



SPM™ Oil & Gas

A Caterpillar Company

**Production
Equipment**

About SPM Oil & Gas

SPM Oil & Gas provides superior products and service solutions to make our customers more efficient and lower total cost of ownership. More customers choose our SPM® pressure pumping solutions than any other. We provide SPM® well service and stimulation pumps, flow control products, replacement expendable parts and supporting engineered repair services. SPM's Pressure Control solutions include Seaboard™ and KOP™ wellheads, API valves, frac trees, managed pressure drilling equipment including Mathena™ chokes, separators and containment equipment. Globally, we deliver engineered mechanical and rotating equipment repairs and upgrades, oilfield and drilling equipment repair and certification, rapid prototyping or spare parts, robust asset management and field engineering services.



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Rocky

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2⁷/₈ 8RD EUE



Contents

Wellheads _____	6	High Performance Stuffing Box _____	22
W2 Profile Tubing Head _____	6	Big Shot Stuffing Box (W-BS) _____	22
WK/WMK/WSK Tubing Head _____	7	W-Big Shot Tee Based Stuffing Box (W-BST) _____	22
WR/WMR/WSR Tubing Head _____	8	High Temperature Stuffing Boxes _____	23
W92 Casing Head _____	9	High Temperature Double Pack Stuffing Box _____	23
WX Tubing Head _____	10	High Pressure Double Pack Stuffing Boxes with Flapper Valve (W-HPSBF) _____	23
Wellhead Accessories _____	11	Glands _____	24
Drilling Flanges _____	11	High Pressure Lube Upper Gland (W-HPLUG) _____	24
Companion Flange _____	12	Big Shot BS-HPLUG _____	24
Belled Nipples _____	12	Lube Upper Gland (W-LUG) _____	25
Tubing Rotators _____	13	Fluid Reserve Gland (FRG) _____	26
W2 Tubing Rotators _____	13	Environmental Control Adapters _____	27
Blow Out Preventers (BOP) _____	14	Environment Control Adapters (ECA) _____	27
W-500F Flanged Rod BOP Single/Dual _____	14	ECA with Weight Activated Switch _____	27
W-300 and 500T Threaded BOP _____	14	Packing _____	28
W-212 BOP _____	15	5K Stuffing Box Packing Options: CP Style, QT Style, V-Packing _____	29
W-150 BOP _____	15	1.5K Stuffing Box Packing Options : V-Style Packing _____	30
Hookup Accessories _____	16	Accessories Used with Dee Packing _____	31
5K Pumping Tee _____	16	Conversion Kit from Cone Packing to Dee Packing _____	31
3K Pumping Tee _____	16	W-HPLUG/FRG Adapter with Dee Packing _____	31
Classic Stuffing Boxes _____	17	Polished Rod Accessories _____	32
Inverted Stuffing Box (W-IVSB) _____	17	Rod Lubricator with Wicks _____	32
Inverted Tee Based Stuffing Box (W-IVSBT) _____	17	Leveling Plates _____	32
Stuffing Box (W-SB) _____	18	Polish Rod Bullet _____	33
Tee Based Stuffing Box (W-SBT) _____	18	Stuffing Box Clamp _____	33
Double Pack Stuffing Box (W-DPSB) _____	19	Rod Rotators _____	34
Inverted Double Pack Stuffing Box (W-IVDPSB) _____	19	W-164/164SG, W-252, W-302/302SG, W-303/303SG, W-304/304SG _____	34
Big Shot Double Pack Stuffing Box (W-BSDP) _____	20	Polished Rod Clamps _____	35
3K Big Shot Double Pack Stuffing Box (BSDP) _____	20	Friction-type Clamp _____	35
Pollution Control Stuffing Boxes _____	21	Indention-type Clamp _____	35
Pollution Controlled Double Pack Stuffing Box (W-PCDP) _____	21		



Comprehensive Production Equipment Solutions

Simplicity delivered

Production equipment solutions have been engineered to enhance safety, increase efficiency and provide extended and improved control over oil and gas production. This economical option has also been enhanced with a smaller footprint and has the ability for rapid installation. Production equipment include:

Stuffing Boxes | Production BOPs | Polish Rod Accesories



1,500 psi stackup



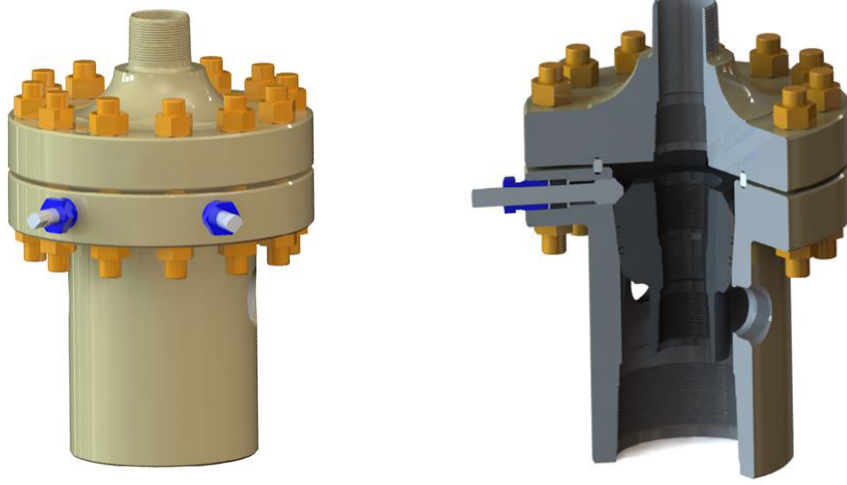
3,000 psi stackup



5,000 psi stackup
with dual ram BOP

- 5,000 psi BOP exclusive design is also available in the dual ram integral tee version with customized flange configurations
- High-temp applications available
- 10,000 psi BOP offering available

W2 Profile Tubing Head



B1 Adapter with mandrel

Design Features

- 2,000 psi/3,000 psi/5,000 psi working pressure
- 4,000 psi/6,000 psi/7,500 psi test pressure
- Slip flange available with 85,000 lb maximum slip load
- Tapered bowl-profile tubing head
- Tubing head available with bottom threaded or slip on weld connection
- Flanged top connection available with thread or flange up

Advantages

- Unique V-style rubber packing ring which energizes under pressure to provide superior seal in slip flange style

Specifications	W2 2,000 psi	W2 3,000 psi	W2 5,000 psi
Test pressure	4,000 psi	6,000 psi	7,500 psi
Hold down screws	4	4	4 or 6
Stud nut sizes	1 in 8UN x 7 1/2 in (12)	1 1/8 in 8UN x 8 1/2 in (12)	1 3/8 in 8UN x 11 1/4 in (12)
Weight	220 lbs	285 lbs	500 lbs
Body material	Forged		
Suspension type	Threaded, slip or mandrel		
Bottom thread	4 1/2 in, 5 1/2 in, 7 in		
Bottom connection	LTC box or SOW		
Tubing size	2 – 3 in		
Side outlets	2 in LP		
Minimum bore	4.06 in, 5.12 in, 6.38 in		
Height	18 1/2 in		

