

Double-Single acting cylinders

DSAI, DSCI

Single Acting - Normally Retracted Piston Rod Type



DSAO, DSCO

Single Acting - Normally Extended Piston Rod Type



DSC, DSA

Double Acting - Single End Rod Type



DSC..B, DSA..B

Double Acting - Single End Rod Type (with End Cushion)



DSD

Double Acting - Double End Rod Type



DSD..B

Double Acting - Double End Rod Type (with End Cushion)



- DS series cylinders according to ISO 6432. (Bore size φ 12~ φ 25)
- Piston with magnet is standard accessory in the DS series cylinders.

- End cushion is optional accessory except bore size φ 12mm
- The rod cover and End cap, molded by rolling and riveting, are of high concentricity and stability.

Specification

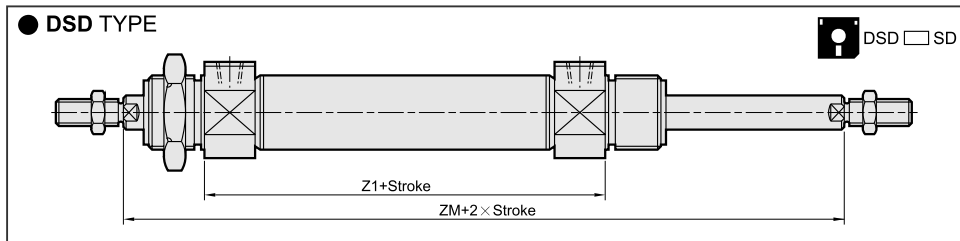
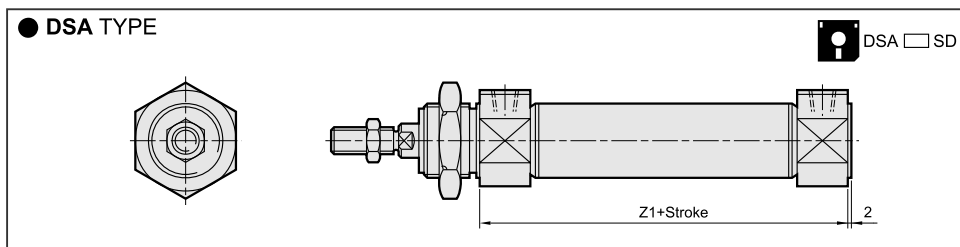
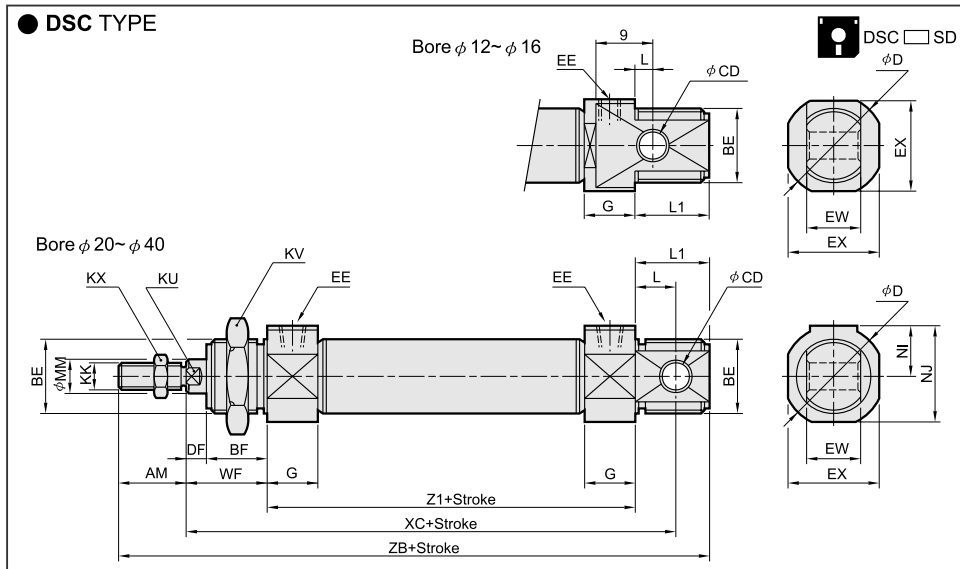
Bore sizes of cylinder (mm)	φ 12	φ 16	φ 20	φ 25	φ 32	φ 40
Stroke (Single acting) (mm)	15,25,50,75,100					
Stroke (Double acting) (mm)	25,50,75,100,125,150,175,200,250,300					
The range of stroke (mm)	200		300		500	
Power fluid	Filtered air with or without lubrication					
Material of cylinder barrel	Stainless steel					
The range of pressure (MPa)	Double Acting:1.03			Single Acting:0.23~1.03		
The range of temperature (°C)	-10~+60					

How to order

DSC	25	N	100	LB	Y	LN01B	2
Type	Bore	Cushion	Stroke	Accessory		Sensor switch	Quantity
DSA DSC DSD DSAI DSAO DSCI DSCO	12—φ 12mm 16—φ 16mm 20—φ 20mm 25—φ 25mm 32—φ 32mm 40—φ 40mm	R: Rod cover with cushion H: End cap with cushion B: Both end with cushion N: No cushion	25—25mm 50—50mm 75—75mm 100—100mm 125—125mm 150—150mm 175—175mm 200—200mm 250—250mm 300—300mm	FA FB LB CU Y I G K		LN01B LN48R	1: 1pc 2: 2pcs

Note:
 1.Can choose NPN or PNP type (3-Wire type, 24VDC).
 2.Can choose plug-in cable.
 3.For details see page 4-1.2 or 4-1.7.

