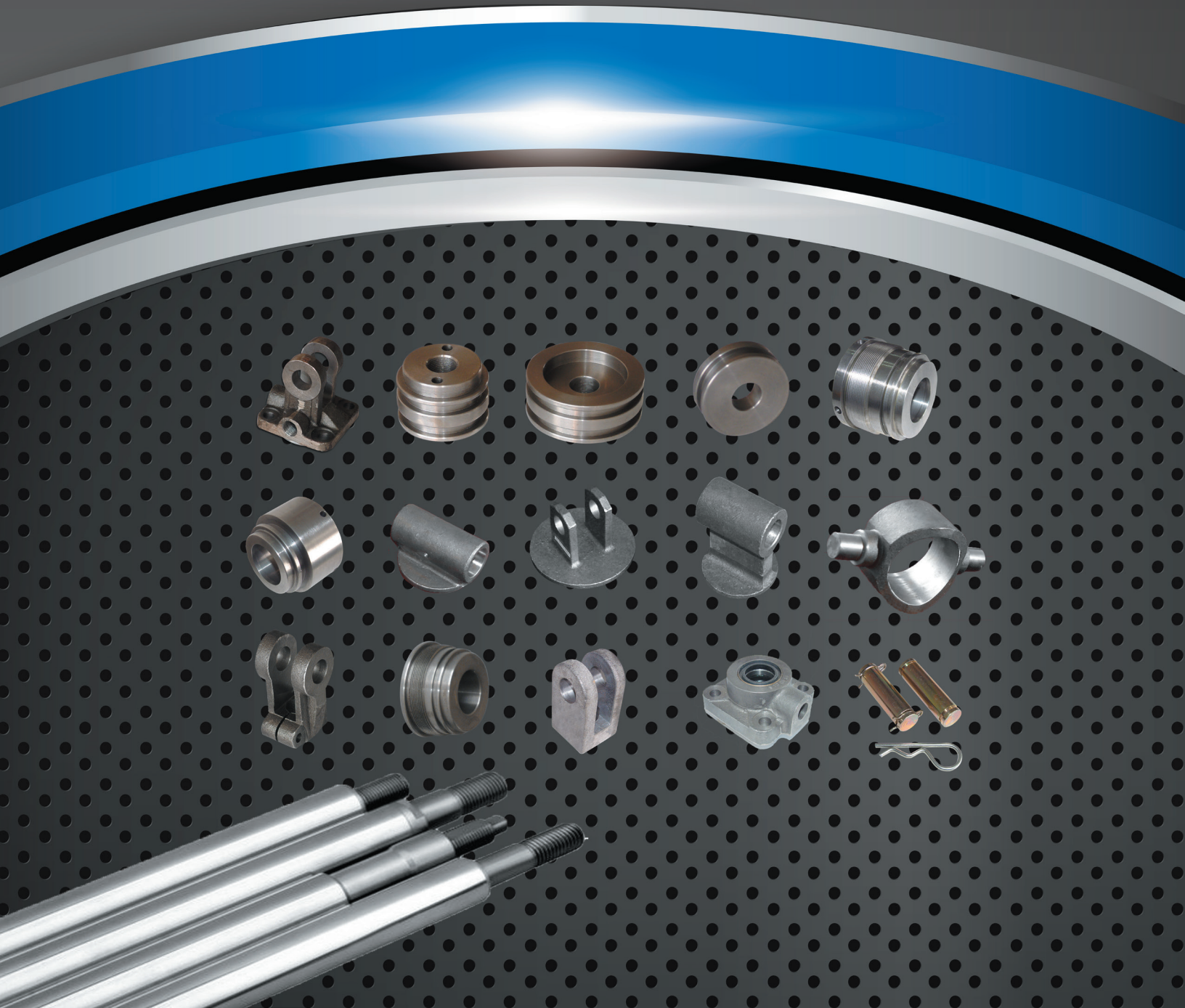


Hydraulic cylinder piece parts

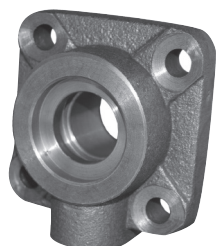


Standard Cylinder Repair Parts

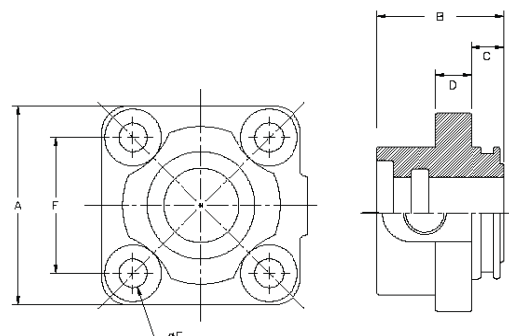
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HYDRAULIC CYLINDER PIECE PARTS

THE TRD LINE



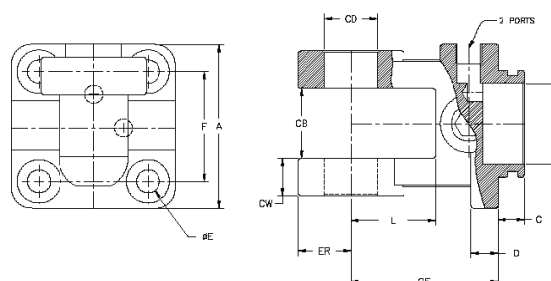
GLANDS



Part Number	Rod	Bore	A	B	C	D	E	F	Port
TRD-2.0X1.125-GLAND	1.125	2.0	3.07	1.92	0.50	0.52	0.43	2.05	3/8" NPT
TRD-2.5X1.125-GLAND	1.125	2.5	3.35	1.92	0.50	0.62	0.43	2.36	3/8" NPT
TRD-3.0X1.250-GLAND	1.250	3.0	4.05	1.96	0.50	0.73	0.51	2.87	1/2" NPT
TRD-3.5X1.250-GLAND	1.250	3.5	4.33	1.95	0.50	0.74	0.51	3.19	1/2" NPT
TRD-3.5X1.500-GLAND	1.500	3.5	4.33	1.95	0.50	0.74	0.51	3.19	1/2" NPT
TRD-4.0X1.250-GLAND	1.250	4.0	4.72	1.89	0.51	0.98	0.51	3.62	1/2" NPT
TRD-4.0X1.500-GLAND	1.500	4.0	4.72	1.89	0.51	0.98	0.51	3.62	1/2" NPT
TRD-4.0X1.750-GLAND	1.750	4.0	4.72	1.89	0.51	0.98	0.51	3.62	1/2" NPT
TRD-5.0X1.500-GLAND	1.500	5.0	6.30	2.24	0.68	1.18	0.67	4.45	1/2" NPT
TRD-5.0X2.000-GLAND	2.000	5.0	6.30	2.24	0.68	1.18	0.67	4.45	1/2" NPT



CAPS



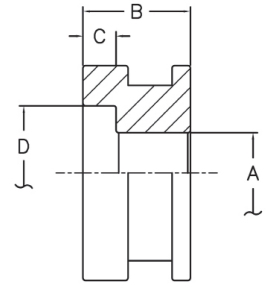
Part Number	Bore	A	B	C	D	E	F	Ports	CB	CD	CE	CW	L	ER
TRD-2.0 CAP	2.0	3.07	1.50	0.50	0.50	0.43	2.05	3/8" NPT	1.14	1.01	2.84	0.69	1.63	1.00
TRD-2.5 CAP	2.5	3.35	1.77	0.50	0.50	0.43	2.36	3/8" NPT	1.14	1.01	2.84	0.69	1.63	1.00
TRD-3.0 CAP	3.0	4.05	2.28	0.50	0.50	0.51	2.87	1/2" NPT	1.14	1.01	2.84	0.69	1.63	1.00
TRD-3.5 CAP	3.5	4.33	2.56	0.50	0.69	0.51	3.19	1/2" NPT	1.14	1.01	2.84	0.69	1.63	1.00
TRD-4.0 CAP	4.0	4.72	3.00	0.51	0.75	0.51	3.62	1/2" NPT	1.14	1.01	2.88	0.73	1.63	1.13
TRD-5.0 CAP	5.0	6.30	3.94	0.69	0.75	0.67	4.45	1/2" NPT	1.26	1.01	3.95	1.12	2.25	1.50

HYDRAULIC CYLINDER PIECE PARTS

THE TRD LINE



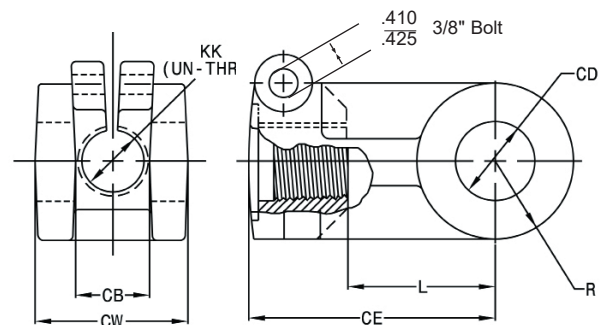
PISTON



Part Number	Bore	A	B	C	D
TRD-2.0 PISTON	2.0	0.75	1.00	0.32	1.38
TRD-2.5 PISTON	2.5	0.75	1.00	0.32	1.50
TRD-3.0 PISTON	3.0	1.00	1.00	0.32	2.25
TRD-3.5 PISTON	3.5	1.00	1.00	0.32	2.76
TRD-4.0 PISTON	4.0	1.00	1.00	0.32	2.76
TRD-5.0 PISTON	5.0	1.25	1.89	0.63	3.54



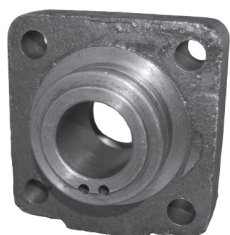
SPLIT CLEVIS



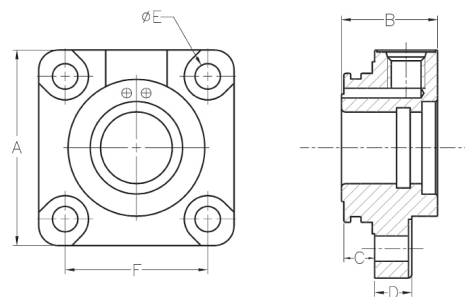
Part Number	Bore	CB	CD	CE	CW	KK	L	R
TRD-2.0 CLEVIS	2.0	1.12	1.00	3.25	2.62	1-1/8"-12	2.12	1.00
TRD-2.5 CLEVIS	2.5	1.12	1.00	3.25	2.62	1-1/8"-12	2.12	1.00
TRD-3.0 CLEVIS	3.0	1.12	1.00	3.25	2.62	1-1/4"-12	2.12	1.00
TRD-3.5 CLEVIS	3.5	1.12	1.00	3.25	2.62	1-1/4"-12	2.12	1.00
TRD-4.0 CLEVIS	4.0	1.12	1.00	3.25	2.62	1-1/4"-12	2.12	1.00
TRD-5.0 CLEVIS	5.0	1.25	1.00	3.25	2.62	1-1/4"-12	2.12	1.25

HYDRAULIC CYLINDER PIECE PARTS

THE HTRD LINE



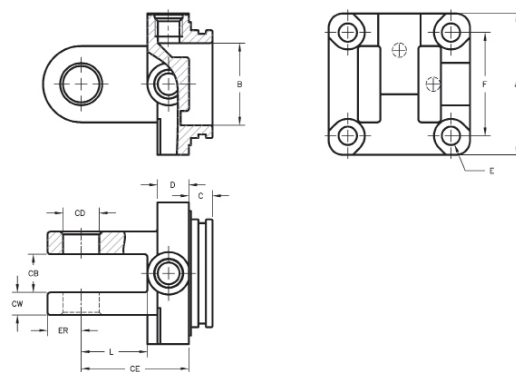
GLANDS



Part Number	Rod	Bore	A	B	C	D	E	F	Port
HTRD-2.0-GLAND	1.125	2.00	3.23	2.25	0.67	0.99	0.43	2.36	SAE8
HTRD-2.5-GLAND	1.250	2.50	3.47	2.38	0.67	0.75	0.51	2.48	SAE8
HTRD-3.0-GLAND	1.375	3.00	4.02	1.94	0.63	0.75	0.51	2.91	SAE8
HTRD-3.5-GLAND	1.375	3.50	4.33	2.00	0.63	0.75	0.51	3.19	SAE8
HTRD-4.0-1.50-GLAND	1.500	4.00	5.12	1.81	0.71	1.06	0.67	3.70	SAE8
HTRD-4.0-1.75-GLAND	1.750	4.00	5.12	1.81	0.71	1.06	0.67	3.70	SAE8
HTRD-5.0-GLAND	2.000	5.00	6.61	2.50	0.71	1.13	0.83	4.96	SAE10



