



# Stuffing Boxes

Our range of stuffing boxes provides a superior seal against different type of applications. Within our product breath of designs, we offer:

- Classic
- High Performance
- Pollution Control
- High Temperature
- Accessories

# Classic Stuffing Boxes

## Single Pack Stuffing Box (SB)

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- Original design
- Superior and dependable performance
- Standard model has Lube Upper Gland (LUG) with grease zerk
- Optional Oil Reservoir Gland (ORG) and APA control device
- Unique misaligning feature reduces need for exact alignment with the pumping unit
- LUG and ORG have two heavy hex nuts on each bolt, which can support up to 20,000 lbs. when engaged during well servicing



## Tee Base Stuffing Box (SBT)

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- Combines SB and cross tee with 1" bleeder
- Eliminates one-threaded connection
- Results in a shorter hookup
- Side outlets:
  - 2" LP with 2" bottom connection
  - 3" LP with 2-1/2" or 3" bottom connection
- Standard model has LUG with grease zerk
- Optional ORG and APA control device
- LUG has two heavy hex nuts on each bolt, which can support up to 20,000 lbs. when engaged during well servicing



## Double Packed Stuffing Box (DPSB)

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- Most widely-used stuffing box in the industry
- Primary packing can be changed under pressure by tightening compression bolts
- Unique misaligning feature reduces need for exact alignment with the pumping unit
- Adaptable to many accessories
- Standard model has LUG with grease zerk
- Optional ORG and APA control device
- LUG has two heavy hex nuts on each bolt, which can support up to 20,000 lbs. when engaged during well servicing
- Flanged bottom connection available



# Classic Stuffing Boxes

## Regular Inverted Stuffing Box (IVSB)

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- Lowest profile design
- Ideal for smaller pumping units
- Furnished with three "Top Cones" and one "Bottom Cone"
  - One Top Cone (thin cone) can be removed to reduce overall height even further without impairing pressure rating (if reduced packing life is acceptable)
- A Polish Rod Support (PRS) is required during well servicing to prevent the transfer of rod string weight to the packing (see page 24)



## Tee Base Inverted Stuffing Box (IVSBT)

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- Combines IVSB and cross tee with 1" bleeder
- Eliminates one threaded connection
- Lower profile than classic models
- Side outlets:
  - 2" LP with 2" bottom connection
  - 3" LP with 2½" or 3" bottom connection
- Furnished with three "Top Cones" and one "Bottom Cone"
  - One Top Cone (thin cone) can be removed to reduce overall height even further without impairing pressure rating (if reduced packing life is acceptable)
- A PRS is required during well servicing to prevent the transfer of rod string weight to the packing (see page 24)



## Double-Packed Inverted Stuffing Box (IVDPSB)

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- Exceptionally rugged; built for performance under tough conditions
- Primary packing can be changed under pressure by tightening compression bolts
- Lower profile than classic model
- Furnished with three "Top Cones" and one "Bottom Cone." One Top Cone (thin cone) can be removed to reduce overall height even further without impairing pressure rating (if reduced packing life is acceptable)
- A PRS is required during well servicing to prevent the transfer of rod string weight to the packing (see page 24)
- Flanged bottom connection available





