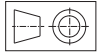




Hydraulic Cylinders - HH16 Series

- Rated Pressure 160 kg/cm²
- Peak Pressure 240 kg/cm²
- Cylinder bore diameters up to 350mm
- Temperature range:- -20°C to 90°C. (optional seals for temp. up to 180°C)



BASIC CYLINDER

SPECIFICATION OF MATERIALS

END COVERS : Precision machined steel

CYLINDER BARREL : Cold drawn seamless steel, honed and polished internally to a maximum surface roughness of Ra=0.4 microns

PISTON : Steel, single piece, precisely machined for perfect alignment

PISTON BEARING : Polyester fabric with polyester resin+PTFE for maximum rigidity

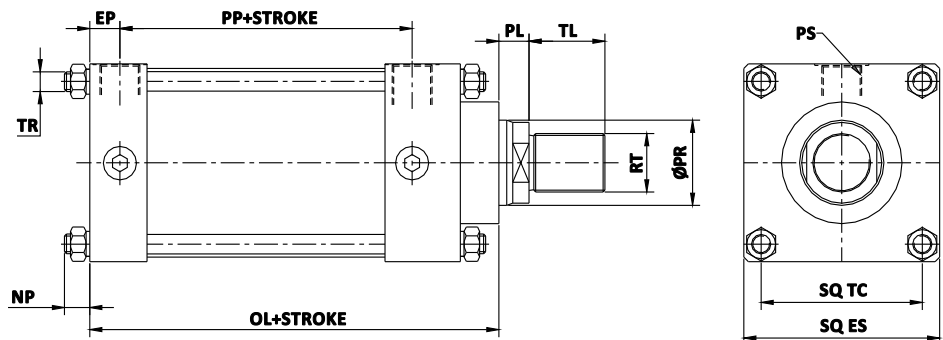
PISTON ROD : Medium carbon steel, toughened ground Hard-chrome plated & polished to a maximum roughness of Ra=0.4 microns

PISTON ROD BEARING : Polyester fabric with polyester resin+PTFE for maximum rigidity

SEALING SYSTEM : We use a wide range of international standard sealing systems to suit various applications & temperatures

MOUNTINGS : Accurately machined steel suitable for heavy duty application

TIE RODS : High tensile steel

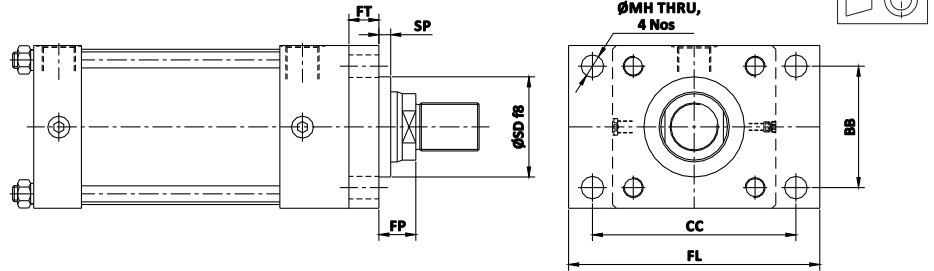


BORE DIA	PR DIA	ES (Sq)	RT	PS (BSP)	OL	PL	TL	PP	TR	NP	EP	TC
25	16	45	M12x1.25	3/8"	142	12	16	76	M8x1.25	12	15	30
40	20	60	M14x1.5	1/2"	161	14	18	89	M10x1.5	13	15	44
50	25	76	M20x1.5	1/2"	179	16	25	93	M12x1.75	15	17	52
63	28	94	M22x1.5	1/2"	176	19	30	94	M12x1.75	15	17	64
80	36	112	M27x2	3/4"	200	19	36	112	M16x2	20	19	82
100	45	125	M33x2	3/4"	216	19	45	124	M16x2	20	19	99
125	56	165	M42x2	3/4"	239	21	56	138	M24x2	28	19	124
160	70	200	M48x2	1"	263	22	63	150	M30x2	37	24	154
200	90	240	M64x3	1 1/4"	309	26	85	174	M30x2	37	30	192

