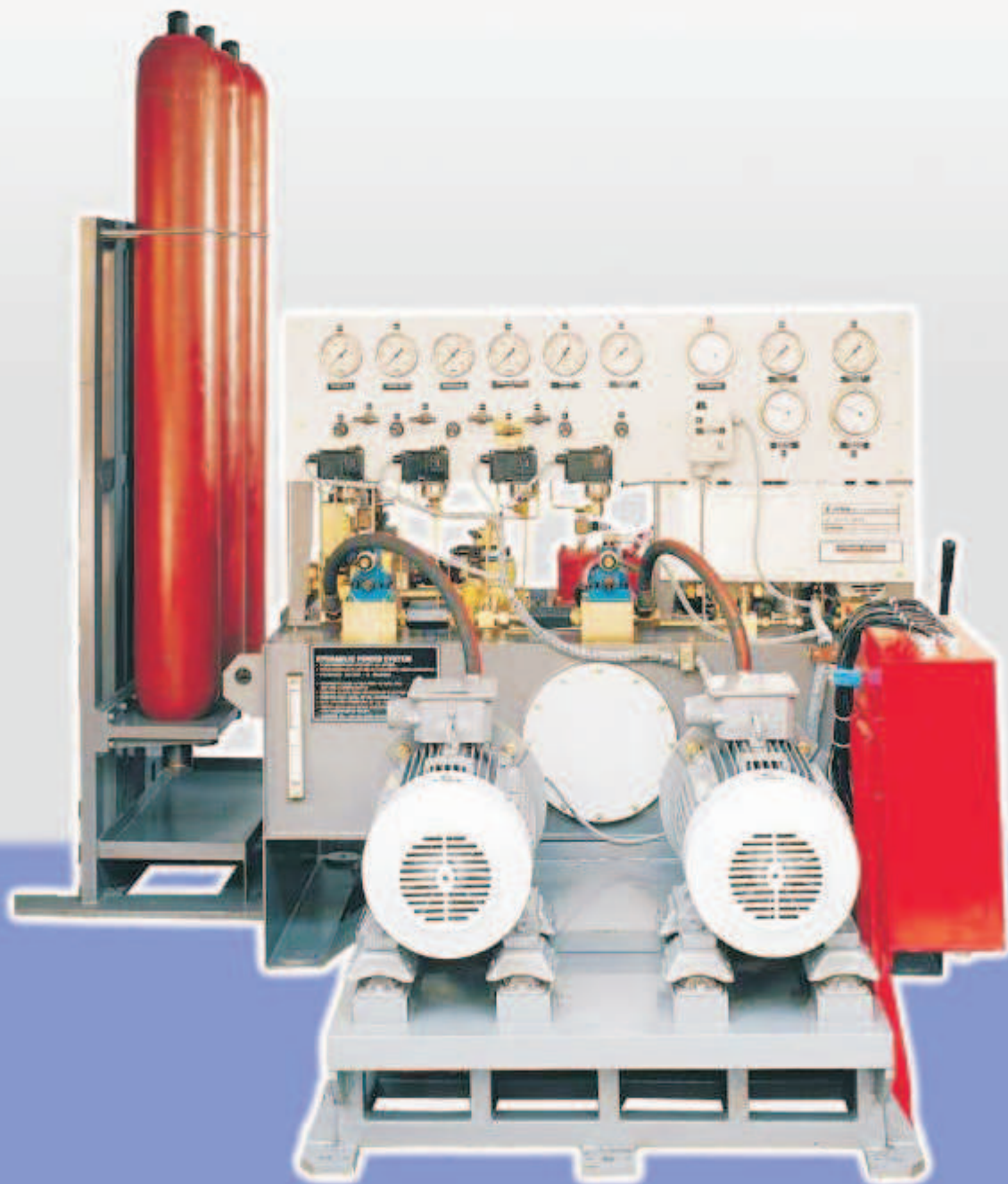
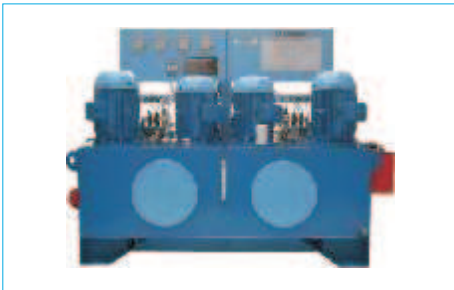
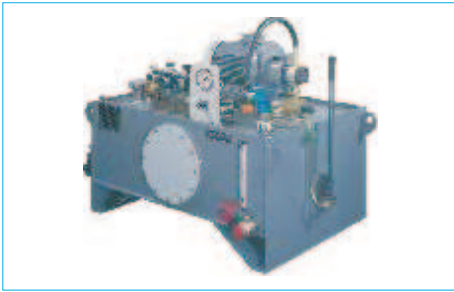