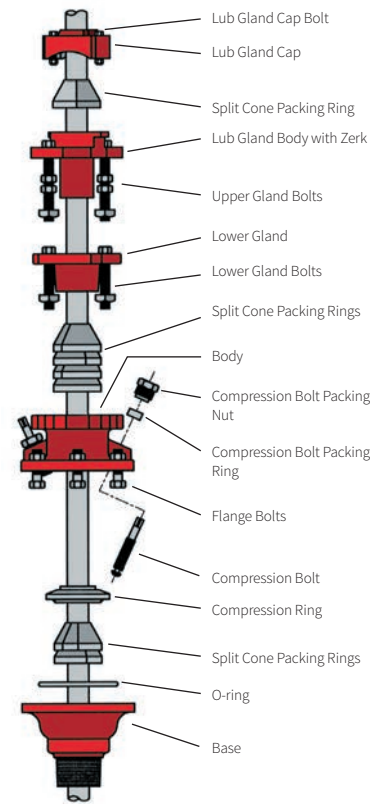
# Classic Stuffing Box Specifications

Specifications	SB	SBT	DPSB
<b>Working Pressure</b>	1500 psi	1500 psi	1500 psi
<b>Bottom Thread (API Tubing or LP)</b>	2", 2½", 3", 4"	2", 2½", 3"	2", 2½", 3", 4"
<b>Bottom Connection</b>	Male	Female	Male
<b>Weight (W/ Std.LUG**)</b>			
2"	24 lbs.	33 lbs.	50 lbs.
2½"	25 lbs.	37 lbs.	51 lbs.
3"	26 lbs.	42 lbs.	52 lbs.
4"	29 lbs.	N/A	56 lbs.
<b>Height (Includes Pin or Box Connection)</b>	13½"	16"	17"
<b>Material</b>	Ductile Iron*		
<b>Split Cone Packing - Rod Sizes</b>	1", 1-⅛", 1-¼", 1-5/16", 1-3/8", 1-7/16", 1-½", 1-¾"		
<b>Pieces Required:</b>			
Top Cones	4	4	6
Bottom Cones	1	1	1

\* Corrosion-resistant coatings available, contact customer service.  
 \*\*Add 11 lbs. if equipped with optional HPLUG.

Specifications	IVSB	IVSBT	IVDPSB
<b>Working Pressure</b>	1500 psi	1500 psi	1500 psi
<b>Bottom Thread (API Tubing or LP)</b>	2", 2½", 3", 4"	2", 2½", 3"	2", 2½", 3", 4"
<b>Bottom Connection</b>	Male	Female	Male
<b>Weight</b>			
2"	19 lbs.	28 lbs.	45 lbs.
2½"	20 lbs.	32 lbs.	46 lbs.
3"	21 lbs.	38 lbs.	47 lbs.
4"	24 lbs.	N/A	51 lbs.
<b>Height (Includes Pin or Box Connection)</b>	10"	12"	14"
<b>Material</b>	Ductile Iron*		
<b>Split Cone Packing - Rod Sizes</b>	1", 1-⅛", 1-¼", 1-5/16", 1-3/8", 1-7/16", 1-½", 1-¾"		
<b>Pieces Required:</b>			
Top Cones	3	3	5
Bottom Cones	1	1	1

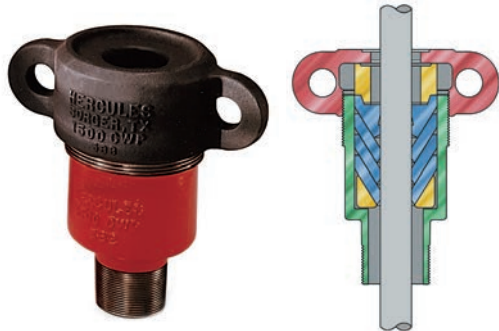
\* Corrosion-resistant coatings available, contact customer service.



Double Packed Stuffing Box (DPSB)

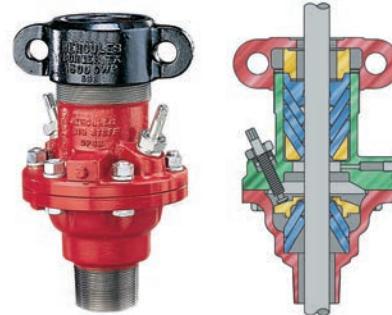
# High-Performance Stuffing Boxes

## Big Stuff™



- Easy to adjust threaded cap—no bolts to tighten
- Cone packing is inverted to achieve a pressure-assisted seal
- Reduces costly packing maintenance time
- Packing compression forces are distributed evenly
- Ideal for short stroke pumping units
- Convenient protection of packing from weight of rod string
- Polish rod lubricator is highly recommended as a grease zerk is not available due to the low profile
- Available with adapters for APA control device or Hercules stuffing box leak detector
- Flanged bottom connection available

## Big Stuff™ DPSB



- Easy to adjust threaded cap—no bolts to tighten
- Cone packing is inverted to achieve a pressure-assisted seal
- Exceptionally rugged, built for performance under tough conditions
- Primary packing can be changed under pressure by tightening compression bolts to temporarily engage secondary packing
- Two ¼" ports (180° apart) for installation of needle valve and grease zerk or pressure gauge, if desired by operator
- Convenient protection of packing from weight of rod string
- Available with adapters for APA control device or Hercules stuffing box leak detector
- Flanged bottom connection available

