

# Rotary & Handling Tools Catalog

## 2018 Land & Offshore



**NOV**

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# GENERAL INFO

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## GENERAL INFORMATION ABOUT THIS ISSUE

This book is the 2018 version of the catalog.

### USER'S MANUALS / ORIGINAL INSTRUCTIONS



**WARNING:** This catalog gives generic information only. It should never be used for operational purposes.

The User's Manuals / Original Instructions can be downloaded from [http://www.nov.com/Segments/Rig\\_Systems/Offshore/Handling\\_Tools.aspx](http://www.nov.com/Segments/Rig_Systems/Offshore/Handling_Tools.aspx)

### PATENT INFO

Products in this catalog are covered by (but not limited to) the following patents:

US6,845,814 B2; WO03060280; US6,896,048; US 6,896,048; WO2005059299; GB2004/003413; US6,997,265 ; USSN 10/807,642; US2005/0216981; EP1475512; US6,443,241; US6,527,493; US6,691,801; US6,637,526; US6,938,709; WO.03/025444; WO.03/054338; WO2005045177; US6,82,632; WO2005106185; US7,510,006; US. 7,591,304

### PRODUCT INFORMATION BULLETINS & SAFETY ALERTS

All bulletins and alerts are available from [www.nov.com/Drilling/Handling\\_Tools.aspx](http://www.nov.com/Drilling/Handling_Tools.aspx)

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Special information: Detailed descriptions of standard workshop procedures, safety principles and service operations are not included. Please note that this catalog may contain warnings about procedures which could damage equipment, make it unsafe, or cause PERSONAL INJURY. Please understand that these warnings cannot cover all conceivable ways in which service (whether or not recommended by NOV) might be done, or the possible hazardous consequences of each conceivable ways. Anyone using service procedures or tools, whether or not recommended by NOV, must be thoroughly satisfied that neither personal safety nor equipment safety will be jeopardized.

All information contained in this catalog is based upon the latest product information available at any time of printing. We reserve the right to make changes at any time without notice.

### TRADEMARK INFO

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### CONVENTIONS; NOTES, CAUTIONS, AND WARNINGS

Notes, cautions, and warnings provide readers with additional information, and to advise the reader to take specific action to protect personnel from potential injury or lethal conditions. They may also inform the reader of actions necessary to prevent equipment damage. Please pay close attention to these advisories.



**WARNING:** A warning indicates a definite risk of equipment damage or danger to personnel. Failure to observe and follow proper procedures could result in serious or fatal injury to personnel, significant property loss, or significant equipment damage.



**CAUTION:** A caution indicates that potential damage to equipment or injury to personnel exists. Follow instructions explicitly. Extreme care should be taken when performing operations or procedures preceded by this caution.

**NOTE:** A note indicates that additional information is provided about the current topics.

### ILLUSTRATIONS

Illustrations (figures) provide a graphical representation of equipment components or screen snapshots for use in identifying parts or establishing nomenclature, and may or may not be drawn to scale.

## SAFETY REQUIREMENTS

NOV equipment is installed and operated in a controlled drilling rig environment involving hazardous situations. Proper maintenance is important for safe and reliable operation. Procedures outlined in NOV User Manuals are the recommended methods of performing operations and maintenance.



**WARNING:** To avoid injury to personnel or equipment damage, carefully observe requirements outlined in this section.

## GENERAL SYSTEM SAFETY PRACTICES



**WARNING:** Read and follow the guidelines below before installing equipment or performing maintenance to avoid endangering exposed persons or damaging equipment.

- Isolate energy sources prior to beginning work.
- Avoid performing maintenance or repairs while the equipment is in operation.
- Wear proper protective equipment during equipment installation, maintenance, or repair.
- Never weld on any parts of tools. The tools are produced from cast alloy heat threaded steel or forged material and must not be welded in the field. Improper welding can cause cracks and brittleness in heat affected area's which result in weakening of the part and possible failure. Forgings should never be welded.

## PERSONNEL TRAINING

All personnel performing installation, operations, repair, or maintenance procedures on the equipment, or those in the vicinity of the equipment, should be trained on rig safety, tool operation, and maintenance to ensure their safety.



**WARNING:** Personnel should wear PPE's during installation, maintenance and operations.

Contact the NOV training department for more information about equipment operation and maintenance training.

## RECOMMENDED TOOLS

Service operations may require the use of tools designed specifically for the purpose described. NOV recommends that only those tools specified be used when stated. Ensure that personnel and equipment safety are not jeopardized when following service procedures or using tools not specifically recommended by NOV.

## REPLACING COMPONENTS

Verify that all components (such as cables, hoses, etc.) are tagged and labeled during assembly and disassembly of equipment to ensure correct installation. Replace failed or damaged components with NOV certified parts. Failure to do so could result in equipment damage or injury to personnel.

Replacing of load carrying parts (not size components) may void any certification. In order to obtain a new certification, pls. contact an NOV Authorized Repair Facility.

## ROUTINE MAINTENANCE

Equipment must be maintained on a routine basis. See the Users Manuals for maintenance recommendations.



**WARNING:** Failure to conduct routine maintenance could result in equipment damage or injury to personnel.

## PROPER USE OF EQUIPMENT

NOV equipment is designed for specific functions and applications, and should be used only for its intended purpose.

## LIFTING

The lifting procedures should carefully be observed and carried out according to the Original Instructions / Users Manuals.

## LIMITATIONS

The tools are designed to be used in the gas and oil well drilling environment, and must not be used for any other purpose.

## ABBREVIATIONS

Abbr.	Explanation	Abbr.	Explanation
AO	Air Operated	m	meter(s)
CL	Center Latch	mm	millimeter(s)
Csg	Casing	max	maximum
°C	Degree Celsius or Centigrade	min	minimum
DC	Drill Collars	Nm	Newton meter (= torque)
dia.	diameter	no	number
DP	Drill Pipe	OD	outside diameter
EU	External Upset	oz	ounce(s)
Elev	Elevator	P/N	part number
°F	Degree Fahrenheit	psi	pounds per square inch
ft	foot or feet	qty	quantity
ft.lbs	foot pounds (= torque)	rpm	rotation per minute
gpm	(US) gallon per minute	sTon	short ton (American ton)
hex	hexagon or hexagonal	sq	square
ID	inside diameter	SD	Side Door
in	inch(es)	(t)	Metric Ton
IEU	Internal External Upset	Tbg	tubing
IU	Internal Upset	tonne	Ton (Metric Ton)
kW	kilowatt	w/	with
kPa	kilo Pascal	w/o	without
kg	kilogram(s)	wt	weight
lb	pound(s)	w/Zip	with Zip groove

## CONVERSIONS

Metric conversions through-out this handbook conform to the Systeme Internationale (SI) metric equivalents.

## METRIC TO US

inches = millimeters / 25.4

feet = meters / 0.3048

pounds = kilograms / 0.4536

ounces = kilograms / 0.0283

sTon (short ton) = Metric Ton / 0.9072

gallon per minute = liter per minute / 3.7853

pounds per square inch = kilo Pascal / 6.8948

foot pounds = Newton meter / 1.356

## US TO METRIC

millimeter (mm) = inches x 25.4

meter (m) = feet x 0.3048

kilogram (kg) = pounds x 0.4536

kilogram (kg) = ounces x 0.0283

metric Ton (Tonne) = sTon x 0.9072

liter per minute = gallon per minute x 3.7853

kilo Pascal = pounds per square inch x 6.8948

Newton meter = foot pounds x 1.356

## EFFECT ON EQUIPMENT RATING DUE TO REVISED API SPECIFICATION 7K TO 6TH EDITION.

On December 30, 2016 the API Specification 7K sixth edition is into effect. Equipment in the field can still be used as is. Below table shows what the changes are in existing and new equipment with regard to the rated capacity.

BHAT Bottom Hole Assembly Tool	Current API 7K 5th edition and/or NOV rating [sTons]	API 7K 6th edition rating [sTons]
BHAT	150	150
<b>MBH1250</b>		
MBH1250 master bushing	1,250	1,250
Casing bushings	no rating	1,000
Drilling bowls (insert bowls)	no rating	750
LSB Landing string bushing	1,250	1,250
LSS Landing string slips	1,000/1,250	1,000/1,250
<b>Hinged Casing Spider (new design, 500 sTon)</b>		
30" Hinged Casing spider, new	n/a	500
36" Hinged Casing spider, new	n/a	500
HCS bushings	n/a	500
<b>Handslips</b>		
SDS	no rating	5th edition only
SDML	no rating	5th edition only
SDXL	no rating	5th edition only
SDHL	750	5th edition only
RHS rotary hand slip 7"-6"	n/a	750
RHS rotary hand slip 6"-5"	n/a	675
RHS rotary hand slip 5"-4"	n/a	500
RHS rotary hand slip 4"-3"	n/a	350
RHS rotary hand slip 3"-2"	n/a	240
DCS-S-150	no rating	150
DCS-R-150	no rating	150
DCS-L-150	no rating	150
DCS-S-150 3-4"	no rating	150
DCS-S-150 -4.7/8"	no rating	150
DCS-R-150 -4.1/2-6"	no rating	150
DCS-R-150 -5.1/2-7"	no rating	150
DCS-L-150 -5.1/2-7"	no rating	150
DCS-L-150 -6.3/4-8.1/4"	no rating	150
DCS-L-150 -8-9.1/2"	no rating	150
DCS-L-150 -8.1/2-10"	no rating	150
DCS-L-150 -9.1/4-11.1/4"	no rating	150
DCS-L-150 -11-12.3/4"	no rating	150
DCS-L-150 -12-14"	no rating	150
CMS-375 - 6.5/8"	no rating	375
CMS-375 - 7"	no rating	375
CMS-375 - 7.5/8"	no rating	375
CMS-400 - 8.5/8"	no rating	400
CMS-475 - 8.5/8"	no rating	475
CMS-475 - 9"	no rating	475
CMS-475 - 9.1/2"	no rating	475
CMS-475 - 9.5/8"	no rating	475
CMS-475 - 9.7/8" & 10"	no rating	475
CMS-500 - 10.3/4"	no rating	500
CMS-500 - 11.1/4"	no rating	500
CMS-500 - 11.1/4" & 11.7/8" & 12"	no rating	500
CMS-500 - 12.3/4"	no rating	500
CMS-500 - 13.3/8" & 13.1/2"	no rating	500
CMS-500 - 13.5/8" & 14"	no rating	500

Handslips	Current API 7K 5th edition and/or NOV rating [sTons]	API 7K 6th edition rating [sTons]
CMS-500 - 14"	no rating	500
CMS-500 - 16"	no rating	500
CMS-500 - 18"	no rating	500
CMS-500 - 18.5/8"	no rating	500
CMS-500 - 20"	no rating	500
CMS-500 - 22"	no rating	500
CMS-500 - 23"	no rating	500
CMS-500 - 24"	no rating	500
CMS-500 -24 1/2"	no rating	500
CMS-500 - 26"	no rating	500
CMS-500 - 28"	no rating	500
CMS-500 - 30"	no rating	500
CP-400 - 24"	no rating	400
CP-450 - 26"	no rating	450
CP-500 - 28"	no rating	500
CP-500 - 30"	no rating	500
CP-500 - 33"	no rating	500
CP-500 - 36"	no rating	500
UC3 Casing slips	no rating	5th edition only
<b>Master bushings</b>		
MPCH Master Bushing	no rating	750
MPCH Insert Bowl #1: 13.3/8" to 11.3/4"	no rating	750
MPCH Insert Bowl #2: 10.3/4" to 9.5/8"	no rating	750
MPCH Insert Bowl #3: API 8.5/8" and smaller	no rating	750
MSPC Master Bushing	no rating	750
MSPC Insert Bowl #1: 13.3/8" to 11.3/4"	no rating	750
MSPC Insert Bowl #2: 10.3/4" to 9.5/8"	no rating	750
MSPC Insert Bowl #3: API 8.5/8" and smaller	no rating	750
MSP Master Bushing	no rating	500
<b>Casing Bushings</b>		
CUL Casing Bushing	no rating	500
CUL Bowls	no rating	500
CB Casing Bushing	no rating	500*
CB Bowls	no rating	500*
<b>Adapter rings</b>		
Configuration change only type	no rating	500
Size reducing type 37.1/2" - 27.1/2"	no rating	750*
Size reducing National to National, 75.1/2"-60.1/2", 60.1/2"-49.1/2" and 49.1/2"-37.1/2"	no rating	1,500
<b>PS Power Slips</b>		
PS15	no rating	750
PS16	no rating	750
PS21	500	350
PS30	750	700

\*not all test results processed at time of catalog issue, and can be subject to change. See chapters for further information.





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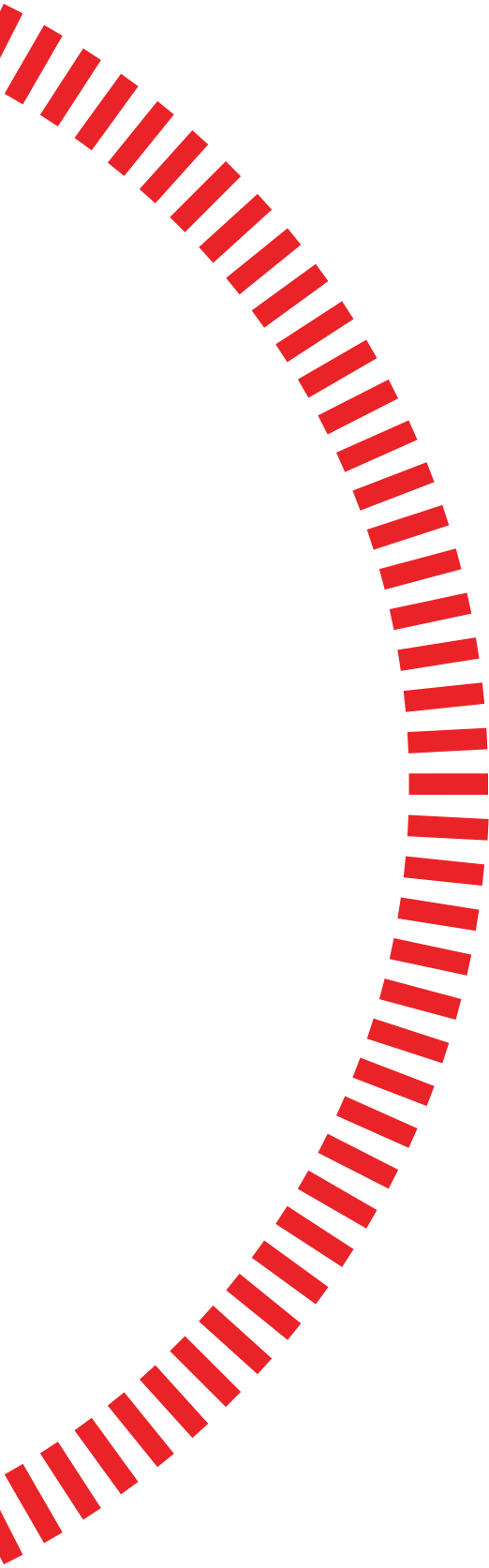
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# POWER TOOLS



## SSW30 HYDRAULIC SPINNING WRENCH

## SSW40 PNEUMATIC SPINNING WRENCH

The hydraulically powered SSW30 can spin drill pipe and drill collars from 2.7/8" - 9.1/2" (73-241 mm) with no adjustments necessary. Its abundant power will bump up shoulders tight enough so each joint is quickly torqued.

This lightweight tool is narrower and has lower profile than previous spinning wrench designs. It achieves its compact shape by using one large cylinder for clamping.

The pneumatically powered SSW40 can spin drill pipe and drill collars from 3.1/2"-9.1/2" (89-241 mm).

An easy adjustment screw eliminates the need to change rollers. The speed of the SSW40's four drive rollers, powered by two motors, is precisely controlled by the operator to permit the slow walking in of drill collars or fast spinning in or out when tripping pipe.

### TECHNICAL SPECIFICATIONS SSW30

Description	Imperial	Metric
Size range	2.7/8" - 9.1/2"	73-241 mm
Normal operating hydraulic pressure	2,000 psi	13,790 kPa
Torque (5" dia. pipe)	900 to 1,000 ft.lbs	1,215-1,350 Nm
Rpm (5" dia. pipe)	100 rpm @ 5" pipe	100 rpm @ 125 mm pipe
Weight	850 lbs	385 kg
Hydraulic power requirement	29 to 45 gpm	106 to 170 lpm

### TECHNICAL SPECIFICATIONS SSW40

Description	Imperial	Metric
Size range	3.1/2" - 9.1/2"	89-241 mm
Air pressure Min/Max:	90 - 125 psi	620 - 860 kPa
Max. air consumption:	250 cfm	530 dm <sup>3</sup> / s
Max. stall torque (5" dia. pipe):	1,100 ft.lbs	1,490 Nm
Weight:	780 lbs	353 kg

### MAIN PART NUMBERS

Description	Part number	Oracle number
SSW30 Closed center	19000-6	10114179-001
SSW30 Open center	19000-7	10137109-001
SSW40	73109	10047238-001

### OPTIONAL EQUIPMENT PART NUMBERS SSW30

Description	Part number	Oracle number
Pressure hose 25 ft	58314-25	10108050-001
Pressure hose 50 ft	58314-50	10145799-001
Return hose 25 ft	58518-25	10108051-001
Return hose 50 ft	58518-50	10145801-001
Plug G3/4 for SD25 for closed center operation	n/a	n/a



SSW30



SSW40

## **KS6600 PNEUMATIC KELLY SPINNER**

## **KS6800 HYDRAULIC KELLY SPINNER**

The KS6600 and KS6800 Kelly Spinners can be used for rotating drill pipe slowly, for limited rathole and mousehole drilling and making fast kelly connections. These units are completely reversible; the driller can spin-out, as well as spin-in, when making connections, therefore, spinning chains are not required.



### TECHNICAL SPECIFICATIONS

Description	Imperial	Metric
Connections	6.5/8" API Reg LH	168.275 mm API Reg LH
Height	38.1/2"	978 mm
Diameter	28"	711 mm
Weight	1,110 Lbs	504 kg
Stall torque	1,200 ft.lbs	1,627 Nm
Rpm	110 rpm	110 rpm
Air flow (KS6600)	230 cfm	680 dm <sup>3</sup> /s
Hydraulic flow (KS6800)	24 gpm	91 lpm
Rotation	Right and Left	Right and Left

### MAIN PART NUMBERS

Part number	Oracle number	Assembly description
70876Y	10385045-001	Pneumatic Kelly Spinner KS6600 complete with thread protectors, control valve, filter lubricator, and 62 foot hoses:
70877Y	10385048-001	Same as above with 77 foot hoses:
70867Y	10385043-001	Hydraulic Kelly Spinner KS6800 complete with thread protectors, control valve, filter lubricator, and 62 foot hoses:
70868Y	10385044-001	Same as above with 77 foot hoses:

## TW61 HYDRAULIC TORQUE WRENCH

The NOV TW61 hydraulic torque wrench makes-up and breaks-out drill pipe and drill collars from 4" to 8" OD. Torque is adjustable and can be pre-set to the required value. Upper and lower gripping structures provide the required torque. The TW61 wrench can rotate the tool joint pin up to 34°, to produce the desired torque while providing its own back-up. A built-in tugger is provided to pull the TW61 wrench back out of the way while lowering or raising pipe stands. The tugger can also be used to assist in pulling the TW61 wrench to a storage position. The tool has 6-foot vertical travel.



### TECHNICAL SPECIFICATIONS

Description	Imperial	Metric
Size	4" - 8"	102-203 mm
Make-up Torque	63,000 ft.lbs	85,428 Nm
Break-out Torque	75,000 ft.lbs	101,700 Nm
Power Requirements	30-35 gpm @ 2,000 psi	114-133 lpm @ 13,790 kPa
Air Pressure (for Tugger)	90-125 psi	620-860 kPa
Weight	3,190 lbs	1,450 kg
Vertical Positioning (Total travel)	72"	1,830 mm
Rate of Travel	2" / s	50.8 mm / s
Cycle Time	@ 40 gpm	@ 151 lpm
Clamping Both Jaws	2.5 s	2.5 s
Clamping Upper Jaw	1.25 s	1.25 s
Torquing 34°	2 s	2 s

### MAIN PART NUMBERS

Part number	Oracle number
19999-12	10359107-001

# HPU & CONTROL PANELS

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HPU & CONTROL PANELS

## HYDRAULIC POWER UNIT

### HKB (CE + ATEX explosion proof) power units

Since the introduction of the HKB35 and HKB66 hydraulic power units, NOV has continuously worked towards improving the efficiency, reliability and safety of these designs. This expanded product range will respond to the industry demands for reliable easy maintenance power units built according to ATEX-rules (Explosion Safety) for safer operation.

#### HKB FEATURES

- Variable displacement piston pump which stops the flow at maximum pressure to prevent unnecessary heating up of the oil.
- A power compensator is mounted to prevent an overload of the electric motor
- Automatic temperature control. The cooler starts automatically at an oil temperature inside the tank of 38°C (100°F). The unit automatically shuts down if the oil temperature inside the tank reaches 70°C (158°F)
- Automatic oil level safety. Unit automatically shuts down if the oil level inside the tank is too low.
- Pressure and return connections with quick disconnect couplings
- Electric powered
- Skid mounted unit can be lifted using a forklift or crane
- HKB units can be lifted using a forklift or a crane.
- Maximum pressure 2,500 psi (17,237 kPa)
- Return line equipped with contamination indicator

#### OPTIONS

- Available in various pressure and flow configurations
- Available for standard, arctic and desert ambient temperatures.
- Available in 50 or 60Hz, from 360 to 480 Volts. Other supply power on request.
- Diesel HKB's on request.
- Available with remote starter kit
- Available HKB140D dual pump with a secondary pump for 100% redundancy.
- Air-over-Hydraulic Power Unit HKB3

#### ATEX: EXPLOSION SAFETY

- HKB units are built according to the requirements of the ATEX directive 2014/34/EU for use in a potentially explosive atmosphere.
- Please contact NOV for details.

#### FLOW AND PRESSURE

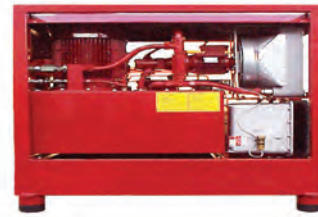
- Fixed pressure - Fixed flow (standard)
- Fixed pressure - Adjustable flow
- Adjustable pressure - Adjustable flow
- Adjustable pressure - Fixed flow

#### AMBIENT TEMPERATURE

- -10° to +40°C (standard)
- 0° to 50° C (Desert)
- -40° to + 10°C (Arctic)

#### POWER SUPPLY

- 360 up to 480 V
- 50 or 60 Hz



### HKB3 POWER AIR-OVER-HYDRAULIC POWER UNIT

The HKB3 unit is an air driven hydraulic power unit which supplies hydraulic fluid under pressure to the FMS.

#### PART NUMBERS HKB3

Description	Part number	New partnumber
HKB3	50007090	10143913-001
HKB3 with remote control	50007091	Contact NOV

#### QUICK REFERENCE FOR EXISTING TOOLS

To order the HKB with the proper specifications, choose from different flow settings, temperatures listed.

HKB	Tool interface	Required pressure [psi/ kPa]	Required flow [gpm/ lpm]	Available units	
				50Hz	60Hz
71	FMS375	2,000 / 13,790	5/18.9	No	Yes
71	PS21/30	2,500 / 17,237	10/38	Yes	Yes
71	BX3,4,5,S	2,000 / 13,790	7/26.5	Yes	Yes
71	H-SJH	2,000 / 13,790	5/18.9	Yes	Yes
71	All E/S's	2,000 / 13,790	12/45	Yes	Yes
71	FMS275	2,000 / 13,790	12/45	Yes	Yes
71	CRT350	2,000 / 13,790	16/60	Yes	Yes
71	CRT500	2,000 / 13,790	16/60	Yes	Yes
100	KS6800	2,000 / 13,790	24/91	Yes	Yes
100	TW61	2,000 / 13,790	35/132	Yes	Yes
140	SSW30	2,000 / 13,790	45/170	Yes	Yes
100	FMS375	2,000 / 13,790	32/121	Yes	No
100	ST80	2,000 / 13,790	45/151	Yes	Yes
140	IR2100	2,000 / 13,790	32/121	Yes	Yes
140	SSW30	2,000 / 13,790	45/170	Yes	Yes
180	ST100	2,500 / 17,237	66/250	Yes	No
140D	TDS+AR 3200	2,500 / 17,237	66/250	Yes	Yes
HKB3	FMS375	2,000 / 13,790	32/121	n/a	n/a

## SELECTING THE HKB POWER UNIT\*

### HKB71

- Pump 71 cc/rev
- Qmax at 1,500 rpm [50 Hz]: 106.5 lpm=27 gpm
- Qmax at 1,750 rpm [60 Hz]: 124 lpm=32 gpm
- Maximal pressure: 2,500 psi / 17,237 kPa
- Maximum power output: 15 kW
- Dimensions LxWxH [inches/m]: 78x43x60/2x1.1x1.5

### HKB100

- Pump 100 cc/rev
- Qmax at 1,500 rpm [50 Hz]: 150 lpm=38 gpm
- Qmax at 1,750 rpm [60 Hz]: 175 lpm=46 gpm
- Maximum pressure: 2,500 psi / 17,237 kPa
- Maximum power output: 22 kW
- Dimensions LxWxH [inches/m]: 79x43x60/2x1.1x1.5

### HKB140 + HKB 140 D

(Dual pump for 100% redundancy, NOT for 2 pump operation)

- Pump 140 cc/rev
- Qmax at 1,500 rpm [50 Hz]: 210 lpm=53 gpm
- Qmax at 1,750 rpm [60 Hz]: 245 lpm=65 gpm
- Maximum pressure: 2,500 psi / 17,237 kPa
- Maximum output power: 30 kW
- Dimensions Single Pump LxWxH [inches/m]: 87x43x60/2.2x1.1x1.5

### HKB180

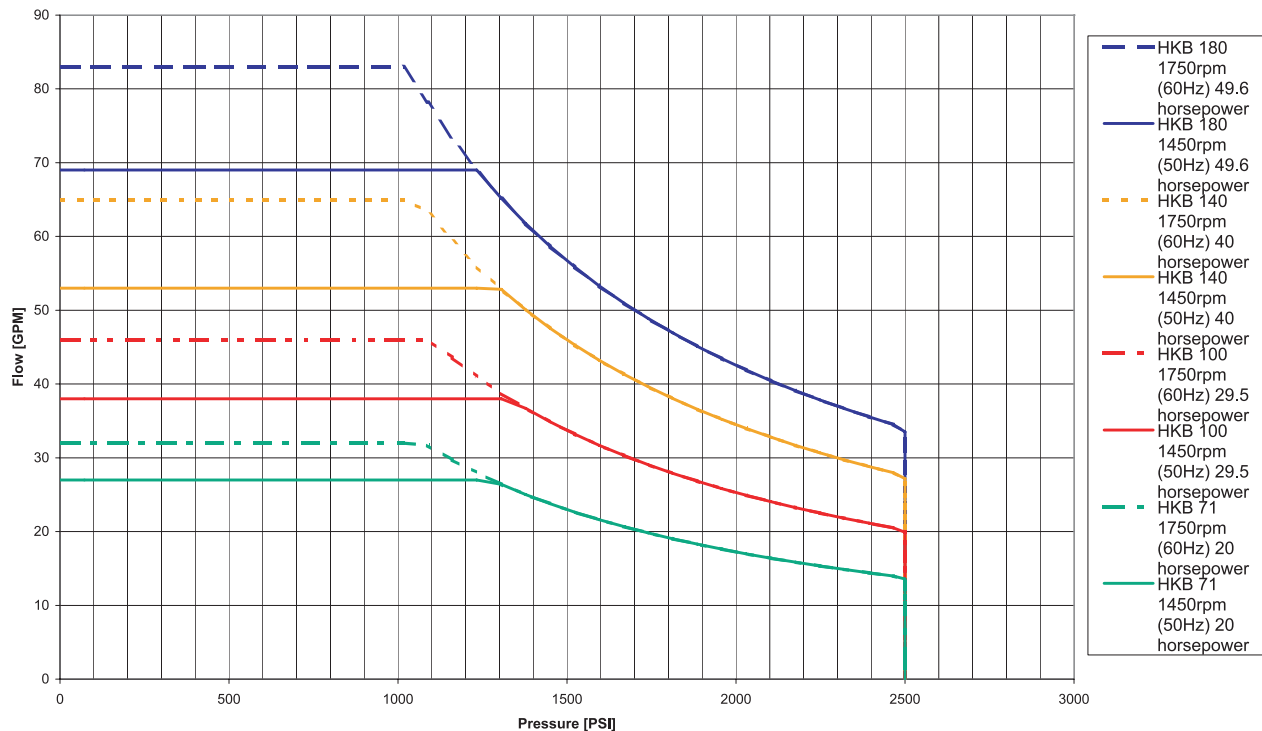
- Pump 180 cc/rev
- Qmax at 1,500 rpm [50 Hz]: 270 lpm=69 gpm
- Qmax bij 1,750 rpm [60 Hz]: 315 lpm=95 gpm
- Maximum pressure: 2,500 psi / 17,237 kPa
- Maximum output power: 37 kW
- Dimensions LxWxH [inches/m]: 95x43x60/2.4x1.1x1.5



### HKB3

- Pump 180 cc/rev
- Qmax: 7.5 lpm = 2 gpm
- Max "Slips down" pressure is preset at 2,500 psi / 17,237 kPa
- Max "Slips up" pressure is preset at 1,000 psi / 6,895 kPa
- Minimum airpressure 95 psi / 690 kPa
- Maximum airpressure 300 psi / 2,069 kPa
- Air consumption at input pressure 95 psi ( 448 kPa) max. 75 cfm / 2.12 m<sup>3</sup>/min
- Dimensions LxWxH [inches/mm]: 34 x 30 x 55.75 / 864 x 762 x 1416

Theoretical flow curves HKB power units



\*All data subject to confirmation by manufacturer

## HYDRAULIC STAND ALONE CONTROL PANEL BX/BXS/FMS/PS/E-S

Portable fully hydraulic control panel to operate BX and BXS tools through a portable service loop. Also suitable to operate the BX universal rotator.

The panel is suitable to operate the following rotary spiders/slips: FMS275, FMS375, PS21, PS30 and hydraulic Elevator / Spiders.

The panel has an interlock function between the elevator and the rotary spider (except FMS275 which can not be interlocked due to the lack of a Xp-signal).



### Technical specifications

Weight & Dimensions of Panel	
Weight Stand Alone Control Panel [lbs/kg]	450 / 200
Dimensions Overall: Height x Width x Depth [inches/mm]	47.5 x 27.6 x 19.7 / 1210 x 700 x 500
Weight & Dimensions of Service Loops	
Service Loop is suitable for BX 3, 4 and 5 and BXS .	
Service Loop is suitable for Universal Rotator (Single Arm, pn 50004130) ONLY	
Length (Coupling to Coupling) [ft/m]	197 / 60
Weight (Oil filled) [lbs/kg]	800 / 365
Service Loop is supplied with two loop hanger assemblies to provide interface point to the Derrick (via Tugger) and the Top-Drive (RLA Link-ear or other suitable attachment point).	

### Main part numbers

Part number	Oracle number	Description
50000350	10140256-001	Control panel assembly
50000360	10140258-001	Service loop

### Optional equipment part numbers

Part number	Oracle number	Description
50000350-13	16631752-001	1 year spares for control panel and service loop
200977-8	10137539-001	Hose kit for FMS375
50005249	10142311-001	Hose kit for FMS275
50008610-21	10144321-001	Hose kit for PS21
50008610-30	10193560-001	Hose kit for PS30



## FMS CONTROL PANEL

The FMS is connected to the panel by applying two hoses between the FMS and the two quick disconnect couplers (Slips up, Slips down) on the panel. On the extra connections of the control panel (Pressure power tong, Return power tong) a power tong or secondary tool can be connected by using hydraulic hoses. This tool also needs to be an open center system.

The panel allows to control both the FMS and power tong. No power fluctuations will occur, allowing a consistent operation and reliable torque read out.



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## TECHNICAL SPECIFICATIONS

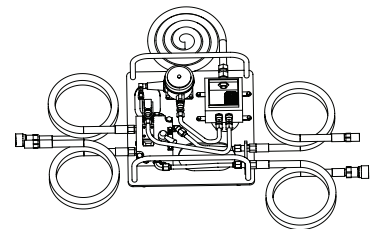
Hydraulic characteristics	
Maximum pressure [psi/kPa]	2,500 / 17,237
Maximum flow [gpm/lpm]	50 / 190
Pressure at "pressure power-unit" connection [psi/kPa]	2,600-3,000 / 17,926-20,684
Back pressure at "return power unit" connection [psi/kPa]	0-200 / 0-1,378
Power unit flow range [gpm/lpm]	5-50 / 19-190
Pressure on "slips down" connection [psi/kPa]	1,050-2,500 / 7,239-17,240
Standard settings on "slips down" connection [psi/kPa]	1,800 / 12,410
Pressure on "slip up" connection [psi/kPa]	1,000 / 6,895
Max. output flow to FMS [gpm/lpm]	15 / 57
Output flow to pressure power tong	When the FMS slips are travelling; no flow is available. With the FMS stationary, see power unit flow range (minus leakage flow)
Nominal volume of accumulator [gallon/l]	0.18 / 0.35
Nitrogen pre-charge pressure [psi/kPa]	1,958 / 13,500
Maximum accumulator pressure [psi/kPa]	3,150 / 21,718
Pneumatic characteristics	
Pressure at air pressure connection [psi/kPa]	90-230 / 620-1,585
Air flow [gpm/lpm]	396 / 1,500
Dimensions and weight	
Dimensions (L x W x H) [inches/mm]	16.22 x 18.15 x 15.55 / 412 x 461 x 395
Weight [lbs/kg]	220 / 100

## MAIN PART NUMBER

Part number	Oracle number	Description
50006538	10143768-001	Control panel

## FMS375 GATE ASSEMBLY

By using the FMS375 gate assembly, it is possible to create an interlocking between an elevator (providing this elevator also has the possibility for interlocking). No need for an additional control panel is needed except for the standard FMS panel P/N 50006538/ 10143768-001.



## MAIN PART NUMBER

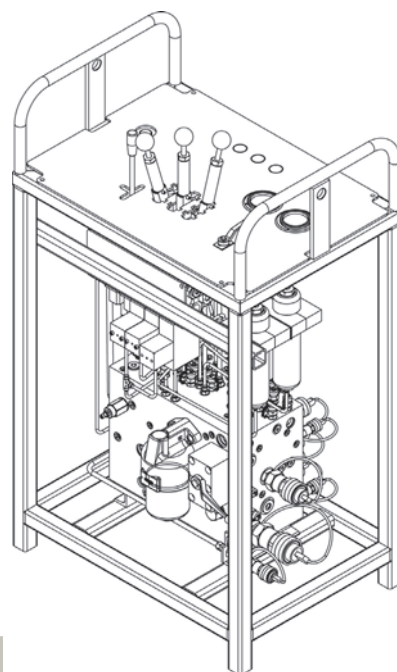
Part number	Oracle number	Description
50008225	10989541-001	FMS375 Gate Assembly

## CRT350/500 INTERLOCK PANEL

The CRT350/500 operator control panel contains all required valves and control handles to remotely operate the following tools:

- The CRT350 Casing Running Tool
- The CRT500 Casing Running Tool
- The CRT350 Casing Running Tool hydraulic single joint elevator (H-SJH)
- The CRT500 Casing Running Tool hydraulic single joint elevator (UX)
- The hydraulic rotary slips like FMS Flush Mounted Slips

The control panel connects to both the CRT350 and the CRT500 and it's hydraulic single joint elevator H-SJH/UX (via the service loop) as well as the hydraulic rotary slips.



### TECHNICAL SPECIFICATIONS

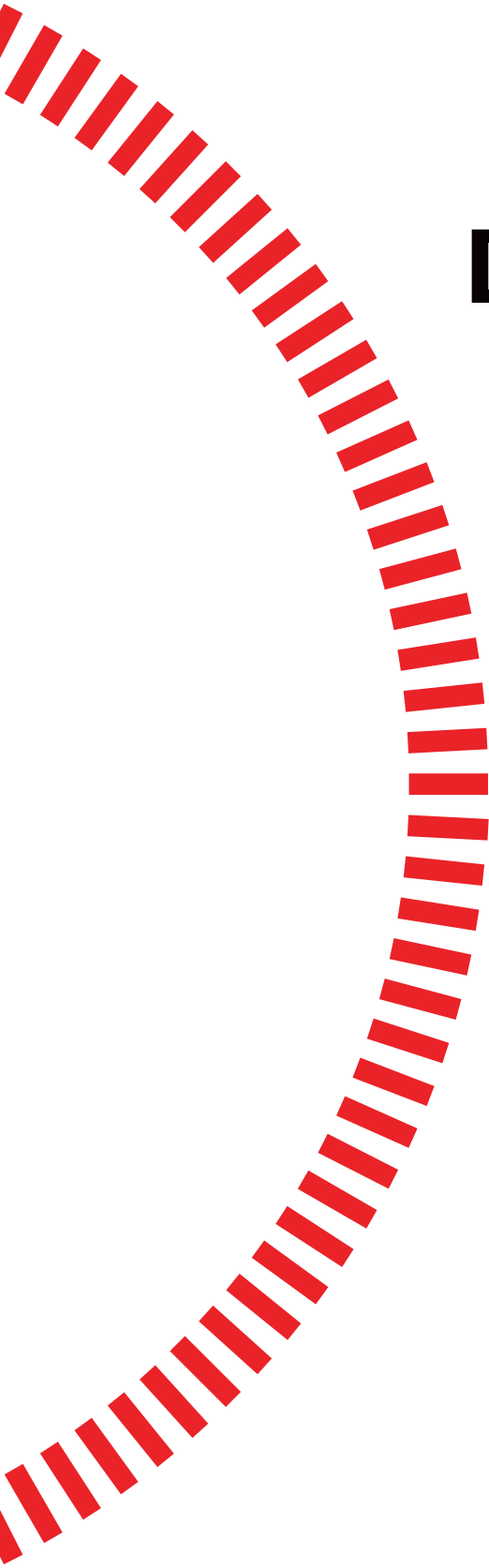
Dimensions and weight	
Dimensions (L x W x H) [inches/mm]	27.6 x 19.7 x 47.5 / 701 x 500 x 1206
Weight [lbs/kg]	450 / 204

### MAIN PART NUMBERS

Part number	Oracle number	Description
50008610	10144320-001	Control panel
50008551	10696977-001	Service loop

### OPTIONAL EQUIPMENT PART NUMBERS

Part number	Oracle number	Description
50008610-13	Contact NOV	1 year spares for control panel and service loop
200977-8	10137539-001	Hose kit for FMS375
50005249	10142311-001	Hose kit for FMS275
50008610-21	10144321-001	Hose kit for PS21
50008610-30	10193560-001	Hose kit for PS30



# DYNAPLEX HOOKS

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## DYNAPLEX HOOKS

The Dynaplex hook is a premium-quality rotary hook for heavy-duty drilling requirements. Special features: hydraulic snubber, flexible pin connection and hook positioner. The hook positioner provides faster, safer operation and cuts down round-trip time. When going in the hole, the positioner automatically rotates the elevator into the correct position for the derrickman to catch the next stand of pipe. The positioner also prevents the hook and elevator from being rotated by the “spin-up” of drill pipe going in the hole. Operators may desire to direct-connect the Dynaplex hook to the traveling block.



### TECHNICAL SPECIFICATIONS

Specifications	51000	5750	5500	5350
Load rating [sTon/Tonne]	907 / 1,000	750 / 680	500 / 453	317 / 350
Hook complete with positioner [lbs]	32,076	18,090	9,950	6,350
Hook complete with positioner [kg]	14,550	8,205	4,513	2,876

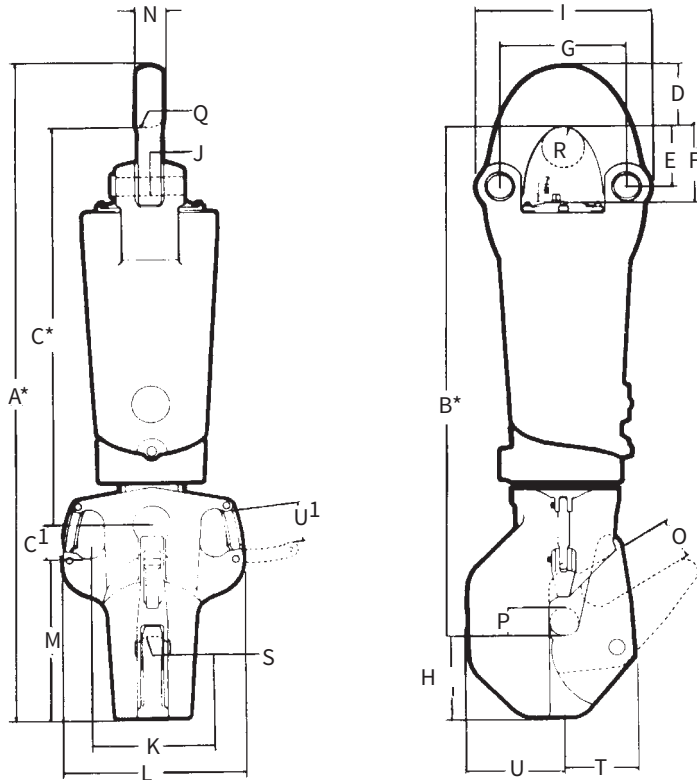
### MAIN PART NUMBERS

Hook Model	Part number hook complete with positioner	Oracle number hook complete with positioner
51000	38327Y	10108022-001
5750	31108Y	10031577-001
5500	26955Y	10138910-001
5350	24767Y	10138685-001

### DIMENSIONAL DATA DYNAPLEX HOOKS - BLOCK COMBINATIONS\*

\*information on request

## DIMENSIONS



Ref.	51000		5750		5500		5350	
No.	[inches]	[mm]	[inches]	[mm]	[inches]	[mm]	[inches]	[mm]
A*	187.3/4	4768.85	162	4114.80	139.1/2	3543.30	126.3/4	3219.45
B*	150.7/8	3832.23	129.1/2	3289.30	109.3/8	2778.13	97.1/2	2476.50
C*	118.3/4	3016.25	102.1/2	2604.00	85.3/8	2168.53	72.5/8	1844.68
C <sup>1</sup>	6.5/8	168.28	6.5/16	160.34	7.3/8	187.33	9	228.60
D	15.1/2	393.70	13.1/2	342.90	12.1/2	317.50	11	279.40
E	17.1/2	444.50	15	381.00	13	330.20	11.1/4	285.75
F	23.3/8	594.00	20	508.00	16.5/8	422.28	14	355.60
G	41	1041.40	35.1/4	895.35	26.1/4	666.75	21	533.40
H	21.3/8	542.93	19	482.60	17.3/4	450.85	18.1/4	463.55
I	56.1/2	1435.10	48.1/4	1225.55	36.1/2	927.10	29.3/4	755.65
J	6.1/2	165.10	5.3/4	146.05	4	101.60	3.1/4	82.55
K	36.3/4	933.45	32.1/4	819.15	26.3/4	679.45	22	558.80
L	48.3/4	1238.25	43.1/2	1104.90	37.3/4	958.85	30.3/4	781.05
M	46.7/8	1190.63	39.11/16	1008.06	34.1/4	869.95	34.1/8	866.78
N	9	228.60	7	177.80	6.1/2	165.10	5.3/8	136.53
O	12.1/2	317.50	10.3/4	273.05	8.1/2	215.90	7.1/2	190.50
P	10.1/2	266.70	8.1/2	215.90	7	177.90	6.1/2	165.10
Q	6	152.40	3.1/4	82.55	3.1/4	82.55	3	76.20
R	6	152.40	6	152.40	4.1/2	114.30	4	101.60
S	5	127.00	4	101.60	4	101.60	4	101.60
T	18.7/8	479.43	16	406.40	14.1/4	361.95	13.1/4	336.50
U	25.5/8	650.88	22.1/2	571.50	20.3/8	517.53	19	482.60
U <sup>1</sup>	9	228.60	8	203.20	8.1/4	209.55	6	152.40

\* Add for Spring Travel 6" for 5100, 8" for all others





# LINKS

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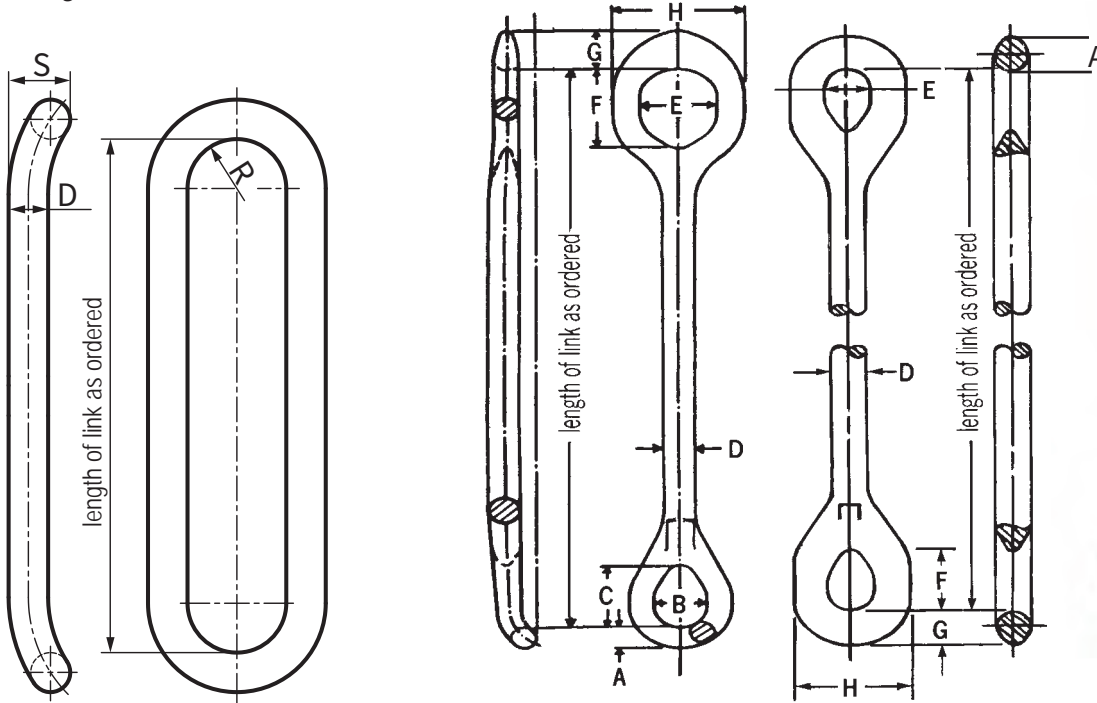
# WELDLESS LINKS & PERFECTION LINKS

## WELDLESS LINKS

Weldless links are forged from a single piece of high-grade alloy steel to provide maximum tensile strength. More weight and “plus-diameter” in critical areas make these links extra strong. Short upper eye design means better balance and easier elevator handling, while reducing wear of the eye section against the swivel bail or body.

## PERFECTION LINKS

Dependable, efficient Perfection links are designed for light loads. They are made by forging, bending and electric welding of high-quality steel bar stock, which is then heat-treated and magnafluxed. Rating 100 sTon / 90 Tonne.



Perfection links 100 sTon

Weldless links 250 - 500 sTon    Weldless links 750 - 1,500 sTon

## TECHNICAL SPECIFICATIONS\*

Link type	Dim.	A	B	C	D	E	F	G	H	R	S
100 [sTon]	[inches]				2					2.5	3.12
90 Tonne	[mm]				50.8					63.5	79.3
250 sTon	[inches]	2.44	5.5	7.5	2.88	9.5	12	5	15.3		
227 Tonne	[mm]	62	140	191	73	241	305	127	389		
350 sTon	[inches]	2.94	5.62	8.8	3.63	9.5	10.5	5	15.3		
318 Tonne	[mm]	75	143	223	92	241	267	127	389		
500 sTon	[inches]	3.62	6.5	10.2	4.5	9.5	12.2	6	17		
454 Tonne	[mm]	92	165	259	114	241	310	152	432		
750 sTon	[inches]	7.55	10.25	14.63	5.75	10.25	14.63	7.4	23		
680 Tonne	[mm]	192	260	371	146	260	371	188	584		
1,000 sTon	[inches]	8.38	12.5	17.45	5.75	12.5	17.45	8.38	28.75		
907 Tonne	[mm]	213	318	94	146	318	94	213	730		
1,250 sTon	[inches]	8.38	12.5	17.45	5.75	12.5	17.45	8.38	28.75		
1,134 Tonne	[mm]	213	318	94	146	318	94	213	730		
1,500 [sTon]	[inches]	10.56	12.75	17.5	6 x 7	12.75	17.5	10.56	30		
1,361 Tonne	[mm]	268	324	445	Oval 152-178	324	445	268	743		

\* Note: The dimensions are nominal. The actual dimensions may vary due to manufacturing tolerances. All applicable dimensions are according to API 8C specification. Part numbers perfection links.



## PART NUMBERS PERFECTION LINKS

Part number	Oracle number	Load rating per set [sTon/Tonne]	Link Length [inches/mm]	Weight per Set [lbs/kg]
200450Y130	10758496-001	100 / 89	30 / 762	49 / 108
200450Y136	10137376-001	100 / 89	36 / 914	58 / 128
200450Y142	10137376-014	100 / 89	42 / 1,067	67 / 148
200450Y148	10137376-020	100 / 89	48 / 1,219	76 / 168
200450Y160	10137376-026	100 / 89	60 / 1,524	95 / 208

## Part numbers weldless links

Part number	Oracle number	Load rating per set [sTon/Tonne]	Link Length [inches/ mm]	Weight per Set [lbs/kg]
16363Y1060	10115275-012	250 / 226.8	60 / 1,524	480 / 218
16363Y1072	10115275-017	250 / 226.8	72 / 1,829	530 / 241
16363Y1084	10115275-019	250 / 226.8	84 / 2,134	580 / 264
16363Y1096	10115275-018	250 / 226.8	96 / 2,438	630 / 286
16363Y1108	10115275-001	250 / 226.8	108 / 2,743	680 / 309
16363Y1132	10115275-013	250 / 226.8	132 / 3,353	780 / 355
16363Y1168	10115275-014	250 / 226.8	168 / 4,267	880 / 399
26940Y1060	10490416-749	350 / 317.5	60 / 1,524	620 / 282
26940Y1072	10490416-728	350 / 317.5	72 / 1,829	685 / 311
26940Y1084	10490416-774	350 / 317.5	84 / 2,134	740 / 336
26940Y1096	10490416-730	350 / 317.5	96 / 2,438	805 / 366
26940Y1108	10490416-773	350 / 317.5	108 / 2,743	870 / 395
26940Y1120	10490416-776	350 / 317.5	120 / 3,048	935 / 425
26940Y1132	10490416-778	350 / 317.5	132 / 3,353	1,000 / 454
26940Y1144	10490416-755	350 / 317.5	144 / 3,657	1,064 / 483
26940Y1150	10490416-735	350 / 317.5	150 / 3,810	1,095 / 498
26940Y1168	10490416-746	350 / 317.5	168 / 4,267	1,190 / 541
26940Y1180	10490416-747	350 / 317.5	180 / 4,572	1,255 / 571
26940Y1192	10490416-736	350 / 317.5	192 / 4,877	1,320 / 600
26940Y1200	10490416-152	350 / 317.5	200 / 5,080	1,363 / 618
26940Y1216	10490416-738	350 / 317.5	216 / 5,486	1,450 / 659
26940Y1240	10490416-739	350 / 317.5	240 / 6,096	1,580 / 718
26940Y1264	10490416-741	350 / 317.5	264 / 6,706	1,770 / 800
26940Y1290	10490416-752	350 / 317.5	290 / 7,366	1,944 / 882
26940Y1350	10490416-777	350 / 317.5	350 / 8,890	2,180 / 988
26940Y1360	10490416-750	350 / 317.5	360 / 9,144	2,235 / 1,014
26940Y1480	10490416-743	350 / 317.5	480 / 12,192	2,885 / 1,306
26940Y1540	10490416-167	350 / 317.5	540 / 13,716	3,187 / 1,446
26940Y1600	10490416-171	350 / 317.5	600 / 15,240	3,408 / 1,546
25469Y1072	10490415-324	500 / 453.6	72 / 1,829	705 / 320
25469Y1096	10490415-320	500 / 453.6	96 / 2,438	1,058 / 480
25469Y1108	10490415-031	500 / 453.6	108 / 2,743	1,450 / 659
25469Y1120	10490415-311	500 / 453.6	120 / 3,048	1,622 / 736
25469Y1132	10490415-998	500 / 453.6	132 / 3,353	1,670 / 759
25469Y1144	10490415-064	500 / 453.6	144 / 3,657	1,780 / 809
25469Y1160	10490415-083	500 / 453.6	160 / 4,064	1,927 / 876

Part number	Oracle number	Load rating per set [sTon/Tonne]	Link Length [inches/ mm]	Appr. weight per Set [lbs/kg]
25469Y1168	10490415-321	500 / 453.6	168 / 4,267	2,000 / 909
25469Y1180	10490415-156	500 / 453.6	180 / 4,572	2,110 / 959
25469Y1190	10490415-575	500 / 453.6	190 / 4,826	2,202 / 998
25469Y1192	10490415-127	500 / 453.6	192 / 4,826	2,220 / 1,007
25469Y1216	10490415-138	500 / 453.6	216 / 5,486	2,422 / 1,098
25469Y1226	10490415-326	500 / 453.6	226 / 5,740	2,596 / 1,177
25469Y1264	10490415-195	500 / 453.6	264 / 6,706	2,882 / 1,307
25469Y1360	10490415-333	500 / 453.6	360 / 9,144	3,174 / 1,440
25469Y1480	10490415-330	500 / 453.6	480 / 12,192	3,968 / 1,800
25469Y1540	10490415-331	500 / 453.6	540 / 13,716	4,519 / 2,050
16143Y1132	10490414-071	750 / 680.4	132 / 3,353	1,741 / 790
16143Y1144	10490414-078	750 / 680.4	144 / 3,657	2,312 / 1,051
16143Y1160	10490414-075	750 / 680.4	160 / 4,064	3,178 / 1,445
16143Y1180	10490414-096	750 / 680.4	180 / 4,572	3,900 / 1,769
16143Y1200	10490414-081	750 / 680.4	200 / 5,080	4,550 / 2,063
16143Y1216	10490414-001	750 / 680.4	216 / 5,486	5,200 / 2,364
16143Y1240	10490414-085	750 / 680.4	240 / 6,096	5,864 / 2,660
16143Y1264	10490414-086	750 / 680.4	264 / 6,706	7,275 / 3,300
16143Y1300	10490414-060	750 / 680.4	300 / 7,620	8,800 / 3,991
70101Y1200	10044677-033	1,000 / 907.2	200 / 5,080	5,100 / 2,315
M614000320Y1144	10392589-001	1,250 / 1,133	144 / 3,657	3,900 / 1,769
M614000320Y1180	10392589-023	1,250 / 1,133	180 / 4,572	4,550 / 2,063
M614000320Y1200	10392589-008	1,250 / 1,133	200 / 5,080	5,100 / 2,315
M614000320Y1216	10392589-025	1,250 / 1,133	216 / 5,486	5,200 / 2,364
M614000320Y1240	10392589-012	1,250 / 1,133	240 / 6,096	7,275 / 3,300
M614000320Y1246	10392589-027	1,250 / 1,133	246 / 6,248	7,410 / 3,361
M614000320Y1264	10392589-029	1,250 / 1,133	264 / 6,706	7,592 / 3,444
Part number	Oracle number	Load rating per set [sTon/Tonne]	Link Length [inches/ mm]	Appr. weight per Set [lbs/kg]
10730284-001	10730284-001	1,500 / 1,360	096 / 2,438	3,265 / 1,481
10730284-021	10730284-021	1,500 / 1,360	096 / 2,438	3,265 / 1,481
10730284-002	10730284-002	1,500 / 1,360	108 / 2,743	3,424 / 1,553
10730284-022	10730284-022	1,500 / 1,360	108 / 2,743	3,424 / 1,553
10730284-003	10730284-003	1,500 / 1,360	132 / 3,353	3,742 / 1,697
10730284-023	10730284-023	1,500 / 1,360	132 / 3,353	3,742 / 1,697
10730284-004	10730284-004	1,500 / 1,360	144 / 3,657	3,900 / 1,769
10730284-024	10730284-024	1,500 / 1,360	144 / 3,657	3,900 / 1,769
10730284-005	10730284-005	1,500 / 1,360	180 / 4,572	4,550 / 2,063
10730284-025	10730284-025	1,500 / 1,360	180 / 4,572	4,550 / 2,063
10730284-006	10730284-006	1,500 / 1,360	200 / 5,080	5,100 / 2,315
10730284-026	10730284-026	1,500 / 1,360	200 / 5,080	5,100 / 2,315
10730284-007	10730284-007	1,500 / 1,360	220 / 5,588	6,200 / 2,812
10730284-027	10730284-027	1,500 / 1,360	220 / 5,588	6,200 / 2,812
10730284-008	10730284-008	1,500 / 1,360	240 / 6,096	7,275 / 3,300
10730284-028	10730284-028	1,500 / 1,360	240 / 6,096	7,275 / 3,300
10730284-009	10730284-009	1,500 / 1,360	264 / 6,706	7,592 / 3,444
10730284-029	10730284-029	1,500 / 1,360	264 / 6,706	7,592 / 3,444

Part number	Oracle number	Load rating per set [sTon/Tonne]	Link Length [inches/mm]	Appr. weight per Set [lbs/kg]
10730284-010	10730284-010	1,500 / 1,360	350 / 8,890	10,610 / 4,812
10738399-350	10738399-350	1,500 / 1,360	350 / 8,890	10,610 / 4,812
10730284-010	10730284-010	1,500 / 1,360	360 / 9,144	10,740 / 4,872
10730284-030	10730284-030	1,500 / 1,360	360 / 9,144	10,740 / 4,872
10730284-011	10730284-011	1,500 / 1,360	480 / 12,192	14,450 / 6,554
10730284-031	10730284-031	1,500 / 1,360	480 / 12,192	14,450 / 6,554
10730284-012	10730284-012	1,500 / 1,360	600 / 15,240	18,190 / 8,250
10730284-032	10730284-032	1,500 / 1,360	600 / 15,240	18,190 / 8,250

### DC DOLLY

Efficient method of handling drill collars without having to remove the elevator from the links.

The drill collar assemblies are suitable for use in combination with the perfection links. The size range is from 2.7/8" plain to 6.5/8" IEU.

### PART NUMBERS DC DOLLIES

Part number	Oracle number	Size [inches]	Load rating [sTon/Tonne]	Weight [lbs/kg]
<b>COLLAR TYPE</b>				
31189Y7	10696850-001	3.1/2 IF, Reg & FH	150 / 136	84 / 184
31189Y16	10695894-001	2.7/8 Plain	150 / 136	254 / 115
<b>18° TYPE</b>				
31189Y3	10696848-001	4.1/2 IF & 5 IEU	150 / 136	204 / 93
31189Y5	10696381-001	4 IF & 4.1/2 Reg & FH	150 / 136	198 / 90
31189Y9	10696852-001	4 FH	150 / 136	181 / 82
31189Y10	10695868-001	5.1/2 IEU	150 / 136	209 / 95
31189Y12	10031647-001	3.1/2 IF & 5 IEU	150 / 136	192 / 87
31189Y15	10695889-001	6.5/8 IEU	150 / 136	254 / 115
31189Y18	10695898-001	5.7/8 IEU	150 / 136	253 / 115
<b>COLLAR/18° TYPE</b>				
31189Y1	10695907-001	4.1/2 IF & 5 IEU	150 / 136	87 / 192





# ELEVATOR SELECTION CHARTS

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## ELEVATOR/PIPE MATCHING TOOL

A high percentage of all dropped pipe incidents is related to selecting the wrong pipe size and/or elevator bore size.

To reduce this specific risk, NOV has developed a measuring tool, called BoreMatch, that allows easy, fast and precise measurement of pipe body OD & the tool joint OD versus the elevator bore ID & the tool joint bore ID, up to 9" (229 mm).

The contour gauge kit consists of the BoreMatch and a contour gauge which can be used for checking the actual profile and wear of an elevator.

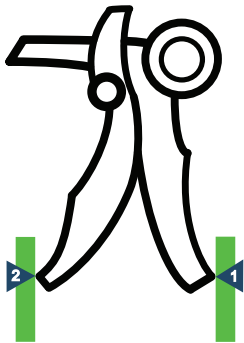


### MAIN PART NUMBERS

Oracle number	Assembly description
10910991-001	Contour gauge kit
10710179-001	BoreMatch

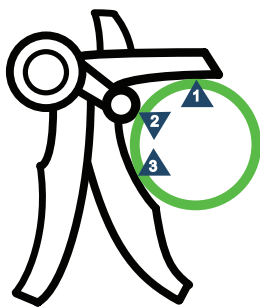
#### ID MEASUREMENT:

1. Insert "BoreMatch" tool into bore.
2. Spread the "BoreMatch" tool legs until the two outer tips with arrow marking make contact to bore.
3. Gently remove the "BoreMatch" tool from the bore and read the "ID".



#### OD MEASUREMENT:

1. Extend the "BoreMatch" tool around the pipe.
2. Push the "BoreMatch" tool against the pipe until the two legs and the center tip with arrow marking make contact with the pipe.
3. Gently remove the "BoreMatch" tool from the pipe and read the "OD".



#### FEATURES AND BENEFITS:

- Proper elevator selection with specific pipe, as a result reduced risk of dropped pipe incidents
- Not sensitive to dirt (i.e. mud)
- Wear indicator for reliable measurement
- Accuracy up to 1/16 inch or 1.5mm
- Light weight — plastic components eliminate the risk of down time when dropped in hole
- Graphics recessed and applied by laser to minimize risk contrast loss
- Contrasting surface roughness to ease dimension reading
- Part Number: 10710179-001

#### MATCHING PIPE example:



Measure elevator bore (ID) with 2-point measurement. Readout 6.1/8".



Measure pipe body (OD) with 3-point measurement. Readout 6".  
The pipe matches with the bore.

#### MATCHING TOOL JOINT example:



Measure elevator TJ-Bore (ID) with 2-point measurement. Readout 8.1/4".



Measure pipe TJ-Diameter (OD) with 3-point measurement. Readout 8".  
The tool joint matches with the bore.

