



HYDRAULIC CYLINDERS



TECHNICAL CATALOGUE

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Hydro-Pneumatic Tool De-Clamp Cylinders PCS Series

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for Machining Centres (VMC & HMC)

Application

- To provide high thrust over a short stroke using compressed air. Ideal for use where hydraulics is not used or cannot be used. Widely used in machining centers (VMC & HMC).

Priming

- Pressurize chambers C2 & C4. Open the bleed port & pour oil into the reservoir. When oil starts to flow out of bleed port, plug it. The system is primed & ready to use.

Working Principle

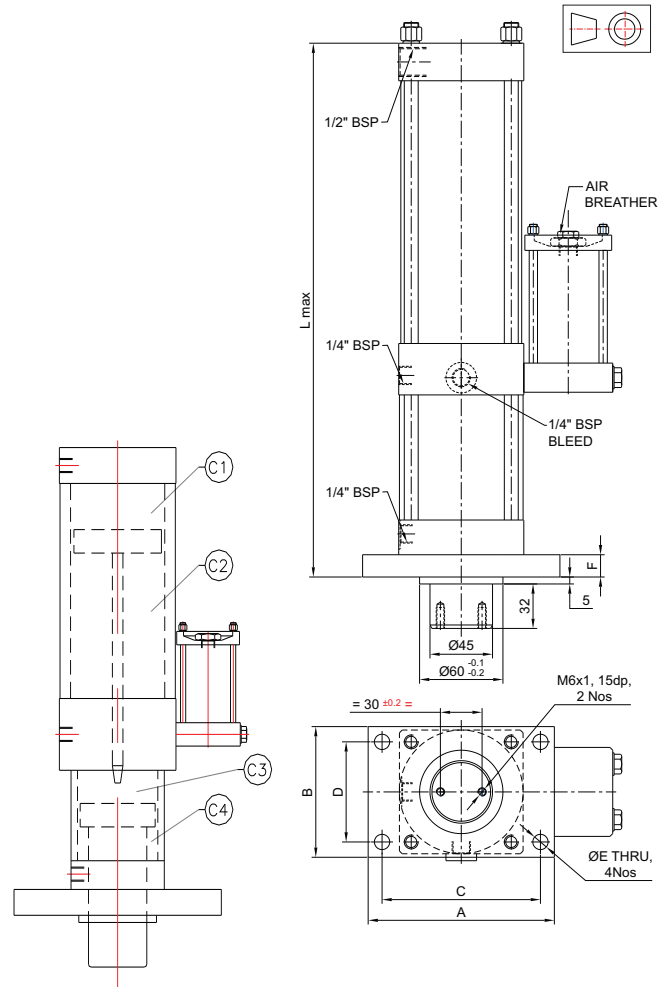
- Compressed air in chamber C1 forces the piston rod into chamber C3 which is primed with oil from the reservoir. As the rod progresses into the sealed area of chamber C3 the oil gets pressurized proportionate to the intensification ratio & this moves the piston rod over the required high pressure stroke. Compressed air is then supplied to chambers C2 & C4 to return both pistons to their original position.

Maintenance

- This unit can operate on dry & filtered air. It is advisable to use lubricated air for longer life. Once lubricated air is used, the unit should not be operated on dry air.
- Oil level in the reservoir should be maintained as marked.
- If excess oil is observed through the valve exhaust ports or oil level in the reservoir drops quickly, there may be a seal failure. If so, replace entire seal kit.

Note

- For horizontal mounting replace 'V' by 'H' in Part number.
- Fully loaded version with valves, limit switches & Air blast can be offered on request



SUPPLY SPECIFICATION

Sl. No.	THEORETICAL THRUST in kgf			STROKE in mm	PART No.	L	A	B	C	D	E	F
	at 4 kg/cm ²	at 5 kg/cm ²	at 6 kg/cm ²									
1	2000	2500	3000	9	PCS3-8045-VC09	357	134	94	114	72	11	16
2	2000	2500	3000	13	PCS3-8045-VC13	425	134	94	114	72	11	16
3	2000	2500	3000	16	PCS3-8045-VC16	477	134	94	114	72	11	16
4	3200	4000	4800	9	PCS4-10045-VC09	376	154	112	134	90	11	161
5	3200	4000	4800	13	PCS4-10045-VC13	414	154	112	134	90	11	16
6	3200	4000	4800	16	PCS4-10045-VC16	470	154	112	134	90	11	16
7	5000	6250	7500	9	PCS5-12545-VC09	361	200	140	170	110	14.5	18
8	5000	6250	7500	13	PCS5-12545-VC13	420	200	140	170	110	14.5	18
9	5000	6250	7500	16	PCS5-12545-VC16	468	200	140	170	110	14.5	18

ORSETT HYDRAULICS PVT. LTD.

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Hydro-Pneumatic Intensifiers for Machining Centres (VMC & HMC)

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Description

- The Hydro-Pneumatic Intensifier consists of a double acting Pneumatic cylinder & a hydraulic high pressure chamber. The Pneumatic cylinder piston rod is forced into the hydraulic chamber resulting in high pressure oil displacement.

Application

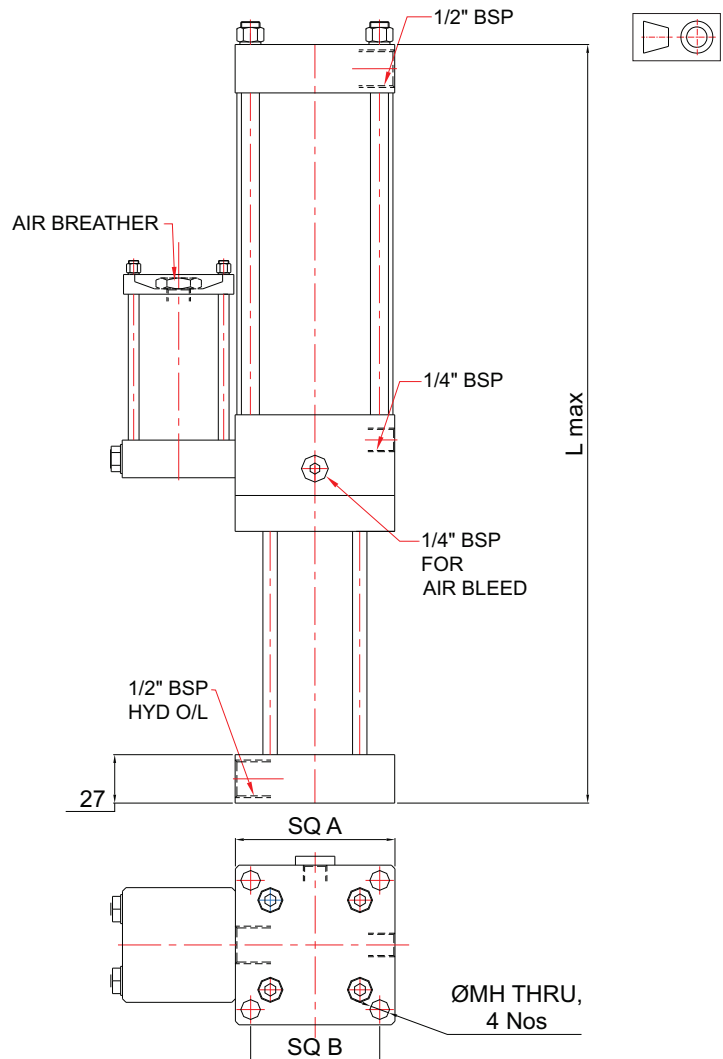
- For actuating the Tool De-clamping cylinders in machining centers.

Operation

- When compressed air is allowed into the positive chamber of the Pneumatic cylinder oil in the hydraulic side gets pressurized and is forced out. This oil operates the clamping cylinders. After changing the direction of air the pneumatic piston returns and the job gets de-clamped.

Important Notes

- Output pressure should not exceed 175 kg/cm^2
- This can be used to operate only single acting cylinders.
- For seal kits, add Prefix SK to part No.
- All dimensions are in mm.
- Overall dimensional tolerance $\pm 0.5 \text{ mm}$.



SUPPLY SPECIFICATION

Sl. No.	PART No.	INTENSIFICATION RATIO	OIL OUTPUT in cc	L	A	B	MH	OUTPUT PRESSURE @ 4 kg/cm ² AIR PRESSURE
1	1330-040-050	1:10	50	425	89	72	11	40
2	1330-040-100	1:10	100	625	89	72	11	40
3	1330-064-050	1:16	50	425	112	88	13	64
4	1330-064-100	1:16	100	625	112	88	13	64
5	1330-100-050	1:25	50	425	140	109	15	100
6	1330-100-100	1:25	100	625	140	109	15	100

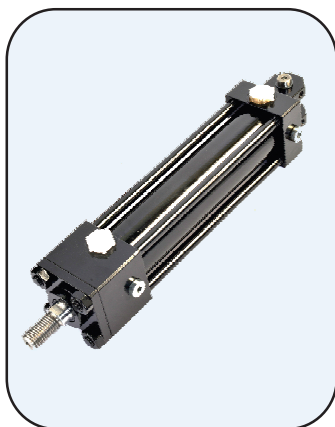
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Hydraulic Cylinders - LH7 Series

- Rated Pressure 50 kg/cm²
- Peak Pressure 70 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

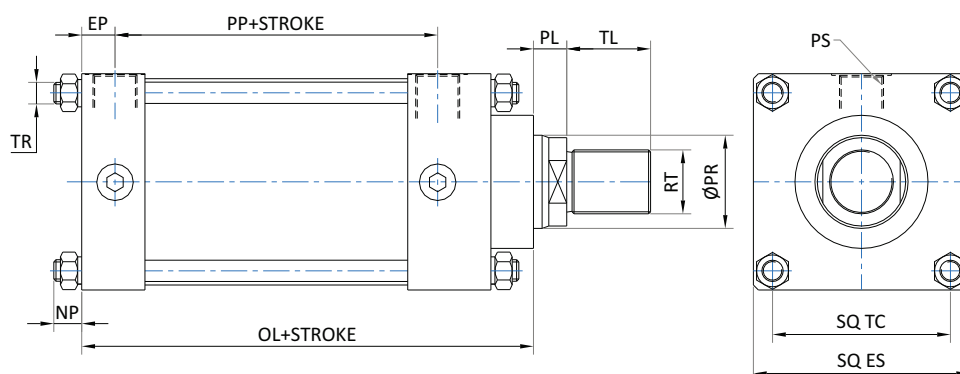
PISTON ROD : Medium carbon steel, ground Hard-chrome plated & polished to a maximum roughness of Ra=0.4 microns

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 : Cold drawn steel



BORE DIA	PR DIA	ES (Sq)	RT	PS (BSP)	OL	PL	TL	PP	TR	NP	EP	TC
25	12	40	M10x1.25	1/4"	115	8	15	62	M6x1	8	12	28
40	16	54	M12x1.25	3/8"	131	8	20	75	M8x1.25	10	14	40
50	20	58	M14x1.5	3/8"	135	10	25	75	M8x1.25	10	14	50
63	25	76	M20x1.5	3/8"	152	10	30	83	M10x1.5	12.5	17	60
80	28	94	M22x1.5	1/2"	171	12	30	99	M12x1.75	15	18	73
100	36	112	M27x2	1/2"	198	16	45	113	M12x1.75	15	20	89
125	45	148	M36x2	1/2"	208	18	45	122	M16x2	18	21	113
160	56	184	M42x2	3/4"	251	20	50	140	M16x2	18	26	138

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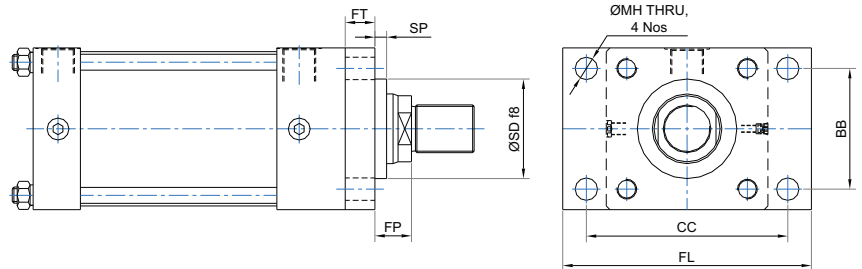
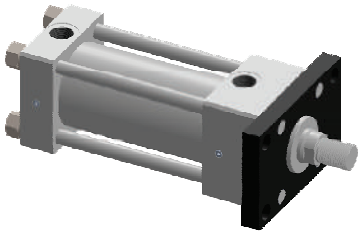
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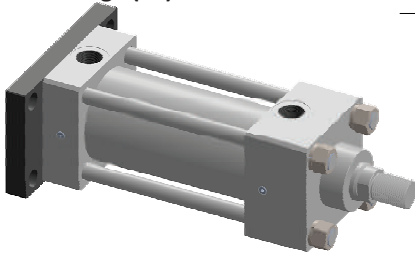
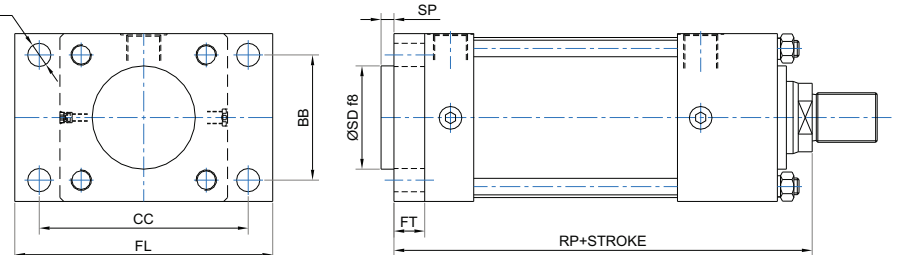
Standard Mountings LH7 Series



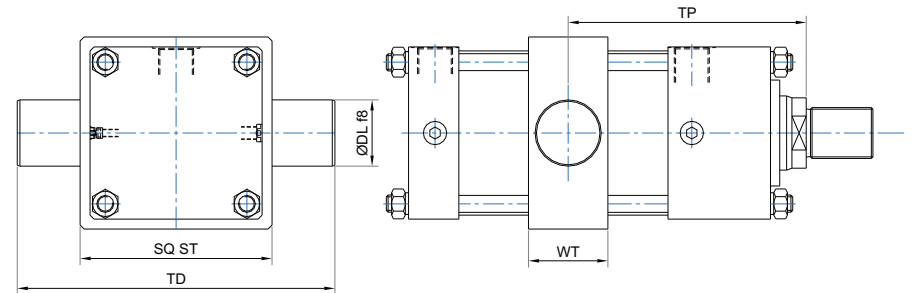
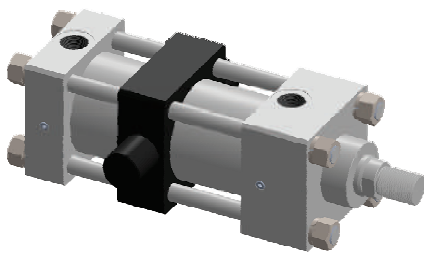
Front Flange (FF)



