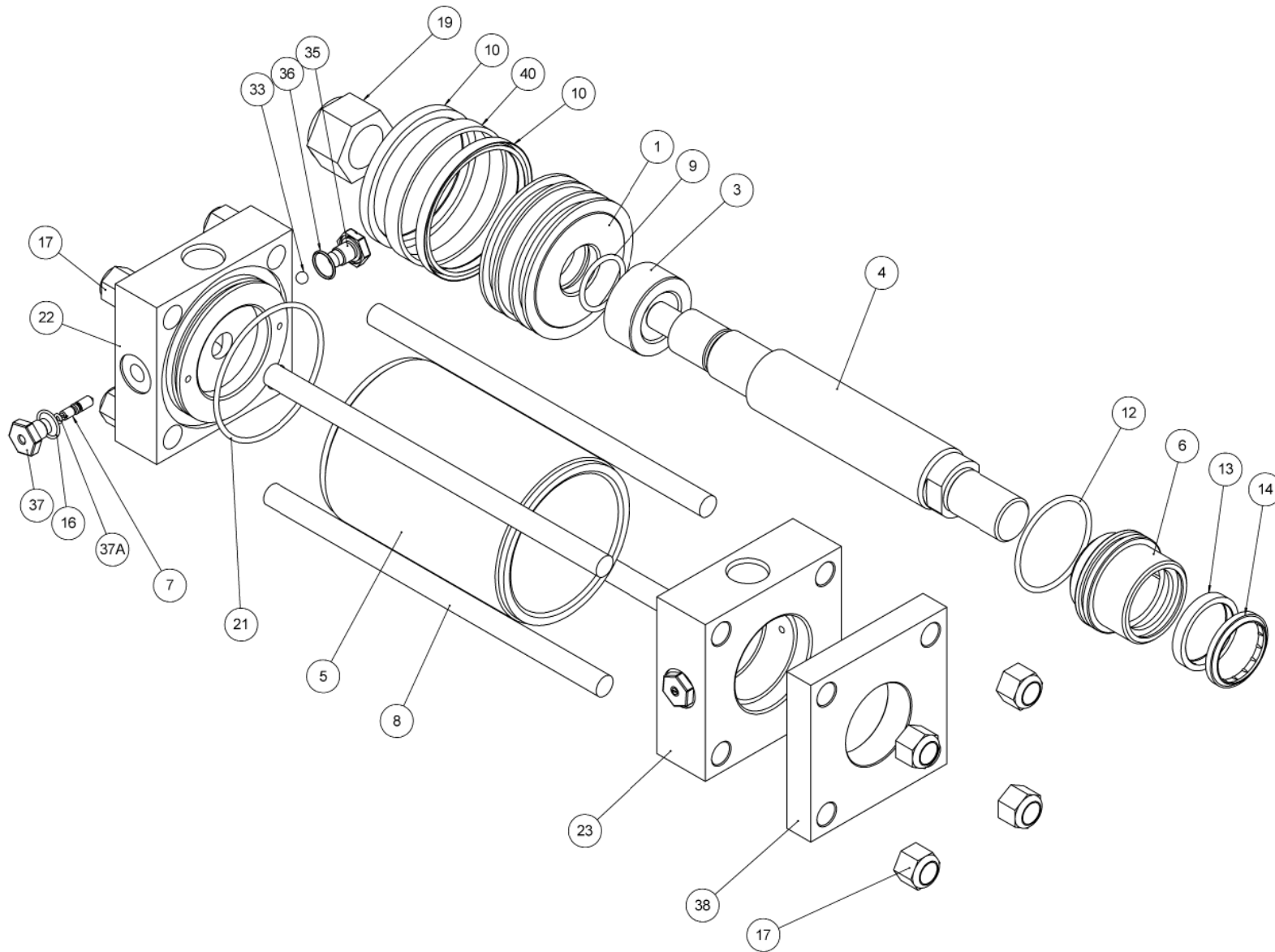


H-Series Parts Drawing



H-SERIES PARTS LIST - 1 1/2" BORE TO 4" BORE (see page 22 for larger bores)

