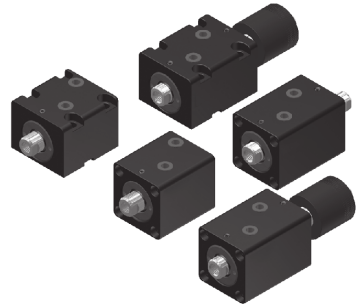


Hydraulic cylinders

HCB Front Mounting	
HCB...D Front Mounting (Double End Rod Type)	
HCQ Side Mounting	
HCQ...D Side Mounting (Double End Rod Type)	
HCB...DA, HCB...DB Adjustable Forward Stroke Cylinder	A:25mm B:50mm
HCQ...DA, HCQ...DB Adjustable Forward Stroke Cylinder	A:25mm B:50mm



- Short stroke and compact body design minimizes total length.
- The cylinder barrel is manufactured from structural carbon steel. Internal wall is specially treated, featuring maximum smoothness and long service.
- High quality and durability.

Specification

Bore sizes of cylinder (mm)	φ 20	φ 25	φ 32	φ 40	φ 50	φ 63	φ 80
The range of stroke (mm)	30		60	80	90	100	
Power fluid	Filtered oil						
Material	Carbon steel						
The range of pressure (MPa)	14(140kgf/cm ²)						
The range of temperature (°C)	-10 ~ +60						

How to order

HCB	50	30	Z	D	A
Type	Bore	Stroke	Rod end type	End rod type	Adjustable stroke
 HCB	20-φ 20mm 25-φ 25mm 32-φ 32mm 40-φ 40mm 50-φ 50mm 63-φ 63mm 80-φ 80mm	5 - 5mm 10 - 10mm 15 - 15mm 20 - 20mm 25 - 25mm 30 - 30mm 35 - 35mm 40 - 40mm 45 - 45mm 50 - 50mm 60 - 60mm 70 - 70mm 80 - 80mm 90 - 90mm 100 - 100mm	 No Code: Female thread in rod end	 D: Double end rod type	None: standard A: Adjustable 25mm B: Adjustable 50mm Note: this number can only be used for the adjustable type.
 HCQ			 Z: Male thread in rod end		
			 R, L: Unilateral female thread		

Standard stroke

● Standard products ○ Articles made to order

Type	Bore \ Stroke	Stroke (mm)															
		5	10	15	20	25	30	35	40	45	50	60	70	80	90	100	
HCB HCB-Z	φ 20	○	●	○	●	○	●	○	●	—	—	—	—	—	—	—	
	φ 25	○	●	○	●	○	●	○	●	○	●	—	—	—	—	—	
	φ 32	●	●	●	●	○	●	○	●	○	●	●	—	—	—	—	
	φ 40	●	●	●	●	●	●	○	●	○	●	●	●	—	—	—	
	φ 50	●	●	●	●	●	●	○	●	○	●	●	●	●	—	—	
	φ 63	●	●	●	●	●	●	○	●	○	●	●	●	●	●	●	
HCB-D HCB-ZD HCB-LD	φ 32	○	●	○	●	○	●	○	●	○	●	—	—	—	—	—	
	φ 40	○	●	○	●	○	●	○	●	○	●	—	—	—	—	—	
	φ 50	○	●	○	●	○	●	○	●	○	●	—	—	—	—	—	
	φ 63	○	●	○	●	○	●	○	●	○	●	—	—	—	—	—	
HCB-DA HCB-ZDA HCB-DB HCB-ZDB	φ 32	○	●	○	●	○	●	○	●	○	●	—	—	—	—	—	
	φ 40	○	●	○	●	○	●	○	●	○	●	—	—	—	—	—	
	φ 50	○	●	○	●	○	●	○	●	○	●	—	—	—	—	—	
	φ 63	○	●	○	●	○	●	○	●	○	●	—	—	—	—	—	

Type	Bore \ Stroke	Stroke (mm)															
		5	10	15	20	25	30	35	40	45	50	60	70	80	90	100	
HCQ HCQ-Z	φ 32	○	●	○	●	○	●	○	●	○	●	—	—	—	—	—	
	φ 40	○	●	○	●	○	●	○	●	○	●	—	—	—	—	—	
	φ 50	○	●	○	●	○	●	○	●	○	●	—	—	—	—	—	
	φ 63	○	●	○	●	○	●	○	●	○	●	—	—	—	—	—	
HCQ-D HCQ-ZD HCQ-RD HCQ-LD	φ 32	○	●	○	●	○	●	○	●	○	●	—	—	—	—	—	
	φ 40	○	●	○	●	○	●	○	●	○	●	—	—	—	—	—	
	φ 50	○	●	○	●	○	●	○	●	○	●	—	—	—	—	—	
	φ 63	○	●	○	●	○	●	○	●	○	●	—	—	—	—	—	
HCQ-DA HCQ-ZDA HCQ-DB HCQ-ZDB	φ 32	○	●	○	●	○	●	○	●	○	●	—	—	—	—	—	
	φ 40	○	●	○	●	○	●	○	●	○	●	—	—	—	—	—	
	φ 50	○	●	○	●	○	●	○	●	○	●	—	—	—	—	—	
	φ 63	○	●	○	●	○	●	○	●	○	●	—	—	—	—	—	

- TC
- TS
- RP
- HC
- HC_M
- HCK
- TH
- DO
- DX
DW
- DM
- DH
- DK

Theoretic Force

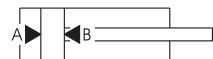
Unit: KN

Bore (mm)	Rod (mm)	Pressure area (mm ²)	Operating pressure (MPa)									
			6	7	8	9	10	11	12	13	14	
φ 20	φ 12	A	314	1.88	2.20	2.51	2.83	3.14	3.46	3.77	4.08	4.40
		B	201	1.21	1.41	1.61	1.81	2.01	2.21	2.41	2.61	2.81
φ 25	φ 14	A	491	2.95	3.44	3.93	4.42	4.91	5.40	5.89	6.38	6.87
		B	337	2.02	2.36	2.70	3.03	3.37	3.71	4.04	4.38	4.72
φ 32	φ 20	A	804	4.83	5.63	6.43	7.24	8.04	8.85	9.65	10.46	11.26
		B	490	2.94	3.43	3.92	4.41	4.90	5.39	5.88	6.37	6.86
φ 40	φ 25	A	1257	7.54	8.80	10.05	11.31	12.57	13.82	15.08	16.34	17.59
		B	766	4.59	5.36	6.13	6.89	7.66	8.42	9.19	9.95	10.72
φ 50	φ 30	A	1963	11.78	13.74	15.71	17.67	19.63	21.60	23.56	25.53	27.49
		B	1257	7.54	8.80	10.05	11.31	12.57	13.82	15.08	16.34	17.59
φ 63	φ 35	A	3117	18.70	21.82	24.94	28.06	31.17	34.29	37.41	40.52	43.64
		B	2155	12.93	15.09	17.24	19.40	21.55	23.71	25.86	28.02	30.17
φ 80	φ 45	A	5027	30.16	35.19	40.21	45.24	50.27	55.29	60.32	65.35	70.37
		B	3436	20.62	24.05	27.49	30.93	34.36	37.80	41.23	44.67	48.11

The method of calculation
(Hydraulic cylinders' force)

$$F = P \times A - f$$

- F: Cylinders' force (N)
- P: Operating pressure (MPa)
- A: Piston area (mm²)
- f: Friction drag (N)



How to order the seal kit

HC **■** SK

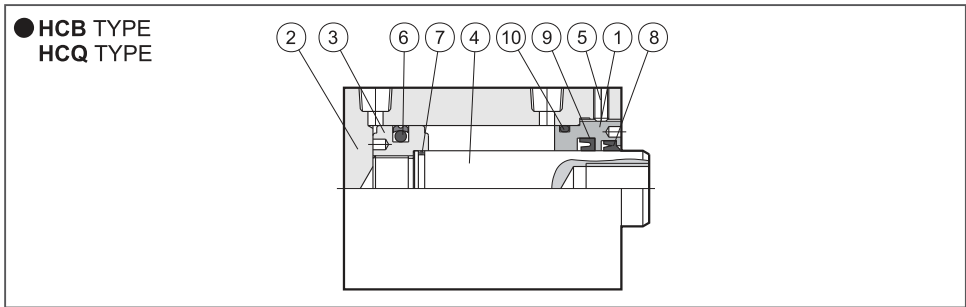
B
Q

Bore	Seal kit
20	HCBSK20 - Including No.6,7,8,9,10
25	HCBSK25 - Including No.6,7,8,9,10
32	HCBSK32,HCQSK32 - Including No.6,7,8,9,10
40	HCBSK40,HCQSK40 - Including No.6,7,8,9,10
50	HCBSK50,HCQSK50 - Including No.6,7,8,9,10
63	HCBSK63,HCQSK63 - Including No.6,7,8,9,10
80	HCBSK80 - Including No.6,7,8,9,10

HC **■** SK D

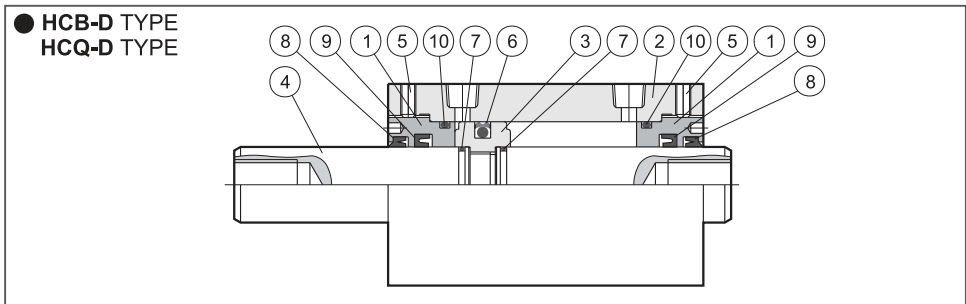
B
Q

Bore	Seal kit
32	HCBSK32D,HCQSK32D - Including No.6,7,8,9,10
40	HCBSK40D,HCQSK40D - Including No.6,7,8,9,10
50	HCBSK50D,HCQSK50D - Including No.6,7,8,9,10
63	HCBSK63D,HCQSK63D - Including No.6,7,8,9,10
80	HCBSK80D - Including No.6,7,8,9,10



Parts List

No.	Part name	Quantity	No.	Part name	Quantity	No.	Part name	Quantity
1	Rod cover	1	5	Set screw	1	9	Rod packing	1
2	Cylinder tube	1	6	Piston packing	1	10	Cylinder gasket	1
3	Piston	1	7	Piston gasket	1	11		
4	Piston rod	1	8	Dust wiper	1	12		



Parts List

No.	Part name	Quantity	No.	Part name	Quantity	No.	Part name	Quantity
1	Rod cover	2	5	Set screw	2	9	Rod packing	2
2	Cylinder tube	1	6	Piston packing	1	10	Cylinder gasket	2
3	Piston	1	7	Piston gasket	2	11		
4	Piston rod	1	8	Dust wiper	2	12		

How to order the seal kit

HC **SK** D

B
Q

Bore	Seal kit
32	HCBSK32D,HCQSK32D - Including No.6,7,8,9,10
40	HCBSK40D,HCQSK40D - Including No.6,7,8,9,10
50	HCBSK50D,HCQSK50D - Including No.6,7,8,9,10
63	HCBSK63D,HCQSK63D - Including No.6,7,8,9,10
80	HCBSK80D - Including No.6,7,8,9,10