Rear Flange (RF)

ØMH THRU,
4 Nos

Intermediate Trunnion (IT)



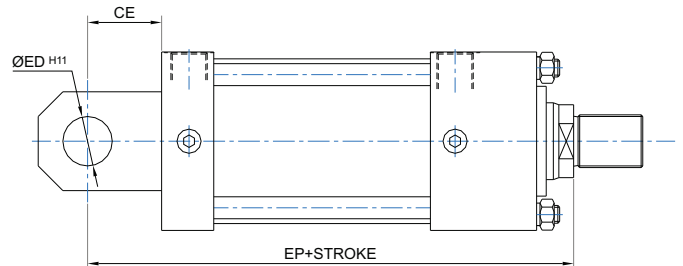
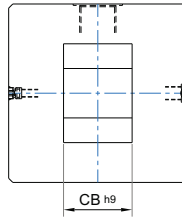
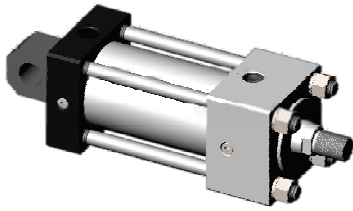
DIMENSIONAL DETAILS

BORE	25	40	50	63	80	100	125	160
BB	28	42	52	58	72	90	118	156
CC	52	66	84	92	114	134	174	210
FL	65	78	100	108	134	154	200	236
SD	27	44	44	62	62	88	88	100
SP	4	4	4	4	4	4	4	4
MH	6.6	6.6	9	9	11	11	14	14
FT	8	10	10	16	16	20	20	25
FP	12	12	14	14	16	20	22	24
RP	131	149	155	178	199	234	246	296
WT	25	32	38	38	50	50	50	58
TD	80	104	118	130	150	170	208	278
ST	48	58	76	84	100	125	162	208
DL	20	25	25	25	25	25	25	35
TP	TO BE SPECIFIED BY CUSTOMER							

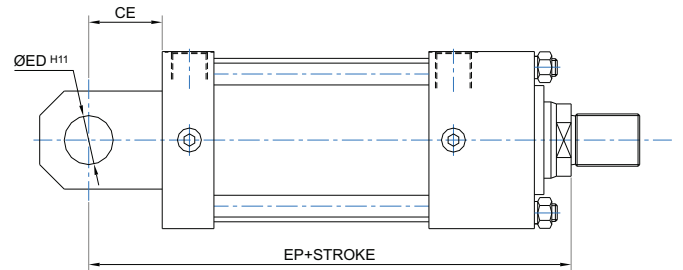
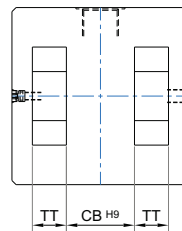
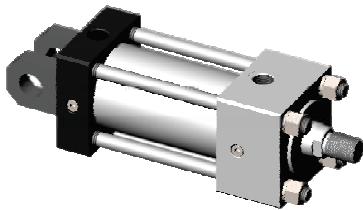
Standard Mountings LH7 Series



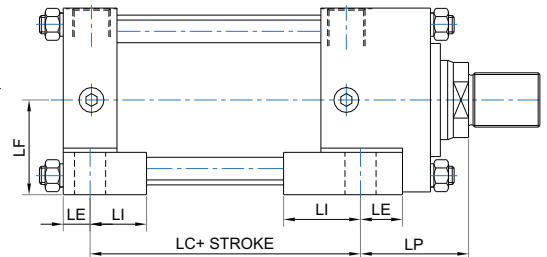
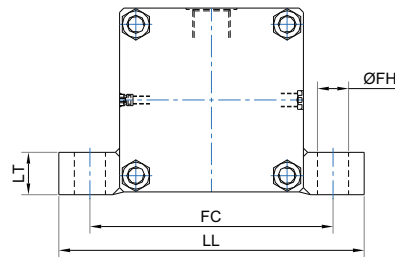
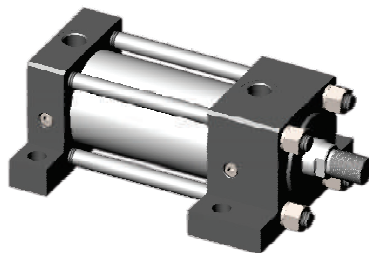
Rear Eye (RE)



Rear Clevis (RC)



Foot Lug (FL)



DIMENSIONAL DETAILS

BORE	25	40	50	63	80	100	125	160
CB	12	20	20	20	32	32	32	40
TT	8	12	12	12	16	16	16	20
ED	10	12	12	12	20	20	20	25
CE	18	20	20	20	32	32	32	40
EP	141	159	165	182	215	246	258	311
LC	65	90	98	100	118	128	135	168
LL	70	98	112	120	146	168	228	264
FC	58	78	92	100	122	144	192	228
LI	8	22	22	22	32	32	40	40
LE	8	10	10	10	12	12	18	18
LT	8	12	12	12	20	20	25	28
LF	20	30	36	40	50	60	76	95
FH	7	11	11	11	14	14	22	22
LP	50	39	37	52	53	74	73	85

Subject to change without notice

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Technical Data & Ordering Details for LH7 Series



TECHNICAL DETAILS

Bore Dia (mm)	Rod Dia (mm)	Piston Area (cm ²)		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	
		+	-	30 kg/cm ²		50 kg/cm ²		+	-	+	-
25	12	4.9	3.8	147.2	113.3	245.3	188.8	0.0340	0.0441	2.94	2.27
40	16	12.6	10.6	376.8	316.5	628.0	527.5	0.0133	0.0158	7.54	6.33
50	20	19.6	16.5	588.8	494.6	981.3	824.3	0.0085	0.0101	11.78	9.89
63	25	31.2	26.3	934.7	787.5	1557.8	1312.5	0.0053	0.0063	18.69	15.75
80	28	50.2	44.1	1507.2	1322.6	2512.0	2204.3	0.0033	0.0038	30.14	26.45
100	36	78.5	68.3	2355.0	2049.8	3925.0	3416.3	0.0021	0.0024	47.10	41.00
125	45	122.7	106.8	3679.7	3202.8	6132.8	5338.0	0.0014	0.0016	73.59	64.06
160	56	201.0	176.3	6028.8	5290.3	10048.0	8817.1	0.0008	0.0009	120.58	105.81

Model Code Indication

L H 7 - 1 0 0 / 5 0 0 - F F - 3 6 - C B - (X) - F C / S S 8

Series	Bore sizes	Stroke	Mountings	Piston Rod sizes	Cushioning	Accessories & Special features	Sealing System Code
LH7 Rated Hydraulic Pressure of 50kg/cm ²	Ø25 - 350mm (12 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 ET - Extended Tie Rod	Ø12 - 140mm (12 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 etc....	FC/SS8 (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

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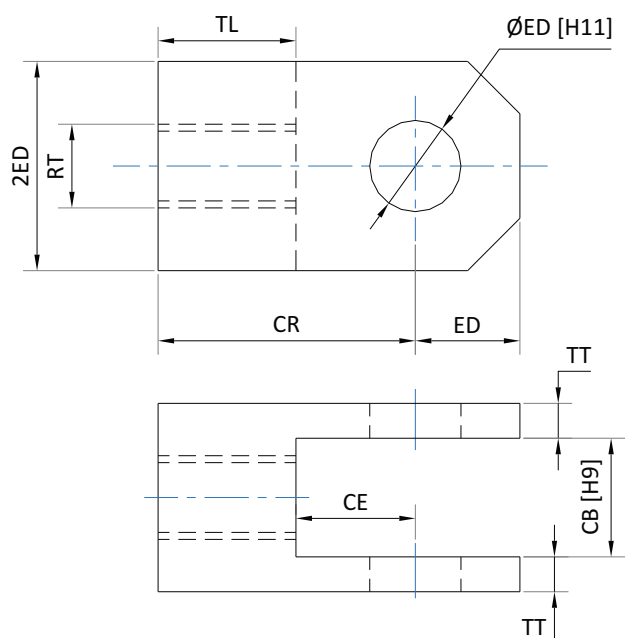
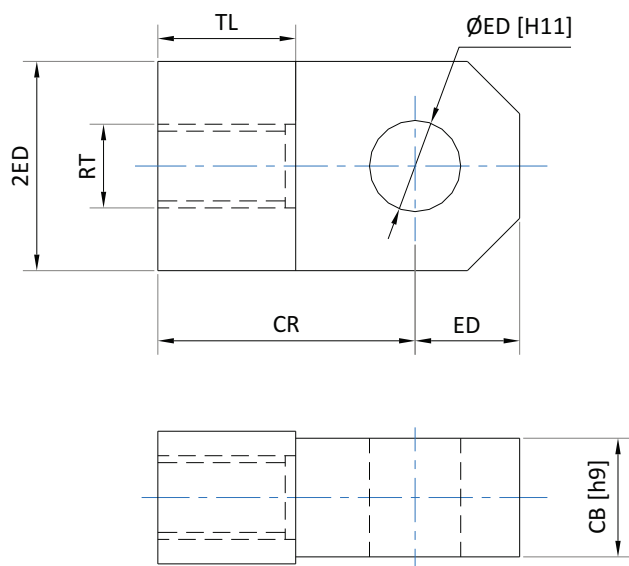
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Piston Rod Eye & Piston Rod Fork for LH7 Series



Piston Rod Eye (PRE)

Piston Rod Fork (PRF)



Ordering Code

For Piston Rod Eye :- **LH7-PRE-****
where ** - Piston Rod Dia

For Piston Rod Fork :- **LH7-PRF-****
where ** - Piston Rod Dia

SPECIFICATION & DIMENSIONAL DETAILS

ROD DIA	RT	TL	CR	ED	CB	TT	CE
12	M10x1.25	18	36	10	12	8	18
16	M12x1.25	22	42	12	20	12	20
20	M14x1.5	29	49	12	20	12	20
25	M20x1.5	35	55	12	20	12	20
28	M22x1.5	35	67	20	32	16	32
36	M27x2	50	82	20	32	16	32
45	M36x2	50	82	20	32	16	32
56	M42x2	55	95	25	40	20	40



Hydraulic Cylinders - HH16 Series

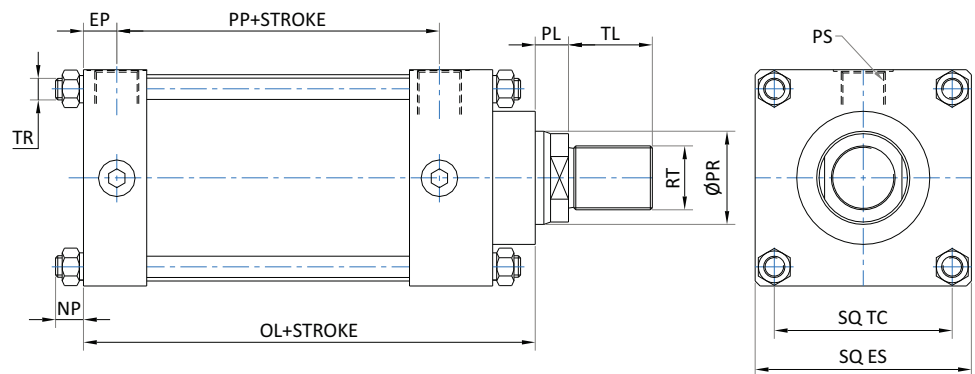
- Rated Pressure 160 kg/cm²
- Peak Pressure 240 kg/cm²
- Cylinder bore diameters up to 350mm
- Temperature range:- -20°C to 90°C. (optional seals for temp. up to 180°C)



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"	171	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

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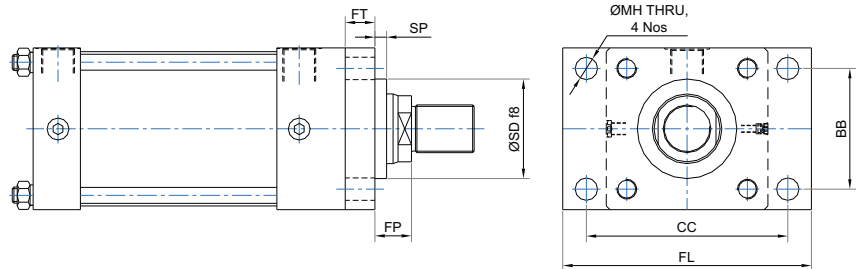
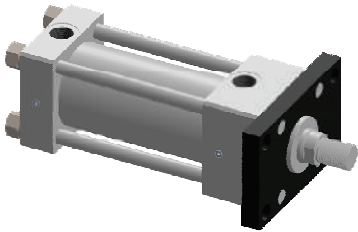
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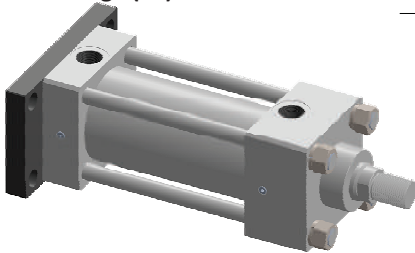
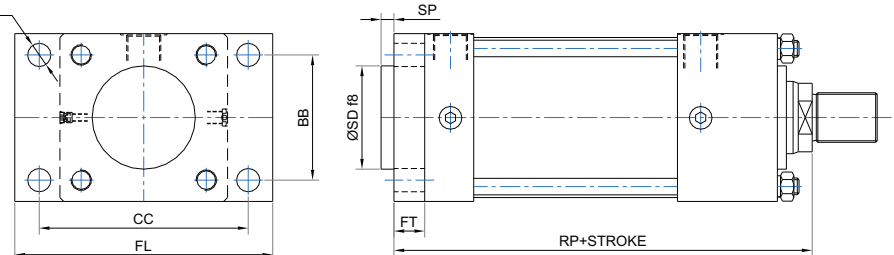
Standard Mountings HH16 Series

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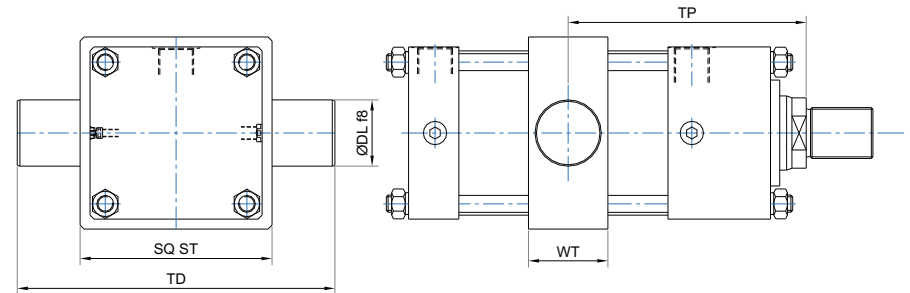
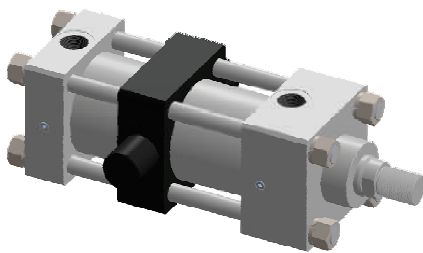
Front Flange (FF)