WK/WMK/WSK Tubing Head



WSK

Design Features

- Max 1,500 psi working pressure
- 3,000 psi test pressure
- 65,000 lb maximum slip load
- Unique V-style rubber packing ring which energizes under pressure to provide superior seal in slip style

Advantages

- Available in both slip style for pumping wells or mandrel style for gas well applications

Specifications	WK/WMK Tubing Head 1,500 psi			WSK Tubing Head 1,500 psi		
Bottom connection	8rd			8rd		
Test pressure	3,000 psi			3,000 psi		
Max slip load limit	65,000 lb			65,000 lb		
Cap thread	7 5/8 in 8rd			7 5/8 in 8rd		
Cap/body material	Ductile			Ductile		
Type suspension	Slip or mandrel			Slip or mandrel		
Bottom thread	4 1/2 in	5 1/2 in	7 in	4 1/2 in	5 1/2 in	7 in
Side outlets	2 in LP	2 in LP	2 in LP	2 in LP	2 in LP	2 in LP
Inner string size	1-2 1/2 in	1-2 1/2 in	1-3 in	1-2 1/2 in	1-2 1/2 in	1-3 in
Minimum bore	4.06 in	5.12 in	6.38 in	4.06 in	5.12 in	6.38 in
Height	12 in	12 in	12 in	16 1/2 in	16 1/2 in	16 1/2 in
Weight	82 lb	82 lb	82 lb	116 lb	116 lb	116 lb
Stripper rubbers	NA	NA	NA	1-2 1/2 in	1-2 1/2 in	1-2 1/2 in

WR/WMR/WSR Tubing Head



WR

Design Features

- Max 3,000 psi working pressure
- 6,000 psi test pressure
- 85,000 lb maximum slip load

Benefits

- Available in both slip style for pumping well or mandrel style for gas well applications
- Unique V-style rubber packing ring which energizes under pressure to provide superior seal in slip style

Specifications	WR/WMR/WSR Tubing Head 3,000 psi		
Bottom connection	8rd or SOW		
Test pressure	6,000 psi		
Max load limit	85,000 lb		
Cap thread	7 ⁵ / ₈ in mod 8rd		
Cap material	Steel		
Type suspension	Slip or mandrel		
Side outlets	2 in LP		
Stripper rubbers	2–3 in		
Body material	Steel		
Height–WR	13 ³ / ₈ in		
Weight–WR	132 lb		
Height–WSR	19 ¹ / ₈ in		
Weight–WSR	187 lb		
Minimum bore	4.06 in	5.12 in	6.38 in
Inner string size	1–2 ¹ / ₂ in	1–3 in	1–3 in
Bottom thread	4 ¹ / ₂ in	5 ¹ / ₂ in	7 in

W92 Casing Head



Design Features

- Max 2,000 psi working pressure
- 4,000 psi test pressure rating
- 176,000 lb maximum slip load

Benefits

- Unique V-style rubber packing ring which energizes under pressure to provide superior seal in slip style
- Slips can be attached on the rig floor

Specifications

Bottom thread	7 in	7 $\frac{5}{8}$ in	8 $\frac{5}{8}$ in	9 $\frac{5}{8}$ in	10 $\frac{3}{4}$ in	11 $\frac{3}{4}$ in	12 $\frac{3}{4}$ in	13 $\frac{3}{8}$ in
Cap thread	8 $\frac{5}{8}$ in mod 8rd	10 $\frac{3}{4}$ in mod 8rd	10 $\frac{3}{4}$ in mod 8rd	11 $\frac{3}{4}$ in mod 8rd	12 $\frac{3}{4}$ in mod 8rd	16 in mod 8rd	16 in mod 8rd	16 in mod 8rd
Inner string size	4 $\frac{1}{2}$ in	4 $\frac{1}{2}$ –5 $\frac{1}{2}$ in	4 $\frac{1}{2}$ –7 in	4 $\frac{1}{2}$ –7 $\frac{5}{8}$ in	4 $\frac{1}{2}$ –8 $\frac{5}{8}$ in	4 $\frac{1}{2}$ –9 $\frac{5}{8}$ in	4 $\frac{1}{2}$ –9 $\frac{5}{8}$ in	4 $\frac{1}{2}$ –9 $\frac{5}{8}$ in
Minimum bore	6.44 in	7.00 in	8.00 in	9.00 in	10.00 in	11.00 in	12.00 in	12.50 in
Weight	110 lb	134 lb	161 lb	203 lb	231 lb	297 lb	363 lb	431 lb
Height	13 $\frac{5}{8}$ in	13 $\frac{5}{8}$ in	13 $\frac{5}{8}$ in	13 $\frac{5}{8}$ in	13 $\frac{5}{8}$ in	15 $\frac{7}{8}$ in	15 $\frac{7}{8}$ in	15 $\frac{7}{8}$ in
Bottom connection	8rd or SOW							
Cap material	Steel							
Type suspension	Slip or mandrel							
Side outlets	2 in LP							
Body material	Steel							

WX Tubing Head



Design Features

- Available in 2,000 psi, 3,000 psi and 5,000 psi working pressures
- Available in slip and seal design or mandrel tubing hanger
- Slip and seal parts available for 1 ¼ inch (1.66 inch) and 1 ½ inch (1.90 inch)
- Available for coil tubing applications

Benefits

- Small compact design that benefits when running a velocity string in a plunger lift application

Advantages

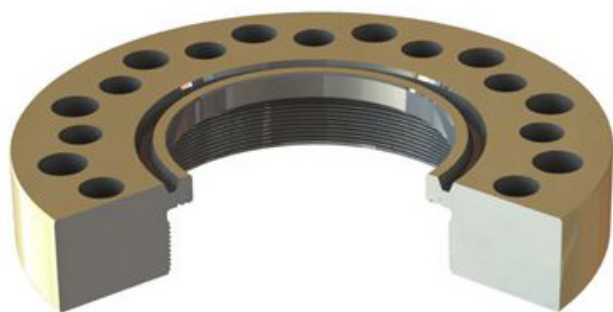
- Availability of 2 7/8 inch EUE 8rd bottom connection which reduces the probability of added connections to adapt from a casing thread to a tubing connection size

Sizes

2 7/8 inch UPTBG × 1.66 inch slip & seal

2 7/8 inch UPTBG × 1.90 inch slip & seal

Drilling Flanges



Design Features

- Max 2,000 psi working pressures

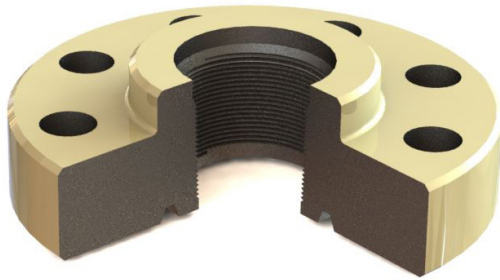
Benefits

- O-ring seal on flange face to wellhead
- Adapts a flanged BOP to an independent style or threaded wellhead connection