hydraulic power systems



HYDMARK APPLICON



- Custom built power units designed to meet specific requirements.
- Applications in machine tools, steel works, hot & cold rolling industries, paper, sugar & rubber processing machines, construction & general engineering industries.
- Shorter deliveries due to large quantity of components held in stock.
- Internationally accepted standard components are used from Rexroth, Vickers, Yuken etc.
- Highly reliable, excellent aesthetic & functional quality.
- Tested for best performance before delivery.
- Manifold designs for minimum leakages, easy installation & maintenance.
- Experienced, qualified & efficient after sales support.
- Pressures up to 550 bar.
- Flow rates up to 1200 lpm.
- Input power up to 100 kw.
- Reservoirs up to 10,000 liters.

General information required for a custom made power unit would be, application details, flow rate, input power, reservoir size, load parameters, pressure requirements, sequence of operation, automation required, manual or electrical controls, frequency of operation etc.

Some or all parameters may be known to you - call our application engineer, he will study, design & offer the system to match your needs.

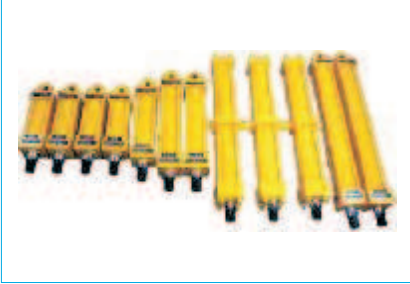
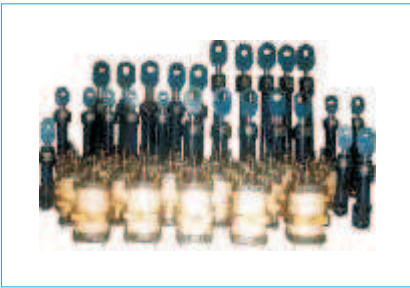
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hydraulic cylinders



HYDMARK APPLICON



- Designed & manufactured to international standards.
- Meets high technology requirements in control & operation of machine tools, hydraulic presses, plastic & rubber moulding machines, steel plants, off shore & on board installations.
- Faster deliveries due to modular construction, standard-isation of components & holding of stocks.
- Tubes used are honed, skived & roller burnished, with dia tolerances H8, roughness $Ra \leq 0.4\mu m$, material ST 52.3 BK+S, straightness 1:2000 mm - from Stelmi of Italy.
- Rods are hard chrome plated & reground with of 0.02 to 0.045mm chrome thickness, dia tolerance f7.
- High quality seals from world pioneers Busak+ Shamban, Merkel of Germany. Seals have seats matching ISO dimensions.
- Special guide design & material gives greater overload margins.
- Easy maintenance & replacement of parts.
- Wide range of standard cylinders, with different attachment options. Special mountings - on request.

Series	Type / Standard	Bores/mm	Max. Pressure kgf./ Sqcm	Data sheet
HCK	Square head, tie rod assembled / ISO-6020-2	25 to 200	160	A - 9001
HCH	Welded counter flange type / ISO6020-3	250,320,400	160	A - 9002
HCC	Standard round head, welded design / ISO6022,	63 - 400	320	A - 9003
HCM	Round screwed cylinder heads	25 - 400	200	A - 9004
HCR	Ram type, single acting cylinders	80 -450	250	A - 9005
HCP	Flange type, hydraulic cylinders	50 - 450	350	A - 9006

Some important parameters required for the selection of hydraulic cylinders are bore diameter, rod diameter, stroke length, attachments & mountings, application details, working pressure or loads & temperature conditions.