Rear Flange (RF)

ØMH THRU,
4 Nos

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								

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INDIA

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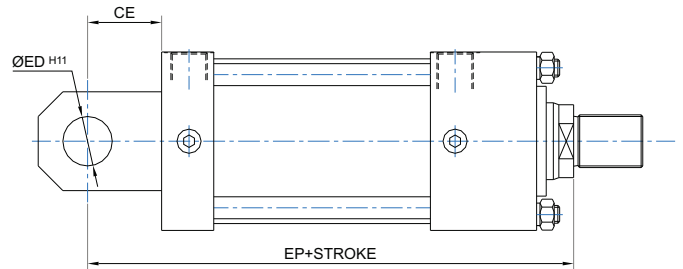
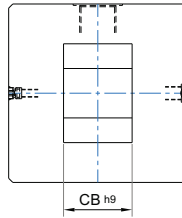
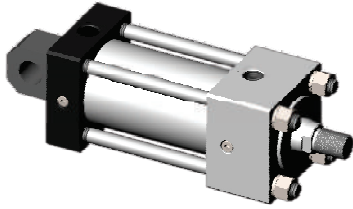
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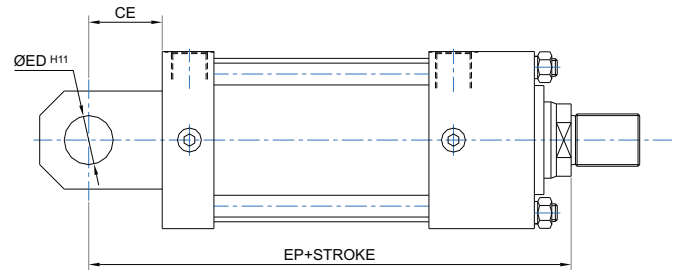
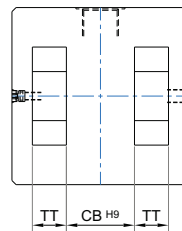
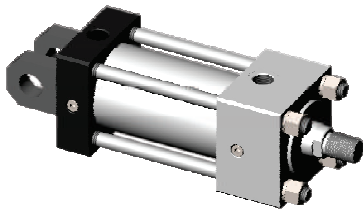
Standard Mountings HH16 Series

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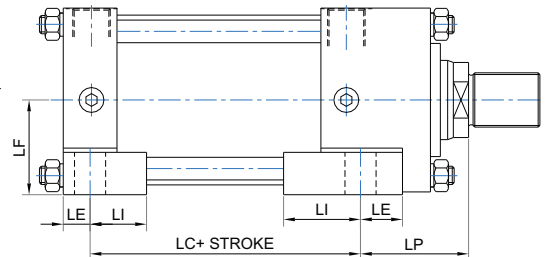
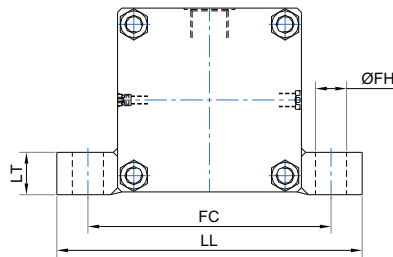
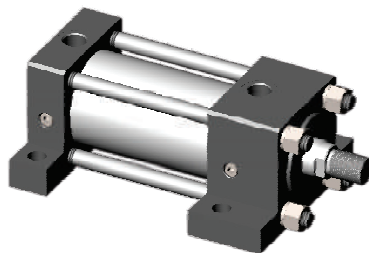
Rear Eye (RE)



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

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Technical Data & Ordering Details for HH16 Series



TECHNICAL DETAILS

Bore Dia (mm)	Rod Dia (mm)	Piston Area (cm ²)		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	
		+	-	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) - FC / 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 (12 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 (12 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 etc....	FC/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

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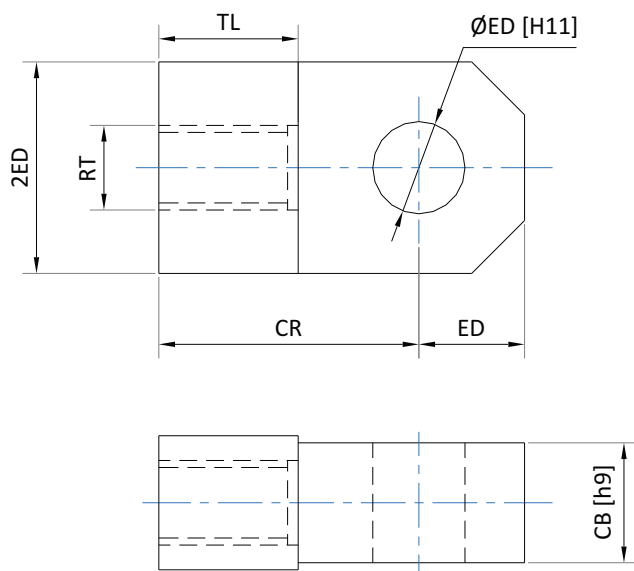
e-mail: info@orsettindia.com, ohplamd@gmail.com

website: www.orsettindia.com

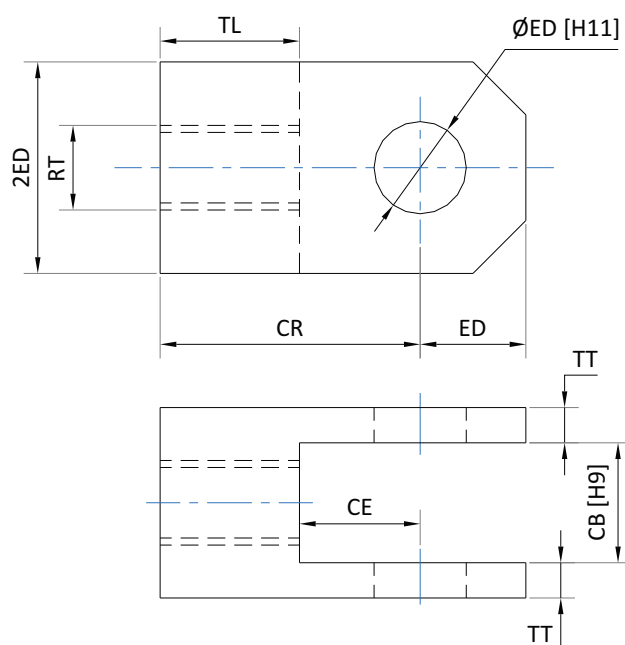
Piston Rod Eye & Piston Rod Fork for HH16 Series



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

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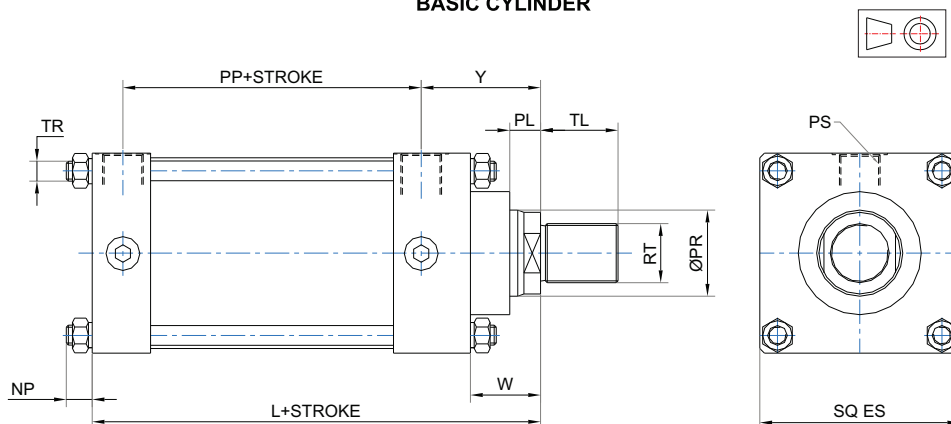
Hydraulic Cylinders - HH21 Series

AS PER ISO 6020/2

- Rated Pressure 210 kg/cm²
- Peak Pressure 315 kg/cm²
- Cylinder bore diameters up to 200mm
- 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

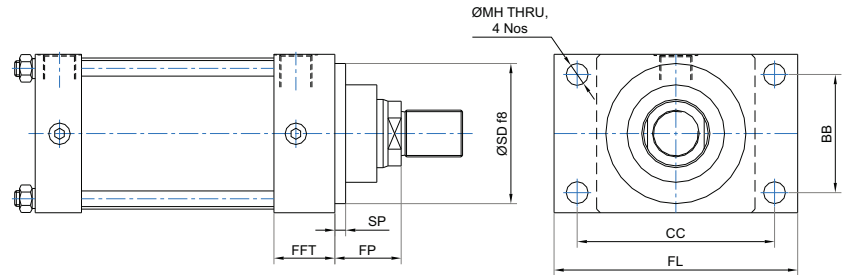
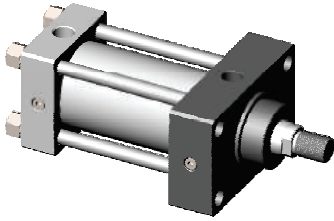
BORE DIA	PR DIA	ES (Sq)	RT	PS (BSP)	L	PL	TL	PP	TR	W	Y	NP (max)
25	12	40	M10x1.25	1/4"	114	9	14	53	M5x0.8	25	50	8
32	14	45	M12x1.25	1/4"	128	13	16	56	M6x1	35	60	9
	22		M16x1.5				22					
40	18	64	M14x1.5	3/8"	153	13	18	73	M8x1	35	62	9
	28		M20x1.5				28					
50	22		M16x1.5				22					
	36	76	M27x2	1/2"	159	16	36	74	M12x1.25	41	67	16
	28		M20x1.5				28					
63	28		M20x1.5				28					
	45	90	M33x2	1/2"	168	19	45	80	M12x1.25	48	71	16
	36		M27x2				36					
80	36		M27x2				36					
	56	115	M42x2	3/4"	190	22	56	93	M16x1.5	51	77	21
	45		M33x2				45					
100	45		M33x2				45					
	70	130	M48x2	3/4"	203	25	63	101	M16x1.5	57	82	21
	56		M42x2				56					
125	56		M42x2				56					
	90	165	M64x3	1"	232	25	85	117	M22x1.5	57	86	27
	70		M48x2				63					
160	70		M48x2				63					
	110	205	M80x3	1"	245	25	95	130	M27x2	57	86	33
	90		M64x3				85					
200	90		M64x3				85					
	140	245	M100x3	1 1/4"	299	25	112	165	M30x2	57	98	36
	110		M80x3				95					

Note: Head end cushioning will not be provided for larger sized piston rods.

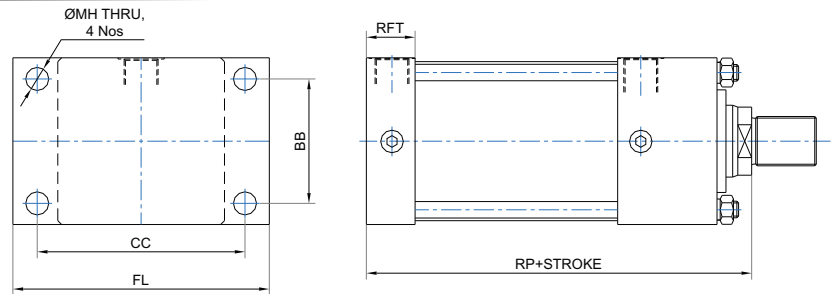
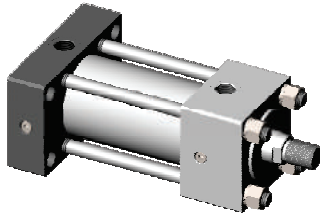
Standard Mountings HH21 Series



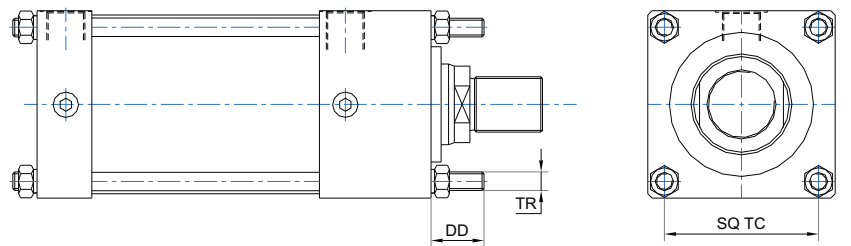
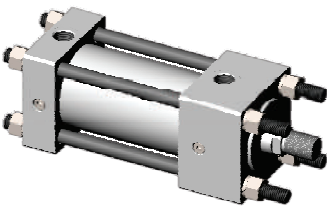
Head Flange (ME5)



Cap Flange (ME6)



Extended Tie Rod Head End (MX3)



DIMENSIONAL DETAILS

BORE	25	32	40	50	63	80	100	125	160	200																
ROD	12	14	22	18	28	22	36	28	28	45	36	36	56	45	45	70	56	56	90	70	70	110	90	90	140	110
BB	27	33	41	52	65	83	97	126	155	190																
CC	51	58	87	105	117	149	162	208	253	300																
FL	65	70	110	130	145	180	200	250	300	360																
SD	38	42	62	74	75	88	88	82	105	105	92	125	125	105	150	150	125	170	170	150	210	210				
SP	3	3	3	4	4	4	5	5	5	5																
MH	5.5	6.6	11	14	14	18	18	22	26	33																
FFT	40	40	45	45	45	50	50	58	58	76																
RFT	25	25	38	38	38	45	45	58	58	76																
FP	25	35	35	41	48	51	57	57	57	57																
RP	114	128	153	159	168	190	203	232	245	299																
DD	19	24	35	46	46	59	59	81	92	115																
TC	28	33	42	52	64	83	97	126	155	190																
TR	M5	M6 x 1	M8 x 1	M12 x 1.25	M12 x 1.25	M16 x 1.5	M16 x 1.5	M22 x 1.5	M27 x 2	M30 x 2																