DESCRIPTION	QTY	BORE													
		1 1/2		2		2 1/2			3 1/4		4				
		5/8	1	1	1 3/8	1	1 3/8	1 3/4	1 3/8	1 3/4	2	1 3/4	2	2 1/2	
ROD SIZE															
1 PISTON	1	1H2015H	1H2215H	1H202H		1H2025H			1H2032			1H204H			
3* CUSHION SLEEVE	1	3H152	3H202	3H202	3H200	3H252		3H2503	3H250	3H322	3H323	3H320	3H402	3H402	3H400
4 ROD - MALE	1	4H1325-	4H134-	4H234-	4H2355-	4H284-	4H2855-	4H287-	4H3355-	4H337-	4H338-	4H437-	4H438-	4H4310-	
4 ROD - FEMALE "HD" MODEL	1	26H1325-	26H134-	26H234-	26H2355-	26H284-	26H2855-	26H287-	26H3355-	26H337-	26H338-	26H437-	26H438-	26H4310-	
4 ROD COMMON	1	44H1325-	44H134-	44H234-	44H2355-	44H284-	44H2855-	44H287-	44H3355-	44H337-	44H338-	44H437-	44H438-	44H4310-	
4 ROD (CUSHIONED CBE)	1	4H1125-	4H114-	4H204-	4H2055-	4H254-	4H2555-	4H257-	4H3055-	4H307-	4H308-	4H407-	4H408-	4H4010-	
5 BARREL (M-HONED STEEL)	1	5H015-		5H020-		5H025-			5H032-			5H040-			
6 GLAND BUSHING	1	6H1562H	6H1510H	6H2010H	6H3213H	6H2010H	6H3213H	6H2517H	6H3213H	6H4017H	6H5020H	6H4017H	6H5020H	6H6025H	
7 NEEDLE VALVE STEM	2	N/A	N/A	7H832-2A		7H832-2A			7H850-3A			7H850-3A			
8 TIE ROD (EA) (STANDARD)	4	8H_156-		8H_208-		8H_258-			8H_3210-			8H_4010-			
9 PISTON SEAL INTERNAL	1	N/A	9A113	9A210		9A117			9A215			9A220			
10 PISTON CUP	2	10H755-15		10H20H		10H25H			10H32H			10H40H			
12 GLAND BUSHING SEAL	1	9H218	9H222	9H224	9H227	9H224	9H227	9H230	9H227	9H230	9H232	9H230	9H232	9H236	
13 ROD SEAL	1	13H62H	13H10H	13H10H	13H13H	13H10H	13H13H	13H17H	13H13H	13H17H	13H20H	13H17H	13H20H	13H25H	
14 ROD WIPER	1	14H62	14H10	14H10	14H13	14H10	14H13	14H17	14H13	14H17	14H20	14H17	14H20	14H25	
16 NEEDLE VALVE SEAL	2	N/A	N/A	9A013		9A013			9A017			9A017			
17 LOCK NUT - TIE ROD	4,8	19A006		19A008		19A008			19A010			19A010			
19 LOCK NUT - PISTON	1	19A007	19H008-1	19A010		19H012			19H016			19H020			
21 BARREL SEAL	2	9H218		9H224	9H228 **			9H232 **			9H239 **		9H240		
22 HEAD BLIND END (see below)	1	H_15B		H_2B		H_25B			H_32B			H_4B			
23 HEAD GLAND END (see below)	1	H_15G62SP08	H_15G10SP08	H_2G10SP08	H_2G13SP08	H_25G10SP08	H_25G13SP08	H_25G17SP08	H_32G13SP12	H_32G17SP12	H_32G20SP12	H_4G17SP12	H_4G20SP12	H_4G25SP12	
24 TRUNNION	1	HT15		HT2		HT25			HT32			HT4			
33 CHECK BALL	2	N/A	N/A	33H18		33H18			33A32			33A32			
35 CHECK PLUG	2	N/A	N/A	35H320-1		35H320-1			35H500-1			35H500-1			
36 CHECK VALVE SEAL	2	N/A	N/A	9A013		9A013			9A017			9A017			
37 NEEDLE VALVE HOUSING	2	N/A	N/A	7H832-2B		7H832-2B			7H850-3B			7H850-3B			
37A NEEDLE VALVE HOUSING SEAL	2	N/A	N/A	9H008		9H008			9A007			9A007			
38 FRONT PLATE	1	FP1562	FP1510	FP2010	FP2013	FP2510	FP2513	FP2517	FP3213	FP3217	FP3220	FP4017	FP4020	FP4025	
40 PISTON WEAR STRIP	1	40H1525		40H2037		40H2537			40H323			40H405			
41 SEAL KIT	1	KH1562H	KH1510H	KH2010H	KH2013H	KH2510H	KH2513H	KH2517H	KH3213H	KH3217H	KH3220H	KH4017H	KH4020H	KH4025H	
42 SEAL KIT UNIVERSAL	1	KH1562U	KH1510U	KH2010U	KH2013U	KH2510U	KH2513U	KH2517U	KH3213U	KH3217U	KH3220U	KH4017U	KH4020U	KH4025U	

NOTES:

A part no. having an underscore indicates a model letter code is required. See tables to right.

