

25MPa Double acting hydraulic cylinders

DKB

Double Acting - Standard Type




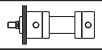
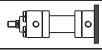
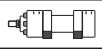
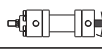
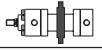
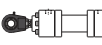
- DK series cylinder according to ISO 6022 (Monting styles FA, FB, TC, CG).
- Operating pressure under 25MPa only.
- Heavy Duty Mill type.
- Design for high quality and durability.



Specification

Bore sizes of cylinder (mm)	φ 50	φ 63	φ 80	φ 100	φ 125	φ 160	φ 200	φ 250
The range of stroke (mm)	Stroke by request							
Power fluid	Filtered oil							
Material of cylinder barrel	Carbon steel STKM 13C							
The range of pressure (MPa)	25(250Kg/cm ²)							
Proof pressure (MPa)	35(350Kg/cm ²)							
The range of temperature (°C)	-10~+60							

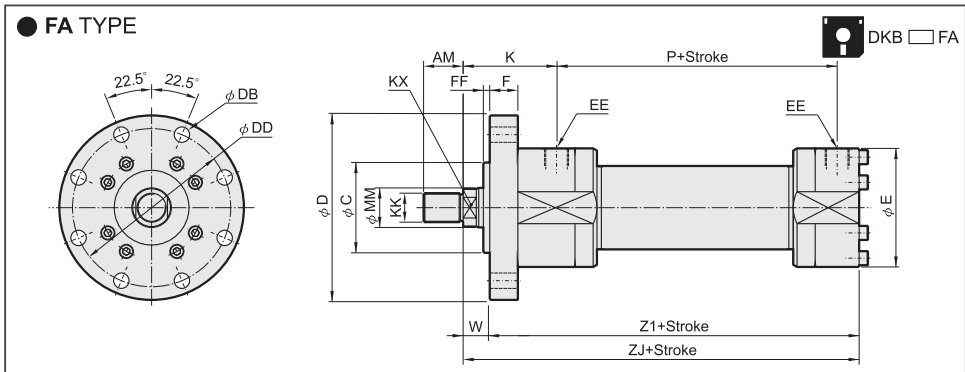
How to order

A	2	DKB	50	N	100	CG - G
Rod type	Seal material	Type	Bore	Cushion	Stroke	Accessory
A: A type B: B type		 DKB	50—φ 50mm 63—φ 63mm 80—φ 80mm 100—φ 100mm 125—φ 125mm 160—φ 160mm 200—φ 200mm 250—φ 250mm	R: Rod cover with cushion H: End cap with cushion B: Both end with cushion N: No cushion	50—50mm 100—100mm 150—150mm 175—175mm 200—200mm 250—250mm 300—300mm 350—350mm 400—400mm 450—450mm 500—500mm	 FA  FB  LA  CG  TC  G

Symbol	Seal material	Kind of fluid				
		Petroleum - Based fluid	Water - Glycol fluid	Phosphate - Ester fluid	W/O Water in oil fluid	O/W Oil in water fluid
1	NBR	○	○	×	○	○
2	PU	○	×	×	△	△
3	VITON	○	×	○	○	○

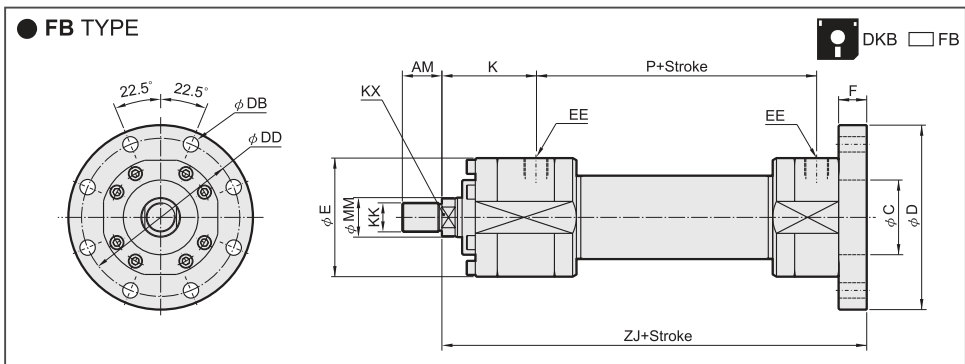
Note: ○: allowable ×: unallowable △: consult us