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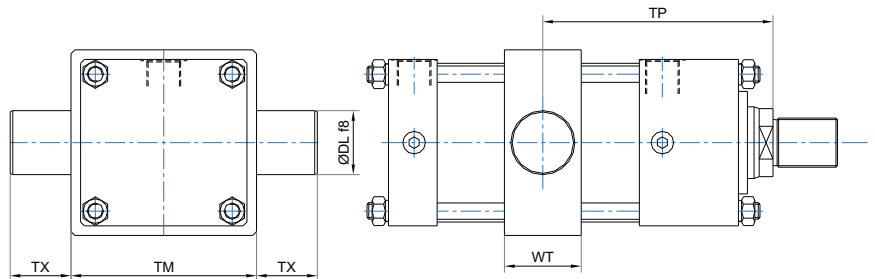
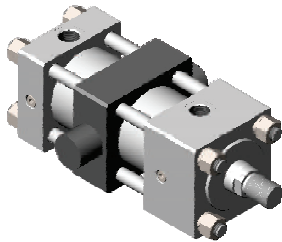
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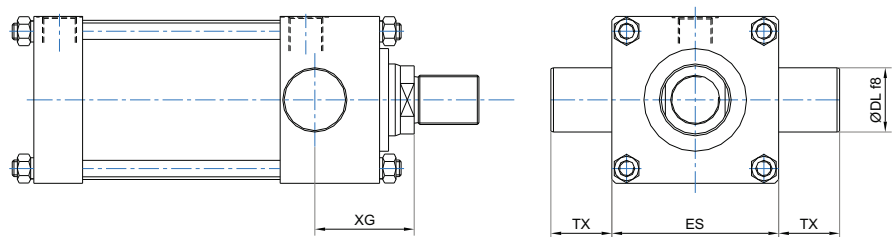
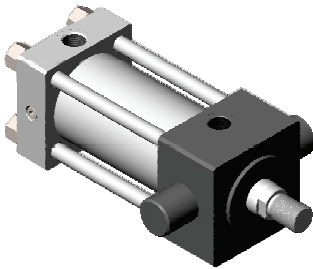
Standard Mountings HH21 Series



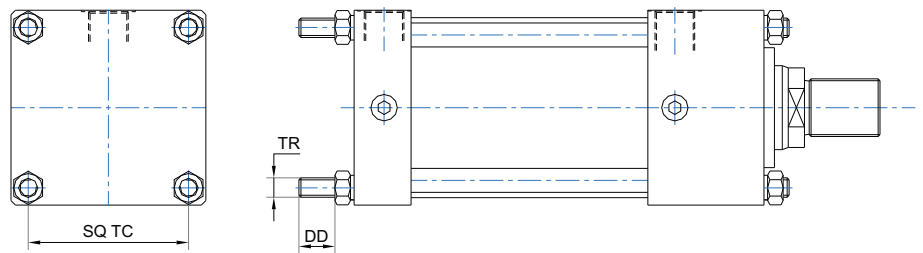
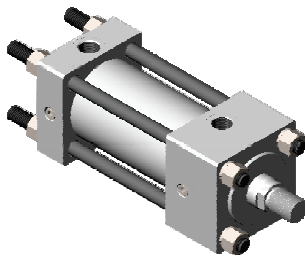
Intermediate Trunnion (MT4)



Head Trunnion (MT1)



Extended Tie Rod Cap End (MX2)



DIMENSIONAL DETAILS

BORE	25	32	40	50	63	80	100	125	160	200																
ROD	12	14	22	18	28	22	36	28	28	45	36	36	56	45	45	70	56	56	90	70	70	110	90	90	140	110
WT	20	25	30	40	40	50	60	73	90	110																
TM	48	55	76	89	100	127	140	178	215	279																
TX	10	12	16	20	25	32	40	50	63	80																
DL	12	16	20	25	32	40	50	63	80	100																
XG	44	54	57	64	70	76	71	75	75	85																
TP	TO BE SPECIFIED BY CUSTOMER																									
DD	19	24	35	26	46	59	59	81	92	115																
TC	28	33	42	52	64	83	97	126	155	190																
TR	M5	M6 x 1	M8 x 1	M12 x 1.25	M12 x 1.25	M16 x 1.5	M16 x 1.5	M22 x 1.5	M27 x 2	M30 x 2																

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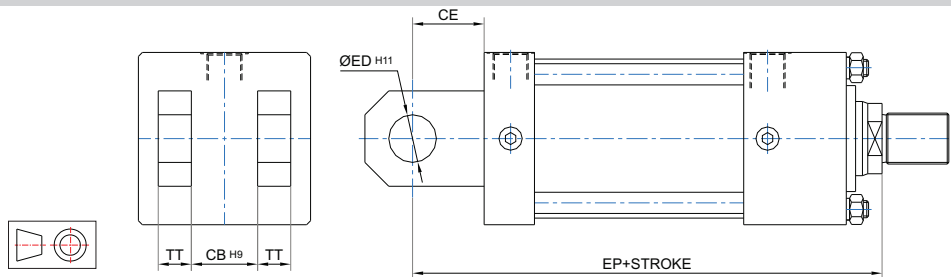
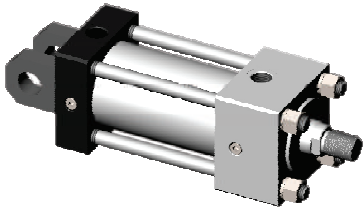
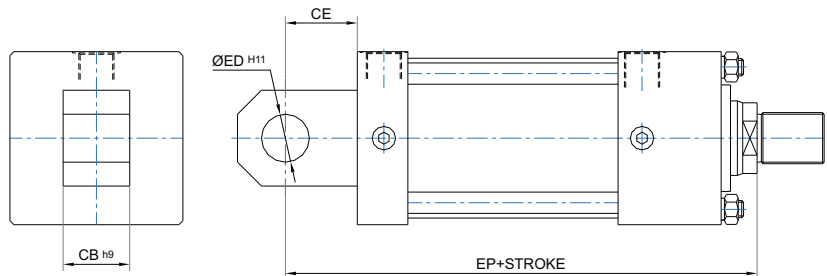
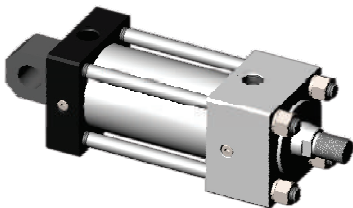
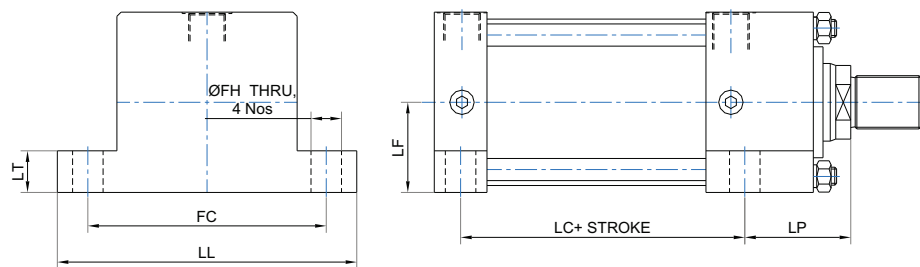
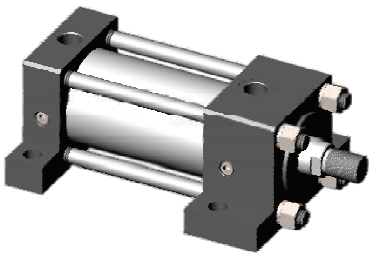
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Standard Mountings HH21 Series

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Cap Clevis (MP1)

Cap Eye (MP3)

Foot Lug (MS2)

DIMENSIONAL DETAILS

BORE	25		32		40		50		63				80			100			125			160			200		
ROD	12	14	22	18	28	22	36	28	28	45	36	36	56	45	45	70	56	56	90	70	70	110	90	90	140	110	
ED	10		12		14		20		20				28			36			45			56			70		
TT	6	8		10		15		15				20			25			30			35			40			
CB	12	16		20		30		30				40			50			60			70			80			
CE	13	19		19		32		32				39			54			57			63			82			
EP	127	147		172		191		200				229			257			289			308			381			
ES	40	45		64		76		90				115			130			165			205			245			
CF	19	22		31		37		44				57			63			82			101			122			
FH	6.6	9		11		14		18				18			26			26			33			39			
LT	8.5	12.5		12.5		19		26				26			32			32			38			44			
FC	54	63		83		102		124				149			172			210			260			311			
LL	72	84		103		127		161				186			216			254			318			381			
LP	33	45		45		54		65				68			79			79			86			98			
LC	73	73		98		92		86				105			102			131			130			172			

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Technical Data & Ordering Details for HH21 Series



TECHNICAL DETAILS

Bore Dia (mm)	Rod Dia (mm)	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	
		(cm ²)		140 kg/cm ²		210 kg/cm ²		+	-	+	-
		+	-	+	-	+	-				
25	12	4.9	3.8	686.9	529	1030	793	0.0340	0.0441	2.94	2.27
32	14	8.0	6.5	1125.4	910	1688	1365	0.0207	0.0256	4.82	3.90
	22		4.2		593		890		0.0393		2.54
40	18	12.6	10.0	1758.4	1402	2638	2103	0.0133	0.0166	7.54	6.01
	28		6.4		897		1345		0.0260		3.84
50	22	19.6	15.8	2747.5	2216	4121	3323	0.0085	0.0105	11.78	9.50
	36		9.5		1323		1985		0.0176		5.67
	28		13.5		1886		2829		0.0124		8.08
63	28	31.2	25.0	4361.9	3500	6543	5250	0.0053	0.0067	18.69	15.00
	45		15.3		2136		3205		0.0109		9.16
	36		21.0		2938		4406		0.0079		12.59
80	36	50.2	40.1	7033.6	5609	10550	8414	0.0033	0.0042	30.14	24.04
	56		25.6		3587		5381		0.0065		15.37
	45		34.3		4808		7212		0.0049		20.61
100	45	78.5	62.6	10990.0	8765	16485	13147	0.0021	0.0027	47.10	37.56
	70		40.0		5605		8407		0.0042		24.02
	56		53.9		7544		11315		0.0031		32.33
125	56	122.7	98.0	17171.9	13725	25758	20588	0.0014	0.0017	73.59	58.82
	90		59.1		8270		12405		0.0028		35.44
	70		84.2		11787		17680		0.0020		50.51
160	70	201.0	162.5	28134.4	22749	42202	34124	0.0008	0.0010	120.58	97.50
	110		106.0		14837		22255		0.0016		63.59
	90		137.4		19233		28849		0.0012		82.43
200	90	314.0	250.4	43960.0	35058	65940	52587	0.0005	0.0007	188.40	150.25
	140		160.1		22420		33629		0.0010		96.08
	110		219.0		30662		45993		0.0008		131.41

Model Code Indication

HH21 - 100 / 500 - ME5 - 45 - CB - (X) - FC / SS12

Series	Bore sizes	Stroke	Mountings	Piston Rod sizes	Cushioning	Accessories & Special features	Sealing System Code
HH21 Rated Hydraulic Pressure of 210kg/cm ²	Ø25 - 200mm (10 Std. sizes)	To be specified in mm	ME5 - Head Flange ME6 - Cap Flange MX2 - Extended Tie Rod-Cap End MX3 - Extended Tie Rod-Cap End MT1 - Head Trunnion MT4 - Intermediate Trunnion MP1 - Cap Clevis MP3 - Cap Eye MS2 - Foot Lug	Ø12 - 140mm (26 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 etc....	FC/SS12 (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

ORSETT HYDRAULICS PVT. LTD.

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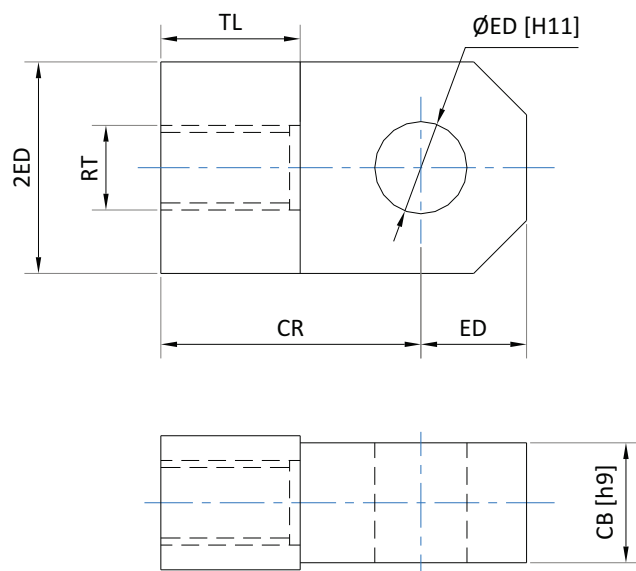
e-mail: info@orsettindia.com, ohplamd@gmail.com

website: www.orsettindia.com

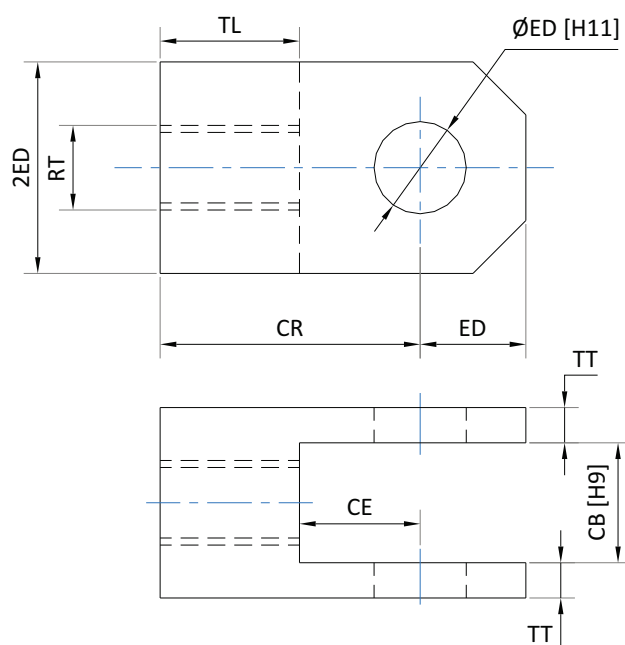
Piston Rod Eye & Piston Rod Fork for HH21 Series



Piston Rod Eye (PRE)



Piston Rod Fork (PRF)



Ordering Code

For Piston Rod Eye :- **HH21-PRE-****
where ** - Piston Rod Dia

For Piston Rod Fork :- **HH21-PRF-****
where ** - Piston Rod Dia

SPECIFICATION & DIMENSIONAL DETAILS

ROD DIA	RT	TL	CR	ED	CB	TT	CE
12	M10x1.25	18	32	10	12	7	14
14	M12x1.25	17	36	12	16	9	19
18	M14x1.5	19	38	14	20	11	19
22	M16x1.5	22	54	20	30	16	32
28	M20x1.5	28	60	20	30	21.5	32
36	M27x2	36	75	28	40	26.5	39
45	M33x2	45	99	36	50	31.5	54
56	M 42x2	56	113	45	60	36.5	57
70	M48x2	63	126	56	70	41.5	63
90	M64x3	85	168	70	80	45	83

