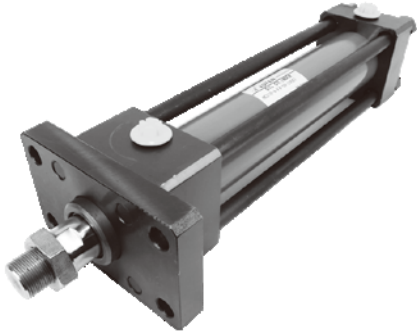


## HC210 HEAVY DUTY CYLINDERS



- Maximum working pressure: 210kgf/cm<sup>2</sup> (21MPa)
- Adopt four-position tie rod structure design, versatile and easy to maintain
- Designed and manufactured according to Japan standard specifications JIS-B8367
- Multiple installation options available

### TYPE

Type	Mark	Graphics	Heat/acid & alkali resistance	Dust cover	Inner diameter (mm)
Double acting cylinder	HC210-A		HC210-AJ	HC210-AH	40 , 50 , 63 80 , 100 , 125 150 , 180 , 200 224 , 250
Biaxial cylinder	HC210-C		HC210-CJ	HC210-CH	
Double acting cylinder with adjustable stroke	HC210-D		HC210-DJ	HC210-DH	

### INSTALLATION FORM

Mark	Type	Graphics	Mark	Type	Graphics
SD	Basic		CA	Clevis	
FA	Rod flange		LA	Foot flange	
FB	Head flange		TC	Mid trunnion	

Tie-rod Hydraulic Cylinder

Mold Hydraulic Cylinders

Swivel & Clamp Hydraulic Cylinders

Booster Cylinders & Unclamping cylinders

ISO Specifications Cylinders

Round Hydraulic Cylinders

Specific Hydraulic Cylinders

Systems & Fittings

## MAXIMUM STROKE CALCULATION

(Table 1)

Form	Status	Terminal coefficient	Form	Status	Terminal coefficient
LA LB		1/4	FB		1/4
		2			2
		4			4
FA		1/4	TC		1
		2			
		4	CA		

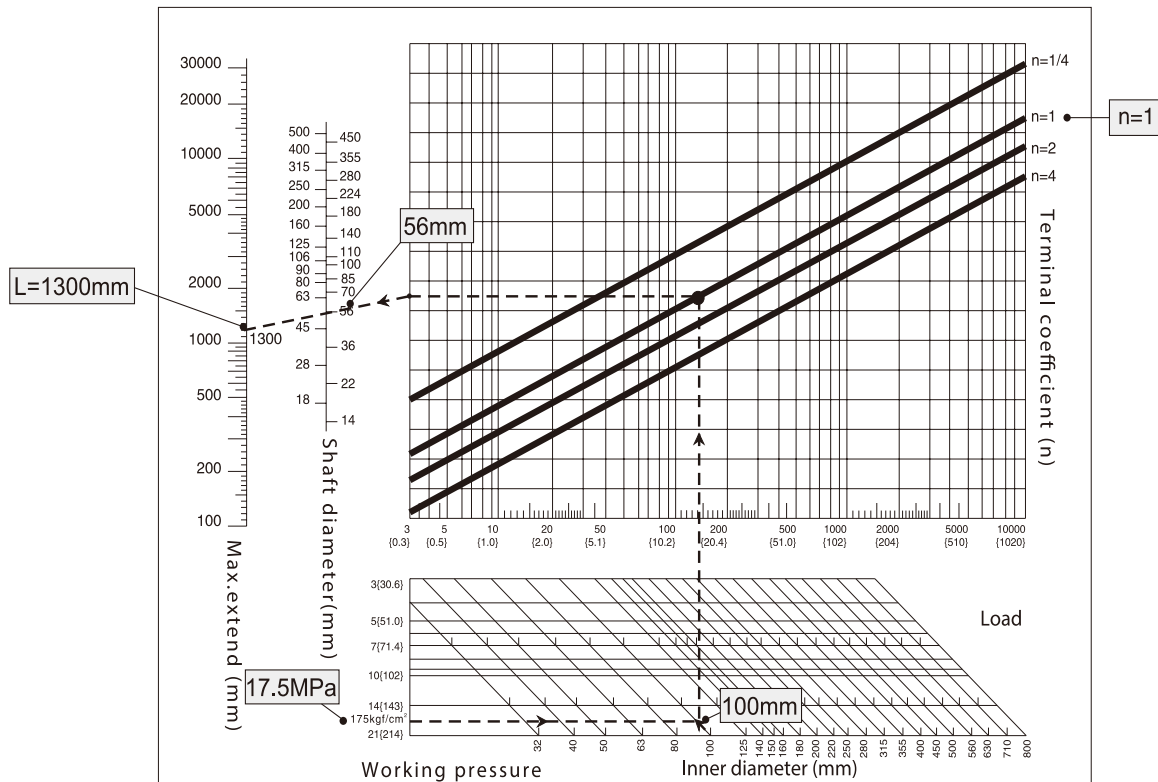
$S=L-\ell$   
 S: Stroke (mm)    L: Extend length (mm)     $\ell$ : Lead in length (mm)

Inner diameter of cylinder is 100mm, shaft diameter 56mm, install form TC, shaft end joint Y and working pressure 17.5MPa. What is the working stroke of the cylinder?

Calculation:

- Installation type TC, shaft end joint Y. Table 1 shows that the terminal coefficient is  $n = 1$ .
- According to inner diameter (100mm), pressure (17.5MPa), terminal coefficient (1), and shaft diameter (56mm) in table 2, can find  $L = 1300\text{mm}$ .
- $\ell$  calculated from installation TC and shaft end joint Y (TC external dimension and shaft end fittings)  
 $\ell = (\text{TC to shaft PH} = \text{QQ} + \text{S}/2) +$   
 (Nut thickness) + (shaft joint end CA)  
 $= 180.5 + \text{S}/2 + 18 + 180 = 378.5 + \text{S}/2\text{mm}$  (lead in length)
- Maximum stroke (S) = Extend length (L) - Lead in length ( $\ell$ )  
 $S = 1300\text{mm} - (378.5 + \text{S}/2)$   
 $= 615\text{mm}$

(Table 2)



## SEAL MATERIAL

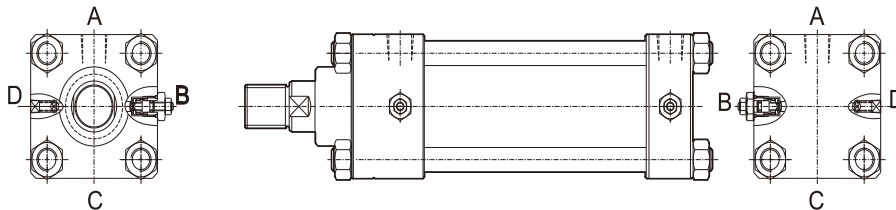
Material Symbol	(NBR)	(FPM)	(PU)
	Oil	Standard	J
Mineral	O	O	O
Water solution	O	O	X
Soluble	O	O	X
Phosphate ester	X	O	X
Temperature	-10°C~+80°C	-10°C~+150°C	-10°C~+80°C
Viscosity	20 ~ 400mm <sup>2</sup> /s{cst}		

Note:

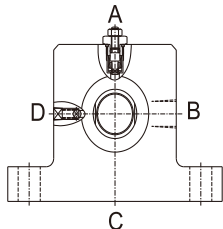
1. Mineral oil
2. If mineral oil is used, NBR will be used without specify selections of material.
3. If phosphate ester oil is used or high temperature is applied, will shown as symbol J.
4. Symbol O = ok, X = cannot be used.
5. Temperature of FPM must set below 150°C when operate long time.