CAPS



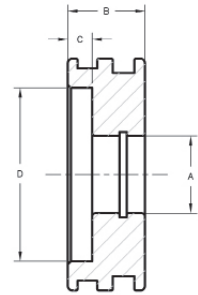
Part Number	Bore	A	B	C	D	E	F	Ports	CB	CD	CE	CW	L	ER
HTRD-2.0-ENDCAP	2.0	3.23	1.42	0.67	1.17	0.39	2.36	SAE8	1.06	1.01	2.98	0.63	1.81	0.93
HTRD-2.5-ENDCAP	2.5	3.47	1.77	0.59	1.10	0.39	2.48	SAE8	1.06	1.01	2.95	0.63	1.84	0.90
HTRD-3.0-ENDCAP	3.0	4.02	2.28	0.63	0.91	0.51	2.91	SAE8	1.06	1.01	3.04	0.63	2.13	0.94
HTRD-3.5-ENDCAP	3.5	4.33	2.56	0.63	0.91	0.51	3.19	SAE8	1.06	1.01	3.04	0.81	2.13	0.94
HTRD-4.0-ENDCAP	4.0	5.12	2.95	0.67	1.04	0.67	3.70	SAE8	1.06	1.01	3.17	0.81	2.13	0.98
HTRD-5.0-ENDCAP	5.0	6.61	3.94	0.67	1.04	0.83	4.96	SAE10	1.06	1.26	3.54	0.94	2.50	1.40

HYDRAULIC CYLINDER PIECE PARTS

THE HTRD LINE



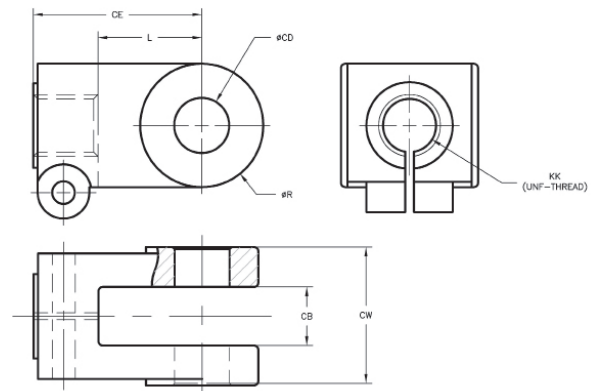
PISTON



Part Number	Bore	A	B	C	D
HTRD-2.0-PISTON	2.0	0.75	1.0	0.2	1.5
HTRD-2.5-PISTON	2.5	0.75	1.0	0.2	1.5
HTRD-3.0-PISTON	3.0	1.00	1.0	0.3	2.3
HTRD-3.5-PISTON	3.5	1.00	1.0	0.3	2.3
HTRD-4.0-PISTON	4.0	1.25	1.3	0.3	2.3
HTRD-5.0-PISTON	5.0	1.50	1.5	0.3	2.3



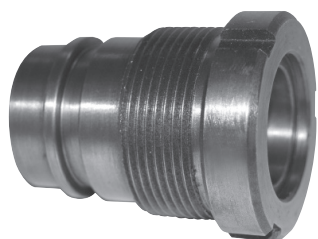
SPLIT CLEVIS



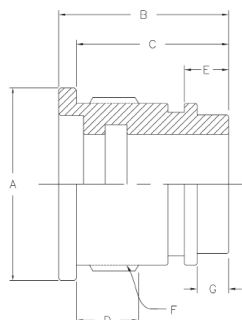
Part Number	Bore	CB	CD	CE	CW	KK	L	R
HTRD-2.0-2.5-CLEVIS	2.0/2.5	1.06	1.01	3.06	2.50	1-1/8"-12	1.81	2.25
HTRD-3.0-CLEVIS	3.0	1.06	1.01	2.98	2.50	1-1/8"-12	1.81	2.55
HTRD-3.5-CLEVIS	3.5	1.06	1.01	2.98	2.87	1-1/4"-12	1.81	2.55
HTRD-4.0-CLEVIS	4.0	1.06	1.01	2.98	2.87	1-1/2"-12	1.81	2.55
HTRD-5.0-CLEVIS	5.0	1.06	1.26	3.19	2.87	1-1/2"-12	2.00	2.55

HYDRAULIC CYLINDER PIECE PARTS

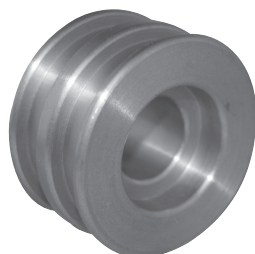
THE MECH LINE



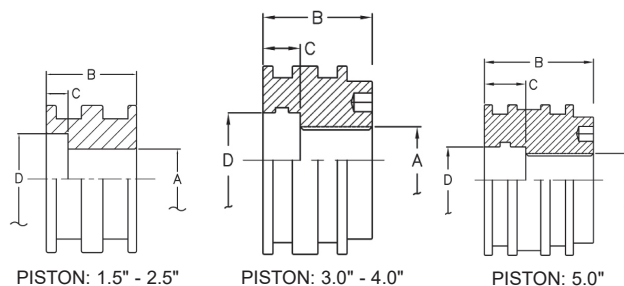
GLANDS



Part Number	Rod	Bore	A	B	C	D	E	F	G
MECH-1.5-GLAND	1	1.5	1.87	2.40	1.93	0.86	0.54	M43 x 2	0.40
MECH-2.0-GLAND	1-1/4	2.0	2.375	2.17	1.93	0.90	0.54	M55 x 2	0.40
MECH-2.5-GLAND	1-1/2	2.5	2.875	2.17	1.93	0.90	0.54	M68 x 2	0.40
MECH-3.0-GLAND	1-1/2	3.0	3.46	2.40	1.93	0.90	0.54	M81 x 2	0.40
MECH-3.5-GLAND	1-3/4	3.5	3.976	2.17	1.93	0.90	0.54	M94 x 2	0.40
MECH-4.0-GLAND	2	4.0	4.488	2.44	2.20	1.18	0.54	M106 x 2	0.40
MECH-5.0-GLAND	2-1/2	5.0	5.472	2.68	2.20	1.18	0.54	M132 x 2	0.40



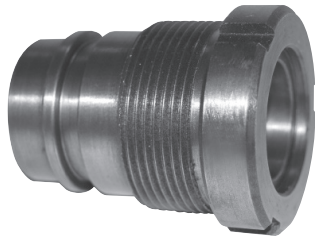
PISTONS



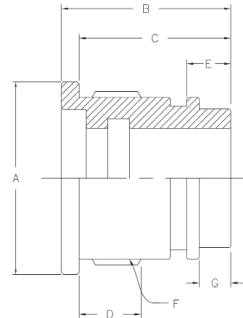
Part Number	Bore	A	B	C	D
MECH-1.5-PISTON	1.5	0.688	1.22	0.15	1.10
MECH-2.0-PISTON	2.0	0.805	1.22	0.29	1.26
MECH-2.5-PISTON	2.5	0.947	1.37	0.37	1.49
MECH-3.0-PISTON	3.0	M24 x 2	2.09	0.71	1.502
MECH-3.5-PISTON	3.5	M30 x 2	2.16	0.67	1.752
MECH-4.0 PISTON	4.0	M36 x 2	2.16	0.67	2.002
MECH-5.0 PISTON	5.0	M48 x 2	2.87	0.98	2.502

HYDRAULIC CYLINDER PIECE PARTS

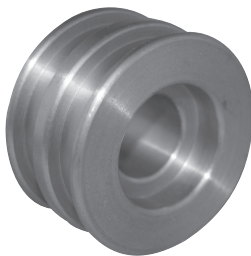
THE WELD LINE



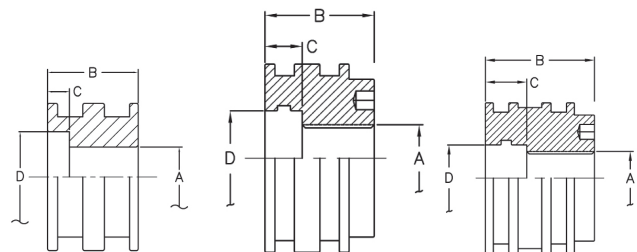
GLANDS



Part Number	Rod	Bore	A	B	C	D	E	F	G
WELD-1.5-GLAND	1	1.5	1.97	2.40	1.93	0.79	0.54	M43-2	0.40
WELD-2.0-GLAND	1-1/4	2.0	2.44	2.17	1.93	0.79	0.54	M55-2	0.40
WELD-2.5-GLAND	1-1/2	2.5	2.95	2.17	1.93	0.79	0.54	M68-2	0.40
WELD-3.0-GLAND	1-1/2	3.0	3.45	2.40	1.93	0.83	0.54	M81-2	0.40
WELD-3.5-GLAND	1-3/4	3.5	3.94	2.17	1.93	0.83	0.54	M94-2	0.40
WELD-4.0-GLAND	2	4.0	4.45	2.44	2.20	1.10	0.54	M106-2	0.40
WELD-5.0-GLAND	2-1/2	5.0	5.45	2.68	2.20	1.10	0.54	M132-2	0.40



PISTONS



PISTON: 1.5" - 2.5"

PISTON: 3.0" - 4.0"

PISTON: 5.0"

Part Number	Bore	A	B	C	D
WELD-1.5-PISTON	1.5	0.634	1.22	0.16	0.906
WELD-2.0-PISTON	2.0	0.807	1.22	0.30	1.220
WELD-2.5-PISTON	2.5	0.948	1.38	0.38	1.375
WELD-3.0-PISTON	3.0	M24-2	2.09	0.71	1.504
WELD-3.5-PISTON	3.5	M30-2	2.28	0.79	1.755
WELD-4.0 PISTON	4.0	M36-2	2.28	0.79	2.005
WELD-5.0 PISTON	5.0	M48-2	2.88	0.98	2.505

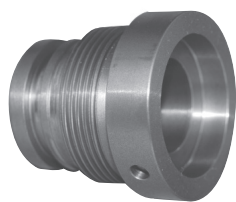
NOTES

Mobile Cylinder Repair Parts

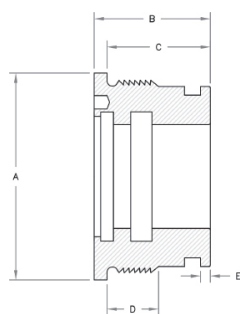
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HYDRAULIC CYLINDER PIECE PARTS

IT Gland



Material: 65-45-12
Ductile Iron



PART NUMBER	BORE +.003" -.003"	ROD +.000" -.003"	A	B	C	D	E	F (BUTTRESS)
TT-H107277	1.500	1.000	2.00	2.00	1.50	0.75	0.28	1-3/4"-12
TT-H107597	2.000	1.000	2.50	2.12	1.94	1.00	0.12	2-1/4"-12
TT-H107598	2.000	1.125	2.50	2.00	1.75	0.75	0.19	2-1/4"-12
TT-H107595	2.000	1.250	2.50	2.25	2.00	1.00	0.19	2-1/4"-12
TT-H107193	2.500	1.125	3.00	2.00	1.75	0.75	0.19	2-3/4"-12
TT-H107194	2.500	1.250	3.00	2.00	1.75	0.75	0.19	2-3/4"-12
TT-H107463	2.500	1.500	3.00	2.38	2.00	1.00	0.19	2-3/4"-12
TT-H107673	2.500	1.750	3.00	2.25	1.88	0.88	0.28	2-3/4"-12
TT-H107157	3.000	1.000	3.50	2.25	2.00	1.00	0.19	3-1/4"-12
TT-H107196	3.000	1.250	3.50	2.25	2.00	1.00	0.19	3-1/4"-12
TT-H107131	3.000	1.500	3.50	2.25	2.00	1.00	0.19	3-1/4"-12
TT-H107189	3.000	1.750	3.50	2.25	2.00	1.00	0.19	3-1/4"-12
TT-H107359	3.000	2.000	3.50	2.50	2.00	1.00	0.19	3-1/4"-12
TT-H107591	3.250	1.500	3.75	2.25	2.00	1.00	0.19	3-1/2"-12
TT-H107592	3.250	1.750	3.75	2.25	2.00	1.00	0.19	3-1/2"-12
TT-H107197	3.500	1.250	4.00	2.25	2.00	1.00	0.19	3-3/4"-12
TT-H107198	3.500	1.500	4.00	2.25	2.00	1.00	0.19	3-3/4"-12
TT-H107108	3.500	1.750	4.00	2.25	2.00	1.00	0.19	3-3/4"-12
TT-H107112	3.500	2.000	4.00	2.25	2.00	1.00	0.19	3-3/4"-12
TT-H107462	3.500	2.500	4.00	2.50	2.12	1.00	0.25	3-3/4"-12
TT-H107130	4.000	1.500	4.50	2.25	2.00	1.00	0.19	4-1/4"-12
TT-H107124	4.000	1.750	4.50	2.25	2.00	1.00	0.19	4-1/4"-12
TT-H107311	4.000	2.000	4.50	2.25	2.00	1.00	0.19	4-1/4"-12
TT-H107331	4.000	2.250	4.50	2.25	2.00	1.00	0.19	4-1/4"-12
TT-H107386	4.000	2.500	4.50	2.50	2.12	1.12	0.19	4-1/4"-12
TT-H107525	4.000	3.000	4.50	2.50	2.12	1.00	0.25	4-1/4"-12
TT-H107199	4.500	1.750	5.00	2.25	2.00	1.00	0.19	4-3/4"-12
TT-H107200	4.500	2.000	5.00	2.25	2.00	1.00	0.19	4-3/4"-12
TT-H107201	4.500	2.250	5.00	2.25	2.00	1.00	0.19	4-3/4"-12
TT-H107528	4.500	3.500	5.00	2.38	2.00	1.00	0.19	4-3/4"-12
TT-H107234	5.000	1.750	5.50	2.25	2.00	1.00	0.19	5-1/4"-12
TT-H107212	5.000	2.000	5.50	2.25	2.00	1.00	0.19	5-1/4"-12
TT-H107204	5.000	2.500	5.50	2.50	2.12	1.12	0.19	5-1/4"-12
TT-H107205	5.000	3.000	5.50	2.50	2.12	1.12	0.19	5-1/4"-12
TT-H107345	6.000	2.000	6.50	2.50	2.12	1.12	0.19	6-1/4"-12
TT-H107206	6.000	2.500	6.50	2.50	2.12	1.12	0.19	6-1/4"-12
TT-H107207	6.000	3.000	6.50	2.50	2.12	1.12	0.19	6-1/4"-12
TT-H107178	6.000	3.500	6.50	2.50	2.12	1.12	0.19	6-1/4"-12
TT-H107328	7.000	3.000	7.50	2.88	2.50	1.12	0.59	7-1/4"-10
TT-H107467	7.000	4.000	7.50	2.88	2.50	1.12	0.59	7-1/4"-10
TT-H107466	8.000	4.000	9.00	3.75	3.25	1.50	0.88	8-1/4"-10
TT-H107475	8.000	5.000	9.00	3.75	3.25	1.50	0.88	8-1/4"-10