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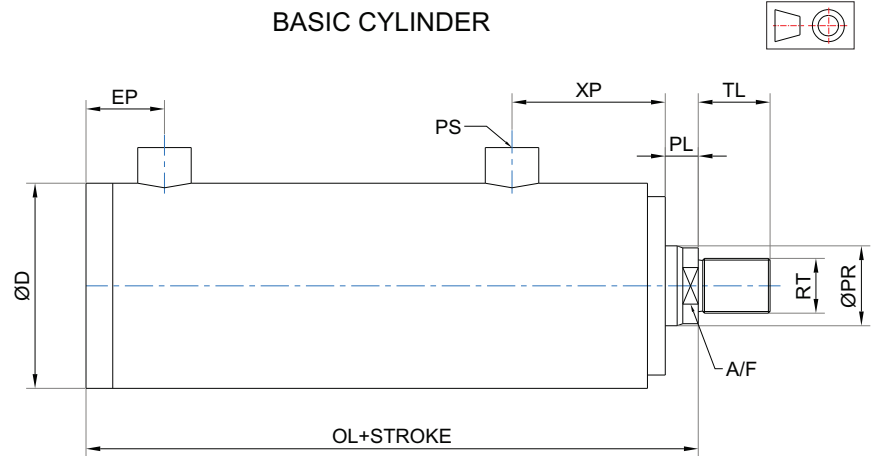


Hydraulic Cylinders - WH21 Series

- Rated Pressure 210 kg/cm²
- Peak Pressure 315 kg/cm²
- Cylinder bore diameters up to 400mm
- Temperature range:- -20°C to 90°C. (optional seals for temp. up to 180°C)

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BASIC CYLINDER



SPECIFICATION OF MATERIALS

END COVERS : Precision machined steel

CYLINDER BARREL : Cold drawn seamless steel tube, 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 std sealing systems to suit various applications & temperatures

MOUNTINGS : Accurately machined steel suitable for heavy duty application

BORE	PR	D	RT	PS	OL	PL	TL	EP	AF	XP
40	20	50	M16X1.5	3/8"BSP	137	20	18	28	16	47
	25		M18X1.5							
50	25	60	M18X1.5	3/8"BSP	150	20	18	28	18	54
	28		M24X2				23		24	
63	28	73	M24X2	3/8"BSP	159	20	23	28	24	57
	36		M24X2						26	
80	45	95	M27X2	1/2"BSP	198	20	30	37	33	73
	50		M30X2						42	
100	50	115	M30X2	1/2"BSP	225	25	30	44	40	86
	70		M56X2				56		56	
125	70	145	M56X2	3/4"BSP	252	25	56	55	56	89
	90		M64X2				64		74	
140	70	160	M56X2	3/4"BSP	279	30	55	62	58	98
	100		M80X2				80		86	
160	80	185	M64X2	3/4"BSP	303	35	60	64	69	117
	100		M80X2				80		86	
180	90	205	M70X2	1"BSP	339	35	70	75	78	122
	125		M110X2				120		110	
200	100	230	M90X2	1"BSP	364	40	80	82	86	135
	140		M105X2				115		125	

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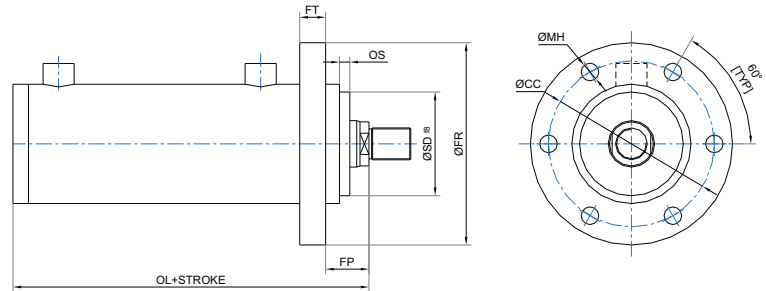
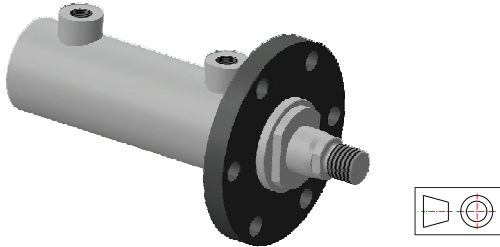
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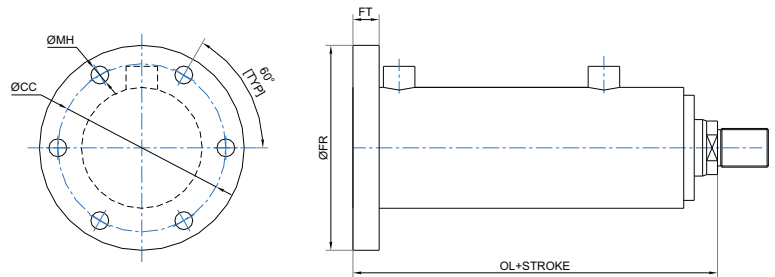
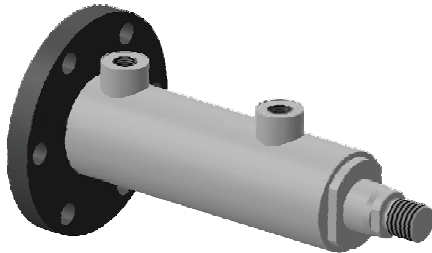
Standard Mountings WH21 Series

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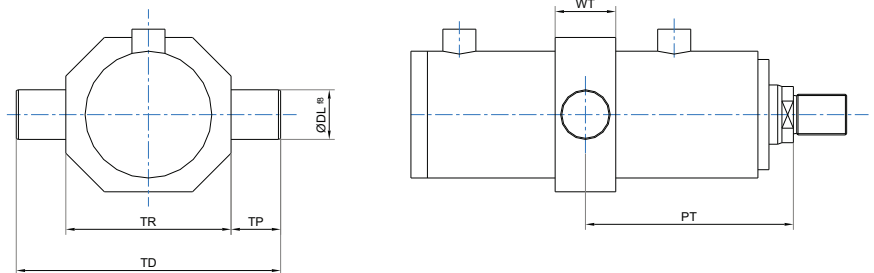
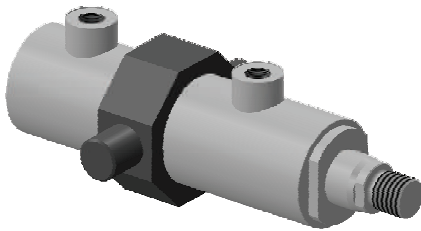
Front Flange (FF)



Rear Flange (RF)



Intermediate Trunnion (IT)



DIMENSIONAL DETAILS

BORE	40	50	63	80	100	125	140	160	180	200
FP	30	34	36	39	43	46	50	57	63	72
FT	12	15	18	20	25	28	35	35	35	40
SD	44	54	67	82	100	135	145	155	190	215
OS	5	8	8	10	10	11	10	12	15	17
FR	110	130	145	170	195	250	280	340	350	380
CC	90	100	115	140	160	210	220	265	290	320
MH	11	13	13	15	17	21	25	32	32	32
WT	30	35	45	50	55	60	65	80	80	100
TD	105	130	165	200	240	285	310	390	400	440
TR	65	80	95	120	150	185	200	260	260	280
TP	20	25	35	40	45	50	55	65	70	80
DL	20	25	35	40	45	50	55	65	70	80

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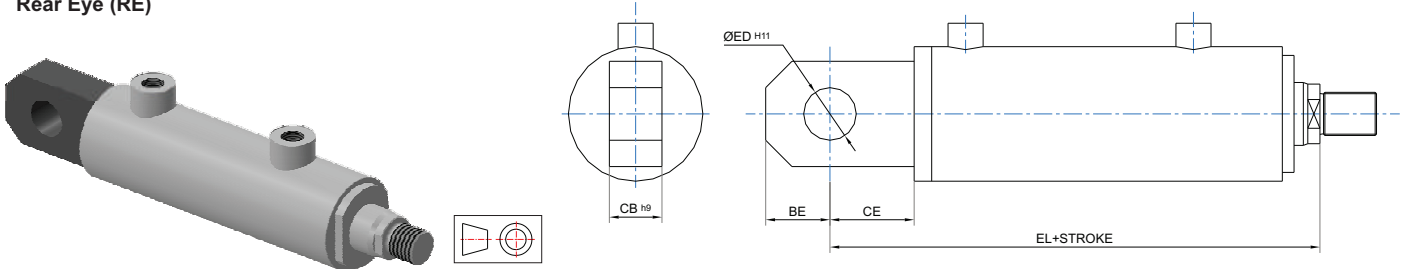
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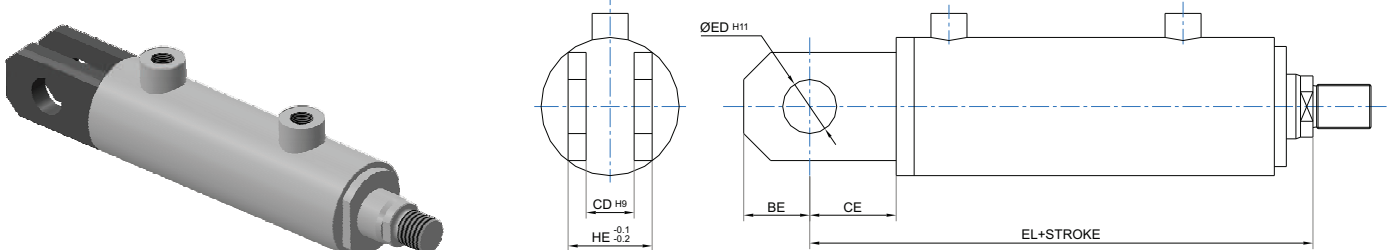
Standard Mountings WH21 Series

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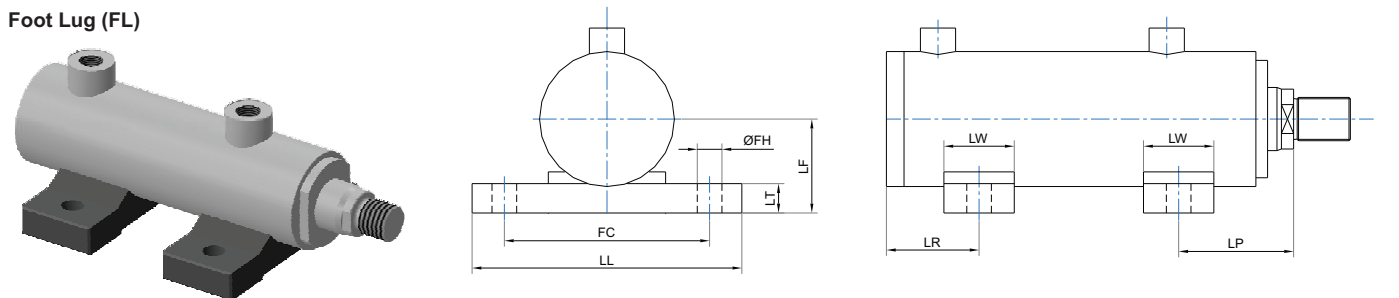
Rear Eye (RE)



Rear Clevis (RC)



Foot Lug (FL)



DIMENSIONAL DETAILS

BORE	40	50	63	80	100	125	140	160	180	200
ED	20	25	30	35	45	50	70	80	80	90
BE	27	30	35	42	55	55	80	95	105	115
CB	20	25	32	40	45	50	60	70	80	100
CD	15	20	25	35	40	45	55	70	70	85
CE	34	40	45	55	72	82	95	115	125	135
EL	137	150	153	197	213	240	265	297	339	364
HE	35	40	45	65	70	85	105	120	130	150
LW	40	40	50	50	60	60	70	90	90	90
LP	60	69	76	81	98	101	110	137	143	157
FH	11	11	13	17	21	25	32	32	35	38
FC	80	90	115	140	175	225	240	290	310	340
LL	110	120	150	185	230	285	310	380	390	440
LT	15	15	18	22	25	25	30	40	45	50
LF	35	40	50	60	80	95	105	128	135	160
LR	44	44	55	57	79	83	91	106	110	112

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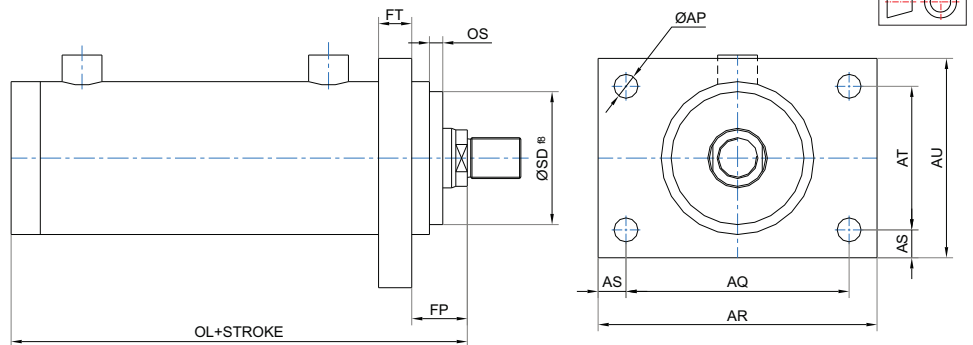
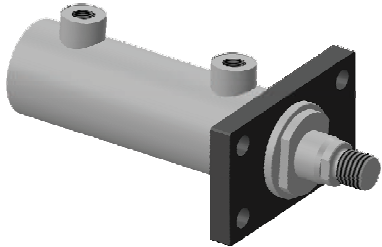
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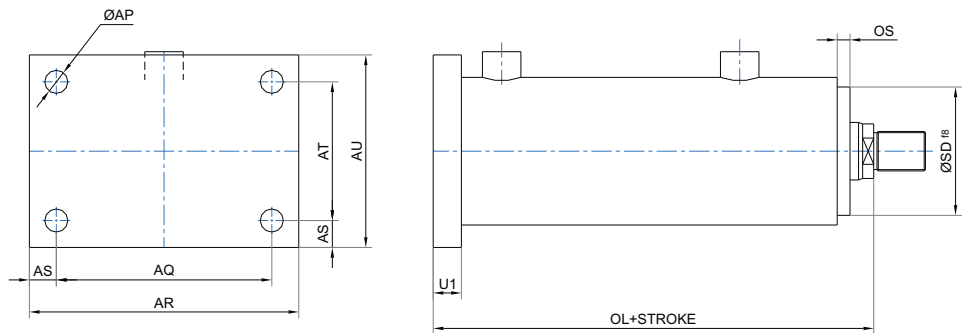
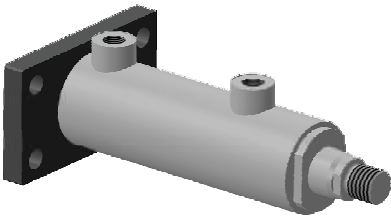
Rectangular Flange Mounting for WH21 Series