Specifications

API flange size	API Stated Pressure Rating	Thread size	Ring gasket	No. of studs	Stud size	For use with	O-ring size	Weight
7 $\frac{1}{16}$ in	2,000 psi	7 $\frac{5}{8}$ mod 8rd	R45	12	1 × 7 $\frac{1}{2}$ in	WK	2-440	56 lbs
9 in	3,000 psi	7 $\frac{5}{8}$ mod 8rd	R49	12	1 $\frac{3}{8}$ × 9 $\frac{1}{2}$ in	WK	2-440	87 lbs
7 $\frac{1}{16}$ in	2,000 psi	8 $\frac{5}{8}$ mod 8rd	R45	12	1 × 7 $\frac{1}{2}$ in	WR	2-443	56 lbs
7 $\frac{1}{16}$ in	3,000 psi	8 $\frac{5}{8}$ mod 8rd	R45	12	1 $\frac{1}{8}$ × 8 $\frac{1}{2}$ in	WR	2-443	56 lbs
9 in	3,000 psi	8 $\frac{5}{8}$ mod 8rd	R49	12	1 $\frac{3}{8}$ × 9 $\frac{1}{2}$ in	WR	2-443	87 lbs
7 $\frac{1}{16}$ in	2,000 psi	8 $\frac{5}{8}$ mod 8rd	R45	12	1 × 7 $\frac{1}{2}$ in	W92 7 in	2-444	65 lbs
9 in	3,000 psi	8 $\frac{5}{8}$ mod 8rd	R49	12	1 $\frac{3}{8}$ × 9 $\frac{1}{2}$ in	W92 7 in	2-444	87 lbs
11 in	2,000 psi	10 $\frac{3}{4}$ mod 8rd	R53	16	1 $\frac{1}{4}$ × 9 $\frac{1}{4}$ in	W92 8 $\frac{5}{8}$ in	2-448	172 lbs
11 in	3,000 psi	10 $\frac{3}{4}$ mod 8rd	R53	16	1 $\frac{3}{8}$ × 10 in	W92 8 $\frac{5}{8}$ in	2-448	171 lbs
11 in	2,000 psi	11 $\frac{3}{4}$ mod 8rd	R53	16	1 $\frac{1}{4}$ × 9 $\frac{1}{4}$ in	W92 9 $\frac{5}{8}$ in	2-450	164 lbs
11 in	3,000 psi	11 $\frac{3}{4}$ mod 8rd	R53	16	1 $\frac{3}{8}$ × 10 in	W92 9 $\frac{5}{8}$ in	2-450	163 lbs
13 $\frac{5}{8}$ in	2,000 psi	12 $\frac{3}{4}$ mod 8rd	R57	20	1 $\frac{1}{4}$ × 9 $\frac{1}{2}$ in	W92 10 $\frac{3}{4}$ in	2-452	156 lbs
13 $\frac{5}{8}$ in	3,000 psi	12 $\frac{3}{4}$ mod 8rd	R57	20	1 $\frac{3}{8}$ × 10 $\frac{3}{4}$ in	W92 10 $\frac{3}{4}$ in	2-452	155 lbs
13 $\frac{5}{8}$ in	2,000 psi	16 mod 8rd	R57	20	1 $\frac{1}{4}$ × 9 $\frac{1}{2}$ in	W92 11 $\frac{3}{4}$ in W92 12 $\frac{3}{4}$ in W92 13 $\frac{1}{8}$ in	2-458	183 lbs
13 $\frac{5}{8}$ in	3,000 psi	16 mod 8rd	R57	20	1 $\frac{3}{8}$ × 10 $\frac{3}{4}$ in	W92 11 $\frac{3}{4}$ in W92 12 $\frac{3}{4}$ in W92 13 $\frac{1}{8}$ in	2-458	182 lbs

Companion Flange



Flanged to threaded adapters.

Specifications

1 13/16 in 10,000 psi × 2 in LP F/5,000 service

1 13/16 in 10,000 psi × 2 3/8 in EUE 8rd F/5,000 service

2 1/16 in 5,000 psi × 2 in LP

2 1/16 in 5,000 psi × 2 3/8 in EUE 8rd

2 3/16 in 5,000 psi × 2 in LP

2 3/16 in 5,000 psi × 2 3/8 in EUE 8rd

Design Features

- Manufactured to API 6A specifications
- Other sizes available

Benefits

- Adapts a flange connection to a threaded connection

Belled Nipples



Belled Nipples — Slip on weld × male thread

Specifications

SOW Connection size 8rd	Height	Weight
4 1/2 × 4 1/2 in	6 in	5 1/2 lbs
5 1/2 × 5 1/2 in	6 3/4 in	7 1/2 lbs
7 × 7 in	7 3/4 in	16 1/2 lbs
8 5/8 × 8 5/8 in	8 in	30 1/2 lbs
9 5/8 × 9 5/8 in	8 in	35 lbs
10 3/4 × 10 3/4 in	8 in	42 lbs

NOTE: 3,000 psi (ductile) and 5,000 psi (4130) rams are NOT interchangeable

Design Features

- Rated at 2,000 psi maximum working pressure
- 5,000 psi working pressure available in 4 1/2 – 7 inch sizes

Benefits

- When used with a belled nipple, casing can be cut at desired length and Belled Nipple can be welded on

Advantages

- Adapts plain end pipe to a male threaded connection

W2 Tubing Rotators



Design Features

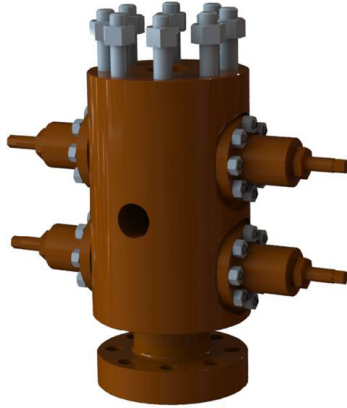
- Fits standard W2 tubing head
- Actuated by pump jack
- Tubing rotator can be removed for maintenance without disturbing hanger or tubing string
- Rotator drive elements protected from well bore

Tubing rotators are used on pumping wells in order to minimize the wear on the tubing string caused by the eccentric loading of the rod string or downhole pumping equipment. By continuously rotating the tubing string, wear is distributed along the entire circumference of the tubing, greatly extending the life of the tubing and reducing the need for costly work-overs to replace worn out tubing.