Dimensional features of double acting cylinders



Dimensional Table

Bore	AM	BE	BF	CD	D	DF	EE	EX	EW	G		KK	KU	KV	KX	L	L1	MM	NI	NJ	WF	XC	Z1	ZB	ZM
										N	B														
φ 12	16	M16×1.5	16	6	21	6	M5	19	12	10	—	M6×1.0	5	24	12	2	16	6	-	-	22	75	51	105	95
φ 16	16	M16×1.5	16	6	21	6	M5	19	12	10	13.5	M6×1.0	5	24	12	2	16	6	-	-	22	82	58	112	102
φ 20	20	M22×1.5	18	8	30	6	G1/8	27	16	15	—	M8×1.25	7	27	14	12	22	8	15	28.5	24	95	59	125	107
φ 25	22	M22×1.5	20	8	30	8	G1/8	27	16	16	—	M10×1.25	9	27	17	12	22	10	15	28.5	28	104	64	136	120
φ 32	23	M27×2.0	20	10	38	8	G1/8	35	20	16	—	M10×1.25	10	35	17	15	27	12	19	36.5	28	115	72	150	128
φ 40	23	M33×2.0	20	10	45	8	G1/8	42	20	16	—	M14×1.5	14	41	22	15	27	16	22.5	43.5	28	115	72	150	128

※ φ 16 comes in only two types: "No Cushion (N)" and "Both end with cushion (B)."

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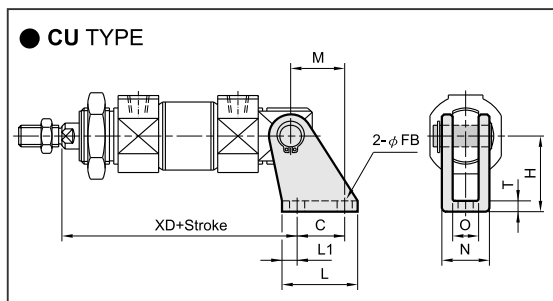
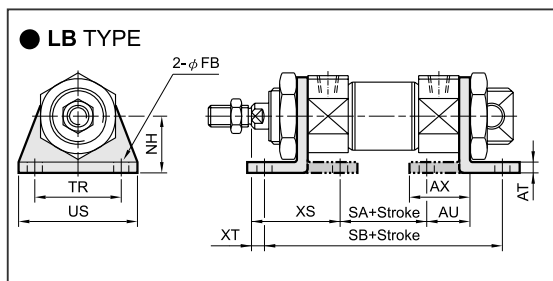
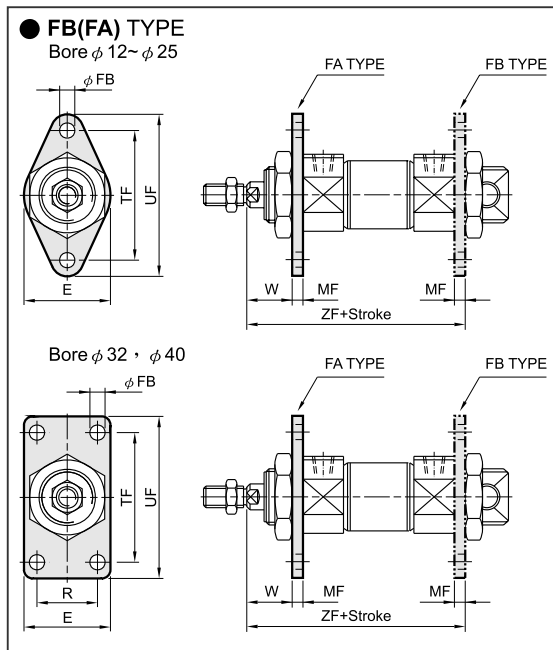
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Mounting Dimension of Double Acting Cylinders



Dimensional Table



Type	Bore	E	FB	MF	R	TF	UF
FA-12	φ 12	30	6	4	-	40	53
FA-16	φ 16	30	6	4	-	40	53
FA-20	φ 20	40	7	5	-	50	66
FA-25	φ 25	40	7	5	-	50	66
FA-32	φ 32	45	7	5	20	60	80
FA-40	φ 40	50	9	5	30	80	100
Type	Bore	W	ZF				
FA-12	φ 12	18	77				
FA-16	φ 16	18	84				
FA-20	φ 20	19	88				
FA-25	φ 25	23	97				
FA-32	φ 32	23.5	104.5				
FA-40	φ 40	23.5	104.5				

Dimensional Table



Type	Bore	AT	AU	AX	FB	NH	SA
LB-12	φ 12	4	14	20	6	20	31
LB-16	φ 16	4	14	20	6	20	38
LB-20	φ 20	5	17	25	7	25	35
LB-25	φ 25	5	17	25	7	25	40
LB-32	φ 32	5	20	30	7	35	42
LB-40	φ 40	5	20	30	9	40	42
Type	Bore	SB	TR	US	XT	XS	
LB-12	φ 12	79	32	42	8	32	
LB-16	φ 16	86	32	42	8	32	
LB-20	φ 20	93	40	54	7	36	
LB-25	φ 25	98	40	54	11	40	
LB-32	φ 32	112	40	55	8	43.5	
LB-40	φ 40	112	50	75	8	43.5	

