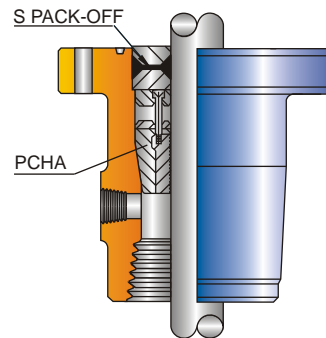


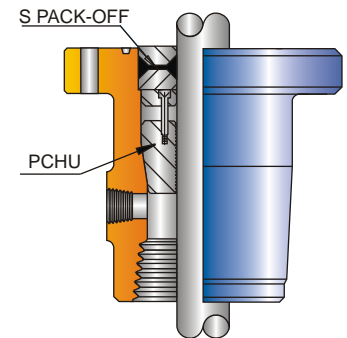
CASING & TUBING HANGER

Automatic Casing, Hanger (PCHA) is basically designed for heavy load service and is used for PARVEEN's Casing Head Housing 'PCHH' and Casing Head Spool 'PCHS' described earlier. When the Casing load is applied to the hanger, the top ring connected by the Pack-off and shoulder screw compresses the packing to seal the annulus pressure of the casing. This casing hanger is normally used for pressure ratings up to 3000 PSI. For ratings over 3000 PSI, type 'PSPO' Pack-off is used to prevent collapse of the pipe.

Unitised Casing Hanger (PCHU) can be used both for PARVEEN's Casing Head Housing (PCHH) and Casing Head Spool (PCHS) as described earlier. This Hanger is designed for medium or heavy load service. This hanger is normally latched around the pipe and lowered in casing head body. After the casing is landed, shoulder screws should be evenly tightened to affect a positive annular seal. The hanger may be used up to 3000 PSI WP. For ratings over 3000 PSI, 'PSPO' Pack-off is used to prevent collapse of the pipe.

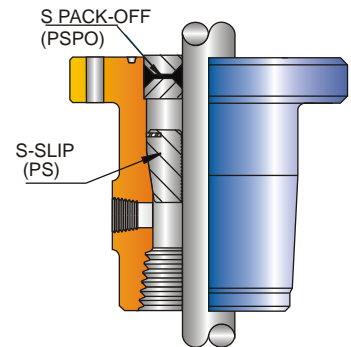


Type PCHA Automatic Casing Hanger with Slip Seal Assly



Type 'PCHU' Unitised Casing Hanger with Slip Seal Assly

Casing Hanger - PARVEEN Casing Hangers are basically 2 types, i.e. Automatic Casing Hanger (PCHA) and Unitised Casing Hanger (PCHU). S-Slips (PS) and S-Pack off (PSPO) assembly are also shown.



Type S-Slip (PS) Casing Hanger with S-Pack-off (PSPO) and S-Slip

SPECIFICATIONS OF PARVEEN'S CASING HANGER

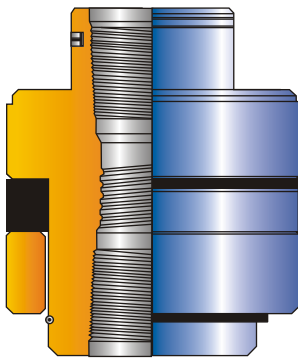
Nominal Flange Size	Casing Size												
	4 1/2	5	5 1/2	6 5/8	7	7 5/8	8 5/8	9 5/8	10 3/4	11 3/4	13 3/8	16	
9	PCHA PCHU	PCHU	PCHA PCHU										
11	PCHA PCHU	PCHA PCHU	PCHA PCHA	PCHA PCHU	PCHA PCHU	PCHA PCHU	PCHA						
13 5/8					PCHA PCHU	PCHA PCHU	PCHA PCHU	PCHA PCHU	PCHA				
16 3/4								PCHA PCHU	PCHA PCHU	PCHA		PCHU	
20 3/4 & 21 1/4												PCHA PCHU	

Nominal Flange Size	Casing Size												
	4 1/2	5	5 1/2	6 5/8	7	7 5/8	8 5/8	9 5/8	10 3/4	11 3/4	13 3/8	16	
9	PS	PS	PS										
11	PS PSPO	PS PSPO	PS PSPO	PS PSPO	PS PSPO	PS PSPO	PS						
13 5/8			PS PSPO	PS PSPO	PS PSPO	PS PSPO	PS PSPO	PS PSPO	PS				
16 3/4								PS PSPO	PS PSPO			PS PSPO	
20 3/4 & 21 1/4									PS PSPO			PS PSPO	PS PSPO

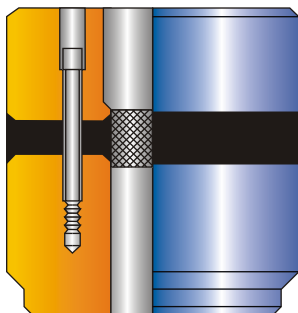
PCHA: PARVEEN's Automatic Casing Hanger, **PS:** PARVEEN's S - Slip,

PCHU: PARVEEN's Unitised Casing Hanger, **PSPO:** PARVEEN's S - Pack-off.