Specifications

Top connection	2 3/8 in EUE 8rd male	2 7/8 in EUE 8rd male
Pressure ratings	2,000 psi	3,000 psi
Tubing sizes	2 3/8 in EU 8rd	2 7/8 in EU 8rd
Tubing head flange size	7 1/16 in	
Rotator height	9.0 in	
Hanging load rating	125,000 lbs	
Rotating operation	Pump jack cccuated	
Temperature rating	0°– 300°F (0°–149°C)	
Materials	NACE compliant for sour service	
Rotation	~8.5 rotations per day (based on operating 24 hours)	

W-500F Flanged Rod BOP Single/Dual



Flanged x Studded dual ram BOP

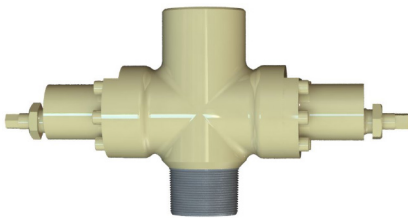
Design Features

- Ram and stem are nitride coated to prevent galling on the FS and FC model
- Available with standard sealing rams or with ceramic coated rod clamping rams, to prevent damage to the polished rod
- Multiple flange configurations available
- Available in single ram configuration
- Test ports available
- Standard rams available
- Blind rams available
- Hydraulic rams available upon request
- Bottom flange can be prepped to accept extended neck tubing hanger

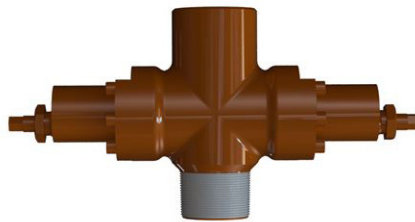
Benefits

- Indicating grooves help facilitate correct opened and closed position
- Can be used in conjunction with flanged wellhead equipment
- Integral tee design reduces height

W-300 and 500T Threaded BOP



W-300



W-500T

Secures well by sealing around the polished rod.

Design Features

- Available in 4 and 5 inch nominal sizes with full opening bore
- Suitable for low temperature -50°F (-45°C), and sour service (NACE MR-01-75)
- Available in high temperature models
- 3,000 psi and 5,000 psi maximum pressure rams available in 1¼ inch, 1½ inch or blind
- Low pressure (1,500 psi maximum when closed)

Benefits

- Forged alloy steel body eliminates risk of casting porosity

Advantages

- Pressure balanced rams allow use of well pressure to assist in closing process, reducing operator effort

Connections

Box (up)	Pin (down)
2 3/8 in EUE	2 3/8 in EUE
2 7/8 in EUE	2 7/8 in EUE
3 1/2 in EUE	3 1/2 in EUE
3 in LP	3 1/2 in EUE
3 in LP	3 in LP

Blow Out Preventers (BOP)

W-212 BOP



Secures well by sealing around the polished rod.

Specifications

Sizes available	2 3/8 in EUE 8rd	2 7/8 in EUE 8rd	3 1/2 in EUE 8rd	3 in LP
Vertical bore	1.995 in	2.441 in	2.992 in	2.900 in
Body and cap material	Ductile			
Ram materials available	Buna, Seagold™ HT, HSN			
Ram screw and packing gland	Carbon steel; stainless steel available upon request			
Ram sizes	Blind, 5/8–1 in, 1 1/8 in, 1 1/4 in, 1 1/2 in, 1 3/4 in			
Connection	Pin × box			
Handles	Optional			
Working pressure	1,500 psi			

Design Features

- Ratigan style
- Blow out proof ram screw
- Full opening
- Steel reinforced elastomer ram block

Optional Features

- Fusion bonded corrosion protection coatings available
- Stainless steel for NACE trim available

W-150 BOP



Secures well by sealing around the polished rod.

Specifications

Sizes available	2 3/8 in EUE 8rd	2 7/8 in EUE 8rd	2 1/2 in LP	3 in LP
Vertical bore	1.995 in	2.441 in	2.469 in	2.900 in
Body and cap material	Ductile			
Ram materials available	Buna, Seagold™ HT, HSN			
Ram screw and packing gland	Carbon steel; stainless steel available upon request			
Ram sizes	Blind, 5/8–1 in, 1 1/8 in, 1 1/4 in, 1 1/2 in, 1 3/4 in			
Connection	Pin × box			
Handles	Optional			
Working pressure	1,500 psi			

Design Features

- Huber style
- Blow out proof ram block
- Steel reinforced elastomer ram block
- O-ring on end caps provide reliable and pressure tight seal

Benefits

- ACME thread end-cap eliminates cross threading and provides quick opening

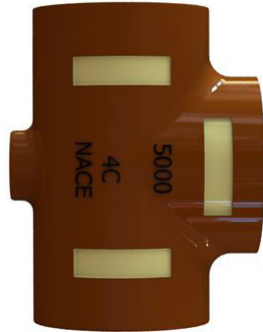
Advantages

- Cap with internal threads protected from environment

Optional Features

- Fusion bonded corrosion protection coating available
- Stainless steel for NACE trim available

5K Pumping Tee



Redirects fluid and gas to a holding tank (wing) from the run. Different thread sizes and types are available.

Design Features

- Applications up to 5,000 working pressure
- Meets NACE requirements
- 1 inch bleeder standard
- Available with corrosion resistant coatings upon request

3K Pumping Tee

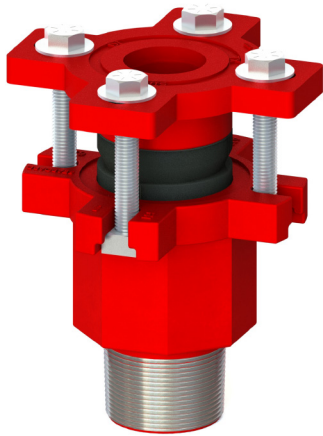


The 3K Pumping Tee's redirects fluid and gas to a holding tank (wing) from the run. Different thread sizes and types are available.

Design Features

- Applications up to 3,000 psi working pressure
- Meets NACE requirements
- Both EUE and LP available
- 1 inch bleeder standard
- Available with corrosion resistant coatings upon request
- Select sizes available with pin bottom threads

Inverted Stuffing Box (W-IVSB)



Redirects the fluid and gas into the flow line by sealing off the well.

Note: Corrosion resistant coatings available—Contact Customer Service.

Pieces of Split Cones Required

Top cones	3
Bottom cones	1

Bottom Connection

2 in LP 11½ V male

2¾ in EUE 8rd male

2½ in LP 11½ V male

2½ in LP 8V male

2¾ in EUE 8rd male

3 in LP 8V male

3½ in EUE 8rd male

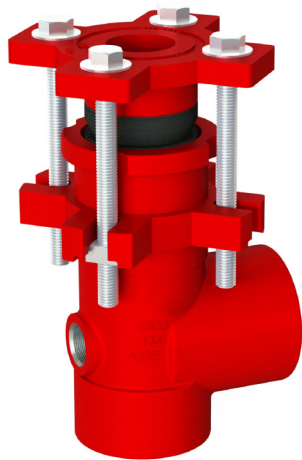
Design Features

- Superior packing contact with polished rod
- Self energized inverted packing, protects against pressure spikes
- 1,500 psi working pressure
- Ductile material

Advantages

- Available in various thread and packing/size compound combinations

Inverted Tee Based Stuffing Box (W-IVSBT)



Redirects the fluid and gas into the flow line by sealing off the well.

