

AGNI HYDROPNEUMATIC PRIVATE LTD

Hydraulic Cylinder Catalogue

January 2025 Rev-01

AGNI

Hydraulics & Pneumatics

Welcome

Welcome to Agni Hydraulics Cylinders Catalogue, your source for high-performance hydraulic and pneumatic cylinders. We offer a comprehensive and cost competitive range of cylinders designed to meet the demands of diverse industries and applications.

Heavy Duty Hydraulic Cylinders Series – Welded Cylinders (HWC)

Contact Us

Address - AGNI Hydropneumatic Private Limited
Plot No - 59A/5 Sector-04 IIE Sidcul Pantnagar Uttarakhand - 263153
Contact - 9045085537 | E-Mail - info@agnihp.com
Website - <https://agnihp.com>



Table Of Content

❖	<u>Welcome</u>	1
❖	<u>Contact Us</u>	1
❖	<u>Table Of Content</u>	2
❖	<u>Get to Know Our Company</u>	3
❖	<u>Material Information</u>	4
❖	<u>Hydraulic Welded Cylinder (HWC)</u>	5
➤	<u>How To Order</u>	5
➤	<u>Cap Fixed Eye Mounting</u>	8
➤	<u>Cap Fixed Clevis Mounting</u>	9
➤	<u>Round Head Flange Mounting</u>	10
❖	<u>Custom Style Cylinder</u>	11

Get to Know Our Company

AGNI HYDROPNEUMATIC PRIVATE LIMITED newly established in 2024 as a small-scale firm, began its journey to introduce world-class Hydraulic and Pneumatic Cylinders of the latest design to the Indian market at affordable prices. Over the years, we will expand our product range to include Pneumatic Power Clamp Cylinders and Other Hydro-Pneumatic products like Valves, Connectors, Fittings and specialized products for OEM applications.

Our Mission

We aim to expand our range of products, technology, and customer base in the coming years to gain the same recognition in the international market and become a global company.

Our Vision

We are committed to enhancing industrial efficiency and performance by offering innovative, high-standard hydraulic and pneumatic solutions that meet the diverse needs of our clients nationwide

Our Values

Customer-Centric

It is our core value that the Customer satisfaction comes before everything.

Innovative

We always strive to deliver new and better solutions to the ever changing business world.

Integrity

We are building trust with honesty and transparency is as the root of our value system

Involved

We value and are actively engaged with our customers, partners, employee or employees and the community.

Disclaimer

Please Read The Following Warning Carefully

Please be aware that using the products described here incorrectly or for unsuitable applications could lead to serious consequences, including death, injury, and property damage.

This document provides information for qualified users to explore product and system options. We encourage you to carefully analyze your specific application, including potential failure risks, and consult the current product catalog for detailed information.

Agni Hydropneumatics reserves the right to make changes to product features, specifications, designs, availability, and pricing without prior notice.

Ultimately, you are responsible for selecting the products and systems that best meet your needs and ensuring they comply with all performance, safety, and warning requirements. We appreciate your understanding and commitment to safety.

Material Information

Hard Chrome Plated Piston Rods

- Material : EN8D/CK-45
- Chrome Thickness: 20-25 Micron Minimum per side above as per requirement.
- Tolerance: ISO f7/f8
- Plating Hardness: 850HV-1100HV
- Surface Roughness: Ra 0.2micron or better
- Straightness: 0.1mm per meter
- UTS: 600-700 N/mm² (min.)
- Y.S : 450 N/mm² (min)

Hard Chrome Plated Piston Rods

- Material : ST52 in BK+S Condition and as per Customer
- Tolerance: As per ISO H8/H9
- Surface Roughness: Ra0.3micron Maximum
- T.S. : >580 N/mm²
- Y.S.: > 520N/mm²
- Elongation: >16%
- Straightness: 0.1mm per meter
- Packing Condition: Bore covered by cap and plastic and Transportation purpose M.S.plate welded in bore both sides