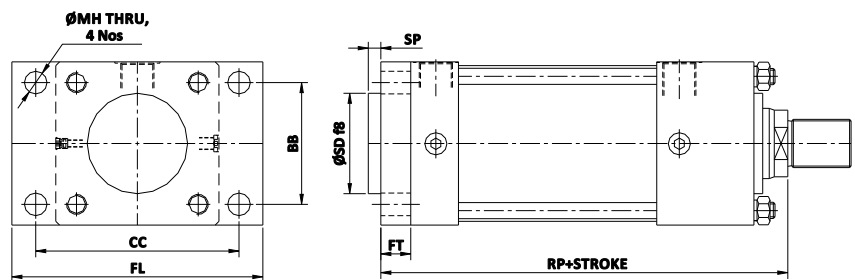
Standard Mountings - HH16 Series



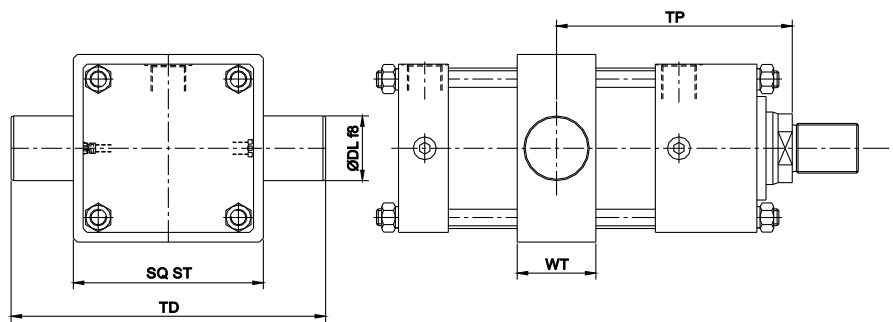
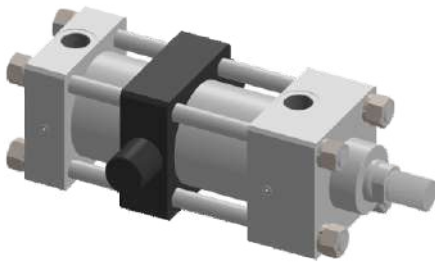
Front Flange (FF)



Rear Flange (RF)



Intermediate Trunnion (IT)



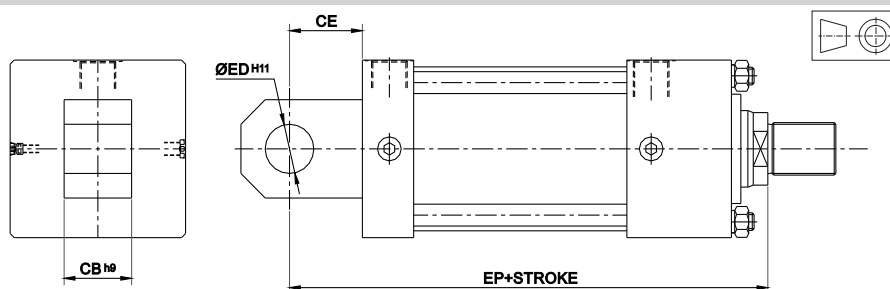
DIMENSIONAL DETAILS

BORE	25	40	50	63	80	100	125	160	200
BB	28	41	52	65	83	97	128	155	190
CC	65	87	105	117	149	162	208	253	300
FL	85	108	130	142	180	194	248	303	358
SD	30	40	44	50	60	70	85	100	120
SP	4	4	4	4	5	5	5	5	5
MH	8	11	14	14	18	18	22	26	33
FT	10	10	16	16	20	22	22	25	25
FP	16	18	20	23	24	24	26	27	31
RP	164	185	211	211	239	257	282	310	360
WT	25	32	40	40	45	50	50	60	85
TD	88	113	140	158	186	207	245	303	391
ST	48	63	76	95	114	127	165	203	241
DL	20	25	32	32	36	40	40	50	75
TP	TO BE SPECIFIED BY CUSTOMER								