Note: Corrosion resistant coatings available—Contact Customer Service.

Pieces of Split Cones Required

Top cones	3
Bottom cones	1

Bottom × Side Connection

2¾ in EUE 8rd × 2 in LP

2¾ in EUE 8rd × 2 in LP

2¾ in EUE 8rd × 3 in LP

3½ in EUE 8rd × 3 in LP

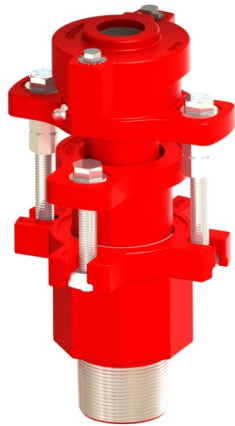
Design Features

- Self energized inverted packing, protects against pressure spikes
- Superior packing contact with the polished rod
- 1,500 psi working pressure
- Ductile material

Advantages

- Reciprocating pump
- Extremely low profile wells
- Available in various thread and packing size compound combinations

Stuffing Box (W-SB)



Redirects the fluid and gas into the flow line by sealing off the well.

Note: Corrosion resistant coatings available—Contact Customer Service.

Pieces of Split Cones Required

Top cones	4
Bottom cones	1

Bottom Connection

2 in LP 11½ V male

2¾ in EUE 8rd male

2½ in LP 11½ V male

2½ in LP 8V male

2¾ in EUE 8rd male

3½ in EUE 8rd male

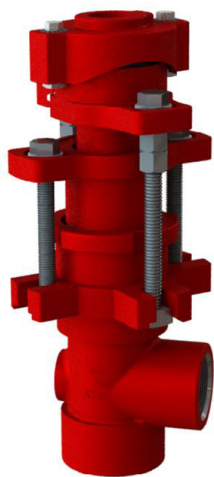
Design Features

- Standard in oil and gas industry; fits most applications
- Low profile
- Features up to a 3° flex, reducing the need for exact alignment with pumping unit
- 1,500 psi working pressure
- Ductile material

Advantages

- Available in various thread and packing size compound combinations
- Can be used in conjunction with a W-HPLUG for improved performance

Tee Based Stuffing Box (W-SBT)



Redirects the fluid and gas into the flow line by sealing off the well.

Note: Corrosion resistant coatings available—Contact Customer Service.

Pieces of Split Cones Required

Top cones	4
Bottom cones	1

Bottom × Side Connection

2¾ in EUE 8rd × 2 in LP

2¾ in EUE 8rd × 2 in LP

2¾ in EUE 8rd × 3 in LP

3½ in EUE 8rd × 3 in LP

Design Features

- 1,500 psi working pressure
- Ductile material

Benefits

- T-base eliminates one connection, reducing potential leak point

Advantages

- Available in various thread and packing size compound combinations
- Can be used in conjunction with a W-HPLUG for improved performance

Double Pack Stuffing Box (W-DPSB)



Redirects the fluid and gas into the flow line by sealing off the well.

Note: Corrosion resistant coatings available—Contact Customer Service.

Pieces of Split Cones Required

Top cones	6
Bottom cones	1

Bottom Connections

2 in LP 11½ V male
2 ¾ in EUE 8rd male
2 ½ in LP 11½ V male
2 ½ in LP 8V male
2 7⁄8 in EUE 8rd male
3 in LP 8V male
3 ½ in EUE 8rd male

Design Features

- Designed to reduce costly packing maintenance time
- 1,500 psi working pressure
- Ductile material

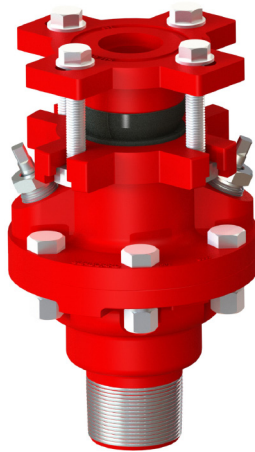
Benefits

- Features up to a 3° flex, reducing the need for exact alignment with pumping unit

Advantages

- Double packing enables primary packing to be changed under pressure
- Available in various thread and packing size compounds combinations
- Can be used in conjunction with a W-HPLUG for improved performance

Inverted Double Pack Stuffing Box (W-IVDPSB)



Redirects the fluid and gas into the flow line by sealing off the well.

Note: Corrosion resistant coatings available—Contact Customer Service.

Pieces of Split Cones Required

Top cones	5
Bottom cones	1

Bottom Connections

2 in LP 11½ V male
2 ½ in LP 11½ V male
2 ½ in LP 8V male
2 ¾ in EUE 8rd male
2 7⁄8 in EUE 8rd male
3 in LP 8V male
3 ½ in EUE 8rd male

Design Features

- Double packing allows primary packing to be changed under pressure
- Self energized inverted packing on the polished rod seal protects against pressure spikes
- Superior packing contact with polished rod
- Can be used in conjunction with a W-HPLUG for improved performance
- 1,500 psi working pressure
- Ductile material

Advantages

- Available in various thread and packing size compound combinations

Big Shot Double Pack Stuffing Box (W-BSDP)



Redirects the fluid and gas into the flow line by sealing off the well.

Note: Corrosion resistant coatings available—Contact Customer Service.

Pieces of Split Cones Required

Top cones	5
Bottom cones	1

Bottom Connections

2 in LP 11½ V male
2½ in LP 11½ V male
2½ in LP 8V male
2¾ in EUE 8rd male
2⅞ in EUE 8rd male
3 in LP 8V male
3½ in EUE 8rd male

Design Features

- Available in various thread and packing size compound combinations
- 1,500 psi working pressure
- Ductile material

Benefits

- Easy to adjust threaded cap – no bolts to tighten
- Standard brass inverter ring designed to reduce polished rod scarring

Advantages

- Designed to reduce costly packing maintenance time
- Packing compression forces are distributed evenly around polished rod
- Can be used in conjunction with a W-HPLUG for improved performance

3K Big Shot Double Pack Stuffing Box (BSDP)



Redirects the fluid and gas into the flow line by sealing off the well.

Note: Corrosion resistant coatings available—Contact Customer Service.

Pieces of Split Cones Required

Top cones	5
Bottom cones	1

Bottom Connections

2¾ EUE 8rd male
2⅞ in 3,000 flanged
2⅞ in EUE 8rd male
3 in LP 8V male

Design Features

- 3,000 psi working pressure
- A-395 NACE compliant material
- Main cone packing is inverted to achieve a pressure assisted seal
- Primary packing can be changed under pressure by tightening compression bolts to temporarily engage secondary packing
- Two ¼ inch NPT ports for grease zerk and pressure gauge
- Flanged bottom connection available
- Optional pollution control adapter available to -50°F (-45°C)
- Can be used in conjunction with a W-HPLUG for improved performance

Pollution Controlled Double Pack Stuffing Box (W-PCDP)



Redirects the fluid and gas into the flow line by sealing off the well.