CASING & TUBING HANGER



Type PTHSE
Extended Neck Hanger



Type PTHSW
Wrap Around Hanger

Tubing Hangers - PARVEEN's Tubing Hangers are basically four types. These are Mandrel Type 'PTHSM', Wrap Around Type 'PTHSW', Extended Neck Type 'PTHSE' and Dual Split Type 'PTHDE'. Extended Neck Type with control lines 'PTHSCCL', Dual Split Type with control lines 'PTHDCCL', mandrel type with metal to metal seals (PTHTSM) and Mandrel type equipped with a continuous control line with metal to metal seals such as PTHTSMM are also supplied.

'PTHSM' type Tubing Hanger is used for the PTHS type of Tubing Head Spool described later. It seals the annulus pressure by compressing the seal with the weight of the tubing and the hold down screws.

Extended Neck Type 'PTHSE' is used for the Tubing Head/Spool described later. This type is like 'PTHSM' type tubing hanger but having an extended neck with a seal ring which seals fluid in the tubing. This type seals the annulus pressure by compressing the seal with the weight of the tubing and the hold down screws.

The 'PTHSW' type is a split type tubing hanger and may be wrapped round the tubing. It seals the annulus pressure by compressing the seal with the hold down screws installed in the top flanges of the spool. This type of hanger is used where tubing must be rotated or moved up and down under pressure. This tubing hanger is used together with a tubing hanger coupling and a tubing hanger spool.

Specifications of PTHSM & PTHSE Type Hangers					
Nominal Flange Size	Tubing Hanger Type	Lift & Suspension Threads			
		2 3/8 Up TBG	2 7/8 Up TBG	3 1/2 Up TBG	4 1/2 Up TBG
7 1/16	PTHSM	X	X	X	X
	PTHSE	X	X	X	X
9	PTHSM	X	X	X	X
	PTHSE	X	X	X	X
11	PTHSM	X	X	X	X
	PTHSE	X	X	X	X

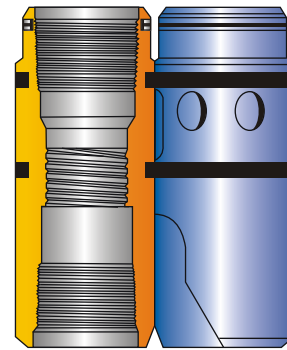
NOTE:

- 1) X-API standard tubing threads.
- 2) These hangers can also be offered with premium threads at request.
- 3) All sizes are in inches.

CASING & TUBING HANGER

Dual split type Tubing Hanger 'PTHDE' is used for Dual Tubing String applications. This utilises plastic packing between the seals for sealing. It is fixed by hold down screws.

Dual split type tubing hangers can also be fitted with hydraulic control lines 1 or 2 called 'PTHDC1' & 'PTHDC2'.



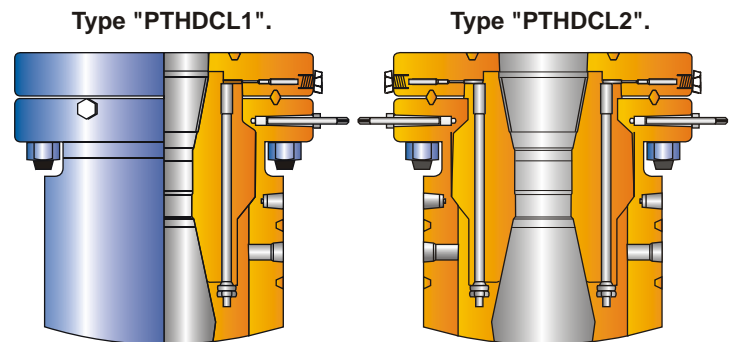
PTHDE Tubing Hanger

Specifications of 'PTHDE' Type Tubing Hangers				
Tubing Pipe	Bore Centre to Bore Centre	Nominal Flange Size	Casing Pipe	
			O.D.	Weight
1.90 x 1.90	2 25/32	7 1/16	5 1/2	17 LBS/FT
2 3/8 x 2 3/8	3 25/32	7 1/16	7	38 LBS/FT
2 7/8 x 2 3/8	3 35/64	7 1/16	7	29 LBS/FT
2 7/8 x 2 3/8	4	9	7 5/8	39 LBS/FT
2 7/8 x 2 7/8	4	9	7 5/8	29.7 LBS/FT
2 7/8 x 2 7/8	4 1/2	9	8 5/8	49 LBS/FT
3 1/2 x 2 7/8	5 3/64	11	9 5/8	53.5 LBS/FT
3 1/2 x 3 1/2	5 3/64	11	9 5/8	53.5 LBS/FT

NOTE: All dimensions are in Inches.

Extended Neck Type Tubing hangers are equipped with a control line (or lines) to control the opening and closing of sub-surface safety valves (SSSV) from the surface. These are called 'PTHSC1' & 'PTHSC2'.

The type 'PTHSC1' is equipped with 1 (1/4") hydraulic control line while 'PTHSC2' is equipped with 2 hydraulic control lines. Both these types seal the annulus pressure by compressing the seal with the hold down screws installed in the type 'PTHSC' Tubing spool top flange.