TC

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RP

HC

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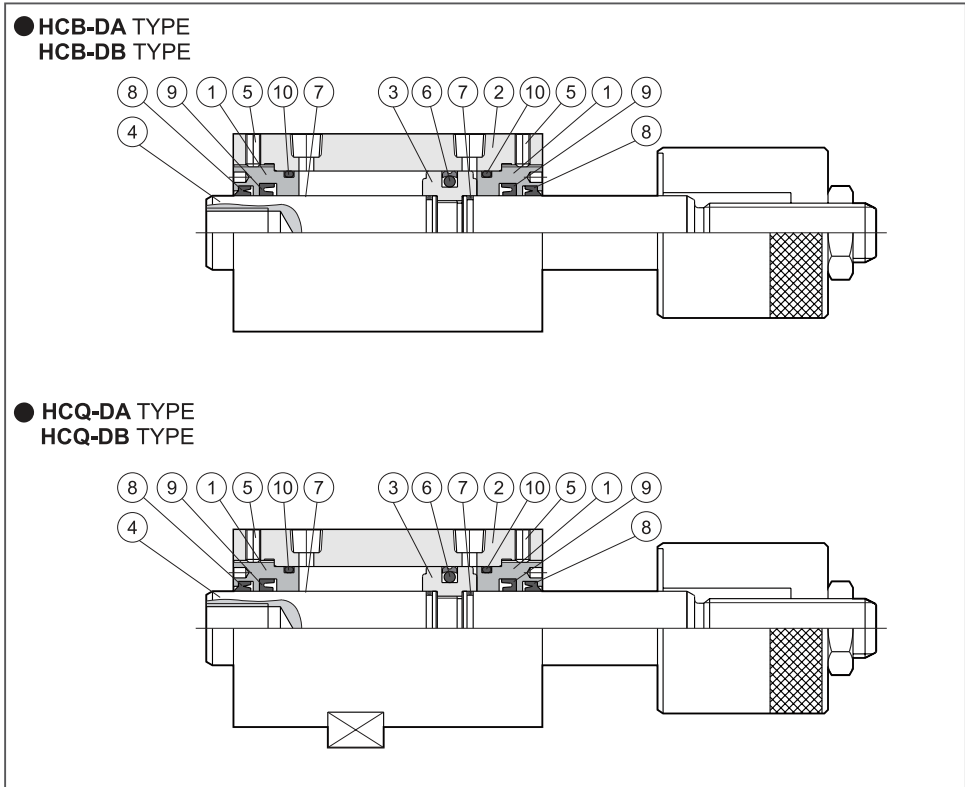
DX

DW

DM

DH

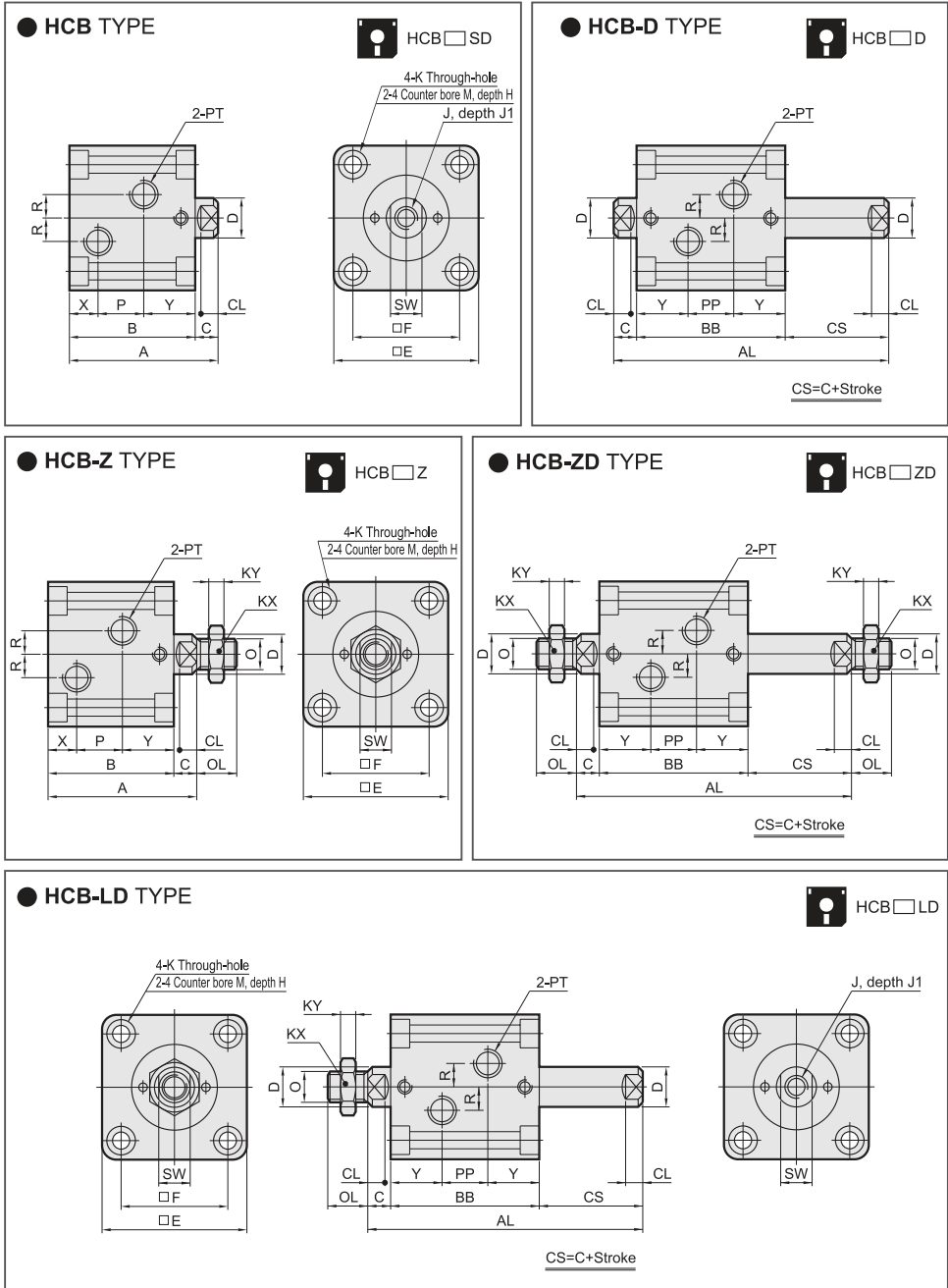
DK



Parts List

No.	Part name	Quantity	No.	Part name	Quantity	No.	Part name	Quantity
1	Rod cover	2	5	Set screw	2	9	Rod packing	2
2	Cylinder tube	1	6	Piston packing	1	10	Cylinder gasket	2
3	Piston	1	7	Piston gasket	2	11		
4	Piston rod	1	8	Dust wiper	2	12		

Dimensional features



Dimensional Table

Bore	Type	HC B / HCB-Z														
	Stroke	5	10	15	20	25	30	35	40	45	50	60	70	80	90	100
φ 20	A	61	61	71	71	81	81	91	91	-	-	-	-	-	-	-
	B	53	53	63	63	73	73	83	83	-	-	-	-	-	-	-
	P	20	20	30	30	40	40	50	50	-	-	-	-	-	-	-
φ 25	A	63	63	73	73	83	83	93	93	103	103	-	-	-	-	-
	B	55	55	65	65	75	75	85	85	95	95	-	-	-	-	-
	P	22	22	32	32	42	42	52	52	62	62	-	-	-	-	-
φ 32	A	69	74	79	84	89	94	104	104	114	114	124	-	-	-	-
	B	59	64	69	74	79	84	94	94	104	104	114	-	-	-	-
	P	19	24	29	34	39	44	54	54	64	64	74	-	-	-	-
φ 40	A	70	75	80	85	90	95	105	105	115	115	125	135	145	-	-
	B	60	65	70	75	80	85	95	95	105	105	115	125	135	-	-
	P	20	25	30	35	40	45	55	55	65	65	75	85	95	-	-
φ 50	A	76	81	86	91	96	101	111	111	121	121	131	141	151	161	-
	B	65	70	75	80	85	90	100	100	110	110	120	130	140	150	-
	P	23	28	33	38	43	48	58	58	68	68	78	88	98	108	-
φ 63	A	85	90	95	100	105	110	120	120	130	130	140	150	160	170	180
	B	72	77	82	87	92	97	107	107	117	117	127	137	147	157	167
	P	25	30	35	40	45	50	60	60	70	70	80	90	100	110	120
φ 80	A	100	105	110	115	120	125	135	135	145	145	155	165	175	185	195
	B	83	88	93	98	103	108	118	118	128	128	138	148	158	168	178
	P	32	37	42	47	52	57	67	67	77	77	87	97	107	117	127

Bore	Type	HC B-D / HCB-ZD / HCB-LD														
	Stroke	5	10	15	20	25	30	35	40	45	50	60	70	80	90	100
φ 32	AL	104	109	124	129	144	149	164	169	184	189	-	-	-	-	-
	BB	79	79	89	89	99	99	109	109	119	119	-	-	-	-	-
	CS	15	20	25	30	35	40	45	50	55	60	-	-	-	-	-
	PP	23	23	33	33	43	43	53	53	63	63	-	-	-	-	-
φ 40	AL	105	110	125	130	145	150	165	170	185	190	-	-	-	-	-
	BB	80	80	90	90	100	100	110	110	120	120	-	-	-	-	-
	CS	15	20	25	30	35	40	45	50	55	60	-	-	-	-	-
	PP	24	24	34	34	44	44	54	54	64	64	-	-	-	-	-
φ 50	AL	112	117	132	137	152	157	172	177	192	197	-	-	-	-	-
	BB	85	85	95	95	105	105	115	115	125	125	-	-	-	-	-
	CS	16	21	26	31	36	41	46	51	56	61	-	-	-	-	-
	PP	26	26	36	36	46	46	56	56	66	66	-	-	-	-	-
φ 63	AL	123	128	143	148	163	168	183	188	203	208	-	-	-	-	-
	BB	92	92	102	102	112	112	122	122	132	132	-	-	-	-	-
	CS	18	23	28	33	38	43	48	53	58	63	-	-	-	-	-
	PP	30	30	40	40	50	50	60	60	70	70	-	-	-	-	-
φ 80	AL	142	147	162	167	182	187	202	207	222	227	-	-	-	-	-
	BB	103	103	113	113	123	123	133	133	143	143	-	-	-	-	-
	CS	22	27	32	37	42	47	52	57	62	67	-	-	-	-	-
	PP	37	37	47	47	57	57	67	67	77	77	-	-	-	-	-

Bore	C	CL	D	E	F	H	J	J1	K	KX
φ 20	8	6	12	42	30	5.5	M8×1.25P	12	5.6	17
φ 25	8	6	14	48	36	5.5	M10×1.5P	15	5.6	19
φ 32	10	7	20	62	47	6.5	M12×1.75P	15	6.6	24
φ 40	10	7	25	70	52	9	M16×2.0P	20	9	32
φ 50	11	8	30	80	58	11	M20×2.5P	25	11	35
φ 63	13	10	35	94	69	13	M27×3.0P	35	13	41
φ 80	17	14	45	114	86	15	M30×3.5P	35	15	50

Bore	KY	M	O	OL	PT	R	SW	X	Y
φ 20	6	9	M10×1.25P	20	PT 1/8	5	10	10	23
φ 25	7	9	M12×1.25P	22	PT 1/8	5	12	10	23
φ 32	8	11	M16×1.5P	25	PT 1/4	10	17	12	28
φ 40	11	14	M22×1.5P	30	PT 1/4	10	22	12	28
φ 50	14	18	M26×1.5P	35	PT 1/4	10	27	12.5	29.5
φ 63	13	20	M30×1.5P	40	PT 3/8	10	32	16	31
φ 80	10	22	M39×1.5P	45	PT 3/8	15	41	18	33