## PORT AND CUSHION POSITIONS

SD type

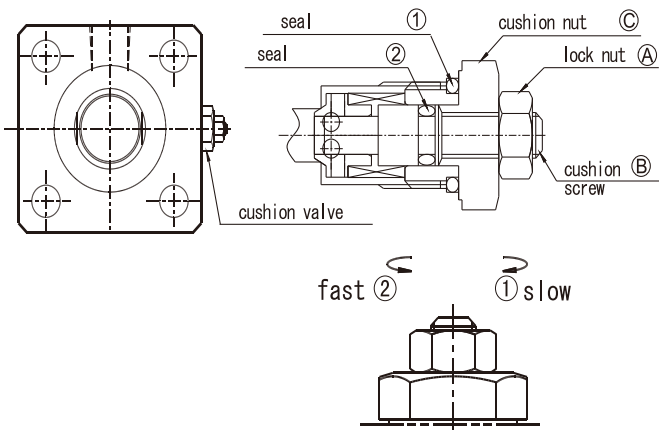


LA type



Standard location A = input port B = cushion position D = check valve position

## USE OF CUSHION VALVES



### Alignment steps

1. Turn lock nut (A) toward counter clockwise with 1/4 circle by wrench.
2. Use wrench to lock cushion nut (C) tightly to prevent (1) (2) oil spill.
3. Use screwdriver to adjust speed of (B)
  - (1) clockwise: rod speed will slow down
  - (2) counter clockwise: rod speed will increase
4. After alignment, fix (B) with hex wrench then tighten (A)

Note: Loose lock nut (A) before adjust (B).

Tie-rod Hydraulic Cylinder

Mold Hydraulic Cylinders

Swivel & Clamp Hydraulic Cylinders

Booster Cylinders & Unclamping cylinders

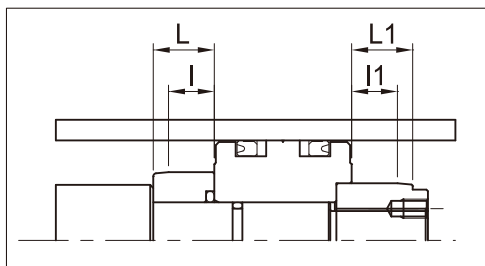
ISO Specifications Cylinders

Round Hydraulic Cylinders

Specific Hydraulic Cylinders

Systems & Fittings

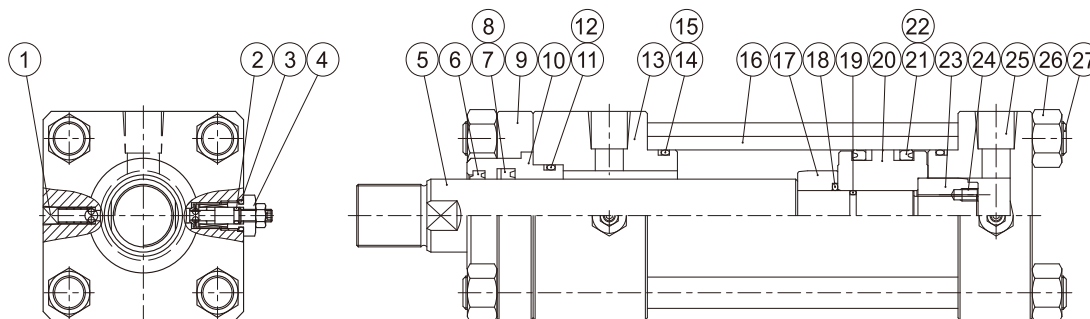
## BUFFER LENGTH



Inner diameter (mm)	Buffer length (front)		Buffer length (rear)	
	L	I	L1	I1
40	20	15	22	17
50、63	20	15	20	15
80、100	25	20	25	20
125	30	25	30	25
140、160	35	30	35	30
180	40	35	40	35
200	45	40	45	40

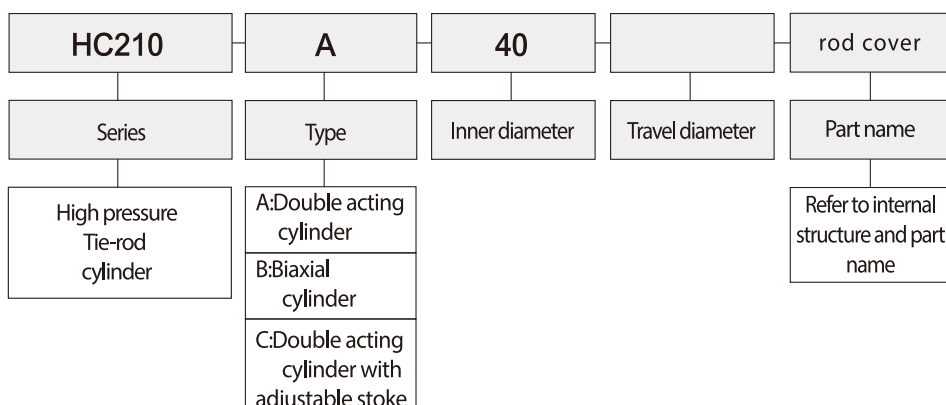
1. Buffering is required when the action speed of the cylinder reaches 100mm/s after the load is applied.
2. When the action speed is greater than 200mm/s, an external buffer should be considered.

## INTERNAL STRUCTURE AND PART NAMES



Item	Part name	Qty	Item	Part name	Qty	Item	Part name	Qty
①	Check and vent valve	2	⑩	Bush	1	⑲	Piston O ring	1
②	Valve O ring	2	⑪	Bush O ring	1	⑳	Piston	1
③	Valve O ring	2	⑫	Bush backing ring	1	㉑	Piston packing	2
④	Cushion aligning valve	2	⑬	Rod cover	1	㉒	Piston backing ring	2
⑤	Piston rod	1	⑭	Cover O ring	2	㉓	Head cushion	1
⑥	Rod dust seal	1	⑮	Cover backing ring	2	㉔	Set screw	1
⑦	Rod seal	1	⑯	Tube	1	㉕	Head cover	1
⑧	Rod backing ring	1	⑰	Rod cushion	1	㉖	Tie-rod nut	8
⑨	Board	1	⑱	Cushion O ring	1	㉗	Tie-rod	4