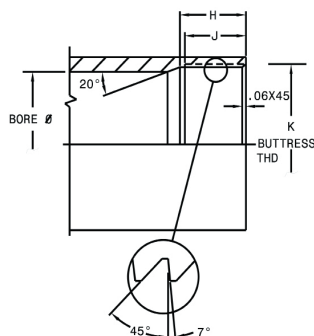
IT & ITW Technical Information

Basic information for Internal Buttress
Threads (52 degrees)

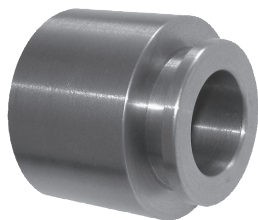
"H" = Length of Thread on Gland plus 1/8"

"J" = Length of Thread on Gland plus 1/16"

"K" = Buttress Thread as determined by Gland

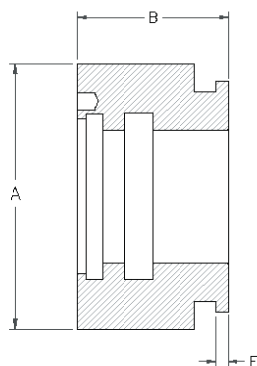


HYDRAULIC CYLINDER PIECE PARTS



IT Gland - Threadless

Material: 65-45-12
Ductile Iron

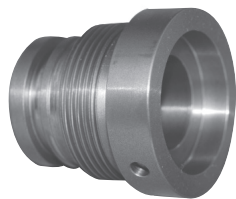


These glands are threadless to allow for a repair or machine shop to customize the threads on the gland as required.

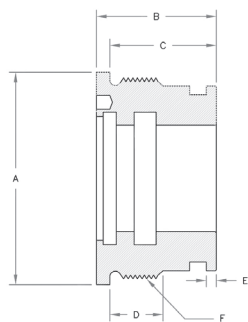
PART NUMBER	BORE +.003" -.003"	ROD +.000" -.003"	A	B	E
TT-H107597-NTHD	2.000	1.000	2.50	2.12	0.12
TT-H107598-NTHD	2.000	1.125	2.50	2.00	0.19
TT-H107595-NTHD	2.000	1.250	2.50	2.25	0.19
TT-H107193-NTHD	2.500	1.125	3.00	2.00	0.19
TT-H107194-NTHD	2.500	1.250	3.00	2.00	0.19
TT-H107463-NTHD	2.500	1.500	3.00	2.38	0.19
TT-H107673-NTHD	2.500	1.750	3.00	2.25	0.28
TT-H107157-NTHD	3.000	1.000	3.50	2.25	0.19
TT-H107196-NTHD	3.000	1.250	3.50	2.25	0.19
TT-H107131-NTHD	3.000	1.500	3.50	2.25	0.19
TT-H107189-NTHD	3.000	1.750	3.50	2.25	0.19
TT-H107359-NTHD	3.000	2.000	3.50	2.50	0.19
TT-H107591-NTHD	3.250	1.500	3.75	2.25	0.19
TT-H107592-NTHD	3.250	1.750	3.75	2.25	0.19
TT-H107197-NTHD	3.500	1.250	4.00	2.25	0.19
TT-H107198-NTHD	3.500	1.500	4.00	2.25	0.19
TT-H107108-NTHD	3.500	1.750	4.00	2.25	0.19
TT-H107112-NTHD	3.500	2.000	4.00	2.25	0.19
TT-H107462-NTHD	3.500	2.500	4.00	2.50	0.25
TT-H107130-NTHD	4.000	1.500	4.50	2.25	0.19
TT-H107124-NTHD	4.000	1.750	4.50	2.25	0.19
TT-H107311-NTHD	4.000	2.000	4.50	2.25	0.19
TT-H107331-NTHD	4.000	2.250	4.50	2.25	0.19
TT-H107386-NTHD	4.000	2.500	4.50	2.50	0.19
TT-H107199-NTHD	4.500	1.750	5.00	2.25	0.19
TT-H107200-NTHD	4.500	2.000	5.00	2.25	0.19
TT-H107201-NTHD	4.500	2.250	5.00	2.25	0.19
TT-H107528-NTHD	4.500	3.500	5.00	2.38	0.19
TT-H107234-NTHD	5.000	1.750	5.50	2.25	0.19
TT-H107212-NTHD	5.000	2.000	5.50	2.25	0.19
TT-H107204-NTHD	5.000	2.500	5.50	2.50	0.19
TT-H107205-NTHD	5.000	3.000	5.50	2.50	0.19
TT-H107345-NTHD	6.000	2.000	6.50	2.50	0.19
TT-H107206-NTHD	6.000	2.500	6.50	2.50	0.19
TT-H107207-NTHD	6.000	3.000	6.50	2.50	0.19
TT-H107178-NTHD	6.000	3.500	6.50	2.50	0.19
TT-H107328-NTHD	7.000	3.000	7.50	2.88	0.59
TT-H107493-NTHD	7.000	3.500	7.50	2.88	0.59
TT-H107467-NTHD	7.000	4.000	7.50	2.88	0.59
TT-H107466-NTHD	8.000	4.000	9.00	3.75	0.88
TT-H107494-NTHD	8.000	4.500	9.00	3.75	0.88
TT-H107475-NTHD	8.000	5.000	9.00	3.75	0.88

HYDRAULIC CYLINDER PIECE PARTS

IT Gland - Unified Thread

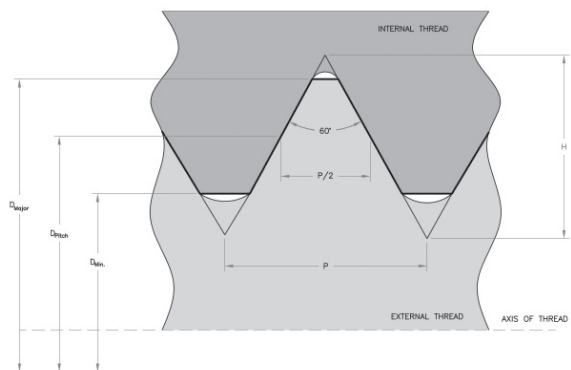


Material: 65-45-12
Ductile Iron



PART NUMBER	BORE +.003" -.003"	ROD +.000" -.003"	A	B	C	D	E	F (UNIFIED)
TT-H107277-UTS	1.500	1.000	2.00	2.00	1.50	0.75	0.28	1-3/4"-12
TT-H107597-UTS	2.000	1.000	2.50	2.12	1.94	1.00	0.12	2-1/4"-12
TT-H107595-UTS	2.000	1.250	2.50	2.25	2.00	1.00	0.19	2-1/4"-12
TT-H107194-UTS	2.500	1.250	3.00	2.00	1.75	0.75	0.19	2-3/4"-12
TT-H107196-UTS	3.000	1.250	3.50	2.25	2.00	1.00	0.19	3-1/4"-12
TT-H107463-UTS	2.500	1.500	3.00	2.38	2.00	1.00	0.19	2-3/4"-12
TT-H107131-UTS	3.000	1.500	3.50	2.25	2.00	1.00	0.19	3-1/4"-12
TT-H107198-UTS	3.500	1.500	4.00	2.25	2.00	1.00	0.19	3-3/4"-12
TT-H107189-UTS	3.000	1.750	3.50	2.25	2.00	1.00	0.19	3-1/4"-12
TT-H107108-UTS	3.500	1.750	4.00	2.25	2.00	1.00	0.19	3-3/4"-12
TT-H107124-UTS	4.000	1.750	4.50	2.25	2.00	1.00	0.19	4-1/4"-12
TT-H107311-UTS	4.000	2.000	4.50	2.25	2.00	1.00	0.19	4-1/4"-12
TT-H107462-UTS	3.500	2.500	4.00	2.50	2.12	1.00	0.25	3-3/4"-12
TT-H107386-UTS	4.000	2.500	4.50	2.50	2.12	1.12	0.19	4-1/4"-12
TT-H107206-UTS	6.000	2.500	6.50	2.50	2.12	1.12	0.19	6-1/4"-12

IT & ITW Glands with Unified Thread Technical Information



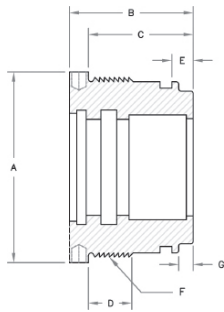
Major Diameter	Threads per Inch	Pitch P	Minor Diameter	Pitch Diameter	Height H
1.75	12	0.0833	1.6598	1.6959	0.0722
2.25	12	0.0833	2.1598	2.1959	0.0722
2.75	12	0.0833	2.6598	2.6959	0.0722
3.25	12	0.0833	3.1598	3.1959	0.0722
3.75	12	0.0833	3.6598	3.6959	0.0722
4.25	12	0.0833	4.1598	4.1959	0.0722
4.75	12	0.0833	4.6598	4.6959	0.0722
5.25	12	0.0833	5.1598	5.1959	0.0722
5.75	12	0.0833	5.6598	5.6959	0.0722
6.25	12	0.0833	6.1598	6.1959	0.0722

HYDRAULIC CYLINDER PIECE PARTS



ITW Gland

Material: 65-45-12
Ductile Iron



PART NUMBER	BORE +.003" -.003"	ROD +.000" -.003"	A	B	C	D	E	F (BUTTRESS)	G
TT-H107729	3.000	1.750	3.50	2.62	2.25	1.00	0.56	3-1/4"-12	0.38
TT-H107548	3.000	2.000	3.50	2.62	2.25	1.00	0.56	3-1/4"-12	0.38
TT-H107791	3.500	1.750	4.00	2.62	2.25	1.00	0.56	3-3/4"-12	0.38
TT-H107549	3.500	2.000	4.00	2.62	2.25	1.00	0.56	3-3/4"-12	0.38
TT-H107550	4.000	2.000	4.50	3.25	2.75	1.25	0.56	4-1/4"-12	0.38
TT-H107551	4.000	2.500	4.50	3.25	2.75	1.25	0.56	4-1/4"-12	0.38
TT-H107640	4.000	3.000	4.50	3.62	3.12	1.38	0.19	4-1/4"-12	N/A
TT-H107716	4.500	2.000	5.00	3.25	2.75	1.25	0.56	4-3/4"-12	0.38
TT-H107552	4.500	2.500	5.00	3.25	2.75	1.25	0.56	4-3/4"-12	0.38
TT-H107553	4.500	3.000	5.00	3.25	2.75	1.25	0.56	4-3/4"-12	0.38
TT-H107630	4.500	3.500	5.00	3.62	3.12	1.38	0.19	4-3/4"-12	N/A
TT-H107679	5.000	2.000	5.50	3.00	2.50	1.12	0.56	5-1/4"-12	0.38
TT-H107554	5.000	2.500	5.50	3.62	3.12	1.38	0.81	5-1/4"-12	0.56
TT-H107555	5.000	3.000	5.50	3.62	3.12	1.38	0.81	5-1/4"-12	0.56
TT-H107651	5.000	3.500	5.50	3.62	3.12	1.38	0.81	5-1/4"-12	0.56
TT-H107606	5.000	4.000	5.50	3.62	3.12	1.38	0.19	5-1/4"-12	N/A
TT-H107611	5.500	2.500	6.00	3.62	3.12	1.38	0.81	5-3/4"-12	0.56
TT-H107612	5.500	3.000	6.00	3.62	3.12	1.38	0.81	5-3/4"-12	0.56
TT-H107706	5.500	3.500	6.00	3.62	3.12	1.38	0.81	5-3/4"-12	0.56
TT-H107556	6.000	2.500	6.50	3.62	3.12	1.38	0.81	6-1/4"-12	0.56
TT-H107557	6.000	3.000	6.50	3.62	3.12	1.38	0.81	6-1/4"-12	0.56
TT-H107558	6.000	3.500	6.50	3.62	3.12	1.38	0.81	6-1/4"-12	0.56
TT-H107570	6.000	4.000	6.50	3.62	3.12	1.38	0.81	6-1/4"-12	0.56
TT-H107584	6.000	4.500	6.50	3.38	2.88	1.25	0.81	6-1/4"-12	0.62
TT-H107721	7.000	2.500	7.50	4.25	3.75	1.50	1.03	7-1/4"-10	0.75
TT-H107559	7.000	3.000	7.50	4.25	3.75	1.50	1.03	7-1/4"-10	0.75
TT-H107560	7.000	3.500	7.50	4.25	3.75	1.50	1.03	7-1/4"-10	0.75
TT-H107561	7.000	4.000	7.50	4.25	3.75	1.50	1.03	7-1/4"-10	0.75
TT-H107607	8.000	3.500	8.50	4.50	3.75	1.50	1.03	8-1/4"-10	0.75
TT-H107562	8.000	4.000	8.50	4.50	3.75	1.50	1.03	8-1/4"-10	0.75
TT-H107563	8.000	4.500	8.50	4.50	3.75	1.50	1.03	8-1/4"-10	0.75
TT-H107722	8.000	5.000	8.50	4.50	3.75	1.50	1.03	8-1/4"-10	0.075
TT-H107605	10.000	4.000	10.50	5.00	4.25	1.50	1.25	10-1/4"-10	1.00
TT-H107604	10.000	5.000	10.50	5.00	4.25	1.50	1.25	10-1/4"-10	1.00