Front Flange Rectangular (FFR)



Rear Flange Rectangular (RFR)



BORE	U ₁	ØAP	AQ	AR	AS	AT	AU
40	10	11	87	110	11.5	41	64
50	16	14	105	130	12.5	52	77
63	16	14	120	145	12.5	65	90
80	19	18	136	170	17	86	120
100	22	18	168	210	21	108	150
125	22	23	205	255	25	135	185
160	25	27	258	320	31	178	240
200	25	33	285	365	40	215	295

NOTE: REFER PAGE NO. 2.410/1 FOR UNSPECIFIED DETAILS

Technical Data & Ordering Details for WH21 Series



TECHNICAL DETAILS

Bore Dia (mm)	Rod Dia (mm)	Piston Area (cm ²)		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	
		+	-	+	-	+	-	+	-	+	-
40	20	12.6	9.4	1256.0	942	2512	1884	0.0133	0.0177	7.54	5.65
	25		7.7		765		1531		0.0218		4.59
50	25	19.6	14.7	1962.5	1472	3925	2944	0.0085	0.0113	11.78	8.83
	28		13.5		1347		2694		0.0124		8.08
63	28	31.2	25.0	3115.7	2500	6231	5000	0.0053	0.0067	18.69	15.00
	36		21.0		2098		4197		0.0079		12.59
80	45	50.2	34.3	5024.0	3434	10048	6869	0.0033	0.0049	30.14	20.61
	50		30.6		3062		6123		0.0054		18.37
100	50	78.5	58.9	7850.0	5888	15700	11775	0.0021	0.0028	47.10	35.33
	70		40.0		4004		8007		0.0042		24.02
125	70	122.7	84.2	12265.6	8419	24531	16838	0.0014	0.0020	73.59	50.51
	90		59.1		5907		11814		0.0028		35.44
140	70	153.9	115.4	15386.0	11540	30772	23079	0.0011	0.0014	92.32	69.24
	100		75.4		7536		15072		0.0022		45.22
160	80	201.0	150.7	20096.0	15072	40192	30144	0.0008	0.0011	120.58	90.43
	100		122.5		12246		24492		0.0014		73.48
180	90	254.3	190.8	25434.0	19076	50868	38151	0.0007	0.0009	152.60	114.45
	125		131.7		13168		26337		0.0013		79.01
200	100	314.0	235.5	31400.0	23550	62800	47100	0.0005	0.0007	188.40	141.30
	140		160.1		16014		32028		0.0010		96.08

Model Code Indication

W H 2 1 - 1 0 0 / 5 0 0 - F F - 5 0 - C B - (X) - F C / S S 4

Series	Bore sizes	Stroke	Mountings	Piston Rod sizes	Cushioning	Accessories & Special features	Sealing System Code
WH21 Rated Hydraulic Pressure of 210kg/cm ²	Ø40 - 400mm (for 250 & above, consult factory)	To be specified in mm	FF - Front Flange RF - Rear Flange RC - Rear Clevis RE - Rear Eye FL - Foot Lug IT - Intermediate Trunnion	Ø20 - 140mm (larger Sizes Available)	NC - Non Cushioned	PRE - Rod Eye PRF - Rod Fork SA - Single Acting DE - Double Ended etc....	FC/SS4 (Std.) for alternatives contact us.

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

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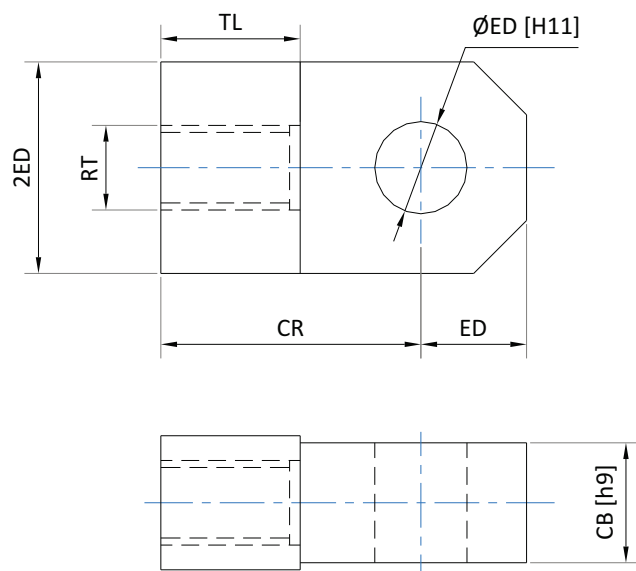
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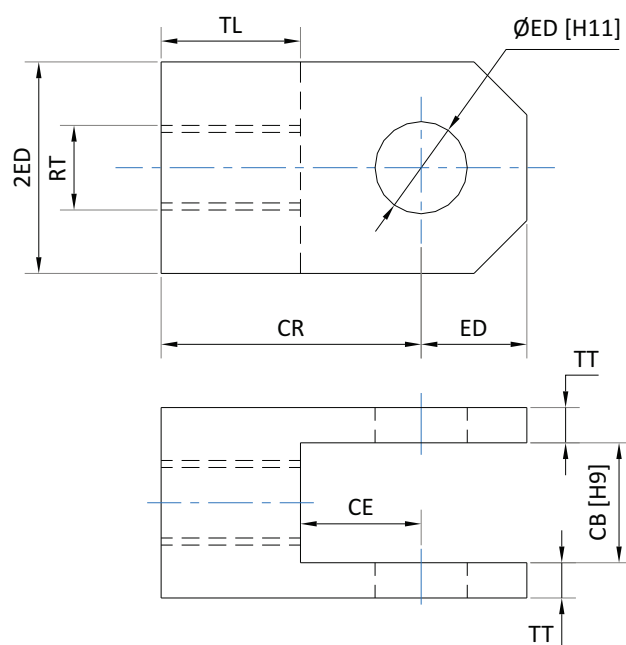
Piston Rod Eye & Piston Rod Fork for WH21 Series



Piston Rod Eye (PRE)



Piston Rod Fork (PRF)



Ordering Code

For Piston Rod Eye :- **WH21-PRE-****
where ** - Piston Rod Dia

For Piston Rod Fork :- **WH21-PRF-****
where ** - Piston Rod Dia

SPECIFICATION & DIMENSIONAL DETAILS

ROD DIA	RT	TL	CR	ED	CB	TT	CE
20	M16x1.5	20	54	20	20	7.5	34
25	M18x1.5	20	60	25	25	10	40
28	M24x2	25	70	30	32	12	45
36	M24x2	25	80	35	40	16	55
45	M27x2	33	105	45	45	18	72
50	M30x2	33	115	50	50	20	82
70	M56x2	60	155	70	60	24	95
80	M64x2	67	182	80	70	28	115
90	M70x2	75	200	80	80	32	125
100	M90x2	85	220	90	100	40	135

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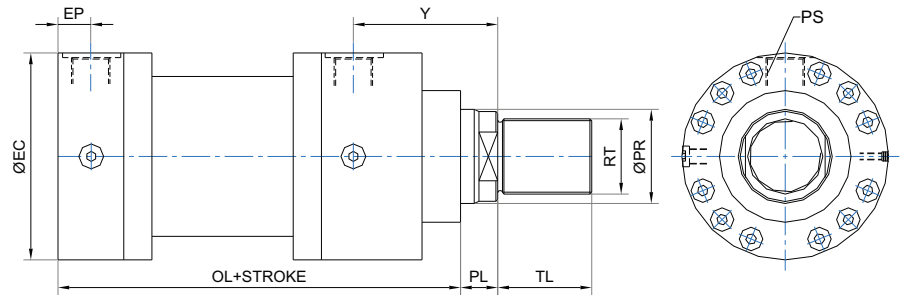
Hydraulic Cylinders - NH16 Series

(Mill Duty Cylinders as per ISO 6020/1)

- Rated Pressure 160 kg/cm²
- Peak Pressure 240 kg/cm²
- Cylinder bore diameters up to 250mm
- Temperature range:- -20°C to 90°C. (optional seals for temp. up to 180°C)

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HYDRAULICS

BASIC CYLINDER



SPECIFICATION OF MATERIALS

END COVERS : Precision machined steel

CYLINDER BARREL : Cold drawn seamless steel tube, 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 std sealing systems to suit various applications & temperatures

MOUNTINGS : Accurately machined steel suitable for heavy duty application

BORE DIA	PR DIA	EC DIA	RT	PS (BSP)	OL	PL	TL	EP	Y
32	18	67	M14x1.5	3/8"	157	13	18	17	64
	22		M16x1.5				22		
40	22	78	M16x1.5	1/2"	177	13	22	22	71
	28		M20x1.5				28		
50	28	95	M20x1.5	1/2"	191	14	28	22	72
	36		M27x2				36		
63	36	116	M27x2	3/4"	208	16	36	25	82
	45		M33x2				45		
80	45	130	M33x2	3/4"	232	18	45	25	91
	56		M42x2				56		
100	56	158	M42x2	1"	280	20	56	30	108
	70		M48x2				63		
125	70	192	M48x2	1	302	23	63	30	121
	90		M64x3				85		
160	90	238	M64x3	1 1/4"	345	25	85	36	143
	110		M80x3				95		
200	110	285	M80x3	1 1/4"	420	30	95	36	190
	140		M100x3				112		
250	140	365	M100x3	1 1/2"	518	32	112	40	210
	180		M125x4				125		

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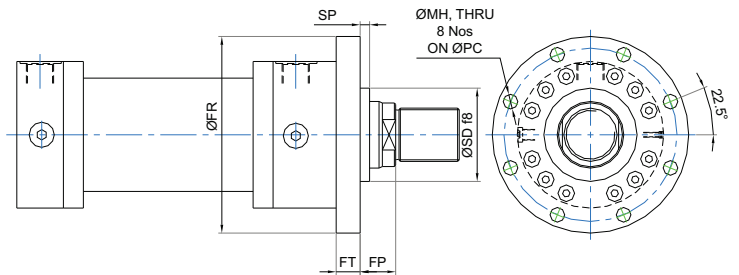
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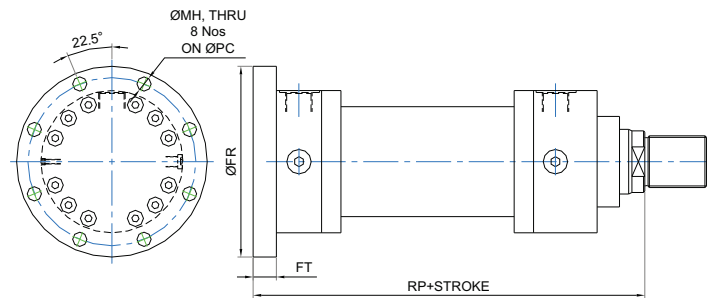
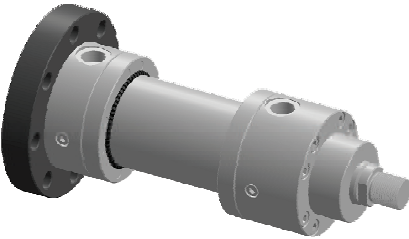
Standard Mountings NH16 Series

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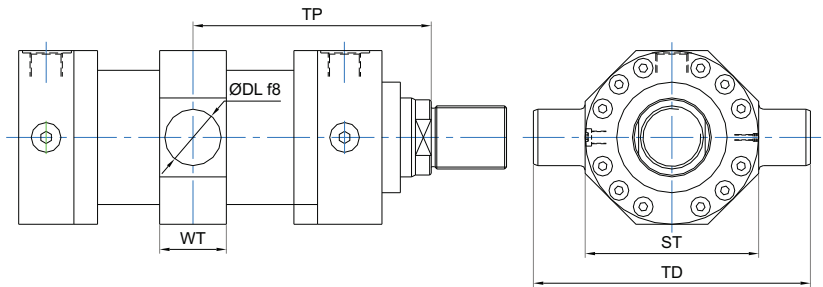
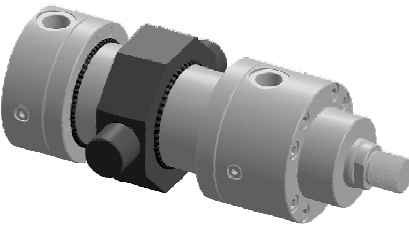
Front Flange (FF)



Rear Flange (RF)



Intermediate Trunnion (IT)



DIMENSIONAL DETAILS

BORE	32	40	50	63	80	100	125	160	200	250
FR	110	125	150	170	195	240	275	320	385	490
PC	92	106	126	145	165	200	235	280	340	420
MH	9	9	11	14	18	22	22	22	26	33
FT	16	16	20	25	32	32	32	36	40	56
SP	3	3	4	4	4	5	5	5	5	8
SD	40	50	60	70	85	106	132	160	200	250
FP	16	16	18	20	22	25	28	30	35	40
RP	186	206	225	249	282	332	357	406	490	606
WT	26	30	35	42	50	60	73	90	110	135
TD	99	122	145	170	199	240	295	366	455	570
ST	75	90	105	120	135	160	195	240	295	370
DL	16	20	25	32	40	50	63	80	100	125

TP

TO BE SPECIFIED BY CUSTOMER

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Near Gujarat Otofilt, AHMEDABAD - 382 445

INDIA

Ph: +91 79 25840151

e-mail: info@orsettindia.com, ohplamd@gmail.com

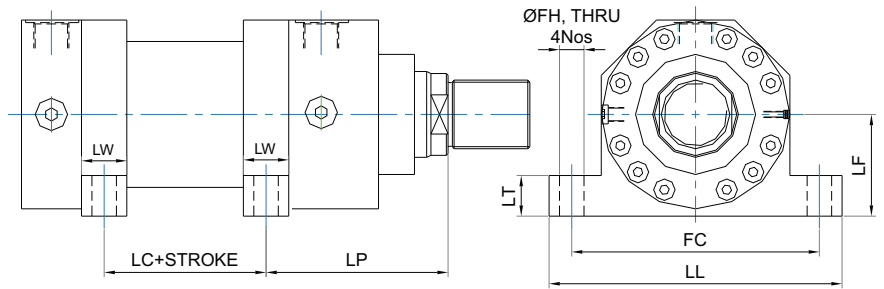
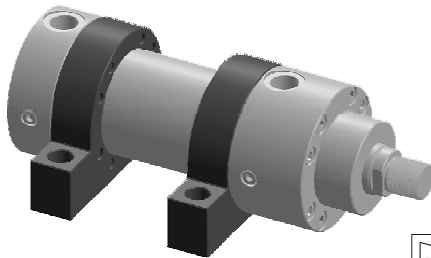
website: www.orsettindia.com