## ELEVATOR SELECTION CHARTS

SLIP TYPE ELEVATORS Y SERIES									
Size	Size	Type	Part number	Load rating	Max. Weight	Max. Weight	Link type (min/max)		
[inches]	[mm]			[sTon/ Tonne]	[lbs]	[kg]	[sTon or Inch]	[sTon or inches]	
1.315 - 2.7/8	33-73	MYT	See Chapter " Manual & Air Operated Elevators".	40 / 36	148	67	250	350	
1.315 - 500	33-89	YT		75 / 68	355	161	250	350	
2.3/8 - 500	60-89	HYT		150 / 136	740	336	250	500	
500- 7	89-178	YC		75 / 68	445	206	250	250	
500- 7	89-178	MYC		125 / 113	750	336	250	250	
2.7/8 - 7.5/8	73-194	HYC		200 / 181	997	452	250	500	
2.7/8 - 7.5/8	73-194	HYC AO		200 / 181	1,415	642	250	500	
COLLAR TYPE CENTER LATCH ELEVATORS A SERIES									
1.050 - 2.7/8	28-73	TA	See Chapter " Manual & Air Operated Elevators".	35 / 32	57	26	100	250	
2.3/8 - 5	60-127	TMA		100 / 90	121	55	250	350	
4.3/4 - 8.5/8	121-219	TA		100 / 90	260	118	250	350	
4.1/2 - 8.5/8	114-219	TA		150 / 136	370	168	350	500	
4.1/2 - 8.5/8	114-219	TA AO		150 / 136	530	240	350	500	
8.1/2 - 11.1/4	216-286	TA		150 / 136	524	238	350	500	
8.1/2 - 11.1/4	216-286	TA AO		150 / 136	550	250	350	500	
2.7/8 - 4.3/4	70 - 120	RGA		200 / 181	304	138	100	250	
500- 7	89 - 178	GA		350 / 318	546	248	250	500	
500- 7	89 - 178	GA AO		350 / 318	725	330	250	500	
4 - 7.5/8	102 - 193	GGA		350 / 318	672	305	250	500	
4 - 7.5/8	102 - 193	GGA AO		350 / 318	998	454	250	500	
18° CENTER LATCH ELEVATOR G SERIES									
2.3/8 - 5	60-127	MG		See Chapter " Manual & Air Operated Elevators".	100 / 90	233	106	250	350
2.3/8 - 500	60-89	RGG	150 / 136		304	138	250	350	
500- 5.1/2	89-140	MGG	250 / 227		608	276	250	500	
500- 5.1/2	89-140	MGG AO	250 / 227		720	327	250	500	
4 - 5.1/2	102-140	GG	350 / 318		693	314	250	500	
4 - 5.1/2	102-140	GG AO	350 / 318		1,018	463	250	500	
4 - 6.5/8	102-168	HGG	500 / 454		1,029	467	250	500	
4 - 6.5/8	102-168	HGG AO	500 / 454		1,441	654	250	500	
18° CENTER LATCH ELEVATOR G SERIES (WITH WEAR BUSHING)									
500- 5.1/2	89-140	MGG	See Chapter " Manual & Air Operated Elevators".	250 / 227	585	266	250	500	
500- 5.1/2	89-140	MGG AO		250 / 227	720	332	250	500	
4 - 5.1/2	102-140	GG		350 / 318	680	310	250	500	
4 - 5.1/2	102-140	GG AO		350 / 318	1,010	459	250	500	
4 - 5.1/2	102-140	HGG		500 / 454	1,010	459	250	500	
4 - 5.1/2	102-140	HGG AO		500 / 454	1,510	685	250	500	
5.1/2 - 6.5/8	140-168	HGG		500 / 454	1,010	459	250	500	
5.1/2 - 6.5/8	140-168	HGG AO		500 / 454	1,510	685	250	500	

**COLLAR TYPE SIDE DOOR ELEVATORS X SERIES**

Size	Size	Type	Part number	Load rating	Max. Weight	Max. Weight	Link type (min/max)	
[inches]	[mm]			[sTon/ Tonne]	[lbs]	[kg]	[sTon or Inch]	[sTon or inches]
1.660 - 2.7/8	42-73	SLX	See Chapter " Manual & Air Operated Elevators".	65 / 59	50	23	100	250
2.3/8 - 2.7/8	60-73	SLX		100 / 91	75	34	250	350
3.1/2 - 4	89-102	SLX		100 / 91	114	58	250	350
3.1/2 - 5.3/4	89-146	SMX		150 / 136	278	126	250	350
4.1/2 - 5.1/2	114-140	SLX		100 / 91	145	66	250	350
5.1/2 - 8.5/8	140-219	SLX		150 / 136	326	148	350	500
5.1/2 - 9	140-229	SMX		150 / 136	291	132	250	500
5.1/2 - 9	140-229	SMX		250 / 227	474	215	250	500
9.5/8 - 10.3/4	245-273	SLX		150 / 136	357	162	350	500
9.1/8 - 13.3/8	231-340	SMX		150 / 136	406	187	250	500
9.1/8 - 13.3/8	231-340	SMX		250 / 227	563	255	250	500
9.1/8 - 13.3/8	231-340	SMX		350 / 318	563	255	250	500
13.5/8 - 14	245-340	SX		350 / 318	1,200	544	250	500
13.5/8 - 14	245-340	SX		500 / 454	1,235	560	350	500
11.3/4 - 13.3/8	289-340	SLX		150 / 136	448	203	350	500
13.1/2 - 17.7/8	343-454	SMX		250 / 227	679	308	250	500
16	406	SLX		150 / 136	537	244	350	500
18 - 24.1/2	457-622	SMX		250 / 227	902	409	250	500
18.5/8 - 20	473-508	SLX		150 / 136	705	320	350	500
24.1/2	622	SLX		250 / 227	1,208	548	350	500
26 - 30	663-762	SLX DD	150 / 136	1,820	826	350	500	

**AUXILIARY ELEVATORS S SERIES**

2.3/8 - 3.1/2	60-89	SJL	See Chapter " Manual & Air Operated Elevators".	5 / 4.5	45	20		
4 - 5.1/2	102-140	SJL		5 / 4.5	51	23		
6 - 7.5/8	152-194	SJL		5 / 4.5	72	32		
8.5/8 - 10.3/4	219-273	SJL		5 / 4.5	98	44		
11.3/4 - 14	298-356	SJL		12 / 10.9	121	55		
16 - 20	406-508	SJL		12 / 10.9	233	105		
21 - 24.1/2	533-622	SJL		12 / 10.9	283	128		
25	635	SJL		7.5 / 6.8	404	183.3		
26	660.4	SJL		7.5 / 6.8	404	183.3		
27	685.8	SJL		7.5 / 6.8	404	183.3		
28	711.2	SJL		7.5 / 6.8	404	183.3		
29	736.6	SJL		7.5 / 6.8	404	183.3		
30	762	SJL		7.5 / 6.8	404	183.3		
2.7/8 - 5.1/2	73-140	SPL 5°		5 / 4.5	77	35		
5.1/2 - 7.5/8	140-194	SPL 5°		5 / 4.5	108	49		
2.3/8 - 4.1/2	60-114	SPL 12°		5 / 4.5	86	39		
2.3/8 - 5	60-127	SPL 18°		5 / 4.5	79	36		
5.1/2 - 6.5/8	140-168	SPL 18°		5 / 4.5	94	42		



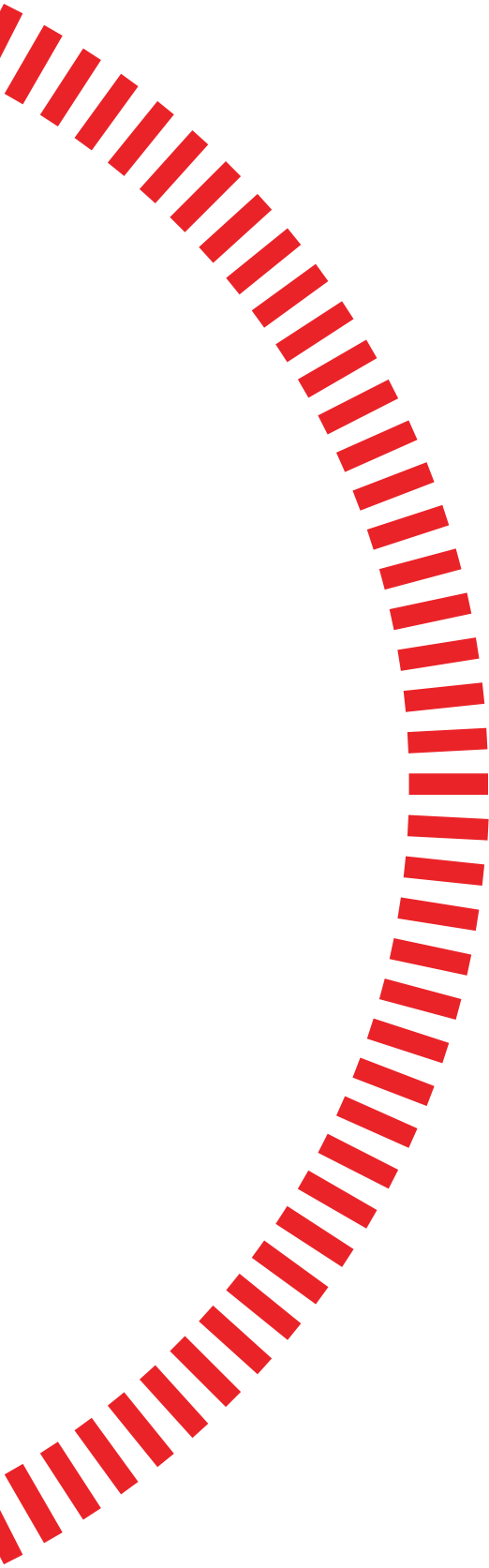
**DOUBLE HINGED SINGLE JOINT ELEVATORS SJX SERIES**

Size	Size	Type	Part number	Load rating	Max. Weight	Max. Weight
[inches]	[mm]			[sTon/Tonne]	[lbs]	[kg]
2.3/8 – 4.1/2	60-114	SJX	See Chapter " Manual & Air Operated Elevators".	5 / 4.5	37	17
4.1/2 – 7	114-178	SJX		5 / 4.5	44	20
7 – 10	178-254	SJX		5 / 4.5	57	25
10 – 14	254-356	SJX		5 / 4.5	67	30

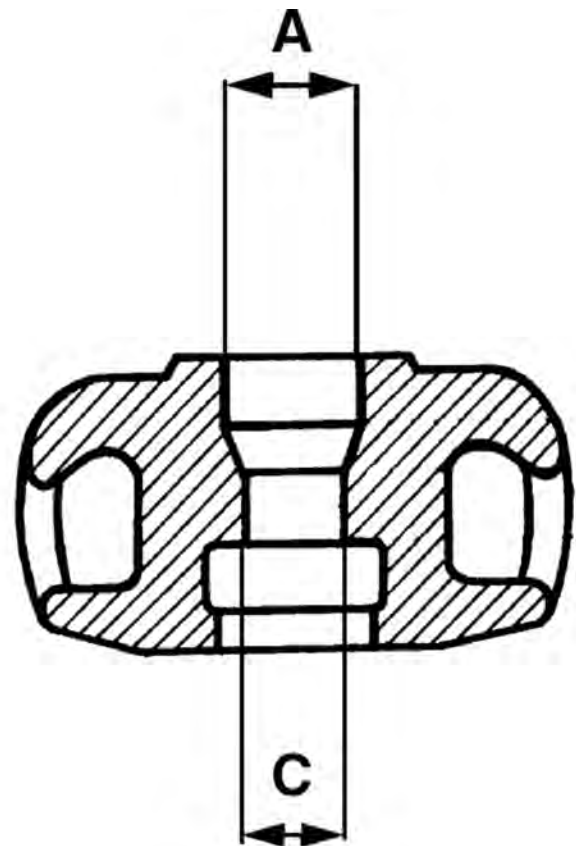
**SJH HORIZONTAL PICK UP ELEVATORS SERIES**

Size	Size	Type	Part number	Load rating	Max. Weight	Max. Weight	
[inches]	[mm]			[sTon/Tonne]	[lbs]	[kg]	Pn Jaws
2.3/8 – 4.1/2	60-114	Tbg / Dp	See Chapter " Manual & Air Operated Elevators".	5 / 4.5	100	45	See Chapter " Manual & Air Operated Elevators"
4.1/2 – 7.5/8	114-194	Tbg / Dp		5 / 4.5	111	51	
7 – 10.3/4	178-273	Csg		5 / 4.5	132	60	





# ELEVATOR BORE CHARTS



## HOW TO USE THE BORE CHARTS

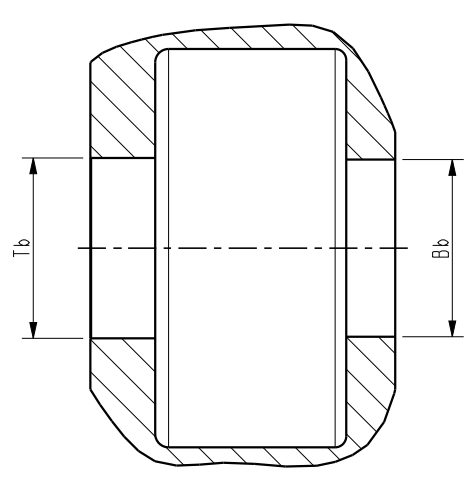
When ordering any elevator for drill pipe, casing and tubing, first determine correct pipe size and corresponding elevator part number part number from specification tables. Then determine correct bore code from the bore charts as per below.

Note that the bore diagrams give bore diagrams for all elevators other than BJ 18° elevators.

Description	Number of chart
Casing bore code chart	See chart 15316-2:63
Tubing bore code chart	See chart 15316-3:63
Drill pipe bore code chart	See chart 15316-5:63
Drill collar bore codes chart	See chart 15316-6:63
Drill pipe bore code chart	See chart 15316-7:63
Plain drill pipe bore code chart	See chart 15316-8:63



TABULATED TUBING BORE DATA												
TUBING SIZE	TYPE	BORE CODE			TOP BORE (Tb)			BOTTOM BORE (Bb)			MARK ELEVATOR	WEAR DATA UPSET TUBING $\Delta$
		NOM	MAX	MIN	NOM	MAX	MIN	NOM	MAX	MIN		
1.050"	PLAIN	1.125	1.141	1.109	1.125	1.156	1.109	1.05" OD TBG		1.484"		
	UPSET	1.422	1.438	1.406	1.422	1.453	1.406	1.05" OD EU TBG				
1.315"	PLAIN	1.390	1.406	1.374	1.390	1.421	1.374	1.31" OD TBG		1.641"		
	UPSET	1.578	1.594	1.562	1.578	1.609	1.562	1.31" OD EU TBG				
1.660"	PLAIN	1.734	1.750	1.718	1.734	1.765	1.718	1.66" OD TBG		1.984"		
	UPSET	1.922	1.938	1.906	1.922	1.953	1.906	1.66" OD EU TBG				
1.900"	PLAIN	1.984	2.000	1.968	1.984	2.015	1.968	1.90" OD TBG		2.266"		
	UPSET	2.203	2.219	2.187	2.203	2.234	2.187	1.90" OD EU TBG				
2.378"	PLAIN	2.453	2.469	2.437	2.453	2.484	2.437	2.378" OD TBG		2.781"		
	UPSET	2.703	2.719	2.687	2.703	2.734	2.687	2.378" OD EU TBG				
2.778"	PLAIN	2.953	2.969	2.937	2.953	2.984	2.937	2.778" OD TBG		3.344"		
	UPSET	3.203	3.219	3.187	3.203	3.234	3.187	2.778" OD EU TBG				
3.178"	PLAIN	3.202	3.218	3.186	3.202	3.233	3.186	3.178" OD TBG (NON API 5CT)		4.016"		
	UPSET	3.578	3.594	3.562	3.578	3.609	3.562	3.172" TBG				
3.172"	PLAIN	3.859	3.875	3.843	3.859	3.890	3.843	3.172" EU TBG				
	UPSET	4.078	4.094	4.062	4.078	4.109	4.062	3.172" OD TBG (NON API 5CT)				
3.578"	PLAIN	3.703	3.719	3.687	3.703	3.734	3.687	3.578" OD TBG (NON API 5CT)		4.516"		
	UPSET	3.828	3.844	3.812	3.828	3.859	3.812	3.578" OD EU TBG				
3.374"	PLAIN	4.078	4.094	4.062	4.078	4.109	4.062	4" OD TBG				
	UPSET	4.359	4.375	4.343	4.359	4.390	4.343	4" OD EU TBG				
4"	PLAIN	4.875	4.891	4.859	4.875	4.906	4.859	4.172" OD TBG				
	UPSET	5.016	5.032	4.984	5.016	5.047	4.984	4.172" OD EU TBG				
4.172"	PLAIN	4.875	4.891	4.859	4.875	4.906	4.859	4.172" OD TBG				
	UPSET	5.016	5.032	4.984	5.016	5.047	4.984	4.172" OD EU TBG				



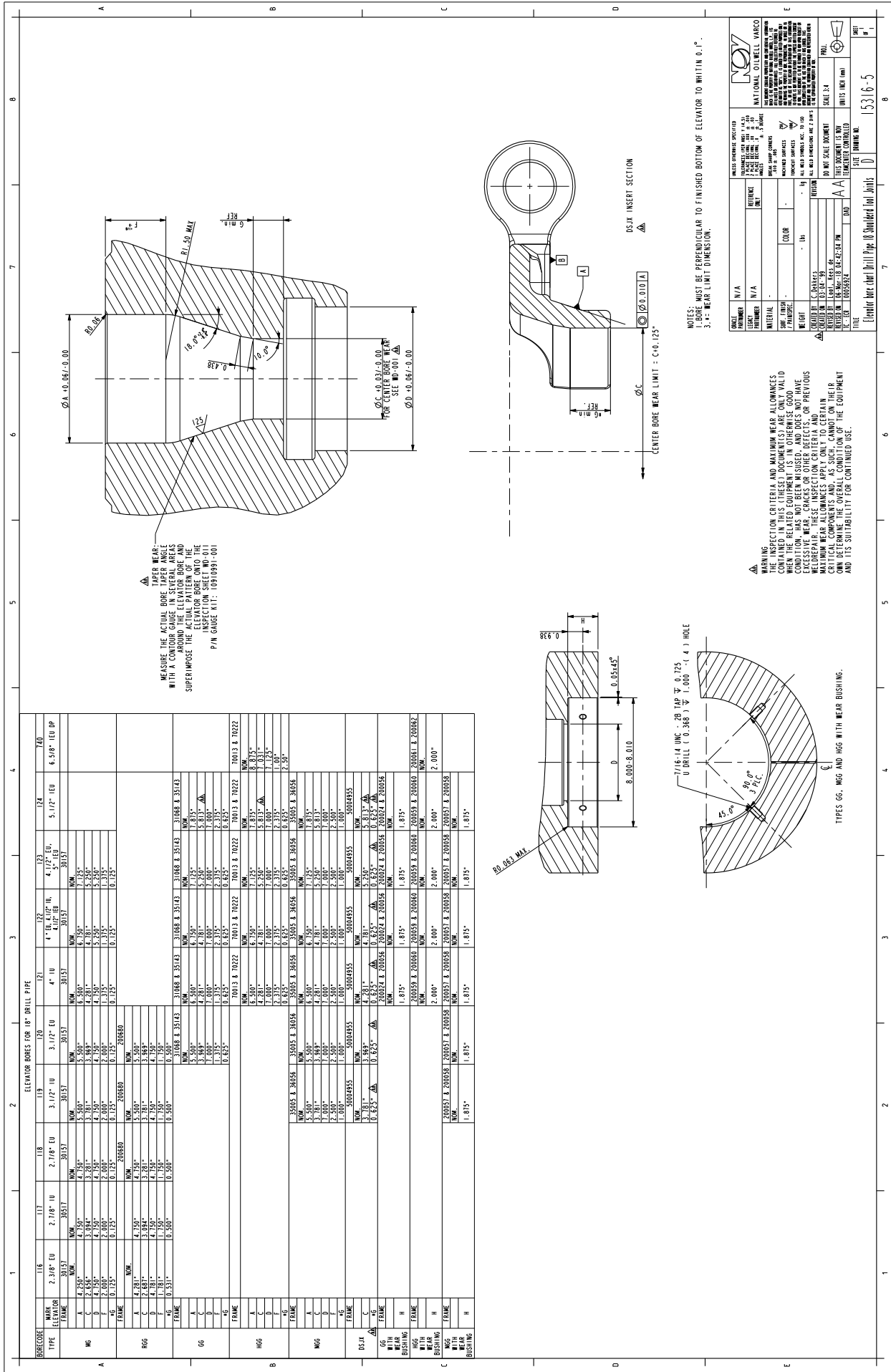
BORE TOLERANCES	
Tb	+0.016 -0.016
Bb	+0.031 -0.016

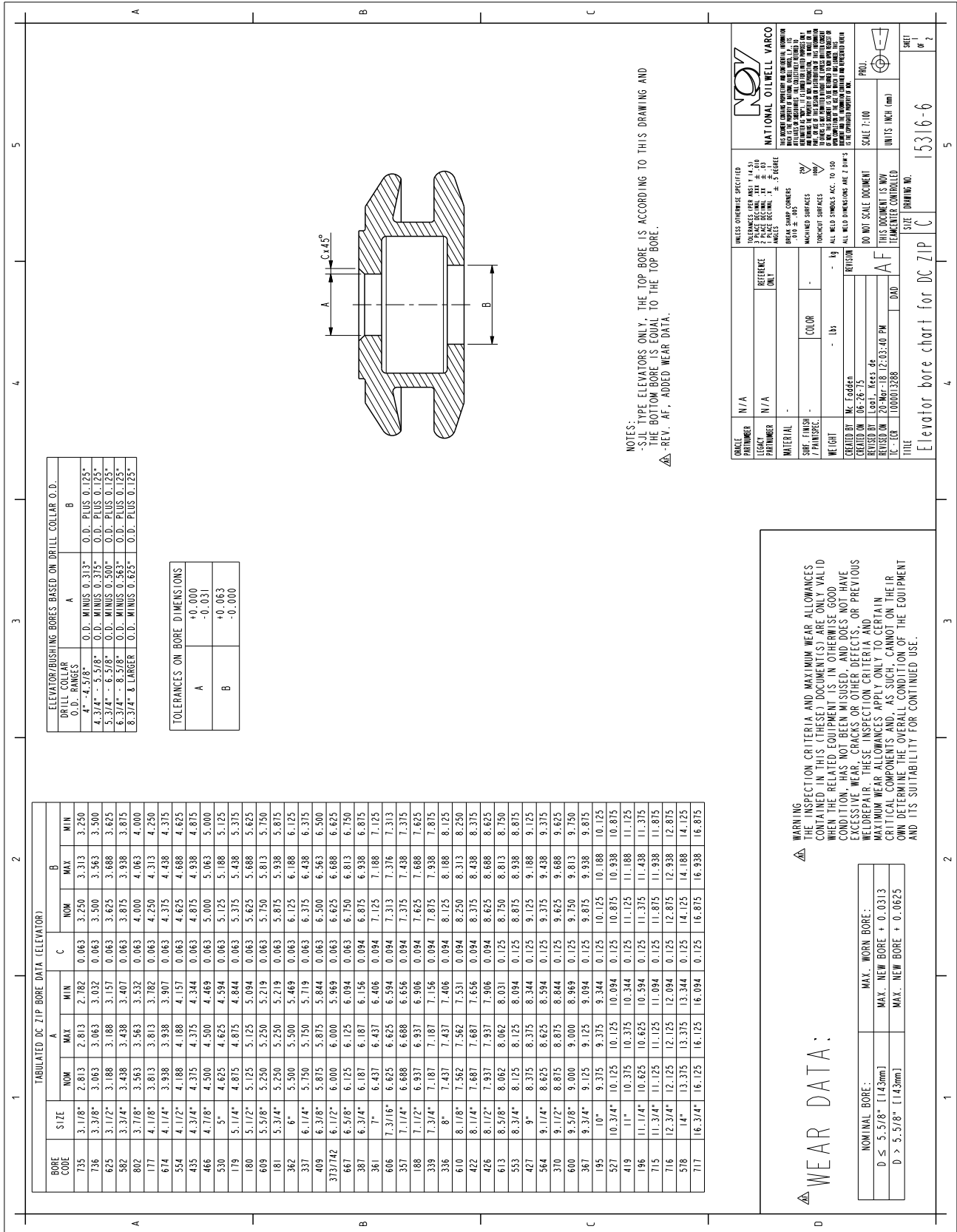
NOTES:  
 1. DO NOT USE EXTERNAL UPSET ELEVATORS ON NON UPSET (PLAIN) TUBING.  
 2. BORE SIZE MEASURED WITH LATCH AND LATCH LUG SURFACE CONTACT.

$\Delta$  WEAR DATA:  
 CAUTION: Wear data are applicable for lifting tubing with regular coupling with dimensions and tolerances according to API 5-CT

CALCULATOR FOR PLAIN TUBING COLLAR TYPE BORE WEAR	
NOMINAL TUBING SIZE:	MAX. WORN BORE:
D < 4.172" [114mm]	nom. D x 1.001 + 0.135" [nom. D x 1.001 + 3.43mm]

ORACLE PARTNUMBER	N/A	UNLESS OTHERWISE SPECIFIED	
LEGACY PARTNUMBER	N/A	TOLERANCES (PER ANSI Y 14.5)	
MATERIAL	-	3 PLACE DECIMAL .XXX ± .010	<b>NATIONAL OILWELL VARCO</b> THIS DOCUMENT CONTAINS PROPRIETARY AND CONFIDENTIAL INFORMATION WHICH IS THE PROPERTY OF NATIONAL OILWELL VARCO, L.P., ITS AFFILIATES OR SUBSIDIARIES. ALL COLLECTIVELY REFERRED TO HEREINAFTER AS "NOV". IT IS LOANED FOR LIMITED PURPOSES ONLY AND REMAINS THE PROPERTY OF NOV. REPRODUCTION, IN WHOLE OR IN PART, OR TRANSMISSION OF ANY KIND WITHOUT THE EXPRESS WRITTEN CONSENT OF NOV, THIS DOCUMENT IS TO BE RETURNED TO NOV FROM WHICHEVER OFFICE OR LOCATION TO WHICH IT WAS LOANED. THIS DOCUMENT AND THE INFORMATION CONTAINED AND REPRESENTED HEREIN IS THE COPYRIGHTED PROPERTY OF NOV.
SURF. FINISH / PAINTSPEC.	-	1 PLACE DECIMAL .X ± .03	
WEIGHT	- lbs	2 PLACE DECIMAL .XX ± .005	
CREATED BY	A. DE PONT	BREAK SHARP CORNERS	
CREATED ON	11-17-'94	.010 ± .005	
REVISED BY	Loat, Kees de	MACHINED SURFACES	
REVISED ON	05-Mar-18 01:41:59 PM	TORCHCUT SURFACES	
IC - ECR	00012821	ALL WELD SYMBOLS ACC. TO ISO	
TITLE	Elevator bore chart for tubing	ALL WELD DIMENSIONS ARE Z DIM'S	
SIZE	B		
DRAWING NO.	15316-3		
SHEET	4		
OF	1		





ELEVATOR/BUSHING BORES BASED ON DRILL COLLAR O. D.

DRILL COLLAR O. D. RANGES	A	B
4" - 4.5/8"	O. D. MINUS 0.313"	O. D. PLUS 0.125"
4.3/4" - 5.5/8"	O. D. MINUS 0.375"	O. D. PLUS 0.125"
5.3/4" - 6.5/8"	O. D. MINUS 0.500"	O. D. PLUS 0.125"
6.3/4" - 8.5/8"	O. D. MINUS 0.563"	O. D. PLUS 0.125"
8.3/4" & LARGER	O. D. MINUS 0.625"	O. D. PLUS 0.125"

TOLERANCES ON BORE DIMENSIONS

A	+0.000 -0.031
B	+0.063 -0.000

TABULATED DC ZIP BORE DATA (ELEVATOR)

BORE CODE	SIZE	A		C		B	
		NOM	MIN	NOM	MIN	NOM	MIN
735	3.1/8"	2.813	2.782	0.063	3.250	3.313	3.250
736	3.3/8"	3.063	3.032	0.063	3.500	3.563	3.500
625	3.1/2"	3.188	3.157	0.063	3.625	3.688	3.625
582	3.3/4"	3.438	3.407	0.063	3.875	3.938	3.875
802	3.7/8"	3.563	3.532	0.063	4.000	4.063	4.000
177	4.1/8"	3.813	3.782	0.063	4.250	4.313	4.250
674	4.1/4"	3.938	3.907	0.063	4.375	4.438	4.375
554	4.1/2"	4.188	4.157	0.063	4.625	4.688	4.625
435	4.3/4"	4.375	4.344	0.063	4.875	4.938	4.875
466	4.7/8"	4.500	4.469	0.063	5.000	5.063	5.000
530	5"	4.625	4.594	0.063	5.125	5.188	5.125
179	5.1/4"	4.875	4.844	0.063	5.375	5.438	5.375
180	5.1/2"	5.125	5.094	0.063	5.625	5.688	5.625
609	5.5/8"	5.250	5.219	0.063	5.750	5.813	5.750
181	5.3/4"	5.250	5.219	0.063	5.875	5.938	5.875
382	6"	5.500	5.469	0.063	6.125	6.188	6.125
337	6.1/4"	5.750	5.719	0.063	6.375	6.438	6.375
409	6.3/8"	5.875	5.844	0.063	6.500	6.563	6.500
373/742	6.1/2"	6.000	5.969	0.063	6.625	6.688	6.625
667	6.5/8"	6.125	6.094	0.063	6.750	6.813	6.750
387	6.3/4"	6.187	6.156	0.094	6.875	6.938	6.875
361	7"	6.437	6.406	0.094	7.125	7.188	7.125
606	7.3/16"	6.625	6.594	0.094	7.375	7.438	7.375
357	7.1/4"	6.688	6.656	0.094	7.375	7.438	7.375
188	7.1/2"	6.937	6.906	0.094	7.625	7.688	7.625
330	7.3/4"	7.187	7.156	0.094	7.875	7.938	7.875
356	8"	7.437	7.406	0.094	8.125	8.188	8.125
610	8.1/8"	7.562	7.531	0.094	8.250	8.313	8.250
422	8.1/4"	7.667	7.636	0.094	8.375	8.438	8.375
426	8.1/2"	7.937	7.906	0.094	8.625	8.688	8.625
613	8.5/8"	8.062	8.031	0.125	8.750	8.813	8.750
553	8.3/4"	8.125	8.094	0.125	8.875	8.938	8.875
427	9"	8.375	8.344	0.125	9.125	9.188	9.125
564	9.1/4"	8.625	8.594	0.125	9.375	9.438	9.375
370	9.1/2"	8.875	8.844	0.125	9.625	9.688	9.625
600	9.5/8"	9.000	8.969	0.125	9.750	9.813	9.750
367	9.3/4"	9.125	9.094	0.125	9.875	9.938	9.875
195	10"	9.375	9.344	0.125	10.125	10.188	10.125
527	10.3/4"	10.125	10.094	0.125	10.875	10.938	10.875
419	11"	10.375	10.344	0.125	11.125	11.188	11.125
186	11.1/4"	10.625	10.594	0.125	11.375	11.438	11.375
715	11.3/4"	11.125	11.094	0.125	11.875	11.938	11.875
716	12.3/4"	12.125	12.094	0.125	12.875	12.938	12.875
578	14"	13.375	13.344	0.125	14.125	14.188	14.125
717	16.3/4"	16.125	16.094	0.125	16.875	16.938	16.875

WEAR DATA:

NOMINAL BORE:	MAX. WORN BORE:
D ≤ 5.5/8" [143mm]	MAX. NEW BORE + 0.0313
D > 5.5/8" [143mm]	MAX. NEW BORE + 0.0625

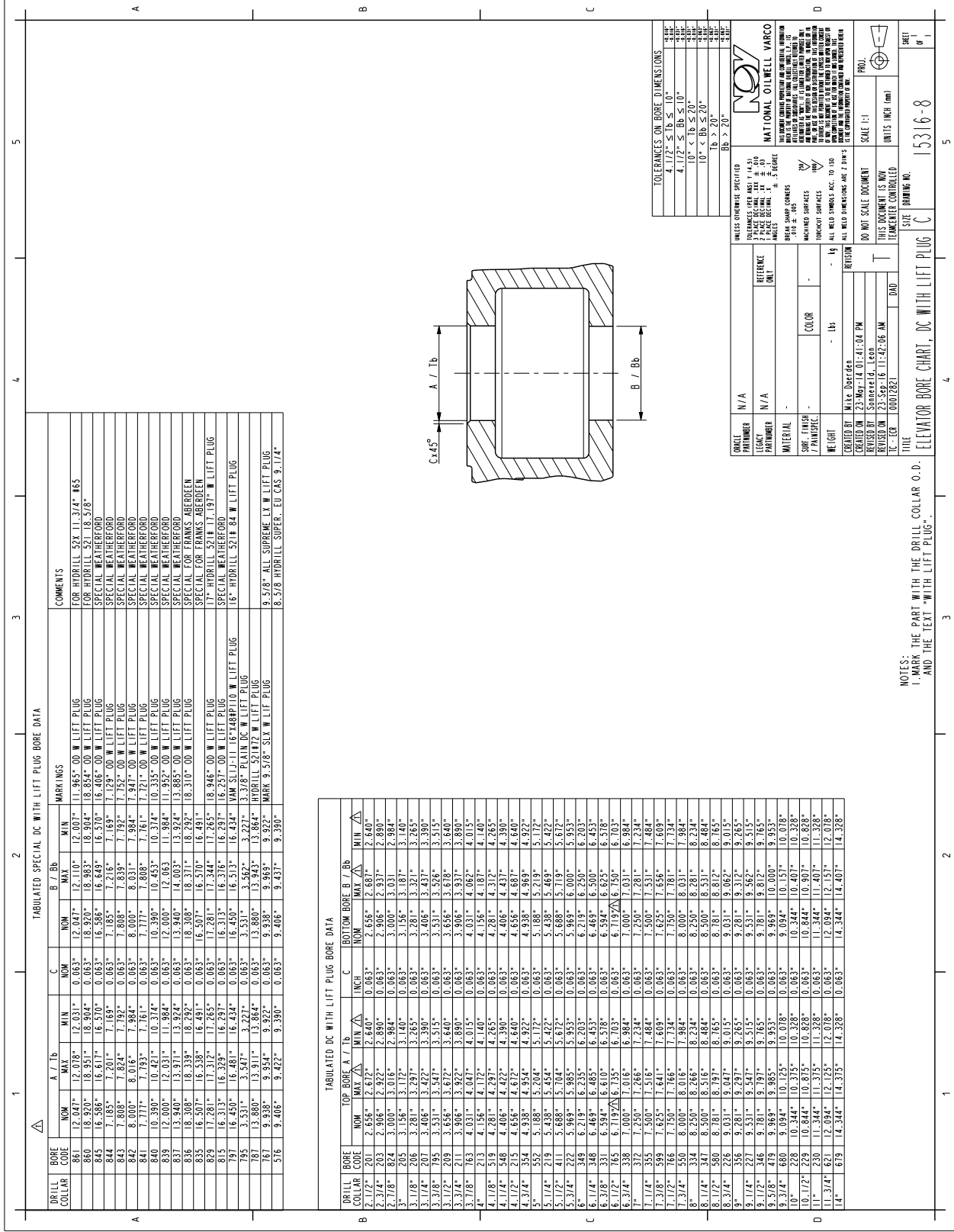
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NOTES:  
 -S, L TYPE ELEVATORS ONLY, THE TOP BORE IS ACCORDING TO THIS DRAWING AND THE BOTTOM BORE IS EQUAL TO THE TOP BORE.  
 Δ -REV. AF, ADDED WEAR DATA.

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LEGACY PART NUMBER: N/A	TOLERANCES PER ANSI Y14.5 3 PLACE DECIMAL: ± .010 2 PLACE DECIMAL: ± .005 1 PLACE DECIMAL: ± .002	
MATERIAL: -	FINISH: POLISHED SURF. FINISH: - TOLERANCE SURFACES: -	ALL WELD DIMENSIONS ARE ± .0045 ALL WELD SURFACES ARE TO 150 UNLESS OTHERWISE SPECIFIED
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DESIGNED BY: LEGAT, KEYS, 46	DATE: 08/23/00	Elevator bore chart for DC ZIP C 15316-6
REVISED ON: 08/23/00	DATE: 08/23/00	
FILE NO: 1000013888	DATE: 08/23/00	







# MANUAL & AIR OPERATED ELEVATORS

ELEVATORS

49

MANUAL & AIR OPERATED



## MANUAL & AIR OPERATED ELEVATORS & SLIP TYPE ELEVATORS

### MANUAL ELEVATORS

Manual operated elevators are conventionally operated elevators for lifting all existing pipe:

- Collar type center latch A series
- 18° center latch G series
- Collar type side door X series
- Auxiliary S-series

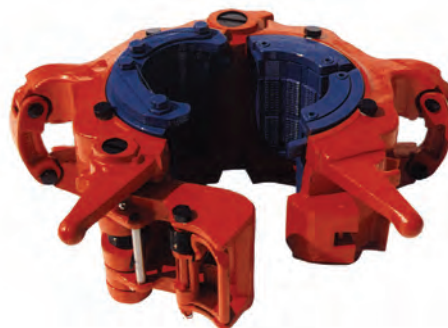
The elevators are suitable for handling casing, tubing, plain & upset drill pipe, collar type drill pipe, 18° drill pipe, IU, EU and IEU pipe etc, depending on the type and rating.

### AIR OPERATED ELEVATORS

Air operated elevators are conventional center latch elevators to which power actuation has been added. This feature permits remote opening of the elevators. All NOV elevators are designed and manufactured in strict accordance with ISO-API standard 8C.

### SLIP TYPE ELEVATORS

NOV "Y" series elevators are conventional slip type elevators for handling tubing and small casing. They feature a four slip design which give an optimum contact on the pipe to prevent bottle necking and gauge damage.



## SLIP TYPE ELEVATORS MYC, YC & HYC SERIES

### HYC CASING ELEVATOR

The HYC elevator is a powerful 200 sTon (181 Tonne) capacity elevator and can handle from 2.7/8" to 7.5/8" tubing or casing. The full range can be achieved with the use of 5 sets of slips for the complete range. All slips provide a full 10.1/2" (7.5/8" slip has a height of 8.625") of insert contact to firmly grip your casing or tubing. The HYC elevator as with all Type 'Y' series elevators operate with the latch lock combination for safety.

Size range and capacity:

2.7/8" through 7.5/8" (73-194 mm) OD. API load rating is 200 sTon (181 Tonne).

### MYC CASING ELEVATOR

With its 125 sTon (114 Tonne) capacity the MYC elevator completes the range of Y type elevators for handling either external upset or API collar type casing or tubing. The MYC elevator has a range of 3.1/2" to 7", utilizing the same slips as the YC elevator. All slips provide a full 7" of insert contact to firmly grip your casing or tubing. The MYC operates with a latch and a latch lock combination for safety.

Size range and capacity:

3.1/2" to 7" (89-178mm) OD. API load rating is 125 sTon (114 Tonne).

### YC CASING ELEVATOR

The YC elevator is an exceptionally versatile elevator that handles either external upset or API collartype casing simply by installing the proper size insert-type slips and slip-setting ring assembly. In addition, slips can be provided that enable the YC elevator to handle dual strings of tubing. To reduce the possibility of the elevator opening under load, a latch lock is provided in addition to the spring type-latch. The rugged, long-lasting slip inserts are easily changed when they become worn.

Size range and capacity:

3.1/2" (89 mm) through 7" (178 mm) casing. API load rating is 75 sTon (68 Tonne)

## TECHNICAL SPECIFICATIONS

Type	Part number	Oracle number	Load rating	Size	Size	Max. Weight		Link type (min/max)	
			[sTon/Tonne]	[inches]	[mm]	[lbs]	[kg]	[sTon]	[sTon]
YC	24140Y	10114487-008	75 / 68	3.1/2 - 7	89-178	445	206	250	350
MYC	200360Y	10137340-003	125 / 113	3.1/2 - 7	89-178	750	336	250	350
HYC	BJ55310Y	10069471-001	200 / 181	2.7/8 - 7.5/8	73-194	997	452	250	500
HYC AO	BJ70166Y	10148056-008	200 / 181	2.7/8 - 7.5/8	73-194	1415	642	250	500

## HYC, MYC & YC SLIP & INSERTS\*

HYC									
Size [inches]	Slip assembly part number	Slip assembly Oracle number	Slip setting ring part number	Slip setting ring Oracle number	Insert part number	Insert Oracle number	No. req.	Weight Slip Ass'y [lbs] [kg]	
3.1/2	201353Y	10137576-001	55516	10145392-001	16441	10137006-001	24	282	128
3.1/2 x 2.7/8	201355Y	10137580-001	201357	10137582-001	201356	10137581-001	24	282	128
4.1/2 x 3.1/2	55509Y	10114192-001	55516	10145392-001	24779	10138689-001	24	275	125
4.1/2 x 4	55510Y	10115265-001	55517	10145394-001	24781	10138690-001	24	270	123
4.1/2	55511Y	10035082-001	55518	10145396-001	BJ16408	10148038-001	24	268	122
5.1/2 x 4.1/2	55513Y1	10069471-004	55518	10145396-001	24785	10138692-001	36	268	122
5.1/2 x 5	55512Y	10035084-001	55520	10145400-001	24783	10138691-001	36	251	114
5.1/2	55513Y	10035087-001	55520	10145400-001	BJ16407	10148037-001	36	238	108
7 x 5.3/4	55515Y2	10069471-021	55520-1	10185737-001	29254	Contact NOV	48	238	108
7 x 6	55515Y1	10069471-022	55520-1	10185737-001	24785	10138692-001	48	234	106
7 x 6.5/8	55514Y	10069471-005	55521	10145402-001	24748	10138684-001	48	234	106
7	55515Y	10069471-006	55522	10145404-001	BJ16407	10148037-001	48	229	104
7.5/8 x 6.5/8	70009Y2	Contact NOV	200217	Contact NOV	25474-1	Contact NOV	48	229	104
7.5/8 x 7	70009Y1	10069471-018	200440	10137372-001	26750-1	10138861-002	48	229	104
7.5/8 x 7.1/4	70009Y5	10069471-020	200440-1	Contact NOV	39287-1	Contact NOV	48	230	105
7.5/8	70009Y	10069471-008	70012	10146322-001	70010	10146319-001	48	230	105
7.3/4	70009Y4	10069471-010	201546	10137628-001	32477-1	10139473-001	48	230	105
MYC & YC									
Size [inches]	Slip assembly part number	Slip assembly Oracle number	Slip setting ring part number	Slip setting ring Oracle number	Insert part number	Insert Oracle number	No. req.	Weight [lbs] [kg]	
4.1/2 x 3.1/2	34931Y	10114487-012	34932	10139735-001	24779	10138689-001	16	130	59
4.1/2 x 4	26830Y	10138877-001	30209	10139177-001	24781	10138690-001	16	120	54
4.1/2	24072Y5	10114487-003	30219	10139185-001	BJ16408	10148038-001	16	116	53
4.3/4	24072Y10	10138638-001	30219-1	10139186-001	BJ16408	10148038-001	16	114	52
5.1/2 x 5	24072Y7	10138642-001	30220	10139188-001	24783	10138691-001	16	112	51
5.1/2	24072Y2	10114487-002	30223	10139192-001	BJ16407	10148037-001	16	101	46
7 x 6.5/8	24077Y7	10114487-004	30226	10139196-001	24748	10138684-001	24	97	44
7	24077Y1	10114487-001	30229	10139199-001	BJ16407	10148037-001	24	95	43

\* Guide plates; see next page.

Guide plates must be ordered when ordering a slip set.  
The slip setting ring and inserts are part of the slip set.

**HYC, MYC & YC GUIDE PLATES**

HYC	Bottom guide plate set part number	Bottom guide plate set Oracle number	Weight Guide plate	
Size [inches]			[lbs]	[kg]
3.1/2	26827-1	10114186-001	18	8
3.1/2 x 2.7/8	201358	10137584-001	18	8
4.1/2 x 3.1/2	26827-1	10114186-001	15	7
4.1/2 x 4	26827	10115244-001	15	7
4.1/2	24071-4	10114185-001	5	2
5.1/2 x 4.1/2	24071-4	10114185-001	5	2
5.1/2 x 5	24071	10114183-001	14	6
5.1/2	24071-1	10114184-001	13	6
7 x 5.3/4	24071-7	10138622-008	13	6
7 x 6	24071-5	10138627-004	10	5
7 x 6.5/8	24071-3	10138627-003	10	5
7	24071-2	10138627-002	8	4
7.5/8 x 6.5/8	24071-3	10138627-003	10	5
7.5/8 x 7	24071-2	10138627-002	8	4
7.5/8 x 7.1/4	24071-9	10138627-001	7	3
7.5/8	24071-6	10138627-005	7	3
7.3/4	24071-8	10138627-006	7	3
MYC & YC	Bottom guide plate set part number	Bottom guide plate set Oracle number	Weight Guide plate	
Size [inches]			[lbs]	[kg]
4.1/2 x 3.1/2	26827-1	10114186-001	15	7
4.1/2 x 4	26827	10115244-001	15	7
4.1/2	24071-4	10114185-001	5	2
4.3/4	24071-10	10114185-002		
5.1/2 x 5	24071	10114183-001	14	6
5.1/2	24071-1	10114184-001	13	6
7 x 6.5/8	24071-3	10138627-003	10	5
7	24071-2	10138627-002	8	4

## SLIP TYPE ELEVATORS YT, MYT & HYT SERIES

### YT SLIP TUBING ELEVATOR

The YT elevator is an outstanding combination tool for use with any of the power tubing spiders. It has four slips each contacting 9" (228.6 mm) of pipe length. The interlocking slips form a circle around the tubing, assuring an uniform grip. Slip inserts are easily replaceable. Only one set of slip bodies is required to handle all tubing sizes from 1.315" (33 mm) through 3.1/2" (89 mm). A sturdy latch and safety latch lock combination holds the YT elevator securely in closed position.

### HYT TUBING ELEVATOR

The HYT elevator is designed to accommodate the widest possible range of tubing. The key is the various combinations possible with three different slip-setting rings, reducing inserts and two sizes of slips. The HYT elevator handles 2.3/8", 2.7/8" or 3.1/2" (60, 70 or 89 mm) OD tubing, with any type of upset and any wall thickness. The slip provides a full 12" (305 mm) of vertical contact on the pipe.

### MYT SLIP TUBING ELEVATOR

The MYT elevator is a light-weight elevator for medium wells. It handles all tubing within its range with one set of slips, plus reducing inserts. The MYT elevator has four curved slips that form a circle around the tubing. This assures an uniform grip with minimum marking of pipe.



### TECHNICAL SPECIFICATIONS

Type	Part number	New Number	Load Rating	Size		Max. Weight		Link type (min/max)	
			[sTon/Tonne]	[inches]	[mm]	[lbs]	[kg]	[sTon or Inch]	[sTon or inches]
YT	50006582Y	10114191-001	75 / 68	1.315 - 3.1/2	33-89	355	161	250	350
HYT	39284Y	10114189-001	150 / 136	2.3/8 - 3.1/2	60-89	740	336	250	500
MYT	29328Y	10139059-001	40 / 36	1.315 - 2.7/8	33-73	148	67	250	350

## SLIP ASSEMBLIES

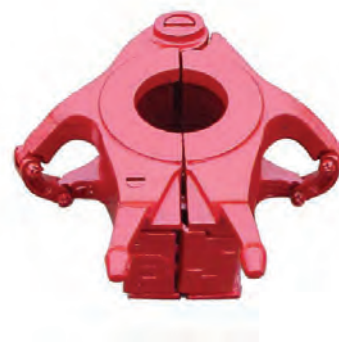
YT									
Nominal x Pipe Size [inches]	Slip assembly part number	Slip assembly Oracle number	Max. Weight [lbs] [kg]		Slip setting ring part number	Slip setting ring Oracle number	Insert part number	Insert Oracle number	Qty.
2.7/8 x 2.7/8	23108Y4	10114180-001			27695	10138962-001	24773	10138686-001	12
2.7/8 x 2.3/8	23108Y6	10114182-001			27694	10138960-001	29255	10139053-001	12
2.7/8 x 2.1/16	23108Y7	11383835-001			27812	10138968-001	29256	10139054-001	12
2.7/8 x 2	23108Y8	11383842-001			28821	10139051-001	29256	10139054-001	12
2.7/8 x 1.900	23108Y9	10177440-001			27811	10177445-001	29257	10377901-001	12
2.7/8 x 1.600	23108Y10	11363576-001			27810	10138966-001	29258	10139056-001	12
2.7/8 x 1.315	23108Y11	10138600-001			29001	10139052-001	29259	10139057-001	12
3.1/2 x 3.1/2	23108Y5	10114181-001			27813	10138969-001	24774	10138687-001	24
3.1/2 x 2.7/8	23108Y3	10138600-002			27695	10138962-001	30358	10139203-001	24
HYT									
Nominal x Pipe Size [inches]	Slip assembly part number	Slip assembly Oracle number	Max. Weight [lbs] [kg]		Slip setting ring part number	Slip setting ring Oracle number	Insert part number	Insert Oracle number	Qty.
2.7/8 x 2.7/8	39259Y2	10114188-002			39214-2	10140009-001	24773	10138586-001	16
2.7/8 x 2.3/8	39259Y4	10114188-001			39214-1	10140007-001	29255	10139053-001	16
3.1/2 x 3.1/2	39258Y2	10140026-001			39214-3	10140011-001	24774	10138687-001	32
3.1/2 x 2.7/8	39258Y4	10140028-001			39214-2	10140009-001	30358	10139203-001	32
MYT									
Nominal x Pipe Size [inches]	Slip assembly part number	Slip assembly Oracle number	Max. Weight [lbs] [kg]		Slip setting ring part number	Slip setting ring Oracle number	Insert part number	Insert Oracle number	Qty.
2.1/16 x 2.1/16	29343Y3	10139059-005			29350	10139084-001	29256	10139054-001	8
2.1/16 x 2.1/16	29343Y4	Contact NOV			29351	10139086-001	29256	10139054-001	8
2.1/16 x 1.900	29343Y5	10139059-006			29352	10139087-001	29257	10377901-001	8
2.1/16 x 1.660	29343Y6	10139059-007			29353	10139089-001	29258	10139056-001	8
2.1/16 x 1.315	29343Y7	Contact NOV			29354	10139091-001	29259	10139057-001	8
2.7/8 x 2.7/8	29343Y1	10139059-003			29348	10139081-001	24773	10138686-001	8
2.7/8 x 2.3/8	29343Y2	10139059-004			29345	10139078-001	29255	10139053-001	8



## COLLAR TYPE ELEVATORS A SERIES

### COLLAR TYPE ELEVATORS A SERIES

Center-latch elevators are for handling collar-type drill pipe, casing and tubing. All "A" type elevators are constructed in two halves of practically the same weight, providing proper balance and easier opening and closing. In open position, the elevator hangs ready for closing at any point below the upset of the pipe. All "A" type elevators feature latch and safety latch lock combinations. Safety features include operating handles to help prevent accidents to operators and an extra handle at the rear of the elevator for safer operation.



### TECHNICAL SPECIFICATIONS A SERIES

Type	Part number	Oracle number	Size		Load Rating [sTon/Tonne]	Max. Weight		Link type (min/max)	
			[inches]	[mm]		[lbs]	[kg]	[sTon]	[sTon]
TA	32387Y101	Contact NOV	2.7/8	73.1	35 / 32	57	26	100	100
TA	32387Y108	Contact NOV	2.7/8	73.1	35 / 32	57	26	100	100
TA	32387Y110	Contact NOV			35 / 32	57	26	100	100
TA	32387Y115	Contact NOV			35 / 32	57	26	100	100
TA	32387Y150	Contact NOV	1.050	26.7	35 / 32	57	26	100	100
TA	32387Y151	Contact NOV	1.050	26.7	35 / 32	57	26	100	100
TA	32387Y152	Contact NOV	1.31	27.9	35 / 32	57	26	100	100
TA	32387Y153	Contact NOV	1.31	27.9	35 / 32	57	26	100	100
TA	32387Y154	Contact NOV	1.66	42.2	35 / 32	57	26	100	100
TA	32387Y155	Contact NOV	1.66	42.2	35 / 32	57	26	100	100
TA	32387Y156	10139454-001	1.90	48.3	35 / 32	57	26	100	100
TA	32387Y157	Contact NOV	1.90	48.3	35 / 32	57	26	100	100
TA	32387Y158	Contact NOV	2.3/8	60.3	35 / 32	57	26	100	100
TA	32387Y159	10139454-002	2.3/8	60.3	35 / 32	57	26	100	100
TA	32387Y160	Contact NOV	2.7/8	73.1	35 / 32	57	26	100	100
TA	32387Y161	10139454-003	2.7/8	73.1	35 / 32	57	26	100	100
TA	32387Y915	Contact NOV			35 / 32	57	26	100	100
TMA	50006310Y101	10490428-001	2.7/8	73.1	100 / 91	121	55	250	350
TMA	50006310Y102	10490428-004	3.1/2	88.9	100 / 91	121	55	250	350
TMA	50006310Y103	10697511-001	3.1/2	88.9	100 / 91	121	55	250	350
TMA	50006310Y104	10697512-001	4	101.6	100 / 91	121	55	250	350
TMA	50006310Y105	10697513-001	4.1/2	114.3	100 / 91	121	55	250	350
TMA	50006310Y108	10697514-001	2.7/8	73.1	100 / 91	121	55	250	350
TMA	50006310Y109	10697515-001	2.3/8	60.3	100 / 91	121	55	250	350
TMA	50006310Y110	10490428-007	2.3/8	60.3	100 / 91	121	55	250	350
TMA	50006310Y115	10697180-001	2.3/8	60.3	100 / 91	121	55	250	350
TMA	50006310Y129	10091046-001	4.1/2	114.3	100 / 91	121	55	250	350
TMA	50006310Y158	10490428-013	2.3/8	60.3	100 / 91	121	55	250	350
TMA	50006310Y159	10490476-016	2.3/8	60.3	100 / 91	121	55	250	350
TMA	50006310Y160	10111418-001	2.7/8	73.1	100 / 91	121	55	250	350
TMA	50006310Y161	10490428-022	2.7/8	73.1	100 / 91	121	55	250	350
TMA	50006310Y162	10091048-001	3.1/2	88.9	100 / 91	121	55	250	350
TMA	50006310Y163	10490428-028	3.1/2	88.9	100 / 91	121	55	250	350

## TECHNICAL SPECIFICATIONS A SERIES

Type	Part number	Oracle number	Size	Size	Load Rating	Max. Weight		Link type (min/max)	
			[inches]	[mm]		[sTon/ Tonne]	[lbs]	[kg]	[sTon]
TMA	50006310Y164	10490428-031	4	101.6	100 / 91	121	55	250	350
TMA	50006310Y165	10490428-034	4	101.6	100 / 91	121	55	250	350
TMA	50006310Y167	10490428-037	4.1/2	114.3	100 / 91	121	55	250	350
TMA	50006310Y177	10697532-001	4.1/8	101.7	100 / 91	121	55	250	350
TMA	50006310Y206	10490428-040	3.1/8	76.3	100 / 91	121	55	250	350
TMA	50006310Y209	10697534-001	3.1/2	88.9	100 / 91	121	55	250	350
TMA	50006310Y211	10490428-043	3.3/4	95.25	100 / 91	121	55	250	350
TMA	50006310Y213	10490428-046	4	101.6	100 / 91	121	55	250	350
TMA	50006310Y435	10490428-049	4.3/4	120.7	100 / 91	121	55	250	350
TMA	50006310Y437	10697539-001	3.5/16	84.1	100 / 91	121	55	250	350
TMA	50006310Y466	Contact NOV			100 / 91	121	55	250	350
TMA	50006310Y519	10697540-001	4.1/8	101.7	100 / 91	121	55	250	350
TMA	50006310Y548	10697541-001	4.1/4	108	100 / 91	121	55	250	350
TMA	50006310Y625	10697542-001	3.1/2	88.9	100 / 91	121	55	250	350
TMA	50006310Y674	Contact NOV	4.1/4	108	100 / 91	121	55	250	350
TMA	50006310Y685	10697547-001	3	76.2	100 / 91	121	55	250	350
TMA	50006310Y735	Contact NOV	3.1/8	76.3	100 / 91	121	55	250	350
TMA	50006310Y748	10697544-001	3.1/4	82.6	100 / 91	121	55	250	350
RGA	201360Y101	10193652-001	2.7/8	73.1	200 / 181	304	138	250	350
RGA	201360Y103	Contact NOV	3.1/2	88.9	200 / 181	304	138	250	350
RGA	201360Y109	10137589-001	2.3/8	60.3	200 / 181	304	138	250	350
RGA	201360Y111	10177408-001	2.7/8	73.1	200 / 181	304	138	250	350
RGA	201360Y115	Contact NOV	2.3/8	60.3	200 / 181	304	138	250	350
RGA	201360Y129	10137590-001	4.1/2	114.3	200 / 181	304	138	250	350
RGA	201360Y130	Contact NOV	4.3/4	120.7	200 / 181	304	138	250	350
RGA	201360Y158	10137591-001	2.3/8	60.3	200 / 181	304	138	250	350
RGA	201360Y159	Contact NOV	2.3/8	60.3	200 / 181	304	138	250	350
RGA	201360Y160	10137592-001	2.7/8	73.1	200 / 181	304	138	250	350
RGA	201360Y161	10862406-001	2.7/8	73.1	200 / 181	304	138	250	350
RGA	201360Y162	10670333-001	3.1/2	88.9	200 / 181	304	138	250	350
RGA	201360Y163	Contact NOV	3.1/2	88.9	200 / 181	304	138	250	350
RGA	201360Y164	10670334-001	4	101.6	200 / 181	304	138	250	350
RGA	201360Y167	Contact NOV	4.1/2	114.3	200 / 181	304	138	250	350
RGA	201360Y206	10137590-002	3.1/8	76.3	200 / 181	304	138	250	350
RGA	201360Y207	Contact NOV	3.1/4	82.6	200 / 181	304	138	250	350
RGA	201360Y209	Contact NOV	3.1/2	88.9	200 / 181	304	138	250	350

## TECHNICAL SPECIFICATIONS A SERIES

Type	Part number	Oracle number	Size	Size	Load Rating	Max. Weight		Link type (min/max)	
			[inches]	[mm]		[sTon/ Tonne]	[lbs]	[kg]	[sTon]
GA	200034Y103	10153691-045	3.1/5	81.3	350 / 318	546	248	250	500
GA	200034Y105	10153691-046	4	101.6	350 / 318	546	248	250	500
GA	200034Y106	10153691-103	4.1/2	114.3	350 / 318	546	248	250	500
GA	200034Y107	10153691-104	5.1/2	139.7	350 / 318	546	248	250	500
GA	200034Y129	10153691-002	4.1/2	114.3	350 / 318	546	248	250	500
GA	200034Y130	Contact NOV	4.3/4	120.7	350 / 318	546	248	250	500
GA	200034Y131	Contact NOV	5	127	350 / 318	546	248	250	500
GA	200034Y132	10153691-105	5.5	139.7	350 / 318	546	248	250	500
GA	200034Y135	10153691-052	6.5/8	168.3	350 / 318	546	248	250	500
GA	200034Y136	10153691-106	7	177.8	350 / 318	546	248	250	500
GA	200034Y163	Contact NOV	3.5	88.9	350 / 318	546	248	250	500
GA	200034Y167	Contact NOV	4.5	114.3	350 / 318	546	248	250	500
GA	200034Y179	Contact NOV	5.1/4	133.4	350 / 318	546	248	250	500
GA	200034Y354	Contact NOV	4.3/4	120.7	350 / 318	546	248	250	500
GA	200034Y372	Contact NOV	7	177.8	350 / 318	546	248	250	500
GA	200034Y373	Contact NOV	6.1/2	165.1	350 / 318	546	248	250	500
GA	200034Y742	Contact NOV	6.1/2	165.1	350 / 318	546	248	250	500
GA AO*	200035Y103	10848081-001	3.1/2	88.9	350 / 318	725	330	250	500
GA AO*	200035Y106	10848081-002	4.1/2	114.3	350 / 318	725	330	250	500
GA AO*	200035Y132	10848081-003	5.1/2	139.7	350 / 318	725	330	250	500
GA AO*	200035Y135	10848081-004	6.5/8	153.1	350 / 318	725	330	250	500
GA AO*	200035Y136	10848081-006	7	177.8	350 / 318	725	330	250	500
GA AO*	200035Y177	10848081-005	4.1/8	104.8	350 / 318	725	330	250	500
GA AO*	200035Y354	10848081-007	Contact NOV		350 / 318	725	330	250	500
GA AO*	200035Y373	10848081-008	6.1/2	165.1	350 / 318	725	330	250	500
GA AO*	200035Y435	10848081-009	4.3/4	120.7	350 / 318	725	330	250	500
GA AO*	200035Y742	10848081-010	6.1/2	165.1	350 / 318	725	330	250	500
GGA	201385Y137	10153853-036	7.5/8	193.7	350 / 318	672	305	250	500
GGA	201385Y931	10153853-002	7.3/8	187.3	350 / 318	672	305	250	500
GGA AO*	201380Y137	11019230-001-01	7.5/8	193.7	350 / 318	998	454	250	500
GGA AO*	201380Y753	Contact NOV	8.1/4	209.6	350 / 318	998	454	250	500

\* AO = Air Operated

## TECHNICAL SPECIFICATIONS A SERIES

Type	Part number	Oracle number	Size	Size	Load Rating	Max. Weight		Link type (min/max)	
			[inches]	[mm]		[lbs]	[kg]	[sTon]	[sTon]
TA	200000Y131	10111254-005	5	127	100 / 91	260	118	250	350
TA	200000Y132	10111254-007	5.1/2	139.7	100 / 91	260	118	250	350
TA	200000Y136	10111254-009	7	177.8	100 / 91	260	118	250	350
TA	200000Y139	10111254-012	8.5/8	219.8	100 / 91	260	118	250	350
TA	200000Y334	10111254-013	8	203.2	100 / 91	260	118	250	350
TA	200000Y336	10111254-014	8	203.2	100 / 91	260	118	250	350
TA	200000Y337	10111254-015	6.1/4	158.8	100 / 91	260	118	250	350
TA	200000Y348	10111254-016	6.1/4	158.8	100 / 91	260	118	250	350
TA	200000Y349	10111254-017	Contact NOV		100 / 91	260	118	250	350
TA	200000Y354	10111254-018	4.3/4	120.7	100 / 91	260	118	250	350
TA	200000Y373	10111254-020	6.1/2	165.1	100 / 91	260	118	250	350
TA	200000Y387	10111254-001	6.3/4	171.9	100 / 91	260	118	250	350
TA	200000Y422	10111254-021	8.1/4	209.6	100 / 91	260	118	250	350
TA	200000Y435	10111254-022	4.3/4	120.7	100 / 91	260	118	250	350
TA AO*	35636Y129	10139821-003	4.1/2	114.3	150 / 136	530	240	350	500
TA AO*	35636Y131	10139821-012	5	127	150 / 136	530	240	350	500
TA AO*	35636Y132	10139821-004	5.1/2	139.7	150 / 136	530	240	350	500
TA AO*	35636Y135	10139821-005	6.5/8	168.3	150 / 136	530	240	350	500
TA AO*	35636Y136	10139821-006	7	177.8	150 / 136	530	240	350	500
TA AO*	35636Y167	10139821-013	4.1/2	114.3	150 / 136	530	240	350	500
TA AO*	35636Y179	10139821-014	5.1/4	133.4	150 / 136	530	240	350	500
TA AO*	35636Y334	10139821-010	8	203.2	150 / 136	530	240	350	500
TA AO*	35636Y336	10139821-007	8	203.2	150 / 136	530	240	350	500
TA AO*	35636Y338	10139821-015	6.3/4	171.9	150 / 136	530	240	350	500
TA AO*	35636Y339	10139821-016	7.3/4	196.9	150 / 136	530	240	350	500
TA AO*	35636Y348	10139821-017	6.1/4	158.8	150 / 136	530	240	350	500
TA AO*	35636Y354	10139821-011	4.3/4	120.7	150 / 136	530	240	350	500
TA AO*	35636Y373	10139821-018	6.1/2	165.1	150 / 136	530	240	350	500
TA AO*	35636Y387	10139821-008	6.3/4	171.5	150 / 136	530	240	350	500
TA AO*	35636Y422	10139821-019	8.1/4	209.6	150 / 136	530	240	350	500
TA AO*	35636Y426	10139821-020	8.1/2	215.9	150 / 136	530	240	350	500
TA AO*	35636Y435	10139821-021	4.3/4	120.7	150 / 136	530	240	350	500

\* AO = Air Operated

## TECHNICAL SPECIFICATIONS A SERIES

Type	Part number	Oracle number	Size	Size	Load Rating	Max. Weight		Link type (min/max)	
			[inches]	[mm]		[lbs]	[kg]	[sTon]	[sTon]
TA	32754Y105	10180343-004	4	101.6	150 / 136	370	168	350	500
TA	32754Y106	10180343-028	4.1/2	114.3	150 / 136	370	168	350	500
TA	32754Y129	10180343-005	4.1/2	114.3	150 / 136	370	168	350	500
TA	32754Y130	10180343-029	4.3/4	120.7	150 / 136	370	168	350	500
TA	32754Y131	10180343-006	5	127	150 / 136	370	168	350	500
TA	32754Y132	10180343-007	5.1/2	139.7	150 / 136	370	168	350	500
TA	32754Y133	10180343-008	5.3/4	146.1	150 / 136	370	168	350	500
TA	32754Y134	10180343-030	6	152.4	150 / 136	370	168	350	500
TA	32754Y135	10180343-009	6.5/8	168.3	150 / 136	370	168	350	500
TA	32754Y136	10180343-010	7	177.8	150 / 136	370	168	350	500
TA	32754Y137	10180343-023	7.5/8	193.7	150 / 136	370	168	350	500
TA	32754Y139	10161739-001	8.5/8	219.1	150 / 136	370	168	350	500
TA	32754Y167	10180343-011	4.1/2	114.3	150 / 136	370	168	350	500
TA	32754Y180	10180343-031	5.1/2	139.7	150 / 136	370	168	350	500
TA	32754Y181	10180343-032	5.3/4	146.1	150 / 136	370	168	350	500
TA	32754Y188	10180343-033	7.1/2	190.5	150 / 136	370	168	350	500
TA	32754Y219	Contact NOV	5.1/2	139.7	150 / 136	370	168	350	500
TA	32754Y222	10180343-034	5.3/4	146.1	150 / 136	370	168	350	500
TA	32754Y331	10180343-035	6.3/8	161.9	150 / 136	370	168	350	500
TA	32754Y334	10180343-013	8	203.2	150 / 136	370	168	350	500
TA	32754Y336	10111340-001	8	203.2	150 / 136	370	168	350	500
TA	32754Y337	10180343-015	6.1/4	158.8	150 / 136	370	168	350	500
TA	32754Y338	10180343-016	6.3/4	171.5	150 / 136	370	168	350	500
TA	32754Y339	10180343-036	7.3/4	196.9	150 / 136	370	168	350	500
TA	32754Y347	10180343-037	8.1/4	209.6	150 / 136	370	168	350	500
TA	32754Y348	10180343-038	6.1/4	158.8	150 / 136	370	168	350	500
TA	32754Y354	10180343-017	4.3/4	120.7	150 / 136	370	168	350	500
TA	32754Y357	10180343-039	7.1/4	184.2	150 / 136	370	168	350	500
TA	32754Y361	10180343-018	7	177.8	150 / 136	370	168	350	500
TA	32754Y362	10180343-040	6	152.4	150 / 136	370	168	350	500
TA	32754Y372	10180343-041	7	177.8	150 / 136	370	168	350	500
TA	32754Y373	10111341-001	6.1/2	165.1	150 / 136	370	168	350	500
TA	32754Y387	10180343-019	6.3/4	171.5	150 / 136	370	168	350	500
TA	32754Y411	10978748-001	5.1/2	139.7	150 / 136	370	168	350	500
TA	32754Y422	10180343-020	8.1/4	209.6	150 / 136	370	168	350	500
TA	32754Y426	10180343-024	8.1/2	215.9	150 / 136	370	168	350	500
TA	32754Y435	10111342-001	4.3/4	120.7	150 / 136	370	168	350	500

## TECHNICAL SPECIFICATIONS A SERIES

Type	Part number	Oracle number	Size	Size	Load Rating	Max. Weight		Link type (min/max)	
			[inches]	[mm]		[lbs]	[kg]	[sTon]	[sTon]
TA	32754Y552	10180343-042	5	127	150 / 136	370	168	350	500
TA	32754Y580	10180343-021	8.1/2	215.9	150 / 136	370	168	350	500
TA	32754Y667	10180343-043	6.5/8	168.3	150 / 136	370	168	350	500
TA	32754Y920	10180343-022	6.3/4	171.5	150 / 136	370	168	350	500
TA	39342Y140	Contact NOV	9	228.6	150 / 136	524	238	350	500
TA	39342Y141	10111364-005	9.5/8	244.5	150 / 136	524	238	350	500
TA	39342Y142	10925629-001	10.3/4	273.1	150 / 136	524	238	350	500
TA	39342Y195	10111364-006	10	254	150 / 136	524	238	350	500
TA	39342Y196	Contact NOV	11.1/4	285.8	150 / 136	524	238	350	500
TA	39342Y226	Contact NOV	8.3/4	222.3	150 / 136	524	238	350	500
TA	39342Y230	Contact NOV	11	279.4	150 / 136	524	238	350	500
TA	39342Y346	10111364-007	9.1/2	241.3	150 / 136	524	238	350	500
TA	39342Y356	10111364-010	9	228.6	150 / 136	524	238	350	500
TA	39342Y367	10111364-008	9.3/4	247.7	150 / 136	524	238	350	500
TA	39342Y370	10111364-001	9.1/2	214.3	150 / 136	524	238	350	500
TA	39342Y419	Contact NOV	11	279.4	150 / 136	524	238	350	500
TA	39342Y427	Contact NOV	9	228.6	150 / 136	524	238	350	500
TA AO*	39343Y139	10140042-005	8.5/8	219.1	150 / 136	550	249	350	500
TA AO*	39343Y141	10140042-006	9.5/8	244.5	150 / 136	550	249	350	500
TA AO*	39343Y346	10140042-007	8	203.2	150 / 136	550	249	350	500
TA AO*	39343Y367	10140042-008	9.3/4	247.7	150 / 136	550	249	350	500
TA AO*	39343Y370	10140042-002	9.1/2	241.3	150 / 136	550	249	350	500
TA AO*	39343Y427	10140042-009	9	228.6	150 / 136	550	249	350	500

\*AO = Air Operated

## 18° TYPE ELEVATORS G SERIES

G series elevators are constructed in two halves of practically the same weight for better balance, making them easier to handle; easier to latch on and take off the pipe. In open position, a G series elevator hangs ready for closing at any point below the upset of the pipe. Safety features include guarded operating handles to help prevent accidents to operators and an extra handle at the rear of the elevator for easier, safer operation.