All or few parameters may be known to you, our application engineer will offer you hydraulic cylinders from our range or will custom design to suit your drawings & needs.

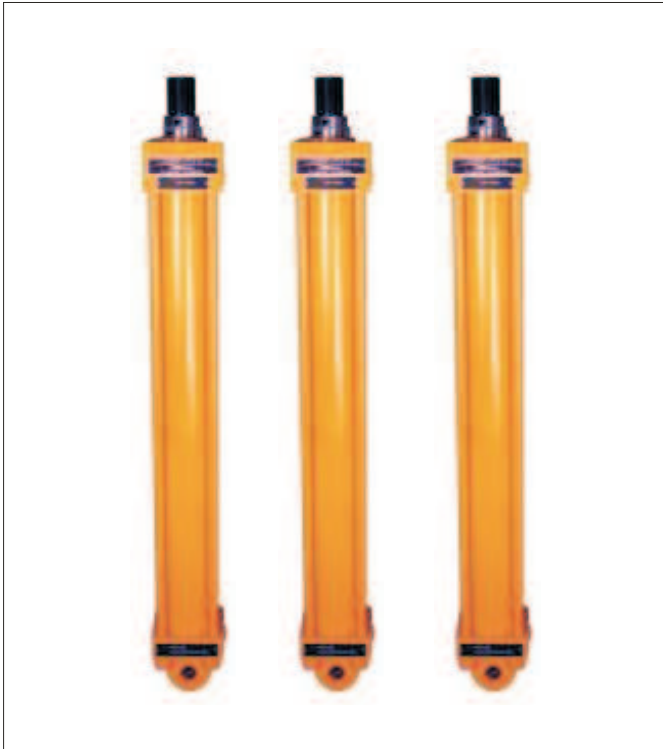
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HYDMARK APPLICON

Hydraulic Cylinders Series HCK

Tie rod design, 160 bar nominal pressure, double acting.



- Standard square heads assembled with tie rods.
- As per International Standard - ISO 6020-2
- Nominal pressure 160 bar, maximum pressure 250 bar.
- Bore diameters 25,32,40,50,63,80,100,125,160 & 200 mm.
- Standard, Intermediate or differential rod diameters for each bore.
- Strokes up to 3500 mm. Higher on request.
- High quality seals from Busak + Shamban, Germany, Hallite, England.
- High overload margin, due to wear resistant PTFE guide rings for rod & piston.
- Roller burnished high profile tubes & chrome plated rods from Stelmi of Italy.
- Adjustable or fixed cushioning available.
- Vast range of mountings & rod attachments.
- Cylinders with special mountings, port sizes or dimensions are custom designed.
- High service life, easy to maintain

MODEL CODE

HCK - **63** - **28 + 28** - **500** - **CT** - **2** - **JO8** - **0199** - **101** - **7**

Cylinder series,

square heads assembled with tie rods, according to ISO 6020 - 2 - 1991

Piston diameter in mm

Rod (s) diameter in mm

second dimension for double-rod cylinders

Stroke in mm.

Attachments - see section

FF	Front flange
FR	Rear flange
FE	Feet
Z	Front screwed hole
CT	Mid - body trunnion
FT	Front body trunnion
CV	Male clevis
CE	Swivel with eye
TE	Extended front tie rods
SP	Special, custom built