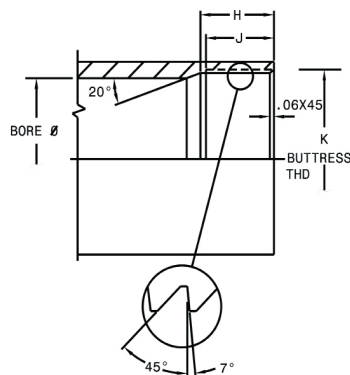
IT & ITW Technical Information

Basic information for Internal Buttress
Threads (52 degrees)

"H" = Length of Thread on Gland plus 1/8"

"J" = Length of Thread on Gland plus 1/16"

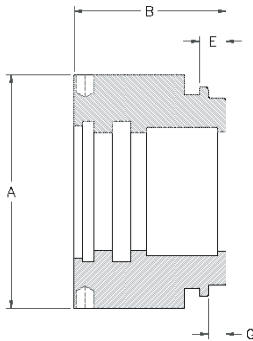
"K" = Buttress Thread as determined by Gland



HYDRAULIC CYLINDER PIECE PARTS



Material: 65-45-12
Ductile Iron



These glands are threadless to allow for a repair or machine shop to customize the threads on the gland as required.

ITW Gland - Threadless

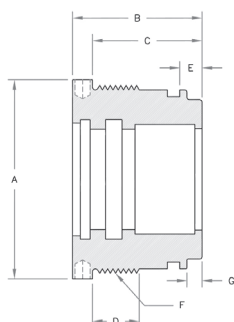
PART NUMBER	BORE +.003" -.003"	ROD +.000" -.003"	A	B	E	G
TT-H107729-NTHD	3.000	1.750	3.50	2.62	0.56	0.38
TT-H107548-NTHD	3.000	2.000	3.50	2.62	0.56	0.38
TT-H107791-NTHD	3.500	1.750	4.00	2.62	0.56	0.38
TT-H107549-NTHD	3.500	2.000	4.00	2.62	0.56	0.38
TT-H107550-NTHD	4.000	2.000	4.50	3.25	0.56	0.38
TT-H107551-NTHD	4.000	2.500	4.50	3.25	0.56	0.38
TT-H107716-NTHD	4.500	2.000	5.00	3.25	0.56	0.38
TT-H107552-NTHD	4.500	2.500	5.00	3.25	0.56	0.38
TT-H107679-NTHD	5.000	2.000	5.50	3.00	0.56	0.38
TT-H107554-NTHD	5.000	2.500	5.50	3.62	0.81	0.56
TT-H107555-NTHD	5.000	3.000	5.50	3.62	0.81	0.56
TT-H107651-NTHD	5.000	3.500	5.50	3.62	0.81	0.56
TT-H107606-NTHD	5.000	4.000	5.50	3.62	0.19	N/A
TT-H107611-NTHD	5.500	2.500	6.00	3.62	0.81	0.56
TT-H107612-NTHD	5.500	3.000	6.00	3.62	0.81	0.56
TT-H107706-NTHD	5.500	3.500	6.00	3.62	0.81	0.56
TT-H107556-NTHD	6.000	2.500	6.50	3.62	0.81	0.56
TT-H107557-NTHD	6.000	3.000	6.50	3.62	0.81	0.56
TT-H107558-NTHD	6.000	3.500	6.50	3.62	0.81	0.56
TT-H107584-NTHD	6.000	4.500	6.50	3.38	0.81	0.62
TT-H107721-NTHD	7.000	2.500	7.50	4.25	1.03	0.75
TT-H107559-NTHD	7.000	3.000	7.50	4.25	1.03	0.75
TT-H107560-NTHD	7.000	3.500	7.50	4.25	1.03	0.75
TT-H107561-NTHD	7.000	4.000	7.50	4.25	1.03	0.75
TT-H107607-NTHD	8.000	3.500	8.50	4.50	1.03	0.75
TT-H107562-NTHD	8.000	4.000	8.50	4.50	1.03	0.75
TT-H107563-NTHD	8.000	4.500	8.50	4.50	1.03	0.75
TT-H107722-NTHD	8.000	5.000	8.50	4.50	1.03	0.75
TT-H107605-NTHD	10.000	4.000	10.50	5.00	1.25	1.00

HYDRAULIC CYLINDER PIECE PARTS

ITW Gland - Unified Thread

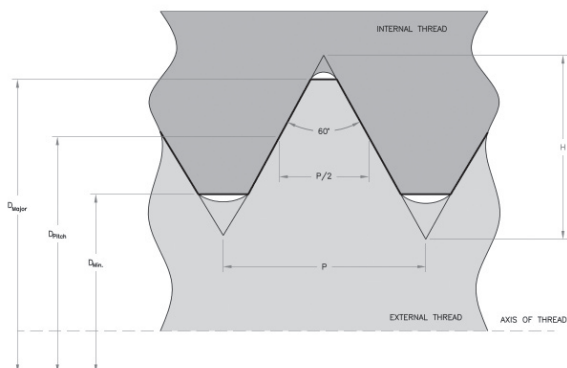


Material: 65-45-12
Ductile Iron



PART NUMBER	BORE +.003" -.003"	ROD +.000" -.003"	A	B	C	D	E	F	G
TT-H107729-UTS	3.000	1.750	3.50	2.62	2.25	1.00	0.56	3-1/4"-12	0.38
TT-H107791-UTS	3.500	1.750	4.00	2.62	2.25	1.00	0.56	3-3/4"-12	0.38
TT-H107548-UTS	3.000	2.000	3.50	2.62	2.25	1.00	0.56	3-1/4"-12	0.38
TT-H107549-UTS	3.500	2.000	4.00	2.62	2.25	1.00	0.56	3-3/4"-12	0.38
TT-H107550-UTS	4.000	2.000	4.50	3.25	2.75	1.25	0.56	4-1/4"-12	0.38
TT-H107716-UTS	4.500	2.000	5.00	3.25	2.75	1.25	0.56	4-3/4"-12	0.38
TT-H107679-UTS	5.000	2.000	5.50	3.00	2.50	1.12	0.56	5-1/4"-12	0.38
TT-H107554-UTS	5.000	2.500	5.50	3.62	3.12	1.38	0.81	5-1/4"-12	0.56
TT-H107611-UTS	5.500	2.500	6.00	3.62	3.12	1.38	0.81	5-3/4"-12	0.56
TT-H107555-UTS	5.000	3.000	5.50	3.62	3.12	1.38	0.81	5-1/4"-12	0.56
TT-H107612-UTS	5.500	3.000	6.00	3.62	3.12	1.38	0.81	5-3/4"-12	0.56
TT-H107557-UTS	6.000	3.000	6.50	3.62	3.12	1.38	0.81	6-1/4"-12	0.56
TT-H107558-UTS	6.000	3.500	6.50	3.62	3.12	1.38	0.81	6-1/4"-12	0.56
TT-H107570-UTS	6.000	4.000	6.50	3.62	3.12	1.38	0.81	6-1/4"-12	0.56

IT & ITW Glands with Unified Thread Technical Information



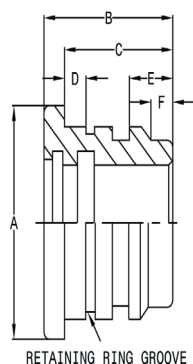
Major Diameter	Threads per Inch	Pitch P	Minor Diameter	Pitch Diameter	Height H
1.75	12	0.0833	1.6598	1.6959	0.0722
2.25	12	0.0833	2.1598	2.1959	0.0722
2.75	12	0.0833	2.6598	2.6959	0.0722
3.25	12	0.0833	3.1598	3.1959	0.0722
3.75	12	0.0833	3.6598	3.6959	0.0722
4.25	12	0.0833	4.1598	4.1959	0.0722
4.75	12	0.0833	4.6598	4.6959	0.0722
5.25	12	0.0833	5.1598	5.1959	0.0722
5.75	12	0.0833	5.6598	5.6959	0.0722
6.25	12	0.0833	6.1598	6.1959	0.0722

HYDRAULIC CYLINDER PIECE PARTS

TK Gland



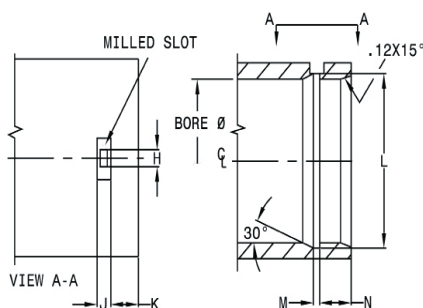
Material: Ductile Iron



TK HEAD	BORE +.003" -.003"	ROD +.000" -.003"	A	B	C	D	E	F
TT-H70181	1.500	0.750	1.88	2.00	1.63	0.38	0.63	0.38
TT-H70184	1.500	1.000	1.88	2.00	1.12	0.31	0.19	N/A
TT-H70093	2.000	1.000	2.38	2.25	1.88	0.44	0.75	0.50
TT-H70159	2.000	1.125	2.38	2.25	1.88	0.44	0.75	0.44
TT-H70160	2.000	1.250	2.38	2.50	1.88	0.44	0.75	0.44
TT-H70161	2.500	1.125	2.88	2.25	1.88	0.44	0.75	0.44
TT-H70162	2.500	1.250	2.88	2.25	1.88	0.44	0.75	0.38
TT-H70163	2.500	1.500	2.88	2.25	1.88	0.44	0.75	0.62
TT-H70861	2.500	1.750	2.88	2.50	1.88	0.44	0.75	0.38
TT-H70164	3.000	1.250	3.38	2.75	2.25	0.51	0.88	0.50
TT-H70130	3.000	1.500	3.38	2.75	2.25	0.51	0.88	0.50
TT-H70560	3.000	1.750	3.38	2.75	2.25	0.51	0.88	0.44
TT-H70165	3.000	2.000	3.38	2.75	2.25	0.51	0.88	0.44
TT-H70166	3.500	1.250	3.88	2.75	2.25	0.51	0.88	0.50
TT-H70089	3.500	1.500	3.88	2.75	2.25	0.51	0.88	0.50
TT-H70862	3.500	1.750	3.88	2.75	2.25	0.51	0.88	0.50
TT-H70167	3.500	2.000	3.88	2.75	2.25	0.51	0.88	0.50
TT-H70115	4.000	1.500	4.50	2.75	2.25	0.44	0.88	0.44
TT-H70576	4.000	1.750	4.50	2.75	2.25	0.44	0.88	0.44
TT-H70116	4.000	2.000	4.50	2.75	2.25	0.44	0.88	0.44
TT-H70168	4.000	2.500	4.50	2.75	2.25	0.44	0.88	0.44
TT-H70367	4.500	2.000	5.00	2.75	2.25	0.44	0.88	0.44
TT-H70378	4.500	2.500	5.00	2.75	2.25	0.44	0.88	0.44
TT-H70114	5.000	2.000	5.50	3.00	2.50	0.56	0.94	0.50
TT-H70113	5.000	2.500	5.50	3.00	2.50	0.56	0.94	0.50
TT-H70107	5.000	3.000	5.50	3.00	2.50	0.56	0.94	0.50
TT-H70390	5.500	2.500	6.00	3.00	2.50	0.56	0.94	0.50
TT-H70391	5.500	3.000	6.00	3.00	2.50	0.56	0.94	0.50
TT-H70112	6.000	2.000	6.50	3.00	2.50	0.56	0.94	0.50
TT-H70111	6.000	2.500	6.50	3.00	2.50	0.56	0.94	0.50
TT-H70108	6.000	3.000	6.50	3.00	2.50	0.56	0.94	0.50

TK Technical Information

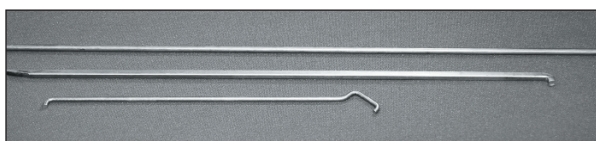
Retaining Groove Information



BORE +.003" -.003"	H	J	K	L +.010" -.000"	M +.005" -.000"	N +.000" -.005"
1.500	0.25	0.25	0.28	1.625	0.125	0.375*
2.000	0.25	0.25	0.34	2.125	0.125	0.438
2.500	0.25	0.25	0.34	2.625	0.125	0.438
3.000	0.25	0.25	0.41	3.125	0.125	0.500
3.500	0.25	0.25	0.41	3.625	0.125	0.500
4.000	0.38	0.25	0.41	4.188	0.188	0.438
4.500	0.38	0.25	0.41	4.688	0.188	0.438
5.000	0.38	0.25	0.53	5.188	0.188	0.562
5.500	0.38	0.25	0.53	5.688	0.188	0.562
6.000	0.38	0.25	0.53	6.188	0.188	0.562

* 0.312 for 1" Rod.