Seal Matrials

Sr. No	Polytetrafluoroethylene	Polyurethane	Nitrile Butadiene Rubber
1	operating temp range: -200°C to 260°C	operating temp range : -40°C to 120°C	Operating temp range : -30°C and 100°C
2	PTFE's durability and chemical stability contribute to a longer lifespan compared to other sealing materials, especially in aggressive environments.	PU's elastic properties provide excellent shock absorption, beneficial in systems with frequent load and pressure changes.	NBR performs excellently with petroleum-based fluids and mineral oils, making it ideal for use in industrial hydraulic systems.
3	PTFE is inert to most chemicals, ensuring that the seals remain stable in a variety of hydraulic fluids, including aggressive and high-viscosity oils	PU seals can absorb impact loads and resist deformation, maintaining their shape and seal integrity under high pressure.	NBR has excellent resistance to petroleum-based oils, hydraulic fluids, and fuels, making it ideal for hydraulic applications.
4	PTFE's low friction coefficient results in smoother operations and reduced wear, especially important in systems with frequent or high-speed movements.	PU's flexibility allows a close fit, minimizing leakage and making PU seals suitable for high-precision applications.	NBR has a low compression set, meaning it retains its shape well after being compressed, maintaining the integrity of the seal.
5	PTFE has a tendency to deform under prolonged high pressure, known as "cold flow" or "creep," especially in unreinforced forms.	Standard PU is sensitive to water and may degrade in hydrolytic environments, so hydrolysis-resistant PU is necessary for water or glycol-based fluids.	NBR does not perform well with certain chemicals, such as strong acids, esters, ketones, and hydraulic fluids containing phosphate esters, as it can cause swelling and degradation.

Hydraulic Welded Cylinder (HWC)

Welded hydraulic cylinders are a type of hydraulic cylinder characterized by their robust construction, where one end cap is welded directly to the cylinder barrel. This design offers several advantages over traditional tie rod cylinders, making them suitable for various applications. Here's a detailed overview:

Welded hydraulic cylinders are utilized in a variety of industries and applications,;

- 1. Industrial Applications:** They are also used in various industrial machines where high performance and durability are required.
- 2. Construction Equipment:** They are commonly found in heavy machinery such as excavators and bulldozers, where high strength and reliability are crucial.
- 3. Agricultural Machinery:** Welded cylinders are used in tractors and other farming equipment, providing the necessary power for lifting and moving heavy loads.
- 4. Material Handling:** In forklifts and other material handling equipment, these cylinders help in lifting and moving goods efficiently.

How To Order

Bore Size \varnothing	Wall Thickness	Mounting Styles	Series	Seal Material	Piston Rod Thread Style	Stroke
Specify the Bore dia (mm) 32 . . . 300	Specify in mm (See the table F below)	CFE : Cap Fixed Eye CFC : Cap Fixed Clevis RHF : Round Head Flange	HWC	1 - (PTFE) Polytetrafluoroethylene 2 - (PU) Polyurethane 3 - (NBR) Nitrile Butadiene Rubber	M - Male F - Female	Specify a length from the range 20 mm to 2000 mm