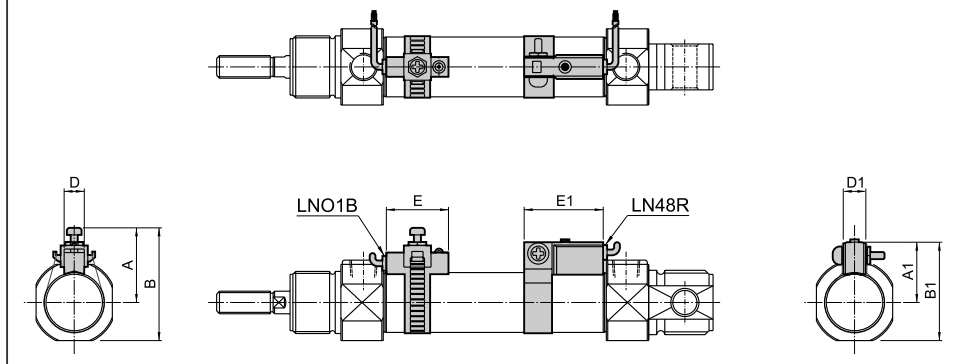
Dimensional Table



Type	Bore	C	FB	H	L	L1	M
CU-12	φ 12	15	6	27	25	5	13
CU-16	φ 16	15	6	27	25	5	13
CU-20	φ 20	20	7	30	32	6	16
CU-25	φ 25	20	7	30	32	6	16
CU-32	φ 32	25	7	40	40	7.5	20
CU-40	φ 40	25	9	40	40	7.5	20
Type	Bore	N	O	T	XD		
CU-12	φ 12	18	12	3	73		
CU-16	φ 16	18	12	3	80		
CU-20	φ 20	24	16	4	91		
CU-25	φ 25	24	16	4	100		
CU-32	φ 32	28	20	4	110		
CU-40	φ 40	28	20	4	110		

Installation of sensor switches

● DS TYPE



Dimensional Table

Bore	Sensor switch	A	B	D	E
φ 12	LN01B	21.4	31	7	22
φ 16	LN01B	23.5	33	7	22
φ 20	LN01B	25.5	39	7	22
φ 25	LN01B	28.4	41.9	7	22
φ 32	LN01B	32	49.5	7	22
φ 40	LN01B	36.3	57.3	7	22

Bore	Sensor switch	Clamp NO.	A1	B1	D1	E1
φ 12	LN48R	BS-S12	18	28	8	28
φ 16	LN48R	BS-S16	20	30	8	28
φ 20	LN48R	BS-S20	22	36	8	28
φ 25	LN48R	BS-S25	24	38	8	28
φ 32	LN48R	BS-S32	28	46	8	28
φ 40	LN48R	BS-S40	32	53	8	28

Cylinder Weight (Including The Mounting Nut)

Unit: kg

Bore	Basic weight DSC	Stroke 25 mm DSC	Basic weight DSA	Stroke 25 mm DSA	Basic weight DSD	Stroke 25 mm DSD	Sensor switch	
							LN01B	LN48R
φ 12	0.070	0.010	0.067	0.010	0.083	0.016	0.030	0.030
φ 16	0.085	0.013	0.082	0.013	0.099	0.019	0.030	0.030
φ 20	0.150/0.160	0.019	0.137/0.147	0.019	0.176/0.186	0.029	0.030	0.030
φ 25	0.190/0.207	0.027	0.176/0.193	0.027	0.236/0.253	0.043	0.030	0.030
φ 32	0.323/0.355	0.040	0.297/0.329	0.040	0.385/0.417	0.062	0.030	0.030
φ 40	0.495/0.546	0.059	0.462/0.513	0.059	0.610/0.661	0.098	0.030	0.030

※ No cushion / With end cushion

Mounting weight

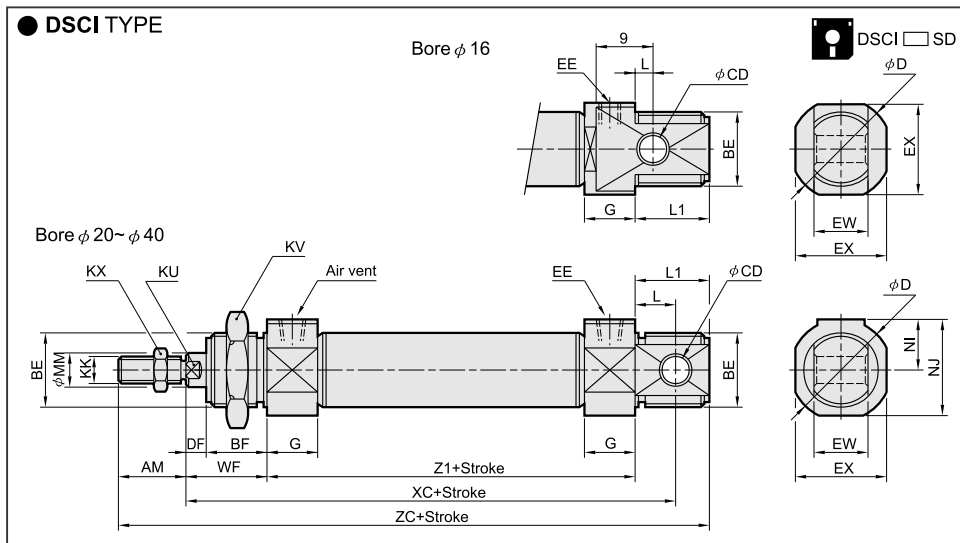
Unit: kg

Bore	FA FB	LB	CU	Y	I	G	K	Nut(Rod)	Nut(Cover)
φ 12	0.026	0.079	0.031	0.018	0.019	0.030	0.024	0.002	0.017
φ 16	0.026	0.079	0.031	0.018	0.019	0.030	0.024	0.002	0.017
φ 20	0.049	0.173	0.064	0.046	0.044	0.053	0.061	0.005	0.011
φ 25	0.049	0.173	0.064	0.088	0.080	0.080	0.113	0.008	0.011
φ 32	0.099	0.218	0.089	0.088	0.080	0.080	0.113	0.008	0.030
φ 40	0.132	0.315	0.090	0.151	0.157	0.175	0.245	0.016	0.038