Cushioning

None - omit
Rear only - 5
Front only - 6
Front & rear - 7

Design designation

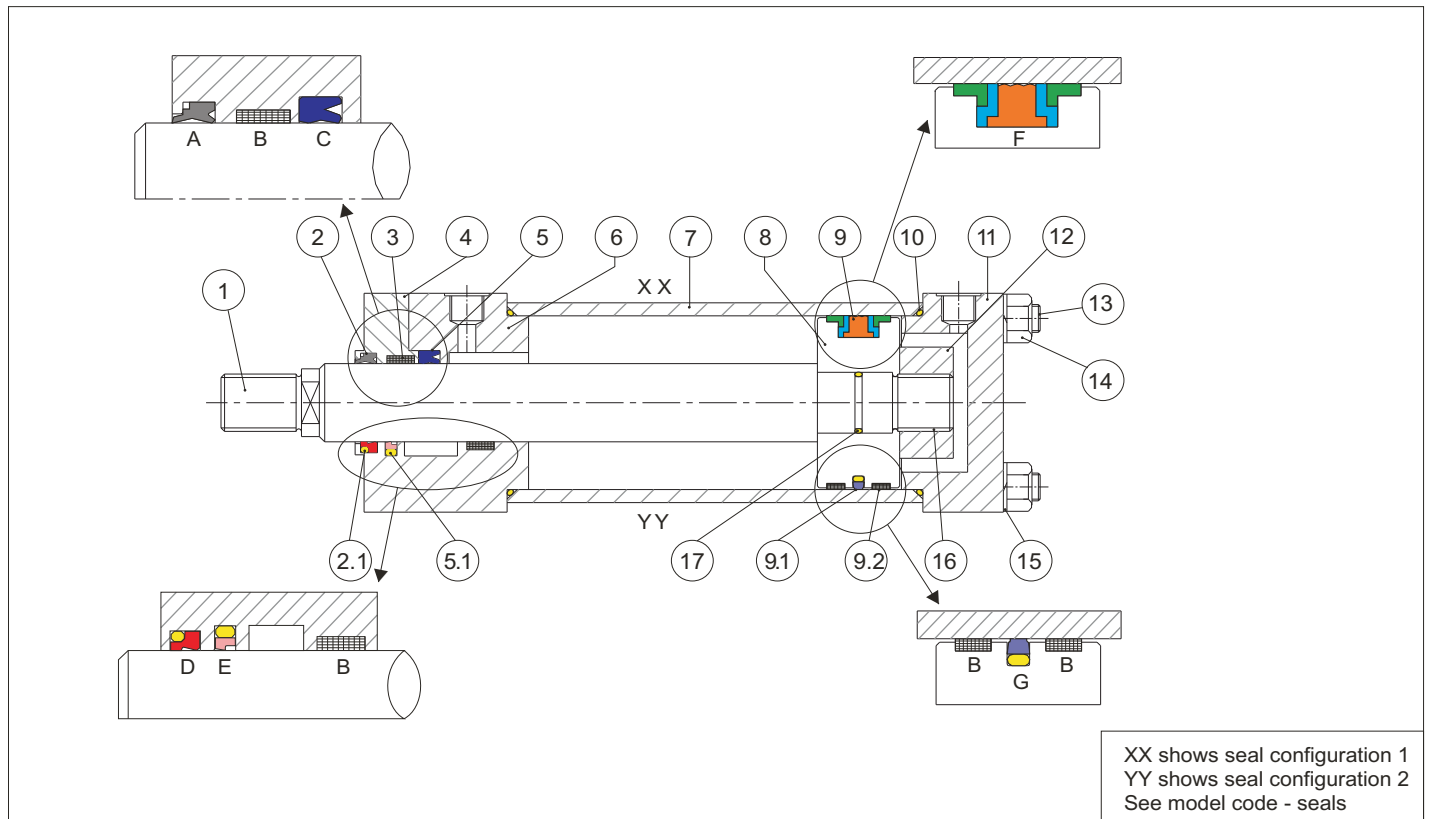
Date of Manufacture

Job card number

Seals

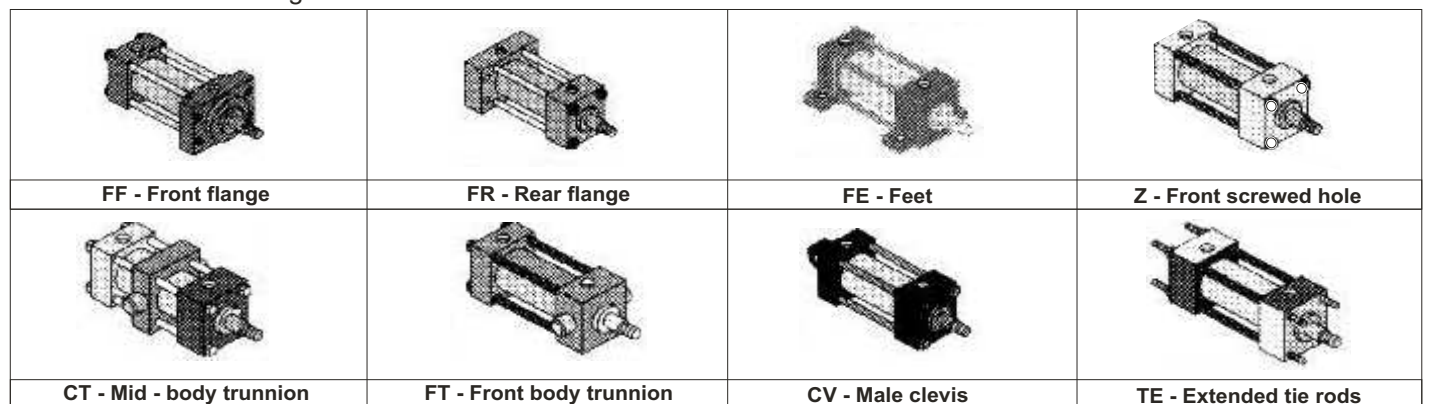
	1	2	3	4
Piston seal	DAS compact seal	PTFE + NBR	PTFE + Viton	Special seals
Rod seal	U cup in PU	PTFE + NBR	PTFE + Viton	
Rod guides	PTFE	PTFE	PTFE	
Scrapers	NBR	PTFE + NBR	PTFE + Viton	
'O' rings	NBR	NBR	Viton	

Sectional view of the HCK series hydraulic cylinders.



PART	DESCRIPTION	MATERIAL	PART	DESCRIPTION	MATERIAL
1	Rod	Chromeplated steel	9.1	Piston seal	Nitrile / viton rubber + PTFE
2	Wiper	Nitrile rubber	9.2	Piston guide	PTFE
2.1	Wiper	Nitrile / Viton rubber + PTFE	10	'O' ring - cylinder head	Nitrile / viton rubber