Table HWC(A) - Order Format For HWC Series

EXAMPLE -

30	5	38	RHF	HWC	1	M	50
----	---	----	-----	-----	---	---	----

So, the order code would be - 30-5-38-RHF-HWC-1-M-50

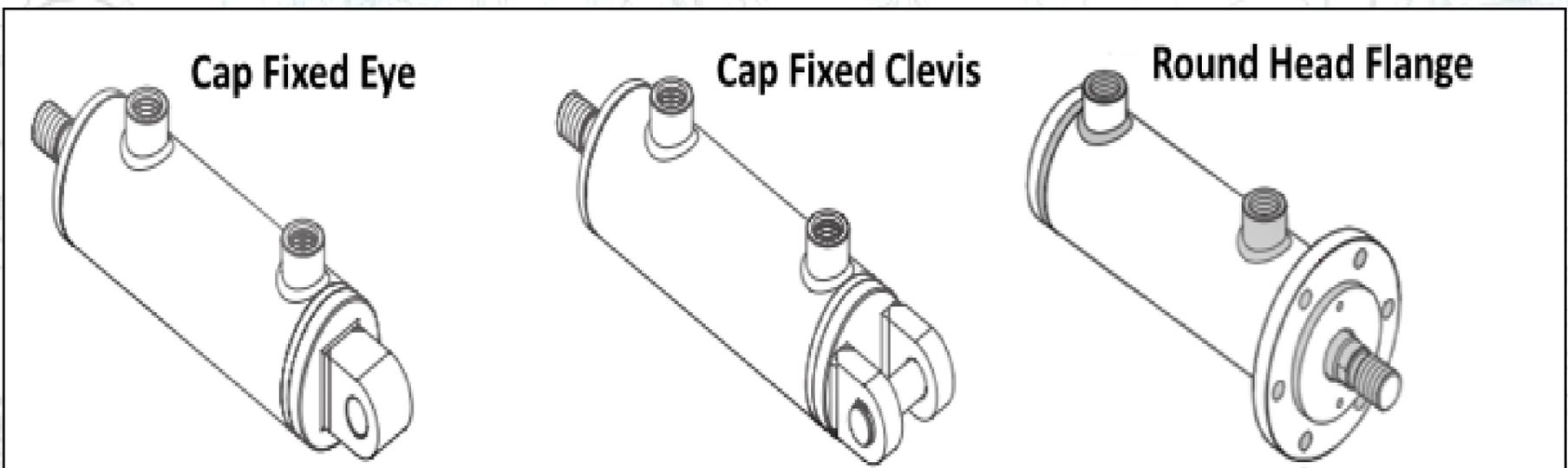
SR	Bore Ø		WT	MM Rod Ø	Operating Pressure Kgf/cm2		Operating Speed MM/sec		Max. Cyl. Tonnage	Ambt. Temp Range (C)	Piston Rod Threads				W	Port Size EE	Working Length
	ID	OD			Max.	Min.	Max.	Min.			Male		Female				
											KK	A	KK	A			
1	32	42	5	20	309.5	10	300	15	9.95	-10 ~ +80	M14x2	15	M10x1.5	20	8	3/8	20 to 500
2	40	50	5	28	260.0	10	300	15	13.06	-10 ~ +80	M18x2.5	18	M10x1.5	20	10	3/8	20 to 500
3	50	60	5	35	216.7	10	300	15	17.01	-10 ~ +80	M18x2.5	18	M14x2	20	13	3/8	20 to 500
4	50	65	7.5	38	300.0	10	300	15	23.55	-10 ~ +80	M22x2.5	20	M14x2	20	13	3/8	20 to 500
5	55	65	5	38	200.0	10	300	15	19.00	-10 ~ +80	M22x2.5	20	M14x2	20	13	3/8	20 to 500
6	63	73	5	40	178.1	10	300	15	22.19	-10 ~ +80	M22x2.5	20	M14x2	20	14	1/2	20 to 500
7	63	75	6	45	208.0	10	300	15	25.92	-10 ~ +80	M22x2.5	30	M18x2.5	30	14	1/2	20 to 500
8	70	80	5	45	162.5	10	300	15	25.00	-10 ~ +80	M33x3.5	30	M18x2.5	30	16	1/2	20 to 500
9	70	85	7.5	50	229.4	10	300	15	35.30	-10 ~ +80	M42x4.5	40	M18x2.5	40	16	1/2	20 to 500
10	75	90	7.5	50	216.7	10	300	15	38.27	-10 ~ +80	M42x4.5	40	M18x2.5	40	16	1/2	20 to 500
11	80	90	5	56	144.4	10	300	15	29.03	-10 ~ +80	M42x4.5	40	M18x2.5	40	17	1/2	20 to 500
12	80	100	10	60	260.0	10	300	15	52.25	-10 ~ +80	M42x4.5	40	M22x2.5	50	17	1/2	20 to 500
13	85	100	7.5	60	195.0	10	300	15	44.24	-10 ~ +80	M48x5	50	M22x2.5	50	18	1/2	20 to 500
14	90	105	7.5	63	185.7	10	300	15	47.23	-10 ~ +80	M48x5	50	M22x2.5	50	18	3/4	20 to 500
15	100	112	6	60	139.3	10	300	15	43.74	-10 ~ +80	M48x5	50	M22x2.5	50	20	3/4	20 to 500
16	100	125	12.5	70	260.0	10	300	15	81.64	-10 ~ +80	M48x5	50	M22x2.5	50	20	3/4	20 to 1000
17	110	125	7.5	75	156.0	10	300	15	59.27	-10 ~ +80	M48x5	50	M22x2.5	50	22	3/4	20 to 1000
18	110	130	10	75	200.0	10	300	15	75.99	-10 ~ +80	M48x5	50	M22x2.5	50	22	3/4	20 to 1000