TC

TS

RP

HC

HC_M

HCK

TH

DO

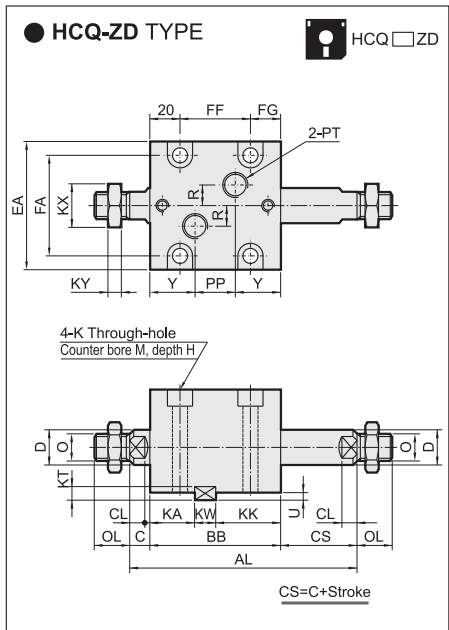
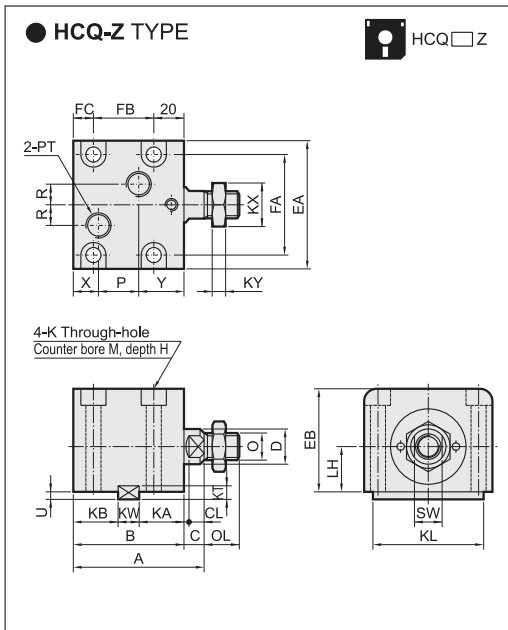
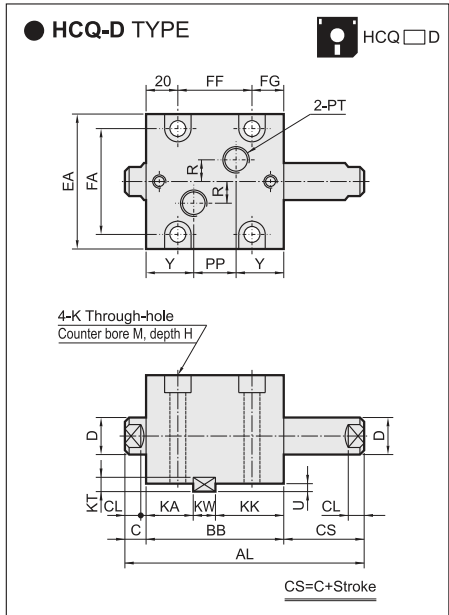
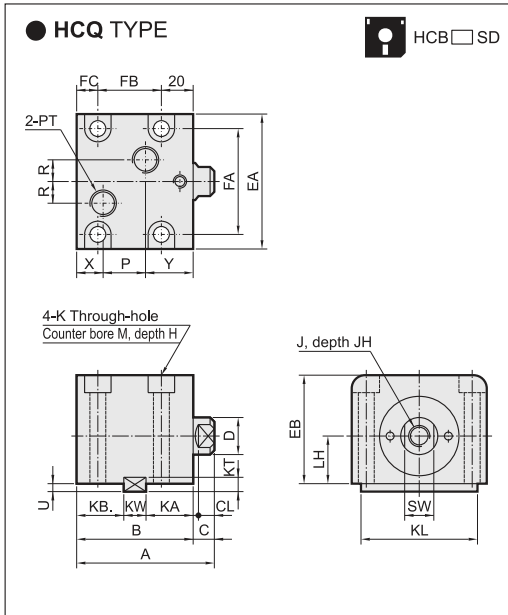
DX
DW

DM

DH

DK

Dimensional features



Dimensional Table

Bore	Type	HCQ / HCQ-Z									
	Stroke	5	10	15	20	25	30	35	40	45	50
φ 32	A	74	74	84	84	94	94	104	104	114	114
	B	64	64	74	74	84	84	94	94	104	104
	FB	34	34	44	44	54	54	64	64	74	74
	KB	24	24	34	34	44	44	54	54	64	64
	P	24	24	34	34	44	44	54	54	64	64
φ 40	A	75	75	85	85	95	95	105	105	115	115
	B	65	65	75	75	85	85	95	95	105	105
	FB	33	33	43	43	53	53	63	63	73	73
	KB	25	25	35	35	45	45	55	55	65	65
	P	25	25	35	35	45	45	55	55	65	65
φ 50	A	81	81	91	91	101	101	111	111	121	121
	B	70	70	80	80	90	90	100	100	110	110
	FB	37	37	47	47	57	57	67	67	77	77
	KB	27	27	37	37	47	47	57	57	67	67
	P	28	28	38	38	48	48	58	58	68	68
φ 63	A	90	90	100	100	110	110	120	120	130	130
	B	77	77	87	87	97	97	107	107	117	117
	FB	42	42	52	52	62	62	72	72	82	82
	KB	30	30	40	40	50	50	60	60	70	70
	P	30	30	40	40	50	50	60	60	70	70

TC

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HC

HC_M

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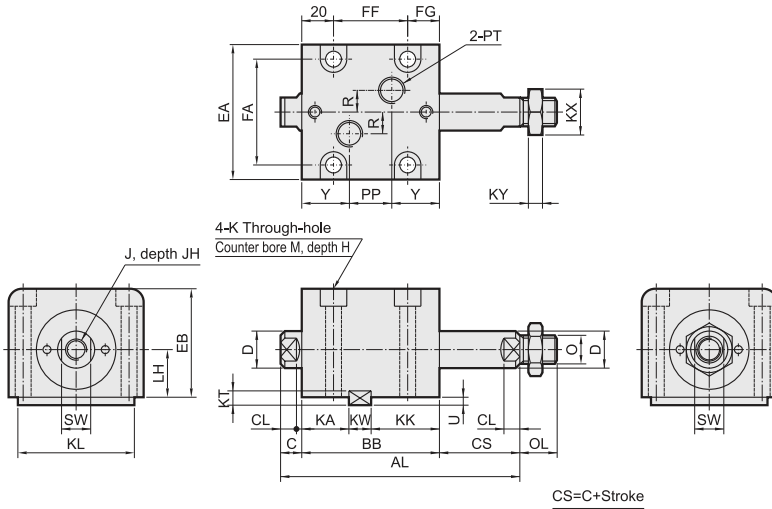
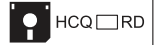
Bore	Type	HCQ-D / HCQ-ZD									
	Stroke	5	10	15	20	25	30	35	40	45	50
φ 32	AL	104	109	124	129	144	149	164	169	184	189
	BB	79	79	89	89	99	99	109	109	119	119
	CS	15	20	25	30	35	40	45	50	55	60
	FF	42	42	52	52	62	62	72	72	82	82
	KK	39	39	49	49	59	59	69	69	79	79
	PP	23	23	33	33	43	43	53	53	63	63
	AL	105	110	125	130	145	150	165	170	185	190
φ 40	BB	80	80	90	90	100	100	110	110	120	120
	CS	15	20	25	30	35	40	45	50	55	60
	FF	42	42	52	52	62	62	72	72	82	82
	KK	40	40	50	50	60	60	70	70	80	80
	PP	24	24	34	34	44	44	54	54	64	64
	AL	112	117	132	137	152	157	172	177	192	197
	BB	85	85	95	95	105	105	115	115	125	125
φ 50	CS	16	21	26	31	36	41	46	51	56	61
	FF	45	45	55	55	65	65	75	75	85	85
	KK	42	42	52	52	62	62	72	72	82	82
	PP	26	26	36	36	46	46	56	56	66	66
	AL	123	128	143	148	163	168	183	188	203	208
	BB	92	92	102	102	112	112	122	122	132	132
	CS	18	23	28	33	38	43	48	53	58	63
φ 63	FF	52	52	62	62	72	72	82	82	92	92
	KK	45	45	55	55	65	65	75	75	85	85
	PP	30	30	40	40	50	50	60	60	70	70

Bore	C	CL	D	EA	EB	FA	FC	FG	H	J	JH	K	KA	KL
φ 32	10	7	20	70	56	56	10	17	9	M12×1.75P	15	9	28	63
φ 40	10	7	25	80	64	62	12	18	11	M16×2.0P	20	11	28	70
φ 50	11	8	30	94	74	74	13	20	13	M20×2.5P	25	13	29	80
φ 63	13	10	35	114	89	90	15	20	15	M27×3.0P	35	15	31	100

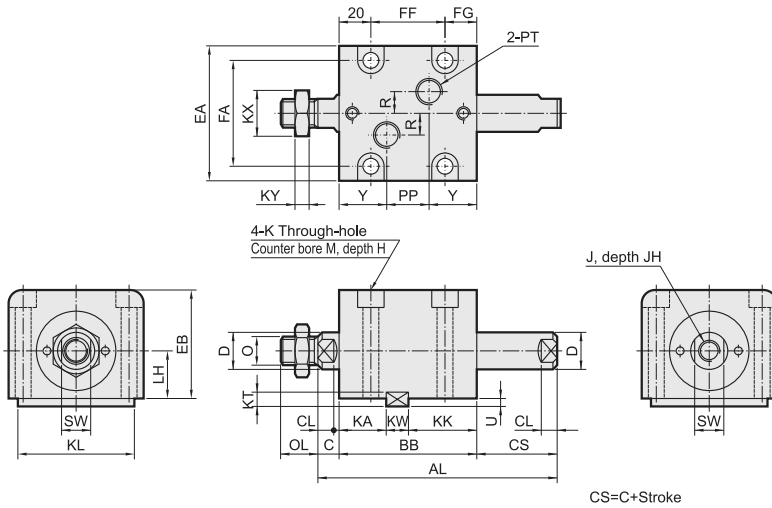
Bore	KT	KW	KX	KY	LH	M	O	OL	PT	R	SW	U	X	Y
φ 32	8	12	24	8	25	14	M16×1.5P	25	PT 1/4	10	17	4.5	12	28
φ 40	8	12	32	11	29	18	M22×1.5P	30	PT 1/4	10	22	4.5	12	28
φ 50	9	14	35	14	34	20	M26×1.5P	35	PT 1/4	10	27	5	12.5	29.5
φ 63	10	16	41	13	42	22	M30×1.5P	40	PT 3/8	10	32	5.5	16	31

Dimensional features

● HCQ-RD TYPE



● HCQ-LD TYPE



Dimensional Table

Bore	Type	HCQ-RD / HCQ-LD									
	Stroke	5	10	15	20	25	30	35	40	45	50
$\phi 32$	AL	104	109	124	129	144	149	164	169	184	189
	BB	79	79	89	89	99	99	109	109	119	119
	CS	15	20	25	30	35	40	45	50	55	60
	FF	42	42	52	52	62	62	72	72	82	82
	KK	39	39	49	49	59	59	69	69	79	79
	PP	23	23	33	33	43	43	53	53	63	63
$\phi 40$	AL	105	110	125	130	145	150	165	170	185	190
	BB	80	80	90	90	100	100	110	110	120	120
	CS	15	20	25	30	35	40	45	50	55	60
	FF	42	42	52	52	62	62	72	72	82	82
	KK	40	40	50	50	60	60	70	70	80	80
	PP	24	24	34	34	44	44	54	54	64	64
$\phi 50$	AL	112	117	132	137	152	157	172	177	192	197
	BB	85	85	95	95	105	105	115	115	125	125
	CS	16	21	26	31	36	41	46	51	56	61
	FF	45	45	55	55	65	65	75	75	85	85
	KK	42	42	52	52	62	62	72	72	82	82
	PP	26	26	36	36	46	46	56	56	66	66
$\phi 63$	AL	123	128	143	148	163	168	183	188	203	208
	BB	92	92	102	102	112	112	122	122	132	132
	CS	18	23	28	33	38	43	48	53	58	63
	FF	52	52	62	62	72	72	82	82	92	92
	KK	45	45	55	55	65	65	75	75	85	85
	PP	30	30	40	40	50	50	60	60	70	70