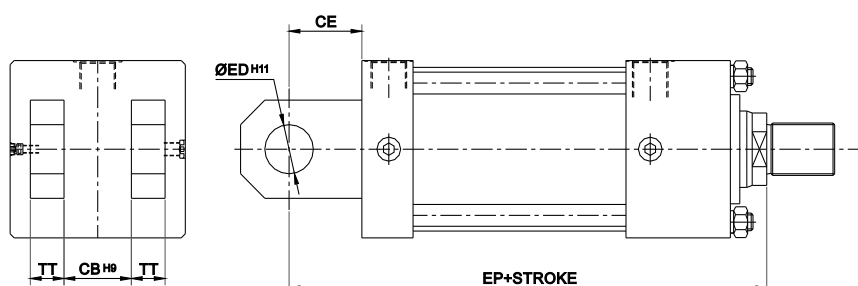
Standard Mountings - HH16 Series



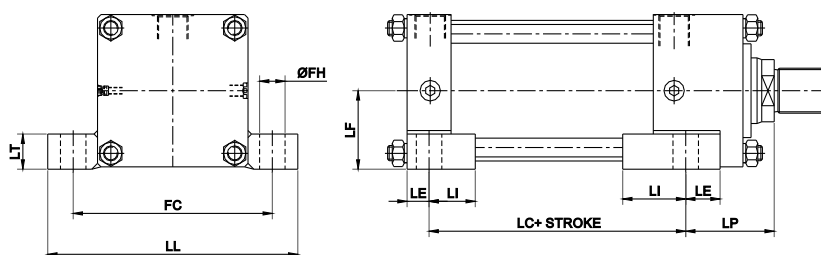
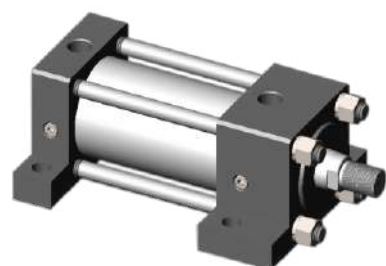
Rear Eye (RE)



Rear Clevis (RC)



Foot Lug (FL)



DIMENSIONAL DETAILS

BORE	25	40	50	63	80	100	125	160	200
CB	15	20	30	30	40	50	60	70	80
TT	10	12	16	16	20	25	32	38	38
ED	10	14	20	20	28	36	45	56	70
CE	16	19	32	32	39	54	57	63	82
EP	170	194	227	227	258	289	317	348	417
LC	100	120	126	112	132	134	156	174	213
LL	85	102	127	166	185	216	254	310	380
FC	65	83	102	130	149	172	210	260	311
LI	22	24	40	40	45	45	45	55	60
LE	8	10	15	18	20	22	25	25	30
LT	10	12	20	25	30	32	32	40	45
LF	24	31	38	48	57	63	82	101	120
FH	9	11	14	20	20	25	25	33	39
LP	46	45	54	65	67	79	79	86	92

Technical Data & Ordering Details for HH16 Series



TECHNICAL DETAILS											
Bore Dia	Rod Dia	Piston Area		Action Force at Pressure in kgf				Piston velocity in m/s at flow= 1 ltr/min		Requisite flow in ltr/min for velocity = 0.1 m/s	
(mm)	(mm)	(cm ²)		100 kg/cm ²		160 kg/cm ²					
		+	-	+	-	+	-	+	-	+	-
25	16	4.9	2.9	490.6	289.7	785.0	463.5	0.0340	0.0575	2.94	1.74
40	20	12.6	9.4	1256.0	942.0	2009.6	1507.2	0.0133	0.0177	7.54	5.65
50	25	19.6	14.7	1962.5	1471.9	3140.0	2355.0	0.0085	0.0113	11.78	8.83
63	28	31.2	25.0	3115.7	2500.2	4985.1	4000.4	0.0053	0.0067	18.69	15.00
80	36	50.2	40.1	5024.0	4006.6	8038.4	6410.6	0.0033	0.0042	30.14	24.04
100	45	78.5	62.6	7850.0	6260.4	12560.0	10016.6	0.0021	0.0027	47.10	37.56
125	56	122.7	98.0	12265.6	9803.9	19625.0	15686.2	0.0014	0.0017	73.59	58.82
160	70	201.0	162.5	20096.0	16249.5	32153.6	25999.2	0.0008	0.0010	120.58	97.50
200	90	314.0	250.4	31400.0	25041.5	50240.0	40066.4	0.0005	0.0007	188.40	150.25

Model Code Indication

HH16 - 100 / 500 - FF - 45 - CB - (X) - SS4

Series	Bore sizes	Stroke	Mountings	Piston Rod sizes	Cushioning	Accessories & Special features	Sealing System Code
HH16 Rated Hydraulic Pressure of 160kg/cm ²	Ø25 - 350mm (9 Std. sizes)	To be specified in mm	FF - Front Flange RF - Rear Flange RC - Rear Clevis RE - Rear Eye FL - Foot Lug IT - Intermediate Trunnion	Ø12 - 170mm (9 Std. sizes)	CB - Cushioned at both ends CR - Cushioned at Rear end CF - Cushioned at Front end NC - Non Cushioned	PRE - Rod Eye PRF - Rod Fork SA - Single Acting DE - Double Ended	SS4 (Std.) for alternatives contact us.