Dimensional features



Dimensional Table

Bore	A Rod		B Rod		AM	C	D	DB	DD	E	EE	F	FF	K	KK	P	W	Z1	ZJ
	KX	MM	KX	MM															
φ 50	30	36	27	32	36	63	155	13.5	132	98	G 1/2	25	4	80	M27×2.0	137	22	218	240
φ 63	36	45	32	40	45	75	175	13.5	150	115	G 3/4	28	4	87	M33×2.0	159	25	245	270
φ 80	46	56	41	50	56	90	210	17.5	180	135	G 3/4	32	4	104	M42×2.0	171	28	272	300
φ 100	62	70	50	63	63	110	250	22	212	165	G 1	36	5	113	M48×2.0	192	32	303	335
φ 125	75	90	65	80	85	132	290	22	250	205	G 1	40	5	131	M64×3.0	229	36	354	390
φ 160	95	110	85	100	95	160	360	26	315	255	G 1 - 1/4	45	5	185	M80×3.0	235	50	417	467
φ 200	120	140	110	125	112	200	440	33	385	306	G 1 - 1/4	56	5	220	M100×3.0	278	45	505	550
φ 250	160	180	140	160	125	250	540	39	475	395	G 1 - 1/2	63	8	253	M125×4.0	332	50	602	652



Dimensional Table

Bore	A Rod		B Rod		AM	C	D	DB	DD	E	EE	F	K	KK	P	ZJ
	KX	MM	KX	MM												
φ 50	30	36	27	32	36	63	155	13.5	132	98	G 1/2	25	80	M27×2.0	137	265
φ 63	36	45	32	40	45	75	175	13.5	150	115	G 3/4	28	87	M33×2.0	159	298
φ 80	46	56	41	50	56	90	210	17.5	180	135	G 3/4	32	104	M42×2.0	171	332
φ 100	62	70	50	63	63	110	250	22	212	165	G 1	36	113	M48×2.0	192	371
φ 125	75	90	65	80	85	132	290	22	250	205	G 1	40	131	M64×3.0	229	430
φ 160	95	110	85	100	95	160	360	26	315	255	G 1 - 1/4	45	185	M80×3.0	235	505
φ 200	120	140	110	125	112	200	440	33	385	306	G 1 - 1/4	56	220	M100×3.0	278	596
φ 250	160	180	140	160	125	250	540	39	475	395	G 1 - 1/2	63	253	M125×4.0	332	703