Extended Neck type Tubing Hangers

Specifications for 'PTHSC & PTHDC' Tubing Hangers					
Nominal Flange Size	Tubing Hanger Type	Lift & Suspension Threads			
		2 3/8 Up TBG	2 7/8 Up TBG	3 1/2 Up TBG	4 1/2 Up TBG
7 1/16	PTHSC	X	X	X	
	PTHDC	X	X		
9	PTHSC	X	X	X	X
	PTHDC	X	X	X	X
11	PTHSC	X	X	X	X
	PTHDC	X	X	X	X

NOTE:

- 1) X-API Standard Tubing Threads.
- 2) These hangers can also be offered with premium threads at request.
- 3) All sizes are in inches



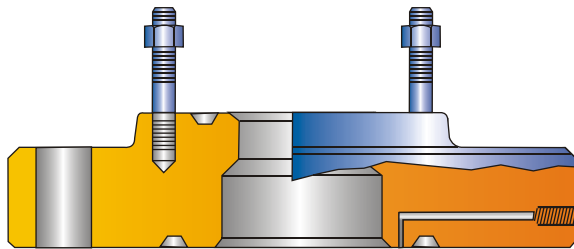
CASING & TUBING HANGER

PARVEEN's Mandrel Type Tubing Hanger with metal to metal seals called 'PTHSM' are used with PARVEEN's Tubing Spool and are equipped with metal to metal seal for fluids which prohibit the use of elastomer seals. These hangers have metal rings at the top and bottom for sealing. The rated working pressure range is 5000 psi to 15000 psi.

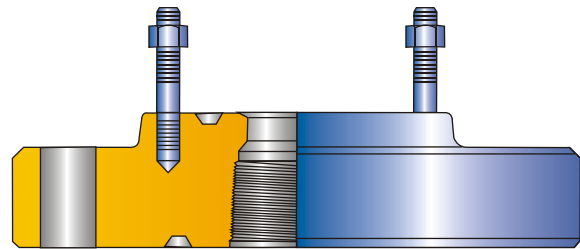
PARVEEN's PTHSM hangers fitted with single or dual hydraulic control lines are called PTHSM1 & PTHSM2. These are equipped with metal to metal seals for fluids prohibiting the use of elastomeric seals. Sealing is affected by metal ring mounted on the top of the hanger and load applied to the bottom of the hanger body.

Tubing Head Adapters

PARVEEN's Tubing Head Adaptors are designed for tubing suspension and can be used with extended neck threaded hanger PTHSE for a max WP of 15000 PSI. These can be provided with a studded up connections and a recessed lower flange with test & bleed ports. Tubing Head Adaptors can also be used with wrap around tubing hanger (PTHSW) for a max. WP of 10000 PSI and are threaded female for tubing suspension. It can be threaded according to the customer specification.



Type PTHSE Tubing Head Adaptor



Type PTHSW Tubing Head Adaptor

Tubing Head Adaptors PTHSE Specifications		
Bottom Flange Size	Studded Top Flange	Min. Bore
7 1/16 x 2000	2 1/16 x 2000	2 1/16
	2 1/16 x 5000	2 1/16
	2 9/16 x 2000	2 9/16
	2 9/16 x 5000	2 9/16
	3 1/8 x 2000	3 1/8
	3 1/8 x 3000	3 1/8
7 1/16 x 3000	2 1/16 x 5000	2 1/16
	2 9/16 x 5000	2 9/16
	3 1/8 x 3000	3 1/8
	3 1/8 x 5000	3 1/8
7 1/16 x 5000	2 1/16 x 5000	2 1/16
	2 9/16 x 5000	2 9/16
	3 1/8 x 5000	3 1/8
7 1/16 x 10000	2 9/16 x 10000	2 9/16
	3 1/16 x 10000	3 1/16
7 1/16 x 15000	2 1/16 x 15000	2 1/16
	2 9/16 x 15000	2 9/16

Tubing Head Adaptors PTHSW Specifications			
Bottom Flange Size	Studded Top Flange	Thread Size API-Up TBG	Min. Bore.
7 1/16 x 2000	2 1/16 x 2000	2 3/8	2 1/16
	2 1/16 x 5000	2 3/8	2 1/16
	2 9/16 x 2000	2 7/8	2 9/16
	2 9/16 x 5000	2 7/8	2 9/16
	3 1/8 x 2000	3 1/2	3 1/8
	3 1/8 x 3000	3 1/2	3 1/8
7 1/16 x 3000	2 1/16 x 5000	2 3/8	2 1/16
	2 9/16 x 5000	2 7/8	2 9/16
	3 1/8 x 3000	3 1/2	3 1/8
	3 1/8 x 5000	3 1/2	3 1/8
7 1/16 x 5000	2 1/16 x 5000	2 3/8	2 1/16
	2 9/16 x 5000	2 7/8	2 9/16
	3 1/8 x 5000	3 1/2	3 1/8
7 1/16 x 10000	2 9/16 x 10000	2 7/8	2 9/16

NOTE:

- 1) Other sizes available on request.
- 2) All Dimensions are in inches.