## ORDER INDICATION

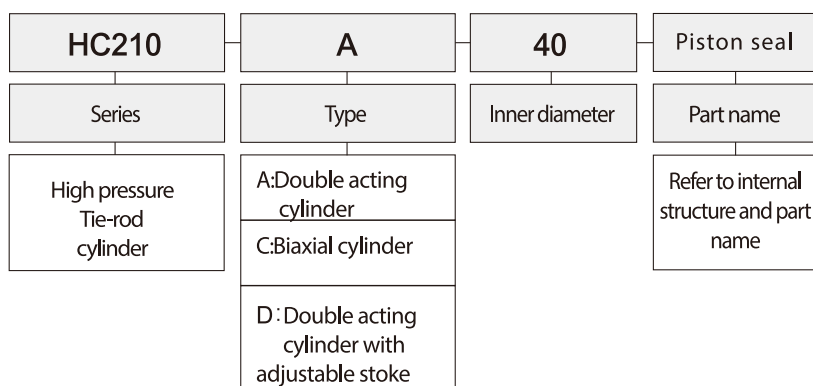


## SEAL SPEC.

Bore Item Name	②	③	⑥	⑦	⑧	⑪	⑫
	Valve O ring	Valve O ring	Rod dust seal	Rod seal	Rod backing ring	Bush O ring	Bush backing ring
	2	2	1	1	1	1	1
40	P5	P11	25×33×6	25×33×5	25×33×2t	G30	30×35×1.25t
50	P5	P11	30×38×6.5	30×40×6	30×40×3t	G35	35×40×1.25t
63	P5	P11	35×43×6.5	35×45×6	35×45×3t	G45	45×50×1.25t
80	P5	P11	40×48×6.5	40×50×6	40×50×3t	G50	50×55×1.25t
100	P5	P11	56×64×6.5	56×66×6	56×66×3t	G65	65×70×1.25t
125	P6	P14	70×80×8	70×80×6	70×80×3t	G85	85×90×1.25t
140	P6	P14	80×90×8	80×90×6	80×90×3t	G100	100×105×1.25t
160	P6	P14	90×100×8	90×105×9	90×105×3t	G100	100×105×1.25t
180	P6	P14	100×110×8	100×115×9	100×115×3t	G115	115×120×1.25t
200	P6	P14	110×120×8	110×125×9	110×125×3t	G130	130×135×1.25t
224	P10A	AS211	125×138×9.5	125×140×9	125×140×3t	G145	145×150×1.25t
250	P10A	AS211	140×153×9.5	140×155×9	140×155×3t	G160	160×170×1.9t

Bore Item Name	⑭	⑮	⑱	⑲	⑳	㉑	㉒
	Cover O ring	Cover backing ring	Cushion O ring	Piston O ring	Piston packing	Piston backing ring	
	2	2	1	1	2	2	
40	G35	35×40×1.25t	P14	AP10A	30×40×6	30×40×3t	
50	G45	45×50×1.25t	P18	P14	40×50×6	40×50×3t	
63	G58	58×63×1.25t	P24	P20	53×63×6	53×63×3t	
80	G75	75×80×1.25t	G30	P24	70×80×6	70×80×3t	
100	G95	95×100×1.25t	G35	G40	85×100×9	85×100×3t	
125	G120	120×125×1.25t	G50	G55	112×125×9	112×125×3t	
140	G135	135×140×1.25t	G60	G55	125×140×9	125×140×3t	
160	G150	150×160×1.9t	G70	G65	145×160×9	145×160×3t	
180	G170	170×180×1.9t	G80	G80	165×180×9	165×180×4t	
200	G190	190×200×1.9t	G95	G90	180×200×12	180×200×4t	
224	G210	210×220×1.9t	G105	G100	204×224×12	204×224×4t	
250	G240	240×250×1.9t	G110	G105	230×250×12	230×250×4t	