Wind-In Lock Wires



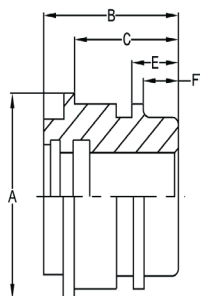
Part Number	Thickness	Length
LW-093-1262	3/32 sq.	12-5/8
MARION-35240	1/8 sq.	10-1/4
MARION-35250	1/8 sq.	13-3/8
MARION-35260	1/8 sq.	16-3/8
MARION-35270	1/8 sq.	19-1/4
MARION-1031	3/16 sq.	21.00
1/8 RD WIRE	1/8 round	11

HYDRAULIC CYLINDER PIECE PARTS

TH Gland

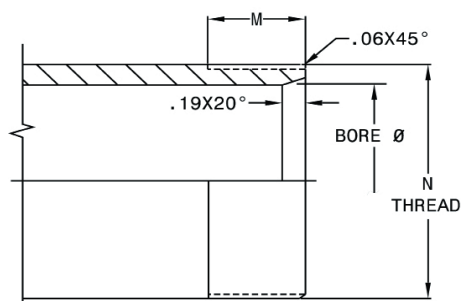


Material: Ductile Iron



PART NUMBER	BORE +.003" -.003"	ROD +.000" -.003"	A	B	C	E	F
TT-H70154	2.000	1.000	2.25	2.38	1.94	0.81	0.62
TT-H70155	2.000	1.125	2.25	2.38	1.94	0.81	0.62
TT-H70156	2.000	1.250	2.25	2.38	1.94	0.81	0.62
TT-H70157	2.500	1.125	2.75	2.38	1.94	0.81	0.62
TT-H70076	2.500	1.250	2.75	2.38	1.94	0.81	0.62
TT-H70158	2.500	1.500	2.75	2.38	1.94	0.81	0.62
TT-H70462	2.500	1.750	2.75	2.38	2.19	0.81	0.62
TT-H70029	3.000	1.250	3.25	2.75	2.19	0.94	0.75
TT-H70011	3.000	1.500	3.25	2.75	2.19	0.94	0.75
TT-H70814	3.000	1.750	3.25	2.75	2.19	0.94	0.75
TT-H70012	3.000	2.000	3.25	2.75	2.56	0.94	0.69
TT-H70013	3.500	1.500	3.75	2.75	2.19	0.94	0.75
TT-H70504	3.500	1.750	3.75	2.75	2.19	0.94	0.75
TT-H70030	3.500	2.000	3.75	2.75	2.19	0.94	0.75
TT-H70031	3.500	2.500	3.75	2.75	2.56	0.94	0.75
TT-H70014	4.000	1.500	4.25	2.75	2.19	0.94	0.75
TT-H70488	4.000	1.750	4.25	2.75	2.19	0.94	0.75
TT-H70015	4.000	2.000	4.25	2.75	2.19	0.94	0.75
TT-H70032	4.000	2.500	4.25	2.75	2.19	0.94	0.75
TT-H70033	4.000	3.000	4.25	2.75	2.56	0.94	0.75
TT-H70276	4.500	2.000	4.75	2.75	2.19	0.94	0.75
TT-H70310	4.500	2.500	4.75	2.75	2.19	0.94	0.75
TT-H70377	4.500	3.000	4.75	2.75	2.19	0.94	0.69
TT-H70037	5.000	2.000	5.38	3.00	2.44	1.13	0.88
TT-H70038	5.000	2.500	5.38	3.00	2.44	1.13	0.88
TT-H70039	5.000	3.000	5.38	3.00	2.44	1.13	0.88
TT-H70153	5.500	2.000	5.88	3.00	2.44	1.13	0.88
TT-H70142	5.500	2.500	5.88	3.00	2.44	1.13	0.88
TT-H70143	5.500	3.000	5.88	3.00	2.44	1.13	0.88
TT-H70041	6.000	2.000	6.38	3.00	2.44	1.13	0.88
TT-H70042	6.000	2.500	6.38	3.00	2.44	1.13	0.88
TT-H70043	6.000	3.000	6.38	3.00	2.44	1.13	0.88
TT-H70180	7.000	2.500	7.50	4.00	3.13	1.75	1.50
TT-H70176	7.000	3.000	7.50	4.00	3.13	1.75	1.50
TT-H70186	7.000	3.500	7.50	4.00	3.13	1.75	1.50
TT-H70133	8.000	3.000	8.50	4.00	3.13	1.75	1.50
TT-H70195	8.000	3.500	8.50	4.00	3.13	1.75	1.50
TT-H70217	8.000	4.000	8.50	4.00	3.13	1.75	1.50

TH Gland Technical Information



HYDRAULIC CYLINDER PIECE PARTS

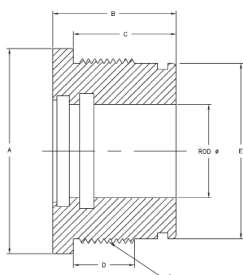
Mobile Metric Gland



Ductile Iron

Thread Configuration Call Out
90 X 2

Maj. Diameter Pitch

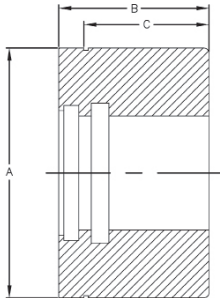


PART NUMBER	BORE	ROD	A	B	C	D	E	F (ISO THREAD)
HCC-SG322027	32.00	20.00	42	33	27	15	32.5	36X1.5
HCC-SG352032	35.00	20.00	45	40	32	18	35.6	39X1.5
HCC-SG352232	35.00	22.00	45	40	32	19	35.6	39X1.5
HCC-SG402032	40.00	20.00	50	40	32	19	40.6	44X1.5
HCC-SG402232	40.00	22.00	50	40	32	19	40.6	44X1.5
HCC-SG402532	40.00	25.00	50	40	32	19	40.6	44X1.5
HCC-SG402832	40.00	28.00	50	40	32	19	40.6	44X1.5
HCC-SG452232	45.00	22.00	55	40	32	19	45.6	49X1.5
HCC-SG452532	45.00	25.00	55	40	32	19	45.6	49X1.5
HCC-SG502035	50.00	20.00	60	43	35	22	50.6	54X1.5
HCC-SG503535	50.00	35.00	60	43	35	22	50.6	54X1.5
HCC-SG553535	55.00	35.00	65	43	35	20	55.6	60X1.5
HCC-SG603540	60.00	35.00	70	50	40	26	60.6	64X1.5
HCC-SG604040	60.00	40.00	70	50	40	26	60.6	64X1.5
HCC-SG633540	63.00	35.00	73	50	40	26	63.6	68X1.5
HCC-SG653540	65.00	35.00	75	50	40	25	65.6	69X1.5
HCC-SG654040	65.00	40.00	75	50	40	25	65.6	69X1.5
HCC-SG703540	70.00	35.00	80	50	40	26	70.6	74X1.5
HCC-SG704040	70.00	40.00	80	50	40	26	70.6	74X1.5
HCC-SG704540	70.00	45.00	80	50	40	26	70.6	74X1.5
HCC-SG753550	75.00	35.00	90	60	50	33	75.6	80X2
HCC-SG754050	75.00	40.00	90	60	50	33	75.6	80X2
HCC-SG754550	75.00	45.00	90	60	50	33	75.6	80X2
HCC-SG803550	80.00	35.00	95	60	50	32	80.6	85X2
HCC-SG804050	80.00	40.00	95	60	50	32	80.6	85X2
HCC-SG806050	80.00	60.00	95	60	50	32	80.6	85X2
HCC-SG853550	85.00	35.00	100	60	50	30	85.6	90X2
HCC-SG854050	85.00	40.00	100	60	50	30	85.6	90X2
HCC-SG854550	85.00	45.00	100	60	50	30	85.6	90X2
HCC-SG904050	90.00	40.00	105	60	50	32	90.6	95X2
HCC-SG904550	90.00	45.00	105	60	50	32	90.6	95X2
HCC-SG906050	90.00	60.00	105	60	50	32	90.6	95X2
HCC-SG1006050	100.00	60.00	115	60	50	32	100.6	105X2
HCC-SG1004070XL	100.00	40.00	115	82	70	51	100.6	105X2
HCC-SG1004570XL	100.00	45.00	115	82	70	51	100.6	105X2
HCC-SG1006070XL	100.00	60.00	115	82	70	51	100.6	105X2
HCC-SG1007070XL	100.00	70.00	115	82	70	51	100.6	105X2
HCC-SG1106070	110.00	60.00	125	82	70	51	110.6	115X2
HCC-SG1107070	110.00	70.00	125	82	70	51	110.6	115X2
HCC-SG1206070	120.00	60.00	140	82	70	49	120.6	125X2
HCC-SG1207070	120.00	70.00	140	82	70	49	120.6	125X2
HCC-SG1208070	120.00	80.00	140	82	70	49	120.6	125X2
HCC-SG1256080	125.00	60.00	145	92	80	59	125.6	130X2
HCC-SG1257080	125.00	70.00	145	92	80	59	125.6	130X2
HCC-SG1258080	125.00	80.00	145	92	80	59	125.6	130X2
HCC-SG1407080	140.00	70.00	160	92	80	59	140.6	145X2
HCC-SG1408080	140.00	80.00	160	92	80	59	140.6	145X2
HCC-SG1507090	150.00	70.00	170	102	90	69	150.6	155X2
HCC-SG1508090	150.00	80.00	170	102	90	69	150.6	155X2
HCC-SG1608090	160.00	80.00	180	102	90	69	160.6	165X2

All dimensions shown in millimeters.

HYDRAULIC CYLINDER PIECE PARTS

Mobile Metric Gland - Unfinished

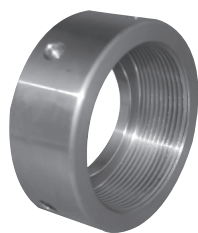


PART NUMBER	BORE *	ROD	A	B	C	D	E	F (ISO THREAD)
HCC-SG542057UF	45.00	20.00	54	65	57	N/A	N/A	N/A
HCC-SG542257UF	45.00	22.00	54	65	57	N/A	N/A	N/A
HCC-SG542557UF	45.00	25.00	54	65	57	N/A	N/A	N/A
HCC-SG742565UF	65.00	25.00	74	75	65	N/A	N/A	N/A
HCC-SG743565UF	65.00	35.00	74	75	65	N/A	N/A	N/A
HCC-SG744065UF	65.00	40.00	74	75	65	N/A	N/A	N/A
HCC-SG943575UF	80.00	35.00	94	85	75	N/A	N/A	N/A
HCC-SG944075UF	80.00	40.00	94	85	75	N/A	N/A	N/A
HCC-SG944575UF	80.00	45.00	94	85	75	N/A	N/A	N/A
HCC-SG1144095UF	100.00	40.00	114	107	95	N/A	N/A	N/A
HCC-SG1144595UF	100.00	45.00	114	107	95	N/A	N/A	N/A
HCC-SF1146095UF	100.00	60.00	114	107	95	N/A	N/A	N/A

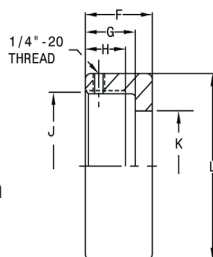
*Denotes Recommended Bore Size.

Unfinished HCC Style Hydraulic Glands Include a Nylon Rod Bearing, Rod Seal and Rod Wiper. All dimensions shown in millimeters.