19	115	130	7.5	75	150.0	10	300	15	62.29	-10 ~ +80	M48x5	50	M22x2.5	50	22	1.00	20 to 1000
20	115	135	10	75	192.6	10	300	15	79.98	-10 ~ +80	M48x5	50	M22x2.5	50	22	1.00	20 to 1000
21	120	140	10	80	185.7	10	300	15	83.97	-10 ~ +80	M48x5	50	M22x2.5	50	24	1.00	20 to 1000
22	125	140	7.5	80	139.3	10	300	15	68.34	-10 ~ +80	M48x5	50	M22x2.5	50	26	1.00	20 to 1000
23	125	150	12.5	90	216.7	10	300	15	106.30	-10 ~ +80	M56x5.5	60	M33x3.5	50	26	1.00	20 to 1000
24	130	150	10	90	173.3	10	300	15	91.98	-10 ~ +80	M56x5.5	60	M33x3.5	50	28	1-1/4	20 to 1000
25	130	156	13	90	216.7	10	300	15	114.98	-10 ~ +80	M56x5.5	60	M33x3.5	50	28	1-1/4	20 to 1000
26	140	160	10	95	162.5	10	300	15	100.01	-10 ~ +80	M56x5.5	60	M33x3.5	50	28	1-1/4	20 to 1000
27	140	170	15	95	229.4	10	300	15	141.19	-10 ~ +80	M56x5.5	60	M33x3.5	50	28	1-1/4	20 to 1000
28	150	170	10	95	152.9	10	300	15	108.05	-10 ~ +80	M56x5.5	60	M33x3.5	50	32	1-1/4	20 to 1000
29	150	180	15	95	216.7	10	300	15	153.08	-10 ~ +80	M56x5.5	60	M33x3.5	50	32	1-1/4	20 to 1000
30	160	180	10	95	144.4	10	300	15	116.11	-10 ~ +80	M56x5.5	60	M33x3.5	50	32	1-1/2	20 to 2000
31	160	190	15	95	205.3	10	300	15	165.00	-10 ~ +80	M56x5.5	60	M33x3.5	50	32	1-1/2	20 to 2000
32	180	200	10	100	130.0	10	300	15	132.26	-10 ~ +80	M56x5.5	60	M33x3.5	50	34	1-1/2	20 to 2000
33	180	220	20	100	236.4	10	300	15	240.47	-10 ~ +80	M64x6	60	M42x4.5	50	34	1-1/2	20 to 2000
34	200	220	10	110	118.2	10	300	15	148.44	-10 ~ +80	M64x6	60	M42x4.5	50	36	1-1/2	20 to 2000
35	200	245	22.5	110	238.8	10	300	15	299.90	-10 ~ +80	M64x6	60	M42x4.5	50	36	1-1/2	20 to 2000
36	220	250	15	120	156.0	10	300	15	237.08	-10 ~ +80	M64x6	60	M42x4.5	50	38	1-3/4	20 to 2000
37	220	266	23	120	224.8	10	300	15	341.66	-10 ~ +80	M64x6	60	M42x4.5	50	38	1-3/4	20 to 2000
38	250	280	15	125	139.3	10	300	15	273.35	-10 ~ +80	M64x6	60	M42x4.5	50	38	1-3/4	20 to 2000
39	250	300	25	125	216.7	10	300	15	425.21	-10 ~ +80	M64x6	60	M42x4.5	50	38	1-3/4	20 to 2000
40	300	351	25.5	130	188.9	10	300	15	533.80	-10 ~ +80	M64x6	60	M42x4.5	50	40	1-3/4	20 to 2000

