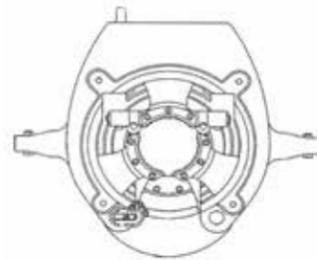
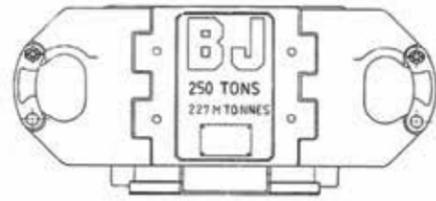


Pipe size range for each model									
PIPE SIZE	BJ-TYPE		VARCO SL TYPE					FMS STYLE	
	250 t 7 7/8"	350 t 13 3/8"	500 t 14"	750 t 14"	500 t 24 1/2"	750 t 24 1/2"	1000 t 24 1/2"	250 t 7 7/8"	500 t 14"
2 3/8"									
2 7/8"									
3 1/2"									
4"									
4 1/2"									
5"									
5 1/2"									
5 3/4"									
6"									
6 3/8"									
7"									
7 3/8"									
7 3/4"									
8 3/8"									
8 3/4"									
9 3/8"									
9 3/4"									
9 7/8"									
10"									
10 3/4"									
10 7/8"									
11 3/4"									
11 7/8"									
12"									
12 3/4"									
13 3/8"									
13 1/2"									
13 3/4"									
13 7/8"									
14"									
16"									
17"									
18"									
18 3/8"									
20"									
22"									
24"									
24 1/2"									

BJ-250

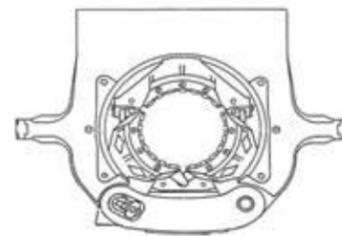
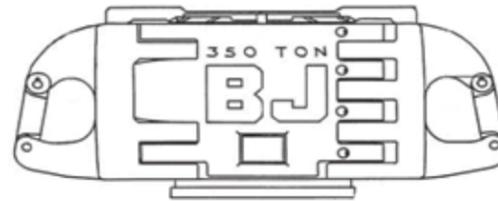


Description

The BJ-250 elevator/spider tool is designed for lifting and suspending tubular goods, from light tubing to heavy wall pipe and drill collars. The 250 sTon model is designed for medium to long strings of smaller casing. 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 unitized design of the slip assembly allows the tool to grip casing with uniform circumferential pressure, ensuring a safe hold while minimizing the possibility to damage the pipe. The unit is either manual or air operated. A double hinged door permits the unit to be rapidly installed on the casing or removed.

Technical specifications	
Weight without slip assembly (lbs/kg)	2,043 / 927
Max weight slips set w/inserts (lbs/kg)	550 / 250
Casing size ranges (inches)	2 3/8 up to 7 7/8"
Load rating (sTon/Tonne)	250 / 226
Normal operating pressure (psi/kPa)	85 / 585
Max. operating pressure (psi/kPa)	125 / 861
Min. allowed ambient temperature	-4°F / -20°C
Max. allowed ambient temperature	131°F / 55°C

BJ-350

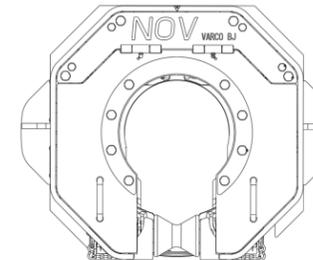
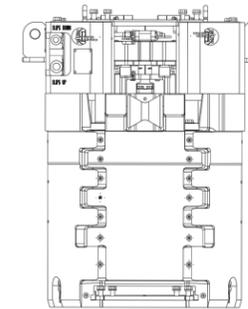


Description

The BJ-350 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 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 unitized design of the slip assembly allows the tool to grip casing with uniform circumferential pressure, ensuring a safe hold while minimizing the possibility to damage the pipe. The unit is either manual or air operated. A double hinged door permits the unit to be rapidly installed on the casing or removed.