TC

TS

RP

HC

HC_M

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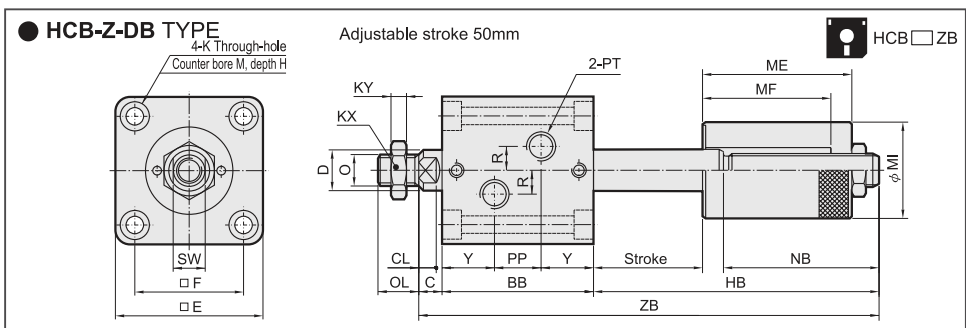
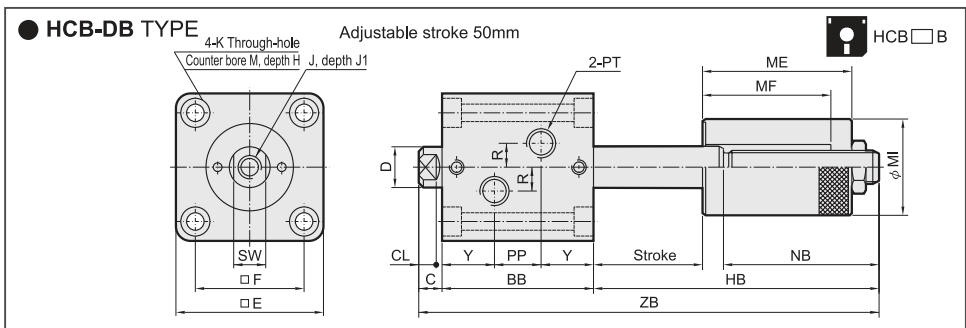
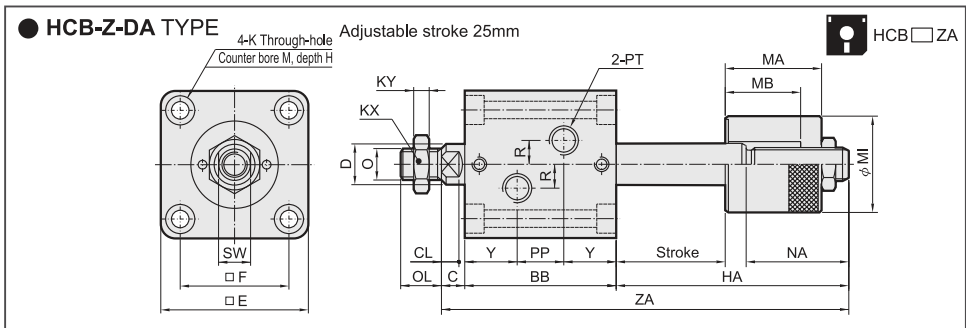
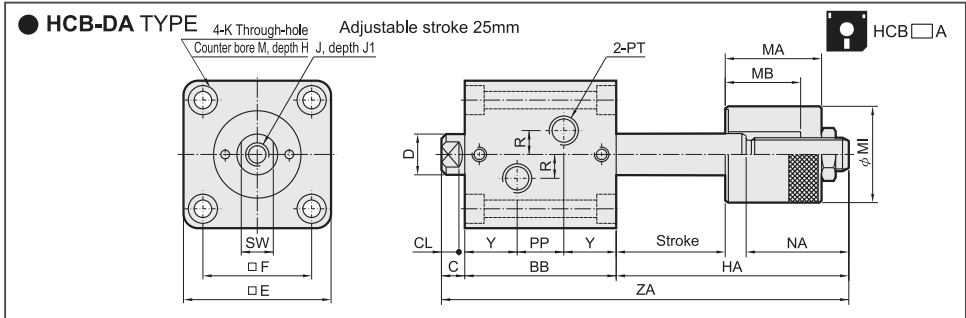
DH

DK

Bore	C	CL	D	EA	EB	FA	FG	H	J	JH	K	KA	KL	KT
$\phi 32$	10	7	20	70	56	56	17	9	M12×1.75P	15	9	28	63	8
$\phi 40$	10	7	25	80	64	62	18	11	M16×2.0P	20	11	28	70	8
$\phi 50$	11	8	30	94	74	74	20	13	M20×2.5P	25	13	29	80	9
$\phi 63$	13	10	35	114	89	90	20	15	M27×3.0P	35	15	31	100	10

Bore	KW	KX	KY	LH	M	O	OL	PT	R	SW	U	Y
$\phi 32$	12	24	8	25	14	M16×1.5P	25	PT 1/4	10	17	4.5	28
$\phi 40$	12	32	11	29	18	M22×1.5P	30	PT 1/4	10	22	4.5	28
$\phi 50$	14	35	14	34	20	M26×1.5P	35	PT 1/4	10	27	5	29.5
$\phi 63$	16	41	13	42	22	M30×1.5P	40	PT 3/8	10	32	5.5	31

Dimensional features



Dimensional Table

Bore	Type	HC B-DA / HC B-Z-DA														
	Stroke	5	10	15	20	25	30	35	40	45	50	60	70	80	90	100
φ 32	ZA	153	158	173	178	193	198	213	218	233	238	-	-	-	-	-
	BB	79	79	89	89	99	99	109	109	119	119	-	-	-	-	-
	PP	23	23	33	33	43	43	53	53	63	63	-	-	-	-	-
	HA	64	69	74	79	84	89	94	99	104	109	-	-	-	-	-
φ 40	ZA	163	168	183	188	203	208	223	228	243	248	-	-	-	-	-
	BB	80	80	90	90	100	100	110	110	120	120	-	-	-	-	-
	PP	24	24	34	34	44	44	54	54	64	64	-	-	-	-	-
	HA	73	78	83	88	93	98	103	108	113	118	-	-	-	-	-
φ 50	ZA	171	176	191	196	211	216	231	236	251	256	-	-	-	-	-
	BB	85	85	95	95	105	105	115	115	125	125	-	-	-	-	-
	PP	26	26	36	36	46	46	56	56	66	66	-	-	-	-	-
	HA	75	80	85	90	95	100	105	110	115	120	-	-	-	-	-
φ 63	ZA	188	193	208	213	228	233	248	253	268	273	-	-	-	-	-
	BB	92	92	102	102	112	112	122	122	132	132	-	-	-	-	-
	PP	30	30	40	40	50	50	60	60	70	70	-	-	-	-	-
	HA	83	88	93	98	103	108	113	118	123	128	-	-	-	-	-
φ 80	ZA	207	212	227	232	247	252	267	272	287	292	-	-	-	-	-
	BB	103	103	113	113	123	123	133	133	143	143	-	-	-	-	-
	PP	37	37	47	47	57	57	67	67	77	77	-	-	-	-	-
	HA	87	92	97	102	107	112	117	122	127	132	-	-	-	-	-

Bore	Type	HC B-DB / HC B-Z-DB														
	Stroke	5	10	15	20	25	30	35	40	45	50	60	70	80	90	100
φ 32	ZB	178	183	198	203	218	223	238	243	258	263	-	-	-	-	-
	BB	79	79	89	89	99	99	109	109	119	119	-	-	-	-	-
	PP	23	23	33	33	43	43	53	53	63	63	-	-	-	-	-
	HB	89	94	99	104	109	114	119	124	129	134	-	-	-	-	-
φ 40	ZB	188	193	208	213	228	233	248	253	268	273	-	-	-	-	-
	BB	80	80	90	90	100	100	110	110	120	120	-	-	-	-	-
	PP	24	24	34	34	44	44	54	54	64	64	-	-	-	-	-
	HB	98	103	108	113	118	123	128	133	138	143	-	-	-	-	-
φ 50	ZB	196	201	216	221	236	241	256	261	276	281	-	-	-	-	-
	BB	85	85	95	95	105	105	115	115	125	125	-	-	-	-	-
	PP	26	26	36	36	46	46	56	56	66	66	-	-	-	-	-
	HB	100	105	110	115	120	125	130	135	140	145	-	-	-	-	-
φ 63	ZB	213	218	233	238	253	258	273	278	293	298	-	-	-	-	-
	BB	92	92	102	102	112	112	122	122	132	132	-	-	-	-	-
	PP	30	30	40	40	50	50	60	60	70	70	-	-	-	-	-
	HB	108	113	118	123	128	133	138	143	148	153	-	-	-	-	-
φ 80	ZB	232	237	252	257	272	277	292	297	312	317	-	-	-	-	-
	BB	103	103	113	113	123	123	133	133	143	143	-	-	-	-	-
	PP	37	37	47	47	57	57	67	67	77	77	-	-	-	-	-
	HB	112	117	122	127	132	137	142	147	152	157	-	-	-	-	-

Bore	C	CL	D	E	F	H	J	J1	K	KX	KY	M	MI
φ 32	10	7	20	62	47	6.5	M12×1.75P	15	6.6	24	8	11	45
φ 40	10	7	25	70	52	9	M16×2.0P	20	9	32	11	14	55
φ 50	11	8	30	80	58	11	M20×2.5P	25	11	35	14	18	60
φ 63	13	10	35	94	69	13	M27×3.0P	35	13	41	13	20	75
φ 80	17	14	45	114	86	15	M30×3.5P	35	15	50	10	22	90

Bore	MA	MB	ME	MF	NA	NB	O	OL	PT	R	SW	Y	
φ 32	46	36	71	61	49	74	M16×1.5P	25	PT 1/4	10	17	28	
φ 40	54	36	79	61	58	83	M22×1.5P	30	PT 1/4	10	22	28	
φ 50	53	37	78	62	59	84	M26×1.5P	35	PT 1/4	10	27	29.5	
φ 63	63	39	88	64	65	90	M30×1.5P	40	PT 3/8	10	32	31	
φ 80	70	43	95	68	65	90	M39×1.5P	45	PT 3/8	15	41	33	