Part numbers terminating in a dash must have the stroke value added immediately afterward.

* Blind end cushion on 1-1/2" bore cylinder is a cushion nut-spear. Part #3H152B (Rod #1), 3H150B (Rod #2) (Self regulating - no needle valve)

** 2", 2 1/2" and 3 1/4" Bores Cushioned Rod end require (1) std barrel seal and (1) other seal see item #21.

UNIVERSAL SEAL KIT: Seal kit contains all legacy seals for obsolete designs

The following models have unique components - contact factory for parts list:

4" and 5" bore HS (Side-tapped) model.

All bores HTR (Rod End Trunnion) model.

2", 2 1/2" and 3 1/4" bores that use the largest rod size and are cushioned on the gland end.

HEAD PART NUMBER STRUCTURE:

- 1) Use "H" for Series - H
- 2) Use table (to right) to select head mounting style.
- 3) BORE eg 3-1/4" bore use 32, 4" bore use 4.
- 4) LOCATION; B=Blind G=Gland or Rod end.
- 5) Rod Size (Gland end only) 1" = 10, 1-3/4 = 17 etc.
- 6) CUSHIONED = "C", NON-CUSHIONED = BLANK
- 7) PORT SIZE, SAE-08 = SP08, SAE-12 = SP12
SAE-12 Code 61 = SF12 etc.

eg. Cyl. Model "HRS", 3-1/4" Bore, 1 3/8" Rod, Cushioned

Gland end head "HC32G13CSP12" Blind end head "HR32BCSP12"

MOUNTING STYLE	GLAND HEAD	BLIND HEAD	BORE	CODE	ROD DIA.	CODE
B	C	R	1 1/2	15	5/8	62
			2	2	1	10
BS	C	R	2 1/2	25	1 3/8	13
C	C	C	3 1/4	32	1 3/4	17
D	C	n/a	4	4	2	20
E	C	E	5	5	2 1/2	25
F	F	F	6	6	3	30
G	G	R	7	7	3 1/2	35
H	C	H	8	8	4	40
MP	C	R			4 1/2	45
NA	C	R				
NB	C	R				
NC	C	R				
NM	C	R				
R	C	R				
RS	C	R				
S	ST	ST				
T	C	R				
TB	C	T				
TR	T	R				
W	C	W				

SEE PAGE FOLLOWING PARTS DRAWING FOR 5" BORE THROUGH 8" BORE PARTS AND TIE-ROD PART NUMBER STRUCTURE.