GG series elevator

### TECHNICAL SPECIFICATIONS G SERIES

Type	Part number	Oracle number	Size	Size	Load Rating	Max. Weight		Link type (min/max)	
			[inches]	[mm]		[lbs]	[kg]	[sTon]	[sTon]
MG	30157Y116	10114187-001	2.3/8	60.3	100 / 91	233	106	250	350
MG	30157Y117	10114187-016	2.7/8	73.1	100 / 91	233	106	250	350
MG	30157Y118	10114187-005	2.7/8	73.1	100 / 91	233	106	250	350
MG	30157Y119	10114187-014	3.1/2	88.9	100 / 91	233	106	250	350
MG	30157Y120	10114187-009	3.1/2	88.9	100 / 91	233	106	250	350
MG	30157Y121	10114187-015	4	101.6	100 / 91	233	106	250	350
MG	30157Y122	10114187-012	4.1/2	114.3	100 / 91	233	106	250	350
MG	30157Y123	10114187-011	4.1/2	114.3	100 / 91	233	106	250	350
MG	30157Y773	Contact NOV	2.7/8	73.1	100 / 91	233	106	250	350
MG	30157Y816	Contact NOV	2.7/8	73.1	100 / 91	233	106	250	350
RGG	200680Y116	10022994-001	2.3/8	60.3	150 / 136	304	138	250	350
RGG	200680Y117	10137456-005	2.7/8	73.1	150 / 136	304	138	250	350
RGG	200680Y118	10111282-001	2.7/8	73.1	150 / 136	304	138	250	350
RGG	200680Y119	10137456-009	3.1/2	88.9	150 / 136	304	138	250	350
RGG	200680Y120	10137456-010	3.1/2	88.9	150 / 136	304	138	250	350
MGG	35005Y119	10153691-058	3.1/2	88.9	250 / 227	608	276	250	500
MGG	35005Y120	10033192-001	3.1/2	88.9	250 / 227	608	276	250	500
MGG	35005Y121	10153691-067	4	101.6	250 / 227	608	276	250	500
MGG	35005Y122	10153691-071	4	101.6	250 / 227	608	276	250	500
MGG	35005Y123	10381224-001	4.1/2	114.3	250 / 227	608	276	250	500
MGG	35005Y124	10153691-078	5.1/2	139.7	250 / 227	608	276	250	500
MGG	35005Y451	Contact NOV	Contact NOV		250 / 227	608	276	250	500
MGG	35005Y509	Contact NOV	5	127	250 / 227	608	276	250	500
MGG	35005Y525	Contact NOV	3.1/2	88.9	250 / 227	608	276	250	500
MGG	35005Y798	10153691-044	4	101.6	250 / 227	608	276	250	500
MGG AO*	36056Y118	10139835-008	3.1/2	88.9	250 / 227	720	327	250	500
MGG AO*	36056Y119	10139835-001	3.1/2	88.9	250 / 227	720	327	250	500
MGG AO*	36056Y120	10139835-013	3.1/2	88.9	250 / 227	720	327	250	500
MGG AO*	36056Y121	10139835-003	4	101.6	250 / 227	720	327	250	500
MGG AO*	36056Y122	10139835-004	4	101.6	250 / 227	720	327	250	500
MGG AO*	36056Y123	10139835-025	4.1/2	139.7	250 / 227	720	327	250	500
MGG AO*	36056Y124	10139835-026	5.1/2	139.7	250 / 227	720	327	250	500
MGG AO*	36056Y509	10139835-027	5	127	250 / 227	720	327	250	500

\* AO = Air Operated

## TECHNICAL SPECIFICATIONS G SERIES

Type	Part number*	Oracle number	Size	Size	Load Rating	Max. Weight		Link type (min/max)	
			[inch]	[mm]		[lbs]	[kg]	[sTon]	[sTon]
MGG AO*	36056Y525	10139835-028	3.1/2	88.9	250 / 227	720	327	250	500
GG	31068Y120	Contact NOV	3.1/2	88.9	350 / 318	693	314	250	500
GG	31068Y121	10153853-010	4	101.6	350 / 318	693	314	250	500
GG	31068Y122	10153853-015	4	101.6	350 / 318	693	314	250	500
GG	31068Y123	10111324-001	4.1/2	114.3	350 / 318	693	314	250	500
GG	31068Y124	10153853-021	5.1/2	139.7	350 / 318	693	314	250	500
GG	31068Y756	10153853-025	5	127	350 / 318	693	314	250	500
GG AO*	35143Y121	10139758-003	4	101.6	350 / 318	720	327	250	500
GG AO*	35143Y122	10139758-006	4	101.6	350 / 318	720	327	250	500
GG AO*	35143Y123	10139758-009	5	127	350 / 318	720	327	250	500
GG AO*	35143Y124	10139758-012	5.1/2	139.7	350 / 318	720	327	250	500
HGG	70013Y106	10146330-003	4.1/2	114.3	500 / 454	1,029	467	250	500
HGG	70013Y121	10146327-001	4	101.6	500 / 454	1,029	467	250	500
HGG	70013Y122	10146328-001	4	101.6	500 / 454	1,029	467	250	500
HGG	70013Y123	10146329-001	4.1/2	114.3	500 / 454	1,029	467	250	500
HGG	70013Y124	10146330-001	5.1/2	139.7	500 / 454	1,029	467	250	500
HGG	70013Y136	10146330-004	7	177.8	500 / 454	1,029	467	250	500
HGG	70013Y655	Contact NOV	6.5/8	168.3	500 / 454	1,029	467	250	500
HGG	70013Y678	10146330-005	Contact NOV		500 / 454	1,029	467	250	500
HGG	70013Y740	10490429-001	6.5/8	168.3	500 / 454	1,029	467	250	500
HGG	70013Y756	10146330-007	5	127	500 / 454	1,029	467	250	500
HGG	70013Y770	10146330-008	5.1/2	139.7	500 / 454	1,029	467	250	500
HGG	70013Y774	10146330-009	Contact NOV		500 / 454	1,029	467	250	500
HGG	70013Y789	10490429-002	6	152.4	500 / 454	1,029	467	250	500
HGG AO*	70222Y122	10146383-001	4.1/2	114.3	500 / 454	1,441	654	250	500
HGG AO*	70222Y123	10146383-003	4.1/2	114.3	500 / 454	1,441	654	250	500
HGG AO*	70222Y124	10146383-005	5.1/2	139.7	500 / 454	1,441	654	250	500
HGG AO*	70222Y678	10146383-007	5.1/2	139.7	500 / 454	1,441	654	250	500
HGG AO*	70222Y740	10146383-009	6.5/8	168.3	500 / 454	1,441	654	250	500
HGG AO*	70222Y756	10146383-017	5	127	500 / 454	1,441	654	250	500
HGG AO*	70222Y770	10146383-011	5.1/2	139.7	500 / 454	1,441	654	250	500
HGG AO*	70222Y789	10146383-013	5.7/8	149.2	500 / 454	1,441	654	250	500

\*AO = Air Operated

## TECHNICAL SPECIFICATIONS G SERIES WITH WEAR BUSHING

Type	Part number	Oracle number	Size	Size	Load Rating	Max. Weight		Link type (min/max)	
			[inches]	[mm]		[lbs]	[kg]	[sTon]	[sTon]
MGG	200058Y119	10359122-005	3.1/2	88.9	250 / 227	585	266	250	500
MGG	200058Y120	10359122-009	3.1/2	88.9	250 / 227	585	266	250	500
MGG	200058Y121	10359122-035	4	101.6	250 / 227	585	266	250	500
MGG	200058Y122	10359122-016	4	101.6	250 / 227	585	266	250	500
MGG	200058Y123	10359122-001	4.1/2	114.3	250 / 227	585	266	250	500



## TECHNICAL SPECIFICATIONS G SERIES WITH WEAR BUSHING

Type	Part number	Oracle number	Size	Size	Load Rating	Max. Weight		Link type (min/max)	
			[inches]	[mm]		[sTon/Tonne]	[lbs]	[kg]	[sTon]
MGG	200058Y124	10359122-036	5.1/2	139.7	250 / 227	585	266	250	500
MGG	200058Y798	10359122-037	4	101.6	250 / 227	585	266	250	500
MGG AO*	200057Y119	10021901-001	3.1/2	88.9	250 / 227	730	332	250	500
MGG AO*	200057Y120	10021901-007	3.1/2	88.9	250 / 227	730	332	250	500
MGG AO*	200057Y121	10021901-015	4	101.6	250 / 227	730	332	250	500
MGG AO*	200057Y122	10021901-017	4	101.6	250 / 227	730	332	250	500
MGG AO*	200057Y123	10021901-018	4.1/2	114.3	250 / 227	730	332	250	500
GG	200056Y120	Contact NOV	3.1/2	88.9	350 / 318	680	310	250	500
GG	200056Y121	10021851-005	4	101.6	350 / 318	680	310	250	500
GG	200056Y122	10021851-009	4	101.6	350 / 318	680	310	250	500
GG	200056Y123	10021851-001	4.1/2	114.3	350 / 318	680	310	250	500
GG	200056Y124	10021851-019	5.1/2	139.7	350 / 318	680	310	250	500
GG	200056Y756	10021851-023	5	127	350 / 318	680	310	250	500
GG	200056Y805	10021851-014	4.1/5	114.3	350 / 318	680	310	250	500
GG AO*	200024Y121	10153678-012	4	101.6	350 / 318	1,010	459	250	500
GG AO*	200024Y122	10153678-013	4	101.6	350 / 318	1,010	459	250	500
GG AO*	200024Y123	10359113-001	4.1/2	114.3	350 / 318	1,010	459	250	500
GG AO*	200024Y124	10153678-007	5.1/2	139.7	350 / 318	1,010	459	250	500
GG AO*	200024Y803	Contact NOV	Contact NOV		350 / 318	1,010	459	250	500
GG AO*	200024Y805	10153679-014	Contact NOV		350 / 318	1,010	459	250	500
HGG	200060Y121	10137268-004	4	101.6	500 / 454	1,010	459	250	500
HGG	200060Y122	10137268-005	4.1/2	114.3	500 / 454	1,010	459	250	500
HGG	200060Y123	10111257-001	4.1/2	114.3	500 / 454	1,010	459	250	500
HGG	200060Y124	10022107-001	5.1/2	139.7	500 / 454	1,010	459	250	500
HGG AO*	200059Y122	10706059-009	5.1/2	139.7	500 / 454	1,510	685	250	500
HGG AO*	200059Y123	10021972-001	5	127	500 / 454	1,510	685	250	500
HGG AO*	200059Y124	10706059-001	5.1/2	139.7	500 / 454	1,510	685	250	500
HGG AO*	200059Y740	Contact NOV	Contact NOV		500 / 454	1,510	685	250	500
HGG AO*	200059Y756	10706059-008	5	127	500 / 454	1,510	685	250	500
HGG	200062Y655	Contact NOV	6.5/8	168.3	500 / 454	1,010	459	250	500
HGG	200062Y678	10137279-003	5.1/2	139.7	500 / 454	1,010	459	250	500
HGG	200062Y740	10122145-001	6.5/8	168.3	500 / 454	1,010	459	250	500
HGG	200062Y770	10137279-006	6	152.4	500 / 454	1,010	459	250	500
HGG AO*	200061Y678	10153768-005	5.1/2	139.7	500 / 454	1,510	685	250	500
HGG AO*	200061Y740	10022115-001	6.5/8	168.3	500 / 454	1,510	685	250	500
HGG AO*	200061Y770	10153768-002	5.1/2	139.7	500 / 454	1,510	685	250	500
HGG AO*	200061Y789	10111259-001	5.7/8	149.2	500 / 454	1,510	685	250	500

\* AO = Air Operated

### OPTIONAL EQUIPMENT PART NUMBERS

Part number	Oracle number	Description
15320	10019468-001	Balancing strap for center latch elevators 350 sTon links and smaller
26905	10027972-001	Balancing strap for center latch elevators 500 sTon links

## X SERIES SIDE DOOR ELEVATORS

The X-series elevators handle all sizes of collar-type tubing, drill pipe and casing. The SMX has a patented latch & latch lock arrangement mounted on the elevator door. The handle protects the latch from accidental opening. Both latches operate from a single handle.

The SLX-elevators are offered alternatively to the SMX-elevators. They provide proven technology and economics.

The SX-elevator is a mid-sized elevator with higher rating compared to the SLX and SMX, while the SLX DD elevator provides for the largest sizes.



SMX elevator



SLX elevator

### TECHNICAL SPECIFICATIONS SLX SERIES

Part number SLX	Oracle number	Load Rating [sTon/Tonne]	Size [inches]	Size [mm]	Max. Weight		Link type (min/max)	
					[lbs]	[kg]	[sTon]	[sTon]
33734Y101	Contact NOV	65 / 59	2.7/8	73.1	50	23	100	250
33734Y115	Contact NOV	65 / 59	2.3/8	60.3	50	23	100	250
33734Y154	Contact NOV	65 / 59	1.660	42.2	50	23	100	250
33734Y156	Contact NOV	65 / 59	1.900	48.3	50	23	100	250
33734Y157	10139639-001	65 / 59	1.900	48.3	50	23	100	250
33734Y158	Contact NOV	65 / 59	2.3/4	69.9	50	23	100	250
33734Y159	10139639-002	65 / 59	2.3/8	60.3	50	23	100	250
33734Y160	Contact NOV	65 / 59	2.7/8	73.1	50	23	100	250
33734Y161	Contact NOV	65 / 59	2.7/8	73.1	50	23	100	250
33734Y735	Contact NOV	65 / 59	3.1/8	79.4	50	23	100	250
33693Y101	10139618-009	100 / 90	2.7/8	73.1	77	35	250	350
33693Y108	Contact NOV	100 / 90	2.7/8	73.1	77	35	250	350
33693Y110	10139618-010	100 / 90	2.3/8	60.3	77	35	250	350
33693Y115	Contact NOV	100 / 90	2.3/8	60.3	77	35	250	350
33693Y158	10139618-002	100 / 90	2.3/8	60.3	77	35	250	350
33693Y159	10139618-003	100 / 90	2.3/8	60.3	77	35	250	350
33693Y160	10139618-004	100 / 90	2.7/8	73.1	77	35	250	350
33693Y161	10139618-005	100 / 90	2.7/8	73.1	77	35	250	350
33693Y206	10139618-006	100 / 90	3.1/8	79.4	77	35	250	350
33693Y625	Contact NOV	100 / 90	3.1/2	88.9	77	35	250	350
33809Y102	Contact NOV	100 / 90	3.1/2	88.9	114	58	250	350
33809Y103	Contact NOV	100 / 90	3.1/2	88.9	114	58	250	350
33809Y162	10143542-033	100 / 90	3.1/2	88.9	114	58	250	350
33809Y163	10143542-036	100 / 90	3.1/2	88.9	114	58	250	350
33809Y164	10143542-038	100 / 90	4	101.6	114	58	250	350
33809Y165	Contact NOV	100 / 90	4.1/8	104.8	114	58	250	350
33809Y177	10139643-001	100 / 90	4.1/8	104.8	114	58	250	350
33809Y209	Contact NOV	100 / 90	3.1/2	88.9	114	58	250	350
33809Y211	10143542-075	100 / 90	3.3/4	95.3	114	58	250	350
33809Y519	Contact NOV	100 / 90	4.1/8	104.8	114	58	250	350
33809Y548	Contact NOV	100 / 90	4.1/4	108	114	58	250	350
33809Y582	Contact NOV	100 / 90	3.3/4	95.3	114	58	250	350
33809Y674	Contact NOV	100 / 90	4.1/4	108	114	58	250	350
33809Y795	10143542-056	100 / 90	3.3/8	85.7	114	58	250	350
33809Y862	10143542-088	100 / 90	3.3/4	95.3	114	58	250	350

Part number SLX	Oracle number	Load Rating [sTon/Tonne]	Size [inches]	Size [mm]	Max. Weight		Link type (min/max)	
					[lbs]	[kg]	[sTon]	[sTon]
33854Y105	Contact NOV	100 / 90	4	101.6	145	66	250	350
33854Y106	Contact NOV	100 / 90	4.1/2	114.3	145	66	250	350
33854Y107	Contact NOV	100 / 90	5.1/2	126.2	145	66	250	350
33854Y129	10161740-001	100 / 90	4.1/2	114.3	145	66	250	350
33854Y130	Contact NOV	100 / 90	4.3/4	120.7	145	66	250	350
33854Y131	10161740-018	100 / 90	5	127	145	66	250	350
33854Y132	10161740-008	100 / 90	5.1/2	139.7	145	66	250	350
33854Y133	Contact NOV	100 / 90	5.3/4	146.1	145	66	250	350
33854Y134	10143542-089	100 / 90	6	152.4	145	66	250	350
33854Y167	Contact NOV	100 / 90	4.1/2	114.3	145	66	250	350
33854Y179	Contact NOV	100 / 90	5.1/4	133.4	145	66	250	350
33854Y180	Contact NOV	100 / 90	5.1/2	139.7	145	66	250	350
33854Y181	Contact NOV	100 / 90	5.3/4	146.1	145	66	250	350
33854Y215	Contact NOV	100 / 90	4.1/2	114.3	145	66	250	350
33854Y219	Contact NOV	100 / 90	5.1/4	133.1	145	66	250	350
33854Y345	10143542-052	100 / 90	4.3/4	120.7	145	66	250	350
33854Y354	Contact NOV	100 / 90	4.3/4	120.7	145	66	250	350
33854Y411	Contact NOV	100 / 90	5.1/2	139.7	145	66	250	350
33854Y435	10161740-016	100 / 90	4.3/4	120.7	145	66	250	350
33854Y530	Contact NOV	100 / 90	5	127	145	66	250	350
33854Y552	Contact NOV	100 / 90	5	127	145	66	250	350
31239Y132	10139410-001	150 / 136	5.1/2	139.7	326	148	350	500
31239Y133	10143542-030	150 / 136	5.3/4	146.1	326	148	350	500
31239Y134	10143542-089	150 / 136	6	152.4	326	148	350	500
31239Y135	10139410-007	150 / 136	6.5/8	168.3	326	148	350	500
31239Y136	10139410-011	150 / 136	7	177.8	326	148	350	500
31239Y137	10139410-015	150 / 136	7.5/8	193.7	326	148	350	500
31239Y139	10139410-018	150 / 136	8.5/8	219.1	326	148	350	500
31239Y181	10143542-073	150 / 136	5.3/4	146.1	326	148	350	500
31239Y222	Contact NOV	150 / 136	5.3/4	146.1	326	148	350	500
31239Y331	Contact NOV	150 / 136	6.3/4	171.5	326	148	350	500
31239Y334	10034495-010	150 / 136	8	203.2	326	148	350	500
31239Y336	Contact NOV	150 / 136	8	203.2	326	148	350	500
31239Y337	10139410-026	150 / 136	6.1/4	158.8	326	148	350	500
31239Y338	Contact NOV	150 / 136	6.3/4	171.5	326	148	350	500
31239Y339	Contact NOV	150 / 136	7.3/4	196.9	326	148	350	500
31239Y347	Contact NOV	150 / 136	8.1/4	209.6	326	148	350	500
31239Y348	Contact NOV	150 / 136	6.1/4	158.8	326	148	350	500
31239Y355	Contact NOV	150 / 136	7.1/4	184.2	326	148	350	500
31239Y357	Contact NOV	150 / 136	7.1/4	184.2	326	148	350	500
31239Y361	Contact NOV	150 / 136	7	177.8	326	148	350	500
31239Y362	Contact NOV	150 / 136	7	177.8	326	148	350	500

Part number SLX	Oracle number	Load Rating [sTon/Tonne]	Size [inches]	Size [mm]	Max. Weight		Link type (min/max)	
					[lbs]	[kg]	[sTon]	[sTon]
31239Y372	Contact NOV	150 / 136	7	177.8	326	148	350	500
31239Y373	Contact NOV	150 / 136	6.1/2	171.5	326	148	350	500
31239Y387	Contact NOV	150 / 136	6.3/4	171.5	326	148	350	500
31239Y409	Contact NOV	150 / 136	6.3/8	161.9	326	148	350	500
31239Y422	Contact NOV	150 / 136	8.1/4	209.6	326	148	350	500
31239Y426	10139410-040	150 / 136	8.1/2	215.9	326	148	350	500
31239Y427	Contact NOV	150 / 136	9	228.6	326	148	350	500
31239Y486	Contact NOV	150 / 136	6.1/2	165.1	326	148	350	500
31239Y550	Contact NOV	150 / 136	7.3/4	196.9	326	148	350	500
31239Y553	Contact NOV	150 / 136	8.3/4	222.3	326	148	350	500
31239Y580	10139410-018	150 / 136	8.5/8	219.1	326	148	350	500
31239Y620	Contact NOV	150 / 136	7.3/4	196.9	326	148	350	500
31239Y697	Contact NOV	150 / 136	8.1/8	206.4	326	148	350	500
31239Y705	Contact NOV	150 / 136	7.3/4	196.9	326	148	350	500
31239Y765	Contact NOV	150 / 136	6.1/2	165.1	326	148	350	500
31239Y804	Contact NOV	150 / 136	8.3/4	222.3	326	148	350	500
31239Y819	Contact NOV	150 / 136	7.931	201.5	326	148	350	500
31239Y841	Contact NOV	150 / 136	Contact NOV		326	148	350	500
31239Y842	Contact NOV	150 / 136	Contact NOV		326	148	350	500
31239Y843	Contact NOV	150 / 136	Contact NOV		326	148	350	500
31239Y844	Contact NOV	150 / 136	Contact NOV		326	148	350	500
33950Y140	Contact NOV	150 / 136	9	228.6	357	162	350	500
33950Y141	10139660-001	150 / 136	9.5/8	244.5	357	162	350	500
33950Y142	10139660-005	150 / 136	10.3/4	273.1	357	162	350	500
33950Y195	10143641-031	150 / 136	10	254	357	162	350	500
33950Y228	Contact NOV	150 / 136	10	254	357	162	350	500
33950Y346	10139660-014	150 / 136	9.1/2	241.3	357	162	350	500
33950Y356	Contact NOV	150 / 136	9	228.6	357	162	350	500
33950Y367	10143641-035	150 / 136	9.3/4	247.7	357	162	350	500
33950Y370	10143641-036	150 / 136	9.1/2	241.3	357	162	350	500
33950Y419	Contact NOV	150 / 136	11	279.4	357	162	350	500
33950Y427	Contact NOV	150 / 136	9	228.6	357	162	350	500
33950Y471	10143641-039	150 / 136	10	254	357	162	350	500
33950Y600	Contact NOV	150 / 136	9.5/8	244.5	357	162	350	500
33950Y649	10139660-011	150 / 136	9.3/4	247.7	357	162	350	500
33950Y704	Contact NOV	150 / 136	11	279.4	357	162	350	500
33950Y769	Contact NOV	150 / 136	9.3/4	247.7	357	162	350	500
33950Y808	10143641-049	150 / 136	10.1/4	260.4	357	162	350	500
33950Y831	10139660-013	150 / 136	9.5/8	244.5	357	162	350	500
33950Y840	Contact NOV	150 / 136	10.355	263	357	162	350	500
33950Y865	Contact NOV	150 / 136	9.3/8	238.2	357	162	350	500
33982Y143	10139672-001	150 / 136	11.3/4	298.5	448	203	350	500
33982Y144	10139672-005	150 / 136	13.3/8	339.7	448	203	350	500
33982Y345	Contact NOV	150 / 136	12.3/4	323.9	448	203	350	500

Part number SLX	Oracle number	Load Rating [sTon/Tonne]	Size		Max. Weight		Link type (min/max)	
			[inches]	[mm]	[lbs]	[kg]	[sTon]	[sTon]
33982Y596	10139672-009	150 / 136	13.5/8	346.1	448	203	350	500
33982Y616	10139672-016	150 / 136	1500	342.9	448	203	350	500
33982Y676	Contact NOV	150 / 136	12.7/8		448	203	350	500
33982Y711	Contact NOV	150 / 136	12	304.8	448	203	350	500
33982Y729	10139672-013	150 / 136	11.7/8	300.4	448	203	350	500
33982Y809	Contact NOV	150 / 136	13	330.2	448	203	350	500
33982Y830	Contact NOV	150 / 136	12.3/4	323.9	448	203	350	500
33982Y839	Contact NOV	150 / 136	Contact NOV		448	203	350	500
34087Y145	10139693-001	150 / 136	16	406.4	537	244	350	500
34087Y664	Contact NOV	150 / 136	16.3/4	425.5	537	244	350	500
34087Y733	Contact NOV	150 / 136	Contact NOV		537	244	350	500
34087Y815	Contact NOV	150 / 136	Contact NOV		537	244	350	500
33632Y146	10139602-001	150 / 136	18.5/8	473.1	705	320	350	500
33632Y147	10139602-003	150 / 136	20	508	705	320	350	500
33632Y664	Contact NOV	150 / 136	16.3/4	425.5	705	320	350	500
33632Y669	Contact NOV	150 / 136	Contact NOV		705	320	350	500
33632Y723	Contact NOV	150 / 136	18	457,2	705	320	350	500
33632Y803	Contact NOV	150 / 136	18.3/16	462	705	320	350	500
33632Y829	10139602-006	150 / 136	17.197	436.8	705	320	350	500
33632Y859	10139602-007	150 / 136	17.7/8	454.1	705	320	350	500

## TECHNICAL SPECIFICATIONS SMX SERIES

Part number SMX	Oracle number	Load Rating [sTon/Tonne]	Size		Max. Weight		Link type (min/max)	
			[inches]	[mm]	[lbs]	[kg]	[sTon]	[sTon]
50006430Y102	10143542-062	150 / 136	3.1/2	88.9	278	126	250	350
50006430Y103	10143542-063	150 / 136	3.1/2	88.9	278	126	250	350
50006430Y104	10143542-064	150 / 136	4	101.6	278	126	250	350
50006430Y105	10143542-065	150 / 136	4.1/2	114.3	278	126	250	350
50006430Y106	10143542-066	150 / 136	4.1/2	114.3	278	126	250	350
50006430Y107	10143542-067	150 / 136	5.1/2	139.7	278	126	250	350
50006430Y129	10143542-002	150 / 136	4.1/2	114.3	278	126	250	350
50006430Y130	10143542-024	150 / 136	4.3/4	120.7	278	126	250	350
50006430Y131	10143542-026	150 / 136	5	127	278	126	250	350
50006430Y132	10143542-028	150 / 136	5.1/2	139.7	278	126	250	350
50006430Y133	10143542-030	150 / 136	5.3/4	146.1	278	126	250	350
50006430Y134	10143542-089	150 / 136	6		278	126	250	350

Part number SMX	Oracle number	Load Rating [sTon/Tonne]	Size [inches]	Size [mm]	Max. Weight		Link type (min/max)	
					[lbs]	[kg]	[sTon]	[sTon]
50006430Y162	10143542-033	150 / 136	500	88.9	278	126	250	350
50006430Y163	10143542-036	150 / 136	500	88.9	278	126	250	350
50006430Y164	10143542-038	150 / 136	4	101.6	278	126	250	350
50006430Y165	10143542-068	150 / 136	4	101.6	278	126	250	350
50006430Y167	10143542-069	150 / 136	4.1/2	114.3	278	126	250	350
50006430Y177	10143542-070	150 / 136	4.1/8	104.7	278	126	250	350
50006430Y179	10143542-071	150 / 136	5.1/4	133.4	278	126	250	350
50006430Y180	10143542-072	150 / 136	5.1/2	139.7	278	126	250	350
50006430Y181	10143542-073	150 / 136	5.3/4	146.1	278	126	250	350
50006430Y209	10143542-074	150 / 136	500	88.9	278	126	250	350
50006430Y211	10143542-075	150 / 136	3.3/4	95.25	278	126	250	350
50006430Y215	10143542-076	150 / 136	4.1/2	114.3	278	126	250	350
50006430Y219	10143542-077	150 / 136	5.1/4	133.4	278	126	250	350
50006430Y222	10143542-078	150 / 136	5.3/4	146.1	278	126	250	350
50006430Y337	10143542-046	150 / 136	6.1/4	158.8	278	126	250	350
50006430Y354	10143542-048	150 / 136	4.3/4	120.7	278	126	250	350
50006430Y362	10143542-079	150 / 136	6	152.4	278	126	250	350
50006430Y409	10143542-081	150 / 136	6.3/8	161.9	278	126	250	350
50006430Y411	10143542-082	150 / 136	5.1/2	139.7	278	126	250	350
50006430Y435	10143542-052	150 / 136	4.3/4	120.7	278	126	250	350
50006430Y519	10143542-054	150 / 136	4.1/8	104.8	278	126	250	350
50006430Y530	10143542-083	150 / 136	5	127	278	126	250	350
50006430Y548	10143542-084	150 / 136	4.1/2	114.3	278	126	250	350
50006430Y552	10143542-085	150 / 136	5	127	278	126	250	350
50006430Y582	10143542-086	150 / 136	3.3/4	95.3	278	126	250	350
50006430Y674	10143542-087	150 / 136	4.1/4	108	278	126	250	350
50006430Y795	10143542-056	150 / 136	3.3/8	85.7	278	126	250	350
50006430Y862	10143542-088	150 / 136	3.3/4	95.3	278	126	250	350
50006430Y905	10143542-058	150 / 136	5.1/4	130.7	278	126	250	350
50006438Y134	10034495-005	150 / 136	6	152.4	291	132	250	500
50006438Y135	10034495-006	150 / 136	6.5/8	168.3	291	132	250	500
50006438Y136	10034495-001	150 / 136	7	177.8	291	132	250	500
50006438Y137	10034495-007	150 / 136	7.5/8	193.7	291	132	250	500
50006438Y139	10034495-008	150 / 136	8.5/8	219.1	291	132	250	500
50006438Y140	10034495-023	150 / 136	9	228.6	291	132	250	500
50006438Y331	10034495-024	150 / 136	6.3/8	162	291	132	250	500
50006438Y334	10034495-010	150 / 136	8	203.2	291	132	250	500
50006438Y336	10034495-011	150 / 136	8	203.2	291	132	250	500
50006438Y338	10034495-025	150 / 136	6.3/4	171.5	291	132	250	500
50006438Y339	10034495-026	150 / 136	7.3/4	196.9	291	132	250	500
50006438Y347	10034495-027	150 / 136	8.1/4	209.6	291	132	250	500

Part number SMX	Oracle number	Load Rating [sTon/Tonne]	Size [inches]	Size [mm]	Max. Weight		Link type (min/max)	
					[lbs]	[kg]	[sTon]	[sTon]
50006438Y348	10034495-028	150 / 136	6.1/4	158.8	291	132	250	500
50006438Y349	10034495-029	150 / 136	6	152.4	291	132	250	500
50006438Y356	10034495-030	150 / 136	9	228.6	291	132	250	500
50006438Y357	10034495-031	150 / 136	7.1/4	184.2	291	132	250	500
50006438Y361	10034495-032	150 / 136	7	177.8	291	132	250	500
50006438Y372	10034495-033	150 / 136	7	177.8	291	132	250	500
50006438Y373	10034495-013	150 / 136	6.1/2	165.1	291	132	250	500
50006438Y387	10034495-014	150 / 136	6.3/4	171.5	291	132	250	500
50006438Y442	10034495-015	150 / 136	8.1/4	209.6	291	132	250	500
50006438Y426	10034495-034	150 / 136	8.1/2	215.9	291	132	250	500
50006438Y427	10034495-035	150 / 136	9	228.6	291	132	250	500
50006438Y486	10034495-036	150 / 136	6.1/2	165.1	291	132	250	500
50006438Y550	10034495-037	150 / 136	7.3/4	196.9	291	132	250	500
50006438Y553	10034495-038	150 / 136	8.3/4	222.3	291	132	250	500
50006438Y620	10034495-039	150 / 136	7.3/8	187.3	291	132	250	500
50006438Y697	10034495-016	150 / 136	8.1/8	206.4	291	132	250	500
50006438Y705	10034495-017	150 / 136	7.3/4	196.9	291	132	250	500
50006438Y765	10034495-040	150 / 136	6.1/2	165.1	291	132	250	500
50006438Y804	10034495-041	150 / 136	8.3/4	222.3	291	132	250	500
50006438Y841	10034495-042	150 / 136	7.721	196.1	291	132	250	500
50006438Y842	10034495-043	150 / 136	7.947	201.9	291	132	250	500
50006438Y843	10034495-046	150 / 136	7.752	196.9	291	132	250	500
50006438Y844	10034495-044	150 / 136	7.129	181.1	291	132	250	500
50006454Y141	10034504-001	150 / 136	9.5/8	244.5	406	187	250	500
50006454Y142	10143624-005	150 / 136	10.3/4	273.1	406	187	250	500
50006454Y143	10143624-007	150 / 136	11.3/4	298.5	406	187	250	500
50006454Y144	10034506-001	150 / 136	13.3/8	339.8	406	187	250	500
50006454Y195	10143624-010	150 / 136	10	254	406	187	250	500
50006454Y228	10143624-011	150 / 136	10	254	406	187	250	500
50006454Y345	10143624-012	150 / 136	1350	323.9	406	187	250	500
50006454Y346	10143624-013	150 / 136	9.1/2	241.3	406	187	250	500
50006454Y367	10143624-014	150 / 136	9.3/4	247.7	406	187	250	500
50006454Y370	10143624-015	150 / 136	9.1/2	241.3	406	187	250	500
50006454Y419	10143624-016	150 / 136	11	279.4	406	187	250	500
50006454Y427	10143624-017	150 / 136	9	228.6	406	187	250	500
50006454Y471	10143624-018	150 / 136	10	254	406	187	250	500
50006454Y578	10143624-019	150 / 136	14	355.6	406	187	250	500
50006454Y600	10143624-020	150 / 136	9.5/8	244.5	406	187	250	500
50006454Y649	10143624-021	150 / 136	9.7/8	250.8	406	187	250	500
50006454Y676	10143624-002	150 / 136	12.7/8	342.9	406	187	250	500
50006454Y704	10143624-023	150 / 136	11	279.4	406	187	250	500
50006454Y711	10143624-024	150 / 136	12	304.8	406	187	250	500
50006454Y720	10143624-025	150 / 136	1250	311.2	406	187	250	500
50006454Y729	10143624-026	150 / 136	11.7/8	342.9	406	187	250	500

Part number SMX	Oracle number	Load Rating [sTon/Tonne]	Size [inches]	Size [mm]	Max. Weight		Link type (min/max)	
					[lbs]	[kg]	[sTon]	[sTon]
50006454Y769	10143624-027	150 / 136	9.3/4	247.7	406	187	250	500
50006454Y808	10143624-028	150 / 136	10.1/4	260.4	406	187	250	500
50006454Y809	10143624-029	150 / 136	13	330.2	406	187	250	500
50006454Y830	10143624-030	150 / 136	12.430	315.7	406	187	250	500
50006454Y831	10143624-031	150 / 136	10	254	406	187	250	500
50006454Y839	10143624-032	150 / 136	11.952	278.2	406	187	250	500
50006454Y840	10143624-033	150 / 136	10.335	262.5	406	187	250	500
50006454Y865	10143624-034	150 / 136	9.3/8	238.1	406	187	250	500
50006454Y906	10143624-035	150 / 136	9.788	248.6	406	187	250	500
50006454Y907	10143624-036	150 / 136	11.988	304.5	406	187	250	500
50006454Y910	10143624-037	150 / 136	12.072	306.6	406	187	250	500
50006454Y911	10143624-040	150 / 136	11.045	280.5	406	187	250	500
50006454Y912	10143624-038	150 / 136	10.996	279.3	406	187	250	500
50006454Y913	10143624-039	150 / 136	10.065	255.7	406	187	250	500
50006426Y134	10143523-004	250 / 227	6	152.4	474	215	250	500
50006426Y135	10143523-005	250 / 227	6.5/8	168.3	474	215	250	500
50006426Y136	10143523-008	250 / 227	7	177.8	474	215	250	500
50006426Y137	10143523-010	250 / 227	7.5/8	193.7	474	215	250	500
50006426Y139	10143523-012	250 / 227	8.5/8	244.5	474	215	250	500
50006426Y140	10143523-013	250 / 227	9	228.6	474	215	250	500
50006426Y336	10143523-014	250 / 227	8	203.2	474	215	250	500
50006426Y337	10143523-015	250 / 227	6.1/4	158.8	474	215	250	500
50006426Y361	10143523-016	250 / 227	7	177.8	474	215	250	500
50006426Y373	10143523-017	250 / 227	6.1/2	165.1	474	215	250	500
50006426Y387	10143523-018	250 / 227	6.3/4	171.5	474	215	250	500
50006426Y422	10143523-019	250 / 227	8.1/4	209.6	474	215	250	500
50006426Y426	10143523-020	250 / 227	8.1/2	215.9	474	215	250	500
50006426Y427	10143523-021	250 / 227	9	228.6	474	215	250	500
50006426Y563	10143523-022	250 / 227	7.1/4	184.2	474	215	250	500
50006426Y801	10143523-023	250 / 227	7.3/8	187.3	474	215	250	500
50006426Y888	Contact NOV	250 / 227	7.1/2	190.5	474	215	250	500
50006426Y914	10143523-025	250 / 227	7.5/8	193.7	474	215	250	500
50006426Y928	10143523-024	250 / 227	7.1/4	184.2	474	215	250	500
50006740Y141	10721814-029	250 / 227	9.5/8	244.5	563	255	250	500
50006740Y142	10721814-001	250 / 227	10.3/4	273.1	563	255	250	500
50006740Y143	10721814-010	250 / 227	11.3/4	298.5	563	255	250	500
50006740Y144	10034518-001	250 / 227	13.3/8	339.7	563	255	250	500
50006740Y195	10721814-013	250 / 227	10	254	563	255	250	500
50006740Y345	10721814-015	250 / 227	12.3/4	323.9	563	255	250	500
50006740Y370	10721814-016	250 / 227	9.1/2	241.3	563	255	250	500
50006740Y471	10721814-017	250 / 227	10	254	563	255	250	500
50006740Y649	10721814-028	250 / 227	9.7/8	244.5	563	255	250	500
50006740Y676	10721814-019	250 / 227	12.7/8	342.9	563	255	250	500
50006740Y704	10721814-020	250 / 227	11	279.4	563	255	250	500



Part number SMX	Oracle number	Load Rating [sTon/Tonne]	Size [inches]	Size [mm]	Max. Weight		Link type (min/max)	
					[lbs]	[kg]	[sTon]	[sTon]
50006740Y711	10721814-021	250 / 227	12	304.8	563	255	250	500
50006740Y729	10721814-022	250 / 227	11.7/8	342.9	563	255	250	500
50006740Y808	10721814-027	250 / 227	10.1/4	260.4	563	255	250	500
50006740Y809	10721814-024	250 / 227	13	330.2	563	255	250	500
50006740Y831	10721814-025	250 / 227	10	254	563	255	250	500
50006740Y865	10721814-026	250 / 227	9.3/8	238.1	563	255	250	500
50006440Y141	10143587-006	350 / 318	9.5/8	244.5	563	255	250	500
50006440Y142	10143587-007	350 / 318	10.3/4	273.1	563	255	250	500
50006440Y143	10143587-008	350 / 318	11.3/4	298.5	563	255	250	500
50006440Y144	10143587-009	350 / 318	13.3/8	339.7	563	255	250	500
50006440Y345	10143587-011	350 / 318	12.3/4	323.9	563	255	250	500
50006440Y356	10143587-012	350 / 318	9	228.6	563	255	250	500
50006440Y370	10143587-013	350 / 318	9.1/2	241.3	563	255	250	500
50006440Y435	Contact NOV	350 / 318	12.3/4	323.9	563	255	250	500
50006440Y471	10143587-014	350 / 318	10	254	563	255	250	500
50006440Y589	10143587-015	350 / 318	12	304.8	563	255	250	500
50006440Y649	10143587-016	350 / 318	9.7/8	244.5	563	255	250	500
50006440Y676	10143587-017	350 / 318	12.7/8	342.9	563	255	250	500
50006440Y704	10143587-018	350 / 318	11	279.4	563	255	250	500
50006440Y711	10143587-019	350 / 318	12	304.8	563	255	250	500
50006440Y729	10143587-020	350 / 318	11.7/8	342.9	563	255	250	500
50006440Y769	10143587-021	350 / 318	9.3/4	247.7	563	255	250	500
50006440Y808	10143587-022	350 / 318	10.1/4	260.4	563	255	250	500
50006440Y809	10143587-023	350 / 318	13	330.2	563	255	250	500
50006440Y830	10143587-024	350 / 318	12.430	315.7	563	255	250	500
50006440Y831	10143587-025	350 / 318	10	254	563	255	250	500
50006440Y846	10143587-026	350 / 318	10.1/8	257.2	563	255	250	500
50006440Y865	10143587-027	350 / 318	9.3/8	238.1	563	255	250	500
50006450Y145	10143612-005	250 / 227	16	406.4	679	308	250	500
50006450Y596	10143612-006	250 / 227	13.5/8	346.1	679	308	250	500
50006450Y616	10143612-007	250 / 227	1500	342.9	679	308	250	500
50006450Y664	10143612-008	250 / 227	16.3/4	425.5	679	308	250	500
50006450Y690	10143612-009	250 / 227	14	355.6	679	308	250	500
50006450Y813	10143612-010	250 / 227	17	431.8	679	308	250	500
50006450Y815	10143612-011	250 / 227	16.257	412.9	679	308	250	500
50006450Y825	10143612-012	250 / 227	15	381	679	308	250	500
50006450Y837	10143612-013	250 / 227	13.885	352.7	679	308	250	500
50006450Y859	10143612-014	250 / 227	17.7/8	454.1	679	308	250	500
50006450Y877	10143612-015	250 / 227	14.1/2	368.3	679	308	250	500
50006450Y908	10143612-016	250 / 227	13.646	346.6	679	308	250	500
50006450Y909	10143612-017	250 / 227	13.7/8	352.4	679	308	250	500
50006460Y146	10111421-001	250 / 227	18.5/8	473.1	902	409	250	500
50006460Y147	10034514-001	250 / 227	20	508	902	409	250	500
50006460Y148	10143649-008	250 / 227	21.1/2	546.1	902	409	250	500

Part number SMX	Oracle number	Load Rating [sTon/Tonne]	Size	Size	Max. Weight		Link type (min/max)	
			[inches]	[mm]	[lbs]	[kg]	[sTon]	[sTon]
50006460Y149	10143649-009	250 / 227	24.1/2	622.3	902	409	250	500
50006460Y630	10143649-010	250 / 227	24	609.6	902	409	250	500
50006460Y640	10143649-011	250 / 227	21	533.4	902	409	250	500
50006460Y669	10143649-012	250 / 227	18.788	477.2	902	409	250	500
50006460Y688	10143649-014	250 / 227	22	558.8	902	409	250	500
50006460Y723	10143649-015	250 / 227	18	457.2	902	409	250	500
50006460Y803	10143649-016	250 / 227	18.3/16	462	902	409	250	500
50006460Y876	10721275-001	250 / 227	22.1/2	571.5	902	409	250	500

## TECHNICAL SPECIFICATIONS SX SERIES

Part number SX	Oracle number	Load Rating [sTon/Tonne]	Size	Size	Max. Weight		Link type (min/max)	
			[inches]	[mm]	[lbs]	[kg]	[sTon]	[sTon]
29965Y596	10139119-001	350 / 317	13.5/8	346.1	1,200	544	250	500
29964Y141	10139114-003	500 / 454	9.5/8	244.5	1,235	560	350	500
29964Y142	10139114-004	500 / 454	10.3/4	273.1	1,235	560	350	500
29964Y143	Contact NOV	500 / 454	11.3/4	298.5	1,235	560	350	500
29964Y144	10139114-005	500 / 454	13.3/8	339.7	1,235	560	350	500
29964Y345	Contact NOV	500 / 454	12.3/4	323.9	1,235	560	350	500
29964Y596	10139114-006	500 / 454	13.5/8	346.1	1,235	560	350	500
29964Y649	10139114-007	500 / 454	9.7/8	244.5	1,235	560	350	500
29964Y728	Contact NOV	500 / 454	10	254	1,235	560	350	500

## TECHNICAL SPECIFICATIONS SLX-DD SERIES

Part number SLX-DD	Oracle number	Load Rating [sTon/Tonne]	Size	Size	Max. Weight		Link type (min/max)	
			[inches]	[mm]	[lbs]	[kg]	[sTon]	[sTon]
52755Y149	10702554-001	150 / 225	24.1/2	622.3	1,820	826	350	500
52755Y630	10702555-001	150 / 225	24	609.6	1,820	826	350	500
52755Y644	10034948-001	150 / 225	30	792	1,820	826	350	500
52755Y650	10702559-001	150 / 225	26	660.4	1,820	826	350	500
52755Y693	10702560-001	150 / 225	28	711.2	1,820	826	350	500
52755Y918	10702562-001	150 / 225	25	635	1,820	826	350	500
30598Y146	Contact NOV	250 / 225	18.5/8	473.1	1,700	771	350	500

## LINK HANDLE KIT

The Link handle kit can be used in combination with a SMX or other kind of Manual Elevator side-door type. It is developed for easier and safer closing the elevator. P/N 50006435 / 10019468-001. Will fit on 350 and 250 sTon links.



## SJL & SPL SERIES ELEVATORS

SJL and SPL single-joint, center-latch elevators are designed to replace unsafe rope slings for hoisting collar-type pipe into position. The SJL 90° elevator enables the crew to handle pipe properly, help avoid damage to pipe threads and reduce the chances of accident or injury. The SPL elevator is the same as the SJL elevator except that the SPL elevator is designed for use on tapered pipe, conforming to API specifications for extreme line casing.



### TECHNICAL SPECIFICATIONS SJL SERIES

Type	Part number	Bore code	Oracle number	Load Rating [sTon/Tonne]	Size [Inches]	Size [mm]	Max. Weight [lbs]	Max. Weight [kg]
SJL	70499Y101	101	10146447-014	5 / 4.5	2.7/8	73.1	45	20
SJL	70499Y102	102	10146447-004	5 / 4.5	Contact NOV		45	20
SJL	70499Y103	103	10146447-005	5 / 4.5	3.1/2	88.9	45	20
SJL	70499Y110	110	10146447-017	5 / 4.5	2.3/8	60.3	45	20
SJL	70499Y156	156	10146447-006	5 / 4.5	1.90	48.26	45	20
SJL	70499Y158	158	10146447-019	5 / 4.5	2.3/8	60.3	45	20
SJL	70499Y159	159	10146447-021	5 / 4.5	2.3/8	60.3	45	20
SJL	70499Y160	160	10146447-023	5 / 4.5	2.7/8	73.1	45	20
SJL	70499Y161	161	10146447-025	5 / 4.5	2.7/8	73.1	45	20
SJL	70499Y162	162	10146447-027	5 / 4.5	3.1/2	88.9	45	20
SJL	70499Y163	163	10146447-030	5 / 4.5	3.1/2	88.9	45	20
SJL	70499Y206	206	10146447-032	5 / 4.5	Contact NOV		45	20
SJL	70499Y211	211	10146447-007	5 / 4.5	Contact NOV		45	20
SJL	70499Y625	625	10146447-003	5 / 4.5	3.1/2	88.9	45	20
SJL	70499Y685	685	10146447-008	5 / 4.5	Contact NOV		45	20
SJL	70499Y785	785	10146447-009	5 / 4.5	Contact NOV		45	20
SJL	70500Y105	105	10161770-004	5 / 4.5	4	101.6	51	23
SJL	70500Y106	106	10161770-005	5 / 4.5	4.1/2	114.3	51	23
SJL	70500Y123	123	Contact NOV	5 / 4.5	5	127	51	23
SJL	70500Y124	124	Contact NOV	5 / 4.5	5	127	51	23
SJL	70500Y129	129	10161770-006	5 / 4.5	4.1/2	114.3	51	23
SJL	70500Y130	130	10161770-008	5 / 4.5	4.3/4	120.7	51	23
SJL	70500Y131	131	10161770-010	5 / 4.5	5	127	51	23
SJL	70500Y132	132	10161770-012	5 / 4.5	5.1/2	126.2	51	23
SJL	70500Y164	164	10161770-016	5 / 4.5	4	101.6	51	23
SJL	70500Y165	165	10161770-018	5 / 4.5	4	101.6	51	23
SJL	70500Y167	167	10161770-020	5 / 4.5	4.1/2	114.3	51	23
SJL	70500Y213	213	10161770-022	5 / 4.5	4	101.6	51	23
SJL	70500Y435	435	10161770-029	5 / 4.5	4.3/4	120.7	51	23
SJL	70500Y519	519	10161770-028	5 / 4.5	4.1/8	104.8	51	23
SJL	70500Y810	810	10161770-030	5 / 4.5	Contact NOV		51	23
SJL	70500Y905	905	10161770-024	5 / 4.5	5.146	130.7	51	23
SJL	70501Y133	133	10722134-028	5 / 4.5	5.3/4	146.1	72	32
SJL	70501Y134	134	10722134-030	5 / 4.5	6	152.4	72	32
SJL	70501Y135	135	10722134-032	5 / 4.5	6.5/8	168.3	72	32

Type	Part number	Bore code	Oracle number	Load Rating [sTon/Tonne]	Size [Inches]	Size [mm]	Max. Weight [lbs]	Max. Weight [kg]
SJL	70501Y136	136	10722134-024	5 / 4.5	7	177.8	72	32
SJL	70501Y137	137	10722134-019	5 / 4.5	7.5/8	193.7	72	32
SJL	70501Y331	331	10722134-001	5 / 4.5	6.3/8	161.9	72	32
SJL	70501Y336	336	10722134-006	5 / 4.5	8	203.2	72	32
SJL	70501Y337	337	10722134-007	5 / 4.5	6.1/4	158.8	72	32
SJL	70501Y373	373	10722134-008	5 / 4.5	6.1/2	165.1	72	32
SJL	70501Y387	387	10722134-009	5 / 4.5	6.3/4	171.5	72	32
SJL	70501Y563	563	10722134-004	5 / 4.5	7.1/4	184.2	72	32
SJL	70501Y705	705	10722134-023	5 / 4.5	7.3/4	196.9	72	32
SJL	70501Y807	807	10722134-010	5 / 4.5	7.797	198	72	32
SJL	70501Y844	844	10722134-011	5 / 4.5	Contact NOV		72	32
SJL	70501Y889	889	10722134-045	5 / 4.5	5.7/8	149.2	72	32
SJL	70502Y133	133	10722134-028	5 / 4.5	5.3/4	146.1	98	44
SJL	70502Y139	139	10046192-005	5 / 4.5	8.5/8	219.1	98	44
SJL	70502Y140	140	Contact NOV	5 / 4.5	9	228.6	98	44
SJL	70502Y141	141	10046192-001	5 / 4.5	9.5/8	244.5	98	44
SJL	70502Y142	142	10046192-001	5 / 4.5	10.3/4	273.1	98	44
SJL	70502Y228	228	10046192-049	5 / 4.5	Contact NOV		98	44
SJL	70502Y347	347	10046192-033	5 / 4.5	8.1/4	209.6	98	44
SJL	70502Y370	370	10046192-034	5 / 4.5	9.1/2	241.3	98	44
SJL	70502Y471	471	10046192-035	5 / 4.5	10	254	98	44
SJL	70502Y649	649	10046192-015	5 / 4.5	9.7/8	244.5	98	44
SJL	70502Y677	677	10046192-036	5 / 4.5	8.5/16	211.1	98	44
SJL	70502Y697	697	10046192-037	5 / 4.5	8.1/8	206.4	98	44
SJL	70502Y704	704	10046192-019	5 / 4.5	11	279.4	98	44
SJL	70502Y767	767	10046192-020	5 / 4.5	9.5/8	244.5	98	44
SJL	70502Y808	808	10046192-038	5 / 4.5	10.1/4	260.4	98	44
SJL	70502Y831	831	10046192-021	5 / 4.5	10	254	98	44
SJL	70502Y840	840	10046192-039	5 / 4.5	10	254	98	44
SJL	70502Y865	865	10046192-050	5 / 4.5	9.3/8	238.1	98	44
SJL	70502Y898	898	10046192-023	5 / 4.5	8.5/8	219.1	98	44
SJL	70502Y906	906	10046192-024	5 / 4.5	9.788	248.6	98	44
SJL	70502Y911	911	10046192-025	5 / 4.5	11.045	280.5	98	44
SJL	70502Y912	912	10046192-048	5 / 4.5	10.996	279.3	98	44
SJL	70502Y913	913	10046192-046	5 / 4.5	10.065	255.7	98	44
SJL	70502Y924	924	10046192-026	5 / 4.5	10	254	98	44
SJL	na	na	10864561-002	7.5 / 6.8	11.3/4	298.5	121	55
SJL	na	na	10864561-004	7.5 / 6.8	13.3/8	339.7	121	55
SJL	na	na	10864561-006	7.5 / 6.8	12.3/4	323.9	121	55
SJL	na	na	10864561-007	7.5 / 6.8	11.375	254.8	121	55
SJL	na	na	10864561-001	7.5 / 6.8	13.5/8	346.1	121	55
SJL	na	na	10864561-009	7.5 / 6.8	13.1/2	342.9	121	55

Type	Part number	Bore code	Oracle number	Load Rating [sTon/Tonne]	Size [Inches]	Size [mm]	Max. Weight [lbs]	Max. Weight [kg]
SJL	na	na	10864561-010	7.5 / 6.8	12.7/8	327	121	55
SJL	na	na	10864561-011	7.5 / 6.8	14	355.6	121	55
SJL	na	na	10864561-013	7.5 / 6.8	12.1/4	311.2	121	55
SJL	na	na	10864561-014	7.5 / 6.8	11.7/8	301.6	121	55
SJL	na	na	10864561-015	7.5 / 6.8	13.3/8	339.7	121	55
SJL	na	na	10864561-016	7.5 / 6.8	13	330.2	121	55
SJL	na	na	10864561-017	7.5 / 6.8	13.552	344.2	121	55
SJL	na	na	10864561-018	7.5 / 6.8	11.952	303.6	121	55
SJL	na	na	10864561-019	7.5 / 6.8	11.3/4	298.5	121	55
SJL	na	na	10864561-020	7.5 / 6.8	12.5/8	320.7	121	55
SJL	na	na	10864561-021	7.5 / 6.8	11.283	286.6	121	55
SJL	na	na	10864561-022	7.5 / 6.8	11.988	304.5	121	55
SJL	na	na	10864561-024	7.5 / 6.8	13.646	346.6	121	55
SJL	na	na	10864561-026	7.5 / 6.8	13.875	352.4	121	55
SJL	na	na	10864561-028	7.5 / 6.8	12.072	301.8	121	55
SJL	na	na	10864561-034	7.5 / 6.8	13.3/4	349.3	121	55
SJL	na	na	10837790-002	7.5 / 6.8	14.5	368.3	233	105
SJL	na	na	10837790-003	7.5 / 6.8	16	406.4	233	105
SJL	na	na	10837790-005	7.5 / 6.8	18.5/8	473.1	233	105
SJL	na	na	10837790-006	7.5 / 6.8	20	508	233	105
SJL	na	na	10837790-008	7.5 / 6.8	16.3/4	425.5	233	105
SJL	na	na	10837790-009	7.5 / 6.8	18.788	477.2	233	105
SJL	na	na	10837790-010	7.5 / 6.8	16.1/6	410.6	233	105
SJL	na	na	10837790-011	7.5 / 6.8	18	457.2	233	105
SJL	na	na	10837790-013	7.5 / 6.8	16	406.4	233	105
SJL	na	na	10837790-014	7.5 / 6.8	15.875	403.2	233	105
SJL	na	na	10837790-015	7.5 / 6.8	17	431.8	233	105
SJL	na	na	10837790-016	7.5 / 6.8	16.257	412.9	233	105
SJL	na	na	10837790-017	7.5 / 6.8	17.197	436.8	233	105
SJL	na	na	10837790-018	7.5 / 6.8	16.507	419.3	233	105
SJL	na	na	10837790-019	7.5 / 6.8	18.310	465.1	233	105
SJL	na	na	10837790-021	7.5 / 6.8	16.405	416.7	233	105
SJL	na	na	10837790-022	7.5 / 6.8	20.5	520.7	233	105
SJL	na	na	10837790-023	7.5 / 6.8	18.948	481.3	233	105
SJL	na	na	10837790-024	7.5 / 6.8	17.7/8	454.1	233	105
SJL	na	149	10872064-013	7.5 / 6.8	24.1/2	622.3	283	128
SJL	na	542	10872064-015	7.5 / 6.8	24.250	616	283	128
SJL	na	630	10872064-011	7.5 / 6.8	24	609.6	283	128
SJL	na	640	10872064-004	7.5 / 6.8	21	533.4	283	128
SJL	na	688	10872064-008	7.5 / 6.8	22	558.8	283	128
SJL	na	876	10872064-009	7.5 / 6.8	22.1/2	571.5	283	128
SJL	na	800	10872064-014	7.5 / 6.8	20.875	530.2	283	128
SJL	na	627	10872064-010	7.5 / 6.8	23.1/2	596.9	283	128

Type	Part number	Bore code	Oracle number	Load Rating [sTon/Tonne]	Size [Inches]	Size [mm]	Max. Weight [lbs]	Max. Weight [kg]
SJL	na	925	10872064-002	7.5 / 6.8	20.3/4	527.1	283	128
SJL	na	738	10872064-003	7.5 / 6.8	20.7/8	530.2	283	128
SJL	na	814	10872064-005	7.5 / 6.8	21.1/4	539.8	283	128
SJL	na	148	10872064-006	7.5 / 6.8	21.1/2	546.1	283	128
SJL	na	918	10876017-002	7.5 / 6.8	25	635	404	183.3
SJL	na	650	10876017-003	7.5 / 6.8	26	660.4	404	183.3
SJL	na	692	10876017-004	7.5 / 6.8	27	685.8	404	183.3
SJL	na	693	10876017-005	7.5 / 6.8	28	711.2	404	183.3
SJL	na	945	10876017-006	7.5 / 6.8	29	736.6	404	183.3
SJL	na	644	10876017-007	7.5 / 6.8	30	762	404	183.3

## TECHNICAL SPECIFICATIONS SPL SERIES

Type	Part number	Oracle number	Load Rating [sTon/Tonne]	Size [Inches]	Size [mm]	Max. Weight [lbs]	Max. Weight [kg]
SPL 5°	200008Y278	10180317-006	5 / 4.5	2.7/8	73.1	77	35
SPL 5°	200008Y312	10180317-007	5 / 4.5	3.1/2	88.9	77	35
SPL 5°	200008Y400	10180317-008	5 / 4.5	4	101.6	77	35
SPL 5°	200008Y412	10180317-009	5 / 4.5	4.1/2	114.3	77	35
SPL 5°	200008Y500	10180317-010	5 / 4.5	5	127	77	35
SPL 5°	200008Y512	10180317-011	5 / 4.5	5.1/2	139.7	77	35
SPL 5°	200010Y512	10177531-013	5 / 4.5	5.1/2	139.7	108	49
SPL 5°	200010Y658	10177531-006	5 / 4.5	6.5/8	168.3	108	49
SPL 5°	200010Y700	10177531-014	5 / 4.5	7	177.8	108	49
SPL 5°	200010Y758	10177531-003	5 / 4.5	7.5/8	193.7	108	49
SPL 12°	200014Y238	10180317-018	5 / 4.5	2.3/8	60.3	86	39
SPL 12°	200014Y278	10180317-019	5 / 4.5	2.7/8	73.1	86	39
SPL 12°	200014Y312	10180317-020	5 / 4.5	3.1/2	88.9	86	39
SPL 12°	200014Y400	10180317-021	5 / 4.5	4	101.6	86	39
SPL 12°	200014Y412	10180317-022	5 / 4.5	4.1/2	114.3	86	39
SPL 12°	200014Y500	10180317-024	5 / 4.5	5	127	86	39
SPL 18°	200009Y238	10180317-014	5 / 4.5	2.3/8	60.3	79	36
SPL 18°	200009Y278	10180317-015	5 / 4.5	2.7/8	73.1	79	36
SPL 18°	200009Y312	10021586-001	5 / 4.5	3.1/2	88.9	79	36
SPL 18°	200009Y400	10180317-016	5 / 4.5	4	101.6	79	36
SPL 18°	200009Y412	10180317-017	5 / 4.5	4.1/2	114.3	79	36
SPL 18°	200009Y500	10021589-001	5 / 4.5	5	127	79	36
SPL 18°	200009Y512	Contact NOV	5 / 4.5	5.1/2	139.7	79	36
SPL 18°	200011Y512	10021604-001	5 / 4.5	5.1/2	139.7	94	42
SPL 18°	200011Y578	10021605-001	5 / 4.5	5.7/8	149.2	94	42
SPL 18°	200011Y658	10021606-001	5 / 4.5	6.5/8	168.3	94	42
SPL 18°	200011Y718	10177531-005	5 / 4.5	6.5/8	168.3	94	42
SPL 18°	200011Y732	10177531-010	5 / 4.5	6.5/8	168.3	94	42

## SIZE COMPONENTS SPL 5° ELEVATORS

Size [inches]	Elevator Ass'y No. = Frame No.	Oracle number	Type	Tapered Insert part number	Tapered Insert Oracle number	Qty
2.7/8	200008Y278	10180317-006	SPL 5°	36184-278	10139847-001	6
3.1/2	200008Y312	10180317-007	SPL 5°	36184-312	10139847-003	6
4	200008Y400	10180317-008	SPL 5°	36184-400	10139847-005	6
4.1/2	200008Y412	10180317-009	SPL 5°	36184-412	10139850-001	6
5	200008Y500	10180317-010	SPL 5°	36184-500	10139850-004	6
5.1/2	200008Y512	10180317-011	SPL 5°	36184-512	10152737-001	6
5.1/2	200010Y512	10177531-001	SPL 5°	36248-512	10152737-001	6
6.5/8	200010Y658	10177531-006	SPL 5°	36248-658	10152737-004	6
7	200010Y700	10177531-014	SPL 5°	36248-700	10152737-006	6
7.5/8	200010Y758	10177531-003	SPL 5°	36248-758	10152737-008	6

## SIZE COMPONENTS SPL 12° &amp; 18° ELEVATORS

Size [inches]	Elevator Ass'y No.	Oracle number	Frame No. Used	Type	Tapered Insert	Tapered Insert Oracle number	Qty
2.3/8	200014Y238	10180317-018	200008	SPL 12°	53614-238	10145318-001	6
2.7/8	200014Y278	10180317-019	200008	SPL 12°	53614-278	10145318-004	6
3.1/2	200014Y312	10180317-020	200008	SPL 12°	53614-312	10145318-006	6
4	200014Y400	10180317-021	200008	SPL 12°	53614-400	10145318-008	6
4.1/2	200014Y412	10180317-022	200008	SPL 12°	53614-412	10145318-010	6
5	200014Y500	10180317-024	200008	SPL 12°	53614-500	10145318-012	6
2.3/8	200009Y238	10180317-014	200008	SPL 18°	36185-238	10139854-001	6
2.7/8	200009Y278	10180317-015	200008	SPL 18°	36185-278	10139854-003	6
3.1/2	200009Y312	10021586-001	200008	SPL 18°	36185-312	10139854-005	6
4	200009Y400	10180317-016	200008	SPL 18°	36185-400	10139854-007	6
4.1/2	200009Y412	10180317-017	200008	SPL 18°	36185-412	10139854-009	6
5	200009Y500	10021589-001	200008	SPL 18°	36185-500	10139859-001	6
5.1/2	200011Y512	10021604-001	200010	SPL 18°	70253-512	10146408-001	6
5.7/8	200011Y578	10021605-001	200010	SPL 18°	70253-578	10146408-003	6
6.5/8	200011Y658	10021606-001	200010	SPL 18°	70253-658	10146408-005	6
6.5/8	200011Y718	10177531-005	200010	SPL 18°	70253-718	10146408-007	6

SJL/SPL swivel suspension sling  
See chapter "Lifting Slings"

## SBX7, SJX & D-SJX SERIES ELEVATORS

The SBX7 elevator is a solid body elevator with one manually operated door for high loads up to 1,250 sTon / 1,133 Tonne. The elevator is suitable in combination with the standard BX7 bushings and dedicated SBX7 bushings. This elevator is designed for (ultra-) deep water drilling rigs.