Dimensional features of single acting cylinders

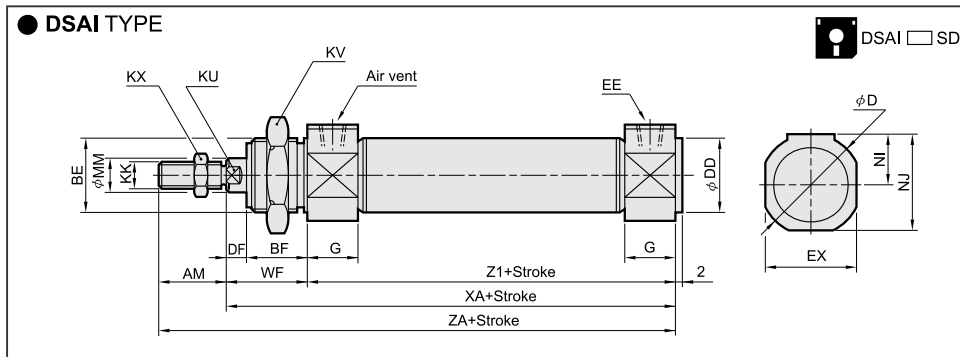
● DSCI TYPE



Dimensional Table

Bore	AM	BE	BF	CD	D	DF	EE	EX	EW	G	KK	KU	KV	KX	L	L1	MM	NI	NJ	WF	Stroke 1~50			Stroke 51~100		
																					XC	Z1	ZC	XC	Z1	ZC
φ 16	16	M16×1.5	16	6	21	6	M5	19	12	10	M6×1.0	5	24	12	2	16	6	-	-	22	82	58	112	107	83	137
φ 20	20	M22×1.5	18	8	30	6	G1/8	27	16	15	M8×1.25	7	27	14	12	22	8	15	28.5	24	95	59	125	120	84	150
φ 25	22	M22×1.5	20	8	30	8	G1/8	27	16	16	M10×1.25	9	27	17	12	22	10	15	28.5	28	104	64	136	129	89	161
φ 32	23	M27×2.0	20	10	38	8	G1/8	35	20	16	M10×1.25	10	35	17	15	27	12	19	36.5	28	115	72	150	140	97	175
φ 40	23	M33×2.0	20	10	45	8	G1/8	42	20	16	M14×1.5	14	41	22	15	27	16	22.5	43.5	28	115	72	150	140	97	175

● DSAI TYPE



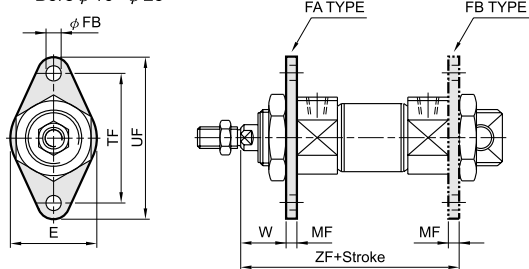
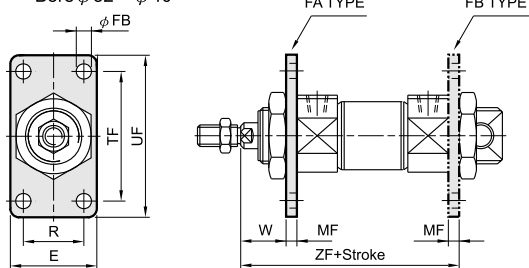
Dimensional Table

Bore	AM	BE	BF	D	DF	DD	EE	EX	G	KK	KU	KV	KX	MM	NI	NJ	WF	Stroke 1~50			Stroke 51~100		
																		XA	Z1	ZA	XA	Z1	ZA
φ 16	16	M16×1.5	16	21	6	φ 16	M5	19	10	M6×1.0	5	24	12	6	-	-	22	80	58	96	105	83	121
φ 20	20	M22×1.5	18	30	6	φ 22	G1/8	27	15	M8×1.25	7	27	14	8	15	28.5	24	83	59	103	108	84	128
φ 25	22	M22×1.5	20	30	8	φ 22	G1/8	27	16	M10×1.25	9	27	17	10	15	28.5	28	92	64	114	117	89	139
φ 32	23	M27×2.0	20	38	8	φ 27	G1/8	35	16	M10×1.25	10	35	17	12	19	36.5	28	100	72	123	125	97	148
φ 40	23	M33×2.0	20	45	8	φ 33	G1/8	42	16	M14×1.5	14	41	22	16	22.5	43.5	28	100	72	123	125	97	148

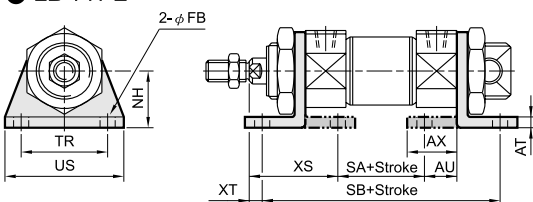


Mounting Dimension of single Acting Cylinders

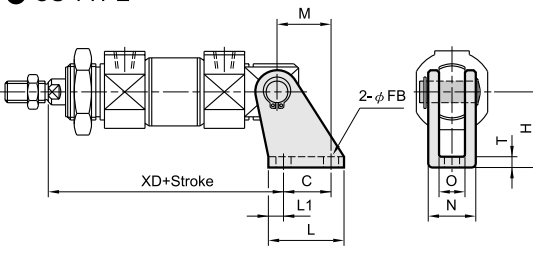
● FA(FB) TYPE

Bore $\phi 16 \sim \phi 25$ Bore $\phi 32, \phi 40$ 

● LB TYPE



● CU TYPE



Dimensional Table



DS □ FA

Type	Bore	E	FB	MF	R	TF	UF
FA-16	$\phi 16$	30	6	4	-	40	53
FA-20	$\phi 20$	40	7	5	-	50	66
FA-25	$\phi 25$	40	7	5	-	50	66
FA-32	$\phi 32$	45	7	5	20	60	80
FA-40	$\phi 40$	50	9	5	30	80	100