3	Rod guide strip	PTFE	11	Rear cylinder head	Steel
4	Head flange	Steel	12	Piston nut	Steel
5	Rod seal	Polyurethane	13	Tie rod	Steel
5.1	Rod seal	Nitrile / Viton rubber + PTFE	14	Tie rod nut	Steel
6	Front cylinder head	Steel	15	Spring washer	Spring steel
7	Cylinder housing	Steel	16	Lock screw	Steel
8	Piston	Steel	17	'O' ring rod	Nitrile / viton rubber
9	Piston seal with guide	NBR+thermoplastic polymer			

Some common mountings available in HCK series.



For complete information on dimensions & mountings contact

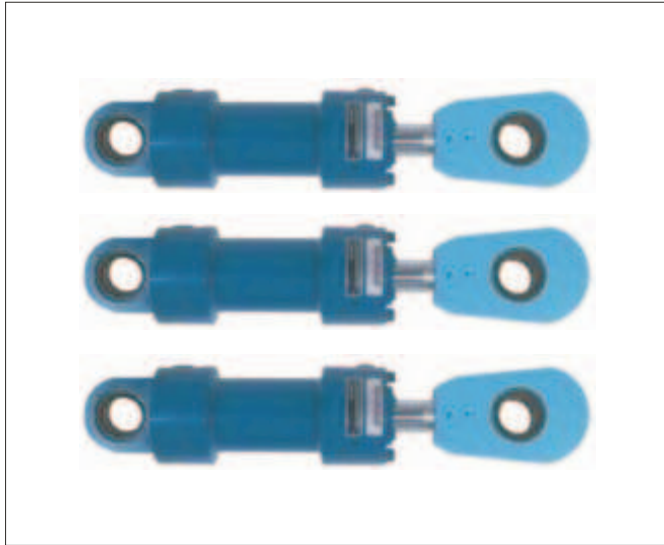
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HYDMARK APPLICON

Hydraulic Cylinders Series HCC

Standard round head type, double acting, high pressure design.