HYDRAULIC CYLINDER PIECE PARTS



TH Cap

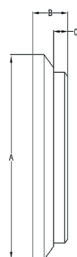


Material: 1026 CDS Tubin
SAE Threads

PART NUMBER	BORE +.003\"-.003"	F	G	H	J	K	L
TT-HC70074	2.000	1.13	0.88	0.69	2-3/8"-12 UN-2B	1.81	3.00
TT-HC70075	2.500	1.13	0.88	0.69	2-7/8"-12 UN-2B	2.31	3.50
TT-HC70008	3.000	1.38	1.00	0.75	3-1/2"-12 UN-2B	2.63	4.00
TT-HC70009	3.500	1.38	1.00	0.75	4"-12 UN-2B	3.13	4.50
TT-HC70034	4.000	1.38	1.00	0.75	4-1/2"-12 UN-2B	3.63	5.00
TT-HC70277	4.500	1.38	1.00	0.75	5"-12 UN-2B	4.13	5.50
TT-HC70040	5.000	1.38	1.00	0.75	5-1/2"-12 UN-2B	4.63	6.25
TT-HC70140	5.500	1.38	1.00	0.75	6"-12 UN-2B	5.13	6.75
TT-HC70044	6.000	1.38	1.00	0.75	6-5/8"-12 UN-2B	5.63	7.50
TT-HC70174	7.000	2.00	1.38	1.13	7-7/8"-12 UN-2B	6.13	9.00
TT-HC70132	8.000	2.00	1.38	1.13	8-7/8"-12 UN-2B	7.13	10.00



Base Plate (medium duty)

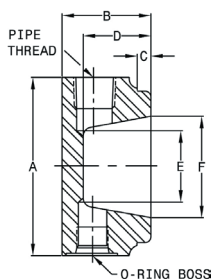


Material: A-36 Plate

PART NUMBER	BORE +.003\"-.003"	A	B	C
TT-BP60056	1.500	1.88	0.50	0.25
TT-BP60010	2.000	2.38	0.50	0.25
TT-BP60011	2.500	2.88	0.50	0.25
TT-BP60012	3.000	3.38	0.59	0.25
TT-BP60013	3.500	3.88	0.69	0.38
TT-BP60014	4.000	4.50	0.75	0.38
TT-BP60437	4.500	5.00	0.88	0.38
TT-BP60015	5.000	5.56	0.88	0.38
TT-BP60124	5.500	6.00	0.88	0.38
TT-BP60016	6.000	6.75	1.00	0.38
TT-BP60157	7.000	8.00	1.00	0.38
TT-BP60107	8.000	9.00	1.00	0.38



Base End (ported)

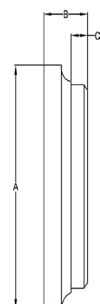


Material: A-36 Plate

PART NUMBER	BORE +.003\"-.003"	NPT	SAE	A	B	C	D	E	F
TT-BEP112380	2.000	3/8"	#6	2.50	1.56	0.25	1.00	1.25	1.45
TT-BEP112381	2.500	3/8"	#6	3.00	1.56	0.25	1.00	1.25	1.75
TT-BEP112382	3.000	1/2"	#8	3.50	1.69	0.25	1.12	1.75	2.19
TT-BEP112383	3.500	1/2"	#8	4.00	1.69	0.25	1.12	2.00	2.19
TT-BEP112384	4.000	1/2"	#8	4.50	1.81	0.25	1.35	2.12	2.62
TT-BEP112385	4.500	1/2"	#8	5.12	1.81	0.25	1.35	2.12	2.62
TT-BEP112386	5.000	3/4"	#12	5.62	1.94	0.25	1.35	2.38	3.03
TT-BEP112398	5.500	3/4"	#12	6.25	2.19	0.25	1.50	3.29	4.06
TT-BEP112387	6.000	3/4"	#12	6.75	2.19	0.25	1.50	3.29	4.06



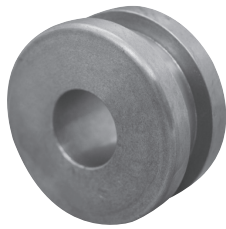
Base Plate (heavy duty)



Material: A-36 Plate

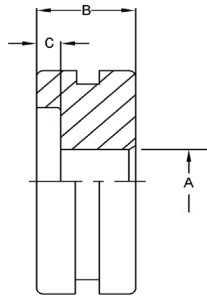
PART NUMBER	BORE +.003\"-.003"	A	B	C
TT-BP112527	1.500	2.000	0.50	0.19
TT-BP112292	2.000	2.500	0.50	0.12
TT-BP112209	2.500	3.000	0.62	0.25
TT-BP112210	3.000	3.500	0.75	0.25
TT-BP112461	3.250	3.750	0.88	0.25
TT-BP112211	3.500	4.000	0.88	0.25
TT-BP112212	4.000	4.500	1.00	0.25
TT-BP112414	4.000	4.620	1.00	0.25
TT-BP112213	4.500	5.000	1.12	0.25
TT-BP112234	5.000	5.500	1.25	0.25
TT-BP112459	5.000	5.620	1.25	0.25
TT-BP112214	5.000	5.750	1.25	0.25
TT-BP112426	5.500	6.120	1.31	0.25
TT-BP112236	6.000	6.500	1.38	0.25
TT-BP112512	6.000	6.620	1.38	0.25
TT-BP112215	6.000	6.750	1.38	0.25
TT-BP112569	6.500	7.250	1.25	0.25
TT-BP112364	7.000	8.000	1.44	0.25
TT-BP112373	8.000	9.000	1.50	0.25
TT-BP112496	9.000	10.000	1.50	0.38
TT-BP112467	10.000	11.000	1.50	0.38

HYDRAULIC CYLINDER PIECE PARTS



Material: Ductile Iron

TM Piston

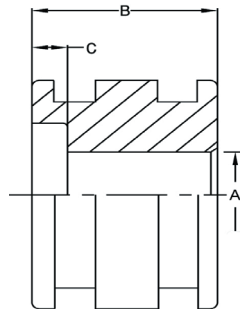


PART NUMBER	BORE +.003" -.003"	A +.002" -.000"	B	C
TT-P70079	1.50	0.626	0.88	N/A
TT-P70055	2.00	0.751	1.00	N/A
TT-P70065	2.50	0.751	1.00	N/A
TT-P70841	3.00	0.751	1.00	0.25
TT-P70872	3.50	1.001	1.00	0.38
TT-P70067	4.00	1.001	1.00	N/A
TT-P70384	4.50	1.251	1.50	N/A
TT-P70090	5.00	1.251	1.50	N/A
TT-P70385	5.50	1.501	1.50	N/A
TT-P70139	6.00	1.501	1.50	N/A



Material: Ductile Iron

TH Piston

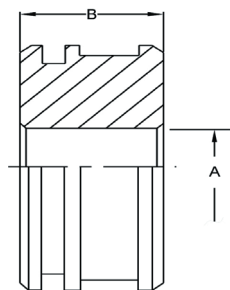


PART NUMBER	BORE +.003" -.003"	A +.002" -.000"	B	C
TT-P70020	1.50	0.626	1.13	N/A
TT-P70005	2.00	0.751	1.50	N/A
TT-P70017	2.50	0.751	1.50	N/A
TT-P70006	3.00	1.001	1.75	N/A
TT-P70007	3.50	1.126	1.75	N/A
TT-P70010	4.00	1.251	1.75	N/A
TT-P70275	4.50	1.251	1.75	N/A
TT-P70018	5.00	1.251	2.00	N/A
TT-P70141	5.50	1.501	2.00	N/A
TT-P70019	6.00	1.501	2.00	N/A
TT-P70175	7.00	1.751	3.00	0.75
TT-P70134	8.00	2.001	3.00	0.75



Material: 65-45-12
Ductile Iron

IT (narrow) Piston



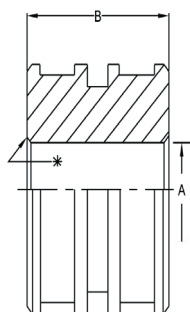
PART NUMBER	BORE +.003" -.003"	A +.002" -.000"	B
TT-P110629	1.500	0.626	1.12
TT-P110238	2.000	0.751	1.25
TT-P110239	2.500	0.751	1.25
TT-P110240	3.000	0.876	1.25
TT-P110608	3.250	1.001	1.25
TT-P110241	3.500	1.001	1.25
TT-P110242	4.000	1.001	1.25
TT-P110384	4.500	1.126	1.50
TT-P110212	5.000	1.126	1.50

HYDRAULIC CYLINDER PIECE PARTS



IT (wide) Piston

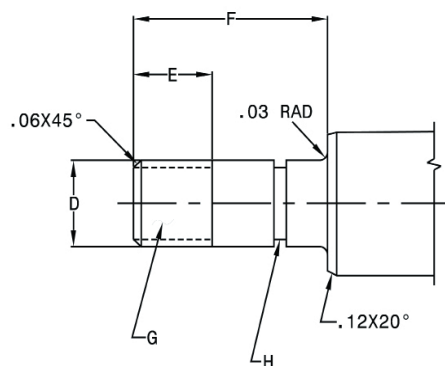
Material: 65-45-12
Ductile Iron



IT (WIDE) PISTON	BORE $+0.003$ " -0.003 "	A $+0.002$ " -0.000 "	B
TT-P110548	2.000	1.001	2.00
TT-P110596	2.500	0.751	1.88
TT-P110121	3.000	1.001	2.00
TT-P110288	3.500	1.126	2.00
TT-P110287	4.000	1.126	2.00
TT-P110537	4.500	1.251	2.00
TT-P110248	5.000	1.251	2.00
TT-P110511	5.500	1.251	2.12
TT-P110249	6.000	1.251	2.12
TT-P110607	6.000	1.501	2.12
TT-P110312	7.000	1.751	2.12
TT-P110479	8.000	2.001	3.12
TT-P110683	9.000	2.501	4.38
TT-P110634	10.000	2.500	4.38

*NOTE: P110479 is counter bored for a (-226) Stub O-ring.
P110634 is counter bored for a (-230) Stub O-ring.
P110683 is counter bored for a (-230) Stub O-ring.

Piston Stub Technical Information



"D" = "A" Diameter of Piston, minus 0.001"/0.003"

"E" = Nut Length + 0.25"

"F" = Piston Width "B" minus Counterbore Depth "C" + Nut Length + 0.12"

"G" = Thread Size to be determined by nut used

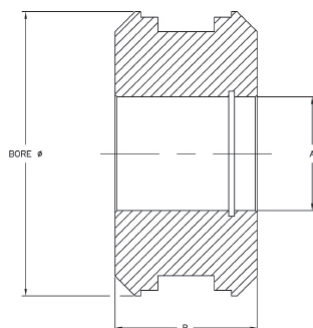
"H" = Located under middle of Piston, 0.098"/0.093" Wide X 0.050"/0.052" Deep for 1/16 cross section O-ring (000 Series)

Note: Good rule of thumb is to size the stub diameter at least one half the diameter of the rod.

HYDRAULIC CYLINDER PIECE PARTS



Material: Steel #1045



Mobile Metric Piston

PART NUMBER	BORE	ROD	A	B
HCC-MP351540	35.00	20,25	15	40
HCC-MP401540	40.00	20,25	15	40
HCC-MP451540	45.00	20,25	15	40
HCC-MP501540	50.00	20,25	15	40
HCC-MP502050	50.00	30,35	20	50
HCC-MP552040	55.00	30,35	20	40
HCC-MP602045	60.00	30,35	20	45
HCC-MP602445	60.00	40	24	45
HCC-MP602750	60.00	35,40	27	50
HCC-MP632050	63.00	30,35	20	50
HCC-MP632445	63.00	40	24	45
HCC-MP632750	63.00	35,40	27	50
HCC-MP633050	63.00	40	30	50
HCC-MP652050	65.00	30,35	20	50
HCC-MP652445	65.00	40	24	45
HCC-MP702050	70.00	30,35	20	50
HCC-MP702445	70.00	40	24	45
HCC-MP702750	70.00	35,40,45,50	27	50
HCC-MP752445	75.00	40	24	45
HCC-MP752750	75.00	35,40,45,50	27	50
HCC-MP802445	80.00	40	24	45
HCC-MP802750	80.00	35,40,45,50	27	50
HCC-MP803050	80.00	40,50	30	50
HCC-MP852445	85.00	40	24	45
HCC-MP852750	85.00	35,40,45,50	27	50
HCC-MP902750	90.00	35,40,45,50	27	50
HCC-MP903050	90.00	40,50	30	50
HCC-MP903350	90.00	50,60	33	50
HCC-MP1002750	100.00	35,40,45,50	27	50
HCC-MP1003350	100.00	50,60	33	50
HCC-MP1004050	100.00	70	40	50
HCC-MP1103350	110.00	50,60	33	50
HCC-MP1104050	110.00	70	40	50
HCC-MP1204050	120.00	70	40	50
HCC-MP1253350	125.00	50,60	33	50
HCC-MP1254050	125.00	70	40	50
HCC-MP1404058	140.00	70	40	58
HCC-MP1504058	150.00	70	40	58
HCC-MP1605158	160.00	—	51	58

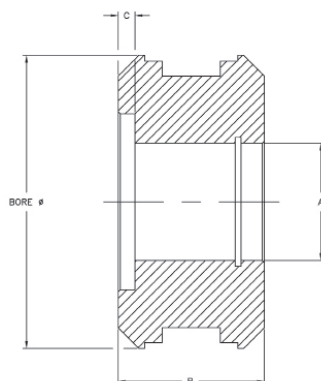
All dimensions shown in millimeters.

HYDRAULIC CYLINDER PIECE PARTS

Mobile Metric Piston - Narrow



Material: Steel #1045



PART NUMBER	BORE	ROD	A	B	C
HCC-MP401527SP	40.00	N/A	15	27	5
HCC-MP502025SP	50.00	N/A	20	25	N/A
HCC-MP502130SP	50.00	N/A	21	30	5
HCC-MP602535SP	60.00	N/A	25	35	5
HCC-MP632535SP	63.00	N/A	25	35	5
HCC-MP652535SP	65.00	N/A	25	35	5
HCC-MP702535SP	70.00	N/A	25	35	5
HCC-MP802840SP	80.00	N/A	28	40	6
HCC-MP903540SP	90.00	N/A	35	40	6
HCC-MP1003540SP	100.00	N/A	35	40	6

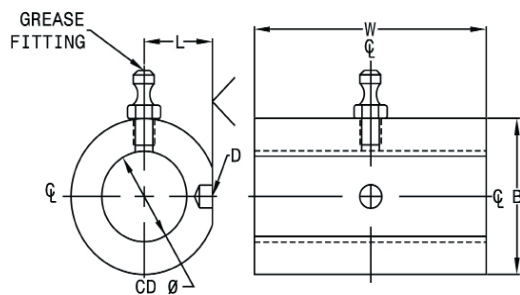
HCC Style Narrow Pistons Include a 5-Piece Piston Seal Assembly, Piston Rod Seal - O-ring, and Threaded Seal - O-ring. All dimensions shown in millimeters.