H-SERIES PARTS LIST - 5" BORE TO 8" BORE														
BORE														
DESCRIPTION	QTY	5				6			7			8		
ROD SIZE		2	2 1/2	3	3 1/2	2 1/2	3	3 1/2	3	3 1/2	4	3 1/2	4	4 1/2
1 PISTON	1	1H205				1H206			1H207			1H208		
3 CUSHION SLEEVE	1	3H502	3H503	3H501	3H500	3H602	3H603	3H600	3H702	3H802	3H803	3H802	3H803	3H800
4 ROD - MALE	1	4H538-	4H5310-	4H5312-	4H5314-	4H6310-	4H6312-	4H6314-	4H7312-	4H7314-	4H7316-	4H8314-	4H8316-	4H8318-
4 ROD - FEMALE "HD" MODEL	1	26H538-	26H5310-	26H5312-	26H5314-	26H6310-	26H6312-	26H6314-	26H7312-	26H7314-	26H7316-	26H8314-	26H8316-	26H8318-
4 ROD COMMON	1	44H538-	44H5310-	44H5312-	44H5314-	44H6310-	44H6312-	44H6314-	44H7312-	44H7314-	44H7316-	44H8314-	44H8316-	44H8318-
4 ROD (CUSHIONED CBE)	1	4H508-	4H5010-	4H5012-	4H5014-	4H6010-	4H6012-	4H6014-	4H7012-	4H7014-	4H7016-	4H8014-	4H8016-	4H8018-
5 BARREL (M-HONED STEEL)	1	5H050-				5H060-			5H070-			5H080-		
6 GLAND BUSHING	1	6H5020H	6H6025H	6H5030H	6H5035H	6H6025H	6H6030H	6H5035H	6H7030H	6H7035H	6H7040H	6H8035H	6H8040H	6H8045H
7 NEEDLE VALVE STEM	2	7H850-3A				7H850-3A			7H850-3A			7H850-3A		
8 TIE ROD (EA) (STANDARD)	4	8H_5014-				8H_6016-			8H_7018-			8H_8020-		
9 PISTON SEAL INTERNAL	1	9A223				9A225			9A229			9A229		
10 PISTON CUP	2	10H50H				10H60H			10H70H			10H80H		
12 GLAND BUSHING SEAL	1	9H232	9H236	9H242	9H245	9H236	9H242	9H245	9H242	9H246	9H252	9H248	9H252	9H256
13 ROD SEAL	1	13H20H	13H25H	13H30H	13H35H	13H25H	13H30H	13H35H	13H30H	13H35H	13H40H	13H35H	13H40H	13H45H
14 ROD WIPER	1	14H20	14H25	14H30	14H35	14H25	14H30	14H35	14H30	14H35	14H40	14H35	14H40	14H45
16 NEEDLE VALVE SEAL	2	9A017				9A017			9A017			9A017		
17 LOCK NUT - TIE ROD	4,8	19A014				19H016			19A018			19A020		
19 LOCK NUT - PISTON	1	19H024				19A028			19H036			19A036		
21 BARREL SEAL	2	9H248				9H256			9H261			9H265		
22 HEAD BLIND END (SEE BELOW)	1	H_5BSP12				H_6BSP16			H_7BSP20			H_8BSP24		
23 HEAD GLAND END (SEE BELOW)	1	H_5G20SP12	H_5G25SP12	H_5G30SP12	H_5G35SP12	H_6G25SP16	H_6G30SP16	H_6G35SP16	H_7G30SP20	H_7G35SP20	H_7G40SP20	H_8G35SP24	H_8G40SP24	H_8G45SP24
24 TRUNNION	1	HT5				HT6			HT7			HT8		
33 CHECK BALL	2	33A32				33A32			33A32			33A32		
35 CHECK PLUG	2	35H500-1				35H500-1			35H500-1			35H500-1		
36 CHECK VALVE SEAL	2	9A017				9A017			9A017			9A017		
37 NEEDLE VALVE HOUSING	2	7H850-3B				7H850-3B			7H850-3B			7H850-3B		
37A NEEDLE VALVE HOUSING SEAL	2	9A007				9A007			9A007			9A007		
38 FRONT PLATE	1	FP5020	FP5025	FP5030	FP5035	FP6025	FP6030	FP6035	FP7030	FP7035	FP7040	FP8035	FP8040	FP8045
40 PISTON WEAR STRIP	1	40H507				40H607			40H7010			40H8010		
41 SEAL KIT	1	KH5020H	KH5025H	KH5030H	KH5035H	KH6025H	KH6030H	KH6035H	KH7030H	KH7035H	KH7040H	KH8035H	KH8040H	KH8045H
42 SEAL KIT UNIVERSAL	1	KH5020U	KH5025U	KH5030U	KH5035U	KH6025U	KH6030U	KH6035U	KH7030U	KH7035U	KH7040U	KH8035U	KH8040U	KH8045U

TIE ROD PART NUMBER STRUCTURE:

- 1) Start with "8H"
- 2) Use table to select mounting style.
- 3) Add Bore Code in space provided.
- 4) - STROKE
- 5) -XI (only for mounting style 'T').

eg. Cyl. Model "HRS", 3-1/4" Bore, 12" Stroke
Tie Rod Part Number 8HR3210-12

MOUNTING STYLE	TIE ROD PART NUMBERS	BORE	CODE
C,E,W,MP,H	8HC(BORE CODE)-STROKE	1 1/2	1506
D	8HD(BORE CODE)-STROKE	2	208
NM, HT, F, S	8HF(BORE CODE)-STROKE	2 1/2	258
NA	8HA(BORE CODE)-STROKE	3 1/4	3210
NB,NC	8HB(BORE CODE)-STROKE	4	4010
R,RS,B,BS	8HR(BORE CODE)-STROKE	5	5014
G	8HG(BORE CODE)-STROKE	6	6016
TR	8HTR(BORE CODE)-STROKE	7	7018
TB	8HT(BORE CODE)-STROKE	8	8020
T (Rod size 1)	8HTA(BORE CODE)-STROKE-XI		
T (Rod size 2)	8HTB(BORE CODE)-STROKE-XI		
T (Rod size 3)	8HTC(BORE CODE)-STROKE-XI		
T (Rod size 4)	8HTD(BORE CODE)-STROKE-XI		