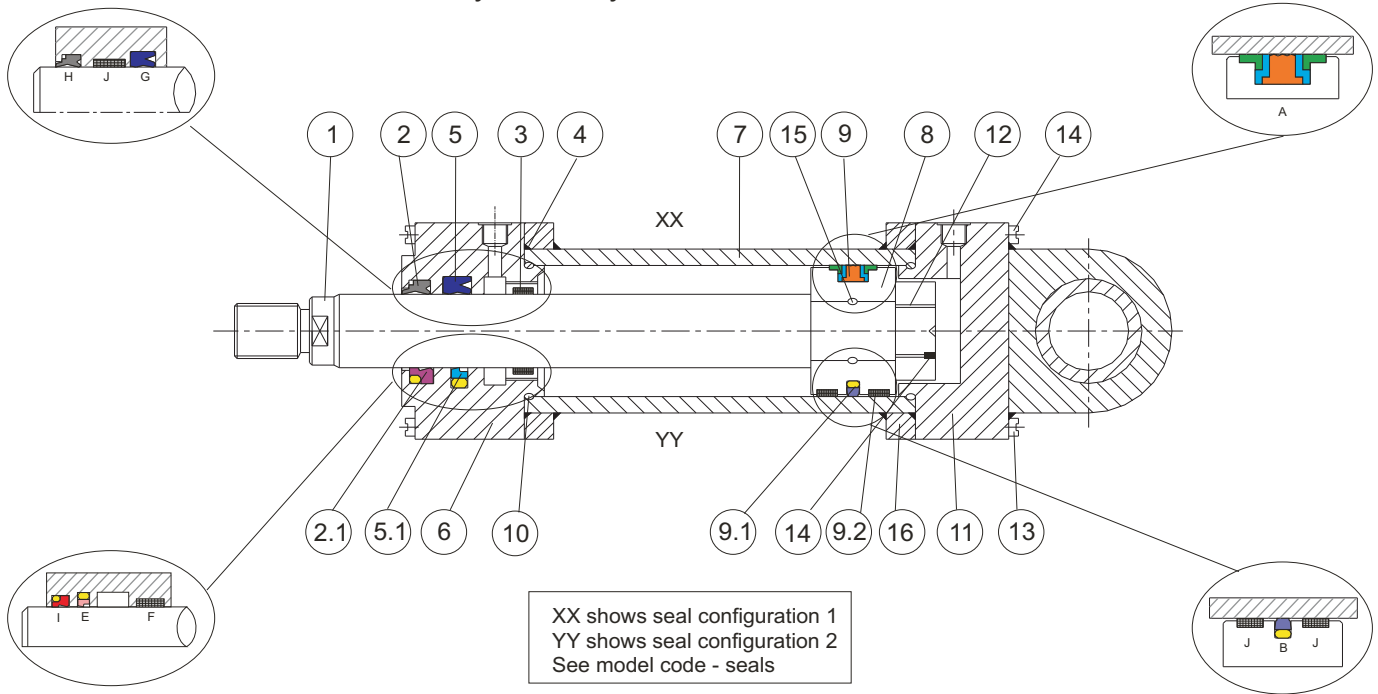


- Round heads as per ISO 6022 standard.
- High pressure, welded counter flange type design
- Nominal pressure 250 bar, max. pressure 320 bar.
- Nine bore diameters of 63, 80, 100, 125, 160, 200, 250, 320 & 400 mm
- Strokes up to 4000 mm, longer on request.
- Seals from Busak + Shamban of Germany, Hallite or DLI of England with international standard seats.
- Fixed or adjustable cushioning available.
- High profile chrome plated rods & roller burnished tubes from Stelmi of Italy.
- Greater overload margins due to wear resistant, high load bearing, PTFE rings for rod & piston guides.
- High service life & easy to maintain.
- Range of mounting types available.