Technical specifications	
Weight without slip assembly (lbs/kg)	3,500 / 1,587
Max weight slips set w/inserts (lbs/kg)	650 / 295
Casing size ranges (inches)	4 1/2 up to 13 3/8"
Load rating (sTon/Tonne)	350 / 317
Normal operating pressure (psi/kPa)	85 / 585
Max. operating pressure (psi/kPa)	125 / 861
Min. allowed ambient temperature	-4°F / -20°C
Max. allowed ambient temperature	131°F / 55°C

FMS275

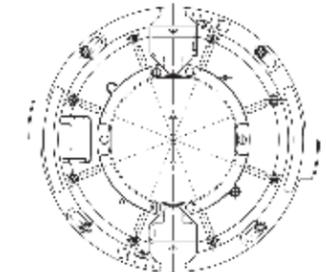
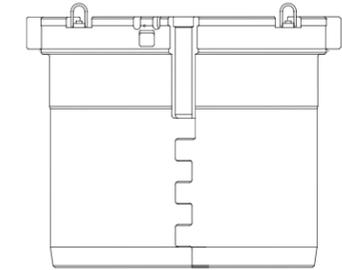


Description

The FMS275 is a hydraulic operated near-flush mounted slip for running completion strings eliminating the need for scaffolding. It enables rigs to handle completion strings and casing up to 7 7/8" in diameter with large umbilicals or control lines. The unit is a companion tool to the "BJ" style 250 sTon elevator/spider. The slip 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 it eliminates the need for a manual tong. The powered down slips allow the first joint of casing to be run with the FMS. The replaceable slip and insert carriers are set/raised by the operator using remote controls.

Technical specifications	
Weight without slip assembly (lbs/kg)	2,755 / 1,250
Weight FMS with slips and guides (lbs/kg)	3,300 / 1,497
Pipe size ranges (inches)	2 3/8 up to 7 7/8"
Load rating (sTon/Tonne)	250 / 226
Rotary size (inches)	27.5 (or reduced from 37.5)
Min. inlet pressure (psi/kPa)	1,500 / 10,342
Normal operating pressure (psi/kPa)	2,000 / 13,790
Max. operating pressure (psi/kPa)	2,500 / 17,237
Recommended inlet pressure slips up (psi/kPa)	500 - 750 / 3,447 - 5,171
Max pressure slips up (psi/kPa)	1,000 / 6,895
Min. pressure differential between pressure line and return line (psi/kPa)	200 / 1,378
Max allowed pressure in return line (psi/kPa)	200 / 1,378
Applied max. back-up torque @ 2,500 psi / 17,237 kPa (ft/lbs/Nm)	14,370 / 19,483

FMS375

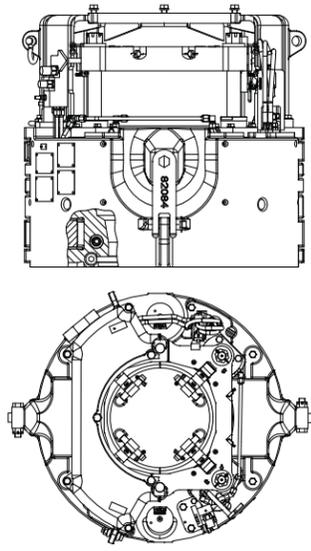


Description

The FMS375 is mounted flush with the rig floor, allowing the casing connection height to be lowered 1 meter (3 ft.), thus eliminating the need for scaffolding. This gives the rig crew more room to work by removing the spider body from the top of the rig floor. The unit is designed to fit standard 37" rotary tables and can be used in combination with the 500 sTon 14" Varco type elevator spider. The slip 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 it eliminates the need for a manual tong. The powered down slips allow the first joint of casing to be run with the FMS. The replaceable slip and insert carriers are set/raised by the operator using remote controls.

Technical specifications	
Weight without slip assembly (lbs/kg)	5,392 / 2,446
Weight FMS with slips and guides (lbs/kg)	6,992 / 3,171
Pipe size ranges (inches)	4 1/2 up to 14"
Load rating (sTon/Tonne)	500 / 454
Rotary size (inches)	37.5
Min. inlet pressure (psi/kPa)	1,500 / 10,342
Normal operating pressure (psi/kPa)	2,000 / 13,790
Max. operating pressure (psi/kPa)	2,500 / 17,237
Recommended inlet pressure slips up (psi/kPa)	500 - 750 / 3,447 - 5,171
Max pressure slips up (psi/kPa)	1,000 / 6,895
Min. pressure differential between pressure line and return line (psi/kPa)	200 / 1,378
Max allowed pressure in return line (psi/kPa)	200 / 1,378
Applied max. back-up torque @ 2,500 psi / 17,237 kPa (ft/lbs/Nm)	40,000 / 54,232