Specifications	Big Stuff	Big Stuff DPSB
<b>Working Pressure</b>	1500 psi	1500 psi
<b>NOTE: 1500 psi cap is not interchangeable with 2500 psi models</b>		
<b>Bottom Thread (API Tubing or LP)</b>	2", 2½", 3", 4"	2", 2½", 3", 4"
<b>Bottom Connection</b>	Male	Male
<b>Weight</b>		
2"	20 lbs.	45 lbs.
2½"	21 lbs.	45 lbs.
3"	21 lbs.	46 lbs.
4"	27 lbs.	49 lbs.
<b>Height (Includes Pin Connection)</b>	9-¾"	15"
<b>Maximum Body/Cap Load</b>	30,000 lbs. for 2" 11.5V. and 40,000 lbs. for all other sizes	
<b>Body and Cap Material</b>	Ductile Iron*	
<b>Split Cone Packing - Rod Sizes</b>	1", 1-½", 1-¼", 1-5/16", 1-¾", 1-7/16", 1-½", 1-¾"	
<b>Pieces Required:</b>		
Top Cones	3	5
Bottom Cones	1	1

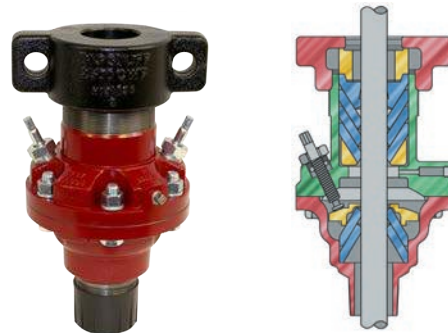
\* Corrosion-resistant coatings available, contact customer service.

## Nace Big Stuff™



- Meets NACE MR0175
- High pressure service 3,000 psi MAX CWP
- Cone packing is inverted to achieve a pressure-assisted seal
- Reduces costly packing maintenance time
- Packing compression forces are distributed evenly
- Ideal for short stroke pumping units
- Convenient protection of packing from weight of rod string
- A Hercules polish rod lubricator is highly recommended, as a grease zerk is not available due to the low profile
- Available with adapters for APA control device or Hercules stuffing box leak detector
- Flanged bottom connection available

## Nace Big Stuff™ DPSB



- Meets NACE MR0175
- High pressure service 3,000 psi MAX CWP
- Cone packing is inverted to achieve a pressure-assisted seal
- Exceptionally rugged; built for performance under tough conditions
- Primary packing can be changed under pressure by tightening compression bolts to temporarily engage secondary packing
- Two 1/4" NPT ports (180° apart) for grease zerk and pressure gauge
- Available with adapters for APA control device or Hercules stuffing box leak detector
- Convenient protection of packing from weight of rod string
- Flanged bottom connection available