MODEL CODE

HCC	-	80	-	50 + 50	-	250	-	FF	-	1	-	J125	-	1191	-	201	-	5	
Cylinder series, standard round heads as per ISO - 6022.		Piston diameter in mm		Rod (s) diameter in mm second dimension for double-rod cylinders		Stroke in mm.		Attachments		Seals		Cushioning		Date of Manufacture		Job card number			
								FF Front flange FR Rear flange FE Feet CT Mid body trunnion FT Front body trunnion CVR Male clevis - Rear CVF Male clevis - Front CER Swivel with eye - Rear CEF Swivel with eye - Front SP Special, custom built		1 2 3 4		None - omit Rear only - 5 Front only - 6 Front & rear - 7							
										Piston seal DAS compact seal PTFE + NBR Rod seal U cup in PU PTFE + NBR Rod guides PTFE PTFE Scrapers NBR NBR 'O' rings NBR NBR		PTFE + Viton PTFE + Viton PTFE PTFE + Viton Viton		Special seals					

Sectional view of the HCC series hydraulic cylinders.



PART	DESCRIPTION	MATERIAL	PART	DESCRIPTION	MATERIAL
1	Rod	Chromeplated steel	9.1	Piston seal	Nitrile / viton rubber + PTFE
2	Wiper	Nitrile rubber	9.2	Piston guide	PTFE
2.1	Wiper	Nitrile / viton rubber + PTFE	10	'O' ring - cylinder head	Nitrile / viton rubber
3	Rod guide strip	PTFE	11	Rear cylinder head	Steel
4	Head flange	Steel	12	Piston nut	Steel
5	Rod seal	Polyurethane	13	Fastening bolts	High tensile steel
5.1	Rod seal	Nitrile / viton rubber + PTFE	14	Lock screw	Steel
6	Front cylinder head	Steel	15	'O' ring - rod	Nitrile / viton rubber
7	Cylinder housing	Steel	16	Counter Flange	Steel
8	Piston	Steel			
9	Piston seal & guides	NBR+thermoplastic polymer			

Some of high profile seals from Busak + Shamban used in our designs.

S.NO.	PROFILE	NAME	APPLICATION	S.NO.	PROFILE	NAME	APPLICATION
a)		D - A - S Compact Seal Piston Seal	Standard Cylinders, Agricultural machinery, Ø 20-250 mm, -30 to 110C 0.5 m/s, 350 bar	f)		Turcon®Glyd Ring T Rod Seal	Industrial & Mobile hydraulics Ø 8-2500mm, -54 to 200C 15 m/s, 800 bar
b)		Turcon®Step Seal K Piston Seal	Standard cylinders, Mobil hydraulics, Machine tools, Presses, Automobile industry. Ø 8-2500mm, -54 to 200C 0.15 m/s, 800 bar	g)		RU 3 U-Cup Rod Seal	Standard cylinders Industrial hydraulics Ø 6-185mm, -30 to 80C 15 m/s, 400 bar
c)		Turcon®Glyd Ring T Piston Seal		h)		DA 17 Rod Scraper	Standard cylinders Mobile hydraulics Ø 10 - 440 mm, - 30 to 110C 1 m/s
d)		Turcon®AQ Seal Piston Seal	Standard cylinders, Piston accumulators. Ø15 - 700mm, -54 to 200C 2 m/s, 400 bar	l)		Turcon®Excluder Rod Seal	Mobile hydraulics, Presses, Construction machinery, 20-2500mm, -54 to 200C, 15 m/s
e)		Turcon®Stepseal K Rod Seal	Standard cylinders, Mobil hydraulics, Presses Automobile industry. Ø3-2500mm, -54 to 200C 15m/s, 800 bar	J)		Turcite, Zurcon, Luytex Wear Rings	Guide material for piston & Rod ISO 10766 Standard, high load & temp bearing character istics

For complete information on dimensions & mountings contact

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