The SJX single joint elevator is designed for running single joints of tubing and casing from V-door to well center. It is double hinged for use with the CRT Casing Running Tool, or any other stabberless operation. Ergonomically designed handles with cast on stop pins prevent the lifting sling shackles from pinching hands. Suitable for loads up to 5 sTon / 4.5 Tonne.

The D-SJX elevator is the heavy duty version of the SJX elevator, capable of handling doubles and triples up to 12 sTon / 10.9 Tonne.



SJX



D-SJX



### TECHNICAL SPECIFICATIONS SBX7, SJX / D-SJX SERIES

Type	Part number	Oracle number	Load Rating [sTon/Tonne]	Size [Inches]	Size [mm]	Max. Weight [lbs]	Max. Weight [kg]
SJX	50004929Y129	10712238-001	5 / 4.5	4.1/2	114.3	37	17
SJX	50004929Y158	10712236-001	5 / 4.5	2.3/8	60.3	37	17
SJX	50004929Y159	10712231-001	5 / 4.5	2.3/8	60.3	37	17
SJX	50004929Y160	10712230-001	5 / 4.5	2.7/8	73.1	37	17
SJX	50004929Y161	10712229-001	5 / 4.5	2.7/8	73.1	37	17
SJX	50004929Y162	10712228-001	5 / 4.5	3.1/2	88.9	37	17
SJX	50004929Y163	10712227-001	5 / 4.5	3.1/2	88.9	37	17
SJX	50004929Y164	10712226-001	5 / 4.5	4	101.6	37	17
SJX	50004929Y165	10712225-001	5 / 4.5	4	101.6	37	17
SJX	50004929Y167	10712240-001	5 / 4.5	4.1/2	114.3	37	17
SJX	50004929Y886	10712246-001	5 / 4.5	3.1/8	79.4	37	17
SJX	50004929Y887	10712241-001	5 / 4.5	3.5/8	92.1	37	17
SJX	50004931Y129	10712515-001	5 / 4.5	4.1/2	114.3	44	20
SJX	50004931Y130	10712517-001	5 / 4.5	4.3/4	120.7	44	20
SJX	50004931Y131	10712518-001	5 / 4.5	5	127	44	20
SJX	50004931Y132	10712520-001	5 / 4.5	5.1/2	139.7	44	20
SJX	50004931Y133	10712521-001	5 / 4.5	5.3/4	146.1	44	20
SJX	50004931Y134	10712522-001	5 / 4.5	6	152.4	44	20
SJX	50004931Y135	10111385-001	5 / 4.5	6.5/8	168.3	44	20
SJX	50004931Y136	10111386-001	5 / 4.5	7	177.8	44	20
SJX	50004931Y354	10712526-001	5 / 4.5	4.3/4	120.7	44	20
SJX	50004931Y482	10712527-001	5 / 4.5	5.1/8	130.2	44	20
SJX	50004931Y889	10712528-001	5 / 4.5	5.7/8	149.2	44	20
SJX	50004931Y890	10712529-001	5 / 4.5	6.7/8	174.6	44	20



TECHNICAL SPECIFICATIONS SBX7, SJX / D-SJX SERIES

Type	Part number	Oracle number	Load Rating [sTon/Tonne]	Size [Inches]	Size [mm]	Max. Weight [lbs]	Max. Weight [kg]
SJX	50004933Y136	10712550-001	5 / 4.5	7	177.8	57	26
SJX	50004933Y137	10712557-001	5 / 4.5	7.5/8	193.7	57	26
SJX	50004933Y139	10712558-001	5 / 4.5	8.5/8	219.1	57	26
SJX	50004933Y140	10712559-001	5 / 4.5	9	228.6	57	26
SJX	50004933Y141	10111388-001	5 / 4.5	9.5/8	244.5	57	26
SJX	50004933Y563	10712593-001	5 / 4.5	7.1/4	184.2	57	26
SJX	50004933Y649	10712599-001	5 / 4.5	9.7/8	244.5	57	26
SJX	50004933Y697	10712607-001	5 / 4.5	8.1/8	206.4	57	26
SJX	50004933Y705	10712608-001	5 / 4.5	7.3/4	196.9	57	26
SJX	50004933Y831	10712610-001	5 / 4.5	10	254	57	26
SJX	50004933Y841	10712613-001	5 / 4.5	7.721	196.1	57	26
SJX	50004933Y842	10712618-001	5 / 4.5	7.947	201.9	57	26
SJX	50004933Y843	10712621-001	5 / 4.5	7.752	196.9	57	26
SJX	50004933Y865	10712843-001	5 / 4.5	9.3/8	238.1	57	26
SJX	50004933Y888	10712844-001	5 / 4.5	7.1/2	190.5	57	26
SJX	50004935Y142	10111390-001	5 / 4.5	10.3/4	273.1	67	30
SJX	50004935Y143	10712851-001	5 / 4.5	11.3/4	298.5	67	30
SJX	50004935Y144	10111391-001	5 / 4.5	13.3/8	339.7	67	30
SJX	50004935Y345	10712856-001	5 / 4.5	12.3/4	323.9	67	30
SJX	50004935Y596	10712858-001	5 / 4.5	13.5/8	346.1	67	30
SJX	50004935Y649	10712861-001	5 / 4.5	9.7/8	250.9	67	30
SJX	50004935Y676	10712865-001	5 / 4.5	12.7/8	327.1	67	30
SJX	50004935Y690	10712868-001	5 / 4.5	14	355.6	67	30
SJX	50004935Y729	10712869-001	5 / 4.5	11.7/8	301.6	67	30
SJX	50004935Y831	10712870-001	5 / 4.5	10	254	67	30
SJX	50004935Y834	10712871-001	5 / 4.5	12.131	308.1	67	30
SJX	50004935Y837	10712872-001	5 / 4.5	13.885	352.7	67	30
SJX	50004935Y846	10712873-001	5 / 4.5	10.1/8	257.2	67	30
SJX	50004935Y856	10712874-001	5 / 4.5	13.1/2	342.9	67	30
SJX	50004935Y861	10712875-001	5 / 4.5	Contact NOV		67	30
SJX	50004935Y871	10712876-001	5 / 4.5	10.3/4	273.1	67	30
D-SJX	50004955Y119	10713145-001	12 / 11	3.1/2	88.9	79	36
D-SJX	50004955Y120	10713144-001	12 / 11	3.1/2	88.9	79	36
D-SJX	50004955Y121	10713143-001	12 / 11	4	101.6	79	36
D-SJX	50004955Y122	10713142-001	12 / 11	4.1/2	114.3	79	36
D-SJX	50004955Y123	10713141-001	12 / 11	5	127	79	36
D-SJX	50004955Y124	10713140-001	12 / 11	5.1/2	139.7	79	36
D-SJX	50004955Y177	10713139-001	12 / 11	4.1/8	104.8	79	36
D-SJX	50004955Y211	1071318-001	12 / 11	3.3/4	95.3	79	36
D-SJX	50004955Y213	10713137-001	12 / 11	4	101.6	79	36
D-SJX	50004955Y215	10713147-001	12 / 11	4.1/2	114.3	79	36
D-SJX	50004955Y219	10713136-001	12 / 11	5.1/4	133.4	79	36
D-SJX	50004955Y222	10713142-001	12 / 11	4.1/2	114.3	79	36

## TECHNICAL SPECIFICATIONS SBX7, SJX / D-SJX SERIES

Type	Part number	Oracle number	Load Rating [sTon/Tonne]	Size [Inches]	Size [mm]	Max. Weight [lbs]	Max. Weight [kg]
D-SJX	50004955Y354	10713133-001	12 / 11	4.3/4	120.7	79	36
D-SJX	50004955Y411	10713131-001	12 / 11	5.1/2	139.7	79	36
D-SJX	50004955Y466	10713129-001	12 / 11	4.7/8	123.8	79	36
D-SJX	50004955Y519	10713127-001	12 / 11	4.1/8	104.8	79	36
D-SJX	50004955Y548	10713126-001	12 / 11	4.1/4	114.3	79	36
D-SJX	50004955Y552	10713124-001	12 / 11	5	127	79	36
D-SJX	50004955Y554	10713123-001	12 / 11	4.1/2	114.3	79	36
D-SJX	50004955Y609	10713122-001	12 / 11	5.5/8	142.9	79	36
D-SJX	50004955Y667	10713121-001	12 / 11	6.5/8	168.3	79	36
D-SJX	50004955Y674	10713120-001	12 / 11	4.1/4	108	79	36
D-SJX	50004955Y763	10713119-001	12 / 11	3.7/8	98.4	79	36
D-SJX	50004955Y789	10713118-001	12 / 11	5.7/8	149.2	79	36
D-SJX	50004958Y188	10713347-001	12 / 11	7.1/2	190.5	89	40
D-SJX	50004958Y331	10713343-001	12 / 11	6.3/8	162	89	40
D-SJX	50004958Y334	10713345-001	12 / 11	8	203.2	89	40
D-SJX	50004958Y338	10713344-001	12 / 11	6.3/4	171.5	89	40
D-SJX	50004958Y347	10713342-001	12 / 11	8.1/4	209.6	89	40
D-SJX	50004958Y348	10713341-001	12 / 11	6.1/4	158.8	89	40
D-SJX	50004958Y349	10713340-001	12 / 11	6	152.4	89	40
D-SJX	50004958Y355	10713339-001	12 / 11	7.1/4	184.2	89	40
D-SJX	50004958Y372	10713338-001	12 / 11	7	177.8	89	40
D-SJX	50004958Y550	10713337-001	12 / 11	7.3/4	196.9	89	40
D-SJX	50004958Y564	10713366-001	12 / 11	9.1/4	235	89	40
D-SJX	50004958Y580	10713335-001	12 / 11	8.1/2	215.9	89	40
D-SJX	50004958Y610	10713159-001	12 / 11	8.1/8	206.4	89	40
D-SJX	50004958Y613	10713158-001	12 / 11	8.5/8	219.1	89	40
D-SJX	50004958Y678	10713156-001	12 / 11	5.1/2	139.7	89	40
D-SJX	50004958Y740	10713155-001	12 / 11	6.5/8	168.3	89	40
D-SJX	50004958Y765	10713154-001	12 / 11	6.1/2	165.1	89	40
D-SJX	50004958Y766	10713153-001	12 / 11	7.1/2	190.5	89	40
SBX7	50001270Y	10140621-001	1,250 / 1,133	5.1/2 -9.5/8	139.7 - 244.5	4,195	1,903

## D-SJX SWIVEL SUSPENSION SLING

See chapter "Lifting Slings"

## DSJX 12 STON WITH DRILL PIPE 18° INSERT BORE CHART

Bore Code	Center Bore C [inches]	Size [inches]	Basic elevator	New number Basic elevator	Part number Insert set	Oracle number Insert set
119	3.25/32	3.1/2 Reg, FH +Hydrill	50004955Y	10713146-001	50004948Y119	10731586-022
120	3.31/32	3.1/2 IF	50004955Y	10713146-001	50004948Y120	10731586-002
121	4.9/32	4 FH	50004955Y	10713146-001	50004948Y121	10731586-003
122	4.25/32	4 IF + 4.1/2 Reg + 4.1/2 FH	50004955Y	10713146-001	50004948Y122	10731586-004
123	5.1/4	4.1/2 IF + 5 EIU	50004955Y	10713146-001	50004948Y123	10731586-005
124	5.13/16	5.1/2 REG + FH	50004955Y	10713146-001	50004948Y124	10731586-006
789	6.1/8	5.7/8 IEU	50004955Y	10713146-001	50004948Y789	10731586-021
678	6.233	5.1/2 IF + IEU	50004958Y	10713348-001	50004959Y678	10141990-015
740	7.031	6.5/8 IEU	50004958Y	10713348-001	50004959Y740	10141990-016

## DSJX 12 STON WITH DRILL COLLARS WITH ZIP LIFT RECESS BORE CHART

Bore Code	Top Bore A [inches]	Size [inches]	Basic elevator	New number Basic elevator	Part number Insert set	Oracle number Insert set
177	3.11/16	4.1/8 DC Zip	50004955Y	10713146-001	50004948Y177	10731586-007
674	3.13/16	4.1/4 DC Zip	50004955Y	10713146-001	50004948Y674	10731586-019
554	4.1/16	4.1/2 DC Zip	50004955Y	10713146-001	50004948Y554	10731586-016
466	4.3/8	4.7/8 DC Zip	50004955Y	10713146-001	50004948Y466	10731586-024
609	5	5.5/8 DC Zip	50004955Y	10713146-001	50004948Y609	10731586-017
667	6	6.5/8 DC Zip	50004955Y	10713146-001	50004948Y667	10731586-018
188	6.3/4	7.1/2 DC Zip	50004958Y	10713348-001	50004959Y188	10141991-001
610	7.3/8	8.1/8 DC Zip	50004958Y	10713348-001	50004959Y610	10141990-013
613	7.7/8	8.5/8 DC Zip	50004958Y	10713348-001	50004959Y613	10141990-014
564	8.3/8	91/4 DC Zip	50004958Y	10713348-001	50004959Y564	10141990-011

## DSJX 12 STON WITH PLAIN DRILL COLLARS WITH LIFT PLUGS BORE CHART

Bore Code	Top Bore A [inches]	Size [inches]	Basic elevator	New number Basic elevator	Part number Insert set	Oracle number Insert set
211	3.29/32	3.3/4 DC	50004955Y	10713146-001	50004948Y211	10731856-023
763	4.1/32	3.7/8 DC	50004955Y	10713146-001	50004948Y763	10731586-020
213	4.5/32	4 DC	50004955Y	10713146-001	50004948Y213	10731586-008
519	4.9/32	4.1/8 DC	50004955Y	10713146-001	50004948Y519	10731586-025
548	4.13/32	4.1/4 DC	50004955Y	10713146-001	50004948Y548	10731586-014
215	4.21/32	4.1/2 DC	50004955Y	10713146-001	50004948Y215	10731586-009
354	4.15/16	4.3/4 DC	50004955Y	10713146-001	50004948Y354	10731586-012
552	5.3/16	5 DC	50004955Y	10713146-001	50004948Y552	10731586-015
219	5.7/16	5.1/4 DC	50004955Y	10713146-001	50004948Y219	10731586-010
411	5.11/16	5.1/2 DC	50004955Y	10713146-001	50004948Y411	10731586-013
222	5.31/32	5.3/4 DC	50004955Y	10713146-001	50004948Y222	10731586-011
349	6.7/32	6 DC	50004958Y	10713348-001	50004959Y349	10141990-007
348	6.15/32	6.1/4 DC	50004958Y	10713348-001	50004959Y348	10141990-006
331	6.19/32	6.3/8 DC	50004958Y	10713348-001	50004959Y331	10141990-002
765	6.23/32	6.1/2 DC	50004958Y	10713348-001	50004959Y765	10141990-017
338	7	6.3/4 DC	50004958Y	10713348-001	50004959Y338	10141990-004
372	7.1/4	7 DC	50004958Y	10713348-001	50004959Y372	10141990-009
355	7.1/2	7.1/4 DC	50004958Y	10713348-001	50004959Y355	10141990-008
766	7.3/4	7.1/2 DC	50004958Y	10713348-001	50004959Y766	10141990-018
550	8	7.3/4 DC	50004958Y	10713348-001	50004959Y550	10141990-010
334	8.1/4	8 DC	50004958Y	10713348-001	50004959Y334	10141990-003
347	8.1/2	8.1/4 DC	50004958Y	10713348-001	50004959Y347	10141990-005
580	8.25/32	8.1/2 DC	50004958Y	10713348-001	50004959Y580	10141990-012

## SBX7 CASING BUSHING 1,250 STON / 1,134 TONNE

Size [inches]	Part number	Oracle number	Load Rating [sTon/Tonne]
6.5/8	50000314Y135	10183719-001	1,250 / 1,134
7	50000314Y136	10183720-001	1,250 / 1,134
7.5/8	50000314Y137	10183721-001	1,250 / 1,134
7.3/4	50000314Y705	10183724-001	1,250 / 1,134
8	50000314Y757	10112880-001	1,250 / 1,134
8.5/8	50000314Y139	10183722-001	1,250 / 1,134
8.3/4	50000314Y804	10183725-001	1,250 / 1,134
9.1/8	50000314Y883	10183726-001	1,250 / 1,134
9.5/8	50000314Y141	10183723-001	1,250 / 1,134
9.7/8	50000314Y142	Contact NOV	1,250 / 1,134

## SBX7 LANDING STRING 45° BUSHINGS

Size [inches]	Part number	Oracle number	Load Rating [sTon/Tonne]
6.5/8	50000314Y832	10490423-013	1,250 / 1,134
6.5/8 with radius 1.5	50000314Y870	10702224-001	1,250 / 1,134

## SBX7 SPECIAL SQUARE SHOULDER BUSHING

Size [inches]	Part number	Oracle number	Load Rating [sTon/Tonne]
8	50000314Y884	10490423-016	1,250 / 1,134
8.3/4	50000314Y783	10702228-001	1,250 / 1,134
8.5/8	50000314Y784	10490423-010	1,250 / 1,134
9.5/8	50000314Y788	10112881-001	1,250 / 1,134
9.28 15° tapered	50000314Y902	10702225-001	1,250 / 1,134
9.4	50000314Y893	10490423-017	1,250 / 1,134



## SJH SERIES MANUAL ELEVATOR

The SJH horizontal pick up elevator is designed to pick up tubulars lying flat on a surface without having to lift the tubulars prior to closing the elevator. The elevator is capable of lifting drill pipe, recessed/zip lift drill collars and casing. It will handle single joints of pipe straight from cantilever to off-line stand building systems.

### TECHNICAL SPECIFICATIONS

Type	Part number*	Oracle number	Load Rating [sTon/Tonne]	Size [inches]	Size range [mm]	Pipe type	Part number Jaws*	Appr. weight [lbs / kg] (incl jaws)
SJH	50003135Y*	10108036-001	5 / 4.5	2.3/8 - 4.1/2	60.3 - 114.3	Tbg & Dp	50003148Y*	100 / 45
SJH	50003155Y*	10108043-001	5 / 4.5	4.1/2 - 7.5/8	114.3 - 193.7	Tbg & Dp	50003189Y*	111 / 51
SJH	50003175Y*	Contact NOV	5 / 4.5	7 - 10.3/4	177.8 - 273.1	Csg	50003150Y*	132 / 60

\*Refer to Jaw Bore code # in the following tables. Size components

#### JAWS SJH 2.3/8" - 4.1/2"

pn 50003135Y\* 10108036-001

Size Tubing	Type upset	90° Bode code	5° Bode code	12° Bode code
2.3/8"	Plain	158	5238	12238
	Upset	159		
2.7/8"	Plain	160	5278	12278
	Upset	161		
3.1/2"	Plain	162	5312	12312
	Upset	163		
4"	Plain	164	5400	12400
	Upset	165		
4.1/2"	Plain	129	5412	12412
	Upset	167		

Size Drill Pipe	Type upset	18° Bode code
2.3/8"	IU	-
	EU	116
2.7/8"	IU	117
	EU	118
3.1/2"	IU	119
	EU	120
4"	IU	121
	EU	122
4.1/2"	EU	123

#### JAWS SJH 4.1/2" - 7.5/8"

pn 50003155Y\* / 10108043-001

Size Casing	90° Bode code	5° Bore code
4.1/2"	129	5412
5"	131	5500
5.1/2"	132	5512
5.3/4"	133	-
6"	134	-
6.5/8"	135	5658
7"	136	5700
7.5/8"	137	5758
Size Drill Pipe	Type upset	18° Bode code
4.1/2"	IU	122
	EU	123
5"	IU	123
5.1/2"	IEU	124
5.7/8" (6" upset)	IEU	789
6.5/8"	IEU	782

#### JAWS SJH 7" - 10.3/4"

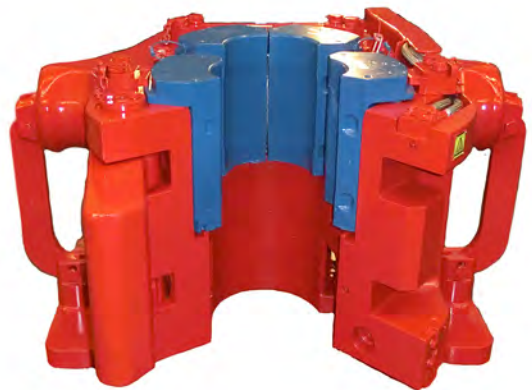
pn 50003175Y\* / Contact NOV

Size Casing	90° Bode code	5° Bode code
4.1/2"	129	na
5"	131	na
5.1/2"	132	na
6.5/8"	135	na
7"	136	5700
7.5/8"	137	5758
8.5/8"	139	5858
9"	140	5900
9.5/8"	141	5958
10.3/4"	142	51034



# HYDRAULIC ELEVATORS

85





### BX 3,4,5,7 & 9

- Designed for hydraulic actuated operation
- Cost competitive and economic with normal rig complement of air-operated, drill pipe, drill collar and casing elevators.
- Double door design for optimal balance and performance.
- The hydraulic cylinders are located inside the body casting for clean lines and maximum protection, and yet they are accessible for normal maintenance.
- Changeable bushings allow one elevator frame to handle all pipe size and type requirements.
- Bushings are locked into place with spring loaded pins for quick, easy removal and installation.
- Bushings can be changed within 5 minutes.
- No special tools are needed, no loose nuts, bolts or pins.
- Hinge journals are bushed to put major wear into replaceable components.
- One door bushing is spring loaded with linkage connecting it to a locking pin. Any load on this bushing segment engages the pin preventing the elevator from opening. This safety lock prevents the elevator from opening under load.
- Latch valve eliminates any faulty signals.
- The elevator is prepared for an interlock system as an option when used with a power slip.
- A trigger mechanism initiates the closing sequence when pipe is thrown into the elevator.
- Additionally equipped with a rotary actuator and can be tilted to pick up pipe from the V-door, eliminating the need for single joint elevators.



### BXS-SLIP TYPE

- Designed for hydraulic actuated operation.
- Cost competitive and economic with normal rig complement of air-operated casing elevators.
- Double door design for optimal balance and performance.
- The hydraulic cylinders are located inside the body casting for clean lines and maximum protection, and yet they are accessible for normal maintenance.
- Movable replaceable slips allow one elevator frame to handle multiple pipe sizes with no or very small external upset or load shoulder.
- Easy slip exchange.
- No loose nuts, bolts or pins.
- The safety lock prevents the elevator from opening under load.
- Latch valve will prevent any false signals
- The elevator is prepared for an interlock system as an option when used with a power slip.
- Additionally equipped with a rotary actuator and can be tilted to pick up pipe from the V-door, eliminating the need for single joint elevators.



### SBX7 ELEVATOR

- The SBX7 elevator is a solid body elevator with one manually operated door for high loads up to 1,250 sTon / 1,133 Tonne.
- For further information, see chapter "Manual Elevators".



### UX-TYPE

- The hydraulic UX single joint horizontal pick up elevator, is designed to pick up tubulars lying flat on a scaffold/raised support beam without having to lift the tubulars prior to closing the elevator.
- The elevator is capable of lifting casing.
- It will handle single joints of pipe straight from cantilever to off-line stand building system, and is used underneath the CRT350/500 casing running tool as for picking up tubulars from the V-door.
- After picking up the pipe, the pipe weight is transferred to the top collar plate.
- The jaws do not carry the vertical load.
- The jaws are delivered in sets and cover the range from 4.1/2" - 14".
- The top collar plates and bottom guides must be ordered separately.



### H-SJH-TYPE

- Hoist joints and/or stands of tubulars (drill pipe, casing or tubing) during the stand building operations of the total CRT350.
- Pick up single tubulars from the V-door or the catwalk (pipe deck) and hoist them into the derrick and vice versa.



### ROTATOR

- Hydraulic actuated operation.
- Strong, reliable, economic.
- Single hydraulic line required for rotation, accumulator actuated return movement.
- The hydraulic cylinder is located inside the body for clean lines and maximum protection.
- No loose nuts, bolts or pins.
- Easy adjustment of angle.
- Safe and reliable picking up pipe from the V-door, eliminating the need for single joint elevators.



## BX HYDRAULIC ACTUATED ELEVATOR

### TECHNICAL SPECIFICATIONS

Type	Size	Size	Weight (w/o bushings) [lbs/kg]	Load Rating up to			Link type (min/max)	
	[inches]	[mm]		18° Tool Joint [sTon/Tonne]	90° Coupling [sTon/Tonne]	45° Coupling [sTon/ Tonne]	[sTon or Inch]	[sTon or inches]
BX3	9.5/8 - 20	244.5 - 508	2,165 / 975	n/a	350 / 318	-	350	500
BX4-35	2.3/8 - 7.1/4	60.3 - 184.2	1,400 / 635	350 / 318	350 / 318	-	350	500
BX4-50	2.3/8 - 9.3/4	60.3 - 247.7	2,039 / 924	500 / 453	500 / 453	-	350	500
BX4-75	2.3/8 - 9.3/4	60.3 - 247.7	2,047 / 928	500 / 453	750 / 680	-	500	750
BX5	3.1/2 - 11	88.9 - 279.4	3,295 / 1,495	750 / 680	1,000 / 907	1,000 / 907	750	1,250
BX7	4 - 9.5/8	139.7 - 244.5	4,475 / 2,030	1000 / 907	1,250 / 1,133	1,250 / 1,133	1,250 *	1,250 *
BX9	4 - 10.3/4	114.3 - 273.1	6,585 / 2,994	1,250 / 1,133	1,500 / 1,360	1,250 / 1,133	1,250 *	1,250 *

\* 1,000 & 1,250 sTon links only, depending on rating

Type	Size range [inches]	Size [mm]	Weight (w/o slips) [lbs/kg]	Load Rating [s Ton/Tonne]	Link type Min [sTon]	Max [sTon]
BXS (slip type)	2.3/8 - 7.5/8	60.3 - 193.7	2,712 / 1,238	350 / 317	350	500

### MAIN PART NUMBERS

Type	Part no.	Oracle number
BX3	203300Y30	10023967-001
BX4-35	50005300Y	10457625-001
BX4-50 PSL1	n/a	10698095-501
BX4-50 PSL1 + SR2	n/a	10698095-502
BX4-50 PSL2	n/a	10698095-503
BX4-50 w/ weight indicator kit PSL1	n/a	10698095-504
BX4-50 w/ weight indicator kit PSL2	n/a	10698095-505
Bx4-75 PSL1	n/a	10034284-751
Bx4-75 PSL1 + SR2	n/a	10034284-752
Bx4-75 w/ weight indicator kit PSL1	n/a	10034284-754
Bx4-75 w/ weight indicator kit PSL2	n/a	10034284-755
Bx4-75 PSL2	n/a	10034284-753
BX5 w/ link kit	50004000Y40	10705608-001
BX5 w/ weight indicator kit	50004000Y50	10141177-001
BX5 PSL1	50004000Y30	10034326-001
BX5 weight indicator and pipe sensor	50004000Y60	10141178-001
BX7	50000580Y	10112883-001
BX9	n/a	10776954-001
BXS (slip type)	50000202Y	10140067-001

### POWER REQUIREMENTS BX, BXS ELEVATORS AND ROTATORS

Description	
Min Pressure [psi/kPa]	2,000 / 13,790
Max Pressure [psi/kPa]	2,500 / 17,237
Flow rate [gpm/lpm]	5 @ 2,000 psi / 19 @ 13,790 kPa
Hydraulic lines	3 @ 1/2" w/o rotator
	5 @ 1/2" w/ rotator

## SIZE COMPONENTS BXS

Size [inches]	Part number Slip carrier	New part number Slip carrier	Insert	New number Insert	Qty. inserts	Dimension insert [inches]
2.7/8 - 2.3/8 pn 50000205						
2.7/8	50000205Y1	10140072-001	6476830	11381052-001	12	3 x2
2.3/8	50000205Y2	10140072-002	6476864	11479117-001	12	3 x2
3.1/2 - 2.7/8 pn 50000206						
3.1/2	50000206Y1	10140077-001	24774	10138687-001	24	3 x1.25
2.7/8	50000206Y2	10140078-001	30358	10139203-001	24	3 x1.25
4.1/2 - 3.1/2 pn 50000207						
4.1/2	50000207Y1	10140083-001	2165	10451957-001	24	2.75 x 1.29
4	50000207Y2	10140084-001	2164	10362081-001	24	2.75 x 1.29
3.1/2	50000207Y3	10140085-001	2163	10451937-001	24	2.75 x 1.29
5.1/2 - 4.1/2 pn 50000208						
5.1/2	50000208Y1	10140091-001	2170	10362140-001	24	2.75 x 1.29
5	50000208Y2	10140091-003	2169	10025332-001	24	2.75 x 1.29
4.1/2	50000208Y3	10140091-004	2168	10451986-001	24	2.75 x 1.29
4.3/4	50000208Y4	10140091-006	2638	10138828-001	24	2.75 x 1.29
6.1/2 - 5.5/8 pn 50000209						
6.1/2	50000209Y1	11408408-001	2173	10452057-001	36	2.75 x 1.29
6.1/8	50000209Y2	11408408-002	2172	10452044-001	36	2.75 x 1.29
6	50000209Y3	11408408-003	2169	10025332-001	36	2.75 x 1.29
5.7/8	50000209Y4	11408408-004	2623	10138773-001	36	2.75 x 1.29
5.5/8	50000209Y5	11408408-005	2650	10377731-001	36	2.75 x 1.29
7.5/8 - 6.5/8 pn 50000210						
7.5/8	50000210Y1	10140104-001	2633	10377727-001	36	2.75 x 1.29
7	50000210Y2	10140104-002	2623	10138773-001	36	2.75 x 1.29
6.5/8	50000210Y3	10140104-004	2632	10377724-001	36	2.75 x 1.29

## Guide plate kits

Size	Kit top guides part number	Kit top guides Oracle number	Kit bottom guides part number	Kit bottom guides Oracle number
2.3/8	50000245-1	10140172-001	50000246-1	10140183-001
2.7/8	50000245-2	10140177-001	50000246-2	10140186-001
3	50000245-3	16597627-001	50000246-3	10740962-001
3.1/2	50000245-4	10140178-001	50000246-4	10140187-001
4	50000245-5	10140179-001	50000246-5	10140188-001
4.1/2	50000245-6	10140180-001	50000246-6	10140189-001
5	50000245-7	10140181-001	50000246-7	10140190-001
5.1/2	50000245-8	10140182-001	50000246-8	10140191-001
5.5/8	50000245-9	16597627-002	50000246-9	10740958-001
5.7/8	50000245-10	10140173-001	50000246-10	10740959-001
6	50000245-11	16597627-003	50000246-11	10740960-001
6.1/8	50000245-12	16597627-004	50000246-12	10740964-001
6.1/2	50000245-13	11408436-001	50000246-13	10740963-001
6.5/8	50000245-14	10140174-001	50000246-14	10140184-001
7	50000245-15	10140175-001	50000246-15	10140185-001
7.5/8	50000245-16	10140176-001	50000246-16	10181909-001
4.3/4	50000245-17	16597627-005	50000246-17	10740957-001

## SIZE COMPONENTS BX3

Casing Bushing			
Size [inches]	Part number	Oracle number	Load Rating [sTon/Tonne]
9.5/8	203310Y141	10023968-001	350 / 318
9.7/8	203310Y649	10721704-004	350 / 318
10.3/4	203310Y142	10023969-001	350 / 318
10.5/8	203310Y453	10721704-011	350 / 318
11.3/4	203310Y143	10721704-002	350 / 318
11.7/8	203310Y729	10721704-005	350 / 318
12.3/4	203310Y345	10721704-003	350 / 318
12.7/8	203310Y676	10959050-001	350 / 318
13.3/8	203310Y144	10023972-001	350 / 318
13.5/8	203310Y596	10112865-001	350 / 318
14	203310Y690	10112866-001	350 / 318
16	203310Y145	10023973-001	350 / 318
16.3/4	203310Y664	10959047-001	350 / 318
18	203310Y723	10112867-001	350 / 318
18.5/8	203310Y146	10490422-001	350 / 318
20	203310Y147	10023974-001	350 / 318

Drill collar Plain			
Size [inches]	Part number	Oracle number	Load Rating [sTon/Tonne]
10	203312Y228	10958252-001	150 / 136
10.1/2	203312Y229	10958252-002	150 / 136
11	203312Y230	10958252-003	150 / 136

## SIZE COMPONENTS BX4-35

Casing Bushing			
Size [inches]	Part number	Oracle number	Load Rating [sTon/Tonne]
4.1/2 Csg / Tubing plain	50005351Y129	10142362-002	350 / 318
5 Casing	50005351Y131	10142362-003	350 / 318
5.1/2 Casing	50005351Y132	10142362-004	350 / 318
6.5/8 Casing	50005351Y135	10142362-006	350 / 318
7 Casing	50005351Y136	10142362-005	350 / 318
Tubing Bushing			
Size [inches]	Part number	Oracle number	Load Rating [sTon/Tonne]
2.3/8 Casing/ Plain Tubing	50005351Y158	Contact NOV	350 / 318
2.3/8 EU Tubing	50005351Y159	10142392-009	350 / 318
2.7/8 Plain Tubing	50005351Y160	10142392-010	350 / 318
2.7/8 EU Tubing	50005351Y161	10142362-001	350 / 318
3.1/2 Casing/ Plain Tubing	50005351Y162	10142392-008	350 / 318
3.1/2 EU Tubing	50005351Y163	10142363-001	350 / 318
4 Plain Tubing	50005351Y164	Contact NOV	350 / 318
4 EU Tubing	50005351Y165	Contact NOV	350 / 318
4.1/2 EU Tubing	50005351Y167	10142364-001	350 / 318
Drill Collars Zip Lift			
Size [inches]	Part number	Oracle number	Load Rating [sTon/Tonne]
3.1/8	50005352Y735	Contact NOV	50 / 45
3.3/8	50005352Y736	Contact NOV	60 / 54
3.1/2	50005352Y625	Contact NOV	60 / 54
4.1/8	50005352Y177	10739954-001	70 / 64
4.3/4	50005352Y435	10739954-003	90 / 82
5.1/4	50005352Y179	Contact NOV	100 / 91
5.1/2	50005352Y180	Contact NOV	110 / 100
5.3/4	50005352Y181	Contact NOV	130 / 118
6	50005352Y362	10739938-001	140 / 127
6.1/4	50005352Y337	Contact NOV	140 / 127
6.1/2	50005352Y373	10739954-002	150 / 136
6.3/4	50005352Y387	Contact NOV	150 / 136
7	50005352Y361	10739954-004	150 / 136
7.1/4	50005352Y357	Contact NOV	150 / 136

Drill Pipe Bushings			
Size [inches]	Part number	Oracle number	Load Rating [sTon/Tonne]
2.7/8 IU DP	50005353Y117	10457626-007	350 / 318
2.7/8 EU DP	50005353Y118	10457626-002	350 / 318
3.1/2 IU DP	50005353Y119	Contact NOV	350 / 318
3.1/2 EU DP	50005353Y120	10457626-003	350 / 318
4 IU DP	50005353Y121	10457626-004	350 / 318
4 EU, 4 1/2 IU & 4 1/2 IEU DP	50005353Y122	10457626-005	350 / 318
4.1/2 EU & 5 IEU DP	50005353Y123	10457626-001	350 / 318
5.1/2 IEU DP	50005353Y124	10457626-006	350 / 318

Drill Collars Plain			
Size [inches]	Part number	Oracle number	Load Rating [sTon/Tonne]
2.1/2	50005354Y201	Contact NOV	150 / 136
2.3/4	50005354Y203	Contact NOV	150 / 136
3	50005354Y205	Contact NOV	150 / 136
3.1/8	50005354Y206	Contact NOV	150 / 136
3.1/4	50005354Y207	Contact NOV	150 / 136
3.1/2	50005354Y209	Contact NOV	150 / 136
3.3/4	50005354Y211	Contact NOV	150 / 136
4	50005354Y213	Contact NOV	150 / 136
4.1/8	50005354Y519	Contact NOV	150 / 136
4.1/4	50005354Y548	Contact NOV	150 / 136
4.1/2	50005354Y215	Contact NOV	150 / 136
4.3/4	50005354Y354	10715123-005	150 / 136
5	50005354Y552	10715123-007	150 / 136
5.1/4	50005354Y219	Contact NOV	150 / 136
5.1/2	50005354Y411	Contact NOV	150 / 136
5.3/4	50005354Y222	Contact NOV	150 / 136
6	50005354Y349	Contact NOV	150 / 136
6.1/4	50005354Y348	10715123-002	150 / 136
6.3/8	50005354Y331	Contact NOV	150 / 136
6.1/2	50005354Y765	10715123-003	150 / 136
6.3/4	50005354Y338	Contact NOV	150 / 136
7	50005354Y372	10715123-004	150 / 136
7.1/4	50005354Y355	Contact NOV	150 / 136

## SIZE COMPONENTS BX4-50, 4-75

NOTE: Mid 2009 some bushings have been replaced by modified bushings. The old and new bushings are interchangeable, however, when ordering bushings, customer will always receive the new bushings with Oracle numbers.

DC w/Zip Lift Bushing			
Size [inches]	Part number	Oracle number	Load Rating [sTon/Tonne]
3.1/8	203211Y735	10698367-002	50 / 45
3.3/8	203211Y736	10698367-004	60 / 54
3.1/2	203211Y625	10698367-001	60 / 54
4.1/8	203211Y177	10698367-005	70 / 64
4.1/4	203211Y674	10698367-003	70 / 64
4.3/4	50000677Y435	10490426-008	90 / 82
5	50000677Y530	10490426-508	100 / 91
5.1/4	50000677Y179	10490426-500	100 / 91
5.1/2	50000677Y180	10490426-501	110 / 100
6.1/4	50000677Y337	10140458-001	140 / 127
6	50000677Y362	10490426-005	140 / 127
6.3/8	50000677Y409	10490426-506	140 / 127
6.1/2	50000677Y373	10490426-006	150 / 136
6.3/4	50000677Y387	10698371-005	150 / 136
7	50000677Y361	10698371-003	150 / 136
7.1/4	50000677Y357	10698371-012	150 / 136
7.3/4	50000677Y339	10698371-013	150 / 136
8	50000677Y336	10698371-001	150 / 136
8.1/4	50000677Y422	10034305-001	150 / 136
8.1/2	50000677Y426	10140465-001	150 / 136
8.3/4	50000677Y553	10140465-002	150 / 136
9	50000677Y427	10698372-001	150 / 136
9.1/2	50000677Y370	10034302-001	150 / 136
9.3/4	50000677Y367	10140460-001	150 / 136
10	50000677Y195	10140465-003	150 / 136
Riser Handling Bushing			
Size [inches]	Part number	Oracle number	Load Rating [sTon/Tonne]
6.5/8	50000676Y333	10753815-002	750 / 608
7	50000676Y790	10140444-001	750 / 608
7.1/4	50000676Y885	10140446-001	750 / 608
8	50000676Y884	10140445-001	750 / 608
8.5/8	50000676Y784	10140442-001	750 / 608
Special 55.deg, 8.5/8 Riser	50000676Y869	10721679-002	750 / 608
8.3/4	50000676Y783	10140441-001	750 / 608
9.5/8	50000676Y788	10111377-001	750 / 608

Tubing Bushing			
Size [inches]	Part number	Oracle number	Load Rating [sTon/Tonne]
2.3/8 Casing / Plain Tbg.	203210Y158	10082632-001	500 / 453
2.3/8 OD.EU. Tbg.	203210Y159	10138300-001	500 / 453
2.7/8 Plain Tbg.	203210Y160	10490421-003	500 / 453
2.7/8 OD. EU. Tbg.	203210Y161	10138302-001	500 / 453
3.1/2 Casing / Plain Tbg.	203210Y162	10490421-005	500 / 453
3.1/2 OD. EU. Tbg.	203210Y163	10138304-001	500 / 453
4 OD. Plain Tbg.	203210Y164	10138305-001	500 / 453
4 OD. EU. Tbg.	203210Y165	10138306-001	500 / 453
2.88 Special Gun tube	203210Y867	11342176-001	500 / 453
3.50 Special Gun tube	203210Y868	Contact NOV	500 / 453
Square Shoulder DP			
Size [inches]	Part number	Oracle number	Load Rating [sTon/Tonne]
2.7/8 EU Sq. Shoulder DP	203212Y101	Contact NOV	500 / 453
3.1/2 IU Sq. Shoulder DP	203212Y102	10138311-001	500 / 453
3.1/2 EU Sq. Shoulder DP	203212Y103	10138311-002	500 / 453
4 IU Sq. Shoulder DP	203212Y104	Contact NOV	500 / 453
5 IEU Sq. Shoulder DP	50000675Y106	10091679-001	750 / 608
5.1/2 IEU Sq. Shoulder DP	50000675Y107	10114359-001	750 / 608

SIZE COMPONENTS BX4-50, 4-75

Casing Bushings			
Size [inches]	Part number	Oracle number	Load Rating [sTon/Tonne]
4.1/2 Casing / Plaine Tbg.	50000676Y129	10490425-006	750 / 608
4.1/2 OD. EU. Tbg.	50000676Y167	10490425-010	750 / 608
4.1/2 Casing / Plaine Tbg.	50000676Y848	10490425-504	750 / 608
5 Casing	50000676Y131	10490425-002	750 / 608
5.1/2 Casing	50000676Y132	10490425-003	750 / 608
6 Casing	50000676Y134	10140421-002	750 / 608
6.5/8 Casing	50000676Y135	10140431-001	750 / 608
6.1/4 Casing	50000676Y505	10140431-004	750 / 608
6.7/8 55 ,45, 35 Taper	50000676Y834	11332363-001	750 / 608
7 Casing	50000676Y136	10034296-001	750 / 608
7 HyDrill 521 #26 w/ Lift plug	50000676Y854	10140431-006	750 / 608
1/16 Bevel 7-1/4 Casing	50000676Y563	10140431-005	750 / 608
7.5/8 Casing	50000676Y137	10140433-001	750 / 608
7.3/4 Casing	50000676Y705	10140440-001	750 / 608
8.5/8 Casing	50000676Y139	10140434-001	750 / 608
8 Casing	50000676Y757	10140439-002	750 / 608
8.3/4 Casing	50000676Y804	10140439-005	750 / 608
9.5/8 Casing	50000676Y141	10034298-001	750 / 608
9.7/8 Casing	50000676Y649	10140439-001	750 / 608
9.1/8 Casing	50000676Y883	10140439-004	750 / 608
DP bushing			
Size [inches]	Part number	Oracle number	Load Rating [sTon/Tonne]
2.7/8 IU DP	50000675Y117	10490424-001	500 / 453
2.7/8 EU DP	50000675Y118	10034286-001	500 / 453
3.1/2 IU DP	50000675Y119	10490424-003	500 / 453
3.1/2 EU DP	50000675Y776	10034287-001	500 / 453
4 DP with 4.1 max upset	50000675Y798	10731581-001	500 / 453
4 IU DP	50000675Y777	10490424-005	500 / 453
4 EU, 4.1/2 IU & 4.1/2 IEU DP	50000675Y778	10034288-001	500 / 453
4.1/2 EU & 5 IEU DP	50000675Y779	10034289-001	500 / 453
5.1/2 IEU DP	50000675Y780	10490424-008	500 / 453

5.1/2 IF IEU DP	50000675Y781	10034291-001	500 / 453
SK 5.1/2 special DP	50000675Y880	Contact NOV	500 / 453
5.7/8 DP 18degr (6 EU MAX.)	50000675Y770	10490424-002	500 / 453
6.5/8 IEU DP	50000675Y782	10034292-001	500 / 453
6.5/8 DP 7.1/8 upset	50000675Y823	10140417-001	500 / 453

Drill Collar Plain Bushing			
Size [inches]	Part number	Oracle number	Load Rating [sTon/Tonne]
6 DC plain	50000678Y349	10721677-010	150 / 136
4.3/4 DC plain	50000678Y354	10140478-001	150 / 136
6.1/2 DC plain	50000678Y765	10721677-007	150 / 136
6.3/4 DC plain	50000678Y338	10721677-002	150 / 136
6.1/4 DC plain	50000678Y348	10721677-004	150 / 136
8 DC plain	50000678Y334	10731584-003	150 / 136
9.1/2 DC plain	50000678Y346	10731584-005	150 / 136
8.1/4 DC plain	50000678Y347	10731584-007	150 / 136
9 DC plain	50000678Y356	10731584-009	150 / 136
8.1/2 DC plain	50000678Y580	10731584-011	150 / 136
2.1/2 DC plain	203213Y201	10138317-003	150 / 136
2.3/4 DC plain	203213Y203	10138317-004	150 / 136
3 DC plain	203213Y205	10138317-005	150 / 136
3.1/8 DC plain	203213Y206	10138317-002	150 / 136
3.1/4 DC plain	203213Y207	10138317-006	150 / 136
3.1/2 DC plain	203213Y209	10138317-001	150 / 136
3.3/4 DC plain	203213Y211	11342658-001	150 / 136
4.1/8 DC plain	203213Y519	10138317-009	150 / 136
4.1/4 DC plain	203213Y548	10138317-010	150 / 136
3.3/8 DC plain	203213Y795	10138317-007	150 / 136

## SIZE COMPONENTS BX4-50, 4-75

DC Plain bushing			
Size [inches]	Part number	Oracle number	Load Rating [sTon/ Tonne]
2.1/2	203213Y201	10138317-003	150 / 136
2.3/4	203213Y203	10138317-004	150 / 136
3	203213Y205	10138317-005	150 / 136
3.1/8	203213Y206	10138317-002	150 / 136
3.1/4	203213Y207	10138317-006	150 / 136
3.3/8	203213Y795	10138317-007	150 / 136
3.1/2	203213Y209	10138317-001	150 / 136
3.3/4	203213Y211	11342658-001	150 / 136
4.1/8	203213Y519	10138317-009	150 / 136
4.1/4	203213Y548	10138317-010	150 / 136
4.3/4	50000678Y354	10140478-001	150 / 136
6	50000678Y349	10721677-001	150 / 136
6.1/4	50000678Y348	10721677-004	150 / 136
6.1/2	50000678Y765	10721677-007	150 / 136
6.3/4	50000678Y338	10721677-002	150 / 136
8	50000678Y334	10731584-003	150 / 136
8.1/4	50000678Y347	10731584-007	150 / 136
8.1/2	50000678Y580	10731584-011	150 / 136
9	50000678Y356	10731584-009	150 / 136
9.1/2	50000678Y346	10731584-005	150 / 136

## SIZE COMPONENTS BX5

Casing Bushing			
Size [inches]	Part number	Oracle number	Load Rating [sTon/ Tonne]
4.1/2	50004010Y129	10034327-004	750 / 680
4.3/4	50004010Y130	10034327-005	750 / 680
5	50004010Y131	10034327-002	750 / 680
5.1/2	50004010Y132	10034327-001	750 / 680
5.3/4	50004010Y133	10034327-006	750 / 680
6	50004010Y134	10034328-004	750 / 680
6 5/8	50004010Y135	10034328-002	750 / 680
7	50004010Y136	10034328-001	750 / 680
7.5/8	50004010Y137	10141199-001	750 / 680
7.3/4	50004010Y705	10141199-004	750 / 680
8.5/8	50004010Y139	10141199-002	750 / 680
9.5/8	50004010Y141	10034330-001	750 / 680
9.7/8	50004010Y649	10034330-003	750 / 680
10.3/4	50004010Y142	10034330-002	750 / 680

## SIZE COMPONENTS BX5

Special square shoulder Bushing			
Size [inches]	Part number	Oracle number	Load Rating [sTon/ Tonne]
8	50004014Y757	10718973-002	1,000 / 907
8.5/8	50004014Y784	10718973-004	1,000 / 907
8.3/4	50004014Y783	10718973-003	1,000 / 907
9.5/8	50004014Y788	10034342-001	1,000 / 907
Drill collars Zip Lift Bushing			
Size [inches]	Part number	Oracle number	Load Rating [sTon/ Tonne]
4.3/4	50004011Y435	10034334-001	90 / 82
6	50004011Y362	10034334-003	140 / 127
6.1/4	50004011Y337	10034334-004	140 / 127
6.1/2	50004011Y373	10083678-001	150 / 136
6.3/4	50004011Y387	10718952-003	150 / 136
7	50004011Y361	10718952-002	150 / 136
7.3/4	50004011Y339	10718952-006	150 / 136
8	50004011Y336	10083676-001	150 / 136
8.1/4	50004011Y422	10034333-001	150 / 136
8.1/2	50004011Y426	10718959-002	150 / 136
9	50004011Y427	10718959-004	150 / 136
9.1/2	50004011Y370	10083677-001	150 / 136
9.3/4	50004011Y367	Contact NOV	150 / 136
10	50004011Y195	Contact NOV	150 / 136
10.3/4	50004011Y527	Contact NOV	150 / 136
11	50004011Y419	Contact NOV	150 / 136
Drill pipe Bushing			
Size [inches]	Part number	Oracle number	Load Rating [sTon/ Tonne]
3.1/2 EU	50004012Y776	10034335-001	750 / 680
4 IU	50004012Y777	10720429-002	750 / 680
4 EU, 4.1/2 IU & 4 1/2 IEU	50004012Y778	10034336-001	750 / 680
4.1/2 EU & 5 IEU	50004012Y779	10034337-001	750 / 680
5.1/2 IEU 18°	50004012Y780	10720428-002	750 / 680
5.1/2 DP IF	50004012Y781	10111761-001	750 / 680
6.5/8 IEU	50004012Y782	10034339-001	750 / 680
5.7/8 EU	50004012Y789	10034340-001	750 / 680

## SIZE COMPONENTS BX5

Drill collars plain (lift-plug) Bushing			
Size [inches]	Part number	Oracle number	Load Rating [sTon/ Tonne]
4.3/4	50004013Y354	10718509-002	150 / 136
5.1/4	50004013Y219	10718509-003	150 / 136
6.1/4	50004013Y348	16601045-002	150 / 136
6.1/2	50004013Y135	16601045-001	150 / 136
8	50004013Y334	16601040-002	150 / 136
8.1/4	50004013Y347	16601040-001	150 / 136
8.1/2	50004013Y357	16601040-003	150 / 136
9	50004013Y356	16601039-002	150 / 136
9.1/2	50004013Y346	16601039-001	150 / 136
10	50004013Y228	16690442-001	150 / 136
10.1/2	50004013Y229	16690443-001	150 / 136
11	50004013Y230	16601039-003	150 / 136

## SIZE COMPONENTS BX7

Casing Bushing 1,250 sTon / 1,134 Tonne			
Size [inches]	Part number	Oracle number	Load Rating [sTon/ Tonne]
6.5/8	50000314Y135	10183719-001	1,250 / 1,134
7	50000314Y136	10183720-001	1,250 / 1,134
7.5/8	50000314Y137	10183721-001	1,250 / 1,134
7.3/4	50000314Y705	10183724-001	1,250 / 1,134
8	50000314Y757	10112880-001	1,250 / 1,134
8.5/8	50000314Y139	10183722-001	1,250 / 1,134
8.3/4	50000314Y804	10183725-001	1,250 / 1,134
9.1/8	50000314Y883	10183726-001	1,250 / 1,134
9.5/8	50000314Y141	10183723-001	1,250 / 1,134
9.7/8	50000314Y142	Contact NOV	1,250 / 1,134
Drill pipe 18° Bushing 750 sTon / 680 Tonne			
Size [inches]	Part number	Oracle number	Load Rating [sTon/ Tonne]
5.1/2 IEU	50000312Y780	10731576-001	750 / 680
5.1/2 IF	50000312Y781	10112877-001	750 / 680
Drill pipe 18° Bushing 1,000 sTon / 907 Tonne			
Size [inches]	Part number	Oracle number	Load Rating [sTon/ Tonne]
5.7/8 with 6 upset	50000312Y789	10112879-001	1,000 / 907
6.5/8 IEU	50000312Y782	10112878-001	1,000 / 907
6.5/8, with 7.1/8 upset	50000312Y823	10704616-001	1,000 / 907

## SIZE COMPONENTS BX7

Landing string 45° Bushings			
Size [inches]	Part number	Oracle number	Load Rating [sTon/ Tonne]
6.5/8	50000314Y832	10490423-013	1,250 / 1,134
6.5/8 with radius 1.5	50000314Y870	10702224-001	1,250 / 1,134
Special square shoulder Bushing			
Size [inches]	Part number	Oracle number	Load Rating [sTon/ Tonne]
8	50000314Y884	10490423-016	1,250 / 1,134
8.3/4	50000314Y783	10702228-001	1,250 / 1,134
8.5/8	50000314Y784	10490423-010	1,250 / 1,134
9.5/8	50000314Y788	10112881-001	1,250 / 1,134
9.28 15° tapered	50000314Y902	10702225-001	1,250 / 1,134
9.4	50000314Y893	10490423-017	1,250 / 1,134
Special square shoulder Bushing			
Size [inches]	Part number	Oracle number	Load Rating [sTon/ Tonne]
8	50000314Y884	10490423-016	1,250 / 1,134
8.3/4	50000314Y783	10702228-001	1,250 / 1,134



## SIZE COMPONENTS BX9

Casing bushings, 750 sTon / 680 Tonne			
Size [inches]	Oracle number	Bore code	Approx. Mass [lbs / kg] , 4 segments excl. transport frame
5	10932262-002	131	748 (340)
5.1/8	10932262-003	482	740 (336)
5.1/4	10932262-004	919	732 (332)
5.1/2	10932262-005	132	722 (328)
5.3/4	10932262-006	133	716 (324)
5.7/8	10932262-007	889	704 (320)
6	10932262-008	134	700 (318)
6.1/4	10932262-009	505	688 (312)
6.1/2	10932262-010	486	678 (308)
6.5/8	10932262-011	135	672 (305)
6.3/4	10932262-012	920	664 (302)
6.7/8	10932262-013	890	660 (300)

Casing bushings, 1,000 sTon / 907 Tonne			
Size [inches]	Oracle number	Bore code	Approx. Mass [lbs / kg] 4 segments excl. transport frame
7	10932262-014	136	652 (296)
7.1/4	10932262-015	563	640 (290)
7.1/2	10932262-016	888	628 (284)
7.5/8	10932262-017	137	620 (282)
7.3/4	10932262-018	705	614 (280)

Casing bushings, 1,250 sTon / 1,134 Tonne			
Size [inches]	Oracle number	Bore code	Approx. Mass [lbs / kg] 4 segments excl. transport frame
8	10932262-019	757	600 (270)
8.1/8	10932262-020	697	582 (268)
8.1/2	10932262-021	646	570 (260)
8.5/8	10932262-022	139	564 (256)

Casing bushings, 1,500 sTon / 1,360 Tonne			
Size [inches]	Oracle number	Bore code	Approx. Mass [lbs / kg] 4 segments excl. transport frame
8.3/4	10780628-006	804	648 (296)
8.7/8	10780628-007	754	640 (292)
9	10780628-008	140	632 (288)
9.1/8	10780628-009	883	620 (280)
9.3/8	10780628-010	865	608 (276)
9.1/2	10780628-011	747	600 (272)
9.5/8	10780628-012	141	592 (268)
9.3/4	10780628-013	769	580 (264)
9.7/8	10780628-014	649	572 (260)
10	10780628-015	471	564 (256)
10.1/8	10780628-016	846	556 (252)
10.1/4	10780628-017	808	540 (244)
10.5/8	10780628-018	453	520 (236)
10.3/4	10780628-019	142	512 (232)

## Drill pipe 18 degree bushings, 750 sTon / 680 Tonne

Size [inches]	Oracle number	Bore code	Approx. Mass [lbs / kg ] 4 segments excl. transport frame
5.1/2 IEU	10780591-001	780	648 (294)
5.1/2 IF	10780591-002	781	456 (207)

## Drill pipe 18 degree bushings, 1,000 sTon / 907 Tonne

Size [inches]	Oracle number	Bore code	Approx. Mass [lbs / kg ] 4 segments excl. transport frame
5.78 , with 6 UPSET	10780591-003	789	460 (209)

## Drill pipe 18 degree bushings, 1,250 sTon / 1,134 Tonne

Size [inches]	Oracle number	Bore code	Approx. Mass [lbs / kg ] 4 segments excl. transport frame
6 5/8 IEU DRILL	10780591-004	782	428 (194)
6 5/8, WITH 7.1/8 UPSET	10780591-005	823	421 (191)

## Landing string 45 degree bushings, 1,250 sTon / 1,134 Tonne

Size [inches]	Oracle number	Bore code	Approx. Mass [lbs / kg ] 4 segments excl. transport frame
6.5/8 WITH RADIUS 1.5"	10824399-001	870	640 (290)
6.5/8 WITH RADIUS 0.125"	10824399-002	832	640 (290)

## Special Square Shoulder bushings, 1,250 sTon / 1,134 Tonne

Size [inches]	Oracle number	Bore code	Approx. Mass [lbs / kg ] 4 segments excl. transport frame
8	10932262-001	884	600 (268)

## Special Square Shoulder bushings, 1,500 sTon / 1,360 Tonne

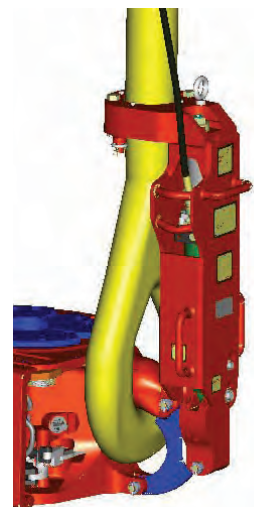
Size [inches]	Oracle number	Bore code	Approx. Mass [lbs / kg ] 4 segments excl. transport frame
8.5/8	10780628-005	784	660 (300)
8.3/4	10780628-004	783	648 (296)
9.28	10780628-003	929	616 (280)
9.40	10780628-002	893	604 (276)
9.5/8	10780628-001	788	593 (269)

## Special Riser bushings, 1,500 sTon / 1,360 Tonne

Size [inches]	Oracle number	Bore code	Approx. Mass [lbs / kg ] 4 segments excl. transport frame
Special 55° Tapered bushing	Contact NOV	834	
9.28, 15° Tapered Riser bushing	Contact NOV	902	

## ROTATORS

The rotator is a tool designed for rotating the BX series elevators, used e.g. when picking up a pipe from the V-door. The rotator is hydraulic driven via the rotating head and is operated via the drillers console. The float function enables the elevator to follow a changing pipe angle without any interference of the operator, as the float command overrides all manual rotator commands. Especially for BX4 i.c.w. TDS-11 top drives, a narrow type is available.



### TECHNICAL SPECIFICATIONS

Type	Part number	Oracle number	Dimensions LxWxH [inches/mm]	Weight [lbs/kg]	Link type [sTon]	
Rotator Left	50004130	10034350-001	15 x 8 x 37 / 381 x 203 x 940	709 / 321.6	350	1,250
Rotator Right	-	11040476-001	15 x 8 x 37 / 381 x 203 x 940	709 / 321.6	350	1,250
Rotator for BX4-35 & 4-50 i.c.w. TDS-11	50004170	10698100-001	18.8 x 11.1 x 68.5 / 478 x 282 x 1,740	407 / 184.6	350	500
Double rotator for BX7 (10034350-001 + 11040476-001)	50004160	10703304-001	18.8 x 11.1 x 68.5 / 478 x 282 x 1,740 (twice)	1,418 / 643.2	350	1,250

### OPTIONAL PART NUMBERS

Rotator		
Part number	Oracle number	Description
50004100-1	10034344-001	Wear buttons for 5.3/4" shank diameter / 750 sTon
50004100-2	10034345-001	Wear buttons for 4.1/2" shank diameter / 500 sTon
50004100-3	10034346-001	Wear buttons for 3.1/2" shank diameter / 350 sTon
50004100-4	10034348-001	Wear buttons for 6.1/4" shank diameter / 1000 sTon
50004100-340	10034347-001	Link block adapter for BX3 & BX4
50004077-50	10141314-001	Link block adapter for BX5

Rotator for BX-4 i.c.w. TDS-11		
Part number	Oracle number	Description
50004170-500	10698380-001	Wear buttons for 4.1/2" shank diameter / 500 sTon
50004170-350	10698379-001	Wear buttons for 3.1/2" shank diameter / 350 sTon
50004170-40	10698378-001	Link block adapter for BX4-50
50004170-435	17466995-001	Link block adapter for BX4-35

Rotator for BX-7		
Part number	Oracle number	Description
50004100-4	10034348-001	Wear buttons for 6.1/4" shank diameter / 1000 sTon
50004077-50	10141314-001	Link block adapter kit for BX7

Hydraulic requirements: See BX-elevator specifications

## HYDRAULIC PICK UP ELEVATOR

The hydraulic SJH and UX single joint horizontal pick up elevator, designed to pick up tubulars lying flat on a surface without having to lift the tubular prior to closing the elevator. The elevator is capable of lifting casing with a lifting collar or nubbin. It will handle single joints of pipe straight from cantilever to off-line stand building system, and is used underneath the CRT350 Casing Running Tool (H-SJH) and CRT500 Casing Running Tool (UX) as a standard for picking up elevators from the V-door. The jaws are delivered in sets and cover the range from 4.1/2" - 14". For the CRT350 Casing Running Tool the size 9.5/8" is the maximum.

H-SJH Elevator



UX Elevator



### TECHNICAL SPECIFICATIONS

Description	H-SJH	UX
Size [inches / mm]	4.1/2 - 9.5/8 / 114 - 245	9.5/8 - 14 / 245 - 356
Size with CRT350 [inches / mm]	max 9.5/8 / 245	9.5/8 - 14 / 245 - 356
Load Rating [sTon/ Tonne]	5 / 4.5	5 / 4.5
Load Rating 4.1/2" to 5.1/2" [sTon / Tonne]	3 / 2.7	n/a
Flow [gpm/lpm]	2 to 5 / 7.5 to 18.9	2 to 5 / 7.5 to 18.9
Max. pressure [psi/kPa]	2,500 / 17,237	2,500 / 17,237
Min. pressure [psi/kPa]	2,000 / 13,790	2,000 / 13,790
BX type controls	3 control lines (P - T - Xp)	3 control lines (P - T - Xp)
Elevator latched feed-back signal	Jaw & Latch closed verification	Jaw & Latch closed verification

### MAIN PART NUMBERS

H-SJH	Oracle number	UX5-14	Oracle number
50003275Y	10140925-003	50002400Y	10140670-001

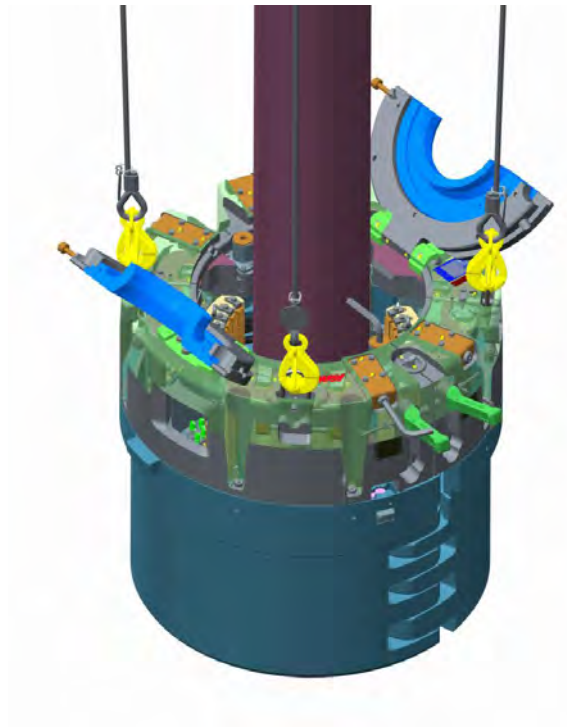
### SIZE COMPONENTS

H-SJH			
Size Casing [inches]	Load Rating [sTons / Tonne]	Part number jaw sets	Oracle number jaw sets
4.1/2	3 / 2.72	50003151Y129	10140852-001
5	3 / 2.72	50003151Y131	10140852-002
5.1/2	3 / 2.72	50003151Y132	10140852-003
6.5/8	5 / 4.54	50003151Y135	10140852-004
7	5 / 4.54	50003151Y136	10140852-005
7.5/8	5 / 4.54	50003151Y137	10140852-006
7.3/4	5 / 4.54	50003151Y705	10140852-010
8.5/8	5 / 4.54	50003151Y139	10140852-009
8.3/4	5 / 4.54	50003151Y804	Contact NOV
9.5/8	5 / 4.54	50003151Y141	10140852-007
9.3/4 *	5 / 4.54	50003151Y769	10140852-008
9.7/8 *	5 / 4.54	50003151Y649	10140864-001

\* on request

UX							
Size Casing [inches]	Load Rating [sTons / Tonne]	Part number jaw set	Oracle number jaw sets	Part number top collar	Oracle number top collar	Part number bottom guide	Oracle number bottom guide
9.5/8	5 / 4.54	50005955Y141	10697093-001	50005954Y141	10697098-001	50005959-141	10697100-001
9.7/8	5 / 4.54	50005955Y649	10143123-001	50005954Y649	10143108-005	50005959-649	10143129-005
10	5 / 4.54	50005955Y831	11044055-001	50005954Y831	10983704-001	10143108-006	10143129-006
10.1/8	5 / 4.54	50005955Y846	10140852-007	50005954Y846	Contact NOV	50005959-846	Contact NOV
10.3/4	5 / 4.54	50005955Y142	10143120-001	50005954Y142	10143108-002	50005959-142	10143129-002
11.3/4	5 / 4.54	50005955Y143	11359794-001	50005954Y143	Contact NOV	50005959-143	Contact NOV
13.3/8	5 / 4.54	50005955Y144	10697103-001	50005954Y144	10143108-003	50005959-144	10143129-003
13.5/8	5 / 4.54	50005955Y596	10143122-001	50005954Y596	10143108-004	50005959-596	10143129-004
14	5 / 4.54	50005955Y690	10983704-001	50005954Y690	10143108-001	50005959-690	10143129-001

# ELEVATOR/SPIDERS & FMS



**VARCO / BJ TYPE ELEVATOR/SPIDERS & FMS FLUSH / FLOOR MOUNTED SLIPS**

**ELEVATOR/SPIDERS**

The elevator/spider tool is designed for lifting and suspending tubular goods, from light tubing to heavy wall pipe and drill collars.