## ORDER INDICATION



Tie-rod Hydraulic Cylinder

Mold Hydraulic Cylinders

Swivel & Clamp Hydraulic Cylinders

Booster Cylinders & Unclamping cylinders

ISO Specifications Cylinders

Round Hydraulic Cylinders

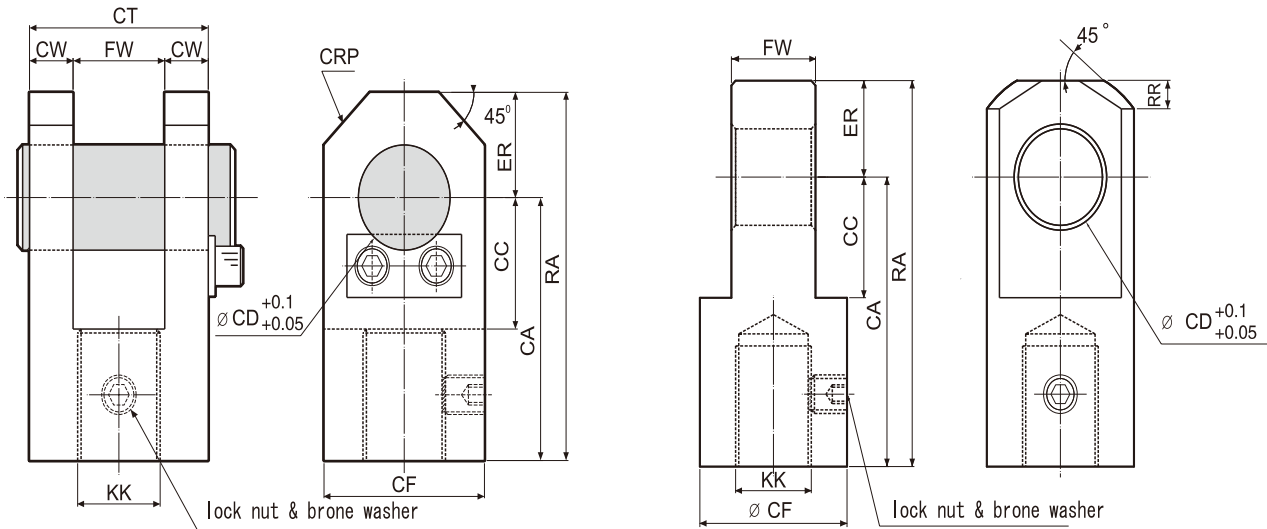
Specific Hydraulic Cylinders

Systems & Fittings

## HC210 CONNECTOR

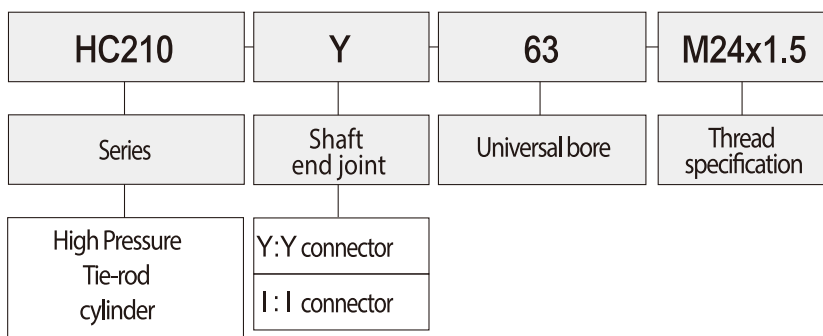
- Y connector

- I connector

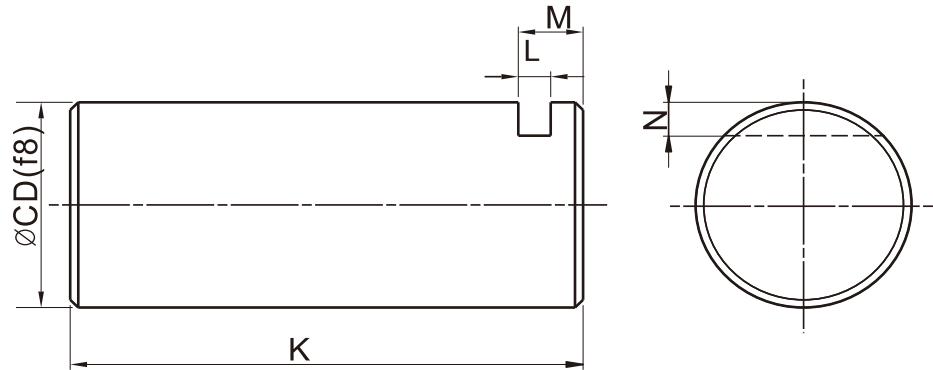


Symbol Bore	KK	FW		CA	RA		CF		CD	CT	CC		ER		CW	RP	RR
		Y	I		Y	I	Y	I			Y	I					
40	M20xP1.5	31.5 <sup>+0.40</sup> <sub>+0.10</sub>	31.5 <sup>-0.10</sup> <sub>-0.40</sub>	70	90	90	40	49	20	63.5	32	28	20	25	16	10	10
50	M24xP1.5	35.5 <sup>+0.40</sup> <sub>+0.10</sub>	35.5 <sup>-0.10</sup> <sub>-0.40</sub>	85	110	115	50	55	25	71.5	45	35	25	30	18	12	12
63	M30xP1.5	40 <sup>+0.40</sup> <sub>+0.10</sub>	40 <sup>-0.10</sup> <sub>-0.40</sub>	115	145	150	60	60	31.5	80	50	43	30	35	20	15	15
80	M39xP1.5	50 <sup>+0.40</sup> <sub>+0.10</sub>	50 <sup>-0.10</sup> <sub>-0.40</sub>	145	185	185	80	80	40	100	60	55	40	40	25	20	20
100	M48xP1.5	63 <sup>+0.60</sup> <sub>+0.10</sub>	63 <sup>-0.10</sup> <sub>-0.40</sub>	180	230	230	100	100	50	126	70	65	50	50	31.5	30	30
125	M64xP2.0	80 <sup>+0.60</sup> <sub>+0.10</sub>	80 <sup>-0.10</sup> <sub>-0.60</sub>	225	290	290	120	120	63	160	90	85	65	65	40	40	30
140	M72xP2.0	80 <sup>+0.60</sup> <sub>+0.10</sub>	80 <sup>-0.10</sup> <sub>-0.60</sub>	240	310	310	140	140	71	160	100	90	70	70	40	45	40
160	M80xP2.0	100 <sup>+0.60</sup> <sub>+0.10</sub>	100 <sup>-0.10</sup> <sub>-0.60</sub>	270	350	350	160	160	80	200	110	100	80	80	50	50	40

## ORDER INDICATION



## PIN



Symbol Bore	CD	K	M	N	L
40	20	76.5	8	3.5	3
50	25	85	9	5.5	6
63	31.5	93	9	5.5	6
80	40	117	12	6.5	6
100	50	143	12	7.5	6
125	63	183	18	10	9
140	71	183	19	11	9
160	80	225	20	12	12

Tie-rod Hydraulic Cylinder

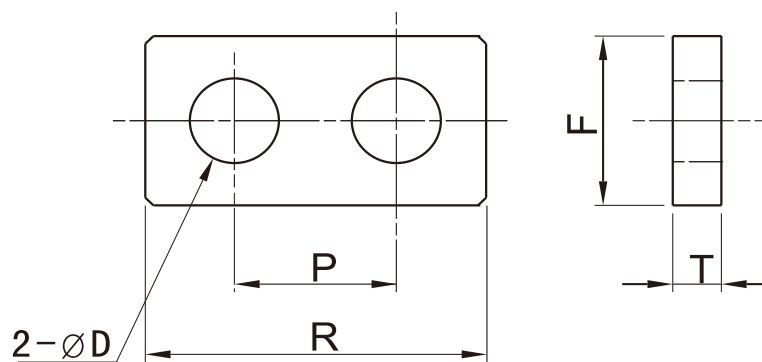
Mold Hydraulic Cylinders

Swivel & Clamp Hydraulic Cylinders

Booster Cylinders & Unclamping cylinders

ISO Specifications Cylinders

## KEEPER



Symbol Bore	R	P	F	T	D
40	28	18	16	3	6.5
50	47	25	25	6	11
63	55	35	25	6	11
80	62	40	25	6	11
100	72	50	25	6	11
125	93	63	32	6	14
140	101	71	32	9	14
160	115	80	38	12	16


Round Hydraulic Cylinders

Specific Hydraulic Cylinders

Systems & Fittings

## ORDER INDICATION

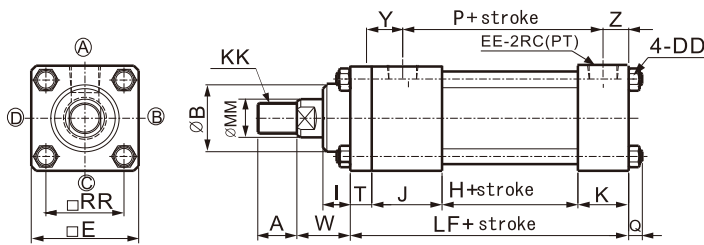
HC210	A			SD	100	200ST
Series	Type	Working pressure	Performance	Installation form	Bore	Stroke
Heavy duty cylinder	A: Double acting cylinder C: Biaxial cylinder D: Double acting cylinder with adjustable stroke	210: 210 kgf/cm <sup>2</sup>	Blank = indicates standard  H: Shaft with dust cover J: Heat/ acid & alkali resistance  (Max. tem. 150°C)	SD: Basic FA: Rod flange FB: Head flange CA: Clevis LA: Foot flange TC: Mid trunnion	32:32mm 40:40mm 50:50mm 63:63mm 80:80mm 100:100mm 125:125mm 150:150mm 180:180mm 200:200mm 224:224mm 250:250mm	Blank = indicates standard Refer maximum stroke in P.061

Cushion	Shaft end joint	Adjustable stroke	Port position	Cushion position
Blank = indicates standard (no cushion) B: Cushion on both ends R: Cushion on rod cover H: Cushion on head cover	Y: Y connector I: I connector Pin	 Double acting cylinder with adjustable stroke length choose 25mm or 50mm	Blank = indicates standard Pls refer to P.062	Blank = indicates standard Pls refer to P.062

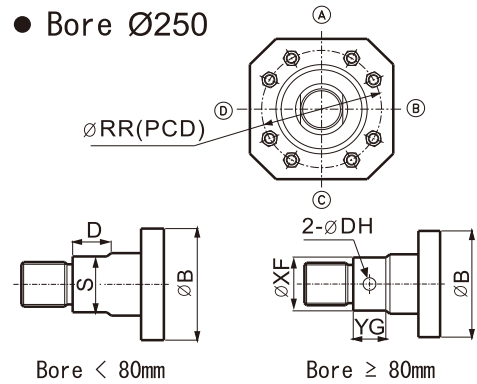


## EXTERNAL DIMENSIONS

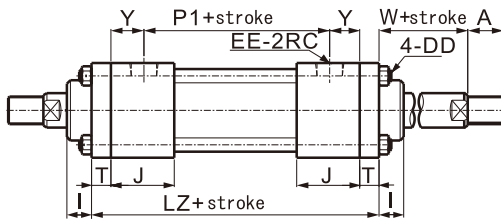
- HC210-A-SD Double acting (basic)
- Bore  $\varnothing 40 \sim \varnothing 224$



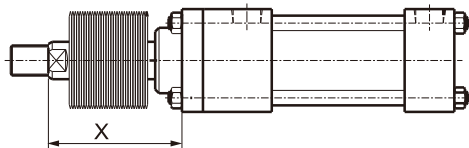
- Bore  $\varnothing 250$



- HC210-C-SD Double rods (basic)



With bellow (HC210-A-H)



Specifying the needed material while order.