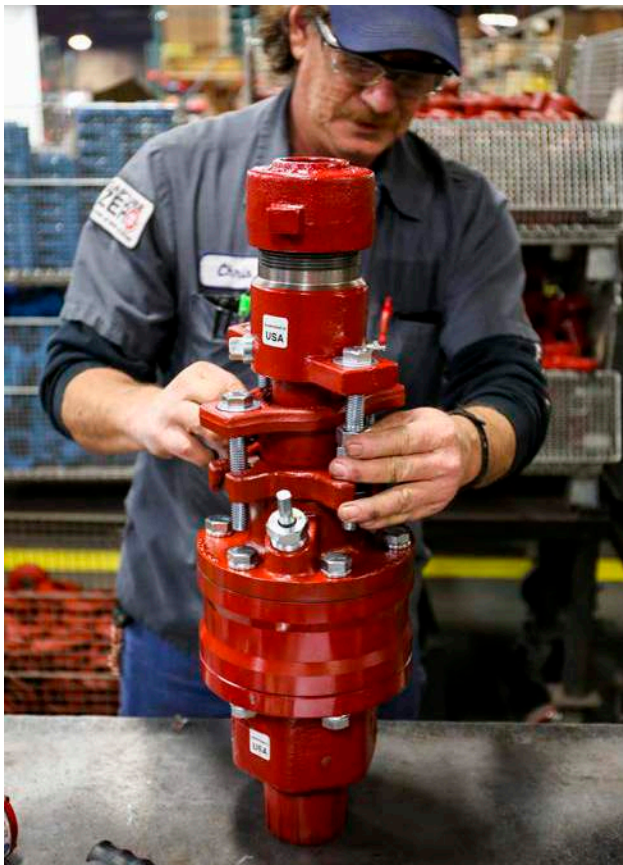
Specifications	NACE Big Stuff	NACE Big Stuff DPSB
<b>Working Pressure</b>	3000 psi	3000 psi
NOTE: 3000 psi cap is not interchangeable with 2500 psi models		
<b>Bottom Thread</b>	Male	Male
<b>Bottom Connection</b>	2", 2-1/2", 3", 4"	2", 2-1/2", 3", 4"
<b>Weight</b>		
2"	20 lbs.	47 lbs.
2 1/2"	21 lbs.	47 lbs.
3"	21 lbs.	48 lbs.
4"	27 lbs.	51 lbs.
<b>Height (Includes Pin Connection)</b>	9-3/4"	15"
<b>Maximum Body/Cap Load</b>	30,000 lbs. for 2"11.5LV and 40,000 lbs. for all other sizes	
<b>Body and cap Material</b>	Ductile Iron*	
<b>Split Cone Packing - Rod Sizes</b>	1-1/8", 1-1/4", 1-5/16", 1-1/2", 1-3/4"	
<b>Pieces Required:</b>		
Top Cones	3	4
Bottom Cones	1	2

\* Corrosion-resistant coatings available, contact customer service.

# Pollution Control Stuffing Boxes (PCSB)

## Classic PCSB & NACE Big Stuff PCSB

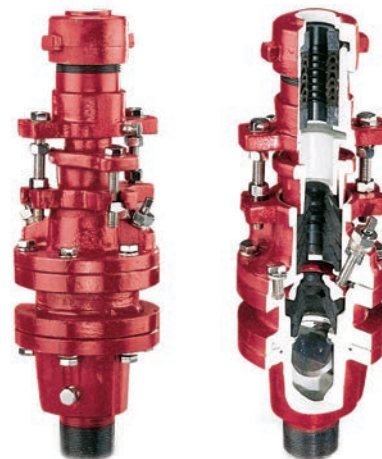
- An enhanced version of Hercules DPSB using PCSB
- Adapter unit below the BOP section and LUG is replaced with PCSB upper gland (a.k.a. Hercules HPLUG)
- If polished rod breaks below stuffing box, flapper closes automatically
- Two independently adjustable packing chambers—primary cone packing in DPSB body and V-ring packing in PCSB upper gland (V-rings contain full working pressure)
- Pollution Control Adapter acceptable to -50°F (-45.5°C)
- Pollution Control Adapter meets NACE MR0175
- Base has ½" NPT test port
- Adaptable to APA control device or Hercules SB leak detector
- Primary packing can be changed under pressure
- Unique misaligning feature in Classic PCSB, reduces need for exact alignment with the pumping unit
- Flanged bottom connection available
- Available with 1,500 or 3,000 psi Big Stuff DPSB top section (with or without HPLUG)
- Corrosion-resistant coating available
- Available with Dome™ primary packing



Specifications	Classic PCSB	NACE Big Stuff PCSB
<b>Working Pressure</b>	1,500 psi	3,000 psi
<b>Bottom Thread (API Tubing or LP)</b>	2", 2½", 3"	2", 2½", 3"
<b>Bottom Connection</b>	Male or Flanged	Male or Flanged
<b>Weight</b>		
2"	105 lbs.	123 lbs.
2½"	110 lbs.	128 lbs.
3"	115 lbs.	133 lbs.
<b>Height (Threaded)</b>	24½"	25-¼"
<b>Material</b>		
<b>Base and Adapter Spool</b>	Low Temperature Steel	Low Temperature Steel
<b>Flapper</b>	Stainless Steel	Stainless Steel
<b>Body and Packing Glands</b>	Ductile Iron*	Ductile Iron Body & Caps Carbon Steel HPLUG Body
<b>Split Cone Packing - Rod Sizes</b>	1-⅛", 1-¼", 1-½", 1-¾" *	1-⅛", 1-¼", 1-½", 1-¾" **
<b>Pieces Required</b>		
<b>Top Cones</b>	5	5
<b>Bottom Cones</b>	1	1
<b>V-ring Packing OD</b>	2½"	2½"
<b>V-ring Stack Height</b>	3"	3"

\* PCSB V-packing only available in these sizes. Classic PCSB can be ordered with LUG or ORG if 1", 1-⅝", 1-¾" or 1-⅞" cone packing is required.