The main body of these units can be dressed as a casing elevator or as a spider. The upper unit is dressed as an elevator, using a bottom guide and a bell guide. The lower unit is dressed as a spider, using a top guide to aid in centering the casing. The elevator is attached to the derrick traveling block and hook with 250, 350, 500, 750 & 1,000 sTon standard Varco weldless links. The spider can be placed directly on the master bushing or rotary, assuming flat and sufficient contact surface is assured. If the load rating of the rotary table is less than the capacity of the elevator/spider, or if the rotary table surface is not flat, a NOV adapter plate may be used. The elevator/spider tools are available air operated as well as hydraulic operated. See below overview.



BJ Style Elevator Spider



Varco Style Elevator Spider



FMS

**FMS FLUSH & FLOOR MOUNTED SLIPS**

The FMS275/375/495 is a hydraulic operated power slip which is equipped with replaceable slips and insert carriers to handle casing. The power down force generated allows the FMS to take the torque reaction of the tong when the string weight is not sufficient to resist rotating and eliminates the need for a manual casing tong. The powered down slips allow the first casing joints to be run in with the FMS. The FMS is mounted flush with the rig floor, allowing the casing connection height to be lowered 1 meter (3 feet), thus eliminating the need for scaffolding. The rig crew also has more room to work by removing the spider body from the top of the rig floor.

The FMS can be used in combination with the rotary support table. The slips will set or raise when a command is given by the driller. Setting and raising slips of the FMS is remote controlled. By detecting the signal-line pressure from the FMS it is determined that the FMS slips are set.

The FMS275 utilizes the full range of slip assemblies and bottom guides, 2.3/8" to 7.5/8", as used in the existing BJ type 250 sTon elevator/spider. In addition, special designated slips will give the FMS275 its maximum 250 sTon capacity.

The FMS375 utilizes the full range of slip assemblies and guides, 4.1/2" to 14", as used in the 500 sTon elevator/spider. The FMS375 is provided with standard rotary locks in case the rotary torque needs to be transmitted to the casing string.

The FMS495 utilizes the full range of slip assemblies and guides, 9.5/8" up to 18.5/8". The FMS495 is provided with standard rotary locks in case the rotary torque needs to be transmitted to the casing string.

**OVERVIEW**

	Pipe size →																																																				
	2.3/8"	2.7/8"	3.1/2"	4"	4.1/2"	5"	5.1/2"	5.3/4"	6"	6.1/4"	6.5/8"	7"	7.1/2"	7.5/8"	7.3/4"	8.1/8"	8.5/8"	8.3/4"	9.5/8"	9.3/4"	9.7/8"	10"	10.1/4"	10.3/4"	10.7/8"	11"	11.3/4"	11.7/8"	12"	12.3/4"	13.3/8"	13.1/2"	13.5/8"	13.3/4"	14"	16"	17"	18"	18.5/8"	20"	22"	24"	24.1/2"										
<b>BJ type</b>																																																					
250 sTon 7.5/8" Air/Manual																																																					
350 sTon 13.3/8" Air/Manual																																																					
<b>Varco type</b>																																																					
500 sTon 14" Air/Hydr.																																																					
750 sTon 14" Air/Hydr.																																																					
500 sTon 24.1/2" Air/Hydr.																																																					
750 sTon 24.1/2" Air/Hydr.																																																					
1000 sTon 24.1/2" Air.																																																					
<b>FMS</b>																																																					
250 sTon 7.5/8" Hydr.																																																					
500 sTon 14" Hydr.																																																					
1500 sTon 18.5/8" Hydr.																																																					

## TECHNICAL SPECIFICATIONS FMS275, FMS375 & FMS495

Subject	FMS275	FMS375	FMS495
Weight without slips and guides [lbs/kg]	2,755 / 1,250	5,392 / 2,446	11,675 / 5,296
Weight FMS with slips and guides [lbs/kg]	3,300 / 1,497	6,992 / 3,171	603-792 / 276-360
Pipe size [inches]	2.3/8 up to 7.5/8	4.1/2 up to 14	9.5/8 - 18.5/8
Load Rating [sTon/Tonne]	250 / 226	500 / 454	1,500 / 1,360
Rotary size [inches]	27.5 (or reduced from 37.5)	37.5	49.5
Minimum inlet pressure [psi/kPa]	1,500 / 10,342		2,300 / 15,858
Normal Operating pressure [psi/kPa]	2,000 / 13,790		2,500 / 17,237
Maximum Operating pressure [psi/kPa]	2,500 / 17,237		3,000 / 20,684
For a cycle time of appr. 4 to 5 seconds, the following flow and pressure is required	5 gpm@2,000 psi to 12 gpm@1,000 psi 19 lpm@13,790 kPa to 45 lpm@6,895 kPa		Min 15 gpm@2,500 psi Min 51 lpm@ 17,237 kPa
Recommended inlet pressure Slips UP [psi/kPa]	500-750 / 3,447-5,171		1,000 / 6,895
Maximum pressure Slips UP [psi/kPa]	1,000 / 6,895		1,000 / 6,895
Maximum pressure Slips Down [psi/kPa]	2,500 / 13,790		5,000 / 34,474
Minimum pressure differential between pressure line and return line [psi/kPa]	200 / 1,378		200 / 1,378
Maximum allowed pressure in return line [psi/kPa]	200 / 1,378		200 / 1,378

### Back up torque for FMS275 only

Hydraulic Working Pressure [psi / kPa]	Power Down Force [sTon / Tonne]	Applied Maximum Back-up Torque [ft.lbs / Nm] *
3,000	20,684	17
2,500	17,237	16
2,000	13,790	13
1,500	10,342	11
		8

\* On 7.5/8" OD pipe

### Back up torque for FMS375 only

Hydraulic Working Pressure [psi / kPa]	Power Down Force [sTon / Tonne]	Applied Maximum Back-up Torque [ft.lbs / Nm]
2,500	17,237	47
2,200	17,237	43
2,000	13,790	41
1,800	12,411	38
1,600	11,032	34
1,400	9,653	31

### Back up torque for FMS495 only

Hydraulic Working Pressure [psi / kPa]	Power Down Force [sTon / Tonne]	Applied Maximum Back-up Torque [ft.lbs / Nm]
2,500	17,237	22
2,300	15,858	20

Maximum back-up torque (independent of string weight while FMS495 being energized @ 2,500 psi working pressure) 22,300 / 30,234) max.

TECHNICAL SPECIFICATIONS MANUAL & PNEUMATIC ELEVATOR/SPIDERS

	250 BJ 7.5/8"	350 BJ 13.5/8"	500 sTon 14"	500 sTon 24.1/2"	750 sTon 14"	750 sTon 24.1/2"	1,000 sTon 24.1/2"
Weight without slip assembly [lbs/kg]	2,043 / 927	3,500 / 1,587	5,000 / 2,268	7,950 / 3,606	7,500 / 3,402	9,500 / 4,275	14,293 / 6,483
Max Weight slips set w/ inserts [lbs/kg]	550 / 250	650 / 295	600 / 272	600 / 272	794 / 360	1,559 / 707	1,559 / 707
Load Rating [sTon/Tonne]	250 / 226	350 / 317	500 / 453	500 / 453	750 / 680	750 / 680	1000 / 907
Casing size range [inches]	2.3/8-7.5/8	4.1/2-13.5/8	4.1/2 - 14	16 - 24.1/2	6.5/8 - 14	8.5/8 - 24.1/2	8.5/8 - 24.1/2
Normal Operating pressure [psi/kPa]*	85 / 585	85 / 585	85 / 585	85 / 585	85 / 585	85 / 585	85 / 585
Maximum Operating pressure [psi/kPa]*	125 / 861	125 / 861	125 / 861	125 / 861	125 / 861	125 / 861	125 / 861

TECHNICAL SPECIFICATIONS HYDRAULIC ELEVATOR/SPIDERS

	500 sTon 14"	500 sTon 24.1/2"	750 sTon 14"	750 sTon 24.1/2"
Weight without slip assembly [lbs/kg]	5,392 / 2,446	9,500 / 4,275	7,500 / 3,402	12,209 / 5,538
Max weight slips set w/ inserts [lbs/kg]	600 / 272	600 / 272	794 / 360	1,559 / 707
Casing size [inches]	4.1/2 - 14	16 - 24.1/2	6.5/8 - 14	16 - 24.1/2
Load Rating [sTon/Tonne]	500 / 454	500 / 454	750 / 680	750 / 680
Minimum inlet pressure [psi/kPa]	1,500 / 10,342			
Normal Operating pressure [psi/kPa]	2,000 / 13,790			
Maximum inlet pressure [psi/kPa]	2,500 / 17,237			
For a cycle time of appr. 4 to 5 seconds, the following flow and pressure is required	5 gpm@2,000 psi to 12 gpm@1,000 psi 19 lpm@13,790 kPa to 45 lpm@6,895 kPa			
Recommended inlet pressure Slips UP [psi/kPa]	500-750 / 3,447-5,171			
Maximum pressure Slips UP [psi/kPa]	1,000 / 6,895			
Maximum pressure Slips Down [psi/kPa]	2,500 / 13,790			
Minimum pressure differential between pressure line and return line [psi/kPa]	200 / 1,378			
Maximum allowed pressure in return line [psi/kPa]	200 / 1,378			

E/S REMOTE OPERATION

Air operated versions can be remote controlled.

ADAPTER PLATES ACCORDING TO API 7K LATEST EDITION (SEE CHAPTERS)

Adapter p/n	Fits spiders	Fits rotary table size (any brand)
17806128-001	BJ-250 sTon, BJ-350 sTon, Varco 14"-500 sTon	27-1/2"
17806129-001	BJ-250 sTon, BJ-350 sTon, Varco 14"-500 sTon, Varco 14"-750 sTon	37-1/2"
17806130-001	Varco 24.1/2" - 500 sTon, Varco 24.1/2"- 750 sTon, Varco 24.1/2"-1000 sTon	37-1/2"

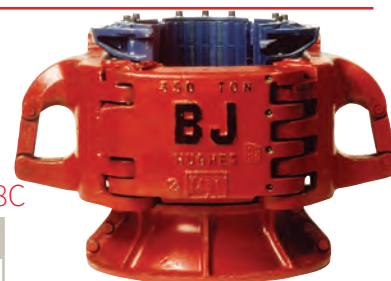
At any rotary table sizes >37.1/2", reduce to 37.1/2" using adapter rings as per chapter "Adapter Rings" in this catalog.



## BJ TYPE ELEVATOR/SPIDER 7.5/8" 250 STON & FMS275 FLUSH MOUNTED SLIP

### MAIN PART NUMBERS 7.5/8" 250 STON E/S API 7K LATEST EDITION & 8C

Part Number	Oracle number	Description
50364Y	10114488-001	Assembly complete, manual
50006260Y	10114488-002	Assembly complete, air operated
31021	100314212-001	Guide Bell Assembly, elevator
50422-2	10034679-001	Upper Guard Assembly, spider
52384	10145175-001	Hose assembly, elevator
23602	10138623-001	Hose assembly, spider
50006261	10776914-001	Conversion kit Manual-to-Air Operated E/S



7.5/8" E/S 250 ton



FMS 275

### ADAPTER PLATE 250 STON ELEVATOR/SPIDER

Description	Previous non API-version		API 7K latest edition
	Part Number	Oracle number	Oracle number
27.1/2" Spider Adapter Plate	31008	10139306-001	17806128-001
37.1/2" Spider Adapter Plate	na	na	17806129-001

### MAIN PART NUMBERS FMS275 API 7K LATEST EDITION

Part Number	Oracle number	Description
50005200	10142246-001	Assembly complete, hydraulically operated

### OPTIONAL EQUIPMENT PART NUMBERS FMS275

Part Number	Oracle number	Description
50004994	10142067-001	Hinged adapter 37.1/2" Emsco to 27.1/2" API
50004998	10142073-001	Hinged adapter 37.1/2" National to 27.1/2" API
50004999	10142075-001	Hinged adapter 37.1/2" Oilwell to 27.1/2" API
59000300	10145949-001	Lifting sling for FMS275
50005248-10	10142310-001	Control valve for FMS275
50005249	10142311-001	Jumper hose kit control valve to FMS275

### SLIPS & INSERTS FMS275 & 250 STON ELEVATOR/SPIDER

Pipe Size [inch]	Slip Size [inch]	API 7K 5th edition & API 8C		API 7K latest edition* & API 8C		Insert Part Number	Insert Oracle number	Qty. of insert	Slip Hanger Kit *	Slip hanger kit Oracle number
		Slip Ass'y. Part Number	Slip Ass'y. Oracle number	Slip Ass'y. Oracle number	Load rating [sTon / Tonne]					
2.3/8	3.1/2	50006291Y238	10193656-001	10193656-501	200 / 181	24777	10375509-001	18	50005241	10142304-001
2.7/8	3.1/2	50006291Y278	10143427-001	10143427-501	200 / 181	25780	10138751-001	18	50005241	10142304-001
3.1/2	3.1/2	50006291Y312	10143428-001	10143428-501	200 / 181	16441	10137006-001	18	50005241	10142304-001
3.1/2	4.1/2	50006292Y312	10193546-001	10193546-501	225 / 204	24779	10138689-001	27	50005242	10142305-001
4	4.1/2	50006292Y400	Contact NOV	Contact NOV	225 / 204	24781	10138690-001	27	50005242	10142305-001
4.1/2	4.1/2	50006292Y412	10143432-001	10143432-501	225 / 204	BJ16408	10148038-001	27	50005242	10142305-001
4.1/2	5.1/2	50006293Y412	10143436-001	10143436-501	225 / 204	24785	10138692-001	27	50005243	10142306-001
5	5.1/2	50006293Y500	10143437-001	10143437-501	225 / 204	24783	10138691-001	27	50005243	10142306-001
5.1/2	5.1/2	50006293Y512	10034480-001	10034480-501	225 / 204	BJ16407	10148037-001	27	50005243	10142306-001
6.5/8	7.5/8	50006294Y658	Contact NOV	Contact NOV	250 / 227	25474	10138742-001	45	50005244	10142307-001
7	7.5/8	50006294Y700	10143442-001	10143442-501	250 / 227	26750	10138861-001	45	50005244	10142307-001
7.5/8	7.5/8	50006294Y758	10143443-001	10143443-501	250 / 227	BJ16407	10148037-001	45	50005244	10142307-001

\* FMS275 only

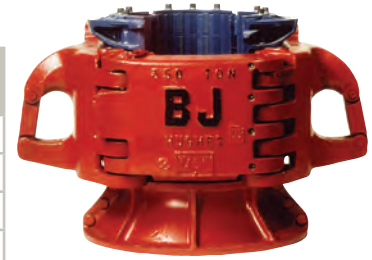
INSERT RETAINERS & GUIDES FMS275 & 250 STON ELEVATOR/SPIDER

Pipe Size, [inches]	Slip Size, [inches]	Insert Retainer Part Number	Insert Retainer Oracle number	Top Plate Assembly Part Number	Top Plate Assembly Oracle number	Bottom Guide Plate Assembly Part Number	Bottom Guide Plate Assembly Oracle number
2.3/8	3.1/2	31003	10139303-001	51925	10145138-001	51920	10145134-001
2.7/8	3.1/2	31004	10139304-001	51925	10145138-001	51920	10145134-001
3.1/2	3.1/2	31005	10139305-001	51925	10145138-001	51920	10145134-001
3.1/2	4.1/2	31177	10139392-001	51926	10145139-001	51921	10145135-001
4	4.1/2	31177	10139392-001	51926	10145139-001	51921	10145135-001
4.1/2	4.1/2	31177	10139392-001	51926	10145139-001	51921	10145135-001
4.1/2	5.1/2	31014	10139312-001	51927	10034850-001	51922	10034847-001
5	5.1/2	31013	10139311-001	51927	10034850-001	51922	10034847-001
5.1/2	6.1/2	31012	10139310-001	51922	10034850-001	51927	10034847-001
6.5/8	7.5/8	31011	10139309-001	51928	10034851-001	51924	10490010-071
7	7.5/8	31010	10139308-001	51928	10034851-001	51924	10490010-071
7.5/8	7.5/8	31009	10139307-001	51928	10034851-001	51924	10490010-071

## BJ TYPE ELEVATOR/SPIDER 13.5/8" 350 STON

### MAIN PART NUMBERS

Part Number	Oracle Number	Description
34301Y	10111346-001	Assembly complete: manually operated
33492Y	10139591-001	Assembly complete, air operated
52384	10145175-001	Hose assembly, elevator
23602	10138623-001	Hose assembly, spider
28599	10028002-001	Guide Bell Assembly, elevator
28570-1	10087166-001	Upper Guard Assembly, spider
50006276	10143408-001	Conversion kit Manual-to-Air operated



### ADAPTER PLATE 350 STON ELEVATOR/SPIDER

Description	Previous non API-version		API 7K latest edition
	Part Number	Oracle number	Oracle number
27.1/2" Spider Adapter Plate	27000	10138916-001	17806128-001
37.1/2" Spider Adapter Plate RT (except Emsco)	31100	10087214-001	17806129-001
37.1/2" Spider Adapter Plate RT (Emsco s/n < 49)	32698	11320265-001	
37.1/2" Spider Adapter Plate RT (Emsco s/n > 48)	34050	11319403-001	

### SLIPS & INSERTS 350 STON ELEVATOR/SPIDER

Pipe size [inches]	Slip size (nominal) [inches]	Slip assembly Part Number	Slip assembly Oracle number	Insert Part Number	Insert Oracle number	Qty	Insert retainer Part Number	Insert retainer Oracle number
4.1/2	5.1/2	50006701Y412	10143806-001	24785	10138692-001	36	50006713	10143825-001
5	5.1/2	50006701Y500	10143806-002	24783	10138691-001	36	50006713	10143825-001
5.1/2	5.1/2	50006701Y512	10143806-003	BJ16407	10148037-001	36	50006713	10143825-001
4.1/2	6	50006480Y412	10143680-001	31157	10139388-001	36	50006479	10143676-001
5	6	50006480Y500	10143681-001	24785	10138692-001	36	50006479	10143676-001
5.1/2	6	50006480Y512	10143682-001	24781	10138690-001	36	50006479	10143676-001
5.3/4	6	50006480Y534	Contact NOV	50006544	Contact NOV	36	50006479	10143676-001
6	6	50006480Y600	10143682-003	BJ16407	10148037-001	48	50006479	10143676-001
6.5/8	7.5/8	50006702Y658	10143811-001	25474	10138742-001	60	50006717	10143833-001
7	7.5/8	50006702Y700	10143811-002	26750	10138861-001	60	50006717	10143833-001
7.5/8	7.5/8	50006702Y758	10143811-003	BJ16407	10148037-001	60	50006717	10143833-001
6.5/8	8	50006485Y658	10087258-002	31157	10139388-001	60	50006484	10143686-001
7	8	50006485Y700	10087258-001	25474	10138742-001	60	50006484	10143686-001
7.5/8	8	50006485Y758	10087258-005	24748	10138684-001	60	50006484	10143686-001
8.5/8	8.5/8	50006785Y858	10846623-001	15660	10136873-001	60	50006484-1	10143687-001
8.5/8	9.5/8	50006703Y858	10143816-001	25474	10138742-001	72	50006721	10143838-001
9.5/8	9.5/8	50006703Y958	10143816-002	15660	10136873-001	72	50006721	10143838-001
9.5/8	10.3/4	50006490Y958	10111422-001	33249	10139586-001	72	50006489	10143697-001
9.7/8	10.3/4	50006490Y958	10111422-001	33249	10139586-001	72	50006489	10143697-001
10.3/4	10.3/4	50006490Y1034	10143701-001	15660	10136873-001	72	50006489	10143697-001
11.3/4	13.3/8	50006495Y1134	10111423-002	50006545	10143769-001	84	28581	10139022-001
12.3/4	13.3/8	50006495Y1234	Contact NOV	32700	Contact NOV	84	28581	10139022-001
13.3/8	13.3/8	50006495Y1338	10111423-001	15660	10136873-001	84	28581	10139022-001
13.5/8	13.5/8	50006795Y1358	10143868-001	32477	10139472-001	84	28581	10139022-001

GUIDES 350 STON ELEVATOR/SPIDER

Pipe size [inches]	Slip size (nominal) [inches]	Bottom guide plate assembly Part Number	Bottom guide plate assembly Oracle number	Top guide plate assembly Part Number	Top guide plate assembly Oracle number
4.1/2	6	51936	10145142-001	51949	10145149-001
5	6	51936	10145142-001	51950	10145150-001
5.1/2	6	51936	10145142-001	51950	10145150-001
5.3/4	6	28568 & 28578	Contact NOV	51951	Contact NOV
6	6	28568 & 28578	Contact NOV	51951	Contact NOV
6.5/8	8	51937	10111438-001	51952	10111440-001
7	8	51937	10111438-001	51952	10111440-001
7.5/8	8	51938	10145144-001	51953	10111440-003
8.5/8	8.5/8	51939	10145145-001	51954	10187271-001
9.5/8	10.3/4	51940	10111439-001	51955	10111441-001
9.7/8	10.3/4	51940	10111439-001	51955	10111441-001
10.3/4	10.3/4	51941	10145147-001	51956	10145154-001
11.3/4	13.3/8	51941	10145147-001	51957	10145155-001
12.3/4	13.3/8	28571*	10111310-001	51958	10111442-001
13.3/8	13.3/8	28571*	10111310-001	51958	10111442-001
13.5/8	13.5/8	28571*	10111310-001	51958-1	10145157-001

\*Only door guide required

## **VARCO TYPE ELEVATOR/SPIDER 14" 500 STON & FMS375 FLUSH MOUNTED SLIP**

### MAIN PART NUMBERS 14" 500 STON E/S API 7K LATEST EDITION & 8C

Part Number	Oracle number	Description
13800Y	10019143-001	Assembly complete, air operated
13800Y10	10112848-001	Assembly complete, air operated, remote controlled
220001	11451926-001	upgrade kit**
50006046Y2	10143218-001	Assembly complete, elevator, hydraulic operated*
50006046Y1	10143217-001	Assembly complete, spider, hydraulic operated*
11881	10015876-001	Airline and filter assembly
11798	10015869-001	Guide Bell Assembly, elevator

\* Hydraulic type requires HUK

\*\* Kit to convert air operated E/S into remote controlled version. Upgrade to be done in an NOV Authorized Repair Facility.



14" E/S 500 ton



FMS 375

### ADAPTER PLATE 14" 500 STON ELEVATOR/SPIDER

Description	Previous non API-version		API 7K latest edition
	Part Number	Oracle number	Oracle number
27.1/2" Spider Adapter Plate	na	na	17806128-001
37.1/2" Spider Adapter Plate	19276	10021088-001	17806129-001

### MAIN PART NUMBERS FMS375 API 7K LATEST EDITION

Part Number	Oracle number	Description
200930-10	10137497-001	Assembly complete, hydraulically operated, less slips and guides

### OPTIONAL EQUIPMENT PART NUMBERS FMS375

Part Number	Oracle number	Description
50004995	10704222-001	Hinged National 49.1/2" to National 37.1/2"
200990-11	10705592-001	Hinged Oilwell 37.1/2" to National 37.1/2", 6.25" raised load shoulder
200991-11	10706320-001	Hinged Emsco 37.1/2" to National 37.1/2", 6.25" raised load shoulder
200995-11	10706632-001	Hinged National 37.1/2" to National 37.1/2", 6.25" raised load shoulder
201430-1	10707218-001	Hinged Ideco 37.1/2" to National 37.1/2", 6.25" raised load shoulder
200982-1	10112862-001	4 Way Lifting sling for FMS375
50006538	10143768-001	Control panel FMS
50000350	10140256-001	Control panel BX(S) i.c.w. FMS275/FMS375/Hydraulic E/S 14" 500 Ton

SLIPS & INSERTS 14" 500 STON ELEVATOR/SPIDER & FMS375

Pipe Size [inches]	Slip Size Nominal [inches]	API 7K 5th edition		API 7K latest edition* & API 8C		Straight inserts			Bevelled inserts		
		Slip Ass'y Part Number	Slip Ass'y Oracle number	Slip Ass'y Oracle number	Load rating [sTon / Tonne]	Part Number	Oracle number	Qty	Part Number	Oracle number	Qty
4.1/2	5.1/2	13842Y3	10136820-004	10136820-504	400 / 363	2168	10451986-001	32	2168 B	10362123-001	16B
5	5.1/2	13842Y2	10136820-003	10136820-503	400 / 363	2169	10025332-001	32	2169 B	10362139-001	16B
5.1/2	5.1/2	13842Y1	10136820-001	10136820-501	400 / 363	2170	10362140-001	48	n/a	n/a	n/a
6.1/4	5.1/2	13841Y62	10136816-008	10136816-508	500 / 454	17080	10137058-001	48	17080B	10137058-002	24B
6.5/8	7.5/8	13841Y3	10136816-005	10136816-505	500 / 454	2632	10377724-001	48	2632 B	10377726-001	24B
7	7.5/8	13841Y2	10136816-001	10136816-501	500 / 454	2623	10138773-001	48	2623 B	10138773-002	24B
7.1/2	7.5/8	13841Y74	10136816-007	10136816-507	500 / 454	2669	Contact NOV	72	n/a	n/a	n/a
7.5/8	7.5/8	13841Y1	10136816-002	10136816-502	500 / 454	2633	10377727-001	72	n/a	n/a	n/a
7.3/4	7.5/8	13841Y4	10136816-006	10136816-506	500 / 454	2649	10377730-001	72	n/a	n/a	n/a
8.1/8	7.5/8	13841Y81	16684864-001	16684864-501	500 / 454	2633	10377727-001	72	n/a	n/a	n/a
8.5/8	9.5/8	13840Y3	10136806-006	10136806-506	500 / 454	2640	10138830-001	64	2640 B	10138830-004	32B
8.3/4	9.5/8	13840Y5	10136806-007	10136806-507	500 / 454	2650	10377731-001	64	2650 B	10138843-001	32B
9.5/8	9.5/8	13840Y1	10136806-001	10136806-501	500 / 454	2633	10377727-001	96	n/a	n/a	n/a
9.3/4	9.5/8	13840Y4	10136806-005	10136806-505	500 / 454	2649	10377730-001	96	n/a	n/a	n/a
9.7/8	10.1/8	94035Y2	10147113-004	10147113-504	500 / 454	2655	10377734-001	96	n/a	n/a	n/a
10	10.1/8	n/a	10147113-506	10147113-506	500 / 454	V-2669	10152556-001	96	n/a	n/a	n/a
10.1/8	10.1/8	94035Y1	10147113-001	10147113-501	500 / 454	2637	10138826-001	96	n/a	n/a	n/a
10.1/4	10.1/8	94035Y3	10147113-005	10147113-505	500 / 454	2651	10138844-001	96	n/a	n/a	n/a
10.3/4	11.3/4	13839Y3	10136801-001	10136801-501	500 / 454	2640	10138830-001	80	2640 B	10138830-004	40B
10.7/8	11.3/4	13839Y4	10136801-007	10136801-507	500 / 454	2650	10377731-001	80	2650 B	10138843-001	40B
11	11.3/4	13839Y5	10136801-006	10136801-506	500 / 454	2638	10138828-001	80	2638 B	10138829-001	40B
11.3/4	11.3/4	13839Y2	10136801-003	10136801-503	500 / 454	2637	10138826-001	120	n/a	n/a	n/a
11.7/8	11.3/4	13839Y1	10136801-002	10136801-502	500 / 454	2651	10138844-001	120	n/a	n/a	n/a
12	12	94034Y1	16684793-001	16684793-501	500 / 454	2637	10138826-001	120	n/a	n/a	n/a
12.3/4	14	70734Y7	10490446-004	10490446-504	500 / 454	2657	10138857-001	80	2657 B	10180337-001	40B
13.3/8	14	70734Y5	10490446-005	10490446-505	500 / 454	2636	10138821-001	80	2636 B	10138821-004	40B
13.1/2	14	70734Y4	10490446-007	10490446-507	500 / 454	2652	10138846-001	80	2652 B	10138846-002	40B
13.5/8	14	70734Y3	10146550-001	10146550-501	500 / 454	2653	10377732-001	80	2653 B	10377733-001	40B
13.3/4	14	70734Y2	10490446-008	10490446-508	500 / 454	2655	10377734-001	80	2655 B	10138854-001	40B
14	14	70734Y1	10490446-001	10490446-501	500 / 454	2635	10377728-001	120	n/a	n/a	n/a

\*FMS375 only

GUIDES 14" 500 STON ELEVATOR/SPIDER & FMS375

Pipe Size [inches]	Slip Size Nominal [inches]	Top Guide Plate Assembly Part Number	Top Guide Plate Assembly Part Oracle number	ID [inches]	Bottom Guide Plate Assembly Part Number	Bottom Guide Plate Assembly Oracle number	ID [inches]
4.1/2	5.1/2	V18419-1	10152569-001	5.3/4	11787	10136615-001	5.3/4
5	5.1/2	V18419-2	10152570-001	6.1/4	11788	10136617-001	6.1/4
5.1/2	5.1/2	V18419-3	10152571-001	6.3/4	11789	10136618-001	6.3/4
6.1/4	5.1/2	18419-62	10490164-021	7.1/2	11789-62	Contact NOV	7.1/2
6.5/8	7.5/8	18419-4	10137092-001	8.1/4	11791	10136619-001	8.1/4
7	7.5/8	18419-4	10137092-001	8.1/4	11791	10136619-001	8.1/4
7.1/2	7.5/8	18419-18	10490164-013	9.1/4	11792	10136619-003	9.1/4
7.5/8	7.5/8	18419-5	10137093-001	8.7/8	11792	10136619-003	9.1/4
7.3/4	7.5/8	18419-5	10137093-001	8.7/8	11792	10136619-003	9.1/4
8.1/8	7.5/8	18419-81	10180799-001	9.1/2	11792-81	Contact NOV	9.1/2
8.5/8	9.5/8	18419-6	10137094-001	9.7/8	11793	10136619-005	10.1/4
8.3/4	9.5/8	18419-6	10137094-001	9.7/8	11793	10136619-005	10.1/4
9.5/8	9.5/8	18419-7	10137095-001	10.7/8	11794	10136623-001	11.1/4
9.3/4	9.5/8	18419-15	10137091-001	11.1/4	71231	10136623-007	11.1/2
9.7/8	10.1/8	18419-15	10137091-001	11.1/4	71231	10136623-007	11.1/2
10	10.1/8	18419-15	10137091-001	11.1/4	71231	10136623-007	11.1/2
10.1/8	10.1/8	18419-15	10137091-001	11.1/4	71231	10136623-007	11.1/2
10.1/4	10.1/8	18419-15	10137091-001	11.1/4	71231	10136623-007	11.1/2
10.3/4	11.3/4	18419-8	10137096-001	12.1/8	11795	10136623-003	12.3/8
10.7/8	11.3/4	18419-8	10137096-001	12.1/8	11795	10136623-005	12.3/8
11	11.3/4	18419-112	10490164-004	12.1/8	11795-112	10136623-009	12.3/8
11.3/4	11.3/4	18419-9	10137097-001	13.1/8	11796	10136623-005	13.5/16
11.7/8	11.3/4	18419-9	10137097-001	13.1/8	11796	10136623-005	13.5/16
12	12	18419-14	10490164-008	13.1/8	11796	10136623-005	13.5/16
12.3/4	14	18419-13	10180798-001	14.1/4	71229	Contact NOV	14.1/2
13.3/8	14	18419-10	10137088-001	14.3/4	11797	10136627-001	15
13.1/2	14	18419-12	10137090-001	15	71228	10046591-001	15.1/4
13.5/8	14	18419-12	10137090-001	15	71228	10046591-001	15.1/4
13.3/4	14	18419-12	10137090-001	15	71228	10046591-001	15.1/4
14	14	18419-11	10137089-001	15.3/8	15939	10112856-001	15.5/8

## VARCO TYPE ELEVATOR/SPIDER 14" 750 STON



### MAIN PART NUMBERS

Part Number	Oracle number	Description
16150Y	10643217-001	Assembly complete, air operated
16150Y10	10793072-001	Assembly complete, air operated, remote controlled
50006010	17808717-001	upgrade kit**
50006500Y2	10143718-001	Assembly complete, elevator, hydraulic operated*
50006500Y1	10143717-001	Assembly complete, spider, hydraulic operated*
11881	10015876-001	Airline and filter assembly
19002	10137111-001	Guide Bell Assembly, air operated elevator
50006520	10143737-001	Guide Bell Assembly, hydraulic operated elevator
50000350	10140256-001	Control panel BX(S) i.c.w. FMS275/FMS375/Hydraulic E/S 14" 750 sTon

\* Hydraulic type requires HUK

\*\* Kit to convert air operated E/S into remote controlled version. Upgrade to be done in a NOV Authorized Repair Facility.

### ADAPTER PLATE 14" 750 STON ELEVATOR/SPIDER

Description	Previous non API-version		API 7K latest edition & API 8C
	Part Number	Oracle number	Oracle number
37.1/2" Spider Adapter Plate	17163	10670144-001	17806129-001

### SLIPS & INSERTS 14" 750 STON ELEVATOR/SPIDER

Pipe Size [inches]	Slip Size Nominal [inches]	Slip Assembly Part Number	Slip Assembly Oracle number	Straight inserts			Bevelled inserts		
				Part Number	Oracle number	Qty	Part Number	Oracle number	Qty
6.5/8	7.5/8	16182Y4	10136971-001	2632	10377724-001	60 + 24B	2632 B	10377726-001	24
7	7.5/8	16182Y8	10136971-003	2623	10138773-001	60 + 24B	2623 B	10138773-002	24B
7.5/8	7.5/8	16182Y7	10136971-002	2633	10377727-001	84	n/a	n/a	n/a
7.3/4	7.5/8	16182Y21	10136971-004	2649	10377730-001	84	n/a	n/a	n/a
8.5/8	9.5/8	16182Y6	10136968-005	2640	10138830-001	80 + 32B	2640 B	10138830-004	32
8.3/4	9.5/8	16182Y20	10136968-004	2650	10377731-001	80 + 32B	2650 B	10138843-001	32B
9.5/8	9.5/8	16182Y3	10136968-002	2633	10377727-001	112	n/a	n/a	n/a
9.3/4	9.5/8	16182Y19	10136968-003	2649	10377730-001	112	n/a	n/a	n/a
9.7/8	9.5/8	16182Y18	10136968-001	2649	10377730-001	112	n/a	n/a	n/a
10.1/8	10.1/8	16182Y25	10136966-006	2637	10138826-001	112	n/a	n/a	n/a
10.1/4	10.1/8	16182Y26	10136966-001	2651	10138844-001	112	n/a	n/a	n/a
10.7/8	11.3/4	16182Y17	10161720-006	2650	10377731-001	100 + 40B	2650 B	10138843-001	40
11.3/4	11.3/4	16182Y2	10161720-001	2637	10138826-001	140	n/a	n/a	n/a
11.7/8	11.3/4	16182Y16	10161720-003	2651	10138844-001	140	n/a	n/a	n/a
13.3/8	14	16182Y10	10136966-005	2636	10138821-001	100 + 40B	2636 B	10138821-004	40
13.1/2	14	16182Y12	10136966-004	2652	10138846-001	100 + 40B	2652 B	10138846-002	40
13.5/8	14	16182Y11	10136966-002	2653	10377732-001	100 + 40B	2653 B	10377733-001	40
13.3/4	14	16182Y13	10136966-003	2655	10377734-001	100 + 40B	2655 B	10138854-001	40
14	14	16182Y9	10136966-007	2635	10377728-001	140	n/a	n/a	n/a



GUIDES 14" 750 STON ELEVATOR/SPIDER

Pipe Size [inches]	Slip Size Nominal [inches]	Spider Top Guide Plate Assembly Part Number	Spider Top Guide Plate Assembly Oracle number	ID [inches]	Elevator Bottom Guide Plate Assembly Part Number	Elevator Bottom Guide Plate Assembly Oracle number	ID [inches]
6.5/8	7.5/8	18419-4	10137092-001	8.1/4	11791	10136619-001	8.1/4
7	7.5/8	18419-4	10137092-001	8.1/4	11791	10136619-001	8.1/4
7.5/8	7.5/8	18419-5	10137093-001	8.7/8	11792	10136619-003	9.1/4
7.3/4	7.5/8	18419-5	10137093-001	8.7/8	11792	10136619-003	9.1/4
8.5/8	9.5/8	18419-6	10137094-001	9.7/8	11793	10136619-005	10.1/4
8.3/4	9.5/8	18419-6	10137094-001	9.7/8	11793	10136619-005	10.1/4
9.5/8	9.5/8	18419-7	10137095-001	10.7/8	11794	10136623-001	11.1/4
9.3/4	9.5/8	18419-15	10137091-001	11.1/4	71231	10136623-007	11.1/2
9.7/8	9.5/8	18419-15	10137091-001	11.1/4	71231	10136623-007	11.1/2
10.1/4	10.1/8	18419-15	10137091-001	11.1/4	71231	10136623-007	11.1/2
10.3/4	11.3/4	18419-8	10137096-001	12.1/8	11795	10136623-003	12.3/8
10.7/8	11.3/4	18419-8	10137096-001	12.1/8	11795	10136623-003	12.3/8
11.3/4	11.3/4	18419-9	10137097-001	13.1/8	11796	10136623-005	13.5/16
11.7/8	11.3/4	18419-9	10137097-001	13.1/8	11796	10136623-005	13.5/16
13.3/8	14	18419-10	10137088-001	14.3/4	11797	10136627-001	15
13.1/2	14	18419-12	10137090-001	15	71228	10046591-001	15.1/4
13.5/8	14	18419-12	10137090-001	15	71228	10046591-001	15.1/4
13.3/4	14	18419-12	10137090-001	15	71228	10046591-001	15.1/4
14	14	18419-11	10137089-001	15.3/8	15939	10112856-001	15.5/8

## VARCO TYPE ELEVATOR/SPIDER 24.1/2" 500 STON



### MAIN PART NUMBERS

Part Number	Oracle number	Description
15740Y	10112850-002	Assembly complete, air operated
15740Y10	10112850-001	Assembly complete, air operated, remote controlled
50006000	11451838-001	upgrade kit*
50006047Y2	10143221-001	Assembly complete, elevator, hydraulic operated*
50006047Y1	10143220-001	Assembly complete, spider, hydraulic operated*
11881	10015876-001	Airline and filter assembly
19001	10112859-001	Guide Bell Assembly, elevator
50000350	10140256-001	Control panel BX(S) i.c.w. FMS275/FMS375/Hydraulic E/S 24.1/2" 500 sTon

\* Hydraulic type requires HUK

\*\* Kit to convert air operated E/S into remote controlled version. Upgrade to be done in a NOV Authorized Repair Facility. Adapter plate 24.1/2"

### 500 STON ELEVATOR/SPIDER

Description	Previous non API-version		API 7K latest edition
	Part Number	Oracle number	Oracle number
37.1/2" Spider Adapter Plate	16552	10112857-001	17806130-001

### SLIPS, GUIDES & INSERTS 24.1/2" 500 STON ELEVATOR/SPIDER

Pipe Size [inches]	Slip Size Nominal [inches]	Slip Assembly Part Number	Slip Assembly Oracle number	Straight inserts			Bevelled inserts		
				Part Number	Oracle number	Qty	Part Number	Oracle number	Qty
16	16	15790Y4	10704226-001	2635	10377728-001	180	n/a	n/a	n/a
17	17	15790Y7	10136908-001	2635	10377728-001	180	n/a	n/a	n/a
18	18.5/8	15790Y6	10136907-001	2636	10138821-001	120	2636 B	10138821-004	60
18.5/8	18.5/8	15790Y3	10136907-002	2635	10377728-001	180	n/a	n/a	n/a
18.5/8	20	15790Y26	10136900-001	17080	10137058-001	120	17080 B	10137058-002	60
20	20	15790Y2	10136898-001	2635	10377728-001	180	n/a	n/a	n/a
22	22	15790Y5	10136906-001	2635	10377728-001	180	n/a	n/a	n/a
24	24	15790Y1	10136888-003	2635	10377728-001	180	n/a	n/a	n/a
24.1/2	24.1/2	75226Y1	10146711-001	2635	10377728-001	180	n/a	n/a	n/a

Pipe Size [inches]	Slip Size Nominal [inches]	Spider Top Guide Plate Assembly Part Number	Spider Top Guide Plate Assembly Oracle number	ID [inches]	Elevator Bottom Guide Plate Assembly Part Number	Elevator Bottom Guide Plate Assembly Oracle number	ID [inches]
16	16	73138	10112903-001	18	16184	10020806-001	18.1/4
17	17	50006198	10143370-001	19	50006199	10143371-001	19.1/4
18	18.5/8	73139-6	10146634-001	20	15794-6	10112855-001	20.1/4
18.5/8	18.5/8	73137	10146631-001	20.5/8	15794	10112855-002	20.7/8
18.5/8	20	73137	10146631-001	20.5/8	15794	10112855-002	20.7/8
20	20	73136	10112902-001	22	15793	10112854-001	22.1/4
22	22	50006074	10112897-001	24	50006055	10702015-001	24.1/4
24	24	73135	10146629-001	26	15792	10136912-001	26.1/4
24.1/2	24.1/2	74817	10146692-001	26.1/2	74818	10146693-001	26.1/4

## VARCO TYPE ELEVATOR/SPIDER 24.1/2" 750/1000 STON



### MAIN PART NUMBERS

Part Number	Oracle number	Description
16180Y	10136961-001	750 sTon ass'y complete, air operated
50006600Y1	10699411-001	750 sTon ass'y, spider, complete, hydraulic operated
50006600Y2	10692124-001	750 sTon ass'y, elevator, complete, hydraulic operated
50006265Y	10136961-003	1,000 sTon ass'y, complete, air operated
11881	10015876-001	Airline and filter assembly
19001	10112859-001	Guide Bell Assembly, elevator

### ADAPTER PLATE 24.1/2" 750/1000 STON ELEVATOR/SPIDER

Description	Previous non API-version		API 7K latest edition
	Part Number	Oracle number	Oracle number
37.1/2" Spider Adapter Plate 750 sTon	n/a	10112857-002	17806130-001
37.1/2" Spider Adapter Plate 1000 sTon	n/a	10112857-003	

### SLIPS & INSERTS 24.1/2" 750/1000 STON ELEVATOR/SPIDER

Pipe Size [inches]	Slip Size Nominal [inches]	Slip Assembly Part Number	Slip Assembly Oracle number	Straight inserts			Bevelled inserts		
				Part Number	Oracle number	Qty	Part Number	Oracle number	Qty
8.5/8	9.5/8 *	50006535Y858	10190179-001	2640	10138830-001	90	2640 B	10138830-004	36
9.5/8	9.5/8 *	50006535Y958	10190180-001	2633	10377727-001	126	n/a	n/a	n/a
10.1/2	11.3/4 *	50006536Y105	Contact NOV	2657	10138857-001	126	n/a	n/a	n/a
10.3/4	11.3/4 *	50006536Y1034	10161762-001	2640	10138830-001	90	2640 B	10138830-004	36
11.3/4	11.3/4 *	50006536Y1134	10190184-001	2637	10138826-001	126	n/a	n/a	n/a
11.7/8	11.3/4 *	50006536Y1178	10190185-001	2651	10138844-001	126	n/a	n/a	n/a
12.3/4	14 *	50006537Y1234	10190188-001	2657	10138857-001	120	2657 B	10180337-001	48
13.3/8	14 *	50006537Y1338	10161764-001	2636	10138821-001	120	2636 B	10138821-004	48
13.5/8	14 *	50006537Y1358	10161765-001	2653	10377732-001	120	2653 B	10377733-001	48
14	14 *	50006537Y140	10161766-001	2635	10377728-001	120	2635 B	10138820-001	48
16	16	16181Y	10706836-002	2635	10377728-001	210	n/a	n/a	n/a
17	17	50006194Y	16684236-001	2635	10377728-001	210	n/a	n/a	n/a
18	18.5/8	16381Y2	10706838-003	2636	10138821-001	210	n/a	n/a	n/a
18.5/8	18.5/8	16381Y1	10706838-002	2635	10377728-001	210	n/a	n/a	n/a
18.5/8	20	16179Y	10181472-001	17080	10137058-001	150	17080 B	10137058-002	60
20	20	16178Y	10706839-002	2635	10377728-001	210	n/a	n/a	n/a
22	22	50006195Y	10706840-002	2635	10377728-001	210	n/a	n/a	n/a
24	24	16900Y	10706841-002	2635	10377728-001	210	n/a	n/a	n/a
24.1/2	24.1/2	50006196Y	Contact NOV	2635	10377728-001	210	n/a	n/a	n/a

\* On request

GUIDES 24.1/2" 750/1000 STON ELEVATOR/SPIDER

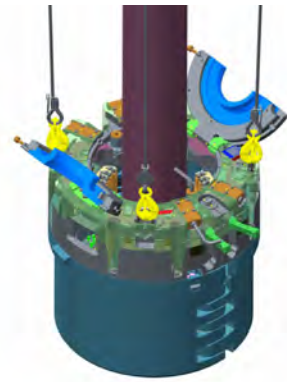
Pipe Size [inches]	Slip Size Nominal [inches]	Spider Top Guide Plate Assembly Part Number	Spider Top Guide Plate Assembly Oracle number	ID [inches]	Elevator Bottom Guide Plate Assembly Part Number	Elevator Bottom Guide Plate Assembly Oracle number	ID [inches]
8.5/8	9.5/8 *	50006533-858	Contact NOV	9.7/8	50006532-858	Contact NOV	10.1/4
9.5/8	9.5/8 *	50006533-958	Contact NOV	10.7/8	50006532-958	Contact NOV	11.1/4
10.1/2	11.3/4 *	50006533-1034	Contact NOV	12.1/8	50006532-1034	10161758-001	12.3/8
10.3/4	11.3/4 *	50006533-1034	Contact NOV	12.1/8	50006532-1034	10161758-001	12.3/8
11.3/4	11.3/4 *	50006533-1134	10854180-002	13.1/8	50006532-1134	10161758-005	13.5/16
11.7/8	11.3/4 *	50006533-1178	Contact NOV	13.1/8	50006532-1178	Contact NOV	13.5/16
12.3/4	14 *	50006533-1234	Contact NOV	14.1/4	50006532-1234	Contact NOV	14.1/2
13.3/8	14 *	50006533-1338	Contact NOV	11.3/4	50006532-1338	10161758-002	15
13.5/8	14 *	50006533-1358	Contact NOV	15	50006532-1358	10161758-003	15.1/4
14	14 *	50006533-140	10854180-001	15.3/8	50006532-140	10161758-004	15.5/8
16	16	73138	10112903-001	18	16184	10020806-001	18.1/4
17	17	50006198	10143370-001	19	50006199	10143371-001	19.1/4
18	18.5/8	73139-6	10146634-001	20	15794-6	10112855-001	20.1/4
18.5/8	18.5/8	73137	10146631-001	20.5/8	15794	10112855-002	20.7/8
18.5/8	20	73137	10146631-001	20.5/8	15794	10112855-002	20.7/8
20	20	73136	10112902-001	22	15793	10112854-001	22.1/4
22	22	50006074	10112897-001	24	50006055	10702015-001	24.1/4
24	24	73135	10146629-001	26	15792	10136912-001	26.1/4
24.1/2	24.1/2	74817	10146692-001	26.1/2	74818	10146693-001	26.1/4

\* On request

## FMS495 - 1,500 STON

The FMS495 Hydraulic Flush mounted Spider is a series of rotary equipment which has been developed to handle casing and covers a range from 9.5/8" – 18.5/8" using replaceable slips and insert carriers. The FMS495 has been designed to meet the need for bigger and higher capacity casing tools that increase running efficiency and safety due to the increasing amount of deepwater rigs drilling in deep water. The Flush Mounted Spider is capable of handling casing string weights up to 1,500 sTon / 1,361 Tonne depending on casing size.

- It fist directly into a 49.1/2" RST with National Configuration. Use of adapter rings allows the tool to be used in combination with 60.1/2" and 75.1/2" RST.
- The FMS is remote controlled via a stand-alone panel or existing FMS375 controls with a feedback signal, slips set.
- Ability to remove from or install tool in well center with casing in well-center
- The tool can generate a back-up of 22,300 ft.lbs / 30,235 Nm of torque, independent of string weight but depending on pipe diameter and grade.



### MAIN PART PUMBERS

Part Number	Description
11312415-001	FMS495 National configuration. The FMS495 can operate in combination with bigger sizes and other configurations of the rotary table by using adapters.

Standard delivery includes leveling assembly tool 11461621-001, assembly bushings for lifting and protection of rod ends pn 10888930-001

### OPTIONAL PART PUMBERS

Part Number	Description
11461621-001	Tool to disassemble the leveling beam assembly and to open the locks of the hinged topcover. Part of delivery.
10888930-001	Assembly bushings for lifting and protection of the threaded rod end.
16530388-001	Cylinder Installation Kit (when no flat floor is available). This kit includes Centering plate ass'y, p/n 11462687-001.
11462687-001	Centering plate.
10744961-001	4-way lifting sling, DNV.
10744961-002	4 way lifting sling, ABS.
10744961-005	4 way lifting sling.
50006538	FMS Control panel.

SLIPS, GUIDES & INSERTS

Casing Size [Inches]	P/n Set Slip Ass'y	P/n Set Insert Carrier	P/n insert	Total Nr Of Inserts Per Set	P/n Set Topguide	ID top guide [Inches]	P/n Set Bottom Guide	ID Bottom Guide [Inches]
9.5/8	11312533-001	11312545-001	11351389-001	112	11362958-002	12.12	11362960-002	12.38
9.3/4	11312533-001	11369386-001	11351389-001	112	11362958-002	12.12	11362960-002	12.38
9.7/8	11312533-001	11369969-001	11351389-001	112	11362958-002	12.12	11362960-002	12.38
10.1/8	11312533-001	11369980-001	11351389-001	140	11362958-002	12.12	11362960-002	12.38
10.3/4	11312533-001	11369988-001	11351389-001	140	11362958-002	12.12	11362960-002	12.38
10.7/8	11312533-001	11369999-001	11351389-002	140	11312598-002	13.12	11312610-002	13.31
11.1/4	11312533-001	11370003-001	11351389-002	140	11312598-002	13.12	11312610-002	13.31
11.3/4	11312533-001	11312546-001	11351389-002	140	11312598-002	13.12	11312610-002	13.31
11.7/8	11312533-001	11370029-001	11351389-002	140	11312598-002	13.12	11312610-002	13.31
12	11312533-001	11370033-001	11351389-002	140	11312598-002	13.12	11312610-002	13.31
12.1/2	11312533-001	11370056-001	11351389-003	168	11312603-002	14.75	11312612-002	15.00
12.3/4	11312533-001	11370076-001	11351389-003	168	11312603-002	14.75	11312612-002	15.00
12.7/8	11312533-001	11370079-001	11351389-003	168	11312603-002	14.75	11312612-002	15.00
13.3/8	11312533-001	11370684-001	11351389-003	168	11312603-002	14.75	11312612-002	15.00
13.1/2	11312533-001	11370690-001	11351389-003	168	11312594-002	15.38	11312609-002	15.62
13.5/8	11312533-001	11370696-001	11351389-003	168	11312594-002	15.38	11312609-002	15.62
13.3/4	11312533-001	11370701-001	11351389-003	168	11312594-002	15.38	11312609-002	15.62
14	11312533-001	11312548-001	11351389-003	168	11312594-002	15.38	11312609-002	15.62
15	11312533-001	11370710-001	11351389-004	196	TBA		TBA	
16	11312533-001	11312550-001	11351389-004	196	11312604-002	18.00	11312614-002	18.25
17	11421706-001	na	11351389-004	196	11421759-002	19.00	11421762-002	19.25
18	11369396-001	na	11351389-004	196	11312607-002	20.62	11312617-002	20.87
18.5/8	11312535-001	na	11351389-004	196	11312607-002	20.62	11312617-002	20.87

# POWER SLIPS

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## PS21 & PS30 HYDRAULIC POWER SLIPS

The PS21 & PS30 hydraulic power slips improve both safety and rig efficiency as proven with the FMS Flush Mounted Slip. Proven technology gives optimal performance, high safety operation, allowing to run the whole string with one tool: centralizers, couplings etc, due to enlarged throat opening.

Eliminates work platforms for stabbing and operating power tongs during casing running operations.

- Power down slips reacts up to 45,000 ft.lbs (PS21) on 14" casing or 55,000 ft.lbs (PS30) of torque, on 20" casing with sufficient string weight.
- Insert carriers make this a universal tool, not just another power slip
- Allows the PS21 to handle all pipe types and sizes, including BHA's, collars, drill pipe, casing and tubing; PS21 from 2.3/8" to 14" and the PS30 from 2.3/8" to 20".
- Quick changeover from BHA's to collars to drill pipe allows the PS21 and the PS30 to trip the entire string.
- Insert carriers can be changed with pipe in the hole.
- Carrier change can be done in 5 minutes or less.
- Special "drop and lock, pull and release" design eliminates loose pieces such as bolts and pins.
- The PS21 and PS30 can be fitted with insert bowls should it become necessary to use hand slips.
- Reliable slips-set signal
- Corrosion resistant nickel plated manifold blocks
- Integrated pressure relief valve in slip actuators
- Umbilical operations possible (optional guides available)
- Like the insert carriers, the slips also have a rapid change system
- Two handles on the middle slip segment retract and lock the springloaded slip retaining pin.
- No loose parts.

### Centering device

- The PS21 and PS30 are standard equipped with a centering device incorporated in the top cover.
- Ram inserts up to 7.5/8" available in stainless steel (DP only) or mild steel

### Slip set-back designed to pass tool joints, BHAs and casing centralizers

- The slip set back allows tool joints and drill pipe protectors to pass without dragging on the inserts, even when drilling with 6.5/8" drill pipe.
- The PS21/30 will pass: BHA's when tripping; Centralizers when running casing.

### Hook Up Kit

- A control panel, which can be located in the driller's console,
- HUK (Hook Up Kit) with integrated flushing system, greasing pump, pressure switches, dependent on customer requirements, ready for plug and play.
- Control panel
- Stand alone control panels enables the driller to operate the slips. See chapter Power Tools.



## TECHNICAL SPECIFICATIONS

	PS21		PS30	
For rotary size	37.1/2 "	953 mm	49.1/2"	1,257 mm
Pipe size range	2.3/8" - 14"	60 to 356 mm	2.3/8" - 20"	60 - 508 mm
Weight w/o slip assembly	4,800 lbs	2,160 kg	7,800 lbs	3,510 kg
Maximum torque	45,000 ft.lbs	61,020 Nm	55,000 ft.lbs	74,580 Nm
<b>Hydraulic requirements</b>				
Pressure*	2,300 - 2,500 psi	15,858 - 17,237 kPa	2,300 - 2,500 kPa	15,858 -17,237
Flow rate	10 gpm	38 l/min	10 gpm	38 l/min

\* Pressure in return line not to exceed 200 psi / 1,379 kPa

## MAIN PART NUMBERS PS21

Description	API 7K 5th edition			API 7K Latest edition*	
	Legacy P/N	Oracle P/N	Capacity [sTon/Tonne]	Oracle P/N	Rating [sTon/Tonne]
PS21 for Emsco	202200-200	10023498-002	500 / 454	10023498-502	350 / 318
PS21 for National**	202200-300	10023498-001	500 / 454	10023498-501	350 / 318
PS21 for National-BT**	202200-300-BT	10023498-013	500 / 454	10023498-513	350 / 318
PS21 for Oilwell**	202200-400	10023498-005	500 / 454	10023498-505	350 / 318
PS21 for Oilwell-BT**	202200-400-BT	10023498-006	500 / 454	10023498-506	350 / 318
PS21 for Ideco	202200-500	10023498-009	500 / 454	10023498-509	350 / 318

\* Includes bit breaker plate 10137966-001 and 4-way lifting sling 10112862-001.

\*\* For PS21 National configuration fits with conventional National RT hoses routed over drill floor and with NOV RST using recessed jumper hoses to slip ring.



## MAIN PART NUMBERS PS30\*

PS30 - 49 1/2" Description	API 7K 5th edition			API 7K Latest edition**	
	Legacy P/N	Oracle P/N	Capacity [sTon/Tonne]	Oracle P/N	Rating [sTon/Tonne]
Emsco 49-1/2	202400-2	10177411-001	750 / 680	10177411-501	700 / 635
National 49-1/2	202400-3	10023607-001	750 / 680	10023607-501	700 / 635
Oilwell 49-1/2	202400-4	10930027-001	750 / 680	10930027-501	700 / 635
NOV 49-1/2	202400-5	10023608-001	750 / 680	10023608-501	700 / 635
Wirth 49-1/2	202400-6	10111288-001	750 / 680	10111288-501	700 / 635
ZP495 49-1/2	202400-8	10138055-001	750 / 680	10138055-501	700 / 635
PS30 - 49 1/2" SS-fittings Description	API 7K 5th edition			API 7K Latest edition**	
	Legacy P/N	Oracle P/N	Capacity [sTon/Tonne]	Oracle P/N	Rating [sTon/Tonne]
Emsco 49-1/2	202400-2-1	10177411-003	750 / 680	10177411-503	700 / 635
National 49-1/2	202400-3-1	10023607-005	750 / 680	10023607-505	700 / 635
Oilwell 49-1/2	202400-4-1	10930027-002	750 / 680	10930027-502	700 / 635
NOV 49-1/2	202400-5-1	10023608-002	750 / 680	10023608-502	700 / 635
Wirth 49-1/2	202400-6-1	10111288-002	750 / 680	10111288-502	700 / 635
PS30 - 49 1/2" Umbilical Description	API 7K 5th edition			API 7K Latest edition**	
	Legacy P/N	Oracle P/N	Capacity [sTon/Tonne]	Oracle P/N	Rating [sTon/Tonne]
Emsco 49-1/2	202400-2-10	10177411-004	750 / 680	10177411-504	700 / 635
National 49-1/2	202400-3-10	10023607-002	750 / 680	10023607-502	700 / 635
Oilwell 49-1/2	202400-4-10	10930027-003	750 / 680	10930027-503	700 / 635
NOV 49-1/2	202400-5-10	10112511-001	750 / 680	10112511-501	700 / 635
Wirth 49-1/2	202400-6-10	10111288-003	750 / 680	10111288-503	700 / 635

\* For PS30 each configuration fits with conventional RT hoses routed over drill floor.

\* For PS30 NOV configuration fits with RST using recessed jumper hoses to slip ring.

\*\* Includes bit breaker plate 10138124-001 and 4-way lifting sling 10112862-001. For lifting sling details, see chapter Lifting slings.