Type	Bore	W	ZF	
			Stroke 1~50	Stroke 51~100
FA-16	$\phi 16$	18	84	109
FA-20	$\phi 20$	19	88	113
FA-25	$\phi 25$	23	97	122
FA-32	$\phi 32$	23.5	104.5	129.5
FA-40	$\phi 40$	23.5	104.5	129.5

Dimensional Table



DS □ LB

Type	Bore	AT	AU	AX	FB	NH	TR	US
LB-16	$\phi 16$	4	14	20	6	20	32	42
LB-20	$\phi 20$	5	17	25	7	25	40	54
LB-25	$\phi 25$	5	17	25	7	25	40	54
LB-32	$\phi 32$	5	20	30	7	35	40	55
LB-40	$\phi 40$	5	20	30	9	40	50	75

Type	Bore	XT	XS	Stroke 1~50		Stroke 51~100	
				SA	SB	SA	SB
LB-16	$\phi 16$	8	32	38	86	63	111
LB-20	$\phi 20$	7	36	35	93	60	118
LB-25	$\phi 25$	11	40	40	98	65	123
LB-32	$\phi 32$	8	43.5	42	112	66	137
LB-40	$\phi 40$	8	43.5	42	112	66	137

Dimensional Table



DS □ CU

Type	Bore	C	FB	H	L	L1	M
CU-16	$\phi 16$	15	6	27	25	5	13
CU-20	$\phi 20$	20	7	30	32	6	16
CU-25	$\phi 25$	20	7	30	32	6	16
CU-32	$\phi 32$	25	7	40	40	7.5	20
CU-40	$\phi 40$	25	9	40	40	7.5	20

Type	Bore	N	O	T	XD	
					Stroke 1~50	Stroke 51~100
CU-16	$\phi 16$	18	12	3	80	105
CU-20	$\phi 20$	24	16	4	91	116
CU-25	$\phi 25$	24	16	4	100	125
CU-32	$\phi 32$	28	20	4	110	135
CU-40	$\phi 40$	28	20	4	110	135

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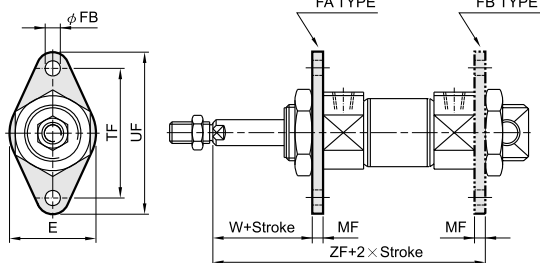
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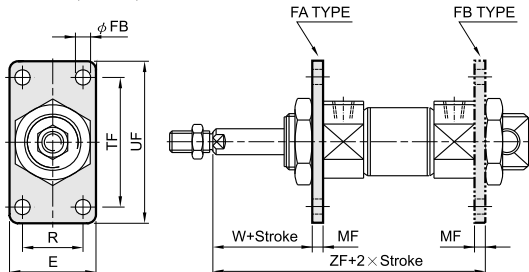
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Mounting Dimension of single Acting Cylinders

● FA(FB) TYPE Bore φ 16~φ 25



Bore φ 32, φ 40



Dimensional Table



Type	Bore	E	FB	MF	R	TF	UF
FA-16	φ 16	30	6	4	-	40	53
FA-20	φ 20	40	7	5	-	50	66
FA-25	φ 25	40	7	5	-	50	66
FA-32	φ 32	45	7	5	20	60	80
FA-40	φ 40	50	9	5	30	80	100

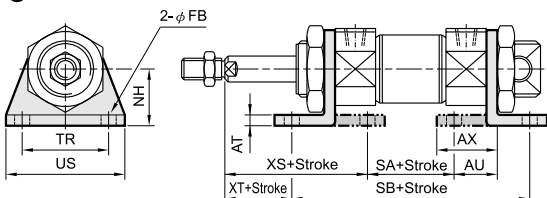
Type	Bore	W	ZF	
			Stroke 1~50	Stroke 51~100
FA-16	φ 16	18	84	109
FA-20	φ 20	19	88	113
FA-25	φ 25	23	97	122
FA-32	φ 32	23.5	104.5	129.5
FA-40	φ 40	23.5	104.5	129.5

Dimensional Table



Type	Bore	AT	AU	AX	FB	NH	TR	US
LB-16	φ 16	4	14	20	6	20	32	42
LB-20	φ 20	5	17	25	7	25	40	54
LB-25	φ 25	5	17	25	7	25	40	54
LB-32	φ 32	5	20	30	7	35	40	55
LB-40	φ 40	5	20	30	9	40	50	75

● LB TYPE



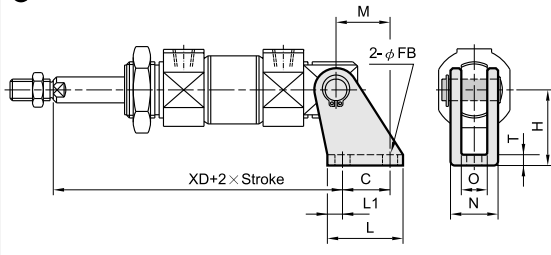
Type	Bore	XT	XS	Stroke 1~50		Stroke 51~100	
				SA	SB	SA	SB
LB-16	φ 16	8	32	38	86	63	111
LB-20	φ 20	7	36	35	93	61	118
LB-25	φ 25	11	40	40	98	65	123
LB-32	φ 32	8	43.5	42	112	66	137
LB-40	φ 40	8	43.5	42	112	66	137

Dimensional Table



Type	Bore	C	FB	H	L	L1	M
CU-16	φ 16	15	6	27	25	5	13
CU-20	φ 20	20	7	30	32	6	16
CU-25	φ 25	20	7	30	32	6	16
CU-32	φ 32	25	7	40	40	7.5	20
CU-40	φ 40	25	9	40	40	7.5	20