Table HWC(B) - Order Details For HWC Series (Please [Contact Us](#) for custom sizes)

Contact us at info@agnihp.com or [\[click here\]](#) to visit our website.

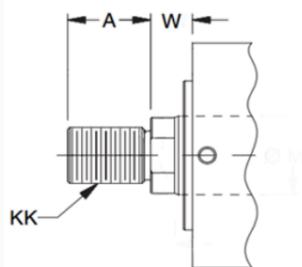
HWC MOUNTING-STYLES

We offer three mounting styles for our HWC Series. You can select any one of the mentioned styles as per your need. The figure below demonstrates the working of the different mounting styles.

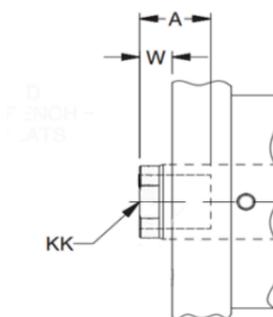


Thread Styles

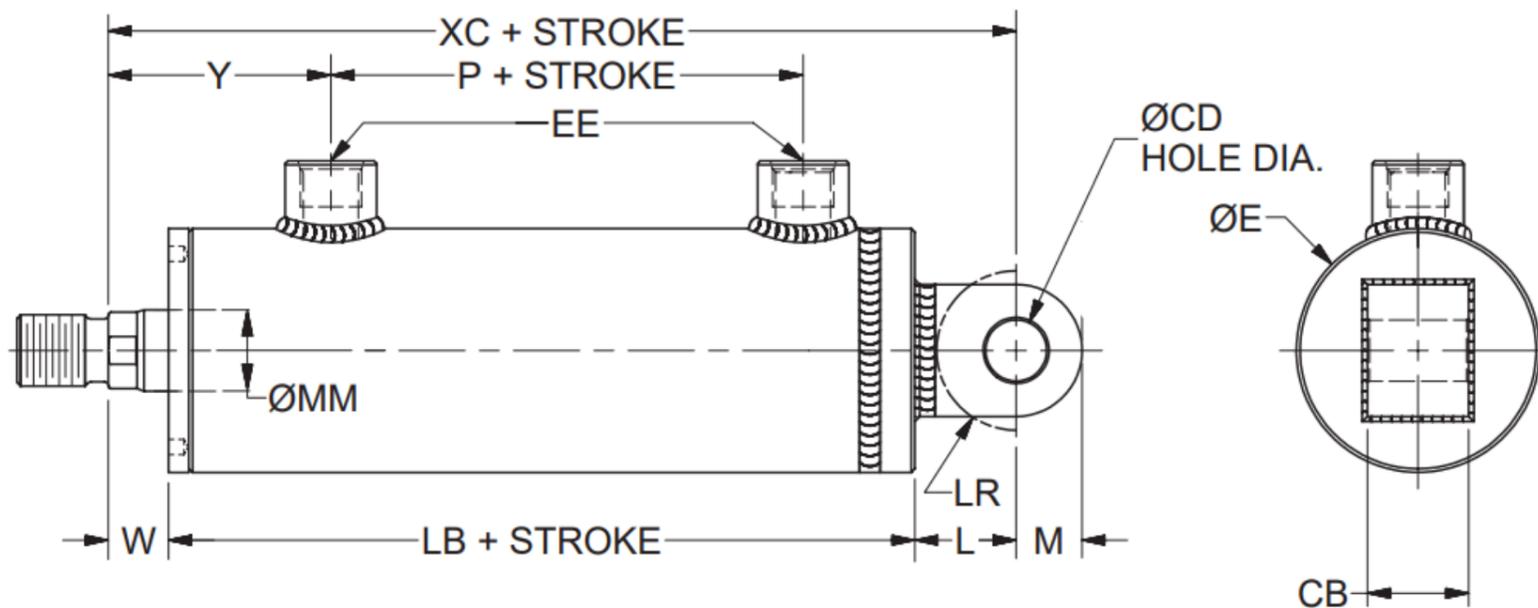
Male Thread Style



Female Thread Style



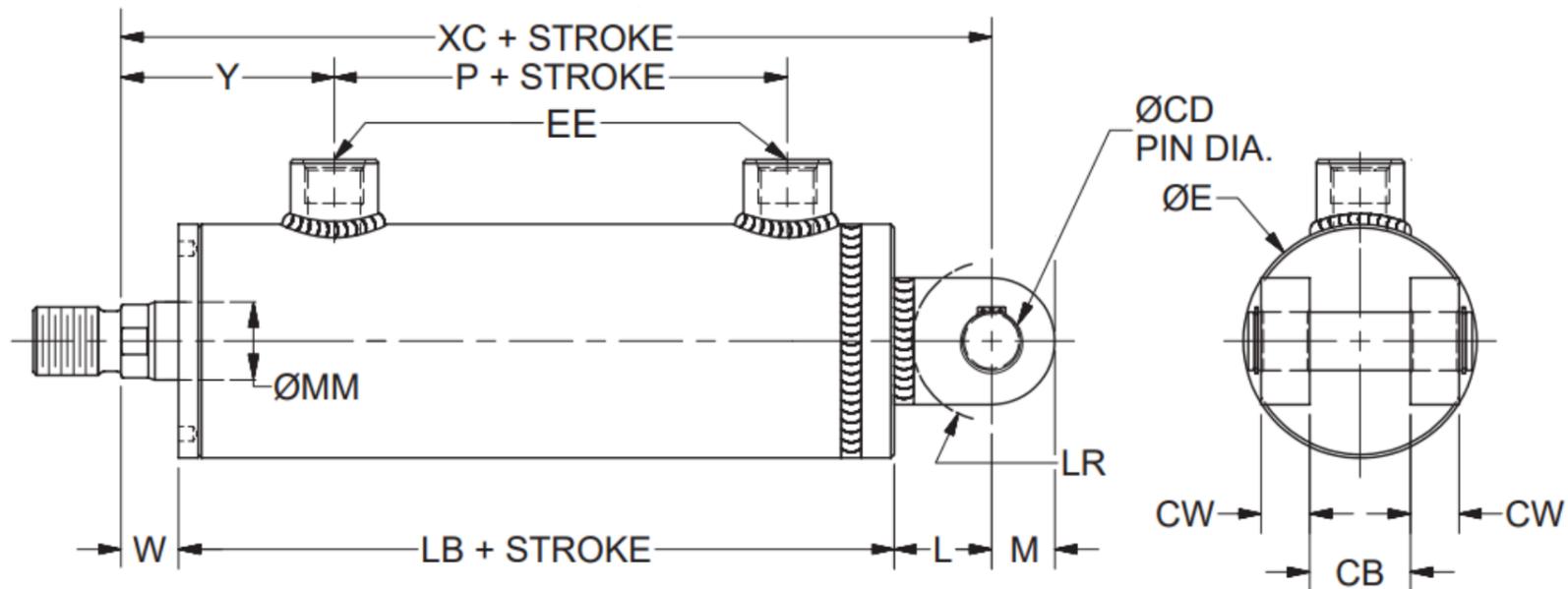
Cap Fixed Eye Mounting



Srl	Bore \varnothing	Fixed Eye Mounting					LB	P	XC	LR min.	Y
	ID (MM)	CB	CD \varnothing	M	L						
1	32	18	12	12	20	64	25	92	13	50	
2	40	19	12	12	20	90	30	118	13	53	
3	50	29	20	20	28	120	45	156	22	63	
4	55	29	20	20	28	120	50	156	22	65	
5	63	32	20	20	28	130	50	166	22	68	
6	70	32	20	20	28	140	52	176	22	70	
7	75	32	20	20	28	140	55	176	22	74	
8	80	38	25	25	35	152	55	195	28	78	
9	85	38	25	25	35	156	60	199	28	80	
10	90	38	25	25	35	160	62	203	28	84	
11	100	48	35	35	45	165	65	218	39	86	
12	110	48	35	35	45	170	68	223	39	88	
13	115	48	35	35	45	170	70	223	39	90	
14	120	48	35	35	45	170	73	223	39	92	
15	125	63	40	40	50	175	80	233	44	94	
16	130	63	40	40	50	175	82	233	44	96	
17	140	63	40	40	50	175	84	233	44	98	
18	150	63	40	40	50	180	86	238	44	100	
19	160	72	50	50	62	180	88	250	55	104	
20	180	72	50	50	62	200	90	270	55	108	
21	200	72	50	50	62	210	92	280	55	112	
22	220	72	50	50	62	220	94	290	55	114	
23	230	80	55	55	70	220	96	298	61	116	
24	250	80	55	55	70	220	100	298	61	118	
25	300	80	55	55	70	220	102	298	61	120	