- (1) N: NBR
- (2) V:  $F \leq 150^\circ\text{C}$

Symbol	X
Shaft 40	$1/3.5 \times \text{stroke} + 47$
50	$1/3.5 \times \text{stroke} + 50$
63	$1/4 \times \text{stroke} + 61$
80	$1/4 \times \text{stroke} + 55$
100	$1/4 \times \text{stroke} + 60$
125	$1/5 \times \text{stroke} + 69$
140	$1/5 \times \text{stroke} + 70$
160	

Symbol	MM	KK	A	B	D	E	W	H	I	J	K	P	P1	Q
40	25	M20xP1.5	25	40	14	70	30	64	12	47	32	98	98	13
50	30	M24xP1.5	30	46	14	85	30	68	14	52	37	106	106	15
63	35	M30xP1.5	35	55	17	100	35	75	15	57	37	113	113	17
80	45	M39xP1.5	45	65	17	125	35	85	9	67	42	129	129	18
100	56	M48xP1.5	55	80	22	160	40	95	14	67	42	139	139	22
125	70	M64xP2.0	75	95	22	190	45	105	13	77	52	159	159	25
140	80	M72xP2.0	80	110	—	215	50	110	14	77	52	164	164	28
160	90	M80xP2.0	90	120	—	240	55	132	14	80	51	186	186	32
180	100	M95xP2.0	105	130	—	260	55	146	10	96	61	210	—	33
200	112	M100xP2.0	110	140	—	310	55	156	10	106	76	228	—	41
224	125	M120xP2.0	130	155	—	330	60	157	10	106	76	229	—	42
250	140	M130xP2.0	140	170	—	375	65	166	10	126	96	262	—	36

Symbol	S	T	Y	Z	DD	EE	LF	LZ	RR
40	19	13	30	15	M12xP1.5	3/8	156	184	50
50	24	15	33	18	M14xP1.5	1/2	172	202	62
63	30	18	38	18	M16xP1.5	1/2	187	225	74
80	41	24	45	20	M18xP1.5	3/4	218	267	92
100	50	26	45	20	M22xP1.5	3/4	230	281	120
125	65	33	50	25	M26xP1.5	1	267	325	145
140	—	36	50	25	M30xP1.5	1	275	336	165
160	—	41	53	24	M33xP2.0	1	304	374	185
180	—	41	64	29	M39xP2.0	1 1/4	344	—	195
200	—	51	70	40	M45xP2.0	1 1/2	389	—	230
224	—	51	70	40	M48xP2.0	1 1/2	390	—	245
250	—	56	78	48	M39xP2.0	2	444	—	355

Symbol	DH	XF	YG
80	10	79	20
85	10	84	20
90	10	89	20
100	12	99	24
110	12	109	24
125	12	124	24
140	12	139	24

Tie-rod Hydraulic Cylinder

Mold Hydraulic Cylinders

Swivel & Clamp Hydraulic Cylinders

Booster Cylinders & Unclamping cylinders

ISO Specifications Cylinders

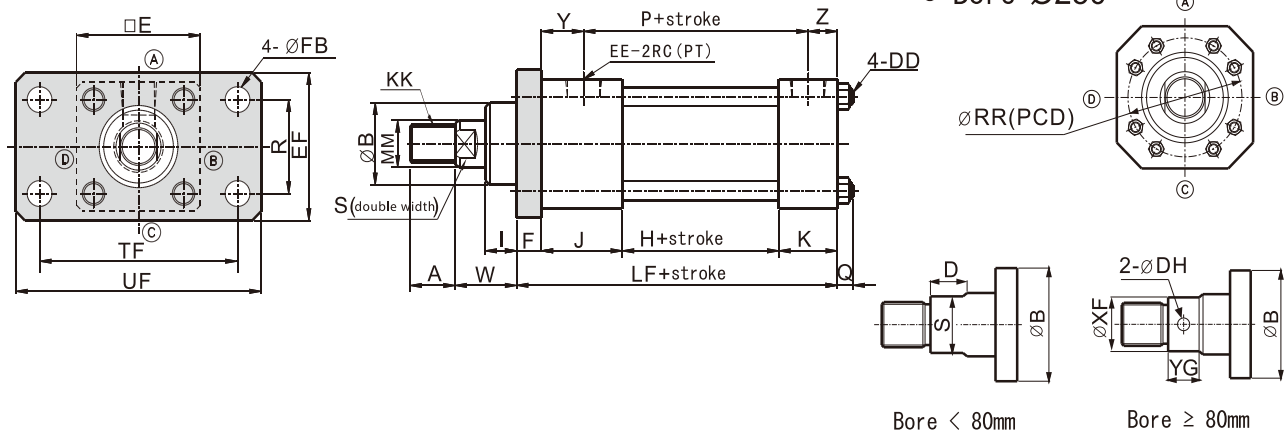
Round Hydraulic Cylinders

Specific Hydraulic Cylinders

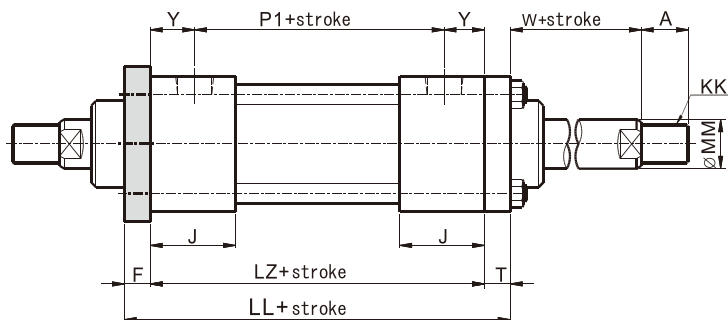
Systems & Fittings

## EXTERNAL DIMENSIONS

### • HC210-A-FA Double acting (rod flange)



### • HC210-C-FA Double rods (rod flange)



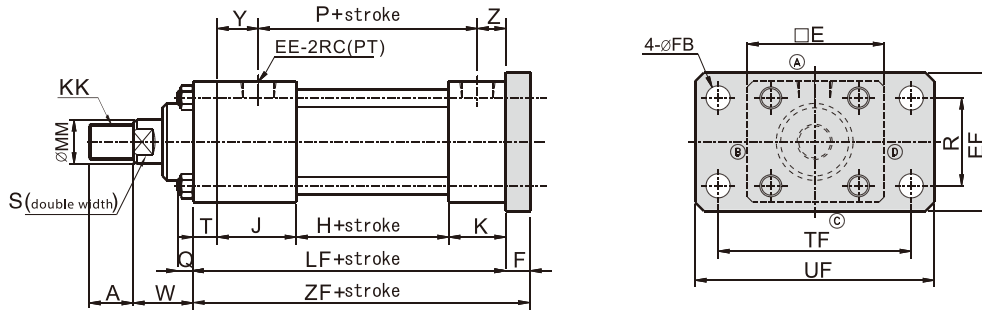
Symbol	DH	XF	YG
80	10	79	20
85	10	84	20
90	10	89	20
100	12	99	24
110	12	109	24
125	12	124	24
140	12	139	24