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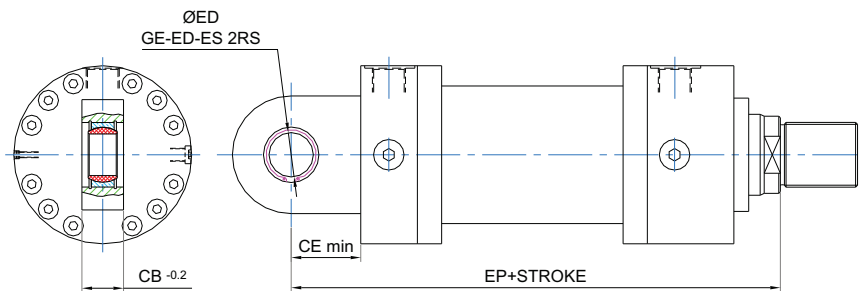
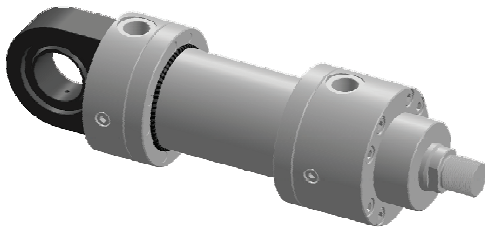
Standard Mountings NH16 Series

Orsett
HYDRAULICS

Foot Lug (FL)



Rear Eye with Spherical Bearing (RES)



DIMENSIONAL DETAILS

BORE	25	40	50	63	80	100	125	160	200	250
CB	16	20	25	32	40	50	63	80	100	125
ED	16	20	25	32	40	50	63	80	100	125
CE	20	25	32	40	50	63	71	91	112	160
EP	206	231	257	289	332	395	428	505	615	773
LC	40	44	51	51	60	70	76	79	100	154
LL	110	120	145	180	210	250	300	350	415	525
FC	90	100	120	150	170	205	245	295	350	450
LW	25	25	32	32	40	50	56	60	72	80
LT	25	30	40	45	50	60	70	80	100	140
LF	38	43	52	62	70	82	100	119	145	190
FH	11	11	14	18	22	26	33	33	39	45
LP	88.5	97.5	102	115	128	154	170	199	252	288

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Technical Data & Ordering Details for NH16 Series



TECHNICAL DETAILS

Bore Dia (mm)	Rod Dia (mm)	Piston Area (cm ²)		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	
				100 kg/cm ²		160 kg/cm ²					
		+	-	+	-	+	-	+	-	+	-
32	18	8	5.5	800	550	1280	880	0.02078	0.03	4.81	3.33
	22		4.2		420		672		0.03942		2.54
40	22	12.6	8.8	1260	880	2016	1408	0.0133	0.0189	7.52	5.29
	28		6.4		640		1024		0.02607		3.84
50	28	19.6	13.5	1960	1350	3136	2160	0.00851	0.0124	11.75	8.07
	36		9.5		950		1520		0.01767		5.66
63	36	31.2	20.9	3120	2090	4992	3344	0.00536	0.00796	18.66	12.56
	45		15.3		1530		2448		0.01094		9.14
80	45	50.2	34.4	5020	3440	8032	5504	0.00332	0.00486	30.08	20.57
	56		25.6		2560		4096		0.00652		15.34
100	56	78.5	53.9	7850	5390	12560	8624	0.00213	0.0031	47.01	33.26
	70		40		4000		6400		0.00417		23.97
125	70	122.7	84.2	12270	8420	19632	13472	0.00136	0.00198	73.45	50.41
	90		59		5900		9440		0.00283		35.37
160	90	201	137	20100	13700	32160	21920	0.00083	0.00122	120.34	82.26
	110		106		1060		16960		0.00158		63.46
200	110	314	219	31400	21900	50240	35040	0.00053	0.00076	188.02	131.15
	140		160		16000		25600		0.00104		95.89
250	140	490	337	49000	33700	78400	53920	0.00034	0.00049	294.1	204
	180		236.4		23640		37824		0.00071		140.8

Model Code Indication

N H 1 6 - 1 0 0 / 5 0 0 - F F - 4 5 - C B - (X) - F C / S S 4

Series	Bore sizes	Stroke	Mountings	Piston Rod sizes	Cushioning	Accessories & Special features	Sealing System Code
NH16 Rated Hydraulic Pressure of 160kg/cm ²	Ø32 - 250mm (10 Std. sizes)	To be specified in mm	FF - Front Flange RF - Rear Flange RES - Rear Eye with Spherical Bearing FL - Foot Lug IT - Intermediate Trunnion	Ø18 - 180mm (11 Std. sizes)	CB - Cushioned at both ends CR - Cushioned at Rear end CF - Cushioned at Front end NC - Non Cushioned	PRES - Rod Eye with Spherical Bearing PRF - Rod Fork SA - Single Acting DE - Double Ended etc....	FC/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

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Plot No. 3711/A/1, Phase-4, GIDC Vatva,
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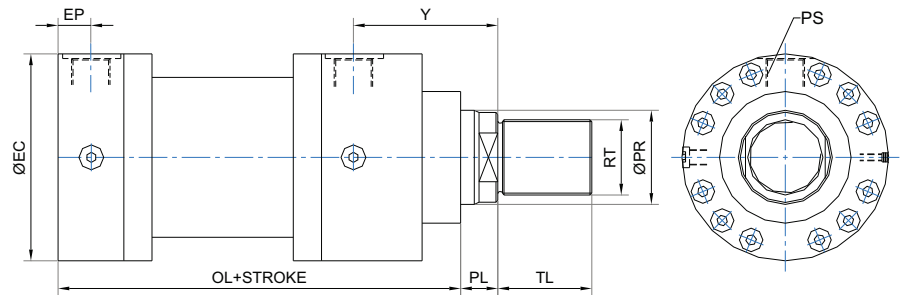


Hydraulic Cylinders - NH25 Series

- Rated Pressure 250 kg/cm²
- Peak Pressure 375 kg/cm²
- Cylinder bore diameters up to 200mm
- 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 tube, 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 std sealing systems to suit various applications & temperatures

MOUNTINGS : Accurately machined steel suitable for heavy duty application

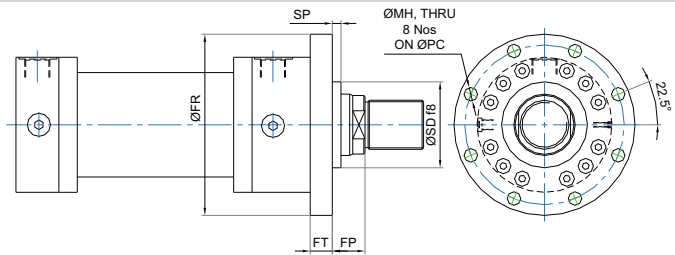
BORE DIA	PR DIA	EC DIA	RT	PS (BSP)	OL	PL	TL	EP	Y
50	36	100	M27x2	1/2"	222	18	36	36	85
63	45	116	M33x2	3/4"	249	21	45	33	97
80	56	145	M42x2	3/4"	286	24	56	34	110
100	70	175	M48x2	1"	362	27	63	37	125
125	90	214	M64x3	1"	421	31	85	45	144
160	110	270	M80x3	1 1/4"	495	35	95	49	180
200	140	330	M100x3	1 1/4"	580	40	112	57	211

Note: Head End cushioning will not be provided in higher size piston rod

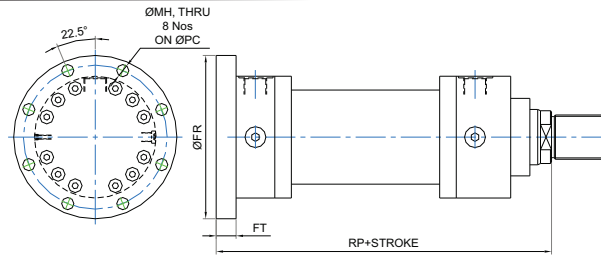
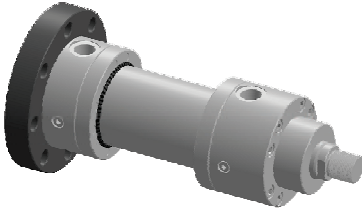
Standard Mountings NH25 Series

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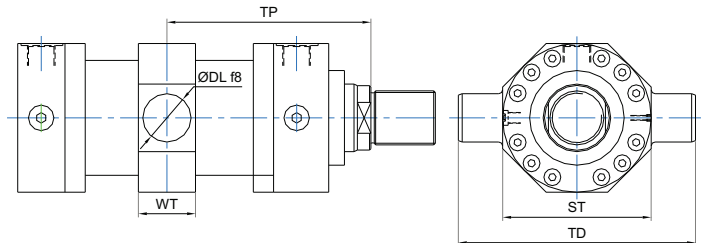
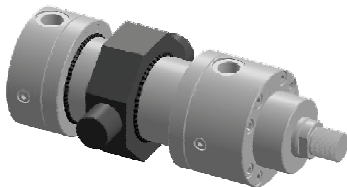
Front Flange (FF)



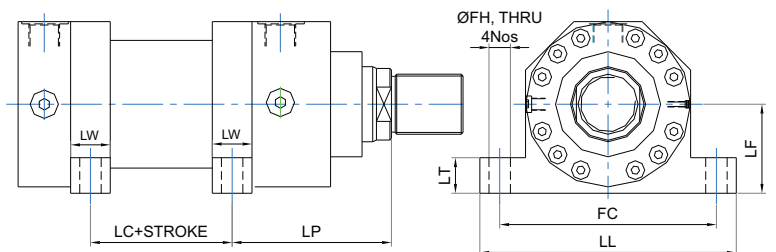
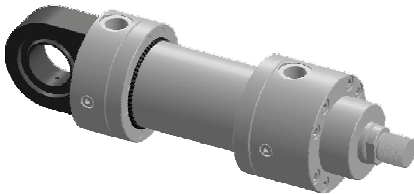
Rear Flange (RF)



Intermediate Trunnion (IT)



Rear Eye with Spherical Bearing (RES)



DIMENSIONAL DETAILS

BORE	50	63	80	100	125	160	200
FR	165	180	220	260	295	370	460
PC	132	150	180	212	250	315	385
MH	14	14	18	22	22	26	33
FT	25	28	32	36	40	45	56
SP	4	4	4	5	5	5	5
SD	63	75	90	110	132	160	200
FP	22	25	28	32	36	40	45
RP	265	298	332	371	430	505	596
CB	30	35	40	50	60	70	90
ED	30	40	50	60	80	100	120
CE	40	50	63	71	90	112	160
EP	305	348	395	442	520	617	756
WT	50	65	80	100	125	120	140
TD	162	189	240	280	350	440	535
ST	112	125	150	180	225	280	335
DL	32	45.5	50	63	80	100	125
TP	TO BE SPECIFIED BY CUSTOMER						

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Technical Data & Ordering Details for NH25 Series



TECHNICAL DETAILS

Bore Dia (mm)	Rod Dia (mm)	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	
		(cm ²)		160 kg/cm ²		250 kg/cm ²					
		+	-	+	-	+	-	+	-	+	-
50	36	19.6	9.5	3140.0	1512.2	4906.3	2362.9	0.0085	0.0176	11.78	5.67
63	45	31.2	15.3	4985.1	2441.7	7789.2	3815.1	0.0053	0.0109	18.69	9.16
80	56	50.2	25.6	8038.4	4099.6	12560.0	6405.6	0.0033	0.0065	30.14	15.37
100	70	78.5	40.0	12560.0	6405.6	19625.0	10008.8	0.0021	0.0042	47.10	24.02
125	90	122.7	59.1	19625.0	9451.4	30664.1	14767.8	0.0014	0.0028	73.59	35.44
160	110	201.0	106.0	32153.6	16956.0	50240.0	26493.8	0.0008	0.0016	120.58	63.59
200	140	314.0	160.1	50240.0	25622.4	78500.0	40035.0	0.0005	0.0010	188.40	96.08

Model Code Indication

N H 2 5 - 1 0 0 / 5 0 0 - F F - 4 5 - C B - (X) - F C / S S 4

Series	Bore sizes	Stroke	Mountings	Piston Rod sizes	Cushioning	Accessories & Special features	Sealing System Code
NH25 Rated Hydraulic Pressure of 250kg/cm ²	Ø50 - 200mm (7 Std. sizes)	To be specified in mm	FF - Front Flange RF - Rear Flange RES - Rear Eye with Spherical Bearing IT - Intermediate Trunnion	Ø36 - 140mm (7 Std. sizes)	CB - Cushioned at both ends CR - Cushioned at Rear end CF - Cushioned at Front end NC - Non Cushioned	PRES - Rod Eye with Spherical Bearing PRF - Rod Fork SA - Single Acting DE - Double Ended etc....	FC/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

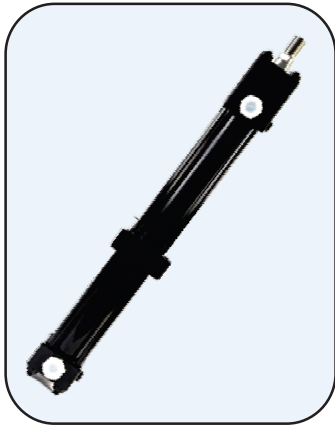
ORSETT HYDRAULICS PVT. LTD.

Plot No. 3711/A/1, Phase-4, GIDC Vatva,
Near Gujarat Otofilt, AHMEDABAD - 382 445
INDIA

Ph: +91 79 25840151

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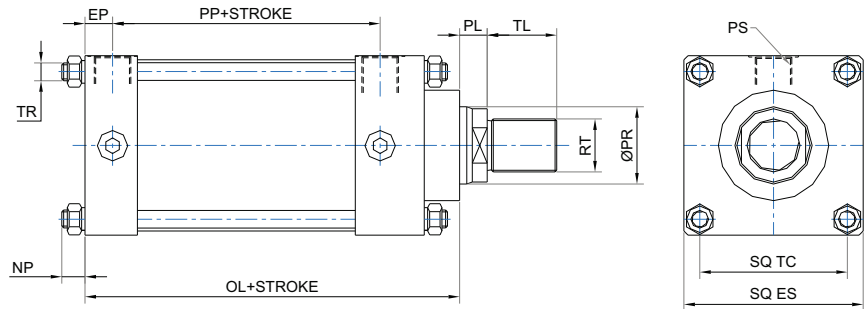
Hydraulic Cylinders - CH16 Series

for Counter Balance Applications

- Rated Pressure 160 kg/cm²
- Peak Pressure 240 kg/cm²
- Speed up to 60m/min
- Temperature range:- -20°C to 90°C.(alternatives available).