NOTE:- The right of modification for technical improvement is reserved. All dimensions are in mm unless otherwise specified

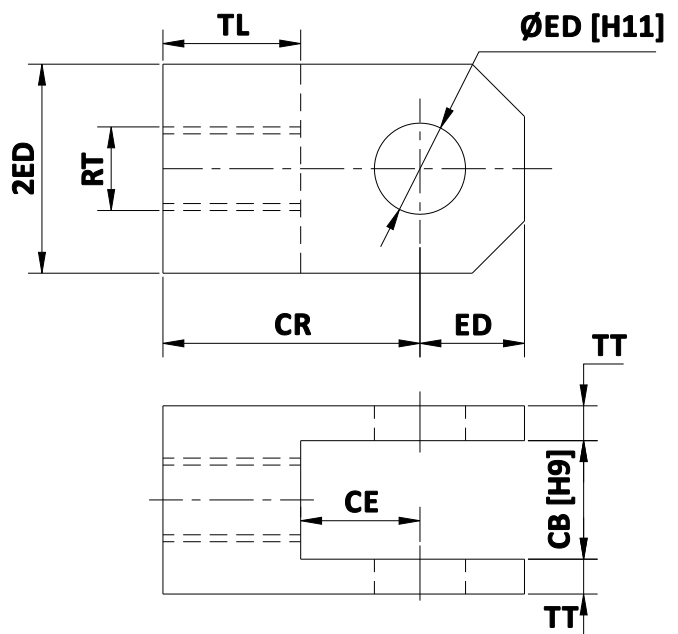
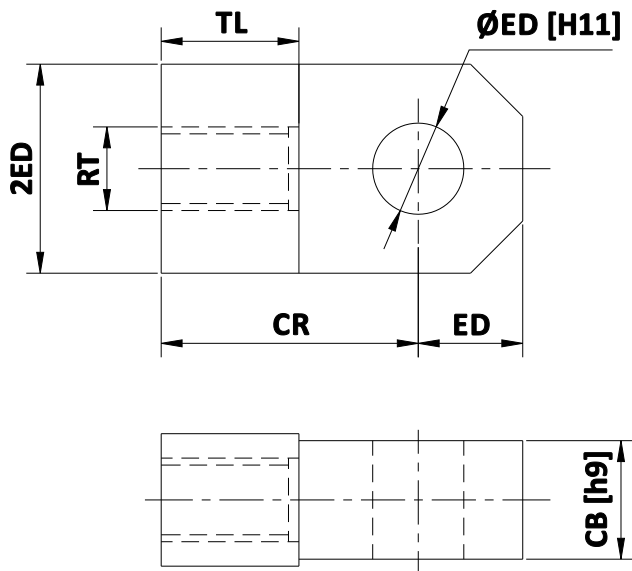
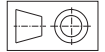
CUSTOM BUILT CYLINDERS CAN ALSO BE OFFERED ON REQUEST

Piston Rod Eye & Piston Rod Fork for HH16 Series



Piston Rod Eye (PRE)

Piston Rod Fork (PRF)



Ordering Code

For Piston Rod Eye :- HH16-PRE-**

where ** - Piston Rod Dia

For Piston Rod Fork :- HH16-PRF-**

where ** - Piston Rod Dia

SPECIFICATION & DIMENSIONAL DETAILS

ROD DIA	RT	TL	CR	ED	CB	TT	CE
16	M12x1.25	19	35	10	15	10	16
20	M14x1.5	22	42	14	20	12	19
25	M20x1.5	29	58	20	30	16	32
28	M22x1.5	32	65	20	30	16	32
36	M27x2	38	75	28	40	20	37
45	M33x2	50	104	36	50	25	54
56	M42x2	61	118	45	60	32	57
70	M48x2	69	132	56	70	38	63
90	M64x3	90	172	70	80	38	82
110	M90x3	100	192	90	100	45	92