\*\* Big Stuff PCSB cannot be ordered with HPLUG in 1", 1-⅝", 1-¾" or 1-⅞".



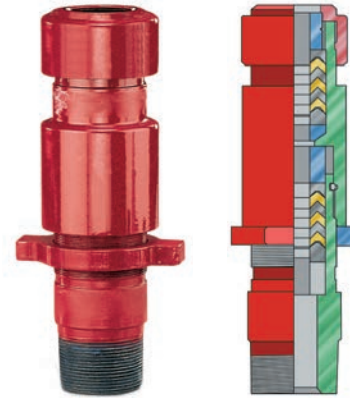
Note: V-ring packing for PCSB is not interchangeable with HTD V-ring packing.

# High Temperature Stuffing Boxes

## High Temperature Double-Packed Stuffing Box (HTD)

- Designed for high pressure and high temperature wells
- Meets NACE MR0175
- Lower packing can be temporarily energized by loosening lock ring and tightening upper body to allow changing primary packing under pressure
- Dual packing chamber
- Primary packing can be changed under pressure
- Versatile chamber design accepts different types of packing, including V-ring, standard crown ring compression and \*Kevlar/PTFE square braid rope packing
- Can be installed on API flanged trees using a Hercules companion flange
- Single-pack version available for low-profile installations

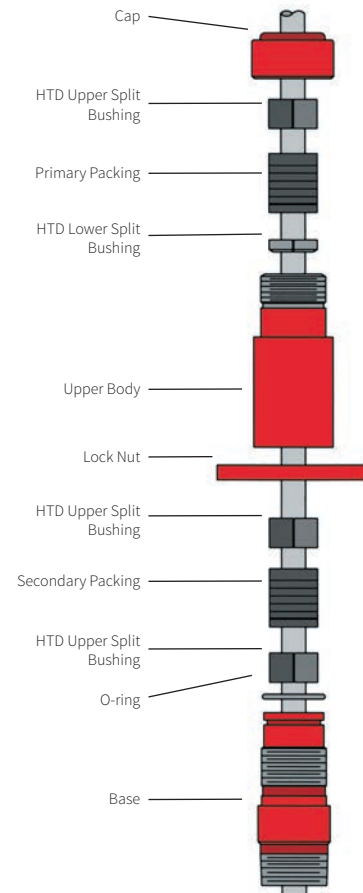
\* Kevlar is a trademark of E.I. du Pont de Nemours and Company.



Specifications	HTD
<b>Working Pressure</b>	3000 psi
<b>Bottom Thread (API Tubing or LP)</b>	2", 2½", 3", 4"
<b>Bottom Connection</b>	Male
<b>Weight</b>	
2"	31 lbs.
2½"	32 lbs.
3"	33 lbs.
4"	35 lbs.
<b>Height (Included Pin)</b>	14"
<b>Material</b>	
<b>Body, Base and Cap</b>	Alloy Steel*
<b>Lock Nut</b>	Carbon Steel*
<b>Split Bushings</b>	Bronze*
<b>Rod Sizes</b>	1-½", 1¼", 1½", 1¾"
<b>Packing OD</b>	2¼"
<b>Stack Height (Primary or Secondary)</b>	2½"

Packing Type	Maximum Temperature
<b>NBR V-ring</b>	250°F (121°C)
<b>HSN V-ring</b>	325°F (163°C)
<b>FKM V-ring</b>	400°F (204°C)
<b>Kevlar/PTFE</b>	540°F (282°C)

\* Corrosion-resistant coatings available, contact customer service.



HTD packing is not interchangeable with PCSB packing. HTD uses 3 Upper Split Bushings and 1 Lower Split Bushing.