Varco-500 14"

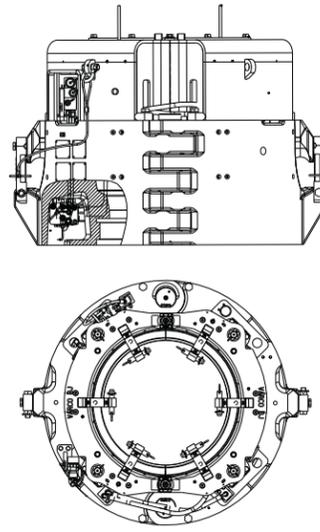


Description

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 bell guide. The lower unit is dressed as a spider, using a top guide to aid in centering casing.

Technical specifications	
Max weight slips set w/inserts (lbs/kg)	600 / 272
Load rating (sTon /Tonne)	500 / 454
Casing size range (inches)	4½ up to 14
MANUAL & PNEUMATIC ELEVATORS	
Weight without slip assembly (lbs/kg)	5,000 / 2,268
Normal operating pressure (psi/kPa)	85 / 585
Max. operating pressure (psi/kPa)	125 / 861
HYDRAULIC ELEVATORS	
Weight without slip assembly (lbs/kg)	5,392 / 2,446
Min. inlet pressure (psi/kPa)	1,500 / 10,342
Normal operating pressure (psi/kPa)	2,000 / 13,790
Max. inlet pressure (psi/kPa)	2,500 / 17,237
Recommended inlet pressure slips up (psi/kPa)	500 - 750 / 3,447 - 5,171
Max. pressure slips up (psi/kPa)	1,000 / 6,895
Max. pressure slips down (psi/kPa)	2,500 / 13,790
Min. pressure differential between pressure line and return line (psi/kPa)	200 / 1,378
Max. allowed pressure in return line (psi/kPa)	200 / 1,378

Varco-500 24½"

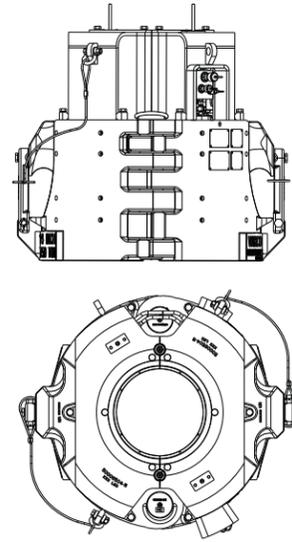


Description

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 bell guide. The lower unit is dressed as a spider, using a top guide to aid in centering casing.

Technical specifications	
Max weight slips set w/inserts (lbs/kg)	600 / 272
Load rating (sTon /Tonne)	500 / 454
Casing size range (inches)	16 up to 24½
MANUAL & PNEUMATIC ELEVATORS	
Weight without slip assembly (lbs/kg)	7,950 / 3,606
Normal operating pressure (psi/kPa)	85 / 585
Max. operating pressure (psi/kPa)	125 / 861
HYDRAULIC ELEVATORS	
Weight without slip assembly (lbs/kg)	9,500 / 4,275
Min. inlet pressure (psi/kPa)	1,500 / 10,342
Normal operating pressure (psi/kPa)	2,000 / 13,790
Max. inlet pressure (psi/kPa)	2,500 / 17,237
Recommended inlet pressure slips up (psi/kPa)	500 - 750 / 3,447 - 5,171
Max. pressure slips up (psi/kPa)	1,000 / 6,895
Max. pressure slips down (psi/kPa)	2,500 / 13,790
Min. pressure differential between pressure line and return line (psi/kPa)	200 / 1,378
Max. allowed pressure in return line (psi/kPa)	200 / 1,378

Varco-750 14"

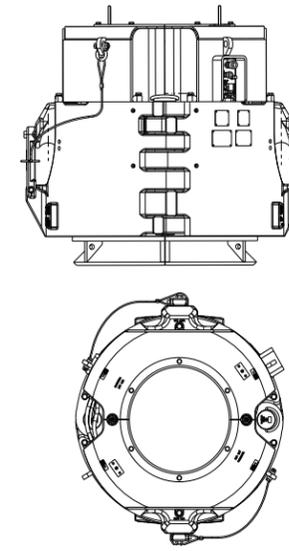


Description

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 bell guide. The lower unit is dressed as a spider, using a top guide to aid in centering casing.