TC

TS

RP

HC

HC_M

HCK

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DO

DX

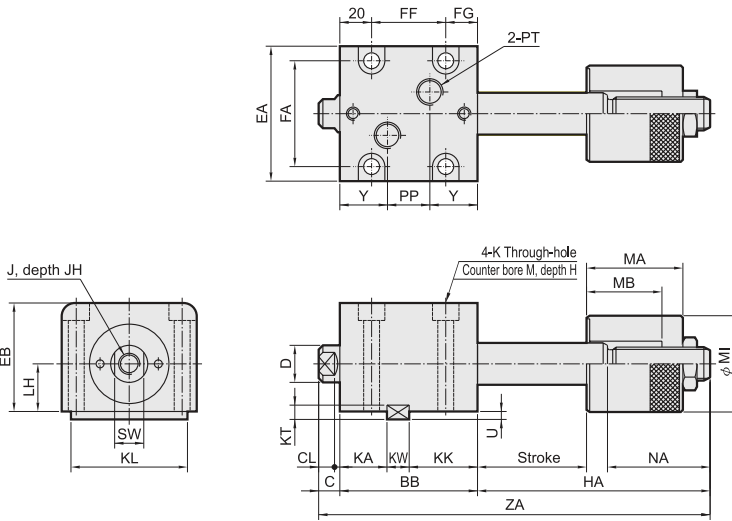
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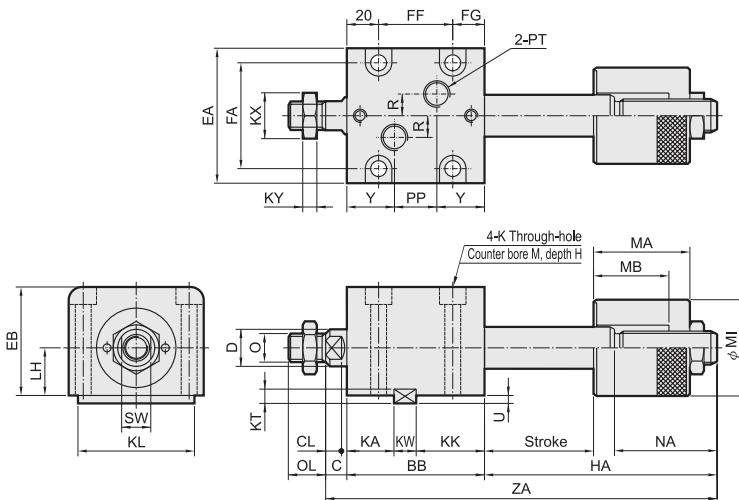
DH

DK

● **HCQ-DA TYPE** Adjustable stroke 25mm



● **HCQ-Z-DA TYPE** Adjustable stroke 25mm



Dimensional Table

Bore	Type	HCQ-DA / HCQ-Z-DA									
	Stroke	5	10	15	20	25	30	35	40	45	50
φ 32	ZA	153	158	173	178	193	198	213	218	233	238
	BB	79	79	89	89	99	99	109	109	119	119
	FF	42	42	52	52	62	62	72	72	82	82
	KK	39	39	49	49	59	59	69	69	79	79
	PP	23	23	33	33	43	43	53	53	63	63
	HA	64	69	74	79	84	89	94	99	104	109
φ 40	ZA	163	168	183	188	203	208	223	228	243	248
	BB	80	80	90	90	100	100	110	110	120	120
	FF	42	42	52	52	62	62	72	72	82	82
	KK	40	40	50	50	60	60	70	70	80	80
	PP	24	24	34	34	44	44	54	54	64	64
	HA	73	78	83	88	93	98	103	108	113	118
φ 50	ZA	171	176	191	196	211	216	231	236	251	256
	BB	85	85	95	95	105	105	115	115	125	125
	FF	45	45	55	55	65	65	75	75	85	85
	KK	42	42	52	52	62	62	72	72	82	82
	PP	26	26	36	36	46	46	56	56	66	66
	HA	75	80	85	90	95	100	105	110	115	120
φ 63	ZA	188	193	208	213	228	233	248	253	268	273
	BB	92	92	102	102	112	112	122	122	132	132
	FF	52	52	62	62	72	72	82	82	92	92
	KK	45	45	55	55	65	65	75	75	85	85
	PP	30	30	40	40	50	50	60	60	70	70
	HA	83	88	93	98	103	108	113	118	123	128

Bore	C	CL	D	EA	EB	FA	FG	H	J	JH	K	KA	KL	KT	KW
φ 32	10	7	20	70	56	56	17	9	M12×1.75P	15	9	28	63	8	12
φ 40	10	7	25	80	64	62	18	11	M16×2.0P	20	11	28	70	8	12
φ 50	11	8	30	94	74	74	20	13	M20×2.5P	25	13	29	80	9	14
φ 63	13	10	35	114	89	90	20	15	M27×3.0P	35	15	31	100	10	16

Bore	KX	KY	LH	M	MI	MA	MB	NA	O	OL	PT	R	SW	U	Y
φ 32	24	8	25	14	45	46	36	49	M16×1.5P	25	PT 1/4	10	17	4.5	28
φ 40	32	11	29	18	55	54	36	58	M22×1.5P	30	PT 1/4	10	22	4.5	28
φ 50	35	14	34	20	60	53	37	59	M26×1.5P	35	PT 1/4	10	27	5	29.5
φ 63	41	13	42	22	75	63	39	65	M30×1.5P	40	PT 3/8	10	32	5.5	31

TC

TS

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HC

HC_M

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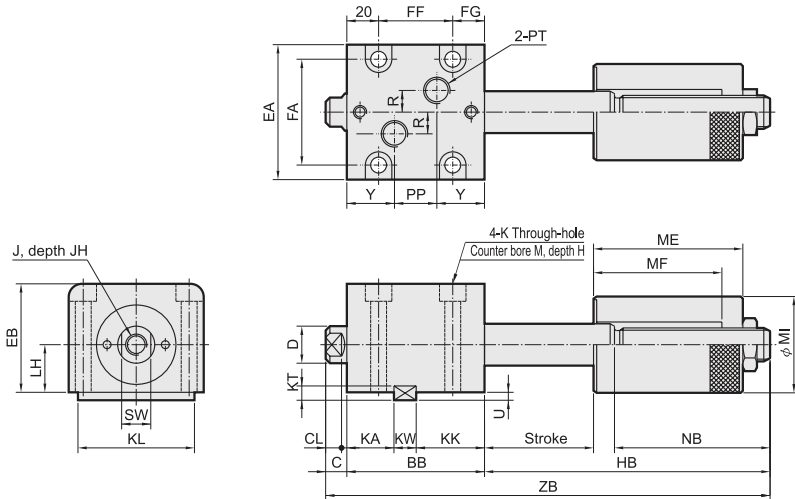
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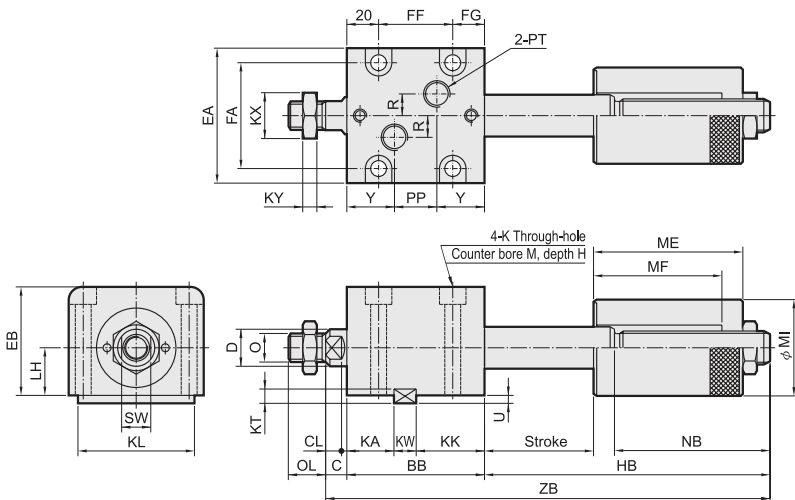
DH

DK

● **HCQ-DB TYPE** Adjustable stroke 50mm



● **HCQ-Z-DB TYPE** Adjustable stroke 50mm



Dimensional Table

Bore	Type Stroke	HCQ-DB / HCQ-Z-DB									
		5	10	15	20	25	30	35	40	45	50
φ 32	ZB	178	183	198	203	218	223	238	243	258	263
	BB	79	79	89	89	99	99	109	109	119	119
	FF	42	42	52	52	62	62	72	72	82	82
	KK	39	39	49	49	59	59	69	69	79	79
	PP	23	23	33	33	43	43	53	53	63	63
φ 40	HB	89	94	99	104	109	114	119	124	129	134
	ZB	188	193	208	213	228	233	248	253	268	273
	BB	80	80	90	90	100	100	110	110	120	120
	FF	42	42	52	52	62	62	72	72	82	82
	KK	40	40	50	50	60	60	70	70	80	80
φ 50	PP	24	24	34	34	44	44	54	54	64	64
	HB	98	103	108	113	118	123	128	133	138	143
	ZB	196	201	216	221	236	241	256	261	276	281
	BB	85	85	95	95	105	105	115	115	125	125
	FF	45	45	55	55	65	65	75	75	85	85
φ 63	KK	42	42	52	52	62	62	72	72	82	82
	PP	26	26	36	36	46	46	56	56	66	66
	HB	100	105	110	115	120	125	130	135	140	145
	ZB	213	218	233	238	253	258	273	278	293	298
	BB	92	92	102	102	112	112	122	122	132	132
φ 63	FF	52	52	62	62	72	72	82	82	92	92
	KK	45	45	55	55	65	65	75	75	85	85
	PP	30	30	40	40	50	50	60	60	70	70
	HB	108	113	118	123	128	133	138	143	148	153

Bore	C	CL	D	EA	EB	FA	FG	H	J	JH	K	KA	KL	KT	KW
φ 32	10	7	20	70	56	56	17	9	M12×1.75P	15	9	28	63	8	12
φ 40	10	7	25	80	64	62	18	11	M16×2.0P	20	11	28	70	8	12
φ 50	11	8	30	94	74	74	20	13	M20×2.5P	25	13	29	80	9	14
φ 63	13	10	35	114	89	90	20	15	M27×3.0P	35	15	31	100	10	16

Bore	KX	KY	LH	M	MI	ME	MF	NB	O	OL	PT	R	SW	U	Y
φ 32	24	8	25	14	45	71	61	74	M16×1.5P	25	PT 1/4	10	17	4.5	28
φ 40	32	11	29	18	55	79	61	83	M22×1.5P	30	PT 1/4	10	22	4.5	28
φ 50	35	14	34	20	60	78	62	84	M26×1.5P	35	PT 1/4	10	27	5	29.5
φ 63	41	13	42	22	75	88	64	90	M30×1.5P	40	PT 3/8	10	32	5.5	31

TC

TS

RP

HC

HC_M

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DM

DH

DK

Cylinder weight (including the mounting nut)

Unit: kg

Bore Type	φ 20				φ 25				φ 32				φ 40				φ 50				φ 63				φ 80	
	HCB		HCB		HCB		HCQ		HCB		HCQ		HCB		HCQ		HCB		HCQ		HCB		HCB			
	N	Z	N	Z	N	Z	N	Z	N	Z	N	Z	N	Z	N	Z	N	Z	N	Z	N	Z	N	Z		
5	0.64	0.69	0.88	0.93	1.61	1.71	1.72	1.82	2.00	2.20	2.21	2.41	2.78	3.03	3.27	3.52	4.24	4.69	5.28	5.73	7.46	8.31				
10	0.63	0.68	0.87	0.92	1.73	1.83	1.71	1.81	2.15	2.35	2.19	2.39	2.96	3.21	3.24	3.49	4.48	4.93	5.22	5.67	7.80	8.65				
15	0.75	0.80	1.02	1.07	1.85	1.95	1.98	2.08	2.30	2.50	2.55	2.75	3.14	3.39	3.71	3.96	4.72	5.17	5.90	6.35	8.14	8.99				
20	0.74	0.79	1.01	1.06	1.97	2.07	1.97	2.07	2.45	2.65	2.53	2.73	3.32	3.57	3.68	3.93	4.96	5.41	5.84	6.29	8.48	9.33				
25	0.86	0.91	1.16	1.21	2.09	2.19	2.24	2.34	2.60	2.80	2.89	3.09	3.50	3.75	4.15	4.40	5.20	5.65	6.52	6.97	8.82	9.67				
30	0.85	0.90	1.15	1.20	2.21	2.31	2.23	2.33	2.75	2.95	2.87	3.07	3.68	3.93	4.12	4.37	5.44	5.89	6.46	6.91	9.16	10.01				
35	0.97	1.02	1.30	1.35	2.46	2.56	2.50	2.60	3.07	3.27	3.23	3.43	4.07	4.32	4.59	4.84	5.98	6.43	7.14	7.59	9.93	10.78				
40	0.96	1.01	1.29	1.34	2.45	2.55	2.49	2.59	3.05	3.25	3.21	3.41	4.04	4.29	4.56	4.81	5.92	6.37	7.08	7.53	9.84	10.69				
45	—	—	1.44	1.49	2.70	2.80	2.76	2.86	3.37	3.57	3.57	3.77	4.43	4.68	5.03	5.28	6.46	6.91	7.76	8.21	10.61	11.46				
50	—	—	1.43	1.48	2.69	2.79	2.75	2.85	3.35	3.55	3.55	3.75	4.40	4.65	5.00	5.25	6.40	6.85	7.70	8.15	10.52	11.37				
60	—	—	—	—	2.93	3.03	3.01	3.11	3.65	3.85	3.89	4.09	4.76	5.01	5.44	5.69	6.88	7.33	8.32	8.77	11.20	12.05				
70	—	—	—	—	3.17	3.27	3.27	3.37	3.95	4.15	4.23	4.43	5.12	5.37	5.88	6.13	7.36	7.81	8.94	9.39	11.88	12.73				
80	—	—	—	—	3.41	3.51	3.53	3.63	4.25	4.45	4.57	4.77	5.48	5.73	6.32	6.57	7.84	8.29	9.56	10.01	12.56	13.41				
90	—	—	—	—	3.65	3.75	3.79	3.89	4.55	4.75	4.91	5.11	5.84	6.09	6.76	7.01	8.32	8.77	10.18	10.63	13.24	14.09				
100	—	—	—	—	3.89	3.99	4.05	4.15	4.85	5.05	5.25	5.45	6.20	6.45	7.20	7.45	8.80	9.25	10.80	11.25	13.92	14.77				