Symbol	Bore														
	MM	KK	A	B	D	E	F	H	J	K	P	P1	Q	DD	I
40	25	M20xP1.5	25	40	14	70	15	64	47	32	98	98	13	M12xP1.5	9
50	30	M24xP1.5	30	46	14	85	20	68	52	37	106	106	15	M14xP1.5	9
63	35	M30xP1.5	35	55	17	100	24	75	57	37	113	113	17	M16xP1.5	9
80	45	M39xP1.5	45	65	17	125	24	85	67	42	129	129	18	M18xP1.5	9
100	56	M48xP1.5	55	80	22	160	31	95	67	42	139	139	22	M22xP1.5	9
125	70	M64xP2.0	75	95	22	190	37	105	77	52	159	159	25	M26xP1.5	9
140	80	M72xP2.0	80	110	—	215	41	110	77	52	164	164	28	M30xP1.5	9
160	90	M80xP2.0	90	120	—	240	46	132	80	51	186	186	32	M33xP2.0	9
180	100	M95xP2.0	105	130	—	260	56	146	96	61	210	—	33	M39xP2.0	—
200	112	M100xP2.0	110	140	—	310	66	156	106	76	228	—	41	M45xP2.0	—
224	125	M120xP2.0	130	155	—	330	71	157	106	76	229	—	42	M48xP2.0	—
250	140	M130xP2.0	140	170	—	375	81	166	126	96	262	—	36	M39xP2.0	—

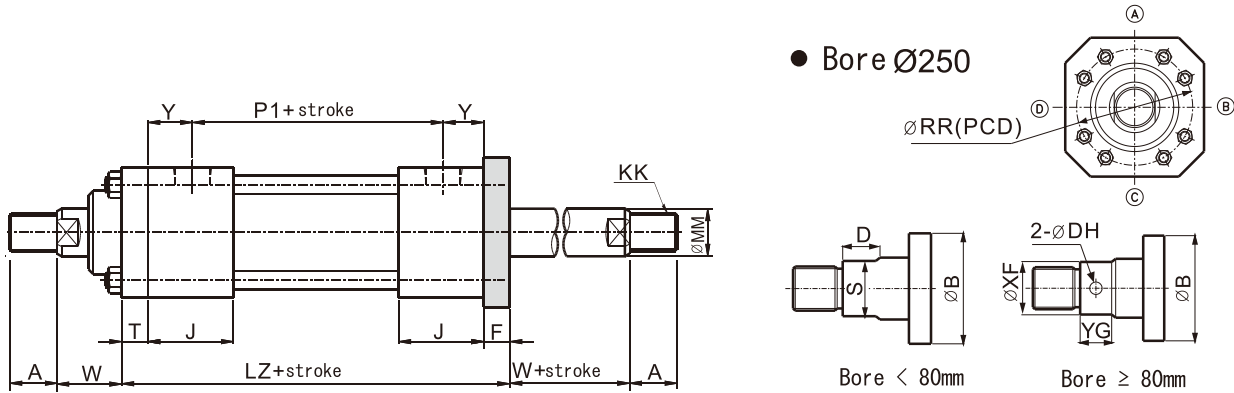
Symbol	Bore													
	R	S	T	W	Y	Z	EE	EF	FB	LL	LF	LZ	TF	UF
40	50	19	13	30	30	15	3/8	73	11	186	158	158	98	122
50	60	24	15	30	33	18	1/2	88	14	207	177	172	118	145
63	73	30	18	35	38	18	1/2	106	18	231	193	189	140	175
80	90	41	24	35	45	20	3/4	130	22	267	218	219	175	210
100	115	50	26	40	45	20	3/4	165	26	286	235	229	215	260
125	145	65	33	45	50	25	1	205	33	329	271	259	270	330
140	160	—	36	50	50	25	1	218	33	341	280	264	280	335
160	180	—	41	55	53	24	1	243	36	379	309	292	315	375
180	200	—	41	55	64	29	1 1/4	265	39	—	359	—	345	412
200	230	—	51	55	70	40	1 1/2	315	48	—	404	—	412	500
224	250	—	51	60	70	40	1 1/2	335	48	—	410	—	425	515
250	285	—	56	65	78	48	2	385	56	—	469	—	490	590

## EXTERNAL DIMENSIONS

- HC210-A-FB Double acting(head flange)



- HC210-C-FB Double rods(head flange)



Symbol Bore	MM	KK	A	B	D	E	F	W	H	J	K	N	P	Q	R
40	25	M20xP1.5	25	40	14	70	15	30	64	47	32	28	98	13	50
50	30	M24xP1.5	30	46	14	85	20	30	68	52	37	25	106	15	60
63	35	M30xP1.5	35	55	17	100	24	35	75	57	37	18	113	17	73
80	45	M39xP1.5	45	65	17	125	24	35	85	67	42	24	129	18	90
100	56	M48xP1.5	55	80	22	160	21	40	95	67	42	35	139	22	115
125	70	M64xP2.0	75	95	22	190	37	45	105	77	52	41	159	25	145
140	80	M72xP2.0	80	110	—	215	41	50	110	77	52	45	164	28	160
160	90	M80xP2.0	90	120	—	240	46	55	132	80	51	50	186	32	180
180	100	M95xP2.0	105	130	—	260	56	55	146	96	61	40	210	33	200
200	112	M100xP2.0	110	140	—	310	66	55	156	106	76	40	228	41	230
224	125	M120xP2.0	130	155	—	330	71	60	157	106	76	40	229	42	250
250	140	M130xP2.0	140	170	—	375	81	65	166	126	96	40	262	36	285

Symbol Bore	S	T	Y	Z	EE	EF	FB	LF	TF	UF	ZF	LZ
40	19	13	30	15	3/8	73	11	156	98	122	171	186
50	24	15	33	18	1/2	88	14	172	118	145	192	207
63	30	18	38	18	1/2	106	18	187	140	175	211	231
80	41	24	45	20	3/4	130	22	218	175	210	242	267
100	50	26	45	20	3/4	165	26	230	215	260	261	286
125	65	33	50	25	1	205	33	267	270	330	304	329
140	—	36	50	25	1	218	33	275	280	335	316	341
160	—	41	53	24	1	243	36	304	315	375	350	379
180	—	41	64	29	1 1/4	265	39	344	345	412	400	—
200	—	51	70	40	1 1/2	315	45	389	412	500	455	—
224	—	51	70	40	1 1/2	335	48	390	425	515	461	—
250	—	56	78	48	2	385	56	444	490	590	525	—

Symbol Shaft	DH	XF	YG
80	10	79	20
85	10	84	20
90	10	89	20
100	12	99	24
110	12	109	24
125	12	124	24
140	12	139	24