TC

TS

RP

HC

HC_M

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DW

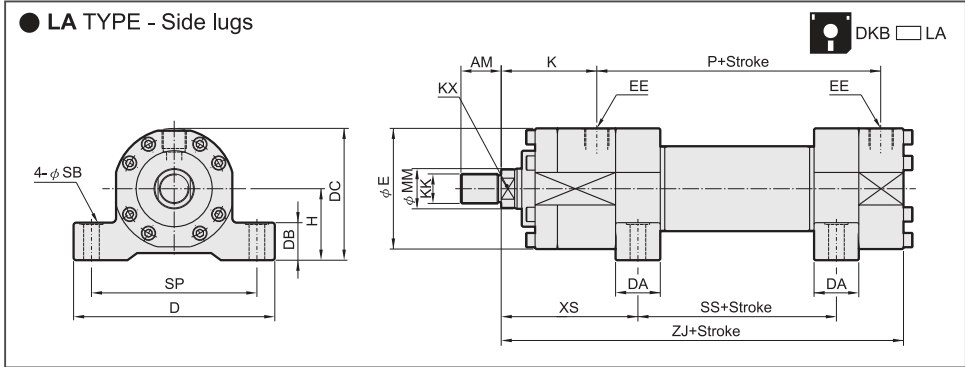
DM

DH

DK

Dimensional features

● LA TYPE - Side lugs

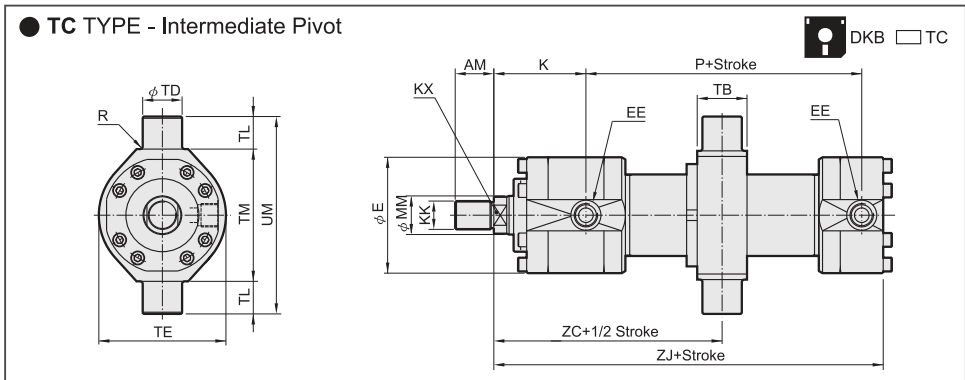


Dimensional Table

Dimension of the LA foot mounting is not accordant to the ISO standard.

Bore	A Rod		B Rod		AM	D	DA	DB	DC	E	EE	H	K	KK	P	SB	SP	SS	XS	ZJ
	KX	MM	KX	MM																
φ 50	30	36	27	32	36	160	30	32	109	98	G 1/2	60	80	M27×2.0	137	11	135	73	112	240
φ 63	36	45	32	40	45	185	35	37	125.5	115	G 3/4	68	87	M33×2.0	159	13.5	155	82	125.5	270
φ 80	46	56	41	50	56	225	45	42	147.5	135	G 3/4	80	104	M42×2.0	171	17.5	185	80	147.5	300
φ 100	62	70	50	63	63	265	55	52	177.5	165	G 1	95	113	M48×2.0	192	22	220	77	170.5	335
φ 125	75	90	65	80	85	325	60	62	217.5	205	G 1	115	131	M64×3.0	229	26	270	109	191	390
φ 160	95	110	85	100	95	405	75	77	272.5	255	G 1 - 1/4	145	185	M80×3.0	235	33	340	90	252.5	467
φ 200	120	140	110	125	112	480	90	87	323	306	G 1 - 1/4	170	220	M100×3.0	278	40	405	115	296	550
φ 250	160	180	140	160	125	620	100	112	412.5	395	G 1 - 1/2	215	253	M125×4.0	332	52	520	140	348	652