Table HWC(C) - CFE Mount Details For HWC Series

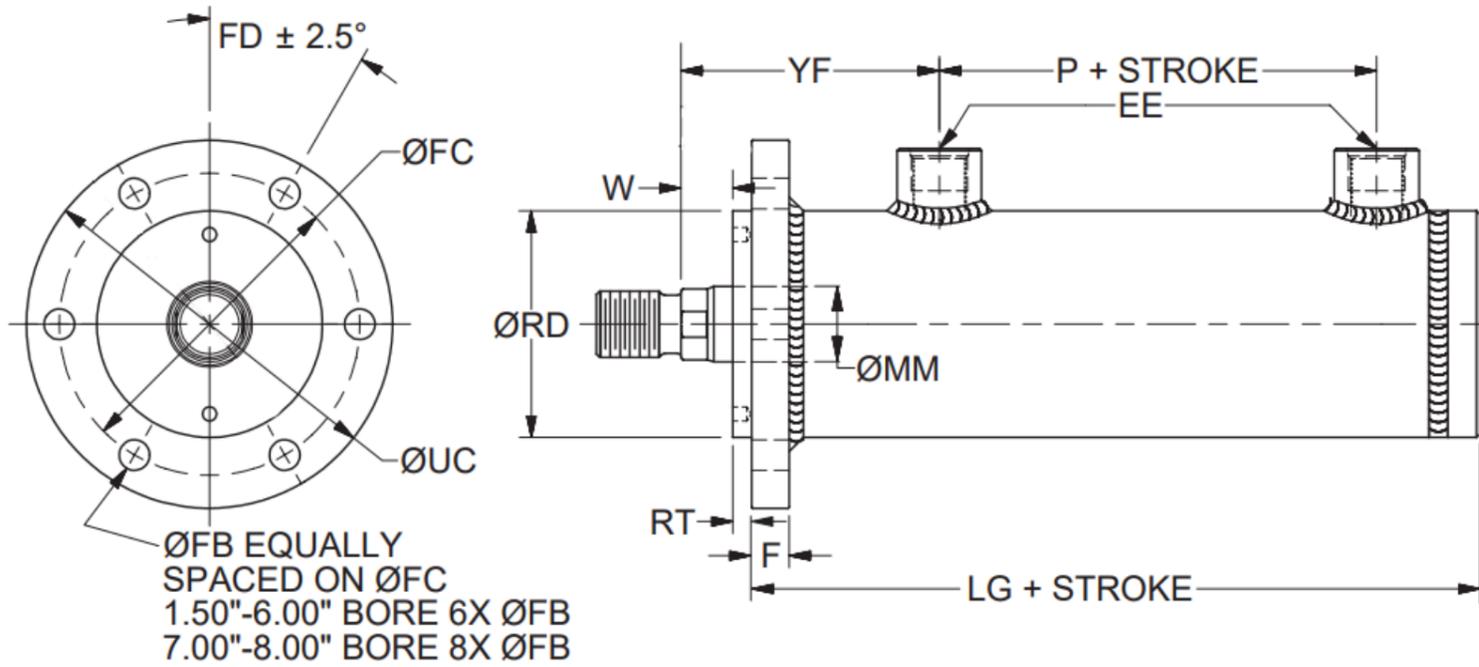
Cap Fixed Clevis Mounting



Srl	Bore \varnothing	Fixed Clevis Mounting					LB	P	XC	LR min.	Y
	ID (MM)	CB	CD \varnothing (+0/-0.002)	M	CW	L					
1	32	18	12	12	12	20	64	25	92	13	50
2	40	19	12	12	12	20	90	30	118	13	53
3	50	29	20	20	12	28	120	45	156	22	63
4	55	29	20	20	12	28	120	50	156	22	65
5	63	32	20	20	16	28	130	50	166	22	68
6	70	32	20	20	16	28	140	52	176	22	70
7	75	32	20	20	16	28	140	55	176	22	74
8	80	38	25	25	19	35	152	55	195	28	78
9	85	38	25	25	19	35	156	60	199	28	80
10	90	38	25	25	19	35	160	62	203	28	84
11	100	48	35	35	25	45	165	65	218	39	86
12	110	48	35	35	25	45	170	68	223	39	88
13	115	48	35	35	25	45	170	70	223	39	90
14	120	48	35	35	25	45	170	73	223	39	92
15	125	63	40	40	30	50	175	80	233	44	94
16	130	63	40	40	30	50	175	82	233	44	96
17	140	63	40	40	30	50	175	84	233	44	98
18	150	63	40	40	30	50	180	86	238	44	100
19	160	72	50	50	30	62	180	88	250	55	104
20	180	72	50	50	38	62	200	90	270	55	108
21	200	72	50	50	38	62	210	92	280	55	112
22	220	72	50	50	40	62	220	94	290	55	114
23	230	80	55	55	40	70	220	96	298	61	116
24	250	80	55	55	42	70	220	100	298	61	118
25	300	80	55	55	42	70	220	102	298	61	120

Table HWC(D) - CFC Mount Details For HWC Series

Round Head Flange Mounting



Srl	Bore Ø	RFH							LG	P
	ID (MM)	F	RT	ØUC	ØFC	ØFB	FD	ØE		
1	32	10	6	64	47	30	8.5	30°	74	25
2	40	10	6	80	63	38	8.5	30°	100	30
3	50	12	6	100	83	48	8.5	30°	132	45
4	55	12	6	110	93	53	8.5	30°	132	50
5	63	14	6	126	105	61	10.5	30°	144	50