Tie-rod Hydraulic Cylinder

Mold Hydraulic Cylinders

Swivel & Clamp Hydraulic Cylinders

Booster Cylinders & Unclamping cylinders

ISO Specifications Cylinders

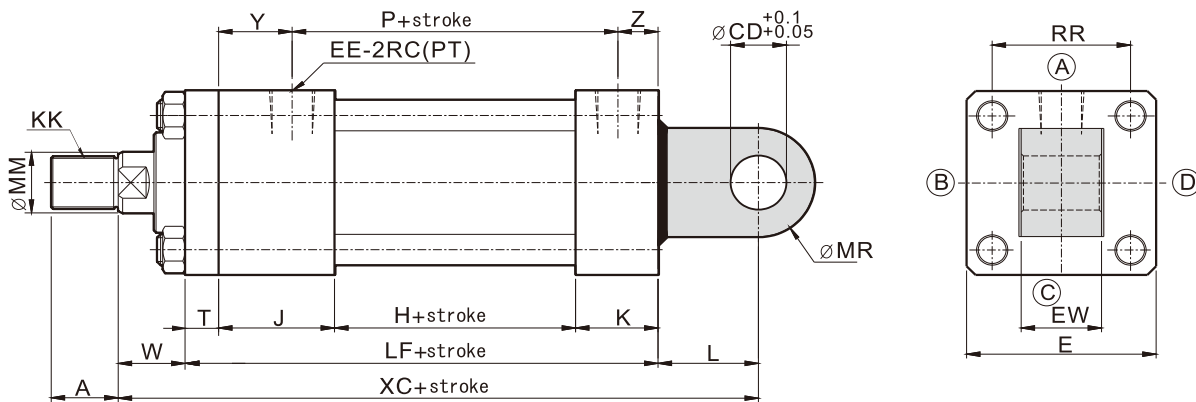
Round Hydraulic Cylinders

Specific Hydraulic Cylinders

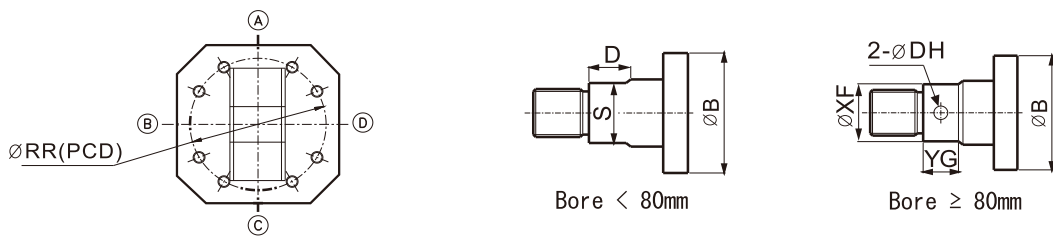
Systems & Fittings

## EXTERNAL DIMENSIONS

- HC210-A-CA Double acting (clevis)



- Bore  $\varnothing 250$



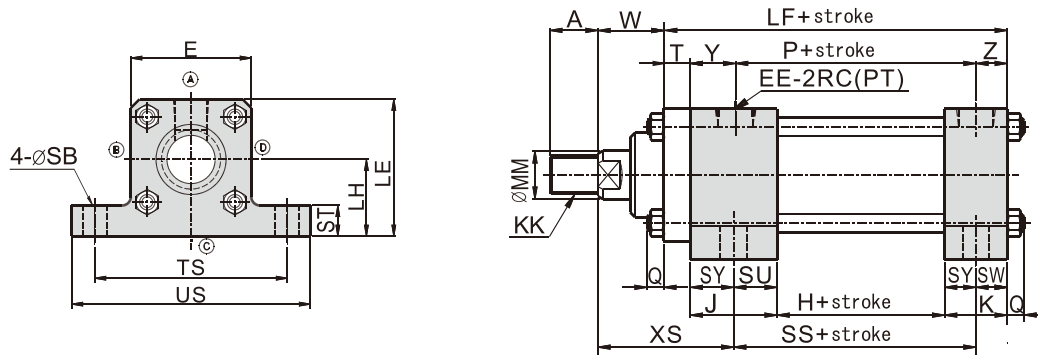
Symbol Bore	MM	KK	A	B	D	E	W	H	J	K	L	P	S	T	Y	Z
40	25	M20xP1.5	25	40	14	70	30	64	47	32	35	98	19	13	30	15
50	30	M24xP1.5	30	46	14	85	30	68	52	37	45	106	24	15	33	18
63	35	M30xP1.5	35	55	17	100	35	75	57	37	35	113	30	18	38	18
80	45	M39xP1.5	45	65	17	125	35	85	67	42	70	129	41	24	45	20
100	56	M48xP1.5	55	80	22	160	40	95	67	42	80	139	50	26	45	20
125	70	M64xP2.0	75	95	22	190	45	105	77	52	105	159	65	33	50	25
140	80	M72xP2.0	80	110	—	215	50	110	77	52	115	164	—	36	50	25
160	90	M80xP2.0	90	120	—	240	55	132	80	51	125	186	—	41	53	24
180	100	M95xP2.0	105	130	—	260	55	146	96	61	145	210	—	41	64	29
200	112	M100xP2.0	110	140	—	310	55	156	106	76	155	228	—	51	70	40
224	125	M120xP2.0	130	155	—	330	60	157	106	76	175	229	—	51	70	40
250	140	M130xP2.0	140	170	—	375	65	166	126	96	195	262	—	56	78	48

Symbol Bore	CD	EE	EW	LF	MR	RR	XC
40	20	3/8	32	156	20	50	221
50	25	1/2	36	172	25	62	247
63	31.5	1/2	40	187	31.5	74	277
80	40	3/4	50	218	40	92	323
100	50	3/4	63	230	50	120	350
125	63	1	80	267	63	145	417
140	71	1	80	275	71	165	440
160	80	1	100	304	80	185	484
180	90	1 1/4	125	344	90	195	544
200	100	1 1/2	125	389	100	230	599
224	112	1 1/2	140	390	112	245	625
250	125	2	160	444	125	355	704

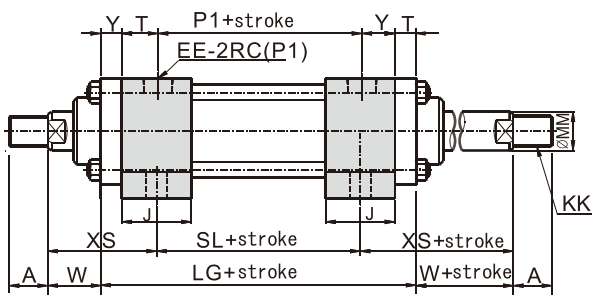
Symbol Shaft	DH	XF	YG
80	10	79	20
85	10	84	20
90	10	89	20
100	12	99	24
110	12	109	24
125	12	124	24
140	12	139	24

## EXTERNAL DIMENSIONS

- HC210-A-LA Double acting (foot flange)