## OPTIONAL EQUIPMENT PART NUMBERS

Description (API 7K latest edition applicable)	PS21 P/N	PS21 Oracle number	Rating [sTon/Tonne]	PS30 P/N	PS30 Oracle number	Rating [sTon/Tonne]
Hand slip bowl # 3: 10.3/4" slip	202361	10023571-501	150 / 136	--	10023571-501	150 / 136
Hand slip bowl # 3: 16" slip	--	--	--	--	10726075-501	150 / 136
Hand slip bowl # 2: 16" slip	--	--	--	--	10726078-501	150 / 136
Hand slip bowl # 1: 16" slip	--	--	--	--	10137973-501	150 / 136
Hand slip bowl # 3: 10.3/4" removal tool	50004550-21	10034353-001	--	50004550-21	10034353-001	--
Hand slip bowl # 1: 16" removal tool	--	--	--	50004550-30	10034354-001	--
Insert carrier removal tool (Pogo stick)	50004600-1	10034361-001	--	50004600-1	10034361-001	--
Slip removal tool	50004551	10034355-001	--	50004551	10034355-001	--
Slip handle operating tool	50004552	10034356-001	--	50004552	10034356-001	--
Extension kit for SD-slip handles	50004604-1	10034362-001	--	50004604-1	10034362-001	--
Extension kit for CMS-slip handles	50004604-2	10141716-001	--	50004604-2	10141716-001	--
Hatch plate	202458-10	10980165-001	--	202458	10112864-001	--
Automated grease unit PS w/RST	50004708	Contact NOV	--	50004708	Contact NOV	--
Grease pump w/ bucket	59000227	10145908-001	--	59000227	10145908-001	--

## PS21 SLIP ASSEMBLIES

Slip Assy No.	Clamping diameter [inch]	Insert contact height [inches]	API 7K 5th edition			API 7K Latest edition		Dressing Kit P/N	Inserts P/N	Inserts Oracle number	Ram P/N	Ram Oracle number	Throat opening (slips up) [inches]
			Slips assy Legacy P/N	Slip assy Oracle number	Capacity [sTon/ Tonne]	Slip assy Oracle number	Rating [sTon/ Tonne]						
#1	14	16.1/2	202250-1400	10115240-001	500 / 453	10115240-501	350 / 318	51202250-1400	2635	10377728-001	202347-1400	10115242-001	18
	13.5/8	16.1/2	202250-1363	10153949-006	500 / 453	10153949-506	350 / 318	51202250-1363	2653	10377732-001	202347-1363	10023570-001	17.5/8
	13.1/2	16.1/2	202250-1350	10727056-001	500 / 453	10727056-501	350 / 318	51202250-1350	2652	10138846-001	202347-1350	10137961-001	17.1/2
	13.3/8	16.1/2	202250-1338	10023503-001	500 / 453	10023503-501	350 / 318	51202250-1338	2636	10138821-001	202347-1338	10023569-001	17.3/8
	13	16.1/2	202250-1300	10115240-002	500 / 453	10115240-502	350 / 318	51202250-1300	2640	10138830-001	202347-1300	16628638-001	17
	12.3/4	16.1/2	202250-1275	10115240-003	500 / 453	10115240-503	350 / 318	51202250-1275	2657	10138857-001	202347-1275	16628637-001	16.3/4
#2	11.7/8	16.1/2	202253-1188	10785781-001	500 / 453	10785781-501	350 / 318	51202253-1188	2651	10138844-001	202347-1188	10785710-001	15.7/16
	11.3/4	16.1/2	202253-1175	10670054-001	500 / 453	10670054-501	350 / 318	51202253-1175	2637	10138826-001	202347-1175	10137957-001	15.5/16
#3 w/o IC	See IC #8-#21		202250-5	10023505-001	500 / 453	10023505-501	350 / 318	See Insert carriers #8 - #21					
	See IC #8-#21		202250-5-BT	10023505-002	500 / 453	10023505-502	350 / 318	See Insert carriers #8 - #21					

## PS30 SLIP ASSEMBLIES

Slip Assy No.	Clamping diameter [inch]	Insert contact height [inches]	API 7K 5th edition			API 7K Latest edition		Dressing Kit P/N	Inserts P/N	Inserts Oracle number	Ram P/N	Ram Oracle number	Throat opening (slips up) [inches]
			Slips assy Legacy P/N	Slip assy Oracle number	Capacity [sTon/ Tonne]	Slip assy Oracle number	Rating [sTon/ Tonne]						
#1	20	22	202430-2000	10023613-001	250 / 227	10023613-501	250 / 227	51202430-2000	2635	10377728-001	202381-2000	10023581-001	24
	18.3/4	22	202430-1875	10023613-007	250 / 227	10023613-507	250 / 227	51202430-1875	2657	10138857-001	202381-1875	11447198-001	22-3/4
	18.5/8	22	202430-1863	10023613-002	250 / 227	10023613-502	250 / 227	51202430-1863	17080	10137058-001	202381-1863	10152716-001	22-3/4
#2	18	22	202430-1800	10154070-002	250 / 227	10154070-502	250 / 227	51202430-1800	2635	10377728-001	202381-1800	10137996-001	22
	17.7/8	22	202430-1788	10154070-005	250 / 227	10154070-505	250 / 227	51202430-1788	V-2669	10152556-001	202381-1788	16632846-001	21.7/8
	17	22	n/a	10154070-007	250 / 227	10154070-507	250 / 227	51202430-1700	n/a	11388733-001	202381-1788	16632846-001	21
#3 w/o IC	See IC #1-#7		202430-5	10023614-001	750 / 680	10023614-501	700 / 636	See Insert carriers #1 - #7					
#4 w/o IC	See IC #8-#21		202433-5	10023617-001	500 / 454	10023617-501	350 / 318	See Insert carriers #8 - #21					

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POWER SLIPS

PS30 INSERT CARRIERS (IC) FOR DRILL PIPE (DP), CASING (CSG) AND TUBING (TBG)

IC No*	Clamping diameter [inches]	API 7K 5th edition			API 7K Latest edition		Inserts P/N	Inserts Oracle number	Ram-inserts P/N	Ram-inserts Oracle number	Throat opening (slips up) [inches]
		I.C. assy Legacy P/N	Oracle P/N	Capacity [sTon/Tonne]	I.C. assy Oracle number	Rating [sTon/Tonne]					
#1	16	202440-1600	10138095-002	750 / 680	10138095-502	500 / 454	2635	10377728-001	202386-1600	10628226-001	20
#2	14	202441-1400	10023622-001	750 / 680	10023622-501	500 / 454	2635	10377728-001	202386-1400	10023590-001	18
	13.5/8	202441-1363	10138098-002	750 / 680	10138098-502	500 / 454	2653	10377732-001	202386-1363	10023589-001	17.5/8
	13.1/2	202441-1350	10138098-005	750 / 680	10138098-505	500 / 454	2652	10138846-001	202386-1350	Contact NOV	17.1/2
	13.3/8	202441-1338	10023621-001	750 / 680	10023621-501	500 / 454	2636	10138821-001	202386-1338	10023588-001	17.3/8
	12.3/4	202441-1275	10138098-004	750 / 680	10138098-504	500 / 454	2657	10138857-001	202386-1275	16632823-001	17.1/4
#3	11.7/8	202442-1188	10138104-002	750 / 680	10138104-502	500 / 454	2651	10138844-001	202386-1188	10815260-001	16.7/16
	11.3/4	202442-1175	10138104-001	750 / 680	10138104-501	500 / 454	2637	10138826-001	202386-1175	10138011-001	16.5/16
	11.1/2	202442-1150	10138104-003	750 / 680	10138104-503	500 / 454	2655	10377734-001	202386-1150	11458591-001	16.1/2
	11	202442-1100	10138104-004	750 / 680	10138104-504	500 / 454	2638	10138828-001	202386-1100	Contact NOV	16
#4	10.7/8	202443-1088	10138106-004	750 / 680	10138106-504	500 / 454	2651	10138844-001	202386-1088	Contact NOV	15.7/8
	10.3/4	202443-1075	10023630-001	750 / 680	10023630-501	500 / 454	2637	10138826-001	202386-1075	10023584-001	15.3/8
	10.1/8	202443-1013	10023630-002	750 / 680	10023630-502	500 / 454	2636	10138821-001	202386-1013	11458597-001	15.1/8
	10	202443-1000	10138106-005	750 / 680	10138106-505	500 / 454	2638	10138828-001	202386-1000	16632773-001	15
	9.7/8	202443-988	10138106-003	750 / 680	10138106-503	500 / 454	2650	10377731-001	202386-988	10138031-001	14.7/16
	9.5/8	202443-963	10023631-001	750 / 680	10023631-501	500 / 454	2656	10377743-001	202386-963	10023603-001	14.5/16
#5	7.5/8	202445-763	10138111-004	750 / 680	10138111-504	700 / 635	2633	10377727-001	202386-763	10180332-013	14.1/2
	7	202445-700	10023633-001	750 / 680	10023633-501	700 / 635	2623	10138773-001	202386-700	10023601-001	13.7/8
	6.7/8	202445-688	10138111-003	750 / 680	10138111-503	700 / 635	2638	10138828-001	202386-688	Contact NOV	13.5/16
	6.5/8	202445-663	10023632-001	750 / 680	10023632-501	700 / 635	2632	10377724-001	202386-663	10023600-001	13.1/2
#6	6.1/2	50004569-650	10034357-004	750 / 680	10034357-504	700 / 635	2173	10452057-001	202386-650	10180322-015	13.1/4
	6	50004569-600	10034357-003	750 / 680	10034357-503	700 / 635	2652	10138846-001	202386-600	10180332-014	?
	5.7/8	50004569-588	10034357-001	750 / 680	10034357-501	700 / 635	2623	10138773-001	202386-588	10023599-001	13
#7	5.1/2	202446-550	10138117-005	750 / 680	10138117-505	600 / 545	2170	10362140-001	202386-550	10023598-001	10.3/4
	5	202446-500	10138117-004	750 / 680	10138117-504	600 / 545	2169	10025332-001	202386-500	10023596-001	10.1/4
	4.1/2	202446-450	10138117-003	750 / 680	10138117-503	600 / 545	2168	10451986-001	202386-450	10023595-001	9.3/4

\*NOTE: Insert contact height for all sizes: 22"

PS21 & PS30 INSERT CARRIERS (IC) FOR DRILL PIPE (DP), CASING (CSG) AND TUBING (TBG)

IC No.	Clamping diameter [inches]	API 7K 5th edition			API 7K Latest edition			Dressing Kit P/N	Load ring P/N	Inserts P/N	Inserts Oracle number	Ram-inserts P/N	Ram-inserts Oracle number	Throat opening (slips up) [inches]
		I.C. assy Legacy P/N	Oracle P/N	Capacity [sTon/ Tonne]	I.C. assy Oracle number	Rating [sTon/ Tonne]	Rating [sTon/ Tonne]							
#8	**11.1/8	202270-1113	16632311-002	500	16632311-502	350 / 318	51202270-1113	--	2651	10138844-001	202346-1113	Contact NOV	15.3/4	
	**11	202270-1100	16632311-001	500	16632311-501	350 / 318	51202270-1100	--	2637	10138826-001	202346-1100	Contact NOV	15.1/2	
#9	10.7/8	202270-1088	10023510-008	500	10023510-508	350 / 318	51202270-1088	--	2651	10138844-001	202346-1088	Contact NOV	15.1/2	
	10.3/4	202270-1075	10023510-004	500	10023510-504	350 / 318	51202270-1075	--	2637	10138826-001	202346-1075	10648223-001	15.3/8	
	10	202270-1000	16628594-001	500	16628594-501	350 / 318	51202270-1000	--	2638	10138828-001	202346-1000	Contact NOV	14.3/4	
	9.7/8	202270-988	10023510-007	500	10023510-507	350 / 318	51202270-988	--	2650	10377731-001	202346-988	10137954-001	14.9/16	
	9.5/8	202270-963	10023510-001	500	10023510-501	350 / 318	51202270-963	--	2656	10377743-001	202346-963	10023568-001	14.5/16	
	9.1/2	202270-950	10023510-003	500	10023510-503	350 / 318	51202270-950	--	2657	10138857-001	202346-950	Contact NOV	14.1/4	
#10	9.1/8	202279-913	10161730-007	500	10161730-507	350 / 318	51202279-913	--	2637	10138826-001	202346-913	Contact NOV	14.1/4	
	8.5/8	202279-863	10161730-005	500	10161730-505	350 / 318	51202279-863	--	2652	10138846-001	202346-863	10137951-001	13.1/2	
	7.3/4	202279-775	10161730-004	500	10161730-504	350 / 318	51202279-775	--	17080	10137058-001	202346-775	10137950-001	13	
#11	7.5/8	202273-763	10137861-006	500	10137861-506	350 / 318	51202273-763	50004573-3	2633	10377727-001	202346-763	10699427-004	12.1/2	
	7	202273-700	10023524-001	500	10023524-501	350 / 318	51202273-700	50004573-3	2623	10138773-001	202346-700	10023566-001	11.7/8	
	6.7/8	202273-688	10137861-005	500	10137861-505	350 / 318	51202273-688	50004573-3	2638	10138828-001	202346-688	Contact NOV	11.3/4	
	6.5/8	202273-663	10023520-001	500	10023520-501	350 / 318	51202273-663	50004573-3	2632	10377724-001	202346-663	10023565-001	11.5/8	
#12	6.1/2	202369-650	10023578-009	500	10023578-509	350 / 318	51202369-650	50004573-2	2173	10452057-001	202346-650	10699427-003	11.1/2	
	6.9/64	202369-614	10023578-008	500	10023578-508	350 / 318	51202369-614	50004573-2	2172	10452044-001	202346-614	10699427-006	11.1/8	
	6	202369-600	10023578-007	500	10023578-507	350 / 318	51202369-600	50004573-2	2169	10025332-001	202346-600	Contact NOV	11	
	5.7/8	202369-588	10023578-001	500	10023578-501	350 / 318	51202369-588	50004573-2	2623	10138773-001	202346-588	10023564-001	11	
	5.7/8	202369-588-BT	10023578-006	500	10023578-506	350 / 318	51202369-588	50004573-2	2623	10138773-001	202346-588	10023564-001	11	
	5.11/16	202369-568	10023578-005	500	10023578-505	350 / 318	51202369-568	50004573-2	2650	10377731-001	202346-568	Contact NOV	10.7/8	
#13	5.1/2	202274-550	10023533-001	500	10023533-501	335 / 304	51202274-550	50004573-5	2170	10362140-001	202346-550	10023563-001	10.3/4	
	5	202274-500	10023530-001	500	10023530-501	335 / 304	51202274-500	50004573-5	2169	10025332-001	202346-500	10023562-001	11.1/4	
	4.1/2	202274-450	10082604-001	500	10082604-501	335 / 304	51202274-450	50004573-5	2168	10451986-001	202346-450	10107997-001	9.3/4	
#14	**4	202278-400	10023555-001	500	10023555-501	215 / 195	51202278-400	50004573-6	2165	10451957-001	202346-400	10023561-001	9.3/8	
#15	3.1/2	202277-350	10023554-001	500	10023554-501	215 / 195	51202277-350	50004573-4	2162	10362053-001	202346-350	10023560-001	8.7/8	
	3.1/8	202277-313	10137885-009	500	10137885-509	215 / 195	51202277-313	50004573-4	2172	10452044-001	202346-313	10699427-002	8.1/2	
	2.7/8	202277-288	10137885-006	500	10137885-506	215 / 195	51202277-288	50004573-4	2161	10362051-001	202346-288	10023559-001	8.1/4	
	2.3/8	202277-238	10137885-005	500	10137885-505	215 / 195	51202277-238	50004573-4	2160	10025329-002	202346-238	10107996-001	7.3/4	

\* NOTE: IC #8 - #10: Insert contact height 16.1/2"

IC #11 - #15: Insert contact height 13.3/4"

\*\* These insert carriers are size specific and can't be redressed to another size

PS21 & PS30 INSERT CARRIERS (IC) FOR DRILL COLLARS

IC No*	Clamping diameter [inches]	API 7K 5th edition			API 7K Latest edition							
		I.C. assy Legacy P/N	Oracle P/N	Capacity [sTon/ Tonne]	I.C. assy Oracle number	Rating [sTon/ Tonne]	Dressing Kit***P/N	Inserts P/N	Inserts Oracle number	Ram-inserts P/N	Ram-inserts Oracle number	Throat opening (slips up) [inches]
#16	**9.1/2	202271-950	10137843-008	350 / 318	10137843-508	150 / 136	51202271-950	2633	10377727-001	--	--	14.3/16
	**9.1/4	202271-925	10023514-001	350 / 318	10023514-501	150 / 136	51202271-925	2655	10377734-001	--	--	13.15/16
#17	9	202271-900	10023513-001	350 / 318	10023513-501	150 / 136	51202271-900	2633	10377727-001	--	--	13.11/16
	8.3/4	202271-875	10137843-011	350 / 318	10137843-511	150 / 136	51202271-875	2655	10377734-001	--	--	13.9/16
	8.5/8	202271-863	10137843-010	350 / 318	10137843-510	150 / 136	51202271-863	2653	10377732-001	--	--	13.1/2
	8.1/2	202271-850	10137843-007	350 / 318	10137843-507	150 / 136	51202271-850	2652	10138846-001	--	--	13.7/16
	8.1/4	202271-825	10023511-001	350 / 318	10023511-501	150 / 136	51202271-825	2638	10138828-001	--	--	12.7/8
	8.1/8	202271-813	10137843-009	350 / 318	10137843-509	150 / 136	51202271-813	2650	10377731-001	--	--	12.3/4
#18	8	202272-800	10023518-001	350 / 318	10023518-501	150 / 136	51202272-800	2633	10377727-001	--	--	13.1/4
	7.3/4	202272-775	10023517-001	350 / 318	10023517-501	150 / 136	51202272-775	2655	10377734-001	--	--	13
	7.5/8	202272-763	10137855-006	350 / 318	10137855-506	150 / 136	51202272-763	2172	10452044-001	--	--	12.1/2
	7.1/2	202272-750	10137855-005	350 / 318	10137855-505	150 / 136	51202272-750	2652	10138846-001	--	--	12.3/4
	7.3/8	202272-738	10137855-007	350 / 318	10137855-507	150 / 136	51202272-738	2636	10138821-001	--	--	12.1/2
	7.1/4	202272-725	10137855-008	350 / 318	10137855-508	150 / 136	51202272-725	2638	10138828-001	--	--	12.1/2
#19	**6.3/4	202275-675	10137872-007	350 / 318	10137872-507	150 / 136	51202275-675	2633	10377727-001	--	--	11.1/4
#20	6.1/2	202275-650	10023546-001	350 / 318	10023546-501	150 / 136	51202275-650	2633	10377727-001	--	--	11
	6.1/4	202275-625	10023545-001	350 / 318	10023545-501	150 / 136	51202275-625	2655	10377734-001	--	--	10.7/8
	6	202275-600	10023541-001	350 / 318	10023541-501	150 / 136	51202275-600	2652	10138846-001	--	--	10.7/8
	5.3/4	202275-575	10137872-008	350 / 318	10137872-508	150 / 136	51202275-575	2638	10138828-001	--	--	10.5/8
	5.5/8	202275-563	10137872-009	350 / 318	10137872-509	150 / 136	51202275-563	2650	10377731-001	--	--	10.1/2
#21	4.3/4	202276-475	10023552-001	225 / 205	10023552-501	150 / 136	51202276-475	2167	10362095-001	--	--	10
	4.5/8	202276-463	10137879-006	225 / 205	10137879-506	150 / 136	51202276-463	2655	10377734-001	--	--	9.7/8
	4.3/8	202276-438	10137879-005	225 / 205	10137879-505	150 / 136	51202276-438	2172	10452044-001	--	--	9.3/4
	4.1/4	202276-425	10137879-007	225 / 205	10137879-507	150 / 136	51202276-425	2166	10451962-001	--	--	9.5/8
	4.1/8	202276-413	10115241-001	225 / 205	10115241-501	150 / 136	51202276-413	2632	10377724-001	--	--	9.1/2
	4	202276-400	10137879-004	225 / 205	10137879-504	150 / 136	51202276-400	--	16696418-001	--	--	9.3/8
	3.3/4	202276-375	10137879-008	225 / 205	10137879-508	150 / 136	51202276-375	2168	10451986-001	--	--	9.1/8
	3.1/2	202276-350	10137879-009	225 / 205	10137879-509	150 / 136	51202276-350	2657	10138857-001	--	--	8.7/8

\* NOTE: IC #16 - #21: Insert contact height 11"

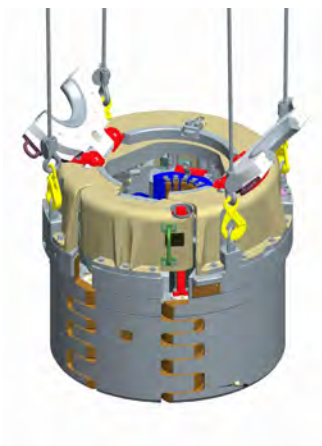
\*\* These insert carriers are size specific and can't be redressed to another size

\*\*\* Dressing kit includes: inserts, size inserts and retainers

## PS495 HYDRAULIC POWER SLIP

The PS495 Hydraulic Power Slips is a series of rotary equipment which has been developed to handle a drillpipe and landing string range and covers a range from 4.1/2" to 7.5/8" using replaceable insert carriers. With the increasing amount of deepwater rigs drilling in deep water, the need is arisen for bigger and higher capacity Power Slips that increase running efficiency and safety. Consisting out of a body and a door the Power Slip is designed having a dedicated rating and safety factor, as per API 7K, to handle string weights up to 1,500 sTon / 1,361 Tonne.

- Power down slips reacts up to 30,000 ft.lbs / 40,600 Nm of torque, independent of string weight but depending on pipe diameter and grade.
- The PS can be used in combination with NOV Rotary support Tables (RST) and able to be rotated without disconnecting hoses.
- Fits directly into a 49.1/2" RST. Use of adapter rings allows the tool to be used in combination with 60.1/2" and 75.1/2" RST.
- Tool is being remote controlled by the driller using PS controls.
- Reliable slips SET and slips-UP signal.
- Crushing force is reduced due to special slip design.
- Ability to be used with all (NOV) Iron Roughnecks (except when IR rail width is <75" / 1,905 mm)
- According to API 7K latest edition



### TECHNICAL SPECIFICATIONS

PS495	
For rotary size [inches / mm]	49.1/2 / 1,257
Pipe size range [inches / mm]	4.1/2 - 7.5/8 / 114 - 202
Load rating [sTon/Tonne]	1,500 / 1,361. The actual rating is depending on the used size of insertcarrier set (see table PS495 size components).
Maximum torque [ft.lbs / Nm]	30,000 / 40,674
Hydraulic requirements PS495	
Pressure* [psi / kPa]	2,300 - 2,500 / 15,858 - 17,237
Flow rate [gpm / lpm]	15 / 58

\* Pressure in return line not to exceed 200 psi / 1,378 kPa

### MAIN PART NUMBERS\*

Description	Oracle number
Final Ass'y National	10141101-001
Final Ass'y Emsco	10981292-001
Final Ass'y Oilwell	10981295-001
Final Ass'y Wirth	10981308-001
The PS495 can operate in combination with bigger sizes by using adapters. Standard delivery includes bit breaker plate	

### OPTIONAL EQUIPMENT PART NUMBERS

Description	Oracle number
Bit breaker plate	10788928-001
4-way lifting sling, DNV	10744961-001
4 way lifting sling, ABS	10744961-002
4 way lifting sling	10744961-005

## PS495 SIZE COMPONENTS

Pipe Size [inches]	OD Clamping [inches]	Rating Set [sTon / Tonne]	Set Insert Carrier	Qty inserts	Insert P/N	Top Guide Oracle P/N	ID [inches]
DP. 4.1/2	4.500	500 / 453	10728647-001	54	10729296-001	17464999-001	7.1/8
DP. 5	5.000	625 / 567	10728647-002	54	10729296-001	17464999-001	7.3/4
DP. 5.1/2	5.500	750 / 680	10728647-003	72	10729296-001	17464999-001	8
DP. 5.7/8	5.875	1,000 / 907	10728647-005	72	10729296-001	17464999-001	7.1/2
DP. 6.5/8	6.625	1,250 / 1,134	10728647-008	72	10704252-001	17464999-001	9.1/4
LS. 6.5/8 Spec.	6.906	1,250 / 1,134	10729808-010	90	10704252-001	17464999-001	9.1/4
DP. 7.5/8	7.625	1,500 / 1,360	10728647-012	90	10729296-002	17464999-001	11.1/4
LS. 7.5/8 Spec.	7.938	1,500 / 1,360	10728647-013	90	10729296-002	17464999-001	11.1/4

## PS15 AND PS16 POWER SLIPS

NOV power slips are designed to eliminate the manual lifting and setting of slips. The PS15 power slip use coil springs as a counterbalance to offset the weight of the slips when in upper, released position. Slips are set by standing on the slipset ring. The foot pedal is pressed to release the slips.

The PS16 power slip is an air operated power slip controlled with various control options. The slips are set by gravity and released with air pressure much like NOV's casing elevator/spiders. The PS16 is equipped with a feedback kit for positive slips set indication.

- Fits directly into NOV pin drive master bushings.
- Fits 27.1/2" and 37.1/2" to 49.1/2" rotary tables using adapter rings
- Accommodates 3.1/2" to 6.5/8" OD Drill pipe
- Not not be used for back up torque.



PS15 Spring Slip



PS16 Pneumatic Slip

### TECHNICAL SPECIFICATIONS

	PS15	PS16
For rotary size inches [mm]	27.1/2 [699]	27.1/2 [699]
Size range inches [mm]	3.1/2 - 5.7/8 [89 - 143]	3.1/2 - 6.5/8 [89 - 168]
Weight lbs [kg]	1,040 [472]	1,600 [727]
Pressure psi [kPa]	n/a	90 [620]

### MAIN PART NUMBERS API 7K LATEST EDITION

	Legacy P/N	Oracle P/N	Load rating [sTon / Tonne]
PS15	18127	16983817-501	750 / 680
PS16	n/a	10383520-508	750 / 680

### OPTIONAL EQUIPMENT PART NUMBERS

Description	P/N
PS16 feedback-kit (included with new units)	11446315-001
PS16 controls w/ footpedal	17474473-001
PS16 controls w/ handvalve	17474473-002
PS16 control panel for remote operation	17474473-003
PS16 safety clamp assembly	10143412-001
PS16 lifting sling	50004848
PS16 controls for RST control station	11449335-001
PS16 feedback kit for RST control station	11464732-001
PS15 Lifting slings	50001120 / 50001150

### PS15 AND PS16 SIZE COMPONENTS API 7K 5TH EDITION

Slip body size [inch]	Drill pipe size [inch]	PS15 complete with guide and slip set P/N	PS15 complete with guide and slip set Oracle number	PS16 complete w/ air controls and hose, guide and slip set P/N	PS16 complete w/ air controls and hose, guide and slip set Oracle number	Slip set P/N	Slip set Oracle number	Insert set P/N	Insert set Oracle number	Guide ring P/N	Guide ring Oracle number
4.1/2	3.1/2	18172-45-35	10449346-001	78181-45-35	10059392-004	7686	10111482-001	2163-16B-32	10138526-001	79011-1	10490413-001
4.1/2	4	18172-45-40	10449346-002	78181-45-40	10059392-002	7685	10384432-001	2164-16B-32	10362081-002	79011-2	10490413-002
4.1/2	4.1/2	18172-45-45	10449346-003	78181-45-45	10059392-001	7684	10384425-001	2165-48	10138533-001	79011-2	10490413-002
5.1/2	4.1/2	18172-55-45	10449346-004	78181-55-45	10059392-005	7691	10111484-001	2168-16B-32	NO.ORAC.ID	79011-2	10490413-002
5.1/2	5	18172-55-50	10449346-005	78181-55-50	10059392-006	7690	10111483-001	2169-16B-32	10025332-002	79011-3	10490413-003
5.1/2	5.1/2	18172-55-55	10449351-001	78181-55-55	10059392-003	7689	10384445-001	2170-48	10362140-002	79011-4	10490413-004
5.7/8	5.7/8	18172-57-57	16555210-001	78181-57-57	10059392-007	7689-57	10384445-002	2173-48	10177439-001	79011-4	10490413-004
*7.5/8	6.5/8	--	--	78181-76-66	10059392-009	7696	10384462-001	2632-24B-48	10971664-001	7799	10146842-001

\* tripping only, otherwise TJ will hit slips/inserts while drilling.

### PS15 AND PS16 SIZE COMPONENTS API 7K LATEST EDITION

Note: When ordering a complete PS15 or PS16, one should order the body + slip set + guide set + controls as separate line items.

Slip body size [inch]	Drill pipe size [inch]	Slip set. Rated (w/ loading)	Rating [sTon/ Tonne]	Insert P/N + Qty.	Insert beveled P/N + Qty.	Slip set. Rated (w/o loading) Oracle number	Rating [sTon/ Tonne]	Guide ring set number	Guide ring set Oracle number
4.1/2	3.1/2	10111482-501	tbd	2163 (24x)	2163B (16x)	10111482-301	250 / 227	79011-1	10490413-001
4.1/2	4	10384432-501	tbd	2164 (24x)	2164B (16x)	10384432-301	250 / 227	79011-2	10490413-002
4.1/2	4.1/2	10384425-501	tbd	2165 (40)	n/a	10384425-301	250 / 227	79011-2	10490413-002
5.1/2	4.1/2	10111484-501	tbd	2168 (24x)	2168B (16x)	10111484-301	250 / 227	79011-2	10490413-002
5.1/2	5	10111483-501	tbd	2169 (24x)	2169B (16x)	10111483-301	250 / 227	79011-3	10490413-003
5.1/2	5.1/2	10384445-501	tbd	2170 (40x)	n/a	10384445-301	250 / 227	79011-4	10490413-004
6.5/8	5.7/8	10384445-502	750 / 680	16696418-001 (36x)	16696418-002 (24x)	n/a	n/a	*	10146842-002
6.5/8	6.5/8	10384462-501	750 / 680	2173 (60x)	n/a	n/a	n/a	*7799	10146842-001

\* special bottom guide for 6.5/8 slipbody.



## PSF POWER SLIP FRAME & SLT SLIP LIFTING TOOL

### PSF

The Power Slip Frame (PSF) improves drilling and tripping operations with simple, light weight, compact mechanical hydraulic slips. The slips may be operated via the hook up kit. In addition, the slips may be operated manually by foot pedal or hand operated control valve. This product does not wear CE-marking.

### SLT

The Slip Lifter Tool (SLT) is a tool especially designed to be used in combination with the heavy duty MBH1250 hinged master bushing, the LSB1250 Landing String Bushing and LSS1250 Landing String Slips. The SLT operates in combination with the dedicated hook up kit. The SLT also can be used for SDHL/SDXL/RHS-slips using the converting kits. It is CE-marked.

Both tools increase safety by moving personnel away from the hazards at well center during drilling operations. In addition, the design does not extend beyond the rotary table and thereby reduces trip hazards in the event of an accidental rotation of the rotary table. Crew fatigue is minimized by reducing the time and energy required for manual slip operations.



SLT

PSF

### TECHNICAL SPECIFICATIONS

Description	PSF	SLT
Weight w/o slips [lbs / kg]	365 / 166	1,992 / 904
Size range [inches / mm]	2.3/8 - 7 / 60 - 178 (with simple adapters required for the range)	5.1/2 - 6.5/8 / 140 - 168 (LSS) 4.1/2 - 7.5/8 / 114 - 194 (SDHL)
Control interface	Hook Up Kit or manually by foot pedal or hand operated control valve	Hook Up Kit
Required hydraulic flow [gpm / lpm]	3 / 11	5 / 19
Minimum pressure [psi / kPa]	600 / 4,137	2,000 / 13,790
Maximum pressure [psi / kPa]	800 / 5,516	2,500 / 17,237

### MAIN PART NUMBERS

Description	P/N	Oracle number
PSF Power Slip Frame for 20.1/2" pin drive rotary table	1100070-501	10136556-001
PSF Power Slip Frame for 17.1/2" - 27.1/2" square drive rotary table	1100070-502	10445721-001
PSF Power Slip Frame for 27.1/2" & 37.1/2" pin drive rotary table	1100070-503	10111197-001
SLT Slip Lifter Tool	50001400	10708317-001

### OPTIONAL EQUIPMENT PART NUMBERS

P/N	Oracle number	PSF	SLT
50001131	10714273-001	Hook Up Kit	Hook Up Kit
n/a	16713840-001	X-over kit for RHS slips	-
n/a	16713841-001	-	X-over kit for RHS slips
50001450	10721752-001	-	X-over kit for SDHL/SDXL slips
1100240	10445762-001	Hand valve control kit (closed center)	-
1100241	10445763-001	Foot valve control kit	-
1100197	10445747-001	Control kit integrated with IR3080	-
n/a	17455774-001	Hose kit	-
n/a	10707214-001	-	By pass jumper hose kit

## BHAT BOTTOM HOLE ASSEMBLY TOOL

### ELIMINATE THE NEED FOR MANUAL CLAMPS

The Bottom Hole Assembly Tool eliminates manual processes for placing safety clamps and hand slips that often require two or three people around well center. It removes the risk of choosing the wrong safety clamp or slip size because of its capability to handle a range of diameters which would typically require separate sets of tools. The gripping force of the BHAT tool is powerful enough to safely run collar-less components with relatively low loads, and ensures that no tubulars are able to slip through the rotary.



### FEATURES

The BHAT consists of two body halves that are hydraulically clamped together to force the insert teeth to penetrate the pipe. It has a throat opening large enough to allow stabilizers to pass through and can be placed on top of a PS30, used with adapters on a master bushing or placed straight into a 49.1/2" National rotary table. When placed on top of the PS30, the main slip assembly can be left inside the PS30 so that only removal of the insert carriers is required. BHAT operation requires only one man and it can close and clamp in 20 seconds or less. There has been extensive testing done to determine the potential saving earned by using the BHAT. These suggest that the payback time for the tool could be as low as seven round trips on a large offshore drillship. This does not include potential savings earned as a result of preventing potential lost time incidents while manually running the BHA.

- Capable of gripping a range of sizes without changing components. Size ranges are 4" - 7", 6" - 10" and 8" - 12"
- Includes air compensator with weight detection
- Four independent cylinders with a double set of non-leaking seals
- Independent load holding check valves to grip the pipe
- Throat opening up to 19" (12.1/2" for 4-7")
- Electronic load cells on each cylinder provide an independent load profile
- Electrical proximity sensor verifies the air compensator position
- Maximum load is 150 sTon/136 Tonne (100 sTon/91 Tonne for 4" - 7") with a 3:1 design safety factor
- Load rating according to ISO 14693 API 7K latest edition

### BENEFITS

- Reduce manpower and equipment required to safely run a BHA
- Tool cannot be opened without the weight of the BHA being transferred to the elevator first
- Independent cylinders ensure that the tool will continue to hold the BHA in the event of full hydraulic power loss
- Allows 17.1/2" BHA to pass through without removing tool from well center
- Eliminates the need for manual handling close to well center - safety clamps and slip changes no longer required
- Footprint is small enough to continue normal Iron Roughneck use
- Can be operated from a stand-alone control box or from the driller's cabin

### TECHNICAL SPECIFICATIONS

Description	
Weight, dressed [lbs / kg]	6,666 / 3,024
Pipe Size Range [inches / mm]	4 - 7, 6 - 10 or 8 - 12 / 102 - 177, 152 - 254 or 203 - 305
Maximum Load Rating [sTon / Tonne]	150 / 136 [100 / 91 for 4"-7"]
Throat opening [inches / mm]	12-1/2" for 4-7" , 19 for 17.1/2" [ 318 for 178 BHA , 495 for 445 BHA] to pass
Minimum required length of clamping surface [inches / mm]	17 / 432
Maximum throat opening [inches / mm]	19.5 / 495
Operating pressure [psi / kPa]	2,250 - 2,500 / 15,515 - 17,237
Operators Control	Can be operated from a stand-alone control box or from the driller's cabin.
Seating	Directly on PS30 or via adapter on Master Bushing using API 7K drive pin holes or inside National 49-1/2" rotary bore.
Required hydraulic flow [gpm / lpm]	25 / 95

### MAIN PART NUMBERS

Description	Part number	Oracle number
BHAT	50003500Y	10140950-002

### SIZE COMPONENTS

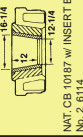
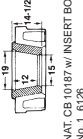
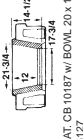
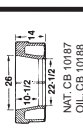
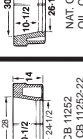
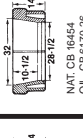
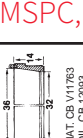
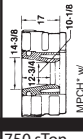
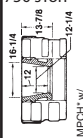
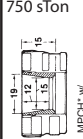
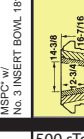
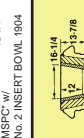
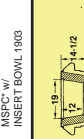
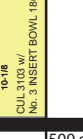
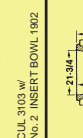

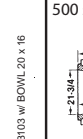
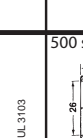



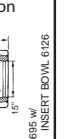
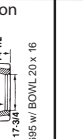

Description	Part number	Oracle number
Self centering carrier 4" - 7" (requires carrier installation set Oracle number 16640732-002)	na	16640732-001
Self centering carrier 6" - 10"	na	11466359-001
Self centering carrier 8" - 12"	na	16548251-001
Adapter BHAT-MPCH 37.1/2" (required when no PS30 available)	50003581	10141043-001
Adapter BHAT-National 49.1/2" (required when no PS30 available)	50003635-1	10141090-001
Bit breaker plate bit box type, 13.9/16" opening	na	10826550-001
Bit breaker plate PDC type, 18" opening	na	11363898-001

# BUSHINGS / SLIPS / CLAMPS



## MASTER BUSHINGS, CASING BUSHINGS AND INSERT BOWLS

### CB, MPCH, MSPC, CUL, CB & MSP MASTERBUSHINGS

Rotary Table Size	TUBULAR GOODS OUTSIDE DIAMETER	SLIP TYPE	Slip type to be selected from tables in this book or from the Rotary and Handling Tools Catalog													
			2.3/8" - 8.5/8" No.3	9.5/8" - 10.3/4" No.2	11.3/4" - 13.3/8" No.1	16"	18.5/8" - 20"	22" - 23"	24-1/2" - 24"	26"	30"					
37.1/2"	CB*	SPLIT BODY	n/a	 NAT. CB 10187 w/ INSERT BOWL No. 2 6114 OIL. CB 10188 w/ INSERT BOWL No. 2 6114 EMS. CB 10190 w/ INSERT BOWL No. 2 6114 IDE. CB 10189 w/ INSERT BOWL No. 2 6114	 NAT. CB 10187 w/ INSERT BOWL No. 1 6126 OIL. CB 10188 w/ INSERT BOWL No. 1 6126 EMS. CB 10190 w/ INSERT BOWL No. 1 6126 IDE. CB 10189 w/ INSERT BOWL No. 1 6126	 NAT. CB 10187 w/ BOWL 20 x 16 6127 OIL. CB 10188 w/ BOWL 20 x 16 6127 EMS. CB 10190 w/ BOWL 20 x 16 6127 IDE. CB 10189 w/ BOWL 20 x 16 6127	 NAT. CB 10187 OIL. CB 10188 EMS. CB 11553 IDE. CB 10189	 NAT. CB 11553 OIL. CB 8170 EMS. CB 16542 IDE. CB 74814	 NAT. CB 16544 OIL. CB 8170 EMS. CB 89183-1 IDE. CB 74814-26	 NAT. CB 11763 OIL. CB 8170 EMS. CB 11633 IDE. CB 12082	500 sTon	500 sTon	500 sTon	500 sTon	500 sTon	500 sTon
37.1/2"	MPCH*	25-3/4" PIN CIRCLE INSERT BODY PIN DRIVE	 MPCH w/ No. 3 INSERT BOWL 6608	 MPCH w/ No. 2 INSERT BOWL 6609	 MPCH w/ INSERT BOWL 6610	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
27.1/2"	MSPC*	25-3/4" PIN CIRCLE SOLID BODY PIN DRIVE	 MSPC w/ No. 3 INSERT BOWL 1810	 MSPC w/ No. 2 INSERT BOWL 1904	 MSPC w/ INSERT BOWL 1903	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
27.1/2"	CUL	SOLID BODY	 CUL 3103 w/ No. 3 INSERT BOWL 1809	 CUL 3103 w/ No. 2 INSERT BOWL 1922	 CUL 3103 w/ No. 1 INSERT BOWL 3105	 CUL 3103 w/ BOWL 20 x 16 3104	 CUL 3103	 CUL 3103	 CUL 3103	500 sTon	500 sTon	500 sTon	500 sTon	500 sTon	500 sTon	500 sTon
27.1/2"	CB	SPLIT BODY	n/a	 CB 6685 w/ No. 2 INSERT BOWL 6114	 CB 6685 w/ No. 1 INSERT BOWL 6128	 CB 6685 w/ BOWL 20 x 16 6127	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
27.1/2"	MSP*	25-3/4" PIN CIRCLE SPLIT PIN DRIVE	 MSP 5429*	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

YELLOW cells are not available as per API Latest edition

NOTE: Ratings only applicable to API latest edition items.

MBH1250 & LSB1000 & LSB1250 MASTER BUSHINGS, LANDING STRING BUSHING & SLIPS

Rotary Table Size	TUBULAR GOODS OUTSIDE DIAMETER	5.7/8"	6.5/8" + 6.9/16"	2.3/8" - 7.5/8" Insert bowl No.3	9.5/8" - 10.3/4" Insert bowl No.2	11.3/4" - 13.3/8" Insert bowl No.1	16"	18.5/8" + 20"	22"	24"
49.1/2"	BUSHING TYPE	Suitable for CMS-XL, DCS & CP-S Casing Slips								
	MBH1250	1,000 sTon MBH & Bowl #3 pn 50005912	750 sTon MBH & Bowl #2 pn 50005911	750 sTon MBH & Bowl #1 pn 50005910	1,000 sTon Casing bushing 16" pn 50005908	1,000 sTon Casing bushing 20" pn 50005907	1,000 sTon Casing bushing 22" pn 50005906	1,000 sTon	1,000 sTon	1,000 sTon
49.1/2"	MBH + LSB1250 Dressed w/1250.sT bushing	1,000 sTon 5.7/8" MBH w/LSB 50005940 & bushing 50005940-578	1,250 sTon 6.5/8" MBH w/LSB 50005940 & bushing 50005940-658							

\*Dimensions to be verified upon ordering

### OVERVIEW OF BAASH-ROSS 200 STON CASING SPIDERS & UC-3 SLIPS

### OVERVIEW OF HCS CASING SPIDERS & CMS / CP SLIPS

Not per API 7K

CASING OUTSIDE DIAMETER →

Spider Size & P/N	16"	18-5/8"	20"	22-1/2"	24"	26"	30"	33"	36"
30" 7704-A-161	UC-3 slip 7704-5036 Bushing 7704-A-165 Retainers 50012-148-8	UC-3 slip 7704-5035 Bushing 7704-A-164 Retainers 50012-50-8	UC-3 slip 7704-5034 Bushing 7704-A-172 Retainers 50012-76-8	UC-3 slip 7704-5002 Bushing 7704-A-171 Retainers 900041-441	UC-3 slip 7704-5001 Bushing 7704-A-171 Retainers 900041-441	UC-3 slip 7704-5006 Bushing 7704-A-170 Retainers 900042-186	UC-3 slip 7704-5005 Bushing 7704-A-169 Retainers 50012-32-C8	UC-3 slip 7704-5008 Bushing 7704-A-168 Retainers 50012-20-C8	UC-3 slip 7704-5007 Use 36" Spider
36" 7704-A-167									UC-3 slip 7704-5007 Use 36" Spider

YELLOW cells are not available as per API Latest edition

According to API 7K latest edition

CASING OUTSIDE DIAMETER →

Spider Size & P/N	16"	18"	18-5/8"	20"	22"	23"	24"	24.1/2	26"	28"	30"	33"	36"
30" 11342732-001	CMS-500 16647418-007 Bushing 17454638-001	CMS-500 16647418-008 Bushing 17454830-001	CMS-500 16647418-009 Bushing 17454830-001	CMS-500 16647418-010 Bushing 17454830-001	CMS-500 16647418-019 Bushing 17455250-001	CMS-500 16647418-020 Bushing 17455250-001	CMS-500 16647418-011 CP-400 16647421-001 Bushing 17455250-001	CMS-500 16647418-021 Bushing 17455250-001	CMS-500 16647418-012 CP-450 16647421-002 Bushing 17455255-001	CMS-500 16647418-022 CP-500 16647421-006 Use 30" Spider	CMS-500 16647418-013 CP-500 16647421-003 Use 30" Spider	CP-500 16647421-004 Bushing 17456153-001	CP-500 16647421-005 Use 36" Spider
36" 11361344-001	CMS-500 16647418-008 Bushing 17456849-001	CMS-500 16647418-009 Bushing 17456849-001	CMS-500 16647418-010 Bushing 17456849-001	CMS-500 16647418-019 Bushing 17456723-001	CMS-500 16647418-020 Bushing 17456723-001	CMS-500 16647418-011 CP-400 16647418-011 Bushing 17456723-001	CMS-500 16647418-021 Bushing 17456723-001	CMS-500 16647418-022 CP-450 16647421-002 Bushing 17456720-001	CMS-500 16647418-012 CP-450 16647421-002 Bushing 17456155-001	CMS-500 16647418-022 CP-500 16647421-006 Bushing 17456155-001	CMS-500 16647418-013 CP-500 16647421-003 Bushing 17456155-001	CP-500 16647421-004 Bushing 17456153-001	CP-500 16647421-005 Use 36" Spider

NOTE: API 7k Latest edition with 4" taper for CMS-slips.

## CUL AND CB CASING BUSHINGS

CUL and CB casing bushings are inserted directly into the rotary table and insure that the casing being run is perfectly aligned with the center of the hole. Model CU is a solid bushing and model CB is a split bushing. All of the bushings accept bowls of different sizes to accommodate a wide range of casing. Using CMS-XL or CP-S slips, since these bushings fit into the rotary table, the casing string can be easily rotated during cementing operations.



CB Casing Bushing



CUL Casing Bushing

Rotary Table Size [inches]	Make	Casing Size [inches]	Casing Bushing and Insert Bowl	API 5th edition		API latest edition				
				Part number	Oracle number	Oracle number	Load rating [sTon / Tonne]	Weight [lbs/kg]		
26 and 27.1/2	ALL	18.5/8 and 20	CUL	3103	16705576-001	16705576-501	500/454	938 / 425.5		
		16	W/bowl 20x16	3104	10139331-001	10139331-501	500/454	562 / 255		
		11.3/4 and 13.3/8	W/bowl No. 1	3105	16706012-001	na	na	846 / 384		
		9.5/8 and 10.3/4	W/bowl No. 2	1902	10449428-001	na	na	342 / 155		
		2.3/8 and 8.5/8	W/bowl No. 3	1809	10950402-001	na	na	464 / 210.5		
27.1/2	ALL 27.1/2	18.5/8 and 20	CB	6695	10535439-001	10535439-501	500/454	713 / 323		
	API	16	W/bowl 20 x 16	6127	10036179-001	10036179-501	500/454	572 / 259		
		11.3/4 and 13.3/8	W/bowl No. 1	6126	10535380-001	10535380-501	500/454	895 / 406		
		9.5/8 and 10.3/4	W/bowl No. 2	6114	10720968-002	na	na	252 / 114		
37.1/2-49.1/2	NATIONAL	30	CB	V11763	10152557-001	10152557-001	500/454	1100 / 499		
		26	CB	16454	10570187-001	10570187-501	500/454	1100 / 499		
		24	CB	11253	10668711-001	10668711-501	500/454	1200 / 544		
		18, 18.5/8 and 20	CB	10187	10136504-001	10136504-501	500/454	1600 / 726		
		16	W/bowl 20 x 16	6127	10036179-001	10036179-501	500/454	572 / 259		
		11.3/4 and 13.3/8	W/bowl No. 1	6126	10535380-001	10535380-501	500/454	895 / 406		
		9.5/8 and 10.3/4	W/bowl No. 2	6114	10720968-002	na	na	252 / 114		
		37.1/2-49.1/2	OILWELL	30	CB	12093	10111216-001	10111216-501	500/454	1170 / 531
				26	CB	6170-26	10720886-003	10720886-003	500/454	1100 / 500
				24	CB	6170	11012301-001	11012301-501	500/454	1260 / 571.5
37.1/2-49.1/2	EMSCO	18.5/8 and 20	CB	V10188	10861045-001	10861045-501	500/454	1670 / 759		
		16	W/bowl 20 x16	6127	10036179-001	10036179-501	500/454	572 / 259		
		11.3/4 and 13.3/8	W/bowl No. 1	6126	10535380-001	10535380-501	500/454	895 / 406		
		9.5/8 and 10.3/4	W/bowl No. 2	6114	10720968-002	na	na	252 / 114		
		37.1/2-49.1/2		30	CB	11633	11052197-001	11052197-501	500/454	1160 / 526
				26	CB	89183-1	16708342-001	16708342-501	500/454	1100 / 500
				24	CB	16542	10153093-001	10153093-501	500/454	1260 / 571.5
				22	CB	11252-22	11038814-001	11038814-501	500/454	1120 / 509
				18.5/8 and 20	CB and above for 37.1/2 only S/N 49	11553	10136587-001	10136587-501	500/454	1610 / 730
				18.5/8 and 20	CB and below for 37.1/2 only S/N 48	10190	11333349-001	11333349-501	500/454	1820 / 825.5
37.1/2	IDECO	16	W/bowl 20 x16	6127	10036179-001	10036179-501	500/454	572 / 259		
		11.3/4 and 13.3/8	W/bowl No. 1	6126	10535380-001	10535380-501	500/454	895 / 406		
		9.5/8 and 10.3/4	W/bowl No. 2	6114	10720968-002	na	na	252 / 114		
		37.1/2		30	CB	12092	16697058-001	16697058-501	500/454	1100 / 499
				26	CB	74814-26	10146690-001	10146690-501	500/454	1452 / 605
				24.1/2	CB	74814	10146689-001	10146689-501	500/454	1560 / 650
				18.5/8 and 20	CB	10189	10136506-001	10136506-501	500/454	1670 / 759
				16	W/bowl 20 x16	6127	10036179-001	10036179-501	500/454	572 / 259
				11.3/4 and 13.3/8	W/bowl No. 1	6126	10535380-001	10535380-501	500/454	895 / 406
				9.5/8 and 10.3/4	W/bowl No. 2	6114	10720968-002	na	na	252 / 114

## BAASH ROSS / BAASH ROSS UC3 API 5TH EDITION

The Baash Ross [200 sTon hinged casing spider, API 5th edition] only, will fit most casing handling operations. It can be placed on the rotary table, mounted on a platform which replaces the rotary table, or supported by cribbing, depending upon the auxiliary equipment and procedure to be followed.

The Baash Ross type UC-3 slips, no API rating, achieves this with many narrow segments. They are hinged together to wrap around the casing for centering and exerting an uniform pressure. The UC-3 has a 3” taper. With changes in the number of segments and liners, it will handle strings from 16” OD to 36” OD. Liners are held in place by a liner retainer key and cotter pins.



Baash Ross 200 Ton hinged casing spider



UC-3 casing slips

### BAASH ROSS HINGED CASING SPIDERS

Csg. Size [inches]	Part Number	Oracle Number	Rating API 7K 5th edition only* [sTon/Tonne]	Weight [lbs / kg]
30"	7704-A-161	10146820-001	200 / 181	1,200 / 544
36"	7704-A-167	10146830-001	200 / 181	1,100 / 499

### BAASH ROSS HINGED CASING SPIDERS, INSERT BUSHINGS AND UC-3 SLIPS API 5TH EDITION

Csg. Size [inches]	UC-3 Slip Part Number	UC-3-Slip Oracle number	Weight [lbs / kg]	30” Spider Part number 7704-A-161 Oracle number 10146820-001		36” Spider Part number 7704-A-167 Oracle number 10146830-001	
				Bushings + Retainers	Weight [lbs / kg]	Bushings + Retainers	Weight [lbs / kg]
16	7704-5036	10384478-001	226 / 102	Bushing 7704-A-165 Retainers 50012-148-8	975 / 442	na	na
18.5/8	7704-5035	10485443-001	325 / 147	Bushing 7704-A-164 Retainers 50012-50-8	900 / 408	Bushing 7704-A-172 Retainers 50012-76-8	1,135 / 514
20	7704-5034	10384477-001	283 / 128	Bushing 7704-A-164 Retainers 50012-50-8	900 / 408	Bushing 7704-A-172 Retainers 50012-76-8	1,135 / 514
22.1/2	7704-5002	10486710-001	359 / 162	Bushing 7704-A-163 Retainers 50012-38-C8	750 / 340	Bushing 7704-A-171 Retainers 900041-441	924 / 419
24	7704-5001	10193659-001	312 / 141	Bushing 7704-A-163 Retainers 50012-38-C8	750 / 340	Bushing 7704-A-171 Retainers 900041 -441	924 / 419
26	7704-5006	10485442-001	325 / 147	Bushing 7704-A-162 Retainers 50012-26-C8	605 / 274	Bushing 7704-A-170 Retainers 900042-186	817 / 370
30	7704-5005	10384474-001	367 / 166	Use 30” Spider	na	Bushing 7704-A-169 Retainers 50012-32-C8	640 / 290
33	7704-5008	11398680-001	410 / 185	na	na	Bushing 7704-A-168 Retainers 50012-20-C8	500 / 226
36	7704-5007	10384475-001	437 / 198	na	na	Use 36” Spider	na



## HCS CASING SPIDERS / CMS-CP CASING SLIPS API LATEST EDITION

For the latest API edition the NOV CMS/CP Casing Slips in combination with the NOV HCS Hinged Casing Spider is recommended, see listing below.



HCS casing spider



CMS casing slips

### HCS CASING SPIDERS

Csg. Size [inches]	Oracle number	Rating API 7K latest edition* [sTon/Tonne]	Weight [lbs / kg]
30"	11342732-001	500 / 454	4,327 / 1,963
36"	11361344-001	500 / 454	4,936 / 2,239

\* Rating determined by spider-bushing and slip combination (weakest part)

### HINGED CASING SPIDERS, INSERT BUSHINGS AND CMS-CP SLIPS API 7K LATEST EDITION

Csg. Size [inches]	CMS-CP-Slip				30" Spider Oracle number 11342732-001		36" Spider Oracle number 11361344-001	
	Type	Rating [sTon/Tonne]	Oracle number	Weight [lbs / kg]	Bushing Oracle number	Weight [lbs / kg]	Bushing Oracle number	Weight [lbs / kg]
16	CMS-500	500 / 454	16647418-007	315/143	17454638-001	2,393/1,085	na	na
18	CMS-500	500 / 454	16647418-008	375/170	17454830-001	798/362	17456849-001	798/362
18.5/8	CMS-500	500 / 454	16647418-009	390/177	17454830-001	798/362	17456849-001	798/362
20	CMS-500	500 / 454	16647418-010	390/177	17454830-001	798/362	17456849-001	798/362
22	CMS-500	500 / 454	16647418-019	450/204	17455250-001	672/305	17456723-001	721/327
23	CMS-500	500 / 454	16647418-020	465/211	17455250-001	672/305	17456723-001	721/327
24	CMS-500	500 / 454	16647418-011	450/204	17455250-001	672/305	17456723-001	721/327
	CP-400	400 / 363	16647421-001	465/211	17455250-001	672/305	17456723-001	721/327
24.1/2	CMS-500	500 / 454	16647418-021	465/211	17455250-001	672/305	17456723-001	721/327
26	CMS-500	500 / 454	16647418-012	495/225	17455255-001	672/305	17456720-001	1,011/459
	CP-450	450 / 408	16647421-002	195/88	17455255-001	672/305	17456720-001	1,011/459
28	CMS-500	500 / 454	16647418-022	540/245	Use 30" Spider	4,327 / 1,963	17456155-001	1,096/497
	CP-500	500 / 454	16647421-006	240/109	Use 30" Spider	4,327 / 1,963	17456155-001	1,096/497
30	CMS-500	500 / 454	16647418-013	555/249	Use 30" Spider	4,327 / 1,963	17456155-001	1,096/497
	CP-500	500 / 454	16647421-003	240/109	Use 30" Spider	4,327 / 1,963	17456155-001	1,096/497
33	CP-500	500 / 454	16647421-004	255/116	na	na	17456153-001	563/255
36	CP-500	500 / 454	16647421-005	285/129	na	na	Use 36" Spider	4,936 / 2,239

## MPCH MASTER BUSHING

The 37.1/2" MPCH pin drive hinged master bushing is specially designed for floating and semi-submersible drilling operations.

With insert bowl No. 3 and optional insert bowls No. 1 and No. 2, the MPCH master bushing will handle 2.3/8" to 13.3/8" OD drill collars, tubing and casing.



MPCH with # 3 bowl and SDXL slips



MPCH with bit breaker adapter plate

Part	5th edition		Latest edition		Weight [lbs/kg]
	Part Number	Oracle number	Oracle number	Load rating [sTon / Tonne]	
Complete**	*	-			4,200 / 1,905
Body only	*	-			3,200 / 1,452
Insert Bowl No. 1: 13.3/8" to 11.3/4"	6610	10146309-001	10146309-501	750 / 680	336 / 152
Insert Bowl No. 2: 10.3/4" to 9.5/8"	6609	10146308-001	10146308-501	750 / 680	470 / 213
Insert Bowl No. 3: API 8.5/8" and smaller	6608	10146303-001	10146303-501	750 / 680	625 / 283
2 way lifting sling for insert bowls	1021	10014790-001	10014790-001	1.8 / 1.63	46 / 22
Bit breaker plate	1816	10449343-001	10449343-001	n/a	234 / 106

\* See selection chart

### MPCH MASTER BUSHING SELECTION CHART

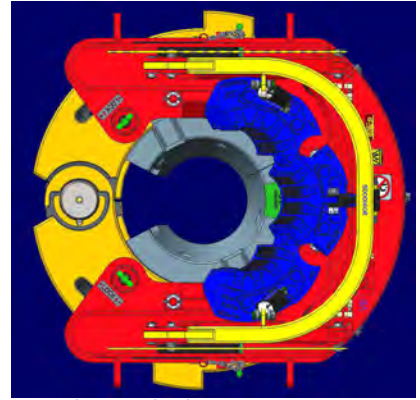
Make	Type	COMPLETE**			BODY ONLY			Load rating [sTon / Tonne]
		API 5th edition		API Latest edition	API 5th edition		API Latest edition	
		Part number	Oracle number	Oracle number	Part number	Oracle number	Oracle number	
Emsco	T-3750 (S/N 1-48)	6600-2A	10345917-001	10345917-501	6601-2A	10739036-001	10739036-501	750 / 680
	T-3750/ T-4950 (49/UP)	6600-2	10383190-001	10383190-501	6601-2	10084406-002	10084406-502	750 / 680
Ideco	27.1/2	-	-	-	-	-	-	-
	37.1/2	6600-4	10392055-001	10392055-501	6601-4	10084406-005	10084406-505	750 / 680
National	MS-27 .1/2, A and B-27.1/2	-	-	-	-	-	-	-
	C-365	6600-5	10734331-001	10734331-501	-	-	-	-
	C-375	6600-1	10039272-001	10039272-501	6601-1	10084406-001	10084406-501	750 / 680
Oilwell	27 .1/2, 27.1/2 A	-	-	-	-	-	-	-
	A-27.1/2	-	-	-	-	-	-	-
	A-37.1/2	6600-3	10383191-001	10383191-501	6601-3	10084406-003	10084406-503	750 / 680
Wirth*	27.1/2	-	-	-	-	-	-	-
	37.1/2	6600-6	10152769-001	10152769-501	6601-3	10084406-003	10084406-503	750 / 680

\*\* Complete unit comes with No. 3 insert bowl, bit breaker adapter plate and 4 way lifting sling part number 6699 / Oracle number 10788731-001.

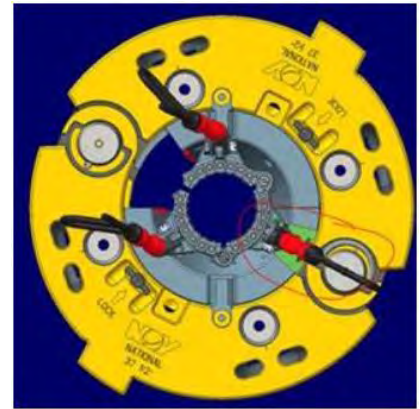
### # 3 SLOTTED BUSHING F- 37 1/2" MASTER BUSHING

For larger diameter umbilical with an API-7K latest edition rating a bowl no #3 with only one slot to the maximum opening possible is developed;

- API 7K bowl rated for 750 sTon/680 Tonne.
- Can be used with standard slips
- Can be used with RHS slips resulting in larger opening (SDHL/SDXL have a flange on the RH and LH top closing the opening).
- In compliance with API-7K sixth edition.
- Safe slip setting area indication.
- Umbilical opening positioned such it can be used with automated slip lifter.
- Can be used in combination with SLT.



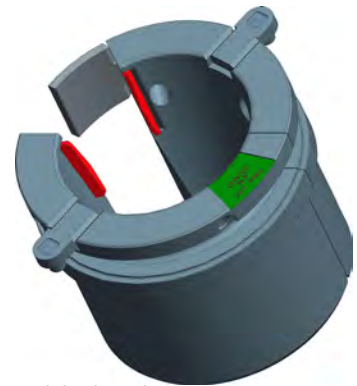
SLT with masterbushing



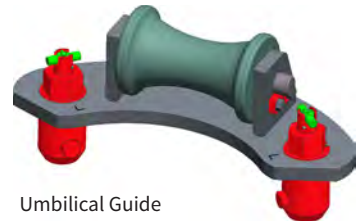
RHS slips in bowl and masterbushing

#### MAIN PART NUMBERS

Part	Oracle number
Umbilical bowl	16982780-501
Umbilical guide	17480710-001



Umbilical Bowl



Umbilical Guide



Wear guides

#### SPLIT BOWL WEAR GUIDE

To avoid wear on equipment having a bore with a bowl #3 configuration when drilling, it is recommended to install a wear guide. Fits MPCH, MSPC, MSP & MBH1250.

DP size [inches]	Wear guide part number	Wear guide Oracle number
5	85974-8	10062645-001
6.5/8	85974-9	10062645-002

### MSPC MASTER BUSHING

The 27.1/2" MSPC solid body pin drive master bushing designed for all drilling operations. The pin drive allows the kelly bushing to ride on top of the rotary table and permits extended bowls to be used for better slip back up. With the extended API insert bowl No. 3, the MSPC master bushing will handle 2.3/8" thru 8.5/8" OD drill pipe, drill collars, tubing and casing. Insert bowl No. 2 can handle tubulars from 9.5/8" to 10.3/4" OD; while insert bowl No. 1 is good for 11.3/4" to 13.3/8" OD.



MSPC

Part	5th edition		Latest edition		Weight [lbs/kg]
	Part Number	Oracle number	Oracle number	Load rating [sTon / Tonne]	
27.1/2" body only	*	*	*	*	1,110 / 503
Insert Bowl No.1: 13.3/8" and 11.3/4"	1903	10179161-001	10179161-501	750 / 680	326 / 148
Insert Bowl No.2: 10.3/4" and 9.5/8"	1904	10195654-001	10195654-501	750 / 680	460 / 209
Insert Bowl No.3: API 8.5/8" and smaller	1810	10540841-001	10540841-501	750 / 680	620 / 281
2 way lifting sling for insert bowls	1021	10014790-001	10014790-001	1.8 / 1.63	46 / 22
Bit breaker plate	1816	10449343-001	10449343-001	n/a	234 / 106

\* See selection chart

### MSPC MASTER BUSHING SELECTION CHART

Make	Type	COMPLETE**			BODY ONLY			Load rating [sTon / Tonne]
		Complete 5th edition		Latest edition	Body only 5th edition		Latest edition	
		Part number	Oracle number	Oracle number	Part number	Oracle number	Oracle number	
Emsco	T-2750	1804-1	10449310-001	10449310-501	1808-1	10449326-001	10449326-501	750 / 680
	G-27.1/2	1804-5	10021018-001	10021018-501	1808-5	10449326-002	10449326-502	750 / 680
	H-27.1/2	1804-2	17756557-001	17756557-501	1808-2	10449326-003	10449326-503	750 / 680
	K-27.1/2, KS, P1	1804-3	17756630-001	17756630-501	1808-3	10449326-004	10449326-504	750 / 680
	T-3750 (S/N 1-48)	-	-	-	-	-	-	-
	T-3750/T-4950 (49/UP)	-	-	-	-	-	-	-
Ideco	27.1/2	1804-7	10718866-001	10718866-501	1808-7	10718827-001	10718827-501	750 / 680
	37.1/2	-	-	-	-	-	-	-
National	MS-27 .1/2, A and B-27.1/2	1804-5	10021018-001	10021018-501	1808-5	10449326-002	10449326-502	750 / 680
	C-365	-	-	-	-	-	-	-
	C-375	-	-	-	-	-	-	-
Oilwell	27 .1/2, 27.1/2 A	1804-9	11358727-001	11358727-501	1808-9	11358714-001	11358714-501	750 / 680
	A-27.1/2	1804-1	10449310-001	10449310-501	1808-1	10449326-001	10449326-501	750 / 680
	A-37.1/2	-	-	-	-	-	-	-
Wirth*	27.1/2	1804-1	10449310-001	10449310-501	1808-1	10449326-001	10449326-501	750 / 680
	37.1/2	-	-	-	-	-	-	-

\*\*Complete unit comes with No. 3 insert bowl, bit breaker adapter plate and 2 way lifting sling: Part number 1021 / Oracle number 10014790-001.

## MSP MASTER BUSHING

With the larger rotary opening the standard No. 3 extended API taper is used. This allows the use of extra-long SDXL slips required for heavier loads.



Part	5th edition		Latest edition		Weight [lbs/kg]
	Part Number	Oracle number	Oracle number	Load rating [sTon / Tonne]	
27.1/2" body only	*	*	*	*	1,600 / 726
4 way lifting sling for master bushing	6699	10788731-001	10788731-001	6 / 5.4	
Bit breaker plate	1816	10449343-001	10449343-001	n/a	234 / 106

\* See selection chartMSP

## MASTER BUSHING SELECTION CHART

Make	Type	5th edition		Latest edition	Load rating [sTon / Tonne]
		Part number	Oracle number	Oracle number	
Emsco	T-2750	5429-1	10651902-002	10651902-502	750 / 680
	G-27.1/2	5429-5	10651902-001	10651902-501	750 / 680
	H-27.1/2	-	-	-	-
	K-27.1/2, KS, P1	-	-	-	-
	T-3750 (S/N 1-48)	-	-	-	-
	T-3750/T-4950 (49/UP)	-	-	-	-
Ideco	27.1/2	5429-7	10651902-005	10651902-505	750 / 680
	37.1/2	-	-	-	-
National	MS-27 .1/2, A and B-27.1/2	5429-5	10651902-001	10651902-501	750 / 680
	C-365	-	-	-	-
	C-375	-	-	-	-
Oilwell	27 .1/2, 27.1/2 A	-	-	-	-
	A-27.1/2	5429-1	10651902-002	10651902-502	750 / 680
	A-37.1/2	-	-	-	-
Wirth*	27.1/2	5429-1	10651902-002	10651902-502	750 / 680
	37.1/2	-	-	-	-

\*WIRTH is a trademark of Wirth Maschinen- und Bohrgeräte-Fabrik GmbH. The Wirth trademark and trade name referenced above are used solely for reference purposes and NOV is not affiliated with Wirth and Wirth does not endorse any of NOV's products.

### MBH1250 HINGED MASTER BUSHING

For the safe handling of heavy weight casing strings, including bit, in combination with the corresponding landing strings, a new series of rotary equipment, having a dedicated rating and safety factor, has been developed.

- Casing sizes up to 24", for string weights up to 1000 sTon.
- 5.1/2" to 6.5/8" landing strings with dedicated drill pipe, string weights up to 1,250 sTon.
- Dual upset drill pipe, string weight up to 1,250 sTon.
- All standard pipe types and sizes with special #1, #2 and #3 master bushing bowls, string weights up to 750 sTon.
- Standard bit breaker plates. Maximum bit diameter 29.1/2".



MBH1250 with drilling bowl and slips

### CASING BUSHINGS

Height and internal diameters/tapers of casing bushing are 100% identical to standard NOV Varco BJ 24" Casing Bushing part number 16542 / Oracle 10153093-001. Interfaces with standard 24" CMS-XL casing slips.



MBH1250 with casing bushing

### DRILLING BOWLS

Interfaces with standard API handslips featuring a 1: 6 taper.

When removed from the MBH1250 bushing, a 29.1/2" diameter bit can pass through MBH1250, without the need to remove the MBH1250 from the rotary table, due to throat opening of 30".

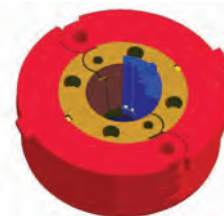
These bowls feature the standard MPCH bit breaker holes. Standard bit breaker plates, kelly bushings, etc, fit into these holes. Interfaces with same torque backup blocks in the MBH1250 as above mentioned casing bowls for torque backup an assembly.



MBH1250 with drilling bowl

### LSB1250 LANDING STRING BUSHING

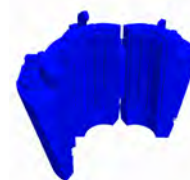
To handle 1,250 sTon capacity landing strings, the MBH1250 can be dressed with the LSB1250 landing string bowl. Combined with the special design landing string slips, the landing string can be run up to loads of 1,250 sTon. A 1,250 sTon rated BX style elevator will be connected to the upper tool joint, while the slip proof section is suspended in the LSB1250 with the special slips that have a 14 degree contour at the backside of the slips, rather than inserts.