6	70	16	6	140	119	68	10.5	30°	156	52
7	75	16	6	150	120	73	15	30°	156	55
8	80	19	6	160	130	78	15	30°	171	55
9	85	19	6	170	140	83	15	30°	175	60
10	90	19	8	180	150	88	15	30°	179	62
11	100	19	8	180	142	98	19	30°	184	65
12	110	22	8	198	160	108	19	30°	192	68
13	115	22	8	207	169	113	19	30°	192	70
14	120	22	8	216	170	118	23	30°	192	73
15	125	22	10	225	179	123	23	30°	197	80
16	130	25	10	234	188	128	23	30°	200	82
17	140	25	10	252	206	138	23	30°	200	84
18	150	25	10	270	224	148	23	30°	205	86
19	160	25	10	256	210	158	23	30°	205	88
20	180	25	10	288	242	178	23	30°	225	90
21	200	28	12	320	252	198	34	30°	238	92
22	220	28	12	352	284	218	34	30°	248	94
23	230	32	12	368	300	228	34	30°	252	96
24	250	32	12	400	332	248	34	30°	252	100
25	300	32	12	480	412	298	34	30°	252	102

Table HWC(E) - RHF Mount Details For HWC Series

AGNI

Custom Style Cylinder

To build Customized Cylinders,

We need a complete drawing of the custom cylinder

OR

The following data:

1. Cylinder Outer Diameter or Required Tonnage.
2. Shaft Diameter and Piston Rod Threads
3. Working Length and Port Size.
4. Max operating Pressure Kgf/cm²
5. Cylinder Seal Material.

(For more info or any queries mail us at - info@agnihp.com or [Click Here](#) to visit our website.)

AGNI

Hydraulics & Pneumatics

Address - AGNI Hydropneumatic Private Limited
Plot No - 59A/5 Sector-04 IIE Sidcul Pantnagar Uttarakhand - 263153
Contact - 9045085537 | E-Mail - info@agnihp.com
Website - <https://agnihp.com>

Contact us at info@agnihp.com or [click here](#) to visit our website.