※N: Female thread : Z: Male thread ◦

Cylinder weight (including the mounting nut)

Unit: kg

Bore Type	φ 32						φ 40						φ 50						φ 63						φ 80		
	HCB_D			HCQ_D			HCB_D			HCQ_D			HCB_D			HCQ_D			HCB_D			HCQ_D			HCB_D		
	N	Z	L	N	Z	L,R	N	Z	L	N	Z	L,R	N	Z	L,R	N	Z	L,R	N	Z	L,R	N	Z	L,R	N	Z	
5	1.89	2.06	1.97	1.90	2.07	1.99	2.37	2.71	2.54	2.45	2.79	2.62	3.22	3.65	3.44	3.63	4.05	3.84	4.85	5.61	5.23	5.59	6.35	5.98	10.18	11.63	10.90
10	1.89	2.06	1.97	1.90	2.07	1.99	2.37	2.71	2.54	2.45	2.79	2.62	3.22	3.65	3.43	3.62	4.05	3.84	4.83	5.59	5.21	5.58	6.34	5.96	10.15	11.60	10.88
15	2.11	2.28	2.20	2.14	2.31	2.23	2.66	3.00	2.83	2.77	3.11	2.94	3.58	4.00	3.79	4.05	4.47	4.26	5.32	6.08	5.70	6.18	6.95	6.57	10.87	12.31	11.59
20	2.11	2.28	2.20	2.14	2.31	2.23	2.66	3.00	2.83	2.77	3.11	2.94	3.57	4.00	3.79	4.04	4.47	4.26	5.30	6.07	5.68	6.17	6.93	6.55	10.84	12.28	11.58
25	2.34	2.51	2.42	2.38	2.55	2.47	2.94	3.28	3.11	3.09	3.43	3.26	3.93	4.36	4.14	4.47	4.90	4.68	5.79	6.56	6.17	6.78	7.54	7.16	11.55	12.99	12.27
30	2.34	2.51	2.42	2.39	2.56	2.47	2.95	3.29	3.12	3.10	3.44	3.27	3.93	4.35	4.14	4.47	4.89	4.68	5.77	6.54	6.15	6.76	7.52	7.14	11.52	12.97	12.25
35	2.56	2.73	2.65	2.63	2.80	2.71	3.23	3.57	3.40	3.42	3.76	3.59	4.28	4.71	4.50	4.89	5.32	5.10	6.26	7.03	6.64	7.37	8.13	7.75	12.23	13.68	12.96
40	2.56	2.73	2.65	2.63	2.80	2.71	3.23	3.57	3.40	3.42	3.76	3.59	4.28	4.71	4.49	4.89	5.31	5.10	6.24	7.01	6.63	7.35	8.11	7.73	12.21	13.65	12.93
45	2.79	2.96	2.87	2.87	3.04	2.95	3.52	3.86	3.69	3.74	4.08	3.91	4.64	5.06	4.85	5.31	5.74	5.52	6.73	7.50	7.12	7.96	8.72	8.34	12.92	14.35	13.64
50	2.79	2.96	2.87	2.87	3.04	2.96	3.52	3.86	3.69	3.74	4.08	3.91	4.63	5.06	4.85	5.31	5.73	5.52	6.72	7.48	7.10	7.94	8.71	8.32	12.89	14.34	13.61

※N: Bilateral Female thread : Z: Bilateral Male thread : L,R: Unilateral Male thread

Mounting weight

Unit: kg

Bore	Adjustable Nut		Nut (Rod)
	A Adjustable stroke 25 mm	B Adjustable stroke 50 mm	
φ 32	0.6	0.9	0.02
φ 40	1.0	1.45	0.04
φ 50	1.15	1.7	0.08
φ 63	2.15	3	0.08
φ 80	3.4	4.2	0.18

Manifold type hydraulic cylinders

HCBR

Front Mounting (Axial front manifold type)



HCBF

Front Mounting (Axial back manifold type)



HCBS

Side Mounting (Manifold type)



HCBS...D

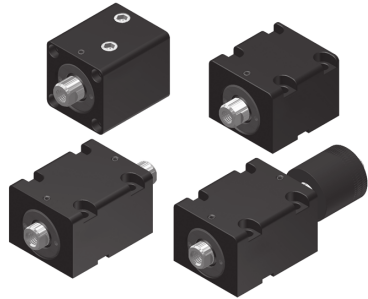
Side Mounting (Double End Rod Type) (Manifold type)



HCBS...DA, HCBS...DB

Adjustable Forward Stroke Cylinder

A:25mm
B:50mm



- Short stroke and compact body design minimizes total length.
- The cylinder barrel is manufactured from structural carbon steel. Internal wall is specially treated, featuring maximum smoothness and long service.
- High quality and durability.

Specification

Bore sizes of cylinder (mm)	φ 20	φ 25	φ 32	φ 40	φ 50	φ 63	φ 80
The range of stroke (mm)	30		50				
Power fluid	Filtered oil						
Material	Carbon steel						
The range of pressure (MPa)	14(140kgf/cm ²)						
The range of temperature (°C)	-10 ~ +60						

How to order

HCBS 50 / 30 Z D A

Type	Bore	Stroke	Rod end type	End rod type	Adjustable stroke
HCBR	20 - φ 20mm 25 - φ 25mm 32 - φ 32mm 40 - φ 40mm 50 - φ 50mm 63 - φ 63mm 80 - φ 80mm	5 - 5mm 10 - 10mm 15 - 15mm 20 - 20mm 25 - 25mm 30 - 30mm 35 - 35mm 40 - 40mm 45 - 45mm 50 - 50mm	No Code: Female thread in rod end	D: Double end rod type	None: standard A: Adjustable 25mm B: Adjustable 50mm Note: this number can only be used for the adjustable type.
HCBF					
HCBS			Z: Male thread in rod end		

Standard stroke

Type	Bore	Stroke									
		5	10	15	20	25	30	35	40	45	50
HCBR HCBF	φ 20	○	●	○	●	○	●	-	-	-	-
	φ 25	○	●	○	●	○	●	-	-	-	-
	φ 32	●	●	●	●	●	○	○	○	○	○
	φ 40	●	●	●	●	●	●	○	○	○	○
	φ 50	●	●	●	●	●	●	○	○	○	○
	φ 63	●	●	●	●	●	●	○	○	○	○
HCBS	φ 32	○	●	○	●	○	●	○	○	○	○
	φ 40	○	●	○	●	○	●	○	○	○	○
	φ 50	○	●	○	●	○	●	○	○	○	○
	φ 63	○	●	○	●	○	●	○	○	○	○

● Standard products
○ Articles made to order

TC

TS

RP

HC

HC_M

HCK

TH

DO

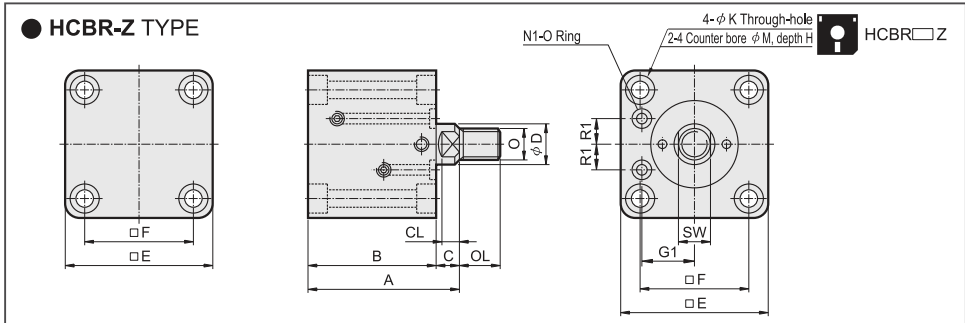
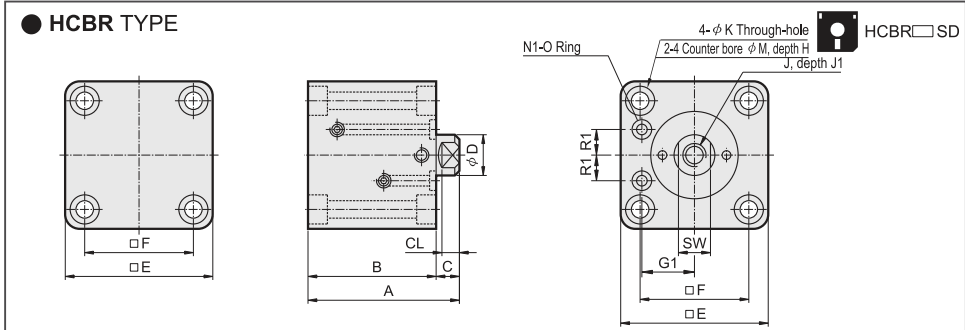
DX
DW

DM

DH

DK

Dimensional features (Axial front manifold type)