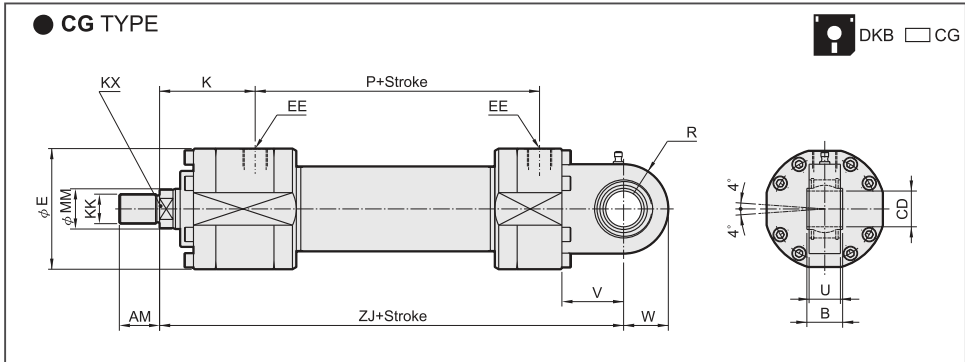
● TC TYPE - Intermediate Pivot



Dimensional Table

Bore	A Rod		B Rod		AM	E	EE	K	KK	P	TB	TD	TE	TL	TM	UM	ZC	ZJ
	KX	MM	KX	MM														
φ 50	30	36	27	32	36	98	G 1/2	80	M27×2.0	137	38	32	105	25	112	162	157.5	240
φ 63	36	45	32	40	45	115	G 3/4	87	M33×2.0	159	48	40	120	32	125	189	175	270
φ 80	46	56	41	50	56	135	G 3/4	104	M42×2.0	171	58	50	140	40	150	230	198	300
φ 100	62	70	50	63	63	165	G 1	113	M48×2.0	192	73	63	170	50	180	280	220	335
φ 125	75	90	65	80	85	205	G 1	131	M64×3.0	229	88	80	210	63	224	350	260	390
φ 160	95	110	85	100	95	255	G 1 - 1/4	185	M80×3.0	235	108	100	265	80	280	440	305	467
φ 200	120	140	110	125	112	306	G 1 - 1/4	220	M100×3.0	278	133	125	320	100	335	535	360	550
φ 250	160	180	140	160	125	395	G 1 - 1/2	253	M125×4.0	332	180	160	410	125	425	675	420	652

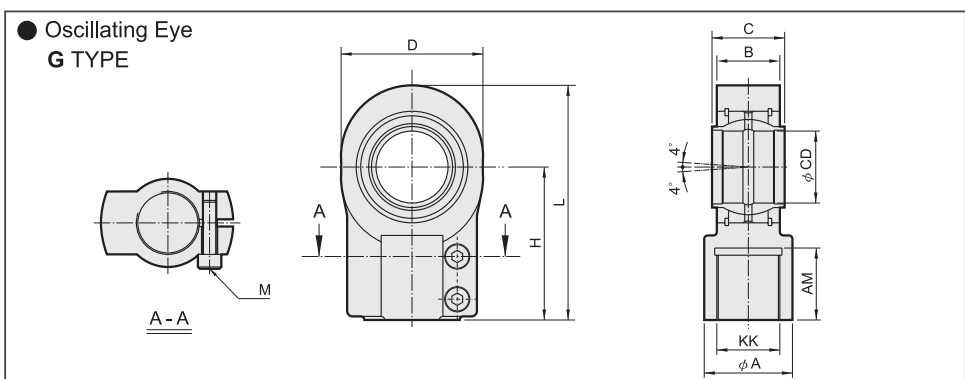
Dimensional features



Dimensional Table

Bore	A Rod		B Rod		AM	B	CD	E	EE	K	KK	P	R	U	V	W	ZJ
	KX	MM	KX	MM													
φ 50	30	36	27	32	36	32	32	98	G 1/2	80	M27 × 2.0	137	35	27	65	38	305
φ 63	36	45	32	40	45	40	40	115	G 3/4	87	M33 × 2.0	159	50	35	69	50	348
φ 80	46	56	41	50	56	50	50	135	G 3/4	104	M42 × 2.0	171	61.5	40	88	61.5	395
φ 100	62	70	50	63	63	63	63	165	G 1	113	M48 × 2.0	192	66	52	107	71	442
φ 125	75	90	65	80	85	80	80	205	G 1	131	M64 × 3.0	229	90	60	130	90	520
φ 160	95	110	85	100	95	100	100	255	G 1 - 1/4	185	M80 × 3.0	235	125	70	150	125	617
φ 200	120	140	110	125	112	125	125	306	G 1 - 1/4	220	M100 × 3.0	278	145	102	206	145	756
φ 250	160	180	140	160	125	160	160	395	G 1 - 1/2	253	M125 × 4.0	332	178	130	251	178	903