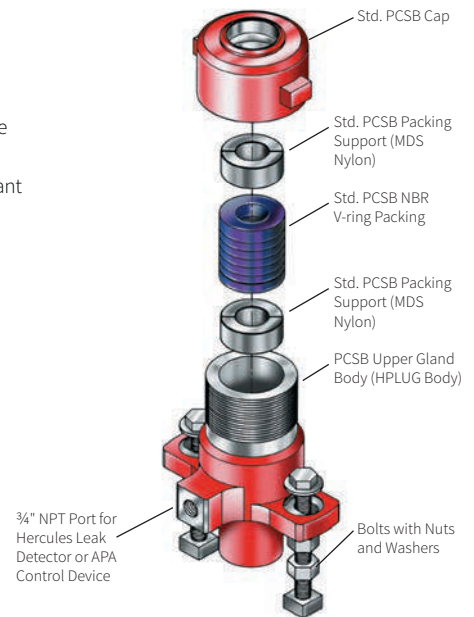


# Stuffing Box Accessories

## High Performance Lubricating Upper Gland (HPLUG)



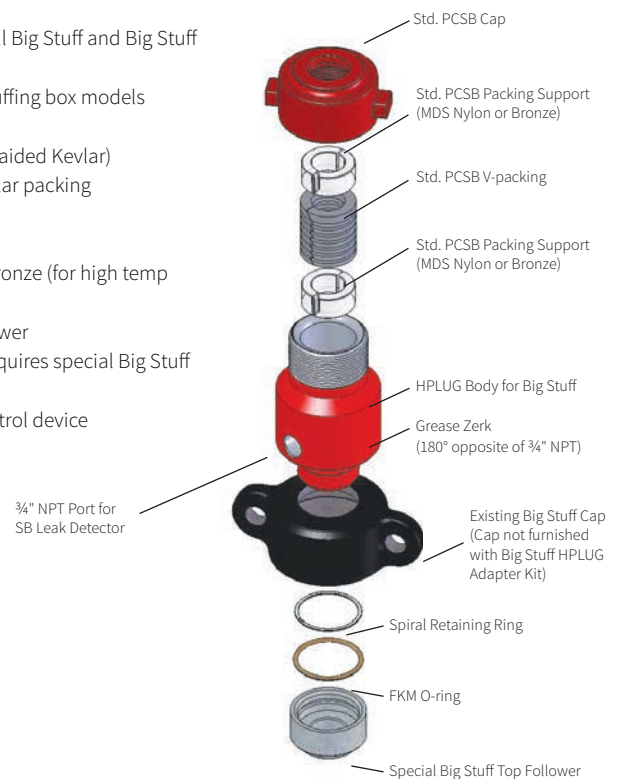
- Provides a secondary seal for stuffing boxes
- Allows installation of Hercules stuffing box leak detector or APA control device
- Fits any Hercules classic model stuffing box
- Zerk fitting for periodic greasing using ordinary NLGI-2 automotive chassis lubricant
- NBR V-ring packing standard (optional: HSN or FMK V-ring; or braided Kevlar)
- Brass packing support rings are supplied with HSN, FMK, or Kevlar packing
- Rod sizes: 1-<sup>1</sup>/<sub>8</sub>", 1-<sup>1</sup>/<sub>4</sub>", 1-<sup>1</sup>/<sub>2</sub>", 1-<sup>3</sup>/<sub>4</sub>"
- Body and cap: ductile iron
- Upper/Lower packing rings: MDS Nylon (Bronze-optional)
- Uses same bolts as Hercules LUG



## High Performance Lubricating Upper Gland (Big Stuff HPLUG)



- Required accessory for installation of Hercules stuffing box leak detector on all Big Stuff and Big Stuff DPSB models
- Can also be used for installing Hercules APA control device on all Big Stuff and Big Stuff DPSB models (in place of Hercules SB leak detector)
- Provides a secondary seal for all Big Stuff and Big Stuff DPSB stuffing box models
- Zerk fitting for periodic greasing
- NBR V-ring packing standard (optional: HSN or FMK V-ring; or braided Kevlar)
- Brass packing support rings are supplied with HSN, FMK, or Kevlar packing
- Rod Sizes: 1-<sup>1</sup>/<sub>8</sub>", 1-<sup>1</sup>/<sub>4</sub>", 1-<sup>1</sup>/<sub>2</sub>", 1-<sup>3</sup>/<sub>4</sub>"
- Body and cap meet NACE MR0175
- Upper/Lower packing support rings: MDS Nylon (standard) or Bronze (for high temp applications)
- Retrofitting existing Big Stuff models requires a special top follower
- Can also be used with models equipped with Dome packing (requires special Big Stuff Dome APA/HPLUG top follower)
- 3/4" NPT side port allows attachment of leak detector or APA control device
- Uses same packing, packing support rings and cap as PCSB