Technical specifications	
Max weight slips set w/inserts (lbs/kg)	794 / 360
Load rating (sTon /Tonne)	750 / 680
Casing size range (inches)	6½ up to 14
MANUAL & PNEUMATIC ELEVATORS	
Weight without slip assembly (lbs/kg)	7,500 / 3,402
Normal operating pressure (psi/kPa)	85 / 585
Max. operating pressure (psi/kPa)	125 / 861
HYDRAULIC ELEVATORS	
Weight without slip assembly (lbs/kg)	7,500 / 3,402
Min. inlet pressure (psi/kPa)	1,500 / 10,342
Normal operating pressure (psi/kPa)	2,000 / 13,790
Max. inlet pressure (psi/kPa)	2,500 / 17,237
Recommended inlet pressure slips up (psi/kPa)	500 - 750 / 3,447 - 5,171
Max. pressure slips up (psi/kPa)	1,000 / 6,895
Max. pressure slips down (psi/kPa)	2,500 / 13,790
Min. pressure differential between pressure line and return line (psi/kPa)	200 / 1,378
Max. allowed pressure in return line (psi/kPa)	200 / 1,378

Varco-750 24½"

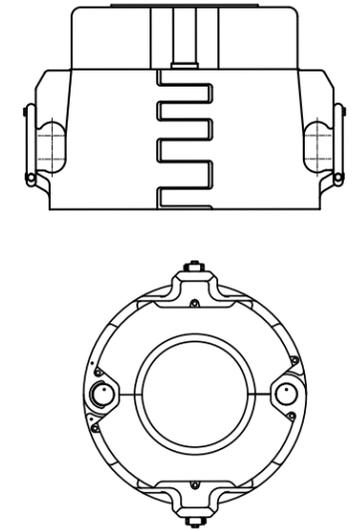


Description

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 bell guide. The lower unit is dressed as a spider, using a top guide to aid in centering casing.

Technical specifications	
Max weight slips set w/inserts (lbs/kg)	1,559 / 707
Load rating (sTon /Tonne)	750 / 680
Casing size range (inches)	8½ up to 24½
MANUAL & PNEUMATIC ELEVATORS	
Weight without slip assembly (lbs/kg)	9,500 / 4,275
Normal operating pressure (psi/kPa)	85 / 585
Max. operating pressure (psi/kPa)	125 / 861
HYDRAULIC ELEVATORS	
Weight without slip assembly (lbs/kg)	12,209 / 5,538
Min. inlet pressure (psi/kPa)	1,500 / 10,342
Normal operating pressure (psi/kPa)	2,000 / 13,790
Max. inlet pressure (psi/kPa)	2,500 / 17,237
Recommended inlet pressure slips up (psi/kPa)	500 - 750 / 3,447 - 5,171
Max. pressure slips up (psi/kPa)	1,000 / 6,895
Max. pressure slips down (psi/kPa)	2,500 / 13,790
Min. pressure differential between pressure line and return line (psi/kPa)	200 / 1,378
Max. allowed pressure in return line (psi/kPa)	200 / 1,378

Varco-1000 24½"



Description

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 bell guide. The lower unit is dressed as a spider, using a top guide to aid in centering casing.

Technical specifications	
Max weight slips set w/inserts (lbs/kg)	1,559 / 707
Load rating (sTon /Tonne)	1000 / 907
Casing size range (inches)	8½ up to 24½
MANUAL & PNEUMATIC ELEVATORS	
Weight without slip assembly (lbs/kg)	14,293 / 6,483
Normal operating pressure (psi/kPa)	85 / 585
Max. operating pressure (psi/kPa)	125 / 861
HYDRAULIC ELEVATORS	
Weight without slip assembly (lbs/kg)	N/A
Min. inlet pressure (psi/kPa)	N/A
Normal operating pressure (psi/kPa)	N/A
Max. inlet pressure (psi/kPa)	N/A
Recommended inlet pressure slips up (psi/kPa)	N/A
Max. pressure slips up (psi/kPa)	N/A
Max. pressure slips down (psi/kPa)	N/A
Min. pressure differential between pressure line and return line (psi/kPa)	N/A
Max. allowed pressure in return line (psi/kPa)	N/A