

HRPI Hydraulic Cylinder Specifications (Both Types)

Cylinder Size (Bore x Stroke)	Max PPRL (@ 3000 psig)	Open Length	Closed Length	Cylinder Outside Diameter (Subsurface)	Minimum Annulus Casing Size at surface (for Subsurface cylinder)	Recommended top tubing/casing joint size (used for top joint of tubing string)	Maximum casing weight (for recommended size at left)	Minimum casing joint length (for top tubing string joint, for specific stroke lengths)*	Flush Joint Crossover Required (if installed in the minimum casing size) **
2.5" x 240"	12,363	527" (44')	287" (24')	3.75"	5-1/2" (all weights)	4-1/2"	11.6#	28'	Yes
3.0" x 240"	18,840	527" (44')	287" (24')	4.75"	7" (all weights)	5-1/2"	17#	28'	Yes
3.5" x 240"	25,169	527" (44')	287" (24')	5.50"	8-5/8" (all weights)	6-5/8"	32#	28'	No
3.5" x 288"	25,169	623" (52')	335" (28')	5.50"	8-5/8" (all weights)	6-5/8"	32#	32'	No
3.5" x 336"	25,169	719" (60')	383" (32')	5.50"	8-5/8" (all weights)	6-5/8"	32#	36'	No
4.0" x 240"	34,000	527" (44')	287" (24')	5.75"	8-5/8" (all weights)	7"	38#	28'	Yes
4.0" x 288"	34,000	623" (52')	335" (28')	5.75"	8-5/8" (all weights)	7"	38#	32'	Yes
4.0" x 336"	34,000	719" (60')	383" (32')	5.75"	8-5/8" (all weights)	7"	38#	36'	Yes
4.5" x 240"	42,390	527" (44')	287" (24')	6.25"	9-5/8" (all weights)	7-5/8"	39#	28'	Yes
4.5" x 288"	42,390	623" (52')	335" (28')	6.25"	9-5/8" (all weights)	7-5/8"	39#	32'	Yes
4.5" x 336"	42,390	719" (60')	383" (32')	6.25"	9-5/8" (all weights)	7-5/8"	39#	36'	Yes
5.0 x 336"	53,376	719" (60')	383" (32')	-	-	-	-	-	-

* Minimum casing joint length is required to allow stabbing an insert pump into the pump shoe.

** Flush joint crossovers may not be necessary, if installed in well casing larger than the minimum size listed. User must verify clearance between the casing collar OD (of the top casing/tubing string joint) and the ID of the annulus casing.