HYDRAULIC CYLINDER PIECE PARTS

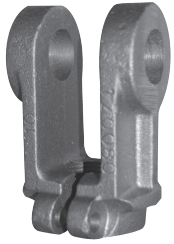


Cross Tube Mount

PART NUMBER	CD	W	B	L	D
TT-CT251015	1.00	2.50	1.50	0.69	.250 x .09
TT-CT301015	1.00	3.00	1.50	0.69	.250 x .09
TT-CT351015	1.00	3.50	1.50	0.69	.250 x .09
TT-CT401015	1.00	4.00	1.50	0.69	.250 x .09
TT-CT451015	1.00	4.50	1.50	0.69	.250 x .09
TT-CT271017	1.00	2.75	1.75	0.81	.250 x .15
TT-CT321017	1.00	3.25	1.75	0.81	.250 x .15
TT-CT371017	1.00	3.75	1.75	0.81	.250 x .15
TT-CT421017	1.00	4.25	1.75	0.81	.250 x .15
TT-CT471017	1.00	4.75	1.75	0.81	.250 x .15
TT-CT521017	1.00	5.25	1.75	0.81	.250 x .15
TT-CT271220	1.25	2.75	2.00	0.88	.250 x .15
TT-CT321220	1.25	3.25	2.00	0.88	.250 x .15
TT-CT371220	1.25	3.75	2.00	0.88	.250 x .15
TT-CT421220	1.25	4.25	2.00	0.88	.250 x .15
TT-CT471220	1.25	4.75	2.00	0.88	.250 x .15
TT-CT521220	1.25	5.25	2.00	0.88	.250 x .15
TT-CT601220	1.25	6.00	2.00	0.88	.250 x .15
TT-CT701220	1.25	7.00	2.00	0.88	.250 x .15
TT-CT301525	1.50	3.00	2.50	1.13	.250 x .19
TT-CT421525	1.50	4.25	2.50	1.13	.250 x .19
TT-CT471525	1.50	4.75	2.50	1.13	.250 x .19
TT-CT551525	1.50	5.50	2.50	1.13	.250 x .19
TT-CT601525	1.50	6.00	2.50	1.13	.250 x .19
TT-CT701525	1.50	7.00	2.50	1.13	.250 x .19
TT-CT321727	1.75	3.25	2.75	1.25	.250 x .19
TT-CT471727	1.75	4.75	2.75	1.25	.250 x .19
TT-CT551727	1.75	5.50	2.75	1.25	.250 x .19
TT-CT601727	1.75	6.00	2.75	1.25	.250 x .19
TT-CT701727	1.75	7.00	2.75	1.25	.250 x .19
TT-CT352030	2.00	3.50	3.00	1.38	.250 x .19
TT-CT472030	2.00	4.75	3.00	1.38	.250 x .19
TT-CT552030	2.00	5.50	3.00	1.38	.250 x .19
TT-CT602030	2.00	6.00	3.00	1.38	.250 x .19
TT-CT702030	2.00	7.00	3.00	1.38	.250 x .19



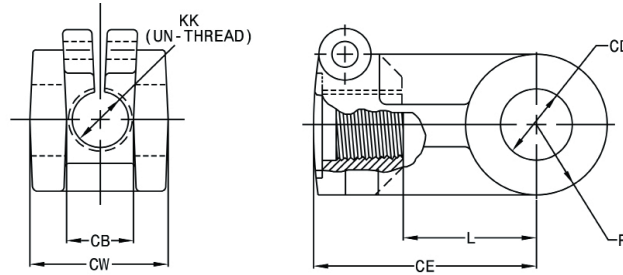
HYDRAULIC CYLINDER PIECE PARTS



Mobile Split Clevis

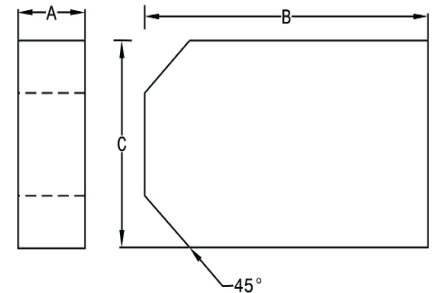
PART NUMBER	CB	CD	CE	CW	KK	L	R
TT-RC10033	1.12	1.00	3.25	2.62	1-1/16"-12	2.12	1.00
TT-RC10034	1.12	1.00	3.25	2.62	1-1/8"-12	2.12	1.00
TT-RC10035	1.12	1.00	3.25	2.62	1-1/4"-12	2.12	1.00
TT-RC11312	1.25	1.25	3.25	2.75	1-1/4"-12	2.12	1.25
TT-RC11412	1.25	1.25	4.00	2.75	1-1/4"-12	2.75	1.25

Material: Ductile Iron



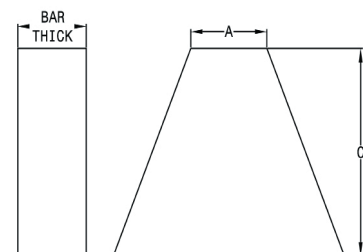
Mounting Ear

PART NUMBER	BAR SIZE	A	B	C
TT-ME-100	1/2 x 1-1/4	1/2	1-1/4	1
TT-ME-200	5/8 x 2	5/8	2	1-1/2
TT-ME-300	3/4 x 2-1/2	3/4	2-1/2	2
TT-ME-400	1 x 3-1/2	1	3-1/2	2-3/4
TT-ME-500	1-1/4 x 4	1-1/4	4	3-1/2
TT-ME-600	1-1/4 x 4	1-1/4	4-1/2	4



Mounting Ear

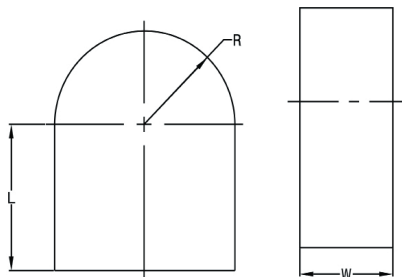
PART NUMBER	BAR SIZE	A	B	C
TT-MEA-100	1/2 x 1-1/4	9/16	1-3/4	1-1/4
TT-MEA-200	5/8 x 2	7/8	2-3/4	2
TT-MEA-300	3/4 x 2-1/2	1-3/8	3-3/4	2-1/2
TT-MEA-400	1 x 3-1/2	1-3/4	5	3-1/2
TT-MEA-500	1-1/4 x 4	1-1/4	4	3-1/2
TT-MEA-600	1-1/4 x 4	1-1/4	6-3/4	4-1/2



HYDRAULIC CYLINDER PIECE PARTS



Material: A-36 Plate

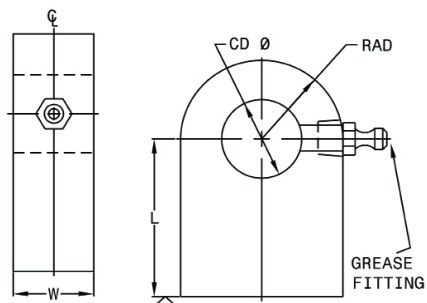


Mounting Lug

PART NUMBER	L	R	W
TT-ML296	1.50	1.00	0.50
TT-ML297	1.50	1.00	0.62
TT-ML298	1.50	1.00	0.75
TT-ML299	1.75	1.25	1.00
TT-ML301	2.00	1.50	1.00
TT-ML302	2.50	2.00	1.00
TT-ML303	1.50	1.00	1.25
TT-ML304	1.50	1.12	1.50
TT-ML305	2.00	1.25	1.50
TT-ML306	1.75	1.50	1.50
TT-ML307	2.75	1.50	1.50
TT-ML308	1.75	1.25	2.00
TT-ML309	2.00	1.50	2.00
TT-ML310	2.12	1.50	2.00
TT-ML311	2.25	1.50	2.00
TT-ML312	3.00	1.50	2.00
TT-ML313	1.75	1.75	2.00
TT-ML314	1.88	1.75	2.00
TT-ML315	2.12	1.75	2.00
TT-ML316	2.50	1.75	2.00
TT-ML317	2.75	1.75	2.00
TT-ML318	3.00	2.00	2.00
TT-ML319	3.00	2.12	2.00
TT-ML320	3.12	2.50	2.00
TT-ML321	2.00	1.12	2.25
TT-ML322	2.25	1.75	2.25
TT-ML323	3.00	2.50	2.25
TT-ML324	3.00	2.50	2.50
TT-ML325	3.00	2.25	3.00
TT-ML326	3.00	2.00	3.25



Material: A-36 Plate



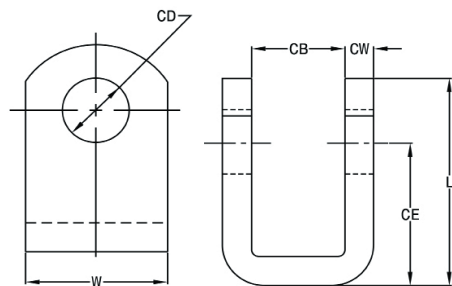
Mounting Lug

PART NUMBER	CD	L	RAD	W	GREASE FITTING
TT-ML050100	1.00	2.00	1.00	0.50	N/A
TT-ML062100	1.00	2.00	1.00	0.62	N/A
TT-ML060333	1.00	2.12	1.00	0.75	N/A
TT-ML100100	1.00	2.00	1.00	1.00	N/A
TT-ML125100	1.00	2.00	1.00	1.25	1/8" NPT
TT-ML062125	1.25	2.50	1.25	0.62	N/A
TT-ML075125	1.25	2.50	1.25	0.75	N/A
TT-ML100125	1.25	2.50	1.25	1.00	N/A
TT-ML150125	1.25	2.50	1.25	1.50	1/8" NPT
TT-ML200125	1.25	2.50	1.25	2.00	1/8" NPT
TT-ML062150	1.50	2.50	1.50	0.62	N/A
TT-ML075150	1.50	2.50	1.50	0.75	N/A
TT-ML150150	1.50	2.50	1.50	1.50	1/8" NPT
TT-ML200150	1.50	2.50	1.50	2.00	1/8" NPT
TT-ML250150	1.50	2.50	1.50	2.50	1/8" NPT
TT-ML200200	2.00	3.00	2.00	2.00	1/8" NPT
TT-ML250200	2.00	3.00	2.00	2.50	1/8" NPT

HYDRAULIC CYLINDER PIECE PARTS



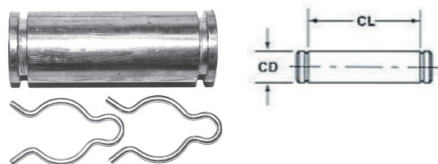
Material: 1040 HF Bar



Formed Clevis

PART NUMBER	CB	CD	CE	CW	L	W
TT-CL3011	0.75	0.50	1.50	0.38	2.25	1.25
TT-CL7337	1.06	0.75	2.00	0.38	3.12	1.75
TT-CL6547	1.25	1.00	2.50	0.50	3.62	2.00
TT-CL8278	0.88	1.00	2.93	0.50	4.06	2.00
TT-CL323	1.25	1.00	5.06	0.38	6.06	1.75
TT-B120753	1.50	1.12	2.12	0.50	3.25	2.25
TT-B120625	1.62	1.25	2.75	0.75	4.00	2.50
TT-80003	0.50	N/A	N/A	0.38	2.38	1.00
TT-80010	1.12	N/A	N/A	0.38	3.50	2.00
TT-B120829	1.50	N/A	N/A	0.50	3.25	2.50
TT-80001	1.12	N/A	N/A	0.50	4.00	2.00
TT-B120672	1.50	N/A	N/A	0.50	4.00	3.00
TT-B120760	1.12	1.00	2.12	0.62	3.38	2.50
TT-B120756	1.12	N/A	N/A	0.62	4.25	3.00
TT-80015	1.25	N/A	N/A	0.62	4.62	2.50
TT-B120613	1.62	N/A	N/A	0.75	4.00	2.50
TT-B120614	2.12	N/A	N/A	1.00	5.00	3.00

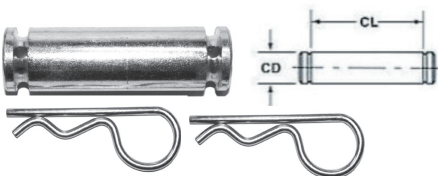
HYDRAULIC CYLINDER PIECE PARTS



Material: Steel, Plated Surface
Includes 2 External Hair Pin Clips

Mobile Pivot Pin and Hair Pin Clips

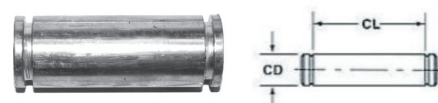
PART NUMBER	DESCRIPTION	CD	CL
WELD-1.0X2.83 PIN ASSY	WELD PIN-CLIP ASSEMBLY	1	2.33
WELD-1.0X3.23 PIN ASSY	WELD PIN-CLIP ASSEMBLY	1	2.33
TRD-1.0X3.50 PIN ASSY	TRD PIN-CLIP ASSEMBLY	1	2.86
TRD-1.0X4.41 PIN ASSY	TRD PIN-CLIP ASSEMBLY	1	3.77