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

: 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 std sealing systems to suit various applications & temperatures

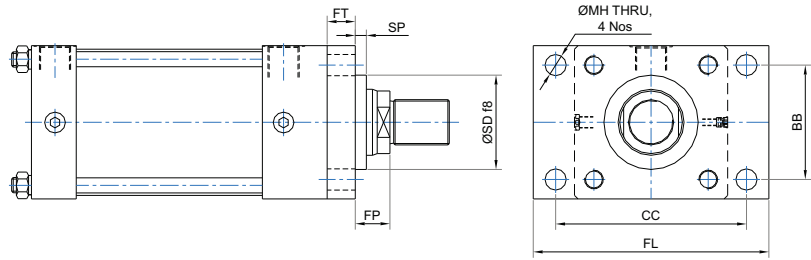
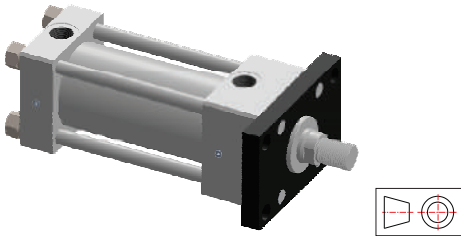
MOUNTINGS : Accurately machined steel suitable for heavy duty application

BORE	PR	ES	RT	PS	OL	PL	TL	PP	TR	NP	EP	TC
DIA	DIA	(Sq)		(BSP)								
32	20	54	M16x1.5	1/2"	155	19	25	87	M8x1.25	12	15	34
40	20	64	M16x1.5	1/2"	181	19	25	99	M8x1.25	12	15	44
50	25	76	M20x1.5	3/4"	191	19	30	103	M12x1.75	15	19	52
63	36	94	M27x2	3/4"	196	21	30	104	M12x1.75	15	19	64
80	45	112	M33x2	3/4"	220	21	45	122	M16 x 2	20	19	82

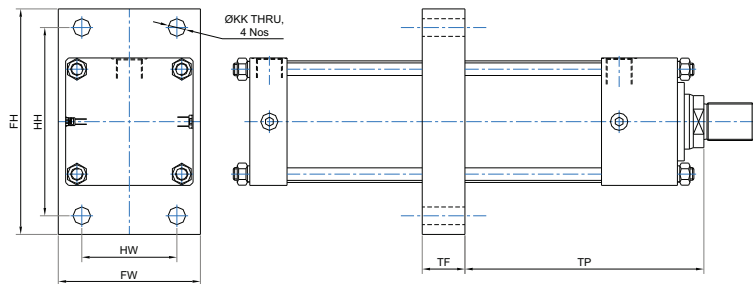
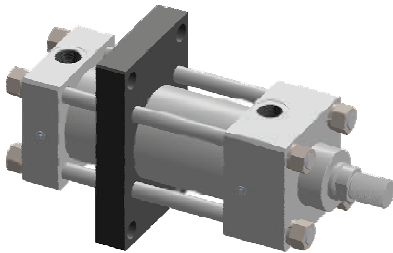
Standard Mountings CH16 Series



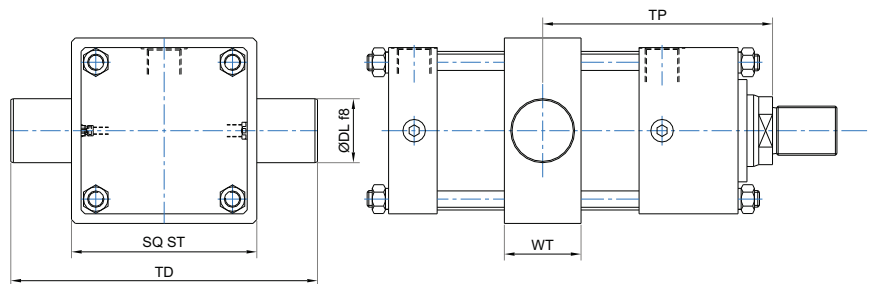
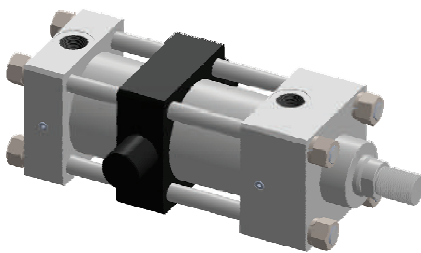
Front Flange (FF)



Intermediate Flange (IF)



Intermediate Trunnion (IT)



DIMENSIONAL DETAILS

BORE	32	20	50	63	80
BB	40	42	52	65	83
CC	66	90	105	117	149
FL	85	112	130	142	180
SD	30	40	44	50	60
SP	4	4	4	4	5
MH	9	11	14	14	18
FT	10	10	16	16	20
FP	23	23	23	25	24
TF	15	20	25	25	30
HW	48	52	65	83	97
HH	90	105	117	149	162
FW	65	76	74	112	125
FH	105	130	142	180	194
KK	9	9	11	14	18
WT	32	32	40	40	45
TD	100	116	140	158	186
ST	58	68	76	95	114
DL	22	25	32	32	36
TP	TO BE SPECIFIED BY CUSTOMER				

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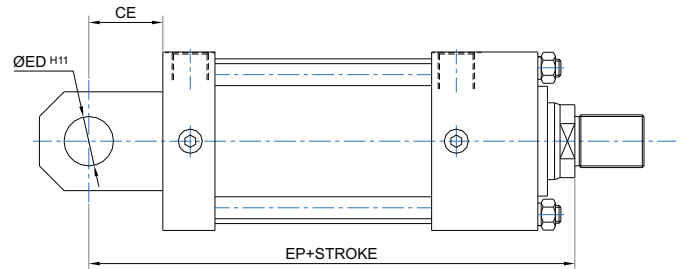
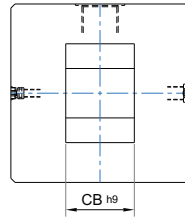
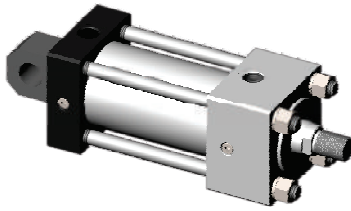
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website: www.orsettindia.com

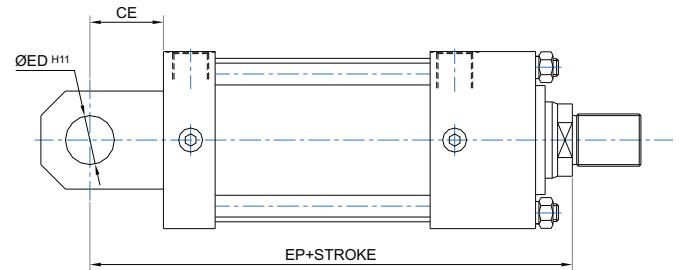
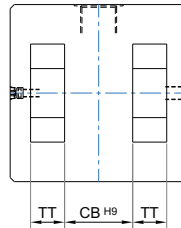
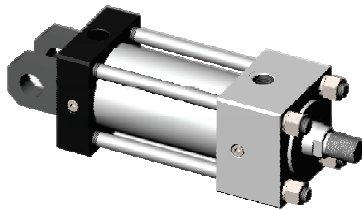
Standard Mountings CH16 Series

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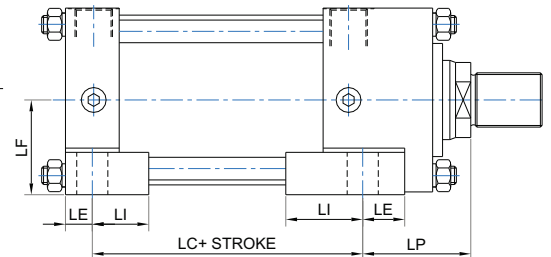
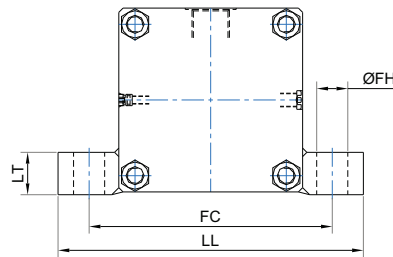
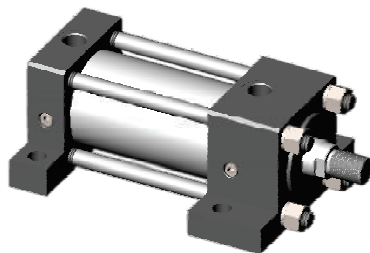
Rear Eye (RE)



Rear Clevis (RC)



Foot Lug (FL)



DIMENSIONAL DETAILS

BORE	32	20	50	63	80
CB	16	20	30	30	40
TT	12	12	16	16	20
ED	12	14	20	20	28
CE	18	19	32	32	39
EP	182	209	232	239	278
LC	109	130	128	122	142
LL	92	106	127	166	185
FC	75	88	102	130	149
LI	22	24	40	40	45
LE	10	10	15	18	20
LT	12	12	20	25	30
LF	28	33	38	48	57
FH	9	11	14	20	20
LP	45	50	57	67	77

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Technical Data & Ordering Details for CH16 Series



TECHNICAL DETAILS

Bore Dia (mm)	Rod Dia (mm)	Piston Area (cm ²)		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	
		+	-	50 kg/cm ²		75 kg/cm ²		+	-	+	-
32	20	8.0	4.9	401.9	244.9	602.9	3673.8	0.0207	0.0340	4.82	2.94
40	20	12.6	9.4	628.0	471.0	942.0	7065.0	0.0133	0.0177	7.54	5.65
50	25	19.6	14.7	981.3	735.9	1471.9	11039.1	0.0085	0.0113	11.78	8.83
63	36	31.2	21.0	1557.8	1049.2	2336.7	15737.3	0.0053	0.0079	18.69	12.59
80	45	50.2	34.3	2512.0	1717.2	3768.0	25757.8	0.0033	0.0049	30.14	20.61

Model Code Indication

C H 1 6 - 8 0 / 5 0 0 - F F - 4 5 - C B - (X) - F C / S S 8

Series	Bore sizes	Stroke	Mountings	Piston Rod sizes	Cushioning	Accessories & Special features	Sealing System Code
CH16 Rated Hydraulic Pressure of 160kg/cm ²	Ø32 - 80mm (5 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	Ø20 - 45mm (4 Std. sizes)	NC - Non Cushioned	PRE - Rod Eye PRF - Rod Fork SA - Single Acting DE - Double Ended etc....	FC/SS8 for 30 m/min, FC/SS85 for 48 m/min, FC/SS71 for 60 m/min

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

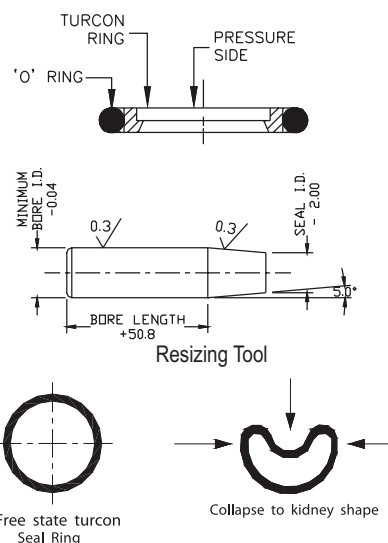
CUSTOM BUILT CYLINDERS CAN ALSO BE OFFERED ON REQUEST

Installation Procedure for Rod Seal



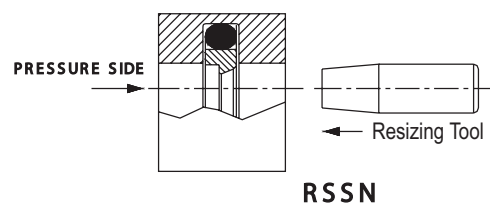
Before you begin:

- ⇒ It is essential that the cylinder tube & piston rod are chamfered.
- ⇒ Sharp edges must be deburred & filleted or chamfered.
- ⇒ The crests of threads must be covered.
- ⇒ Any dust, splinters or other foreign particles must be carefully removed.
- ⇒ Do not use tools with sharp edges.
- ⇒ Before assembly, the cylinder, piston rod & seals must be oiled.
(Oil used for lubrication must not contain any solid additives)
- ⇒ Turcon rings can be expanded easily.
- ⇒ Resizing the tool as per the drawing is recommended.



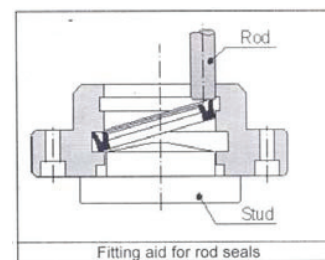
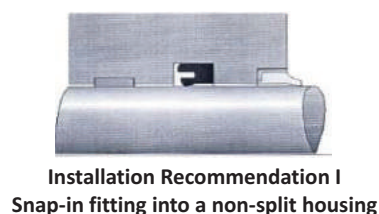
1. Rod step seal installation data (RSSN-XXX)

- Step 1:** Clean & Lubricate all cylinder parts, seal components & the resizing rod (as noted above)
- Step 2:** Place 'O' Ring into groove. The 'O' Ring must be seated correctly without twisting.
- Step 3:** Collapse the Turcon seal to a kidney shape, ensuring the Turcon seal ring is not creased. Place into groove as shown. If possible use fingers to smooth out the I.D of the Turcon seal ring after installation.
- Step 4:** Twist and push the resizing tool into the bore. Remove the resizing tool from the bore after one minute.



2. Rod U-Cup seal installation data (RUCP-XXX)

The snap-in fitting, in single piece housings (Installation recommendation I), can be made easier through suitable fitting tools. U-Packing of 35mm diameter (profile thickness 5mm) up to nominal diameter 80mm (profile thickness 10mm) are snapped into the non-split grooves. For this, the ring is formed into a kidney shape & pushed into the rod guide. The tool is withdrawn after the seal snaps into the groove. A further possibility for snap-in fitting of rod seals, exists in the application of a suitable plug and a rod. Here, the seal is first positioned by hand to one side of the groove and then pushed with a rod until it snaps into the groove.



RUCP

Installation Procedure for Piston Seal



The following installation procedure is for piston seals. Installation tools, as per drawing, are recommended for one piece glands.

- Step 1:** Clean and lubricate the cylinder parts, hardware & seals.
- Step 2:** Place 'O' Ring (elastomer) into groove as per drawing. The 'O' Ring must be seated correctly without twisting.
- Step 3:** Place the loading mandrel onto the piston.
- Step 4:** Place Turcon seal ring on loading mandrel as per drawing.
- Step 5:** Push Turcon seal ring up the loading mandrel and into the groove.
- Step 6:** Remove the loading mandrel from the piston.
- Step 7:** Push, while twisting, the resizing tool onto the seal assembly. Remove after one minute.