● CU TYPE



Type	Bore	N	O	T	XD	
					Stroke 1~50	Stroke 51~100
CU-16	φ 16	18	12	3	80	105
CU-20	φ 20	24	16	4	91	116
CU-25	φ 25	24	16	4	100	125
CU-32	φ 32	28	20	4	110	135
CU-40	φ 40	28	20	4	110	135

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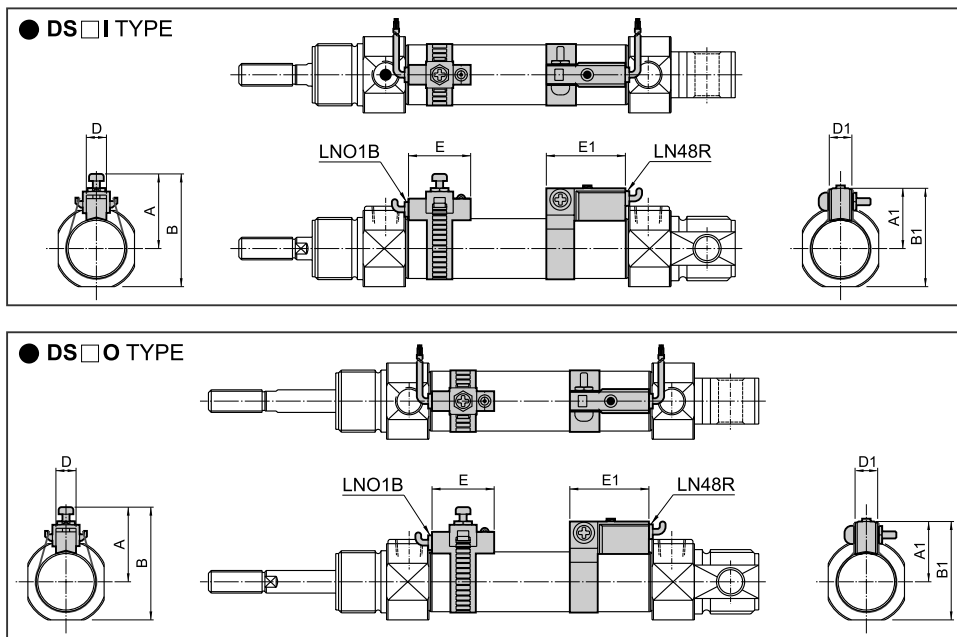
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Installation of sensor switches



Dimensional Table

Bore	Sensor switch	A	B	D	E
φ 16	LN01B	23.4	33	7	22
φ 20	LN01B	25.5	39	7	22
φ 25	LN01B	28.4	41.9	7	22
φ 32	LN01B	32	49.5	7	22
φ 40	LN01B	36.3	57.3	7	22

Bore	Sensor switch	Clamp NO.	A1	B1	D1	E1
φ 16	LN48R	BS-S16	20	30	8	28
φ 20	LN48R	BS-S20	22	36	8	28
φ 25	LN48R	BS-S25	24	38	8	28
φ 32	LN48R	BS-S32	28	46	8	28
φ 40	LN48R	BS-S40	32	53	8	28

Cylinder Weight (Including The Mounting Nut)

Unit: kg

Bore	Basic weight	Stroke 25 mm	Basic weight	Stroke 25 mm	Basic weight	Stroke 25 mm	Basic weight	Stroke 25 mm
	DSCI	DSCI	DSAI	DSAI	DSCO	DSCO	DSAO	DSAO
φ 16	0.089	0.013	0.086	0.013	0.090	0.013	0.087	0.013
φ 20	0.154	0.019	0.141	0.019	0.156	0.019	0.142	0.019
φ 25	0.199	0.027	0.185	0.027	0.201	0.027	0.187	0.027
φ 32	0.339	0.040	0.313	0.040	0.342	0.040	0.316	0.040
φ 40	0.515	0.059	0.482	0.059	0.520	0.059	0.487	0.059

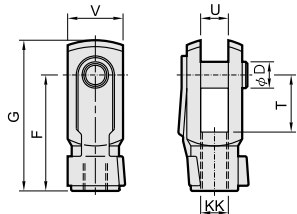
Mounting weight

Unit: kg

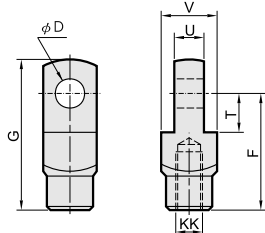
Bore	FA	FB	LB	CU	Y	I	G	K	Nut(Rod)	Nut(Cover)	Sensor switch	
											LN01B 	LN48R 
φ 16	0.026		0.079	0.031	0.018	0.019	0.030	0.024	0.002	0.017	0.030	0.030
φ 20	0.049		0.173	0.064	0.046	0.044	0.053	0.061	0.005	0.011	0.030	0.030
φ 25	0.049		0.173	0.064	0.088	0.080	0.080	0.113	0.008	0.011	0.030	0.030
φ 32	0.099		0.218	0.089	0.088	0.080	0.080	0.113	0.008	0.030	0.030	0.030
φ 40	0.132		0.315	0.090	0.151	0.157	0.175	0.245	0.016	0.038	0.030	0.030

Accessories

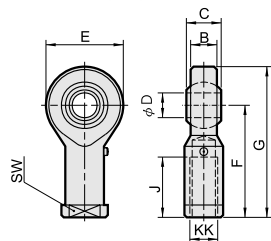
● Y Rod Clevis (With Pin)