Material: Steel, Plated Surface
Includes 2 R-Clips

Mobile Pivot Pin and R-Clips

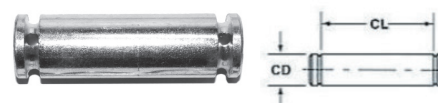
PART NUMBER	DESCRIPTION	CD	CL
HTRD-1.0X2.83 PIN ASSY	HTRD PIN-CLIP ASSEMBLY	1	2.83
HTRD-1.0X3.25 PIN ASSY	HTRD PIN-CLIP ASSEMBLY	1	3.25
HTRD-1.25X3.31 PIN ASSY	HTRD PIN-CLIP ASSEMBLY	1.25	3.31



Does not include Hair Pin Clips

Mobile Pivot Pins

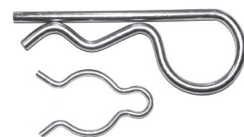
PART NUMBER	DESCRIPTION	CD	CL
WELD-1.0X2.83PIN	1.0 X 2.83	1	2.33
WELD-1.0X3.23PIN	1.0 X 3.23	1	2.73
TRD-1.0X3.50PIN	1.0 X 3.50	1	2.86
TRD-1.0X4.41PIN	1.0 X 4.41	1	3.77



Does not include R Clips

Mobile Pivot Pins

PART NUMBER	DESCRIPTION	CD	CL
HTRD-1.0X2.83 PIN	1.0 X 2.83	1	2.83
HTRD-1.0X3.25 PIN	1.0 X 3.25	1	3.25
HTRD-1.25X3.31 PIN	1.25 X 3.31	1	3.31



Mobile Clips

PART NUMBER	DESCRIPTION
WELD-CLIP	WELD-TRD HAIR PIN CLIP
TRD-CLIP	WELD-TRD HAIR PIN CLIP
HTRD-CLIP	HTRD R-CLIP

HYDRAULIC CYLINDER PIECE PARTS

MACHINED CHROME RODS



- One end machined to fit mobile pistons
- One end supplied blank for modification by customer (custom mount)

FEATURES:

- Steel Bar: 1045 steel bar, 75,000 psi minimum yield strength
- Shaft diameter is turned, ground, polished, induction hardened and chrome plated
- Surface Hardness: Induction hardened to Rc 50 minimum
Case Depth: 0.050" minimum per SAE J423
- Plate Thickness: 0.001" minimum hard chrome-plated
- Hardness of Chrome Plate: Rc 68-72
- Surface Finish: 12 RMS maximum
- Packaging: Individually cardboard tube wrapped, inside hard plastic tubing
- Salt Spray Test: 48 hours minimum per ASTM B117
- One end square cut to be modified, per application, by customer

SELECTION CHART OVERVIEW

Rod Dia	Stub Dia	Part # 12" Nominal Stroke* (24" OAL)
0.750	0.625	CR75I-0.75X24-0.62
1.000	0.750	CR75I-1.00X24-0.75
1.125	0.750	CR75I-1.12X24-0.75
1.250	0.750	CR75I-1.25X24-0.75
1.500	0.750	CR75I-1.50X24-0.75
1.500	1.000	CR75I-1.50X24-1.00
1.750	1.000	CR75I-1.75X24-1.00
2.000	1.000	CR75I-2.00X24-1.00
2.000	1.250	CR75I-2.00X24-1.25
2.500	1.250	CR75I-2.50X24-1.25
3.000	1.250	CR75I-3.00X24-1.25

Part # 24" Nominal Stroke* (36" OAL)
CR75I-0.75X36-0.62
CR75I-1.00X36-0.75
CR75I-1.12X36-0.75
CR75I-1.25X36-0.75
CR75I-1.50X36-0.75
CR75I-1.50X36-1.00
CR75I-1.75X36-1.00
CR75I-2.00X36-1.00
CR75I-2.00X36-1.25
CR75I-2.50X36-1.25
CR75I-3.00X36-1.25

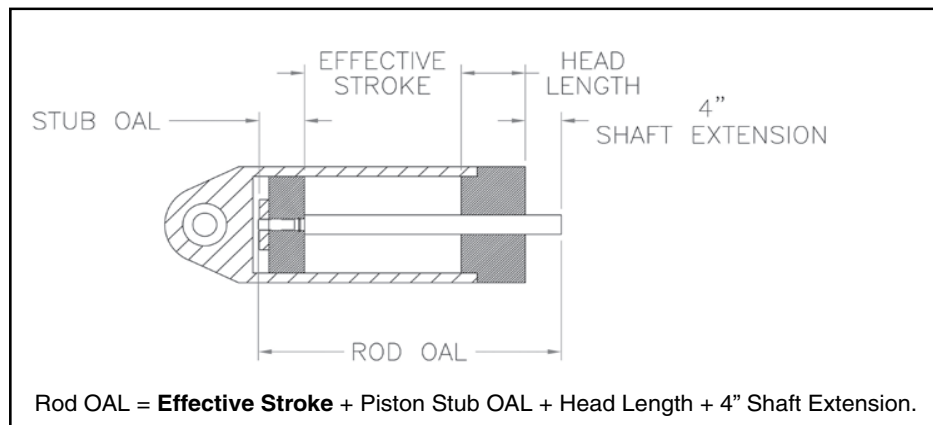
Part # 36" Nominal Stroke* (48" OAL)
CR75I-0.75X48-0.62
CR75I-1.00X48-0.75
CR75I-1.12X48-0.75
CR75I-1.25X48-0.75
CR75I-1.50X48-0.75
CR75I-1.50X48-1.00
CR75I-1.75X48-1.00
CR75I-2.00X48-1.00
CR75I-2.00X48-1.25
CR75I-2.50X48-1.25
CR75I-3.00X48-1.25

Part # 48" Nominal Stroke* (60" OAL)
N/A
CR75I-1.00X60-0.75
CR75I-1.12X60-0.75
CR75I-1.25X60-0.75
CR75I-1.50X60-0.75
CR75I-1.50X60-1.00
CR75I-1.75X60-1.00
CR75I-2.00X60-1.00
CR75I-2.00X60-1.25
CR75I-2.50X60-1.25
CR75I-3.00X60-1.25

Part # 60" Nominal Stroke (72" OAL)
N/A
N/A
CR75I-1.12X72-0.75
CR75I-1.25X72-0.75
CR75I-1.50X72-0.75
CR75I-1.50X72-1.00
CR75I-1.75X72-1.00
CR75I-2.00X72-1.00
CR75I-2.00X72-1.25
CR75I-2.50X72-1.25
CR75I-3.00X72-1.25

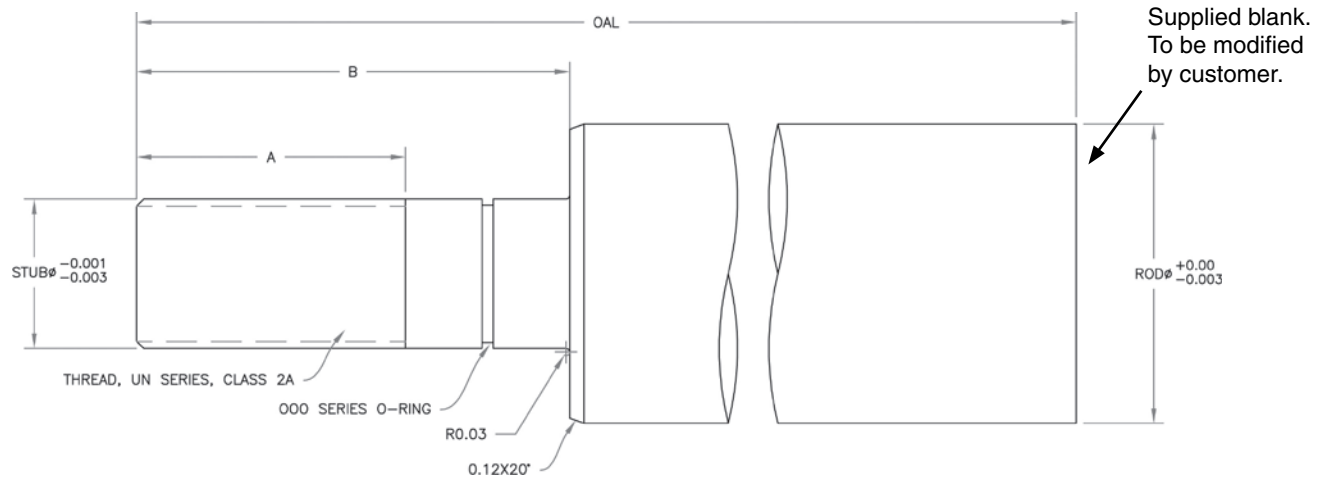
EFFECTIVE STROKE CALCULATION

* Stroke length is dependent upon selection of piston and head type



HYDRAULIC CYLINDER PIECE PARTS

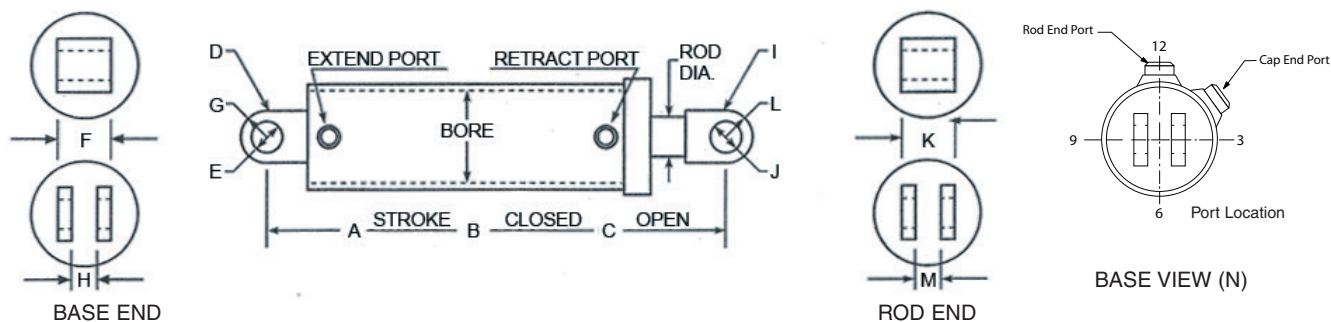
MACHINED CHROME ROD STUB



PISTON STUB SHAFT DETAIL

Part Number	Rod Dia	Thread	Stub Dia	Thread Length A	Stub Length B	12" Nom Stroke OAL	24" Nom Stroke OAL	36" Nom Stroke OAL	48" Nom Stroke OAL	60" Nom Stroke OAL
CR75I-0.75X(OAL)-0.62	0.750	5/8"-18 UNF	0.625	1.255	2.005	24.00	36.00	48.00	N/A	N/A
CR75I-1.00X(OAL)-0.75	1.000	3/4"-16 UNF	0.750	1.630	2.505	24.00	36.00	48.00	60.00	N/A
CR75I-1.12X(OAL)-0.75	1.125	3/4"-16 UNF	0.750	1.630	2.505	24.00	36.00	48.00	60.00	72.00
CR75I-1.25X(OAL)-0.75	1.250	3/4"-16 UNF	0.750	2.255	2.880	24.00	36.00	48.00	60.00	72.00
CR75I-1.50X(OAL)-0.75	1.500	3/4"-16 UNF	0.750	2.255	2.880	24.00	36.00	48.00	60.00	72.00
CR75I-1.50X(OAL)-1.00	1.500	1"-14 UNS	1.000	2.690	3.185	24.00	36.00	48.00	60.00	72.00
CR75I-1.75X(OAL)-1.00	1.750	1"-14 UNS	1.000	2.690	3.185	24.00	36.00	48.00	60.00	72.00
CR75I-2.00X(OAL)-1.00	2.000	1"-14 UNS	1.000	2.690	3.185	24.00	36.00	48.00	60.00	72.00
CR75I-2.00X(OAL)-1.25	2.000	1-1/4"-12 UNF	1.250	2.255	3.630	24.00	36.00	48.00	60.00	72.00
CR75I-2.50X(OAL)-1.25	2.500	1-1/4"-12 UNF	1.250	2.255	3.630	24.00	36.00	48.00	60.00	72.00
CR75I-3.00X(OAL)-1.25	3.000	1-1/4"-12 UNF	1.250	2.255	3.630	24.00	36.00	48.00	60.00	72.00

CUSTOM CYLINDER APPLICATION DATA FORM



Cylinder application _____

Single - or Double-acting _____ System operating pressure Normal _____ Max. _____

Bore _____ Is there a relief valve in system _____ Setting _____

Rod diameter _____ System flow in G.P.M Min. _____ Max. _____

Head & gland design _____ System operating temp. Normal _____ Max. _____

Piston design _____ Fluid type _____

Mounting conditions ____Vert.____Horz.____Incline angle Load holding requirements _____

Any side or eccentric loading possible _____ Environmental condition _____

Average cycles per week _____ Cylinder max force during: Push____Pull____Both _____

A : Total stroke _____ I : Rod mount type or code _____

B : Closed length _____ J : Rod pin diameter _____

C : Open length _____ K : Rod mount width _____

D : Base mount type or code _____ L : Rod mount radius _____

E : Base pin diameter _____ M : Rod clevis gap (if applicable) _____

F : Base mount width _____ N : Base End Port Location _____

G : Base mount radius _____ Rod End Port Location _____

H : Base Clevis Gap (if applicable) _____

Special mounting (if applicable) _____

Extend port size and type _____ Extend port location _____

Retract port size and type _____ Retract port location _____

*Special features or comments:

Requested by: Company Name _____ Quantity / Shipment _____

Address _____ Annual Usage _____

Phone _____ Fax _____

Contact _____



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