Note: Corrosion resistant coatings available—Contact Customer Service.

Design Features

- Two independently adjustable packing chambers
- Base has a ½ inch NPT test port
- 1,500 psi working pressure
- Maximum operating temperature: 350°F (176°C)
- Pollution control adapter acceptable to -50°F (-45°C)
- Ductile material

Benefits

- Promotes clean and environmentally sound well site hookup
- Packing can be changed under pressure
- Features up to a 3° flex, reducing the need for exact alignment with pumping unit
- Flapper closes automatically if polished rod breaks

Advantages

- Adaptable to Environmental Control Adapter (ECA)

Pieces of Split Cones Required

Top cones	5
Bottom cones	1

Bottom Connection

2 ⅝ in EUE 8rd male

2 ⅝ in 5,000 flanged

2 ⅞ in EUE 8rd male

3 in LP 8V male

3 ½ in EUE 8rd male

Big Shot Stuffing Box (W-BS)



Redirects the fluid and gas into the flow line by sealing off the well.

Note: Corrosion resistant coatings available—Contact Customer Service.

Pieces of Split Cones Required

Top cones	3
Bottom cones	1

Bottom Connection

2 in LP 11 1/2 V male
2 1/2 in LP 11 1/2 V male
2 1/2 in LP 8V male
2 3/8 in EUE 8rd male
2 7/8 in EUE 8rd male
3 in LP 8V male
3 1/2 in EUE 8rd male

Design Features

- Available in various thread and packing size compound combinations
- 1,500 psi working pressure
- Ductile material

Benefits

- Easy to adjust threaded cap – no bolts to tighten
- Standard brass inverter ring designed to reduce polished rod scarring

Advantages

- Packing compression forces are distributed evenly around polished rod
- Low profile design for stroke length limitations
- Ability to be used in height restricted applications (Big Shot is 10 inches tall)
- Can be used in conjunction with a W-HPLUG for improved performance

W-Big Shot Tee Based Stuffing Box (W-BST)



Redirects the fluid and gas into the flow line by sealing off the well.

Note: Corrosion resistant coatings available—Contact Customer Service.

Pieces of Split Cones Required

Top cones	3
Bottom cones	1

Bottom × Side Connection

2 3/8 in EUE 8rd × 2 in LP
2 3/8 in EUE 8rd PIN × 2 in LP
2 7/8 in EUE 8rd × 3 in LP
2 7/8 in EUE 8rd PIN × 3 in LP

Design Features

- Available in various thread and packing size compound combinations
- 1,500 psi working pressure
- Ductile material

Benefits

- Easy to adjust threaded cap – no bolts to tighten
- Standard brass inverter ring designed to reduce polished rod scarring

Advantages

- Packing compression forces are distributed evenly around polished rod
- Low profile design for stroke length limitations
- Can be used in conjunction with a W-HPLUG for improved performance

High Temperature Double Pack Stuffing Box



The W-HPSB Double Pack Stuffing Box is a self-contained, low profile, durable unit designed to operate at pressures up to 3,000 psi and temperatures up to 650°F (343.3°C).

Design Features

- Available with pollution control check valve
- Available in flanged or threaded versions
- For improved performance, use in conjunction with H-plug

Benefits

- Upper packing can be replaced under pressure
- Suitable for steam applications
- Suitable for sour service—all materials conform to NACE MR-01-75 requirements
- Easily incorporated into any existing wellhead completion

High Pressure Double Pack Stuffing Boxes with Flapper Valve (W-HPSBF)



The W-HPSBF Double Pack Stuffing Box with integral flapper valve is designed to reduce cost while increasing productivity. It is a self-contained, low profile, all steel unit, designed to operate at pressures up to 5,000 psi.

Design Features

- Integrated flapper valve that closes automatically if polished rod breaks
- Suitable for sour service—all materials conform to NACE MR-01-75 specifications
- V-style upper (primary) packing.
- Available in 2 3/8 inch, 2 7/8 inch and 3 1/2 inch EUE 8RD male thread
- Available in 1 1/4 inch and 1 1/2 inch polished rod sizes
- Can be used in conjunction with a H-plug for improved performance

Advantages

- Upper packing can be replaced under pressure

High Pressure Lube Upper Gland (W-HPLUG)



Rod Sizes

1 in 1 1/8 in 1 1/4 in 1 5/16 in 1 3/8 in 1 1/2 in 1 3/4 in

Design Features

- Provides a secondary seal
- Uses V-style packing

Benefits

- Promotes clean and environmentally sound well site hookup

Advantages

- Fits any W-series Stuffing Box

Big Shot BS-HPLUG



Rod Sizes

1 1/4 in 1 1/2 in 1 3/4 in

Design Features

- Provides a secondary seal
- Uses V-style packing

Benefits

- Promotes clean and environmentally sound well site hookup

Advantages

- Fits any BS-series

Lube Upper Gland (W-LUG)



Design Features

- Zerk fitting for maintenance
- Ductile iron material

Benefits

- Top split cone balances oil film on the polished rod

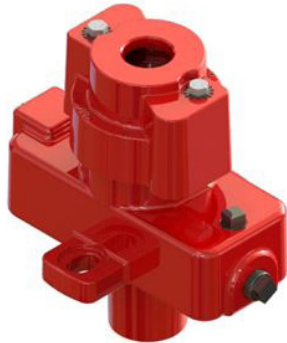
Advantages

- Designed to extend packing life and reduce maintenance costs

Rod Sizes

1 in 1 1/8 in 1 1/4 in 1 5/16 in 1 3/8 in 1 1/2 in 1 3/4 in

Fluid Reserve Gland (FRG)



This piece of equipment takes the place of the LUG (Lube Upper Gland) on a standard stuffing box, double pack stuffing box, stuffing box with T-base or the W-HPLUG (High Pressure Lube Upper Gland) on the Pollution Control Double Pack Stuffing Box.

Design Features

- For use on “problem” wells that pump or flow off
- Holds one quart of oil
- Complete with 3/4 inch NPT port for installation of SPM Oil & Gas ECA
- Top split cone packing controls oil film on polish rod
- Available for all polished rod sizes
 - Blue FRG is for the 1 inch through 1 5/16 inch polish rod
 - Red FRG is for the 1 3/8 inch through 1 1/2 inch polish rod
 - Black FRG is for the 1 3/4 inch polish rod

Benefits

- Easily installed and maintained

Advantages

- Since the cap and reservoir are not connected by a tube, the water or snow accumulating on the top of the FRG will not fill up the reservoir like other FRG's or ORG's on the market. When using the FRG with an ECA, it will keep the ECA from filling up and the well from stopping prematurely.