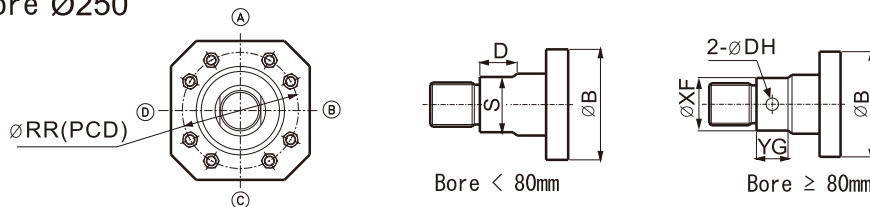


- HC210-C-LA Ddouble rods (foot flange)



Shaft	Symbol	DH	XF	YG
80		10	79	20
85		10	84	20
90		10	89	20
100		12	99	24
110		12	109	24
125		12	124	24
140		12	139	24

- Bore ∅250



Symbol	Bore																	
	MM	KK	A	B	D	E	H	J	K	L	P	P1	Q	S	T	Y	Z	W
40	25	M20xP1.5	25	40	14	70	64	47	32	35	98	98	13	19	13	30	15	30
50	30	M24xP1.5	30	46	14	85	68	52	37	45	106	106	15	24	15	33	18	30
63	35	M30xP1.5	35	55	17	100	75	57	37	35	113	113	17	30	18	38	18	35
80	45	M39xP1.5	45	65	17	125	85	67	42	70	129	129	18	41	24	45	20	35
100	56	M48xP1.5	55	80	22	160	95	67	42	80	139	139	22	50	26	45	20	40
125	70	M64xP2.0	75	95	22	190	105	77	52	105	159	159	25	65	33	50	25	45
140	80	M72xP2.0	80	110	—	215	110	77	52	115	164	164	28	—	36	50	25	50
160	90	M80xP2.0	90	120	—	240	132	80	51	125	186	186	32	—	41	53	24	55

Symbol	Bore														
	EE	LE	LF	LG	LH	SB	SL	SS	SU	SY	TS	ST	US	XS	SW
40	3/8	77	156	186	42±0.15	11	126	111	31	16	98	15	122	59	16
50	1/2	97.5	172	202	55±0.15	14	136	120	34	18	118	20	145	63	19
63	1/2	113	187	222	63±0.15	18	153	132	39	18	140	25	175	71	19
80	3/4	137.5	218	253	75±0.25	22	177	152	46	21	175	30	210	80	21
100	3/4	165	230	270	85±0.25	26	183	162	44	23	215	35	260	89	19
125	1	200	267	312	105±0.25	33	203	182	49	28	270	45	330	106	24
140	1	219.5	275	317	112±0.25	33	208	187	49	28	280	45	335	114	24
160	1	245	304	359	125±0.25	36	230	212	49	31	315	50	375	127	28

Tie-rod Hydraulic Cylinder

Mold Hydraulic Cylinders

Swivel & Clamp Hydraulic Cylinders

Booster Cylinders & Unclamping cylinders

ISO Specifications Cylinders

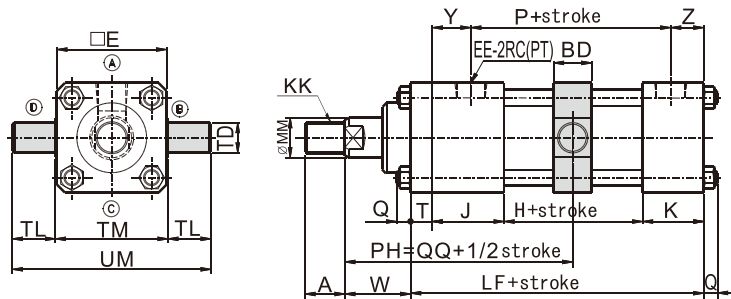
Round Hydraulic Cylinders

Specific Hydraulic Cylinders

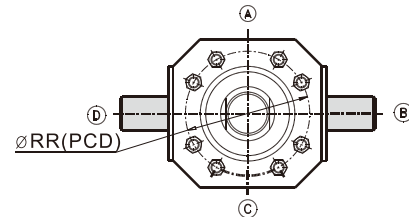
Systems & Fittings

## EXTERNAL DIMENSIONS

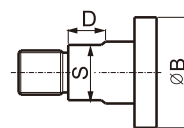
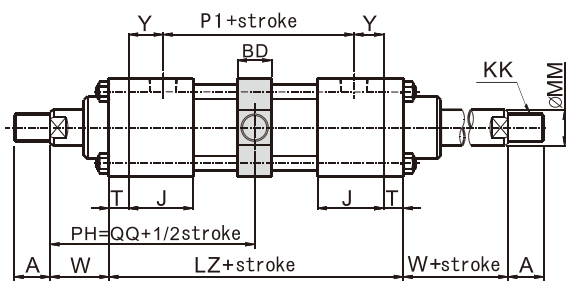
- HC210-A-TC Double acting (mid trunnion)



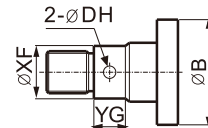
- Bore Ø250



- HC210-C-TC Double rods (mid trunnion)



Bore < 80mm



Bore ≥ 80mm

Symbol	MM	KK	A	B	D	E	W	H	J	K	P	P1	Q	S	T	Y	Z	LF
40	25	M20xP1.5	25	40	14	70	30	64	47	32	98	98	13	19	13	30	15	156
50	30	M24xP1.5	30	46	14	85	30	68	52	37	106	106	15	24	15	33	18	172
63	35	M30xP1.5	35	55	17	100	35	75	57	37	113	113	17	30	18	38	18	187
80	45	M39xP1.5	45	65	17	125	35	85	67	42	129	129	18	41	24	45	20	218
100	56	M48xP1.5	55	80	22	160	40	95	67	42	139	139	22	50	26	45	20	230
125	70	M64xP2.0	75	95	22	190	45	105	77	52	159	159	25	65	33	50	25	267
140	80	M72xP2.0	80	110	—	215	50	110	77	52	164	164	28	—	36	50	25	275
160	90	M80xP2.0	90	120	—	240	55	132	80	51	186	186	32	—	41	53	24	304
180	100	M95xP2.0	105	130	—	260	55	146	96	61	210	—	33	—	41	64	29	344
200	112	M100xP2.0	110	140	—	310	55	156	106	76	228	—	41	—	51	70	40	389
224	125	M120xP2.0	130	155	—	330	60	157	106	76	229	—	42	—	51	70	40	390
250	140	M130xP2.0	140	170	—	375	65	166	126	96	262	—	36	—	56	78	48	444

Symbol	BD	EE	LZ	TD	TL	TM	UM	QQ
40	33	3/8	184	25	20	73	123	122
50	33	1/2	202	25	25	88	138	131
63	42	1/2	225	31.5	31.5	106	169	147.5
80	52	3/4	267	40	40	128	208	168.5
100	62	3/4	281	50	50	170	270	180.5
125	77	1	325	63	63	205	331	207.5
140	87	1	336	76	71	215	347	218
160	97	1	374	80	80	255	415	242
180	107	1 1/4	—	90	90	280	460	265
200	117	1 1/2	—	100	100	320	520	290
224	137	1 1/2	—	112	112	355	579	295.5
250	147	2	—	125	125	400	650	330

Symbol	DH	XF	YG
80	10	79	20
85	10	84	20
90	10	89	20
100	12	99	24
110	12	109	24
125	12	124	24
140	12	139	24