Accessories



Dimensional Table

Type	Bore	A	AM	B	C	CD	D	H	KK	L	M	Filename
G-M27 × 2.0S	φ 50	38	37	27	32	32	70	80	M27 × 2.0	118	M8 × 20	GM02720S
G-M33 × 2.0S	φ 63	47	46	32	40	40	89	97	M33 × 2.0	145.5	M8 × 25	GM03320S
G-M42 × 2.0S	φ 80	58	57	40	50	50	108	120	M42 × 2.0	179	M10 × 30	GM04220S
G-M48 × 2.0S	φ 100	70	64	52	63	63	132	140	M48 × 2.0	211	M12 × 40	GM04820S
G-M64 × 3.0S	φ 125	90	86	66	80	80	168	180	M64 × 3.0	270	M16 × 50	GM06430S
G-M80 × 3.0S	φ 160	110	96	84	100	100	210	210	M80 × 3.0	322	M20 × 60	GM08030S
G-M100 × 3.0S	φ 200	135	106	103	125	125	264	260	M100 × 3.0	405	M20 × 70	GM10030S
G-M125 × 4.0S	φ 250	165	126	130	160	160	326	310	M125 × 4.0	488	M24 × 80	GM12540S

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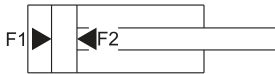
DK

Theoretic Force

Unit: KN

Bore (mm)	Rod (mm)		Pressure area (mm ²)	Operating pressure (MPa)																	
				5	10		15	17		19	21		23	25							
φ 50	φ 32	φ 36	F1	1963		9.8		19.6		29.4		33.3		37.2		41.2		45.1		49.1	
			F2	1159	946	5.8	4.7	11.6	9.5	17.4	14.2	19.7	16.1	22	18	24.3	19.9	26.6	21.8	28.9	23.7
φ 63	φ 40	φ 45	F1	3116		15.5		31.1		46.6		52.9		59.2		65.4		71.6		77.9	
			F2	1860	1526	9.3	7.6	18.6	15.2	27.9	22.9	31.6	25.9	35.3	29	39.1	32	42.7	35.1	46.5	38.1
φ 80	φ 50	φ 56	F1	5024		25.1		50.2		75.3		85.4		95.4		105.5		115.5		125.6	
			F2	3061	2562	15.3	12.8	30.6	25.6	45.9	38.4	52	43.5	58.1	48.6	64.2	53.8	70.4	58.9	76.5	64.0
φ 100	φ 63	φ 70	F1	7850		39.2		78.5		117.7		133.4		149.1		164.8		180.5		196.2	
			F2	4734	4003	23.6	20.0	47.3	40	71	60	80.4	68	89.9	76	99.4	84	108.8	92	118.3	100
φ 125	φ 80	φ 90	F1	12266		61.3		122.6		184		208.5		233		257.5		282.1		306.6	
			F2	7242	5907	36.2	29.5	72.4	59.1	108.6	88.6	123.1	100.4	137.6	112.2	152.1	124	166.5	135.8	181	147.6
φ 160	φ 100	φ 110	F1	20096		100.5		201		301.4		341.6		381.8		422		462.2		502.4	
			F2	12246	10597	61.2	52.9	122.4	106	183.6	158.9	208.1	180.1	232.6	201.3	257.1	222.5	281.6	243.7	306.1	264.9
φ 200	φ 125	φ 140	F1	31400		157.0		314		471		533.8		596.6		659.4		722.2		785	
			F2	19134	16014	95.6	80.0	191.3	160.1	287	240.2	325.2	272.2	363.5	304.2	401.8	336.2	440	368.3	478.3	400.3
φ 250	φ 160	φ 180	F1	49063		245.3		490.6		735.9		834.1		932.2		1030.3		1128.4		1226.5	
			F2	28967	23629	144.8	118.1	286.6	236.3	434.5	354.4	492.4	401.6	550.3	448.9	608.3	496.2	666.2	543.4	724.1	590.7

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)