Environmental Control Adapters (ECA)



Specifications

Container	Switch
Stainless steel	Explosion proof
Plastic (not shown)	Standard

Design Features

- Meets NEC Class 1, Division 1 requirements
- Fits all FRG and W-HPLUG models
- 2 connections for assembly
- Long travel float
- Both “Normally Open” and “Closed” contacts
- Optional Pollution control adapter available

Benefits

- Reduces spills due to leakage

Advantages

- Corrosion-resistant components

Environment Control Adapters (ECA) with Weight Activated Switch



Design Features

- Leak detection system to prevent costly stuffing box spills
- Fits all FRG and W-HPLUG models
- Durable stainless steel container
- Meets NEC Class 1, Div.1 (with explosion proof switch)
- Weight activated switch options
 - Standard
 - Explosion proof (NEC Class 1, Div. 1)
- Expanded capacity canister

Benefits

- Reduces spills due to leakage

Advantages

- Corrosion resistant components

Packing

Material	Description
BUNA Soft	Sweet crude production with high oil to water ratios and low abrasive content.
HT Kevlar Brass Filled	Engineered for high H ₂ S wells with long stroke and fast pumping. Specifically designed with reinforced sealing surface for high abrasives.
HSN	Well suited for higher gas to oil ratios than conventional general service packing. Designed to withstand high concentrations of hydrocarbons, and increase production temperatures for extended periods of time.
PFTE	The PFTE cone packing is built with PFTE rope packing to create an inner seal around the polished rod. It is designed to reduce heat and polished rod wear and extend the life of the rubber cone housing. It works well on worn rods but, is not recommended for scored polished rods.
PFTE Filled	PFTE filled cone packing has sweet crude production with long strokes and rapid pumping cycles. It works well with gas locking wells when added lubrication is needed.
High Tensile	Excellent for low gas to oil ratio, and high water cut wells. This packing has a high tensile strength at 2,000 psi.
Soft Lubricated	Recommended for wells pumping off or not on a timer. Sweet crude production with high oil to water ratios. Low abrasive content.
Brass Filled	Brass filled cone packing is best suited for wells producing medium to heavy oil 20-30 API. Handles moderate produced heat along with higher than average friction heat and can be used with light to moderate abrasives when additional lubrication is not required.
Dee Style (BUNA)	Specific design with fluid pressure in mind, Dee style packing has a self-activating profile that creates a tighter seal with an increase in flow line pressure. TFE/BRZ inserts provide added protection when "pump off" or high speed conditions arise. Built with engineered compounds which provide operators with improved general service packing or sour service alternative to cone packing.
Dee Style (HSN)	Specific design with fluid pressure in mind, Dee style packing has a self-activating profile that creates a tighter seal with an increase in flow line pressure. TFE/BRZ inserts provide added protection when "pump off" or high speed conditions arise. Built with engineered compounds which provide operators with improved general service packing or sour service alternative to cone packing.
Seal Pack	Cone packing with pressure handling capabilities of up to 2500 psi. Utilizes the same TFE/BRZ inserts found in the Dee style packing, to provide added protection when "pump off" or high speed conditions arise while effectively dissipating heat. Longer life & requires fewer packing gland adjustments than regular cone packing.
Super Orange	Super Orange packing comes in both Cone and Dee style to suit any application. Super Orange packing benefits by being able to not only handle any application, but also provide pumping longevity that can be relied on. Saving time from changing, adjusting, and overall visits to wells. This hydro carbon infused lubrication packing replaces the comon flake style manufacturing process. Bringing excellent abrasion properties while increasing cold weather performance, Super Orange is the best packing for temperature changes while pumping during winter months.

Material	Maximum % H ₂ S	Maximum Temperature
BUNA soft	2%	110°F (43°C)
HT kevlar brass filled	30%	650°F (345°C)
HSN	8–10%	355°F (180°C)
PFTE	5–8%	500°F (250°C)
PFTE filled	2%	110°F (43°C)
High tensile	15%	400°F (200°C)
Soft lubricated	2%	110°F (43°C)
Brass filled	5%	130°F (70°C)
Dee style (BUNA)	5%	230°F (110°C)
Dee style (HSN)	25%	311°F (155°C)
Seal Pack (BUNA)	2%	160°F
Seal Pack (HSN)	20%	325°F
Super Orange	97+%	250°F (125°C)



Rod Sizes

1 in 1 1/8 in 1 1/4 in 1 3/16 in 1 3/8 in 1 1/2 in 1 3/4 in

Packing

5K Stuffing Box Packing Options: CP Style, QT Style, V-Packing



CP Style



QT Style



V-Packing

CP Style

- Maximum temperature: 650°F (345°C)
- Maximum burst temperature: 1,000°F (540°C)
- Maximum 30% H₂S

QT Style

- Temperature: 500°F (260°C)
- Reciprocating: 1,500 psi (80 bar)
- Shaft speed: 2,800 fpm (14 m/s)

V-Packing

- Temperature capability: -20°F (-29°C) to 250°F (121°C)

CP Style

Engineered for high H₂S content wells with long stroke and fast pumping. Specifically designed with a reinforced sealing surface for high abrasives. Considered to be the best extreme service packing in today's market place.

QT Style

A blend of high-performance aramid and fiberglass fibers are impregnated with PTFE, increasing chemical resistance. Its excellent properties and density help provide an extrusion resistant barrier designed to extend the life of the packing. The fiberglass conducts heat while the PTFE mitigates shaft wear.

V-Packing

Fluid seal rod packing incorporates the proven theory of lip-type action (sealing from pressure), with space provided between each ring designed to provide a perfect, non-binding fluid seal for lubrication of the rod. This packing requires no tightening. It performs best when run loose (finger-tight). Normal operating pressure expands the lip to compensate for wear until the packing is completely worn out.

1.5K Stuffing Box Packing Option: V-Style Packing



Design Features

- Used in the W-HPLUG, are rated to 250°F (121°C) to 350°F (177°C)
- Available in BUNA or HSN material

Used in the W-HPLUG, are rated to 250°F (121°C) to 350°F (177°C).
This secondary packing seal is designed to help prevent costly environmental spills.

Rod Sizes

1 in, 1 1/8 in, 1 1/4 in, 1 5/16 in, 1 3/8 in, 1 1/2 in, 1 3/4 in

Packing Sizes

2 1/2 in OD x 3 1/8 in high

Conversion Kit from Cone Packing to Dee Packing



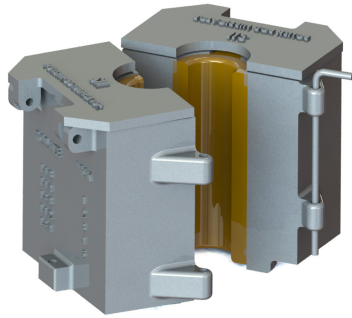
This set of brass conversion rings are used when converting a stuffing box that uses a W-LUG from Cone Packing to Dee Packing.

W-HPLUG/FRG Adapter with Dee Packing



This set is used when converting a stuffing box that uses a W-HPLUG or FRG from Cone Packing to Dee Packing.