MBH1250 with LSB1250 landing string bushing and LSS1250 landing string slip

### SLT SLIP LIFTER TOOL

The Slip Lifter Tool (SLT) is a tool especially designed to be used in combination with the heavy duty MBH1250 hinged master bushing, the LSB1250 Landing String Bushing and LSS1250 Landing String Slips. The SLT operates in combination with the dedicated hook up kit. The SLT also can be used for SDHL/SDXL/RHS-slips using the converting kit. It is CE-marked. For details, see chapter Power Slips



LSS1250 landing string slip

### TECHNICAL SPECIFICATIONS

Description	MBH1250
Size	Fits into 49.1/2" National rotary table (= 49.1/2" RST) as standard.
Height	20" (equal to a standard 37.1/2" MPCH Master Bushing)
Internal throat opening	30"
Maximum backup torque	500,000 ft.lbs / 677,910 Nm
Load Rating axial	1,250 sTon / 1,134 Tonne
Load Rating axial w/ spreading load 1:6 taper	1,000 sTon / 907 Tonne
Lifting slings	Can be handled (lifted) with standard lifting slings with certified latching hooks or standard certified shackles.



SLT

## MAIN PART NUMBERS

### MBH1250 MASTER BUSHING HINGED

Name	5th edition		Latest edition	
	Part number	Oracle number	Oracle number	Load rating [sTon / Tonne]
MBH1250 Emsco	50005900-2	10740581-001	10740581-501	1250/1134
MBH1250 National	50005900-3	10711363-001	10711363-501	1250/1134
MBH1250 Oilwell	50005900-4	10740596-001	10740596-501	1250/1134
MBH1250 Wirth*	50005900-6	10143061-001	10143061-501	1250/1134
MBH1250 Ideco	50005900-7	10143063-001	10143063-501	1250/1134

### MBH1250 MASTER BUSHING HINGED W/ BOWL #3\*\*, + BIT BREAKER PLATE + LIFTING SLINGS

Name	5th edition		Latest edition	
	Part number	Oracle number	Oracle number	Load rating [sTon / Tonne]
MBH1250 Emsco	50005900-200	Contact NOV	Contact NOV	1250/1134
MBH1250 National	50005900-300	10711364-001	10711364-501	1250/1134
MBH1250 Oilwell	50005900-400	Contact NOV	Contact NOV	1250/1134
MBH1250 Wirth*	50005900-600	10143061-002	10143061-502	1250/1134
MBH1250 Ideco	50005900-700	10143064-001	10143064-501	1250/1134

\*\* only to be used with standard hand Slips (SDML, SDS, SDXL, SDHL, CMS, DCS & RHS)

## CASING BUSHINGS

Description	5th edition		Latest edition	
	Part number	Oracle number	Oracle number	Load rating [sTon / Tonne]
Casing bushing for 24"	50005905	10705575-001	10705575-501	1000/980
Casing bushing for 22"	50005906	10705576-001	10705576-501	1000/980
Casing bushing for 20" & 18.5/8"	50005907	10705574-001	10705574-501	1000/980
Casing bushing for 16"	50005908	10705579-001	10705579-501	1000/980

## DRILLING BOWLS

Description	5th edition		Latest edition	
	Part number	Oracle number	Oracle number	Load rating [sTon / Tonne]
MBH bowl #1 - 11.3/4" - 13.3/8"	50005910-1	10699407-001	10699407-501	750 / 680
MBH bowl #2 - 9.5/8" - 10.3/4"	50005911-1	10699408-001	10699408-501	750 / 680
MBH bowl #3 - 2.3/8" - 8.5/8"	50005912-1	10699409-001	10699409-501	750 / 680

## LSB1250 - LANDING STRING BUSHING

Description	5th edition		Latest edition	
	Part number	Oracle number	Oracle number	Load rating [sTon / Tonne]
Landing String Bushing 1,250 sTon load rating	50005920-1	10699415-001	10699415-501	1250/1134

## LSS1250 LANDING STRING SLIPS

Type	Size [inches]	5th edition		Latest edition		Insert	Qty	Weight [lbs/ kg]
		Part number	Oracle number	Oracle number	Load rating [sTon / Tonne]			
LSS1000***	5.7/8	50005929-1	10734787-001	10734787-501	1000/907	50005937	60	968 / 439
LSS1250	6.5/8	50005935-1	10704809-001	10704809-501	1250/1134	50005937	60	996 / 451
LSS1250	6.906	50005939-1	10697566-001	10697566-501	1250/1134	50005937	60	968 / 439

\*\*\* higher rating impossible due to limitations of test mandrel.

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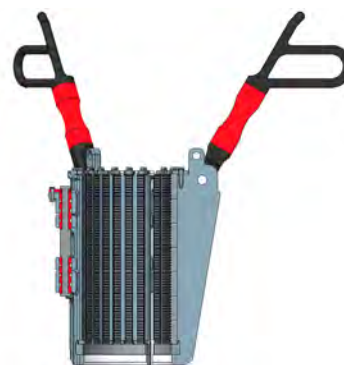
## RHS ROTARY HAND SLIPS

The RHS Rotary Hand Slip is a slip to hang off drill pipe , during running in or pulling out of hole. It is used in an API standard insert bowl dedicated for this particular slip size.

Setting and lifting the RHS in and from the bowl is done by either manually or by the Slip Lifter tool (SLT) or Power Slip Frame (PSF), depending on the slip weight. By means of a connection kit the RHS slips can be attached to the SLT or PSF.

Lifting & handling the slips from and to rigfloor can be done in a safe manner attaching a shackle to one of the dedicated lifting points on the slip. Certified lifting shackle available as optional equipment to this slip, to be removed from lifting eye prior to operation.

By using special designed different size inserts: 1/8” diameter reducing and non-radii dependent, the RHS body can be dressed to handle the required pipe size. The RHS Slip is rated according to API 7k latest edition.



RHS

### TECHNICAL SPECIFICATIONS

Description	
Size	Fits into API standard bowl # 1,2 or 3
Height	20" (equal to a standard 37.1/2" MPCH Master Bushing)
Backup torque	Not allowed
Connection kit for SLT Slip Lifter Tool (CE-qualified)	pn 16713841-001
Connection kit for PSF Power Slip Lifter (not CE-qualified)	pn 16713840-001

Slip size [inches]	Bowl #	Load rating [sTon]	Load rating [Tonne]	Mass slip set [lbs / kg]
7 - 6	#3	750	680	245 / 111.1
6 - 5	#3	675	613	252.3 / 114.5
5 - 4	#3	500	454	243.3 / 110.4
4 - 3	#3	350	317	230 / 104.3
2 - 3	#3	240	218	207.3 / 94



RHS ROTARY PARTS OVERVIEW

Pipe size [inch]	Rating [STon]	Rating [Tonne]	Nominal slip size [inches]	Final assy partnumber	Straight inserts part number	Qty	Top bevelled inserts part number*	Qty	Bottom bevelled inserts part number	Qty
7,000	750	680	7.000	10737785-001	16504796-001	147	-	-	-	-
6,875	750	680	7.000	10737785-002	16504796-002	147	-	-	-	-
6,750	750	680	7.000	10737785-003	16504796-003	105	16504796-103	21	16504796-203	21
6,625	750	680	7.000	10737785-004	16504796-004	105	16504796-104	21	16504796-204	21
6,500	750	680	7.000	10737785-005	16504796-005	105	16504796-105	21	16504796-205	21
6,375	750	680	7.000	10737785-006	16504796-006	105	16504796-106	21	16504796-206	21
6,250	750	680	7.000	10737785-007	16504796-007	105	16504796-107	21	16504796-207	21
6,125	750	680	7.000	10737785-008	16504796-008	105	16504796-108	21	16504796-208	21
6,000	750	680	7.000	10737785-009	16504796-009	105	16504796-109	21	16504796-209	21
6,000	675	613	6.000	10737789-001	16504796-001	126	-	-	-	-
5,875	675	613	6.000	10737789-002	16504796-002	126	-	-	-	-
5,750	675	613	6.000	10737789-003	16504796-003	90	16504796-103	18	16504796-203	18
5,625	675	613	6.000	10737789-004	16504796-004	90	16504796-104	18	16504796-204	18
5,500	675	613	6.000	10737789-005	16504796-005	90	16504796-105	18	16504796-205	18
5,375	675	613	6.000	10737789-006	16504796-006	90	16504796-106	18	16504796-206	18
5,250	675	613	6.000	10737789-007	16504796-007	90	16504796-107	18	16504796-207	18
5,125	675	613	6.000	10737789-008	16504796-008	90	16504796-108	18	16504796-208	18
5,000	675	613	6.000	10737789-009	16504796-009	90	16504796-109	18	16504796-209	18
5,000	500	454	5.000	10737793-001	16504796-001	105	-	-	-	-
4,875	500	454	5.000	10737793-002	16504796-002	105	-	-	-	-
4,750	500	454	5.000	10737793-003	16504796-003	75	16504796-103	15	16504796-203	15
4,625	500	454	5.000	10737793-004	16504796-004	75	16504796-104	15	16504796-204	15
4,500	500	454	5.000	10737793-005	16504796-005	75	16504796-105	15	16504796-205	15
4,375	500	454	5.000	10737793-006	16504796-006	75	16504796-106	15	16504796-206	15
4,250	500	454	5.000	10737793-007	16504796-007	75	16504796-107	15	16504796-207	15
4,125	500	454	5.000	10737793-008	16504796-008	75	16504796-108	15	16504796-208	15
4,000	500	454	5.000	10737793-009	16504796-009	75	16504796-109	15	16504796-209	15
4,000	350	317	4.000	10737794-001	16504796-001	84	-	-	-	-
3,875	350	317	4.000	10737794-002	16504796-002	84	-	-	-	-
3,750	350	317	4.000	10737794-003	16504796-003	60	16504796-103	12	16504796-203	12
3,625	350	317	4.000	10737794-004	16504796-004	60	16504796-104	12	16504796-204	12
3,500	350	317	4.000	10737794-005	16504796-005	60	16504796-105	12	16504796-205	12
3,375	350	317	4.000	10737794-006	16504796-006	60	16504796-106	12	16504796-206	12
3,250	350	317	4.000	10737794-007	16504796-007	60	16504796-107	12	16504796-207	12
3,125	350	317	4.000	10737794-008	16504796-008	60	16504796-108	12	16504796-208	12
3,000	350	317	4.000	10737794-009	16504796-009	60	16504796-109	12	16504796-209	12
3,000	240	218	3.000	16647550-001	16504796-001	63	-	-	-	-
2,875	240	218	3.000	16647550-002	16504796-002	63	-	-	-	-
2,750	240	218	3.000	16647550-003	16504796-003	45	16504796-103	9	16504796-203	9
2,625	240	218	3.000	16647550-004	16504796-004	45	16504796-104	9	16504796-204	9
2,500	240	218	3.000	16647550-005	16504796-005	45	16504796-105	9	16504796-205	9
2,375	240	218	3.000	16647550-006	16504796-006	45	16504796-106	9	16504796-206	9
2,250	240	218	3.000	16647550-007	16504796-007	45	16504796-107	9	16504796-207	9
2,125	240	218	3.000	16647550-008	16504796-008	45	16504796-108	9	16504796-208	9
2,000	240	218	3.000	16647550-009	16504796-009	45	16504796-109	9	16504796-209	9

\* NOTE: The RHS insert teeth shape is of the BJ type. When installing ensure the teeth are pointing upward in the opposite direction of the string weight. Varco inserts have a teeth shape which is symmetrical. When installing only the bevelled type shall be installed with the bevel directing outward.

## SDS, SDML, SDXL & SDHL ROTARY SLIPS

SDS, SDML, SDXL and SDHL rotary slips are for use in API standard insert bowls. Featuring better contact and distribution of load on drill pipe through a superior wraparound configuration and unique insert design, these slips prevent bottle necking and gouging damage. The buttress design of the body segments provides great strength while minimizing weight for ease of handling. Flex handles are standard on all NOV Varco BJ rotary hand slips.

**⚠ WARNING: SDXL type hand slips are not to be used on floating drilling vessels / installations. Use SDHL type hand slips instead. Do not use for back up torque.**

### LOOSE FLEX HANDLES

Description	Part number	Oracle number
Center flex handle	50006230	10457753-001
Left H.S. flex handle	50006231	10457754-001
Right H.S. flex handle	50006232	10457755-001



Flex handle

### SDS, SDML, SDXL & SDHL SLIPS OVERVIEW W/ FLEX HANDLES

Slip size [inch]	Pipe size [inch]	SDS		SDML		SDXL		SDHL	
		Part number	Oracle number	Part number	Oracle number	Part number	Oracle number	Part number	Oracle number
3.1/2	2.3/8	3901-FH	10739250-001	15524-FH	10450539-001	-	-	-	-
	2.7/8	3903-FH	10739246-001	15523-FH	10392653-001	-	-	-	-
	3.1/2	3905-FH	10739248-001	15522-FH	10019700-003	-	-	-	-
4.1/2	3.1/2	3907-FH	10739253-001	15563-FH	10450572-001	V15515-FH	10472170-001	-	-
	4	3909-FH	10739249-001	15564-FH	10392654-001	15514-FH	10450525-001	-	-
	4.1/2	3911-FH	10454615-001	15565-FH	10450576-003	V15513-FH	10472168-001	-	-
5	4	-	-	15567-FH	10698504-001	15518-FH	10450529-001	-	-
	4.1/2	-	-	15568-FH	10392655-001	V15517-FH	10389863-001	-	-
	5	-	-	15569-FH	10450587-003	V15516-FH	10111691-001	-	-
5.1/2	4.1/2	-	-	15571-FH	10450595-001	V15521-FH	10739258-001	50006021-450-FH	10457734-001
	5	-	-	15572-FH	10450597-001	15520-FH	10450530-002	50006021-500-FH	10457736-001
	5.1/2	-	-	15573-FH	10787766-001	V15519-FH	10472175-001	50006021-550-FH	10457738-001
6.7/8	5.5/8	-	-	-	-	-	-	50006040-563-FH	10111494-001
	5.3/4	-	-	-	-	-	-	50006040-575-FH	10676969-003
	5.7/8	-	-	-	-	-	-	50006040-588-FH	10457748-001
	6	-	-	-	-	-	-	50006040-600-FH	10676969-005
	6.3/8	-	-	-	-	-	-	50006040-638-FH	10676969-007
	6.5/8	-	-	-	-	-	-	50006040-663-FH	10457750-001
	6.7/8	-	-	-	-	-	-	50006040-688-FH	Contact NOV
7	6.5/8	-	-	-	-	86720-FH	10111494-001	-	-
	7	-	-	-	-	86719-FH	10464383-002	-	-



SDXL slip

SDS, SDML, SDXL & SDHL SLIPS OVERVIEW W/O FLEX HANDLES

Slip size [inch]	Pipe size [inch]	SDS		SDML		SDXL		SDHL	
		Part number	Oracle number	Part number	Oracle number	Part number	Oracle number	Part number	Oracle number
3.1/2	2.3/8	3901	10381413-001	15524	10450538-001	-	-	-	-
	2.7/8	3903	10454608-001	15523	10019705-001	-	-	-	-
	3.1/2	3905	10454609-001	15522	10019700-001	-	-	-	-
4.1/2	3.1/2	3907	10676957-001	15563	10450571-001	V15515	10075269-001	-	-
	4	3909	10454613-001	15564	10450573-001	15514	10450524-001	-	-
	4.1/2	3911	10454614-001	15565	10450576-001	V15513	10472167-001	-	-
5	4	-	-	15567	10450582-001	15518	10450528-001	-	-
	4.1/2	-	-	15568	10450584-001	15517	10450527-001	-	-
	5	-	-	15569	10450587-001	V15516	10114376-001	-	-
5.1/2**	4.1/2	-	-	15571	10450587-001	15521	10450532-001	50006021-450	10457733-001
	5	-	-	15572	10111228-001	15520	10450530-001	50006021-500	10034467-001
	5.1/2	-	-	15573	10450598-001	V15519	10075272-001	50006021-550	10034468-001
6.7/8**	5.5/8	-	-	-	-	-	-	50006040-563	10457746-001
	5.3/4	-	-	-	-	-	-	50006040-575	10676969-002
	5.7/8	-	-	-	-	-	-	50006040-588	10034470-001
	6	-	-	-	-	-	-	50006040-600	10676969-004
	6.3/8	-	-	-	-	-	-	50006040-638	10676969-006
	6.5/8	-	-	-	-	-	-	50006040-663	10034471-001
7	6.7/8	-	-	-	-	-	-	50006040-688	10676969-001
	6.5/8	-	-	-	-	86720	10063204-001	-	-
	7	-	-	-	-	86719	10464383-001	-	-

\*\* Load rings for SDHL

Slip size [inches]	Load ring part number	Load ring Oracle number	Cotter pin part number	Cotter pin Oracle number
5.1/2	50006033	10457742-001	51403-12-S	10490024-054
6.7/8	50006038	10457744-001	51403-12-S	10490024-054

## CMS & DCS SLIPS

### CMS EXTRA LONG MULTI-SEGMENT CASING SLIPS (PREVIOUSLY CMS-XL)

Today's deeper drilling calls for long and heavy casing strings.

NOV has slips to handle any casing job.

Varco CMS slips are manufactured from castings, reinforced to take severe service. The self-centering full wraparound grip prevents damage to casing. With certain simple adjustments, the CMS can accommodate casing from 6.5/8" to 30" OD. All NOV slips have an API taper of 4"/ft on the diameter.

### DCS DRILL COLLAR SLIPS

Each slip segments are castings with an extra long back to provide maximum support to the circular button gripping elements. Full wraparound design and circular buttons assure positive holding and slip setting. Drill collar slips are flat on top to accommodate the MP clamp. All NOV slips have an API taper of 4"/ft on the diameter.



CMS-XL slip

### CMS CASINGS SLIPS AND CPS CONDUCTOR PIPE SLIPS

Casing OD [inches]	CMS-XL 5th edition				CMS Latest edition			Load rating [sTon/ Tonne]
	Without Flex handles		With Flex handles		Standard with Flex handles			
	Part number	Oracle number	Part number	Oracle number	Oracle number	Used in		
6.5/8	5315	10457064-001	5315-FH	10457064-002	16647412-001	Bowl #3	375/340	
7	5301	10034977-001	5301-FH	10691402-001	16647412-002	Bowl #3	375/340	
7.5/8	5303	10457045-001	5303-FH	10457045-002	16647412-003	Bowl #3	375/340	
8.5/8	5305	10457047-001	5305-FH	10457047-002	16647412-004	Bowl #3	400/363	
8.5/8	na	na	na	na	16647418-015	Bowl #2	475/431	
9	na	na	na	na	16647418-016	Bowl #2	475/431	
9.1/2	na	na	na	na	16647418-017	Bowl #2	475/431	
9.5/8	5307	10034979-001	5307-FH	10691404-001	16647418-001	Bowl #2	475/431	
9.7/8 & 10	na	na	na	na	16647418-018	Bowl #2	475/431	
10.3/4	V5309	10076001-001	V5309-FH	10076001-002	16647418-002	Bowl #2	500/454	
11.1/4	na	na	na	na	16647418-003	Bowl #1	500/454	
11.3/4	5311	10457052-001	5311-FH	10457052-004	16647418-004	Bowl #1	500/454	
11.7/8 & 12	na	na	na	na	16647418-004	Bowl #1	500/454	
12.3/4	na	na	na	na	16647418-014	Bowl #1	500/454	
13.3/8	5313	10034989-001	5313-FH	10692204-001	16647418-005	Bowl #1	500/454	
13.1/2	na	na	na	na	16647418-005	Bowl #1	500/454	
13.5/8 & 14	na	na	na	na	16647418-006	Bowl/bushing 20X16	500/454	
16	5325	10457099-001	5325-FH	10457099-002	16647418-007	Bowl/Bushing 20X16 SB 30x16"	500/454	
18	5335-1	10457185-001	5335-1-FH	10457185-002	16647418-008	CUL 18.5/8&20 S.B. 30/36x20"	500/454	

## CMS CASINGS SLIPS AND CPS CONDUCTOR PIPE SLIPS

Casing OD [inches]	CMS-XL 5th edition				CMS Latest edition		
	Without Flex handles		With Flex handles		With Flex handles		
	Part number	Oracle number	Part number	Oracle number	Oracle number	Used in	Load rating [sTon/Tonne]
18.5/8	na	na	na	na	16647418-009	CUL + Bushing 18.5/8&20 S.B. 30/36x20"	500/454
20	na	na	na	na	16647418-010	CUL + Bushing 18.5/8&20 S.B. 30/36x20"	500/454
22	na	na	na	na	16647418-019	Bushing 22-23" Latest S.B. 30/36x24"	500/454
23	na	na	na	na	16647418-020	Bushing 22-23" Latest S.B. 30/36x24"	500/454
24	5331	10457172-001	5331-FH	10457172-002	16647418-011	Bushing 24" S.B. 30/36x24"	500/454
24.1/2	na	na	na	na	16647418-021	Bushing 24" S.B. 30/36x24"	500/454
26	5346	10457210-001	5346-FH	10457210-002	16647418-012	CB26" S.B.30/36x26"	500/454
28	na	na	na	na	16647418-022	CB30" S.B. 36"x30" H.C.S. 30"	500/454
30	5342	10457201-001	5342-FH	10457201-002	16647418-013	CB30" S.B.36x30" H.C.S.30"	500/454
<b>CPS-CONDUCTOR SLIPS</b>							
24	5338	10357715-001	5338-FH	10357715-002	16647421-001	Bushing 24" S.B. 30/36x24"	400/363
26	5344	10665030-001	5344-FH	10665030-002	16647421-002	CB 26" S.B. 30/36x26"	450/408
28	na	na	na	na	16647421-006	CB30" S.B. 36"x30" H.C.S. 30"	500/454
30	5340	10457186-001	5340-FH	10457186-002	16647421-003	CB30" S.B.36x30" H.C.S.30"	500/454
33	na	na	na	na	16647421-004	S.B.36x33"	500/454
36	na	na	na	na	16647421-005	H.C.S.36"	500/454

CB=CB type Casing Bushing

S.B.=Split Bushing for H.C.S.

H.C.S.=Hinged Casing Spider

Bushing=All types casing bushings

DCS DRILL COLLARS SLIPS

Slip Set	Drill Collar OD [inches]	5th edition				Latest edition		
		Without Flex handles		With Flex handles		With Flex handles		
		Part number	Oracle number	Part number	Oracle number	Oracle number	Used in	Load rating [sTon/Tonne]
DCS-S	3 - 4	2572	10027879-001	2572-FH	10027879-002	16646561-001	Bowl #3	150/136
	4 - 4.7/8	2573	10115243-001	2573-FH	10355957-001	16646561-002	Bowl #3	150/136
DCS-R	4.1/2 - 6	2552	10027869-001	2552-FH	10375691-001	16645714-001	Bowl #3	150/136
	5.1/2 - 7	2550	10027852-001	2550-FH	10375686-001	16645714-002	Bowl #3	150/136
DCS-L	5.1/2 - 7	2501	10027773-001	2501-FH	10375520-001	16644604-001	Bowl #3	150/136
	6.3/4 - 8.1/4	2503	10027786-001	2503-FH	10375534-001	16644604-002	Bowl #3	150/136
	8 - 9.1/2	2507	10027790-001	2507-FH	10375539-001	16644604-003	Bowl #3	150/136
	8.1/2 - 10	2530	10027803-001	2530-FH	10027803-002	16644604-004	Bowl #2	150/136
	9.1/4 - 11.1/4	2508	10027794-001	2508-FH	10027794-002	16645325-001	Bowl #2	150/136
	11 - 12.3/4	2534	10375622-001	2534-FH	10375622-002	16645325-002	Bowl #1	150/136
	12 - 14	V2536	10152589-001	V2536-FH	10152589-002	16645325-003	Bowl #1	150/136

## CIRCULAR BUTTONS

### CIRCULAR BUTTONS FOR CMS-XL & CPS SLIPS

Slip Set	Casing OD [inches]	5th edition					Latest edition			
		Part number	Oracle number	Weight lbs	kg	Qty	Part number	Oracle number	Qty	
CMS-XL	6.5/8	2628-144	11407568-001	45	16	144	2513	10375549-001	132	
	7	2619-144	10138770-001	36	16	144	2626	11331858-001	132	
	7.5/8	2630-144	10138796-001	18	11	144	2619	10377709-001	132	
	8.5/8	2630-156	16579254-001	19.5	12	156	2630	10113309-001	143	
	8.5/8	na	na	na	na	na	13868	10450269-001	154	
	9	na	na	na	na	na	2625	10377713-001	154	
	9.1/2	na	na	na	na	na	2626	11331858-001	154	
	9.5/8	2627-180*	10138797-001	21	13	168	2627	10377717-001	154	
	9.7/8&10	na	na	na	na	na	2630	10113309-001	154	
	10.3/4	2630-180	10138797-003	22.5	14	180	2630	10113309-001	165	
	11.1/4	na	na	na	na	na	13868	10450269-001	187	
	11.3/4	2627-204	11407523-001	51	23	204	2626	11331858-001	187	
	12.3/4	na	na	na	na	na	2630	10113309-001	187	
	13.3/8	2630-216	10138797-002	27	16	216	2631	10377723-001	198	
	13.1/2	na	na	na	na	na	2631	10377723-001	198	
	13.5/8	na	na	na	na	na	13868	10450269-001	220	
	16	2631-252	11406762-001	31.5	19.5	252	2631	10377723-001	231	
	18	13868-300	10457185-002	59	27	300	13868	10450269-001	275	
	18.5/8	2626-300	11406489-001	56	25	300	13868	10450269-001	286	
	20	2631-312	10138802-001	39	18	312	2631	10377723-001	286	
	22	na	na	na	na	na	13868	10450269-001	330	
	23	na	na	na	na	na	2626	11331858-001	341	
	24	2631-360	Contact NOV	45	21	360	13868	10450269-001	330	
	24.1/2	na	na	na	na	na	2631	10377723-001	341	
	26	2631-396	16527729-001	49.5	23	396	2631	10377723-001	363	
	28	na	na	na	na	na	13868	10450269-001	396	
	30	2631-444	10985357-001	55.5	25	444	2631	10377723-001	407	
	CPS	24	2631-156	16579983-001	26	12	156	2631	10377723-001	143
		26	2631-168	16576259-001	28	13	168	2631	10377723-001	154
		28	na	na	na	na	na	13868	10450269-001	176
30		2631-192	10985348-001	32	14.5	192	2631	10377723-001	176	
33		na	na	na	na	na	2631	10377723-001	187	
36		na	na	na	na	na	2631	10377723-001	209	

\*Old: 2630-168

### CIRCULAR BUTTONS FOR DCS SLIPS API 5TH & LATEST EDITION

Slip Set	Casing OD [inches]	5th edition					Latest edition		
		Part number	Oracle number	Weight lbs	kg	Qty	Part number	Oracle number	Qty
DCS-S	3 - 4	2628-49	10377720-001	13	6	49	2628	10972623-001	42
	4 - 4.7/8	2620-49	10377710-002	8	3.5	49	2620	10377710-001	42
DCS-R	4.1/2 - 6	2628-63	10972266-001	16	7	63	2513	10375549-001	54
	5.1/2 - 7	2620-63	10377710-003	11	5	63	2619	10377709-001	54
DCS-L	5.1/2 - 7	2513-88	10375550-001	22	10	88	2513	10375549-001	77
	6.3/4 - 8.1/4	2630-88	10113309-002	15	7	88	2630	10113309-001	77
	8 - 9.1/2	2630-96	10138800-001	16	7	96	2630	10113309-001	84
	8.1/2 - 10	2627-104	10377718-001	26	12	104	2627	10377717-001	91
	9.1/4 - 11.1/4	2630-112	Contact NOV	19	8.5	112	2630	10113309-001	98
	11 - 12.3/4	2625-136	Contact NOV	13	6	136	2625	10377713-001	119
12 - 14	2630-136	Contact NOV	16	7	136	2630	10113309-001	119	

## SDS SHORT ROTARY SLIPS AND SDS INSERTS

### SDS SLIPS W/O FLEX HANDLES

Slip Body Size [inches]	2.3/8	3.1/2	3.1/2	4.1/2	4.1/2	4.1/2
Pipe Size [inches]	2.3/8	2.7/8	3.1/2	3.1/2	4	4.1/2
Part number Slip w/inserts	3901	3903	3905	3907	3909	3911
Oracle number Slip w/insert	10381413-001	10454608-001	10454609-001	10676957-001	10454613-001	10454614-001
Weigth Slip w/insert [[lbs / kg]	134 / 61	128 / 58	124 / 56	162 / 73	155 / 70	146 / 66
Insert Set: part number	2160-24	2161-24	2162-24	2163-36	2164-36	2165-36
Oracle number Insert Set	Contact NOV	Contact NOV	Contact NOV	Contact NOV	Contact NOV	Contact NOV
Insert Set [Qty]	24	24	24	36	36	36

### SDS SLIPS W/ FLEX HANDLES

Slip Body Size [inches]	2.3/8	3.1/2	3.1/2	4.1/2	4.1/2	4.1/2
Pipe Size [inches]	2.3/8	2.7/8	3.1/2	3.1/2	4	4.1/2
Part number Slip w/inserts	3901-FH	3903-FH	3905-FH	3907-FH	3909-FH	3911
Oracle number Slip w/insert	10739250-001	10739246-001	10739248-001	10739253-001	10739249-001	10454615-001
Weigth Slip w/insert [[lbs / kg]	134 / 61	128 / 58	124 / 56	162 / 73	155 / 70	146 / 66
Insert Set: part number	2160-24	2161-24	2162-24	2163-36	2164-36	2165-36
Oracle number Insert Set	Contact NOV	Contact NOV	Contact NOV	Contact NOV	Contact NOV	Contact NOV
Insert Set [Qty]	24	24	24	36	36	36



## SDML MEDIUM ROTARY SLIPS AND SDML INSERTS

### SDML SLIPS W/ FLEX HANDLES

Slip Body Size [inches]	3.1/2	3.1/2	3.1/2	4.1/2	4.1/2	4.1/2
Pipe Sizes [inches]	2.3/8	2.7/8	3.1/2	3.1/2	4	4.1/2
Part number Slip w/inserts	15524-FH	15523-FH	15522-FH	15563-FH	15564-FH	15565-FH
Oracle number Slip w/insert	10450539-001	10392653-001	10019700-003	10450572-001	10392654-001	10450576-003
Weight : Slip w/inserts [lbs / kg]	193 / 87.5	188 / 85	180 / 81.50	207 / 94	199 / 90	188 / 85
Part number Insert set	2160-30	2161-30	2162-30	2163-45	2164-45	2165-45
Oracle number Insert set	10025329-001	10362051-002	10362053-002	Contact NOV	10138530-001	10138532-001
Insert set: Qty	30	30	30	45	45	45
Slip Body Size [inches]	5	5	5	5.1/2	5.1/2	5.1/2
Pipe Sizes [inches]	4	4.1/2	5	4.1/2	5	5.1/2
Part number Slip w/inserts	15567-FH	15568-FH	15569-FH	15571-FH	15572-FH	15573-FH
Oracle number Slip w/insert	10698504-001	10392655-001	10450587-003	10450595-001	10450597-001	10787766-001
Weight : Slip w/inserts [lbs / kg]	204 / 92.5	196 / 89	185 / 84	200 / 91	185 / 84	181 / 82
Part number Insert set	2168-45	2166-45	2167-45	2168-45	2169-45	2170-45
Oracle number Insert set	Contact NOV	10138535-001	10114949-001	Contact NOV	10138544-001	10138548-001
Insert set: Qty	45	45	45	45	45	45

### SDML SLIPS W/O FLEX HANDLES

Slip Body Size [inches]	3.1/2	3.1/2	3.1/2	4.1/2	4.1/2	4.1/2
Pipe Sizes [inches]	2.3/8	2.7/8	3.1/2	3.1/2	4	4.1/2
Part number Slip w/inserts	15524	15523	15522	15563	15564	15565
Oracle number Slip w/insert	10450538-001	10019705-001	10019700-001	10450571-001	10450573-001	10450576-001
Weight : Slip w/inserts [lbs / kg]	193 / 87.5	188 / 85	180 / 81.50	207 / 94	199 / 90	188 / 85
Part number Insert set	2160-30	2161-30	2162-30	2163-45	2164-45	2165-45
Oracle number Insert set	10025329-001	10362051-002	10362053-002	Contact NOV	10138530-001	10138532-001
Insert set: Qty	30	30	30	45	45	45
Slip Body Size [inches]	5	5	5	5.1/2	5.1/2	5.1/2
Pipe Sizes [inches]	4	4.1/2	5	4.1/2	5	5.1/2
Part number Slip w/inserts	15567	15568	15569	15571	15572	15573
Oracle number Slip w/insert	10450582-001	10450584-001	10450587-001	10450594-001	10111228-001	10450598-001
Weight : Slip w/inserts [lbs / kg]	204 / 92.5	196 / 89	185 / 84	200 / 91	185 / 84	181 / 82
Part number Insert set	2168-45	2166-45	2167-45	2168-45	2169-45	2170-45
Oracle number Insert set	Contact NOV	10138535-001	10114949-001	Contact NOV	10138544-001	10138548-001
Insert set: Qty	45	45	45	45	45	45

## SDXL EXTRA LONG ROTARY SLIPS AND INSERTS

### SDXL-EXTRA LONG SLIPS W/ FLEX HANDLES

Slip Body Size [inches]	4.1/2			5			
Pipe Sizes [inches]	3.1/2	4	4.1/2	4	4.1/2	5	5.1/2
Part number Slip w/inserts	V15515-FH	15514-FH	V15513-FH	15518-FH	15517-FH	V15516-FH	15521-FH
Oracle number Slip w/inserts	10472170-001	10450525-001	10472168-001	10450529-001	10389863-001	10111691-001	10739258-001-001
Weight : Slip w/inserts [lbs/kg]	229 / 104	219 / 99	205 / 93	237 / 107.5	227 / 103	213 / 96.5	234 / 106
Part number Insert set	2163-54	2164-54	2165-54	2168-54	2166-54	2167-54	2168-54
Part number Inserts	2163	2164	2165	2168	2166	2167	2168
Oracle number Inserts	10451937-001	10362081-001	10451957-001	10451986-001	10451962-001	10362095-001	10451986-001
Inserts [Qty]	54	54	54	54	54	54	54
Slip Body Size [inches]	5.1/2		7				
Pipe Sizes [inches]	5	5.1/2	5.3/4	5.7/8	6	6.5/8	7
Part number Slip w/inserts	15520-FH	V15519-FH	86719-1-FH	86722-1-FH	86719-2-FH	86720-FH	86719-FH
Oracle number Slip w/inserts	10450530-002	10472175-001	10686622-002	10111495-001	16579325-001	10111494-001	10464383-002
Weight : Slip w/inserts [lbs/kg]	224 / 101.5	210 / 95	242 / 110	252 / 114	220 / 100	242 / 110	232 / 106
Part number Insert set	2169- 54	2170 - 54	-	2656	2632-60	2172- 60	2173-60
Part number Inserts	2169	2170	2521	2656	2632 +2632B	2172	2173
Oracle number Insert set	10138545-001	10138548-002	10375602-001	10377743-001	10377724-001	10452044-002	10177439-002
Inserts [Qty]	54	54	48	60	48+12B	60	60

### SDXL-EXTRA LONG SLIPS W/O FLEX HANDLES

Slip Body Size [inches]	4.1/2			5			
Pipe Sizes [inches]	3.1/2	4	4.1/2	4	4.1/2	5	5.1/2
Part number Slip w/inserts	V15515	15514	V15513	15518	15517	V15516	15521
Oracle number Slip w/inserts	10075269-001	10450524-001	10472167-001	10450528-001	10450527-001	10114376-001	10450532-001
Weight : Slip w/inserts [lbs/kg]	229 / 104	219 / 99	205 / 93	237 / 107.5	227 / 103	213 / 96.5	234 / 106
Part number Insert set	2163-54	2164-54	2165-54	2168-54	2166-54	2167-54	2168-54
Part number Inserts	2163	2164	2165	2168	2166	2167	2168
Oracle number Inserts	10451937-001	10362081-001	10451957-001	10451986-001	10451962-001	10362095-001	10451986-001
Inserts [Qty]	54	54	54	54	54	54	54
Slip Body Size [inches]	5.1/2		7				
Pipe Sizes [inches]	5	5.1/2	5.3/4	5.7/8	6	6.5/8	7
Part number Slip w/inserts	15520	V15519	86719-1	86722-1	-	86720	86719
Oracle number Slip w/inserts	10450530-001	10075272-001	10686622-001	10464386-001	10795344-001	10063204-001	10464383-001
Weight : Slip w/inserts [lbs/kg]	224 / 101.5	210 / 95	242 / 110	252 / 114	220 / 100	242 / 110	232 / 106
Part number Insert set	2169- 54	2170 - 54	-	2656	2632-60	2172- 60	2173-60
Part number Inserts	2169	2170	2521	2656	2632 +2632B	2172	2173
Oracle number Insert set	10138545-001	10138548-002	10375602-001	10377743-001	10377724-001	10452044-002	10177439-002
Inserts [Qty]	54	54	48	60	48+12B	60	60

## SDHL ROTARY SLIPS AND INSERTS

### SDHL ROTARY SLIPS AND INSERTS W/ FLEX HANDLES

Slip Body Size [inches]	5.1/2				
Pipe Sizes [inches]	4.1/2	5	5.1/2	5.5/8	5.3/4
Part number Slip w/inserts	50006021-450-FH	50006021-500-FH	50006021-550-FH	50006040-563-FH	50006040-575-FH
Oracle number Slip w/inserts	10457734-001	10457736-001	10457738-001	Contact NOV	10676969-003
Weight : Slip w/inserts [lbs/kg]	*	250 / 113	235 / 107	260 / 117	250 / 113
Part number Insert set	2168	2169	2170	2521	2656
Oracle number Insert set	10451986-001	10025332-001	10362140-001	10375602-001	10377743-001
Inserts [Qty]	45	45	45	60	60
Slip Body Size [inches]	6.7/8				
Pipe Sizes [inches]	5.7/8	6	6.3/8	6.5/8	6.7/8
Part number Slip w/inserts	50006040-588-FH	50006040-600-FH	50006040-638-FH	50006040-663-FH	50006040-688-FH
Oracle number Slip w/inserts	10457748-001	10676969-005	10676969-007	10457750-001	10676969-009
Weight : Slip w/inserts [lbs/kg]	235 / 107	230 / 104	220 / 100	210 / 95	200 / 91
Part number Insert set	2632	2650	2652	2655	2173
Oracle number Insert set	10377724-001	10377731-001	10138846-001	10377734-001	10452057-001
Inserts [Qty]	60	60	60	60	60

### SDHL ROTARY SLIPS AND INSERTS W/O FLEX HANDLES

Slip Body Size [inches]	5.1/2				
Pipe Sizes [inches]	4.1/2	5	5.1/2	5.5/8	5.3/4
Part number Slip w/inserts	50006021-450	50006021-500	50006021-550	50006040-563	50006040-575
Oracle number Slip w/inserts	10457733-001	10034467-001	10034468-001	10457746-001	10676969-002
Weight : Slip w/inserts [lbs/kg]	*	250 / 113	235 / 107	260 / 117	250 / 113
Part number Insert set	2168	2169	2170	2521	2656
Oracle number Insert set	10451986-001	10025332-001	10362140-001	10375602-001	10377743-001
Inserts [Qty]	45	45	45	60	60
Slip Body Size [inches]	6.7/8				
Pipe Sizes [inches]	5.7/8	6	6.3/8	6.5/8	6.7/8
Part number Slip w/inserts	50006040-588	50006040-600	50006040-638	50006040-663	50006040-688
Oracle number Slip w/inserts	10034470-001	10676969-004	10676969-006	10034471-001	10676969-001
Weight : Slip w/inserts [lbs/kg]	235 / 107	230 / 104	220 / 100	210 / 95	200 / 91
Part number Insert set	2632	2650	2652	2655	2173
Oracle number Insert set	10377724-001	10377731-001	10138846-001	10377734-001	10452057-001
Inserts [Qty]	60	60	60	60	60

## ROLLER KELLY BUSHINGS

### HDP ROLLER KELLY BUSHING

Widely recognized as the standard of the industry. For master bushings with 25.3/4" pin circle 27 HDP of 23" pin circle, 20 HDP. Unit comes with wrench, wiper and wear gauge. Weight 1,500 lbs / 680 kg.

### 27 XHDP ROLLER KELLY BUSHING

For extreme high-torque drilling. Essentially two HDP bushings combined into one unit, this tool reduces wear to kelly and itself through wider force distribution. For master bushings with 25.3/4" pin circle.

Unit comes with wrench, wiper and wear gauge. Weight 2,850 lbs / 1,293 kg.

### HDS ROLLER KELLY BUSHING

For heavy duty square drive applications. Components are interchangeable with HDP. Unit comes with wrench, wiper and wear gauge. Weight 1,420 lbs / 644 kg.

### OPTIONAL LOCK ASSEMBLY

Locks for the kelly bushing in the master bushing for use offshore with motion compensators. Lock assembly may be ordered installed in 27-HDP only. To specify, add an "L" to basic part number of unit. Lock assembly alone:

- Part number 3695
- Oracle number 10139923-001



27" HDP Roller Kelly Bushing



XHDP Roller Kelly Bushing



HDS Roller Kelly Bushing



27.1/2" HDP Roller Kelly Bushing

Kelly Size	27" HDP		20" HDP	
Size/Type [inches]	Part. Number	Oracle number	Part. Number	Oracle number
3 Hex	3650-30	10161742-003	-	-
3 .1/2 Hex	3650-35	10161742-001	3690-35	Contact NOV
4.1/4 Hex	3650-42	10161742-002	3690-42	10139918-001
5 Spec. Hex	3650-50	Contact NOV	-	-
5.1/4 Hex	3650-52	10111353-001	3690-52	10139918-002
6 Hex	3650-60	Contact NOV	-	-
2 .1/2 Sq	-	-	-	-
3 Sq	3651-30	Contact NOV	-	-
3 .1/2 Sq	3651-35	10139897-001	3691-35	Contact NOV
4.1/4 Sq	3651-42	10139898-001	3691-42	Contact NOV
5.1/4 Sq	3651-52	Contact NOV	3691-52	Contact NOV
6 Sq	3651-60	10181906-001	-	-
Less Rollers	3653	10783227-001	3692	Contact NOV

Kelly Size	27" XHDP		HDS	
Size/Type [inches]	Part Number	Oracle number	Part. Number	Oracle number
3 Hex	-	-	-	-
3 .1/2 Hex	-	-	3635-35	Contact NOV
4.1/4 Hex	70947-1	10146562-001	3635-42	10139890-001
5 Spec. Hex	-	-	-	-
5.1/4 Hex	-	-	3635-52	10812044-001
6 Hex	70947-2	Contact NOV	3635-60	Contact NOV
2 .1/2 Sq	-	-	-	-
3 Sq	-	-	3636-30	10869063-002
3 .1/2 Sq	-	-	3636-35	10869063-001
4.1/4 Sq	-	-	3636-42	Contact NOV
5.1/4 Sq	70947-3	Contact NOV	3636-52	Contact NOV
6 Sq	70947-4	Contact NOV	-	-
Less Rollers	70947-BD	10146562-002	3637	Contact NOV

ROLLER ASSEMBLIES COMPLETE

Kelly Size/Type [inches]	HDP + HDS* Part Number	Oracle number	Weight [lbs/kg]
3 Sq	3660	10183717-001	590/276
3.1/2 Sq	3661	10139907-001	562/255
4.1/4 Sq	3662	10815514-001	512/232
5.1/4 Sq	3665	10139908-001	438/199
6 Sq	3666	10181907-001	374/169
3 Hex	3667	11369362-001	612/278
3.1/2 Hex	3668	Contact NOV	584/265
4.1/4 Hex	3669	10139910-001	532/241
4.1/2 Hex	3670	Contact NOV	509/230
5 Sp Hex	3671	Contact NOV	486/220
5.1/4 Hex	3672	10139911-001	476/215
6 Hex	3673	10139912-001	414/188

\* Sleeve bearings are standard, roller bearings optional

KELLY WIPERS

Kelly Size [inches]	HDP, HDS Square Part Number	HDP, HDS Square Oracle number	Weight [lbs/kg]	Hex Part Number	Hex Oracle number	Wt [lbs/kg]
3 API	8-0260	16572109-001	4 / 1.8	8-0320	11357829-001	4 / 1.8
3.1/2 API	8-0265	10146865-001	4 / 1.8	8-0285	10161771-001	4 / 1.8
4.1/4 API	8-0170	10146861-001	3.5 / 1.6	8-0275	10146866-001	3.5 / 1.6
5.1/2 API	8-0300	10146867-001	3 / 1.4	8-0305	10384873-001	3 / 1.4
6 API	8-0200	10181953-001	3 / 1.4	8-0240	10146864-001	3 / 1.4

KELLY BUSHING SAFETY GUARD

Fits Rotary Tables with HDP-HDS Kelly Bushings.	Part Number	Oracle number
For 17.1/2" - 27.1/2" Rotary Table	15794	10112855-002
For 37.1/2" Rotary Table	16951	Contact NOV
For 49.1/2" Rotary Table	16953	Contact NOV

## MULTIPURPOSE SAFETY CLAMP

Safety clamps are a convenient way to secure flush tubular products during installation. The MP clamp can act as the last resort, when a piece of tubular slips through the slips. Especially in combination with handslips, the clamp will land on top of the slips, adding extra push down force to the slips and thus stopping the tubular from slipping through the slip. They are used to guard against dropping flush joint pipe, stream line drill collars, fishing tools, pre-pack gravel liners, wash pipe, etc.

**⚠️ WARNING:** The MP clamps should NOT be used for snubbing or lifting operations.

Adjusting for different pipe diameters: The safety clamp consists of individual links, flexibly hinged together creating an uniform gripping pressure so that there is little danger of crushing thin wall pipe. The safety clamp can easily be adjusted to any diameter simply by adding links. Each link changes the effective gripping diameter of the clamp by 1".



MP Safety Clamp

### MP SAFETY CLAMP KITS

Size [inches]*	CLAMP W/ BOX & WRENCH			LINKS			GRIP DIES PER LINK		
	Part number	Oracle number	Weight clamp [lbs / kg]	Part number	Oracle number	Qty	Part number	Oracle number	Qty
<b>MP-S</b>									
2.7/8 - 4.1/8	33030	10111345-001	83 / 38	CDI-3335	10454600-001	7	CDI-3333	10454598-001	8
4 - 5	33031	10454553-001	91 / 41	CDI-3335	10454600-001	8	CDI-3333	10454598-001	9
<b>MP-R</b>									
4.1/2 - 5.5/8	33011	10033074-001	81 / 37	CDI-3319	10454587-001	7	CDI-3310	10454576-001	8
5.1/2 - 7	33012	10033085-001	89 / 40	CDI-3319	10454587-001	8	CDI-3310	10454576-001	9
6.3/4 - 8.1/2	V33013	10075455-001	97 / 44	CDI-3319	10454587-001	9	CDI-3310	10454576-001	10
8 - 9.1/4	V33014	10075658-001	105 / 48	CDI-3319	10454587-001	10	CDI-3310	10454576-001	11
9.1/4 - 10.1/2	33015	10033098-001	113 / 51	CDI-3319	10454587-001	11	CDI-3310	10454576-001	12
<b>MP-M</b>									
10.1/2 - 11.1/2	33016	10454532-001	121 / 55	CDI-3319	10454587-001	12	CDI-3310	10454576-001	13
11.1/2 - 12.1/2	33017	10454534-001	129 / 59	CDI-3319	10454587-001	13	CDI-3310	10454576-001	14
12.1/2 - 13.5/8	33018	10454536-001	137 / 62	CDI-3319	10454587-001	14	CDI-3310	10454576-001	15
13.5/8 - 14.3/4	33019	10111343-001	145 / 66	CDI-3319	10454587-001	15	CDI-3310	10454576-001	16
14.3/4 - 15.7/8	33020	10111344-001	153 / 69	CDI-3319	10454587-001	16	CDI-3310	10454576-001	17
<b>MP-L</b>									
15.7/8 - 17	33021	10454543-001	173 / 79	CDI-3319	10454587-001	17	CDI-3310	10454576-001	18
17 - 18.1/8	33022	Contact NOV	181 / 82	CDI-3319	10454587-001	18	CDI-3310	10454576-001	19
18.1/8 - 19.3/8	33023	10454546-001	189 / 86	CDI-3319	10454587-001	19	CDI-3310	10454576-001	20
<b>MP-XL</b>									
19.3/8 - 20.3/8	33024	10454548-001	196 / 89	CDI-3319	10454587-001	19	CDI-3310	10454576-001	20
20.3/8 - 21.1/2	33025	Contact NOV	204 / 93	CDI-3319	10454587-001	20	CDI-3310	10454576-001	21
21.1/2 - 22.5/8	V33032	10472181-001	212 / 96	CDI-3319	10454587-001	21	CDI-3310	10454576-001	22
22.5/8 - 23.3/4	V33033	10113164-001	220 / 100	CDI-3319	10454587-001	22	CDI-3310	10454576-001	23
23.3/4 - 24.7/8	33034	10193654-001	228 / 103	CDI-3319	10454587-001	23	CDI-3310	10454576-001	24
24.7/8 - 26	V33035	10472183-001	236 / 107	CDI-3319	10454587-001	24	CDI-3310	10454576-001	25
26 - 27.1/8	33036	10355449-001	244 / 111	CDI-3319	10454587-001	25	CDI-3310	10454576-001	26
29.3/8 - 30.1/2	V33039	10075675-001	336 / 152	CDI-3319	10454587-001	28	CDI-3310	10454576-001	29

\* It is not allowed to dress clamps in such a way that the pipe opening exceeds 30.1/2". This will not allow a proper pipe opening.

Size [inches]*	CLAMP			CLAMP W/ BOX & WRENCH		LINKS			GRIP DIES	
	Part number	Oracle number	Weight clamp [lbs / kg]	Part number	Oracle number	Part number	Oracle number	Qty	Part number	Oracle number
<b>MP-C</b>										
3.3/4 - 4.5/8	CDI-3301	17477251-001	94 / 43	CDI-3316	17479044-001	CDI-3332	10460989-001	7	CDI-3333	10460991-001
4.1/2 - 5.5/8	CDI-3302	10460978-001	100 / 45	CDI-3317	10767760-001	CDI-3332	10460989-001	8	CDI-3333	10460991-001
5.1/2 - 6.5/8	CDI-3303	10460979-001	105 / 48	CDI-3318	10460987-001	CDI-3332	10460989-001	9	CDI-3333	10460991-001
6.1/2 - 7.5/8	CDI-3304	10460980-001	108 / 49	CDI-3319	10454587-001	CDI-3332	10460989-001	10	CDI-3333	10460991-001
7.1/2 - 8.5/8	CDI-3305	10460981-001	113 / 51	CDI-3320	17474442-001	CDI-3332	10460989-001	11	CDI-3333	10460991-001
8.1/2 - 9.5/8	CDI-3306	10460982-001	117 / 53	CDI-3321	17479046-001	CDI-3332	10460989-001	12	CDI-3333	10460991-001
9.1/2 - 10.5/8	CDI-3307	10460983-001	122 / 55	CDI-3322	10767762-001	CDI-3332	10460989-001	13	CDI-3333	10460991-001
10.1/2 - 11.5/8	CDI-3308	10486712-001	142 / 64	CDI-3323	17479047-001	CDI-3332	10460989-001	14	CDI-3333	10460991-001
11.1/2 - 12.5/8	CDI-3309	17477283-001	147 / 67	CDI-3324	17479048-001	CDI-3332	10460989-001	15	CDI-3333	10460991-001
12.1/2 - 13.5/8	CDI-3310	10460984-001	152 / 69	CDI-3325	10753652-001	CDI-3332	10460989-001	16	CDI-3333	10460991-001
13.1/2 - 14.5/8	CDI-3311	17477289-001	157 / 71	CDI-3326	17479049-001	CDI-3332	10460989-001	17	CDI-3333	10460991-001
14.1/2 - 15.5/8	CDI-3312	17477295-001	162 / 74	CDI-3327	17479050-001	CDI-3332	10460989-001	18	CDI-3333	10460991-001
15.1/2 - 16.5/8	CDI-3313	10460985-001	118 / 54	na	na	CDI-3332	10460989-001	19	CDI-3333	10460991-001
16.1/2 - 18	na	na	169 / 77	CDI-3328	17479045-001	CDI-3332	10460989-001	19	CDI-3333	10460991-001
17.1/2 - 19	CDI-3314	17477299-001	124 / 57	na	na	CDI-3332	10460989-001	20	CDI-3333	10460991-001
19.1/2 - 21	CDI-3315	10460986-001	136 / 62	na	na	CDI-3332	10460989-001	22	CDI-3333	10460991-001
29.1/2 - 31	na	na	274 / 125	CDI-3329	11473277-001	CDI-3332	10460989-001	34	CDI-3333	10460991-001

\* It is not allowed to dress clamps in such a way that the pipe opening exceeds 31". This will not allow a proper pipe opening.

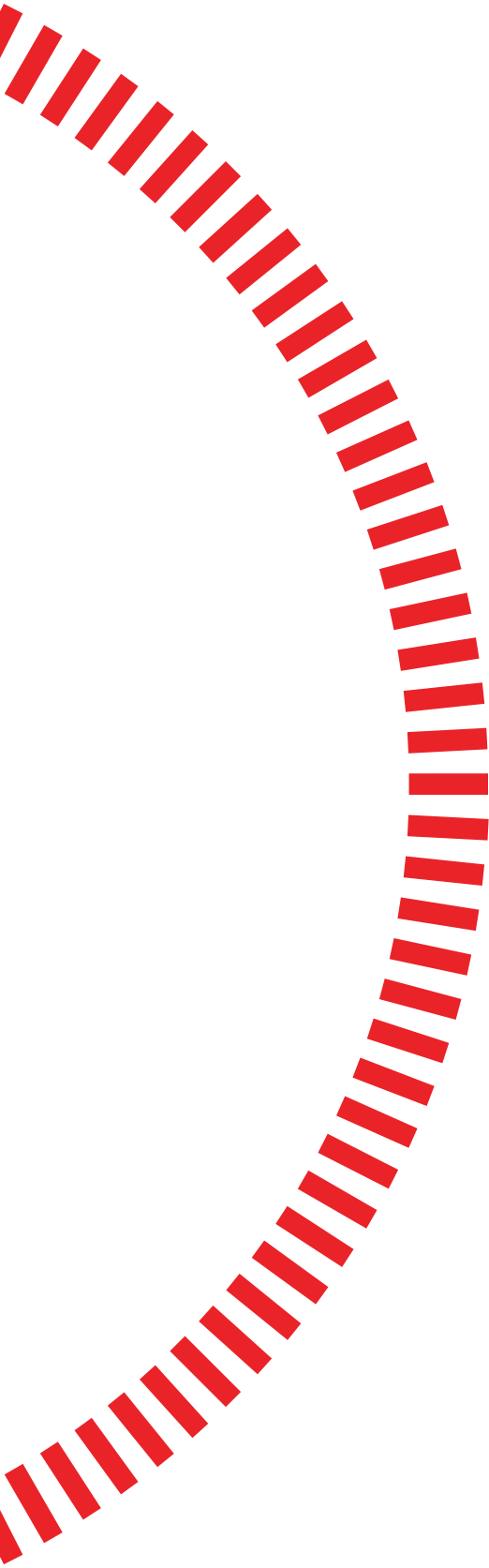
**MP SAFETY CLAMP NUT RETENTION KITS**

Type of clamp	Oracle Number
MP-type Kit	16619950-001
C-type Kit	16682359-002





# MANUAL TONGS



## MANUAL TONGS

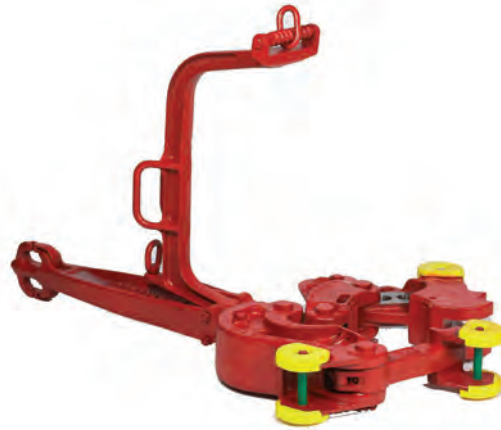
The HT tong is a tool designed for making up and breaking connections of tubular goods, from light tubing to heavy wall pipe and drill collars. There are 7 types, varying in torque capacity from 10,000 to 200,000 lbs / ft (13,560 - 271,000Nm).

Covered sizes are from 2.3/8" to 36". As from 13.3/8" the HT50 configuration is required for extended reach up to 36" to be used with the HT55 tong and hanger.

Interchangeable lug jaw design permits each tong to handle different sizes of pipe. By installing hinge jaws (available for some models), bigger pipe sizes can be handled.

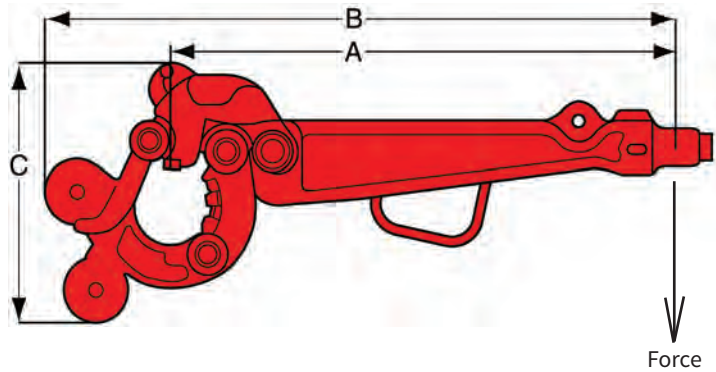
The tongs can be assembled for either making-up or break-out by removing the hanger and turning the complete HT tong over.

NOV recommends the use of a snub line saver at all times for increased safety.



### SNUB LINE SAVERS ACCORDING TO API 7K LATEST EDITION

Part number	Fits tong type
17793626-001	HT14
17793620-001	HT35, HT50, HT55, HT65, HT100, HT200



### DIMENSIONS

HT tong type	Size lever [inch]	Size lever [mm]	Type	A max. [inch-mm]	A min. [inch-mm]	B max. [inch-mm]	B min. [inch-mm]	C [inch-mm]
14	2.3/8 - 7	60 - 178	Standard	27 - 685	24.3/4-628	33-838	30.3/4-781	14-355
35	2.3/8 - 10.3/4	60 - 273	Long lever	47.1/8 - 1,196	44.5/8-1,133	57.1/8-1,450	54.5/8-1,387	18-457
			Short lever	36.3/16 - 919	33.11/16-885	46.11/16-1,173	43.11/16-1,109	18-457
55	3.1/2 - 13.3/8	89 - 340	Long lever	55.3/16 - 1,401	52.1/16-1,322	66.7/16-1,687	59.9/16-1,512	23.1/4-590
			Short lever	49.3/16 - 1,249	46.1/16-1,169	60.7/16-1,535	53.9/16-1,360	23.1/4-590
65	3.1/2 - 17	89 - 432	Standard	59.9/16 - 1,436	50.15/16 - 1,293	72.9/16-1,843	72.9/16-1,519	35.3/4-908
			Standard	62.1/2 - 1,597	60-1,524	80-2,032	76.3/8-1,940	31.3/4-806
100	4 - 17	102 - 432	Standard	60 - 1,524	53.7/8 - 1,368	78-1,981	78-1,641	34.1/8-866
	7.1/2 - 12	191 - 305	Standard	62.1/2 - 1,597	60-1,524	80-2,032	76.3/8-1,940	31.3/4-806
200	6 - 16	152 - 406	Standard	62.3/8 - 1,584	57.11/16-1,465	78-1,981	68-1,727	38-965

### CASING HEAD ASSEMBLY ONLY

HT tong type	Size lever [inch]	Size lever [mm]	
HT50	13.3/8-36	340 - 914	Lever to be used with HT55 tong and hanger

## MAIN PART NUMBERS AND SIZE EQUIPMENT TONGS

Part Description [inches]	Part number	Oracle number	Torque Rating		Weight	
			[ft.lbs]	[Nm]	[lbs]	[kg]
<b>HT14</b>						
Complete less lug jaws	200640	10022940-001	-	-	99	45
Lug jaw assembly 2.3/8 - 3.1/2	200645-1	10022941-001	10,000	13,558	12	5.4
Lug jaw assembly 3.1/2 - 5	200646-1	10022946-001	10,000	13,558	15	6.8
Lug jaw assembly 4.3/4 - 6.1/4	200647-1	10022950-001	14,000	18,981	24	10.9
Lug jaw assembly 5.3/4 - 7	200648-1	10022951-001	12,000	16,269	31	14
<b>HT35</b>						
Long lever 7 x 10.3/4 less lug jaw	200620	10663261-001	-	-	242	110
Short lever 7.5/8 x 10.3/4 less lug jaw	200620-1	10657134-001	-	-	238	108
Long lever 2.3/8 x 7 less lug jaw	200620-2	10022900-001	-	-	242	110
Short lever 2.3/8 x 7 less lug jaw	200620-3	10449538-001	-	-	238	108
Lug jaw assy. 2.3/8 - 3.668	200076-1	10022167-001	15,000	20,337	25	11
Lug jaw assembly 2.7/8 - 4.1/4	200077-1	10359137-001	15,000	20,337	29	13
Lug jaw assembly 3.1/2 - 5.1/4	200078-1	10022172-001	25,000	33,895	33	15
Lug jaw assembly 5.1/4 - 7	200079-1	10022179-001	33,500	45,419	45	20
Hinge and lug jaw assembly 7 - 8.5/8	200080-2	10359145-001	25,000	33,895	33	15
Hinge and lug jaw assembly 9.5/8 - 10.3/4	200081-2	10359149-001	32,000	43,386	76	34.5
<b>HT55</b>						
Complete with long lever, less lug jaws	200560	10022875-001	-	-	400	181
Complete with short lever, less lug jaws	200560-1	10449507-001	-	-	386	175
Lug jaw assembly 3.1/2 - 5	200083-1	10022188-001	35,000	47,453	29	13
Lug jaw assembly 5 - 6.3/4	200084-1	10022189-001	55,000	74,570	39	17.7
Lug jaw assembly 6.5/8 - 9	200085-1	10022190-001	55,000	74,570	56	25.4
Lug jaw assembly 9 - 10.3/4	200086-1	10022195-001	40,000	54,232	60	27.2
Lug jaw assembly 11.3/4	200087-1	10022196-001	30,000	40,674	61	27.7
Lug jaw assembly 12	200088-1	10359156-001	30,000	40,674	65	29.5
Lug jaw assembly 12.3/4 - 13	200089-1	10022202-001	30,000	40,674	72	32.7
Lug jaw assembly 13.3/8	200090-1	10022204-001	30,000	40,674	72	32.7
<b>HT65</b>						
Complete less lug jaws	200540	10022865-001	-	-	440	199.6
Lug jaw assembly 3.1/2-8.1/4	200546-1	10022870-001	65,000	88,128	82	37.2
Lug jaw assembly 8 - 11.1/4	200547-1	10022871-001	65,000	88,128	97	44
Lug jaw assy. 11.3/4 - 14.3/8	200548-1	10022872-001	40,000	54,232	71	32
Lug jaw assembly 16 - 17	200549-1	10022873-001	40,000	54,232	83	37.6
Hinge jaw assembly 8 - 17	200545-1	10022869-001	40,000	54,232	56	25.4
<b>HT100</b>						
Complete less lug jaws	200071	10022158-001	-	-	533	241
Lug jaw assembly 4 - 8.1/2	200663-1	10022962-001	100,000	135,582	135	61
Lug jaw 8.1/2 - 12	200664	10022964-001	100,000	135,582	102	46.3
Lug jaw 12 - 15	200665	10022981-001	75,000	101,686	140	63.5
Lug jaw 15.3/4	200666	10022991-001	60,000	81,349	162	73.5
Lug jaw 16 - 17	200667	10022992-001	60,000	81,349	135	61.2
Hinge jaw assy. 8.1/2 - 17	200662-1	10022956-001	100,000	135,582	112	50.8
<b>HT200</b>						
Complete less lug jaws	200500	10115238-001	-	-	1,050	476
Lug jaw 6 - 7.7/8	200506-SP	10359287-001	200,000	271,164	90	40
Lug jaw assembly 8 - 9.5/8 or 13 - 13.1/4	200506-1	10022862-001	200,000	271,164	89	40.4
Lug jaw assy. 9.1/2 - 11.1/8 or 13 - 14.3/4	200507-1	10115239-001	175,000	237,268	104	47.2
Lug jaw assembly 11 - 12.1/2 or 14.3/8 - 16	200508-1	10022864-001	200,000	271,164	150	68
Hinge jaw assy. 11.1/2 - 16	200505-1	10022861-001	150,000	203,373	60	27.2

MAIN PART NUMBERS CASING HEAD ASSEMBLIES

Range [inches]	Casing head assy Part no	Casing head assy Oracle number	Torque rating [ft.lbs]	Torque rating [Nm]	Weight [lbs]	Weight [kg]
13.3/8 - 14.1/2	200580-1	10449519-001	50,000	67,791	340	154
14.1/2 - 16	200580-2	10449520-001	50,000	67,791	352	159
16 - 17.1/2	200580-3	10449521-001	50,000	67,791	373	169
17.1/2 - 19	200580-4	10111280-001	50,000	67,791	385	175
19 - 20	200580-5	10111281-001	50,000	67,791	397	180
20 - 21.1/2	200580-6	10449524-001	50,000	67,791	418	189
21.1/2 - 23	200580-7	10449525-001	50,000	67,791	430	195
24 - 25.1/2	200580-8	10088121-001	50,000	67,791	459	208
25.1/2 - 27	200600-1	10359342-001	50,000	67,791	490	222
27 - 28.1/2	200600-2	10359344-001	50,000	67,791	499	226
28.1/2 - 30	200600-3	10022889-001	50,000	67,791	531	240
30 - 31.5/8	200600-4	10359347-001	50,000	67,791	542	245
31.1/2 - 33	200600-5	10359349-001	50,000	67,791	572	259
33 - 34.1/2	200600-6	Contact NOV	50,000	67,791	612	277
34.1/2 - 36	200600-7	10022891-001	50,000	67,791	618	280

CASING TONG HEAD SIZE COMPONENTS\*

Part number	Fig. A	Fig. B	Fig. C	Fig. D	Fig. E	Fig. F	Fig. G	Fig. H	Part number	Oracle number
Oracle number	10449519-001	10449520-001	10449521-001	10111280-001	10111281-001	10449524-001	10449525-001	10088121-001		
Ref	Hinge Jaw Ass'y	No. req.	No. req.	No. req.	No. req.	No. req.	No. req.	No. req.		
7	A		1		1	2	1	2	2	200584-1 10359337-001
8	B	1	1	1	1	1	1	1	1	200585-1 10359338-001
9	C	1	-	2	1	-	2	1	2	200586-1 10359339-001

Part number	Fig. I	Fig. J	Fig. K	Fig. L	Fig. M	Fig. N	Fig. O	Part number	Oracle number
Oracle number	10359342-001	10359344-001	10022889-001	10359347-001	10359349-001	Contact NOV	10022891-001		
Ref	Hinge Jaw Ass'y	No. req.	No. req.	No. req.	No. req.	No. req.	No. req.		
7	D	3	4	3	4	3	2	2	200604-1 10449535-001
8	E	1	1	3	2	2	2	5	200605-1 10359353-001
9	F	1	-	-	-	2	4	1	

Example 1: When purchasing pn 200600-4 (10359347-001) comprising 4 x pn 200604-1 (10449535-001) and 2 x pn 200605-1 (10359353-001), one can assemble pn 200600-5 (10359349-001) comprising 3 x pn 200604-1 (10449535-001) and 2 x pn 200605-1 (10359353-001), however, one needs in this case also 2 x hinge jaw pn 200606-1 (10449536-001).