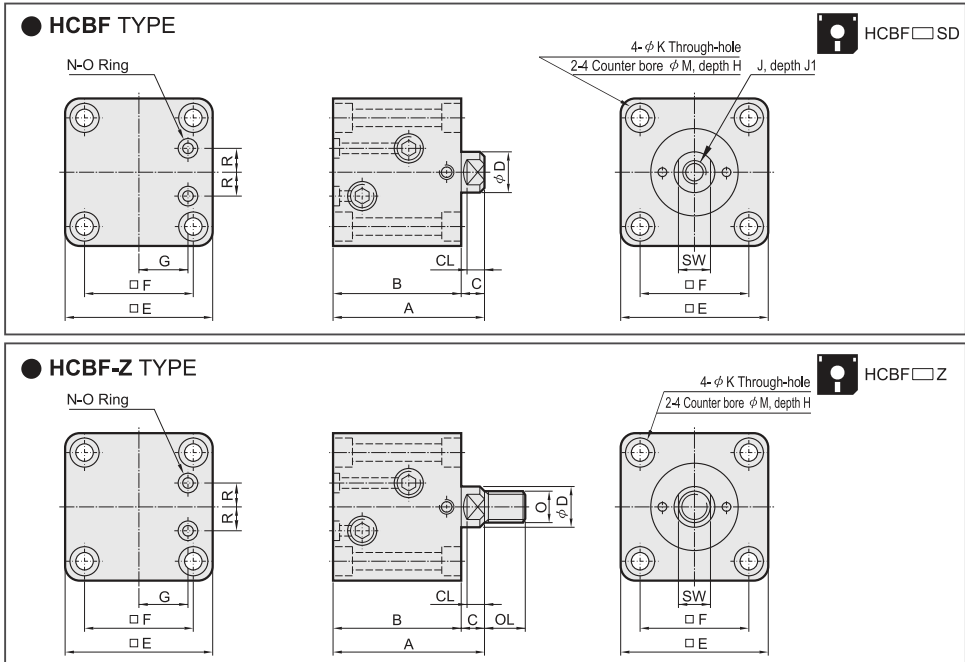


Dimensional Table

Bore	Type	HCBR / HCBR-Z									
	Stroke	5	10	15	20	25	30	35	40	45	50
φ 20	A	61	61	71	71	81	81	-	-	-	-
	B	53	53	63	63	73	73	-	-	-	-
φ 25	A	63	63	73	73	83	83	-	-	-	-
	B	55	55	65	65	75	75	-	-	-	-
φ 32	A	69	74	79	84	89	94	104	104	114	114
	B	59	64	69	74	79	84	94	94	104	104
φ 40	A	70	75	80	85	90	95	105	105	115	115
	B	60	65	70	75	80	85	95	95	105	105
φ 50	A	76	81	86	91	96	101	111	111	121	121
	B	65	70	75	80	85	90	100	100	110	110
φ 63	A	85	90	95	100	105	110	120	120	130	130
	B	72	77	82	87	92	97	107	107	117	117
φ 80	A	100	105	110	115	120	125	135	135	145	145
	B	83	88	93	98	103	108	118	118	128	128

Bore	C	CL	D	E	F	G1	H	J	J1	K	M	N1	O	OL	R1	SW
φ 20	8	6	12	42	30	16.5	5.5	M8 × 1.25P	12	5.6	9	P4	M10 × 1.25P	20	6.5	10
φ 25	8	6	14	48	36	19.5	5.5	M10 × 1.5P	15	5.6	9	P4	M12 × 1.25P	22	9	12
φ 32	10	7	20	62	47	24	6.5	M12 × 1.75P	15	6.6	11	P6	M16 × 1.5P	25	12	17
φ 40	10	7	25	70	52	27	9	M16 × 2.0P	20	9	14	P6	M22 × 1.5P	30	13	22
φ 50	11	8	30	80	58	32	11	M20 × 2.5P	25	11	18	P8	M26 × 1.5P	35	13.5	27
φ 63	13	10	35	94	69	38	13	M27 × 3.0P	35	13	20	P8	M30 × 1.5P	40	17.5	32
φ 80	17	14	45	114	86	47	15	M30 × 3.5P	35	15	22	P11	M39 × 1.5P	45	22.5	41

Dimensional features (Axial back manifold type)



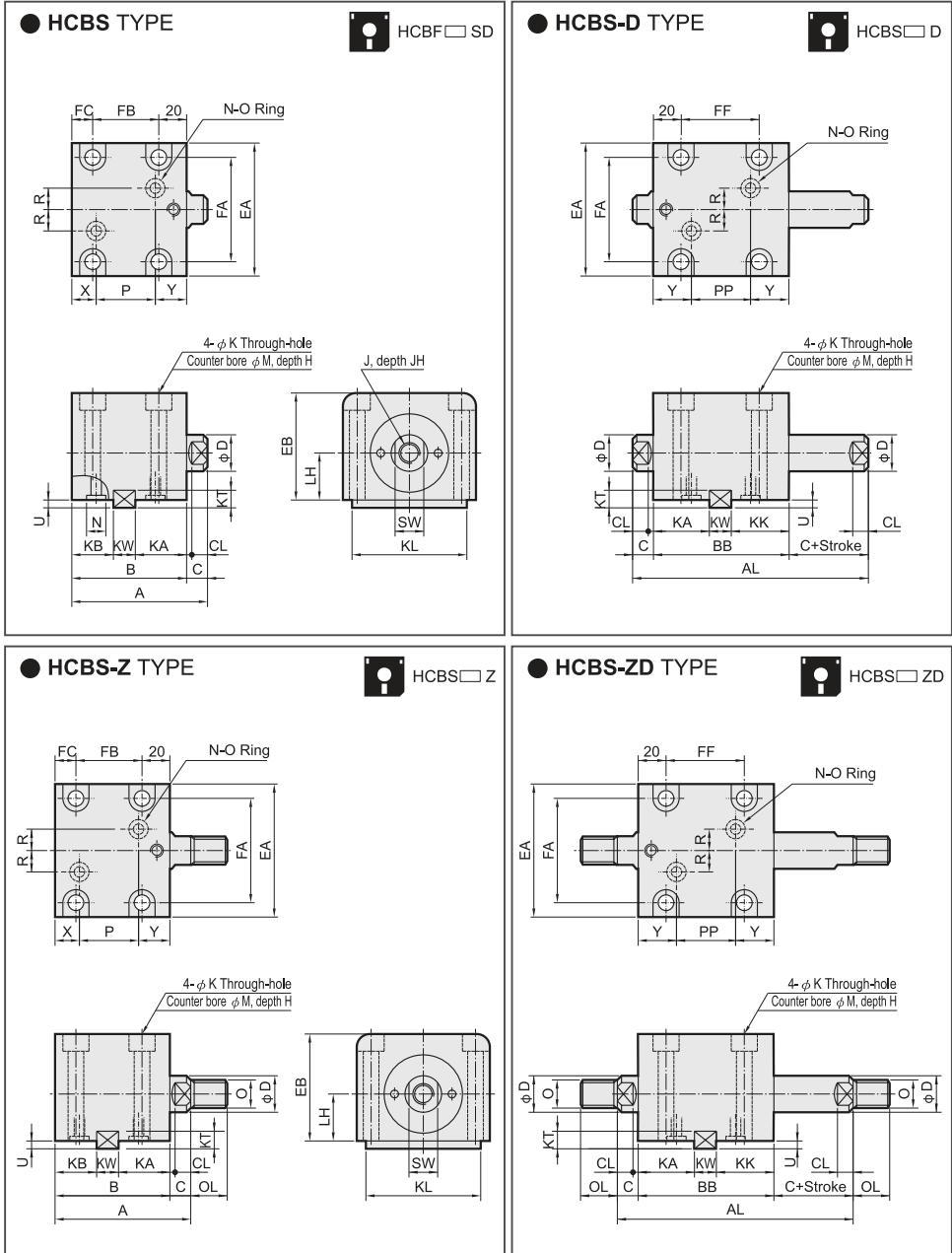
- TC
- TS
- RP
- HC
- HC_M
- HCK
- TH
- DO
- DX
DW
- DM
- DH
- DK

Dimensional Table

Bore	Type	HCBF / HCBF-Z									
		Stroke	5	10	15	20	25	30	35	40	45
φ 20	A	61	61	71	71	81	81	-	-	-	-
	B	53	53	63	63	73	73	-	-	-	-
φ 25	A	63	63	73	73	83	83	-	-	-	-
	B	55	55	65	65	75	75	-	-	-	-
φ 32	A	69	74	79	84	89	94	104	104	114	114
	B	59	64	69	74	79	84	94	94	104	104
φ 40	A	70	75	80	85	90	95	105	105	115	115
	B	60	65	70	75	80	85	95	95	105	105
φ 50	A	76	81	86	91	96	101	111	111	121	121
	B	65	70	75	80	85	90	100	100	110	110
φ 63	A	85	90	95	100	105	110	120	120	130	130
	B	72	77	82	87	92	97	107	107	117	117
φ 80	A	100	105	110	115	120	125	135	135	145	145
	B	83	88	93	98	103	108	118	118	128	128

Bore	C	CL	D	E	F	G	H	J	J1	K	M	N	O	OL	R	SW
φ 20	8	6	12	42	30	13	5,5	M8 × 1,25P	12	5,6	9	P5	M10 × 1,25P	20	5,5	10
φ 25	8	6	14	48	36	15	5,5	M10 × 1,5P	15	5,6	9	P7	M12 × 1,25P	22	6,5	12
φ 32	10	7	20	62	47	20	6,5	M12 × 1,75P	15	6,6	11	P9	M16 × 1,5P	25	10	17
φ 40	10	7	25	70	52	24	9	M16 × 2,0P	20	9	14	P9	M22 × 1,5P	30	10	22
φ 50	11	8	30	80	58	29	11	M20 × 2,5P	25	11	18	P9	M26 × 1,5P	35	10	27
φ 63	13	10	35	94	69	35	13	M27 × 3,0P	35	13	20	P11	M30 × 1,5P	40	13	32
φ 80	17	14	45	114	86	44	15	M30 × 3,5P	35	15	22	P11	M39 × 1,5P	45	15	41

Dimensional features



Dimensional Table (Stroke: 5, 10mm without keyway)

Bore	Type	HCBS / HCBS-Z									
	Stroke	5	10	15	20	25	30	35	40	45	50
φ 32	A	74	74	84	84	94	94	104	104	114	114
	B	64	64	74	74	84	84	94	94	104	104
	FB	34	34	44	44	54	54	64	64	74	74
	KB	—	—	24	24	34	34	44	44	54	54
	P	24	24	34	34	44	44	54	54	64	64
φ 40	A	75	75	85	85	95	95	105	105	115	115
	B	65	65	75	75	85	85	95	95	105	105
	FB	33	33	43	43	53	53	63	63	73	73
	P	25	25	35	35	45	45	55	55	65	65
φ 50	A	81	81	91	91	101	101	111	111	121	121
	B	70	70	80	80	90	90	100	100	110	110
	FB	37	37	47	47	57	57	67	67	77	77
	KB	—	—	26	26	36	36	46	46	56	56
	P	28	28	38	38	48	48	58	58	68	68
φ 63	A	90	90	100	100	110	110	120	120	130	130
	B	77	77	87	87	97	97	107	107	117	117
	FB	42	42	52	52	62	62	72	72	82	82
	P	30	30	40	40	50	50	60	60	70	70

TC

TS

RP

HC

HC_M

HCK

TH

Bore	Type	HCBS-D / HCBS-ZD									
	Stroke	5	10	15	20	25	30	35	40	45	50
φ 32	AL	104	109	124	129	144	149	164	169	184	189
	BB	79	79	89	89	99	99	109	109	119	119
	FF	42	42	52	52	62	62	72	72	82	82
	KK	—	—	39	39	49	49	59	59	69	69
	PP	23	23	33	33	43	43	53	53	63	63
φ 40	AL	105	110	125	130	145	150	165	170	185	190
	BB	80	80	90	90	100	100	110	110	120	120
	FF	42	42	52	52	62	62	72	72	82	82
	KK	—	—	40	40	50	50	60	60	70	70
	PP	24	24	34	34	44	44	54	54	64	64
φ 50	AL	112	117	132	137	152	157	172	177	192	197
	BB	85	85	95	95	105	105	115	115	125	125
	FF	45	45	55	55	65	65	75	75	85	85
	KK	—	—	41	41	51	51	61	61	71	71
	PP	26	26	36	36	46	46	56	56	66	66
φ 63	AL	123	128	143	148	163	168	183	188	203	208
	BB	92	92	102	102	112	112	122	122	132	132
	FF	52	52	62	62	72	72	82	82	92	92
	KK	—	—	44	44	54	54	64	64	74	74
	PP	30	30	40	40	50	50	60	60	70	70