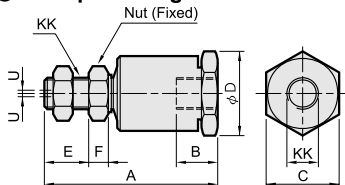
● I Rod end mounting



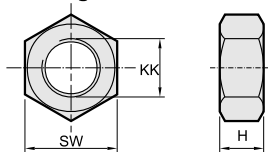
● Oscillating Eye



● Compensating Joint



● Mounting Nut



Dimensional Table

Type	Bore	D	F	G	KK	T	U	V
Y-M6×1.0	φ 12, φ 16	6	24	31	M6×1.0	12	6	12
Y-M8×1.25	φ 20	8	32	42	M8×1.25	16	8	16
Y-M10×1.25	φ 25, φ 32	10	40	52	M10×1.25	20	10	20
Y-M14×1.5	φ 40	10	45	58	M14×1.5	20	14	25



Type	Filename
Y-M6×1.0	YM06100
Y-M8×1.25	YM08125
Y-M10×1.25	YM10125
Y-M14×1.5	YM14150

Dimensional Table

Type	Bore	D	F	G	KK	T	U	V
I-M6×1.0	φ 12, φ 16	6	24	31	M6×1.0	9	6	12.7
I-M8×1.25	φ 20	8	32	42	M8×1.25	11	8	16
I-M10×1.25	φ 25, φ 32	10	40	52	M10×1.25	13	10	19
I-M14×1.5	φ 40	10	45	57	M14×1.5	13	14	25.4



Type	Filename
I-M6×1.0	IM06100
I-M8×1.25	IM08125
I-M10×1.25	IM10125
I-M14×1.5	IM14150

Dimensional Table

Type	Bore	B	C	D	E	F	G	J	KK	SW
G-M6×1.0	φ 12, φ 16	7	9	6	18	30	39	14	M6×1.0	11
G-M8×1.25	φ 20	9	12	8	22	36	47	17	M8×1.25	14
G-M10×1.25	φ 25, φ 32	10.5	14	10	26	43	56	21	M10×1.25	17
G-M14×1.5	φ 40	13.5	19	14	34	57	74	27	M14×1.5	22



Type	Filename
G-M6×1.0	GM06100
G-M8×1.25	GM08125
G-M10×1.25	GM10125
G-M14×1.5	GM14150

Dimensional Table

Type	Bore	A	B	C	D	E	F	KK	U
K-M6×1.0	φ 12, φ 16	37	7.5	14	15	12	5	M6×1.0	1
K-M8×1.25	φ 20	47	11	19	20	14.5	5	M8×1.25	0.75
K-M10×1.25	φ 25, φ 32	54	13	24	25.5	14.5	6	M10×1.25	1
K-M14×1.5	φ 40	70	17	29	31	19	8	M14×1.5	1.15



Type	Filename	Type	Filename
K-M6×1.0	KM06100	K-M10×1.25	KM10125
K-M8×1.25	KM08125	K-M14×1.5	KM14150

Dimensional Table

Type	Bore	H	KK	SW	Type	Filename
N-M6×1.0	φ 12, φ 16	3	M6×1.0	10	N-M6×1.0	NM06100
N-M8×1.25	φ 20	5	M8×1.25	14	N-M8×1.25	NM08125
N-M10×1.25	φ 25, φ 32	6	M10×1.25	17	N-M10×1.25	NM10125
N-M14×1.5	φ 40	8	M14×1.5	22	N-M14×1.5	NM14150
N-M16×1.5	φ 12, φ 16	8	M16×1.5	24	N-M16×1.5	NM16150
N-M22×1.5	φ 20, φ 25	6	M22×1.5	27	N-M22×1.5	NM22150
N-M27×2.0	φ 32	8	M27×2.0	35	N-M27×2.0	NM27200
N-M33×2.0	φ 40	8	M33×2.0	41	N-M33×2.0	NM33200

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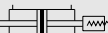
CH

Adjustable forward stroke type

DSN..A, DSN..B

Double End Rod Type - Adjustable

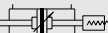
A: 25mm
B: 50mm



DSN..B..A, DSN..B..B

Double End Rod Type (with End Cushion) - Adjustable

A: 25mm
B: 50mm

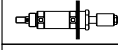
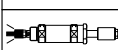


- Piston with magnet is standard accessory in the adjustable stroke cylinders.
- The rod cover and End cap, molded by rolling and riveting, are of high concentricity and stability.
- Adjustable stroke A: 25mm B: 50mm

Specification

Bore sizes of cylinder (mm)	φ 12	φ 16	φ 20	φ 25	φ 32	φ 40
Standard stroke (mm)	25, 50, 75, 100, 125, 150, 175, 200, 250, 300					
The range of stroke (mm)	Max. 100					
Power fluid	Filtered air with or without lubrication					
Material of cylinder barrel	Stainless steel					
The range of pressure (MPa)	0.1~1.03					
The range of temperature (°C)	-10~+60					

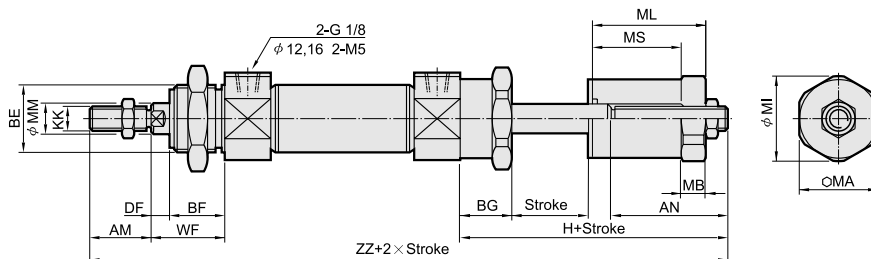
How to order

DSN	25	N	100	A	LB - Y - LN01B ×	2
Type	Bore	Cushion	Stroke	Adjustable stroke	Accessory	Sensor switch
 DSN	12—φ 12mm 16—φ 16mm 20—φ 20mm 25—φ 25mm 32—φ 32mm 40—φ 40mm	R: Rod cover with cushion H: End cap with cushion B: Both end with cushion N: No cushion	25—25mm 50—50mm 75—75mm 100—100mm 125—125mm 150—150mm 175—175mm 200—200mm 250—250mm 300—300mm	None: standard A: Adjustable 25mm B: Adjustable 50mm Note: this number can only be used for the adjustable type.	 FA  FB  LB  Y  I  G  K	 LN01B  LN48R
						Quantity 1: 1pc 2: 2pcs

Note:
1.Can choose NPN or PNP type (3-Wire type, 24VDC).
2.Can choose plug-in cable.
3.For details see page 4-1.2 or 4-1.7.