Example 2: When purchasing pn 200580-8 (10088121-001) comprising 2 x pn 200584-1, 1 x pn 200585-1 (10359337-001) and 2 x pn 200586-1 (10359339-001), one can assemble pn 200580-7 (10449525-001) by leaving out 1 x pn 200586-1 (10359339-001).

\* Note: It is possible to combine the number of jaws. One doesn't need to purchase a casing head tong for each size.

PARTS LIST HT50 CASING HEAD ASSEMBLIES

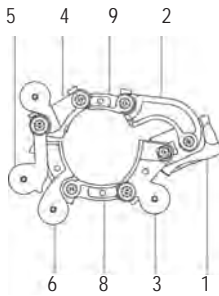


Fig A, 13.3/8"- 14.1/2", Part no. 200580-1  
Oracle no.. 10449519-001

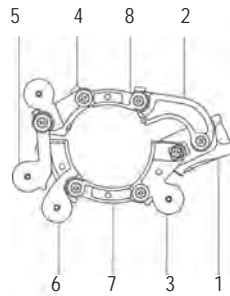


Fig B, 14.1/2"- 16", Part no. 200580-2  
Oracle no.. 10449520-001

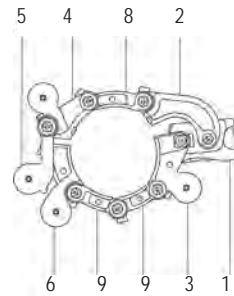


Fig C, 16"-17.1/2", Part no. 200580-3  
Oracle no.. 10449521-001

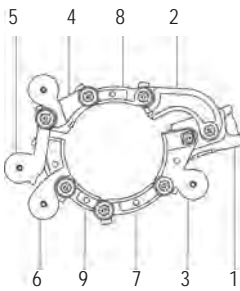


Fig D, 17.1/2"- 19", Part no. 200580-4  
Oracle no.. 10111280-001

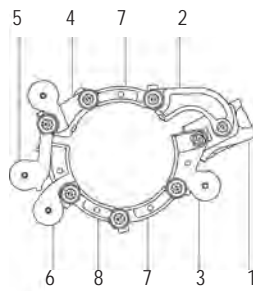


Fig E, 19"- 20", Part no. 200580-5  
Oracle no.. 10111281-001

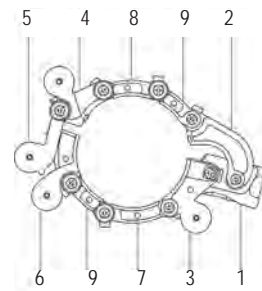


Fig F, 20"-21.1/2", Part no. 200580-6  
Oracle no.. 10449524-001

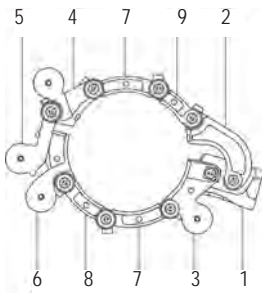


Fig G, 21.1/2"- 23", Part no. 200580-7  
Oracle no.. 10449525-001

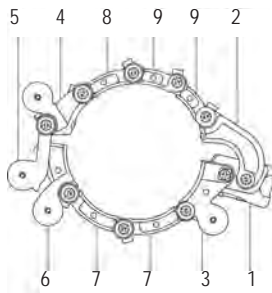


Fig H, 24"- 25.1/2", Part no. 200580-8  
Oracle no.. 10088121-001

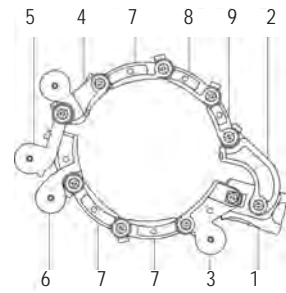


Fig I, 25.1/2"- 27", Part no. 200600-1  
Oracle no..10359342-001

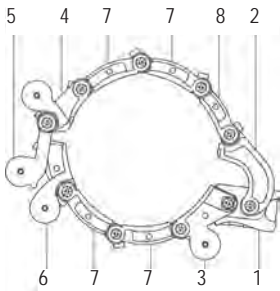


Fig J, 27"- 28.1/2", Part no. 200600-2  
Oracle no.. 10359344-001

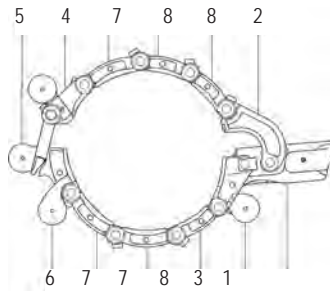


Fig K, 28.1/2"- 30", Part no. 200600-3  
Oracle no.. 10022889-001

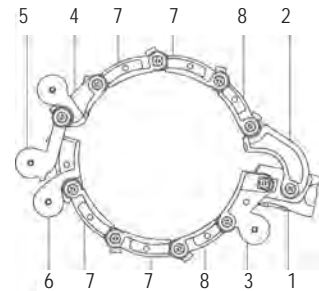


Fig L, 30"- 31.5/8", Part no. 200600-4  
Oracle no.. 10359347-001

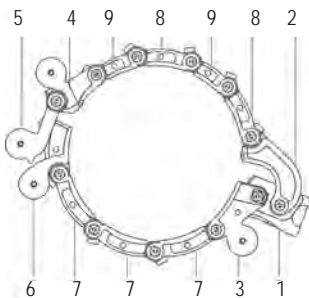


Fig M, 31.1/2"- 33", Part no. 200600-5  
Oracle no.. 10359349-001

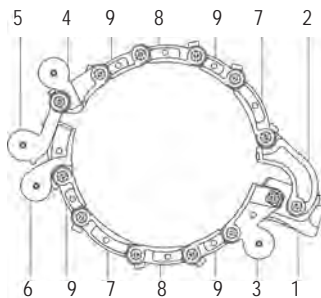


Fig N, 33"- 34.1/2", Part no. 200600-6  
Oracle no.. Contact NOV

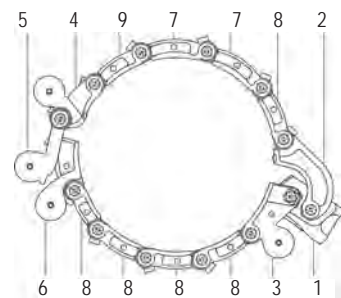


Fig O, 34.1/2"- 36", Part no. 200600-7  
Oracle no.. 10022891-001





# CASING RUNNING TOOLS



## CRT350 CASING RUNNING TOOL

- The CRT introduces step change in the way casing is run today. By combining the functionality of field proven tools such as the top drive, flush mounted slip (FMS), fill and circulation tool and hydraulic single joint elevator (H-SJH & UX), casing operations are now safer, faster and more efficient. The CRT, which is connected directly to the top drive main shaft, hoists and lowers casing, spins in and makes up the casing connection. Additionally, while reciprocating and rotating the casing string, the CRT has the ability to fill-up and circulate.

### SAFETY

- Eliminates stabbing-board operations (leading contributor to LTA's while running casing), less manual handling in the V-door and fewer safety hazards.
- Power casing tong operations and work platforms have been removed, allowing for better ergonomics and work space around the well center.

### ECONOMICS

- Drilling contractors or a reduced casing crew can run the casing, minimizing stand-by costs associated with weather or problematic well conditions.
- The CRT integral compensator substantially reduces the risk of damage due to cross-threading.
- Utilizing the top drive to control make-up reduces thread damage during the complete make-up cycle.

### WELL IMPROVEMENTS

- Assures that the casing can be set to the casing point with the ability of the CRT to push casing to bottom, fill, circulate, rotate, and reciprocate.
- Reduces the risk of differential wall sticking.
- Ability to pressure test.

### EFFICIENCY

- Less equipment to rig up; the CRT contains the single joint elevator, rigid link hoist and stabbing assembly, fill and circulation tool, and compensator in one assembly.
- Single load-path design eliminates links.
- The operator determines and controls the running/tripping speed, spin-in and make-up torques.
- When running mixed strings, size of components can be changed within minutes through the twist lock design.

### FEATURES CRT COMPENSATOR

- Employs a patented cushioned weight compensator which balances out the weight of CRT.
- Soft stabbing and thread compensation minimizes casing thread damage.

### CRT PIPE SENSOR

- The pipe sensor detects the casing coupling so slips will set automatically at the correct position, ensuring casing connection integrity.
- Provides feedback to CRT operator that the correct CRT stabbing height is reached.

### CRT FILL-UP AND CIRCULATION TOOL

- Fill-up tool enables fast change out of seal and guide elements when mixed strings are run.
- Prevents possible spills of expensive fluids.
- Reduces the risk of environmental incidents.

### SINGLE JOINT ELEVATORS

- Hydraulic operated elevator (H-SJH & UX)
- Hydraulic cylinder assembly to tilt the H-SJH elevator to the V-door.



CRT350 with H-SJH elevator

### CRT500

Per April 2018 the CRT500 is obsolete. Spare parts and size components will remain available for a period of 5 years.



## TECHNICAL SPECIFICATIONS CRT350

Description	Value
API 8C Load Rating [sTon/Tonne]	350 / 317
Casing Size [inches]	4.1/2 to 9.7/8
Fill-Up and Circulation [inches]	4.1/2 to 9.7/8 circulation and fill-up (fill-up, circulate, and recovery over the full range)
Maximum Mud Circulation Pressure [psi/kPa]	up to 5,000 / 34,474 (size dep.)
Rotational speed [rpm]	0-20 intermittent
Weight (fully dressed, typical) [lbs/kg]	10,500 / 4,763
Maximum Push Down Force [lbs/kg]	20,000 / 9,072 (static)
Temperature Range [°C/°F]	-20° to +55° / -4° to 131°
Maximum Torque [ft.lbs / Nm]	35,000 / 47,460
Shaft connection [inches]	6.5/8 API RH (box), 7.750 OD TJ.
Diameter of CRT body [inches]	32
Width of CRT ass'y [inches]	44.3
Height* [inches]	117 (compensator mid stroke, from shaft shoulder + CRT bell guide)
Height [inches]	139.8 (link arm fully in, from shaft shoulder to H-SJH)

## MAIN PART NUMBERS

Part number	Oracle number	Description
50008500Y*	Contact NOV	CRT350 Casing Running Tool
50008610	10144320-001	Independent Control Panel
50008551	10696977-001	Portable service loop

SIZE COMPONENTS CRT350: SLIPS AND INSERTS

CASING : 4.1/2" UP TO 9.7/8"

Size [inches]	Insert Part Number	Insert Oracle number	Qty (per slip ass'y)	Slip Ass'y Part Number	Slip Ass'y Oracle number
4.1/2	2165	10451957-001	8	50008566Y412	Contact NOV
Slip #3 up to 5.1/2 Nominal, CASING					
4.1/2	2168	10451986-001	12	50008567Y412	10144287-002
5	2169	10025332-001	12	50008567Y500	10193616-001
5.1/2	2170	10362140-001	12	50008567Y512	10144287-001
Slip #4 up to 7.5/8 Nominal, CASING					
6.5/8	2632	10377724-001	16	50008568Y658	10144291-004
7	2623	10138773-001	16	50008568Y700	10144291-001
7.5/8	2633	10377727-001	16	50008568Y758	10144291-002
7.3/4	2649	10377730-001	16	50008568Y734	10144291-003
Slip #5 up to 9.5/8 Nominal, CASING					
8.5/8	2640	10138830-001	20	50008569Y858	10144296-002
8.3/4	2650	10377731-001	20	50008569Y834	10144296-003
9.5/8	2633	10377727-001	20	50008569Y958	10144296-001
9.3/4	2649	10377730-001	20	50008569Y934	10144296-004
9.7/8	2649	10377730-001	20	50008569Y978	10144297-001

SIZE COMPONENTS: CRT350: BOTTOM GUIDES

Part number for CRT350	Oracle number for CRT350	Bottom guide (nominal pipe size)		Inner Diameter	
		[inches]	[mm]	[inches]	[mm]
50008588	10144302-001	4.1/2	114	5.3/4	146
50008589	10144302-001	5	127	6.1/4	159
50008590	10144304-001	5.1/2	140	6.3/4	172
50008591	10144305-001	6.5/8	168	8.1/4	210
50008592	10144308-001	7	178	8.1/4	210
50008593	10144309-001	7.5/8	194	9.1/4	235
50008594	10144311-001	8.5/8	219	10.1/4	230
50008595	10144313-001	9.5/8 - 9.7/8	245	11.1/4	286

## SIZE COMPONENTS CRT500: SLIPS AND INSERTS

CASING : 4.1/2" UP TO 14"					
Size [inches]	Insert Part Number	Insert Oracle number	Qty (per slip ass'y)	Slip Ass'y Part Number	Slip Ass'y Oracle number
Slip #4.1/2 up to 5.1/2" Nominal, CASING					
4.1/2	2168	10451986-001	18	50002567Y412	10189594-001
5	2169	10025332-001	18	50002567Y500	10189594-002
5.1/2	2170	10362140-001	18	50002567Y512	10189594-003
Slip #6.5/8 up to 7.3/4 Nominal, CASING					
6.5/8	2632	10377724-001	24	50002568Y658	10140719-002
7	2623	10138773-001	24	50002568Y700	10696987-001
7.5/8	2633	10377727-001	24	50002568Y758	10140719-003
7.3/4	2649	10377730-001	24	50002568Y734	10140719-004
Slip #8.5/8 up to 9.7/8 Nominal, CASING					
8.5/8	2640	10138830-001	30	50002569Y858	10948775-001
8.3/4	2650	10377731-001	30	50002569Y834	10948775-002
9.5/8	2633	10377727-001	30	50002569Y958	10696990-001
9.3/4	2649	10377730-001	30	50002569Y934	10948775-004
9.7/8	2649	10377730-001	30	50002569Y978	10948775-005
Slip #10.3/4 up to 12 Nominal, CASING					
10.3/4	2640	10138830-001	42	50002570Y1034	10140725-001
10.7/8	2650	10377731-001	42	50002570Y1078	10140725-002
11.3/4	2637	10138826-001	42	50002570Y1134	10140725-003
11.7/8 -12	2651	10138844-001	42	50002570Y1178	10140725-004
Slip #12.3/4 up to 14 Nominal, CASING					
12.3/4	2657	10138857-001	42	50002571Y1234	10140728-003
13.3/8	2636	10138821-001	42	50002571Y1338	10140728-001
13.1/2	2652	10138846-001	42	50002571Y1312	10140728-004
13.5/8	2653	10377732-001	42	50002571Y1358	10140729-005
14	2635	10377728-001	42	50002571Y1400	10140728-002

## SIZE COMPONENTS CRT500: BOTTOM GUIDES

Part number for CRT500-14	Oracle number for CRT500-14	Bottom guide (nominal pipe size)		Inner Diameter	
		[inches]	[mm]	[inches]	[mm]
50002583	10718978-002	4.1/2	114	5.3/4	146
50002584	10718979-002	5	127	6.1/4	159
50002585	10726127-002	5.1/2	140	6.72	171
50002586	10718980-002	6.5/8 & 7	168 & 178	8.1/4	210
50002587	10718982-002	7.1/2 upto 7.7/8	191 upto 200	9.1/4	235
50002588	10718981-002	8.5/8 & 8.3/4	219 & 196	10.1/4	230
50002589	10696992-001	9.5/8	245	11.1/4	286
50002590	10718983-002	9.3/4 & 9.7/8	248 & 251	11.1/2	292
50002591	10718993-002	10.3/4 & 10.7/8	273 & 276	12.38	315
50002592	10718992-002	11.3/4 upto 12	324 upto 305	13.31	338
50002593	10718975-002	12.3/4 & 12.7/8	324 & 237	14.1/2	368
50002594	10696995-001	13.3/8	467	15	381
50002595	10719003-002	13.1/2 upto 13.3/4	343 upto 349	15.1/4	387
50002596	10718995-002	14	314	15.62	397

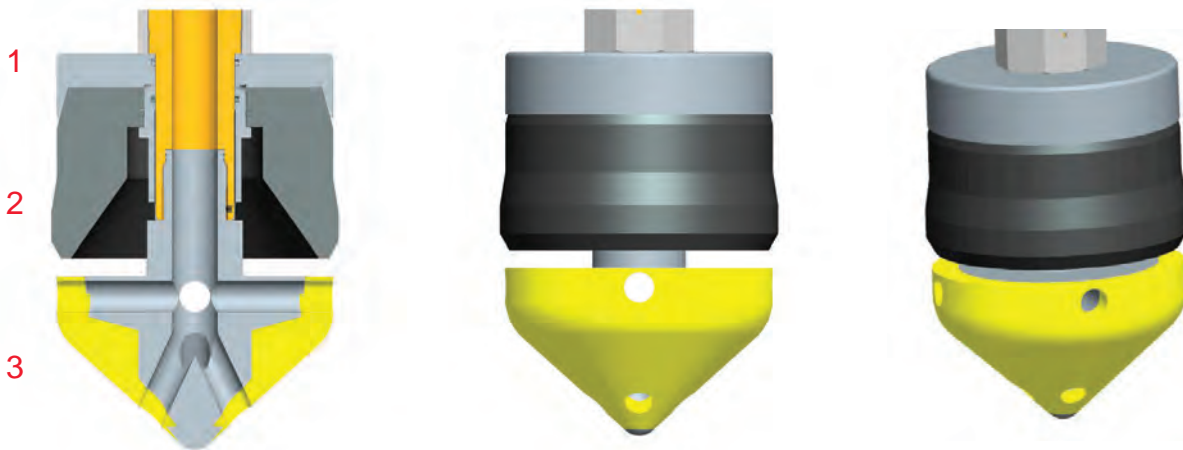
## MAIN PART NUMBERS FAC TOOL

CRT	Part number	Oracle number	Range [inches]
CRT350	59000361*	10146007-001	4.1/2 - 6.5/8
CRT350	59000360*	10145992-001	7 - 9.7/8
CRT500	59000360*	10145992-001	7 - 14

\* Depends on size components



## SIZE COMPONENTS: FAC TOOLS



- 1: Thimble
- 2: Packer Cup
- 3: Noze cone

## SIZE COMPONENTS FAC TOOL 4.1/2" - 5"

Pipe size [inches]	Pipe weight (range)	Casing I.D. [inches]	Thimble item 1 part number	Thimble item 1 Oracle number	Packer Cup item 2 part number	Packer Cup item 2 Oracle number
4.1/2	9.5 -11.6 #	4.090 -4.000	59000377-412-9	10146040-005	59000378-412-9	10146053-011
4.1/2	12.6 -13.5#	3.958 -3.920	59000377-412-9	10146040-005	59000378-412-13	10146053-010
4.1/2	15.1#	3.826	59000377-412-15	10748585-001	59000378-412-15	10748586-001
5.00	15 -18#	4.408 -4.276	59000377-500-15	10146040-006	59000378-500-15	10146053-012
5.00	18 - 21#	4.276 -4.126	59000377-500-18	Contact NOV	59000378-500-18	10146053-013

Pipe size [inches]	Cup OD. [inches]	Nose cone item 3 part number	Nose cone item 3 Oracle number	Nose cone OD. [inches]	Remarks
4.1/2	4.15	59000379-412-9	10146082-009	3.875	
4.1/2	4.08	59000379-412-13	10146082-008	3.795	
4.1/2	3.95	59000379-412-15	10748587-001	3.710	Smallest possible drift
5.00	4.62	59000379-500-15	10146082-024	4.151	
5.00	4.34	59000379-500-15 59000379-500-21	10146082-024 10146082-010	4.151 3.919	5.00" 20.3# Upwards Cone 59000379-500-21 / 10146082-010

### Available size components for 4.1/2" casing

Parts marked with a Qty are part of size component kit 59000362-412 / 10146020-002

Qty	NOV Part number	NOV Oracle number	Description
1	59000377-412-9	10146040-005	Thimble 4.1/2" 9.5 / 11.6# 12.6/13.5#
1	59000377-412-15	10146040-006	Thimble 4.1/2" 15.1#
1	59000378-412-9	10146053-011	Cup 4.1/2" 9.5 / 11.6#
1	59000378-412-13	10146053-010	Cup 4.1/2" 12.6 / 13.5#
1	59000378-412-15	10748586-001	Cup 4.1/2" 15.1#
1	59000379-412-9	10146082-009	Nose cone 4.1/2" 9.5/11.6#
1	59000379-412-13	10146082-008	Nose cone 4.1/2" 12.6/13.5#
1	59000379-412-15	10748587-001	Nose cone 4.1/2" 15.1#

### Available size components for 5" casing

Parts marked with a Qty are part of size component kit 59000362-500 / 10146020-003

Qty	NOV Part number	NOV Oracle number	Description
1	59000377-500-15	10146040-006	Thimble 5.00" 15/18# 18/21#
1	59000378-500-15	10146053-012	Cup 5.00" 15/18#
1	59000378-500-18	10146053-013	Cup 5.00" 18/21#
1	59000379-500-15	10146082-024	Nose cone 5.00" 15/18#
1	59000379-500-21	10146082-010	Nose cone 5.00" 21/23#

SIZE COMPONENTS FAC TOOL 5.1/2" - 6.5/8"

Pipe size [inches]	Pipe weight {lbs-ft}	Casing I.D. [inches]	Thimble item 1 part number	Thimble item 1 Oracle number	Packer Cup item 2 part number	Packer Cup item 2 Oracle number
5.1/2	14 -17 #	5.012 -4.892	59000377-512-17	Contact NOV	59000378-512-17	10146053-015
5.1/2	17 -23 #	4.892 -4.670	59000377-512-17	Contact NOV	59000378-512-17	10146053-015
6.5/8	24 -28 #	5.920 -5.791	59000377-658-24	10146040-014	59000378-658-24	10146053-030
6.5/8	32 #	5.675	59000377-658-24	10146040-014	59000378-658-32	10146053-031

Pipe size [inches]	Cup OD. [inches]	Nose cone item 3 part number	Nose cone item 3 Oracle number	Nose cone OD. [inches]	Remarks
5.1/2	5.20	59000379-512-14	10146082-011	4.767	
5.1/2	4.98	59000379-512-14 59000379-512-20	10146082-011 10146082-012	4.767 4.545	5.1/2" 20# use cone 59000379-550-20 / Contact NOV for Oracle p/n
6.5/8	6.01	59000379-658-24	10182124-001	5.67	
6.5/8	5.83	59000379-658-32	10182125-001	5.55	

Available size components for 5.1/2" casing

Parts marked with a Qty are part of size component kit 59000362-512 / 10146020-004

Qty	NOV Part number	NOV Oracle number	Description
1	59000377-512-14	10146040-007	Thimble 5.1/2" 14/17-17/23#
1	59000378-512-14	10146053-014	Cup 5.1/2" 14/17#
1	59000378-512-17	10146053-015	Cup 5.1/2" 17/23#
1	59000379-512-14	10146082-011	Nose cone 5.1/2" 14/17#
1	59000379-512-20	10146082-012	Nose cone 5.1/2" 20/23#

Available size components for 6.5/8" casing

Parts marked with a Qty are part of size component kit 59000362-658 / 10146020-011

Qty	NOV Part number	NOV Oracle number	Description
1	59000377-658-24	10146040-014	Thimble 6.5/8" 24/28# 32#
1	59000378-658-24	10146053-030	Cup 6.5/8" 24/28#
1	59000378-658-32	10146053-031	Cup 6.5/8" 32#
1	59000379-658-24	10182124-001	Nose cone 6.5/8" 24/28#
1	59000379-658-32	10182125-001	Nose cone 6.5/8" 32#

## SIZE COMPONENTS FAC TOOL 7" - 7.5/8"

Pipe size [inches]	Pipe weight (range)	Casing I.D. [inches]	Thimble item 1 part number	Thimble item 1 Oracle number	Packer Cup item 2 part number	Packer Cup item 2 Oracle number
7.00	17 -23 # (Premium)	6.538 -6.366	59000377-700-17	10146040-008	59000378-700-17PR	10146053-017
7.00	26 -30 # (Premium)	6.276 -6.154	59000377-700-17	10146040-008	59000378-700-26PR	10146053-019
7.00	32 # (Premium)	6.094	59000377-700-22	10146040-009	59000378-700-32PR	10146053-021
7.5/8	24 -26.4 # (Premium)	7.025 -6.969	59000377-758-24	10146040-010	59000378-758-24PR	10140653-036
7.5/8	29.7 -33.7 # (Premium)	6.875 -6.765	59000377-758-24	10146040-010	59000378-758-30PR	10140653-034
7.5/8	39 # (Premium)	6.625	59000377-758-24	10146040-010	59000378-758-39PR	10140653-035

Pipe size [inches]	Cup OD. [inches]	Nose cone item 3 part number	Nose cone item 3 Oracle number	Nose cone OD.	Remarks
7.00	6.62	59000379-700-17	10146082-013	6.25	
7.00	6.38	59000379-700-26	10146082-014	6.00	
7.00	6.20	59000379-700-26	10146082-014	6.00	Smallest drift dia. F AC #59000360 / 10455992-001: 5.695"
7.5/8	7.25	59000379-758-24	10146082-015	6.75	
7.5/8	6.92	59000379-758-24 59000379-758-34	10146082-015 10146082-016	6.75 6.50	7.5/8" 33.7# use 59000378-758-34 / 10146082-016
7.5/8	6.72	59000379-758-34	10146082-016	6.50	

### Available size components for 7" Buttress casing

Parts marked with a Qty are part of size component kit 59000362-700 / 10146020-005

Qty	NOV Part number	New NOV Part number	Description
1	59000377-700-17	10146040-008	Thimble 7.00" 17/20#, 17/23#, 26/30#
1	59000377-700-22	10146040-009	Thimble 7.00" 22/24#, 12/26#, 32#
1	59000378-700-17	10146053-016	Cup 7.00" 17/23#
1	59000378-700-26	10146053-018	Cup 7.00" 26/30#
1	59000378-700-32	10146053-020	Cup 7.00" 32#
1	59000379-700-17	10146082-013	Nose cone 7.00" 17/23#
1	59000379-700-26	10146082-014	Nose cone 7.00" 26/32#

### Available size components for 7" Premium casing

Parts marked with a Qty are part of size component kit 59000362-700PR / 10146020-006

Qty	NOV Part number	NOV Oracle number	Description
1	59000377-700-17	10146040-008	Thimble 7.00" 17/20#, 17/23#, 26/30#
1	59000377-700-22	10146040-009	Thimble 7.00" 22/24#, 12/26#, 32#
1	59000378-700-17PR	10146053-017	Cup 7.00" 17/23# Premium
1	59000378-700-26PR	10146053-019	Cup 7.00" 26/30# Premium
1	59000378-700-32PR	10146053-021	Cup 7.00" 32# Premium
1	59000379-700-17	10146082-013	Nose cone 7.00" 17/23#
1	59000379-700-26	10146082-014	Nose cone 7.00" 26/32#

SIZE COMPONENTS FAC TOOL 7" - 7.5/8"

Available size components for 7.5/8" Buttress casing

Parts marked with a Qty are part of size component kit 59000362-758 / 10146020-007

Qty	NOV Part number	NOV Oracle number	Description
1	59000377-758-24	10146040-010	Thimble 7.5/8" (all weight ranges)
1	59000378-758-24	10146053-022	Cup 7.5/8" 24/26.4# Premium
1	59000378-758-30	10146053-023	Cup 7.5/8" 29.7/33.7# Premium
1	59000378-758-39	10146053-024	Cup 7.5/8" 39# Premium.
1	59000379-758-24	10146082-015	Nose cone 7.5/8" 24/29.7#
1	59000379-758-34	10146082-016	Nose cone 7.5/8" 33.7/39#

Available size components for 7.5/8" Premium casing

Parts marked with a Qty are part of size component kit 59000362-758PR / Contact NOV for new P/N

Qty	NOV Part number	NOV Oracle number	Description
1	59000377-758-24	10146040-010	Thimble 7.5/8" (all weight ranges)
1	59000378-758-24PR	10146053-036	Cup 7.5/8" 24/26.4# Premium
1	59000378-758-30PR	10146053-034	Cup 7.5/8" 29.7/33.7# Premium
1	59000378-758-39P	10146053-035	Cup 7.5/8" 39# Premium
1	59000379-758-24	10146082-015	Nose cone 7.5/8" 24/29.7#
1	59000379-758-34	10146082-016	Nose cone 7.5/8" 33.7/39#

SIZE COMPONENTS FAC TOOL 8.5/8" - 9.5/8"

Pipe size [inches]	Pipe weight (range)	Casing I.D. [inches]	Thimble item 1 part number	Thimble item 1 Oracle number	Packer Cup item 2 part number	Packer Cup item 2 Oracle number
8.5/8	20 -24 #	8.191 -8.097	59000377 -858-20	10741577-001	59000378-858-20	10741579-001
8.5/8	28 -36 #	8.017 -7.825	59000377 -858-28	10741577-002	59000378-858-28	10741579-002
9.5/8	36 -43 # (Premium)	8.921 -8.755	59000377-958-36	10146040-011	59000378-958-36PR	10146053-045
9.5/8	40 -47 # (Premium)	8.835 -8.681	59000377-958-40	10146040-012	59000378-958-40PR	10146053-033
9.5/8	47 -53 # (Premium)	8.681 -8.535	59000377-958-40	10146040-012	59000378-958-47PR	10146053-028
9.5/8	53 -58 # (Premium).	8.535 -8.435	59000377-958-53	10146040-013	59000378-958-53PR	10146053-029

Pipe size [inches]	Cup OD. [inches]	Nose cone item 3 part number	Nose cone item 3 Oracle number	Nose cone OD. [inches]	Remarks
8.5/8	8.26	59000379-858-20	10741580-001	8.00	
8.5/8	8.15	59000379-858-28	10741580-002	7.70	
9.5/8	9.05	59000379-958-36	10146082-017	8.625	
9.5/8	8.85	59000379-958-36 59000379-958-47	10146082-017 10146082-018	8.625 8.375	9.5/8" 47# use partnumber 59000379-958-47 / Oracle number 10146082-018
9.5/8	8.75	59000379-958-47	10146082-018	8.375	
9.5/8	8.65	59000379-958-53	10146082-019	8.220	



## SIZE COMPONENTS FAC TOOL 8.5/8" - 9.5/8"

Available size components for 8.5/8" Buttress casing

Parts marked with a Qty are part of size component kit 59000362-858 / 10146020-008

Qty	NOV Part number	NOV Oracle number	Description
1	59000377-858-20	Contact NOV	Thimble 8.5/8" 20/24#
1	59000377-858-28	Contact NOV	Thimble 8.5/8" 28/36#
1	59000378-858-20	10741579-001	Cup 8.5/8" 20/24#
1	59000378-858-28	Contact NOV	Cup 8.5/8" 28/36#
1	59000379-858-20	10741580-001	Nose cone 8.5/8" 20/24#
1	59000379-858-28	Contact NOV	Nose cone 8.5/8" 28/36#

Available size components for 9.5/8" Buttress casing

Parts marked with a Qty are part of size component kit 59000362-958 / 10146020-009

Qty	NOV Part number	NOV Oracle number	Description
1	59000377-958-36	10146040-011	Thimble 9.5/8" 36/43#
1	59000377-958-40	10146040-012	Thimble 9.5/8" 40/47- 47/53#
1	59000378-958-36	10146053-025	Cup 9.5/8" 36/43#
1	59000378-958-40	10146053-026	Cup 9.5/8" 40/47#
1	59000378-958-47	10146053-027	Cup 9.5/8" 47/53.5#
1	59000379-958-36	10146082-017	Nose cone 9.5/8" 36/43#
1	59000379-958-47	10146082-018	Nose cone 9.5/8" 47/53#

Available size components for 9.5/8" Premium casing

Parts marked with a Qty are part of size component kit 59000362-958PR / Contact NOV for new P/N

Qty	NOV Part number	NOV Oracle number	Description
-	59000377-958-36	10146040-011	Thimble 9.5/8" 36/43#
1	59000377-958-40	10146040-012	Thimble 9.5/8" 40/47-47/53#
1	59000377-958-53	10146040-013	Thimble 9.5/8" 53/58#
-	59000378-958-36PR	Contact NOV	Cup 9.5/8" 36/43# Premium.
1	59000378-958-40PR	Contact NOV	Cup 9.5/8" 40/47# Premium.
1	59000378-958-47PR	10146053-028	Cup 9.5/8" 47/53# Premium.
1	59000378-958-53PR	10146053-029	Cup 9.5/8" 53/58# Premium.
1	59000379-958-36	10146082-017	Nose cone 9.5/8" 36/43#
1	59000379-958-47	10146082-018	Nose cone 9.5/8" 47/53#
1	59000379-958-53	10146082-019	Nose cone 9.5/8" 53/58#

SIZE COMPONENTS FAC TOOL 10.3/4"

Pipe size [inches]	Pipe weight ( range )	Casing I.D. [inches]	Thimble item 1 part number	Thimble item 1 Oracle number	Packer Cup item 2 part number	Packer Cup item 2 Oracle number
10.3/4	32-55 #	10.192 -9.760	59000377-1034-32	10146040-001	59000378-1034-32	10146053-001
10.3/4	60-73 #	9.660 -9.406	59000377-1034-60	10146040-002	59000378-1034-60	10146053-002
10.3/4	51-55 # Premium	9.850 -9.760	59000377-1034-32	10146040-001	59000378-1034- 51PR	10146053-044
10.3/4	60-65 # Premium	9.660 -9.560	59000377-1034-60	10146040-002	59000378-1034- 60PR	10146053-003
10.3/4	71-73 # Premium	9.450 -9.406	59000377-1034-60	10146040-002	59000378-1034- 71PR	10146053-004
10.3/4	79-85 # Premium	9.282 -9.156	59000377-1034-79	10146040-003	59000378-1034- 79PR	10146053-005

Pipe size [inches]	Cup OD. [inches]	Nose cone item 3 part number	Nose cone item 3 Oracle number	Nose cone OD. [inches]	Remarks
10.3/4	10.20	59000379-1034-32	10146082-001	9.794	10.3/4" 32-46#
		59000379-1034-55	10146082-026	9.604	10.3/4" 51-55#
10.3/4	9.72	59000379-1034-65	10146082-002	9.404	10.3/4" 60-65#
		59000379-1034-73	10146082-003	9.250	10.3/4" 71-73#
10.3/4	10.10	59000379-1034-51	10146082-026	9.694	10.3/4" 51#
		59000379-1034-55	10146082-025	9.604	10.3/4" 55#
10.3/4	9.94	59000379-1034-60	10146082-020	9.504	10.3/4" 60#
		59000379-1034-65	10146082-002	9.404	10.3/4" 65#
10.3/4	9.72	59000379-1034-71	10146082-021	9.294	10.3/4" 71#
		59000379-1034-73	10146082-003	9.250	10.3/4" 73#
10.3/4	9.56	59000379-1034-79	10146082-003	9.125	10.3/4" 79#
		59000379-1034-85	10146082-028	9.000	10.3/4" 85#

Available size components for 10.3/4" Buttress casing

Parts marked with a Qty are part of size component kit 59000362-1034 / 10146020-001

Qty	NOV Part number	NOV Oracle number	Description
-	59000377-1034-32	10146040-001	Thimble 10.3/4" 32/55#
1	59000377-1034-60	10146040-002	Thimble 10.3/4" 60/73#
-	59000378-1034-32	10146053-001	Cup 10.3/4" 32/55#
1	59000378-1034-60	10146053-002	Cup 10.3/4" 60/73#
-	59000379-1034-32	10146082-001	Nose cone 10.3/4" 32/46#
-	59000379-1034-55	10146082-026	Nose cone 10.3/4" 51/55#
1	59000379-1034-65	10146082-002	Nose cone 10.3/4" 65#
1	59000379-1034-73	10146082-003	Nose cone 10.3/4" 73#

## SIZE COMPONENTS FAC TOOL 10.3/4"

Available size components for 10.3/4" Premium casing

Parts marked with a Qty are part of size component kit 59000362-1034PR / 10146020-001

Qty	NOV Part number	NOV Oracle number	Description
1-	59000377-1034-32	10146040-001	Thimble 10.3/4" 32/55#
1	59000377-1034-60	10146040-002	Thimble 10.3/4" 60/73#
-	59000377-1034-79	10146040-003	Thimble 10.3/4" 79-85#
-	59000378-1034-51PR	10146053-044	Cup 10.3/4" 51/55# Premium.
1	59000378-1034-60PR	10146053-003	Cup 10.3/4" 60/65# Premium.
1	59000378-1034-71PR	10146053-004	Cup 10.3/4" 71/73# Premium.
-	59000378-1034-79PR	10146053-005	Cup 10.3/4" 79/85# Premium.
-	59000379-1034-51	10146082-025	Nose cone 10.3/4" 51#
-	59000379-1034-55	10146082-026	Nose cone 10.3/4" 55#
1	59000379-1034-60	10146082-020	Nose cone 10.3/4" 60#
1	59000379-1034-65	10146082-002	Nose cone 10.3/4" 65#
1	59000379-1034-71	10146082-021	Nose cone 10.3/4" 71#
1	59000379-1034-73	10146082-003	Nose cone 10.3/4" 73#
-	59000379-1034-79	10146082-027	Nose cone 10.3/4" 79#
-	59000379-1034-85	10146082-028	Nose cone 10.3/4" 85#

## SIZE COMPONENTS FAC TOOL 13.3/8"

Pipe size [inches]	Pipe weight (range)	Casing I.D. [inches]	Thimble item 1 part number	Thimble item 1 Oracle number	Packer Cup item 2 part number	Packer Cup item 2 Oracle number
13.3/8	48 -54#	12.710 -12.615	59000377-1338-48	10146040-004	59000378-1338-48	10146040-004
13.3/8	54 -72 #	12.615 -12.347	59000377-1338-48	10146040-004	59000378-1338-54	10146053-006
13.3/8	54 -61 # Premium	12.615 -12.515	59000377-1338-48	10146040-004	59000378-1338- 54PR	10146053-007
13.3/8	68-72 # Premium	12.415 -12.347	59000377-1338-48	10146040-004	59000378-1338- 68PR	10146053-008
13.3/8	77 # Premium	12.275	59000377-1338-48	10146040-004	59000378-1338- 77PR	10146053-009

Pipe size [inches]	Cup OD. [inches]	Nose cone item 3 part number	Nose cone item 3 Oracle number	Nose cone OD. [inches]	Remarks
13.3/8	12.95	59000379-1338-54	10146053-006	12.459	
13.3/8	12.72	59000379-1338-72	10146082-007	12.181	
13.3/8	12.87	59000379-1338-54 59000379-1338-61	10146082-004 10146082-005	12.459 12.354	13.3/8" 54# 13.3/8" 61#
13.3/8	12.70	59000379-1338-68 59000379-1338-72	10146082-006 10146082-007	12.248 12.181	13.3/8" 68# 13.3/8" 72#
13.3/8	12.56	59000379-1338-77	Contact NOV	12.119	13.3/8" 77#

SIZE COMPONENTS FAC TOOL 13.3/8"

Available size components for 13.3/8" Buttress casing

Parts marked with a Qty are part of size component kit 59000362-1338 / 10146020-010

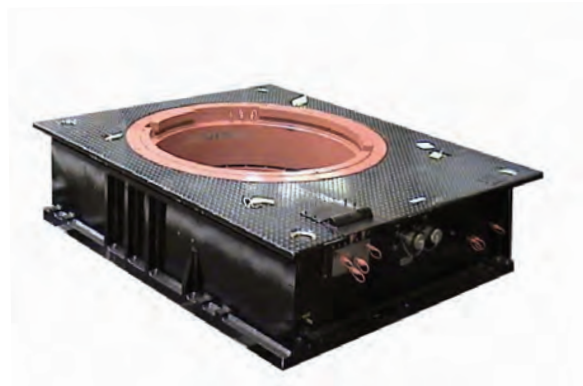
Qty	NOV Part number	NOV Oracle number	Description
1	59000377-1338-48	10146040-004	Thimble 13.3/8" 48/77#
-	59000378-1338-48	10146053-032	Cup 13.3/8" 48/61 #
1	59000378-1338-54	10146053-006	Cup 13.3/8" 54/72*
1	59000379-1338-54	10146082-004	Nose cone 13.3/8" 54*
1	59000379-1338-72	10146082-007	Nose cone 13.3/8" 72*

Available size components for 13.3/8" Premium casing

Parts marked with a Qty are part of size component kit 59000362-1338PR / Contact NOV for new P/N

Qty	NOV Part number	NOV Oracle number	Description
1	59000377-1338-48	10146040-004	Thimble 13.3/8" 48/77#
-	59000378-1338-54PR	10146053-007	Cup 13.3/8" 54/61# Premium.
1	59000378-1338-68PR	10146053-008	Cup 13.3/8" 68/72# Premium.
-	59000378-1338-77PR	10146053-009	Cup 13.3/4" 77# Premium.
-	59000379-1338-54	10146082-004	Nose cone 13.3/8" 54#
-	59000379-1338-61	10146082-005	Nose cone 13.3/8" 61#
1	59000379-1338-68	10146082-006	Nose cone 13.3/8" 68#
1	59000379-1338-72	10146082-007	Nose cone 13.3/8" 72#
-	59000379-1338-77	10146082-029	Nose cone 13.3/8" 77#

# ROTARY SUPPORT TABLES



## RST ROTARY SUPPORT TABLE

- Smaller, lighter and more cost effective for top drive equipped rigs.
- Uses hydraulic motors directly geared to the rotary drive gear.
- Eliminates the transmission and the drive train.
- Standard hydraulic operated lock permits the table to be locked at any position, in both directions.
- Reduces the rotary skid size.
- Lower maintenance costs.
- Hydraulic dynamic slip ring allows operation of PS21/30 power slip without manually breaking/making hydraulic connections, except RST755 + False
- Central lubrication system allows easy greasing of all moving RST-parts.
- Maximum back-up torque on locks is 120,000 ft-lbs.; RST375 max. 80,000 ft-lbs.
- Can be ordered with hinged adapter in size range from 37.1/2" to 75.1/2".
- External skid mounted hydraulic hook up kit (HUK) for easy maintenance.
- PS21/30 controls are included in the control station
- Recessed tracks optional
- PS Power Slip Autogreasing System available



### Available tables

- RST375 is available with or without slip ring
- RST495 is available with or without slip ring
- RST605 is available with or without slip ring
- RST755 without slip ring
- RST495 and 605-False without drive motors / slip ring but including the hydraulic lock for positioning of the rotary bowl. Supplied with a hook up system for the RST and the PS21/30, provided with automated greasing for both the PS and the RST.
- The RST495-H and RST605-H are the heavy duty versions of the RST495 and 605 series with increased load capacity.
- RST755-H is the heavy duty versions of the RST755 with increased load capacity.

## TECHNICAL SPECIFICATIONS

RST-SPECIFICATIONS*	RST375**	RST495**	RST495-H	RST495 False	RST605**	RST605 False	RST605 -H**	RST755 w/o slip ring	RST755-H w/o slip ring
Table size [inches]	37.1/2	49.1/2	49.1/2	49.1/2	60.1/2	60.1/2	60.1/2	75.1/2	75.1/2
Load rating static [sTon/Tonne]	750 / 680	1,000 / 907	1,250 / 1,134	1,000 / 907	1,000 / 907	1,000 / 907	1,375 / 1,250	1,375 / 1,250	1,500 / 1,361
Torque max. [ft. lbs] / Nm (@ 3000 psi / 20,684 kPa)	30,000 / 40,674	45,000 / 61,011	45,000 / 61,011	n/a	45,000 / 61,011	n/a	45,000 / 61,011	45,000 / 61,011	45,000 / 61,011
Speed max. [rpm]	15	15	15	***	15	***	15	15	15
Max. operational speed [rpm]	5	5	5	20 ***	5	20 ***	5	5	5
Dimensions [LxWxH] (incl. top cover) [inches]	89 x 61.75 x 28	105 x 82 x 30.5	105 x 82 x 30.5	105 x 82 x 30.5	114 x 95 x 30.5	114 x 95 x 30.5	114 x 95 x 31.21	132.75 x 114 x 31.21	132.75 x 114 x 31.21
Dimensions [LxWxH] (frame only) [inches]	86.82 x 58.78 x 28	99 x 82 x 30.5	99 x 82 x 30.5	99 x 82 x 30.5	109 x 91 x 30.5	109 x 91 x 30.5	109 x 91 x 31.21	127.75 x 110 x 31.21	127.75 x 110 x 31.21
Weight, approx. [lbs / kg]	14,102 / 6,396	22,082 / 10,016	25,823 / 11,713	19,026 / 8,630	25,823 / 11,713	22,949 / 10,409	28,050 / 12,723	32,906 / 14,926	33,660 x 15,277
Maximum working pressure [psi / kPa]	3,000 / 20,684	3,000 / 20,684	3,000 / 20,684	3,000 / 20,684	3,000 / 20,684	3,000 / 20,684	3,000 / 20,684	3,000 / 20,684	3,000 / 20,684
Maximum flow [gpm / lpm]	75 / 284	115 / 435	115 / 435	10 / 38	115 / 435	10 / 38	115 / 435	115 / 435	115 / 435

\* All data subject to conformation by manufacturer.

\*\* Available w/ OR w/o slip ring

\*\*\* No motors.

### MAIN PART NUMBERS

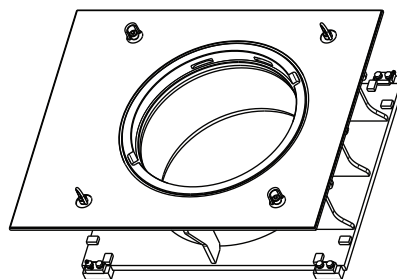
The RST Rotary Support Tables are customer specific, hence the part numbers are unique for all tables.

When ordering a Rotary Support Table, customer will be requested to specify dimensions, I/O etc.

Rotary Support Tables delivery will include the hook up kit, containing the required manifolds, greasing pumps and reservoirs.

## SST STATIC SUPPORT TABLE

- SST: Static table for support purposes only, has no moving parts and does not supply hydraulic fluids.
- Accommodates existing power slips with or without adapter rings.
- To be used as a auxiliary well center location.
- Table can apply back up torque via drive lug pockets.



## TECHNICAL SPECIFICATIONS

SST-SPECIFICATIONS	SST375	SST495	SST605	SST755
Table size [inches]	37.1/2	49.1/2	60.1/2	75.1/2
Load rating [sTon/Tonne]	750 / 680	1,000 / 907	1,250 / 1,134	1,375 / 1,247
Torque back-up [ft-lbs / Nm]	50,000 / 67,791	120,000 / 162,698	120,000 / 162,698	120,000 / 162,698
Dimensions [LxWxH] (incl. top cover) [inches]	89 x 61.75 x 28	105 x 88 x 30.5	120.13 x 100.75 x 35.25	135 x 114 x 31.25
Dimensions [LxWxH] (frame only) [inches]	TBD	TBD	103 x 84 x 35.25	TBD
Weight, approx. [lbs/kg]	7,000 / 3,175	11,500 / 5,216	15,300 / 6,940	22,500 / 10,206

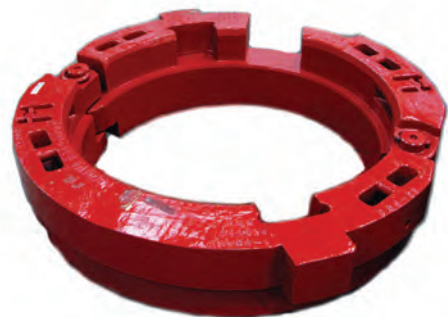
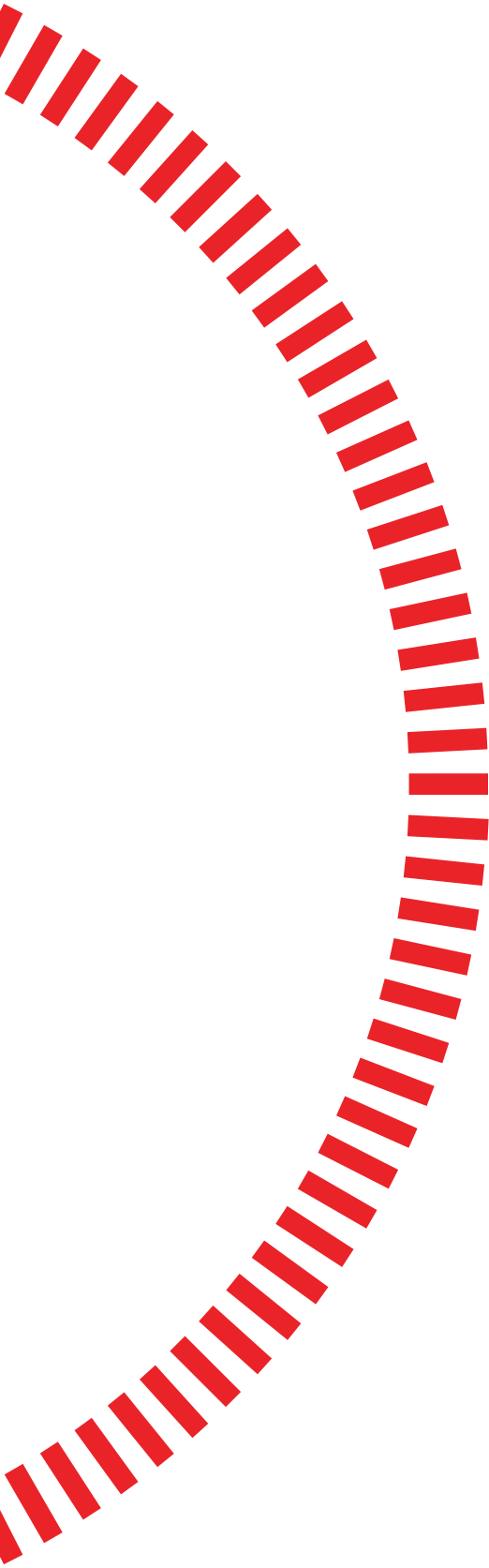
## MAIN PART NUMBERS

SST-MODEL	SST375	SST495	SST605	SST755
Part number	50005457	50005459	50005452	50005453
Oracle number	10142422-001	Contact NOV	10111392-001	Contact NOV





# ADAPTER RINGS



## ADAPTER RINGS

Adapter rings, both solid and hinged to be used for creating a smaller rotary opening.

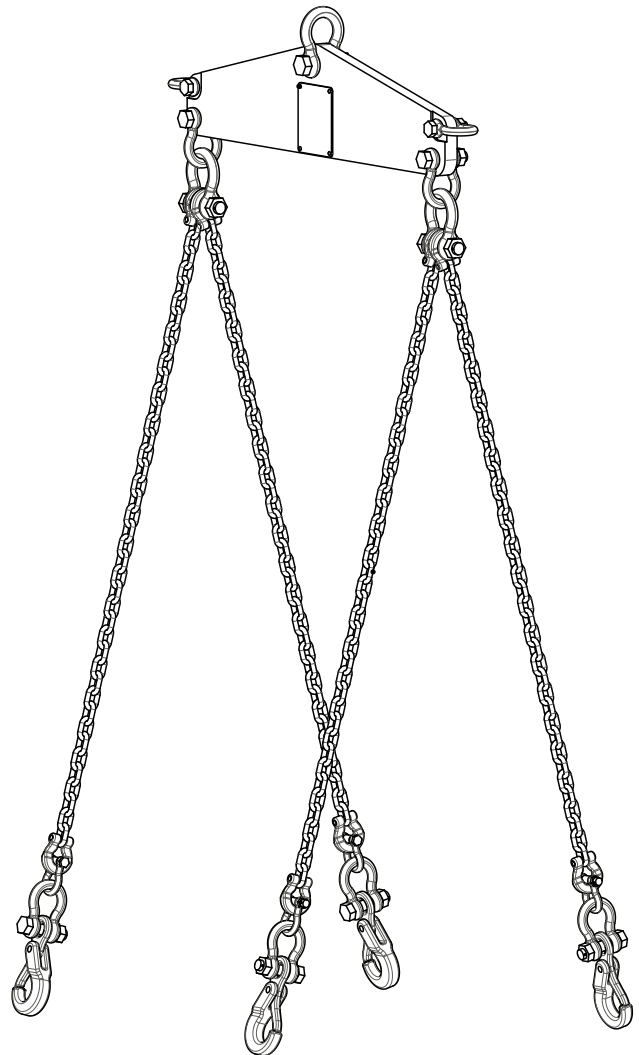


### MAIN PART NUMBERS CONFORM API 7K LATEST EDITION

Configuration and size (from - to) [inch]	Rating [sTon / Tonne]	Partnumber	Oracle number	Remark
NOV 75.1/2" to NOV 60.1/2"	1,500 / 1,360	n/a	16670784-001	Hinged w/o recess for hoses
NOV 60.1/2" to National 49.1/2"	1,500 / 1,360	n/a	16668659-001	Hinged w recess for hoses
NOV 60.1/2" to National 49.1/2"	1,500 / 1,360	n/a	16668659-002	Hinged w/o recess for hoses
National 49.1/2" to National 37.1/2"	1,500 / 1,360	n/a	16668051-001	Hinged w recess for hoses
National 49.1/2" to National 37.1/2"	1,500 / 1,360	n/a	16668051-002	Hinged w/o recess for hoses
National 49.1/2" to National 37.1/2"	TBD *	n/a	11341269-001	Solid w/o recess for hoses, designed for taking spreading forces, e.g. CB Bushings
National 37.1/2" to National 37.1/2"	500 / 454	n/a	10706632-501	Hinged w/o recess for hoses
Oilwell 37.1/2" to National 37.1/2"	500 / 454	n/a	10705592-501	Hinged w/o recess for hoses
Emsco 37.1/2" to National 37.1/2"	500 / 454	n/a	10706320-501	Hinged w/o recess for hoses
National 37.1/2" to API standard 27.1/2"	750 / 680	n/a	10142073-501	Hinged w/o recess for hoses
Oilwell 37.1/2" to API standard 27.1/2"	750 / 680*	n/a	10142075-501	Hinged w/o recess for hoses
Emsco 37.1/2" to API standard 27.1/2"	750 / 680*	n/a	10142067-501	Hinged w/o recess for hoses

\*= Rating to be verified by DVT

# LIFTING SLINGS & WIRE LINE GUIDE



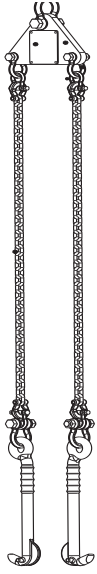
## LIFTING SLINGS SELECTION CHART

### GENERAL INFORMATION + PART NUMBERS

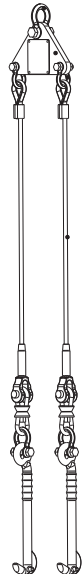
Purpose	Rating (Short Tons)	Configuration		Spreader bar		Leg design		Bottom config.		Overhead hoisting		Designed acc. to:	Oracle number	Part number
		2-way	4-way	Yes	No	Cable	Chain	Hook	Shackle	Yes	No			
For MPC, MSP, MBH, LSB masterbushings + E/S adapter plates + CB Bushing, PS21, PS30, FMS375	2.8		X	X		X		X			X	X	10700699-001	50001110
For PS15, bit breaker plates, FMS275	1.4	X		X		X		X			X	X	10700700-001	50001120
For #1, #2 and #3 drilling bowls. CU and CUL bushings	1.4	X		X		X		X		X	X	X	10700702-001	50001130
For MPC, MSP, MBH, LSB masterbushings + E/S adapter plates + CB Bushing, PS21, PS30, FMS375	2.8		X	X		X		X			X	X	10700703-001	50001140
For PS15, bit breaker plates, FMS275	1.4	X		X		X		X			X	X	10700704-001	50001150
For #1, #2 and #3 drilling bowls. CU and CUL bushings	1.4	X		X		X		X		X	X	X	10700705-001	50001160
For SJX, DSJX, SJH, SPL, SJL	12.0	X			X	X		X			X	X	10115190-001	50001105
For FMS375, PS21, PS30	6.0	X		X		X		X			X	X	10112862-001	200982-1
For Master bushings, PS15, #1, #2 and #3 drilling bowls.	1.8	X			X	X		X			X		10014790-001	1021
For Master bushings	6.0	X		X		X		X			X		10788731-001	6699
For SJ, SJL, SP, SPL	5.0	X		X		X		X		X	X	X	10033182-001	34568-5
For PS495 and FMS495	11.0	X		X		X		X			X	X	10744961-005	-
For hanging single joint elevators underneath the CRT.	10.0	X			X	X		X			X	X	10970940-001	50008021
For PS16 and FMS275.	1.4	X			X	X		X			X	X	10145949-001	59000300
Short leg 4-way lifting sling with chain-legs and standard hooks. Fits PS16.	2.8	X		X		X		X			X	X	16566846-001	50004848

Slings which are compliant with DNV2.22 are optionally available with DNV or ABS witness. Delivery time depending on availability of type approval.

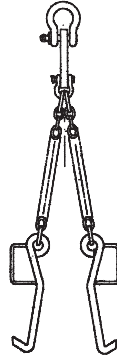
## LIFTING SLINGS



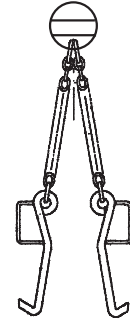
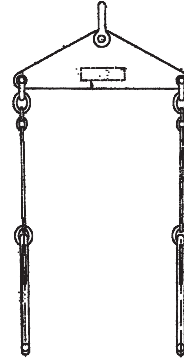
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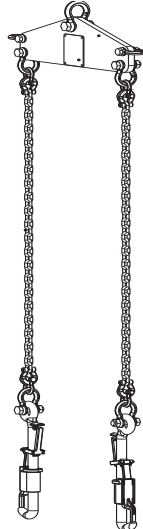
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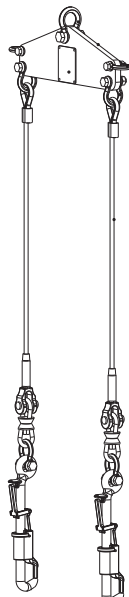
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PN 50001120 / 10700700-001



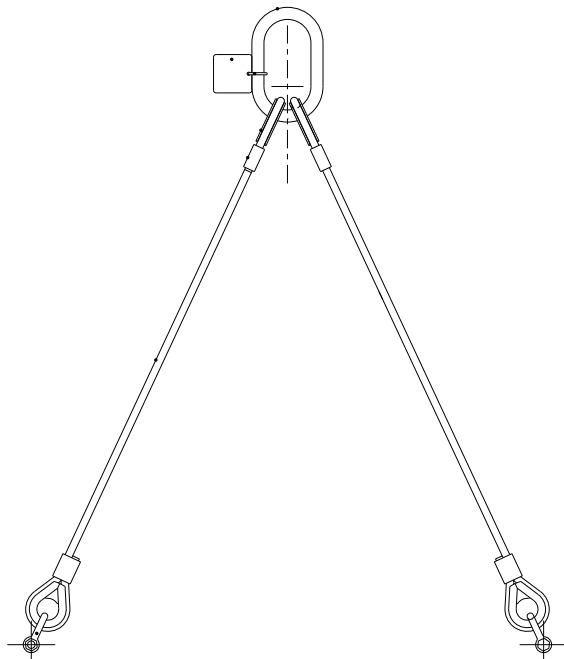
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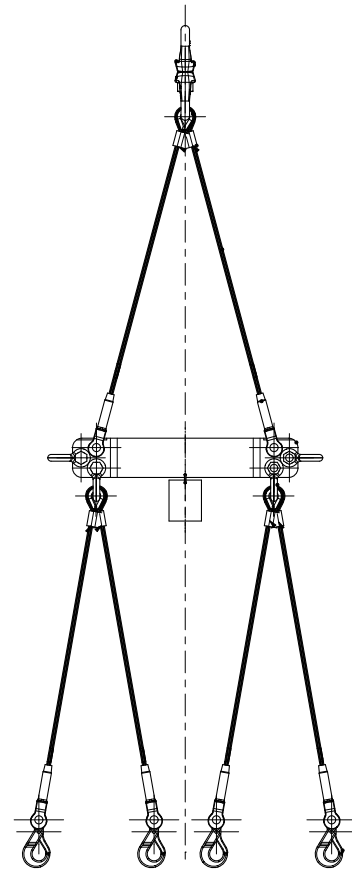
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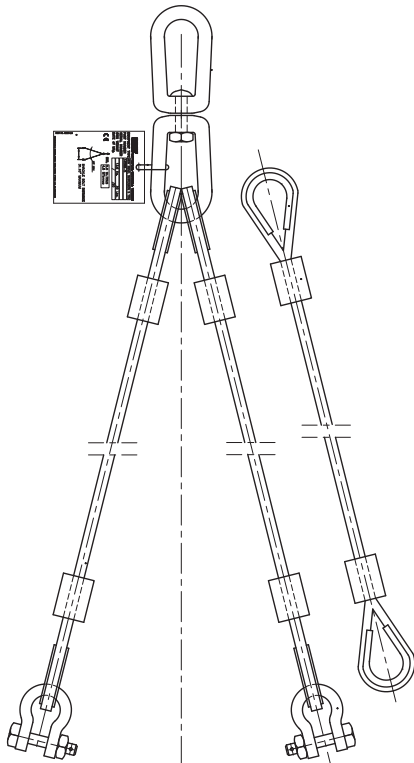
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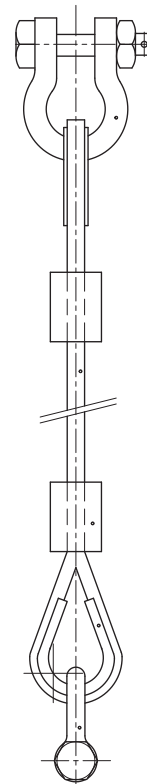
PN 50001105 / 10115190-001



PN 200982-1 / 10115190-001



PN 34568-5 / 10033182-001



PN 50008021 / 10970940-001

## WIRE LINE GUIDE

Excessive wire line wear caused by uncontrolled whipping and vibration can lead to wire line failure, endangering the crew, the rig and the entire drilling investment. The wire line guide is designed to absorb dangerous whiplash and traveling waves in wire lines. This effective

dampening action prevents excessive wire line wear, uneven line spooling, line pile-up including protection of the wire line sheave (first entry sheave) installed in the crown block as the line spools onto and off the drum.

Wire line whiplash and waves are absorbed by the wire line guides and the energy is transmitted through the guide body, to the hanging assembly, where they are dissipated. This assures an as straight and steady as possible line motion accomplished with maximum damping.

The wire line guide has omitted the traditional rubber rollers and instead is using wear bushings manufactured from a typical low friction, wear resistant bearing material. The functionality and rig setup is identical for each design.

Both designs and thus changing out units does not require any modification to the wire setup.



## TECHNICAL SPECIFICATIONS

Subject	Description
Wire diameter	The fast-line stabilizer is designed for fast-line diameter from below <1" to 2.1/2" .
Protective coating	Due to high exposure of being damaged during operation the unit is preserved with hot metal spray (not to be confused with zinc paint).
Material of bushings	The bushing have been manufactured of extreme wear resistant material and shall only be replaced by NOV bushings.
Weight	Appr. 165.8 Lbs / 75.2 kg

## MAIN PART NUMBER

Description	P/N
Wire Line Guide Assembly	1467858-AS



Traditional design with rollers.

## WIRE LINE GUIDE SIZE COMPONENTS

Wire Line Diameter [inch]	Inner bore	PN assembly complete dressed with bushings	PN ass'y one set of 2 bushing halves
1	1.300	11467858-001	11467867-001
1.5	1.800	11467858-002	11467867-002
2	2.300	11467858-003	11467867-003
2.5	2.800	11467858-004	11467867-004





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