DO

DX

DW

DM

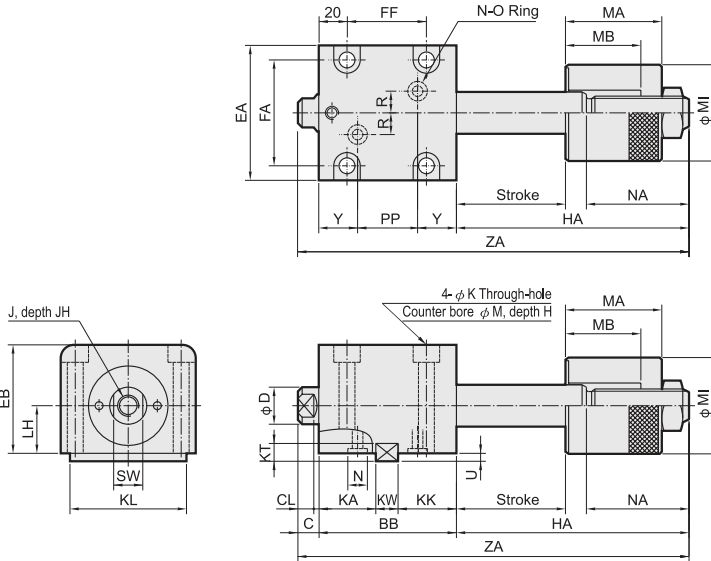
DH

DK

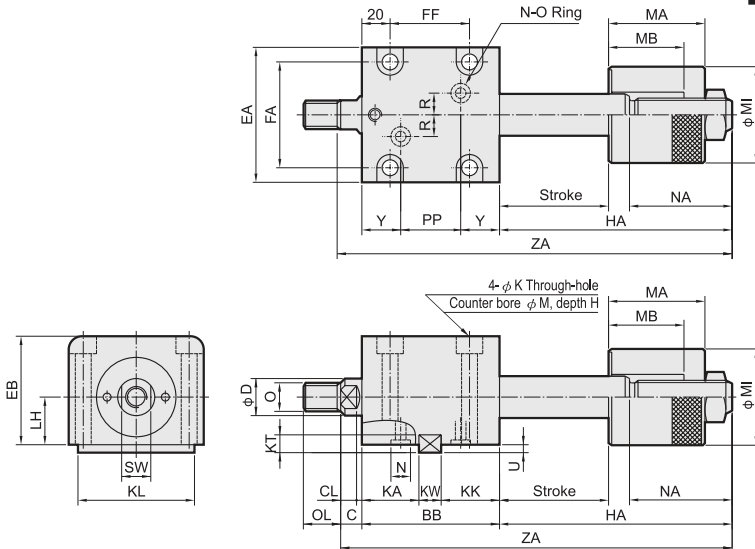
Bore	C	CL	D	EA	EB	FA	FC	H	J	JH	K	KA	KL	KW
φ 32	10	7	20	70	56	56	10	9	M12×1.75P	15	9	38	63	12
φ 40	10	7	25	80	64	62	12	11	M16×2.0P	20	11	38	70	12
φ 50	11	8	30	94	74	74	13	13	M20×2.5P	25	13	40	80	14
φ 63	13	10	35	114	89	90	15	15	M27×3.0P	35	15	42	100	16

Bore	KT	LH	M	N	O	OL	R	SW	U	X	Y		
φ 32	8	25	14	P9	M16×1.5P	25	10	17	4.5	12	28		
φ 40	8	29	18	P9	M22×1.5P	30	10	22	4.5	12	28		
φ 50	9	34	20	P11	M26×1.5P	35	10	27	5	12.5	29.5		
φ 63	10	42	22	P11	M30×1.5P	40	10	32	5.5	16	31		

● **HCBS-DA TYPE** Adjustable stroke 25mm



● **HCBS-Z-DA TYPE** Adjustable stroke 25mm



Dimensional Table (Stroke: 5, 10mm without keyway)

Bore	Type	HCBS-DA / HCBS-Z-DA									
	Stroke	5	10	15	20	25	30	35	40	45	50
φ 32	ZA	153	158	173	178	193	198	213	218	233	238
	BB	79	79	89	89	99	99	109	109	119	119
	FF	42	42	52	52	62	62	72	72	82	82
	KK	—	—	39	39	49	49	59	59	69	69
	PP	23	23	33	33	43	43	53	53	63	63
	HA	64	69	74	79	84	89	94	99	104	109
φ 40	ZA	163	168	183	188	203	208	223	228	243	248
	BB	80	80	90	90	100	100	110	110	120	120
	FF	42	42	52	52	62	62	72	72	82	82
	KK	—	—	40	40	50	50	60	60	70	70
	PP	24	24	34	34	44	44	54	54	64	64
	HA	73	78	83	88	93	98	103	108	113	118
φ 50	ZA	171	176	191	196	211	216	231	236	251	256
	BB	85	85	95	95	105	105	115	115	125	125
	FF	45	45	55	55	65	65	75	75	85	85
	KK	—	—	41	41	51	51	61	61	71	71
	PP	26	26	36	36	46	46	56	56	66	66
	HA	75	80	85	90	95	100	105	110	115	120
φ 63	ZA	188	193	208	213	228	233	248	253	268	273
	BB	92	92	102	102	112	112	122	122	132	132
	FF	52	52	62	62	72	72	82	82	92	92
	KK	—	—	44	44	54	54	64	64	74	74
	PP	30	30	40	40	50	50	60	60	70	70
	HA	83	88	93	98	103	108	113	118	123	128

Bore	C	CL	D	EA	EB	FA	H	J	JH	K	KA	KL	KT	KW
φ 32	10	7	20	70	56	56	9	M12×1.75P	15	9	38	63	8	12
φ 40	10	7	25	80	64	62	11	M16×2.0P	20	11	38	70	8	12
φ 50	11	8	30	94	74	74	13	M20×2.5P	25	13	40	80	9	14
φ 63	13	10	35	114	89	90	15	M27×3.0P	35	15	42	100	10	16

Bore	LH	M	MI	MA	MB	N	NA	O	OL	R	SW	U	Y	
φ 32	25	14	45	46	36	P9	49	M16×1.5P	25	10	17	4.5	28	
φ 40	29	18	55	54	36	P9	58	M22×1.5P	30	10	22	4.5	28	
φ 50	34	20	60	53	37	P11	59	M26×1.5P	35	10	27	5	29.5	
φ 63	42	22	75	63	39	P11	65	M30×1.5P	40	10	32	5.5	31	

TC

TS

RP

HC

HC_M

HCK

TH

DO

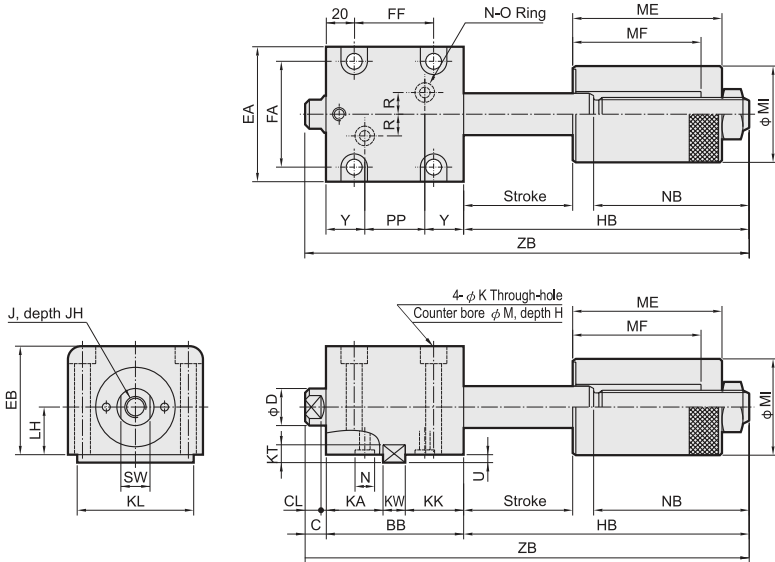
DX
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DM

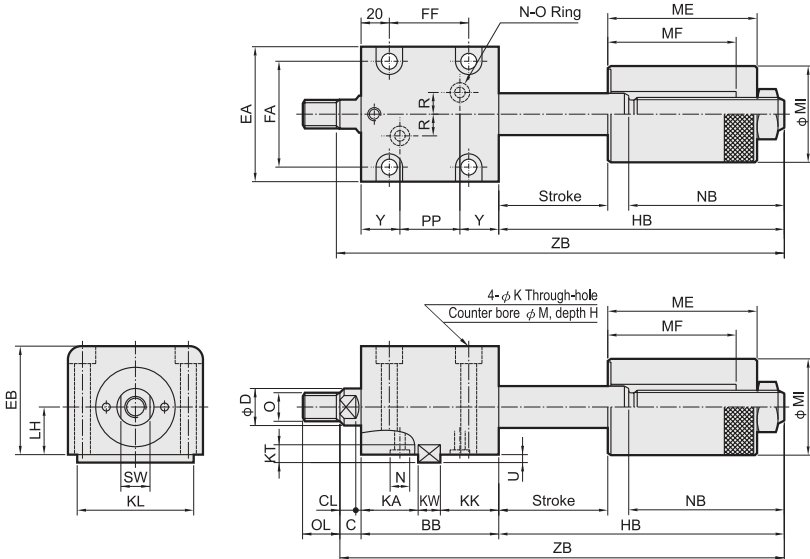
DH

DK

● **HCBS-DB TYPE** Adjustable stroke 50mm



● **HCBS-Z-DB TYPE** Adjustable stroke 50mm



Dimensional Table (Stroke: 5, 10mm without keyway)

Bore	Type	HCBS-DB / HCBS-Z-DB									
	Stroke	5	10	15	20	25	30	35	40	45	50
φ 32	ZB	178	183	198	203	218	223	238	243	258	263
	BB	79	79	89	89	99	99	109	109	119	119
	FF	42	42	52	52	62	62	72	72	82	82
	KK	—	—	39	39	49	49	59	59	69	69
	PP	23	23	33	33	43	43	53	53	63	63
	HB	89	94	99	104	109	114	119	124	129	134
φ 40	ZB	188	193	208	213	228	233	248	253	268	273
	BB	80	80	90	90	100	100	110	110	120	120
	FF	42	42	52	52	62	62	72	72	82	82
	KK	—	—	40	40	50	50	60	60	70	70
	PP	24	24	34	34	44	44	54	54	64	64
	HB	98	103	108	113	118	123	128	133	138	143
φ 50	ZB	196	201	216	221	236	241	256	261	276	281
	BB	85	85	95	95	105	105	115	115	125	125
	FF	45	45	55	55	65	65	75	75	85	85
	KK	—	—	41	41	51	51	61	61	71	71
	PP	26	26	36	36	46	46	56	56	66	66
	HB	100	105	110	115	120	125	130	135	140	145
φ 63	ZB	213	218	233	238	253	258	273	278	293	298
	BB	92	92	102	102	112	112	122	122	132	132
	FF	52	52	62	62	72	72	82	82	92	92
	KK	—	—	44	44	54	54	64	64	74	74
	PP	30	30	40	40	50	50	60	60	70	70
	HB	108	113	118	123	128	133	138	143	148	153

Bore	C	CL	D	EA	EB	FA	H	J	JH	K	KA	KL	KT	KW
φ 32	10	7	20	70	56	56	9	M12×1.75P	15	9	38	63	8	12
φ 40	10	7	25	80	64	62	11	M16×2.0P	20	11	38	70	8	12
φ 50	11	8	30	94	74	74	13	M20×2.5P	25	13	40	80	9	14
φ 63	13	10	35	114	89	90	15	M27×3.0P	35	15	42	100	10	16

Bore	LH	M	MI	ME	MF	N	NB	O	OL	R	SW	U	Y	
φ 32	25	14	45	71	61	P9	74	M16×1.5P	25	10	17	4.5	28	
φ 40	29	18	55	79	61	P9	83	M22×1.5P	30	10	22	4.5	28	
φ 50	34	20	60	78	62	P11	84	M26×1.5P	35	10	27	5	29.5	
φ 63	42	22	75	88	64	P11	90	M30×1.5P	40	10	32	5.5	31	

TC

TS

RP

HC

HC_M

HCK

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DO

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DH

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