Rod Lubricator with Wicks



The Polished Rod Lubricator is easily installed and can be used with any style of stuffing box. Lubrication extends stuffing box packing life and the lubricator uses replaceable felt wicks. Available for all polished rod sizes.

Design Features

- Provides convenient polished rod lubrication
- Easy installation. Use with any style of stuffing box.
- Lubrication extends stuffing box packing life
- Uses replaceable felt wicks
- Available for all polished rod sizes
- 5 1/2 inch height
- Single completion

Benefits

- Applies when the unit first begins pumping

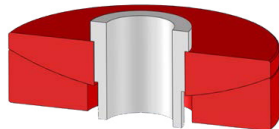
Advantages

- Designed to prevent premature packing failure due to lack of lubrication on the polished rod

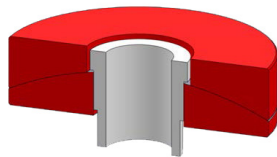
Sizes

1 1/8 in 1 1/4 in 1 3/8 in 1 1/2 in 1 3/4 in

Leveling Plates



When used WITH a rod rotator



When used WITHOUT a rod rotator

The use of Leveling Plates can help compensate for misalignment of the carrier bar of up to 2 degrees in any direction.

Design Features

- Can be installed under the rod rotator or under the polished rod clamp if rod rotators are not used
- Available in all polished rod sizes

Benefits

- Designed to help minimize polished rod breaks

Advantages

- Designed to ensure uniform engagement between the polished rod clamp and the carrier bar

Sizes

1 1/8 in 1 1/4 in 1 3/8 in 1 1/2 in 1 3/4 in

Polish Rod Bullet



Eliminate the risk of packing damage during installation with a streamlined design, the polish rod bullet from SPM Oil & Gas will help you avoid damaging your packing during installation, allowing you to extend the life cycle of your internal components. Simply screw the bullet onto the last string of the polished rod and tighten with a screwdriver inserted through the cross-hole. Available in three sizes, it easily passes through the stuffing box and flapper valve on the BOP.

Design Features

- Assists in the installation of a polished rod
- Passes easily through the stuffing box
- Greatly reduces risk of damaging polished rod threads, stuffing box packing, and flapper valve on pollution-control (PC) stuffing boxes
- Tapered end improves ease of installation
- Cross-hole design for trouble-free installation and removal from polished rod

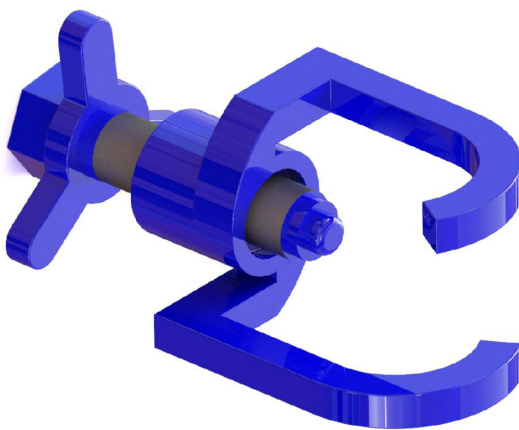
Specifications

1.375–10 UN Box × 1 ½ OD

1.187–10 UN Box × 1 ½ OD

1.187–10 UN Box × 1 ¼ OD

Stuffing Box Clamp



Design Features

- Allows operator to safely change out the primary packing in any double pack stuffing box
- Holds the cap or top section of the stuffing box on the polish rod to allow access to the primary packing
- Fits all rod sizes from 1 ¼ –1 ¾ in

W-164/164SG, W-252, W-302/302SG, W-303/303SG, W-304/304SG



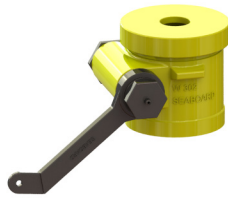
W-164/164SG



W-252



W-302/303



W-302SG/303SG



W-304/304SG

Rod rotation is one of the most effective means of reducing rod coupling and tubing wear, especially when used in conjunction with rod guides. Rod Rotators are available in maximum recommended loads ranging from 13,000–50,000 pounds.

Series	W-164/164SG	W-252	W-302/302SG	W-303/303SG	W-304/304SG
Maximum recommended load	13,000 lb	33,000 lb	40,000 lb	40,000 lb	50,000 lb
Required bridal clearance width	4 in	6 in	7 in	7 in	7 in
Polished rod sizes	1 1/8 – 1 1/4 in	1 1/8 – 1 1/2 in	1 1/8 – 1 3/4 in	1 1/8 – 1 3/4 in	1 1/8 – 1 3/4 in
Height	4 1/2 in	5 1/2 in	6 1/2 in	6 1/2 in	6 1/2 in
Weight	18 lb	35 lb	47 lb	47 lb	47 lb
Standard actuator cable length	16 ft	16 ft	25 ft	25 ft	25 ft
90° Lever pull per revolution	24/43	28	77/154	77/154	77/154

Design Features

- Slow gear allows rod gear torque to easily disperse downhole
- Ductile body material
- Helical gear rotation
- Polished rod sizes 1 1/8 to 1 3/4 inches

Patent Pending—New and improved ratchet pawl design on the W-164, W-164SG, W-302 and W-302SG

Friction-type Clamp



W-25 Series



W-40 Series

Series	W-25	W-40
Rated load	25,000 lb	40,000 lb
Polished rod size	1 1/8 in, 1 1/4 in, 1 1/2 in	1 1/8 in, 1 1/4 in, 1 1/2 in, 1 3/4 in
Recommended min/max bolt torque	250/300 ft-lbf	500/550 ft-lbf
Weight	10.5 lb	25 lb
Height	4 1/8 in	6 3/4 in

Design Features

- Available in standard rod sizes
- Phosphate coated
- Steel forged steel body
- 9 inch rotating diameter

Indention-type Clamp



W-10S Series



W-10D Series



W-10T Series

Series	W-10S 1 bolt	W-10D 2 bolt	W-10T 3 bolt
Rated load	13,000 lb	26,000 lb	40,000 lb
Polished rod size	1 in, 1 1/8 in, 1 1/4 in, 1 5/16 in, 1 1/2 in	1 in, 1 1/8 in, 1 1/4 in, 1 5/16 in, 1 1/2 in	1 in, 1 1/8 in, 1 1/4 in, 1 5/16 in, 1 1/2 in
Recommended min/max bolt torque	225/250 ft-lbf	225/250 ft-lbf	225/250 ft-lbf
Weight	3.75 lb	7.5 lb	11.25 lb
Height	2 1/2 in	5 in	7 1/2 in

Design Features

- Individually hinged
- Available in standard rod sizes
- Phosphate coated
- Forged steel body
- Rotating diameter 5 3/4 inch

Benefits

Reduced size with no decrease in weight load capacity

Advantages

- Can be individually torqued
- Light weight compact design

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