# Stuffing Box Accessories

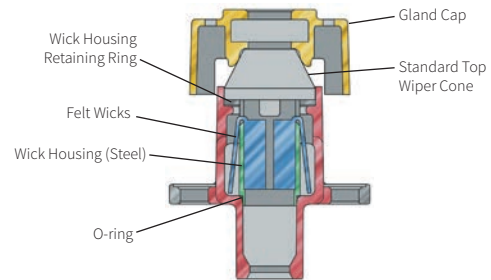
## Standard Oil Reservoir Gland (ORG)

- Designed for use on problem wells that pump or flow off
- Holds one quart of 30W motor oil (or other viscosity as necessary for extreme high or low temperature applications)
- 3/4" NPT Port for installation of APA control device
- Note: Cannot be used with leak detector*
- Top split cone wiper controls oil film on polished rod
- Modified version available for Hercules IVSB, IVSBT and IVDPSB models
- Optional for all Hercules classic models
- Rod sizes: 1", 1-3/8", 1-1/4", 1-5/16", 1-3/8", 1-7/16", 1-1/2", 1-3/4"
- Material: ductile iron
- Standard ORG cap and Drain Nipple captures oil that escapes past loose or worn Wiper Cone
- LUG gland cap option recommended to prevent water from prematurely shutting down well



## High Performance Oil Reservoir Gland (HPORG)

- Provides polished rod lubrication and extends packing life
- Wicks reduce oil consumption
- 3/4" NPT Port for installation of APA control device
- Note: Cannot be used with leak detector*
- Top split cone wiper controls oil film on polished rod
- Optional for all Hercules classic models
- Rod sizes: 1", 1-3/8", 1-1/4", 1-5/16", 1-3/8", 1-7/16", 1-1/2", 1-3/4"
- Material: ductile iron



## Lubricating Upper Gland (LUG)

- Standard on classic models
- Zerk fitting for periodic greasing
- Top split cone wiper controls oil film on polished rod
- Extends packing life and reduces maintenance costs
- Rod sizes: 1", 1-3/8", 1-1/4", 1-5/16", 1-3/8", 7/16", 1-1/2", 1-3/4"
- Material: ductile iron



# Stuffing Box Accessories

## Leak Detector

- Adapts to all Hercules classic stuffing boxes and Hercules Big Stuff stuffing boxes equipped with HPLUG
- Consists of the following:
  - Pressure activated shutdown switch
    - Meets NEC Class 1, Div. 1 requirements
    - Provides positive shut down of the flow
    - Easily wired to SCADA or a controller
  - Manifold connection
    - Two ½" ports and one ¾" port allow custom installation
    - ¾" end cap allows easy clean out of blockage
- HPLUG required for installation (not included; must purchase separately)
- Set at 18 psi as standard
- Available in 1500, 2500 and 3000 psi



## Anti-Pollution Adapter (APA) Control Device

- The original Hercules leak detection system used to prevent costly stuffing box spills; used worldwide since 1975
- Converts Hercules ORG to APA
- Can also be used with HPORG or HPLUG
- Durable stainless steel container
- Meets NEC Class 1, Div. 1 (with explosion-proof switch)
- Switch options: Standard or explosion-proof with NEC Class 1, Div. 1, UL, FM, CSA approvals and CE conformance mark
- Approximately 3L capacity



## Pollution Control Adapter

- Compatible with any Hercules DPSB
- Can be retrofitted on existing double-pack stuffing box
- Comprehensive spill protection from polished rod breaks
- Suitable for cold weather service, -50°F (-45.5°C)
- Meets NACE MR0175
- ½" NPT test port
- Base options:
  - 2" EUE Male      2-½" 2000 psi API flange
  - 2-½" EUE Male    2-¾" 2000 psi API flange
  - 3" 8V LP Male    3-½" 2000 psi API flange
  - 3" EUE Male      2-¾" 5000 psi API flange