Dimensional features

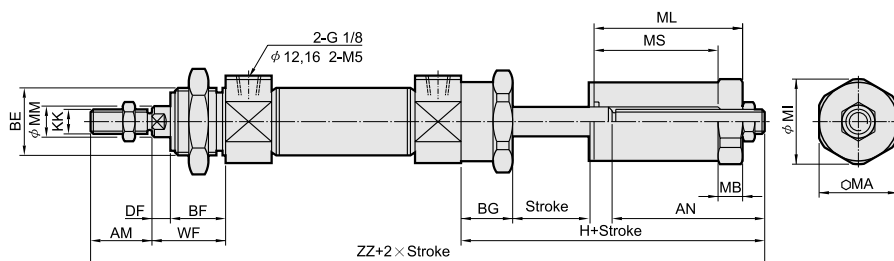
● DSN TYPE (A: 25mm)



Dimensional Table

Bore	AN	AM	BE	BF	BG	DF	H	KK	MA	MB	MI	ML	MM	MS	WF	ZZ
φ 12	41.5	16	M16×1.5	16	19	6	66.5	M6×1.0	14	6	—	40	6	31	22	155.5
φ 16	41.5	16	M16×1.5	16	19	6	66.5	M6×1.0	14	6	—	40	6	31	22	162.5
φ 20	45	20	M22×1.5	18	25	6	78	M8×1.25	22	8	24	43	8	33	24	181
φ 25	46	22	M22×1.5	20	25	8	79	M10×1.25	22	8	24	45	10	35	28	193
φ 32	46	23	M27×2.0	20	25	8	79	M10×1.25	27	10	29	47	12	35	28	202
φ 40	50	23	M33×2.0	20	25	8	83	M14×1.5	32	10	35	47	16	35	28	206

● DSN TYPE (B: 50mm)



Dimensional Table

Bore	AN	AM	BE	BF	BG	DF	H	KK	MA	MB	MI	ML	MM	MS	WF	ZZ
φ 12	66.5	16	M16×1.5	16	19	6	91.5	M6×1.0	14	6	—	65	6	56	22	180.5
φ 16	66.5	16	M16×1.5	16	19	6	91.5	M6×1.0	14	6	—	65	6	56	22	187.5
φ 20	70	20	M22×1.5	18	25	6	103	M8×1.25	22	8	24	68	8	58	24	206
φ 25	71	22	M22×1.5	20	25	8	104	M10×1.25	22	8	24	70	10	60	28	218
φ 32	71	23	M27×2.0	20	25	8	104	M10×1.25	27	10	29	72	12	60	28	227
φ 40	75	23	M33×2.0	20	25	8	108	M14×1.5	32	10	35	72	16	60	28	231

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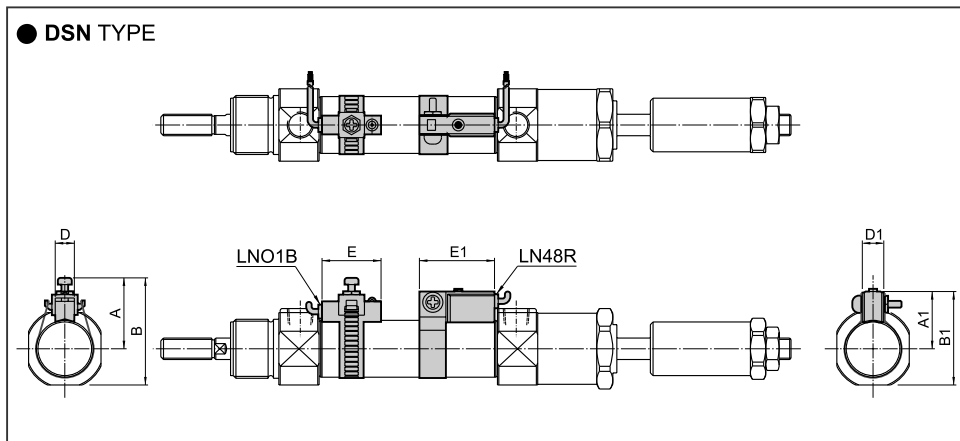
RT

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CH

Installation of sensor switches

● DSN TYPE



Dimensional Table

Bore	Sensor switch	A	B	D	E
φ 12	LN01B	21.5	31	7	22
φ 16	LN01B	23.5	33	7	22
φ 20	LN01B	25.5	39	7	22
φ 25	LN01B	28.4	41.9	7	22
φ 32	LN01B	32	49.5	7	22
φ 40	LN01B	36.3	57.3	7	22

Bore	Sensor switch	Clamp NO.	A1	B1	D1	E1
φ 12	LN48R	BS-S12	18	28	8	28
φ 16	LN48R	BS-S16	20	30	8	28
φ 20	LN48R	BS-S20	22	36	8	28
φ 25	LN48R	BS-S25	24	38	8	28
φ 32	LN48R	BS-S32	28	46	8	28
φ 40	LN48R	BS-S40	32	53	8	28

Cylinder Weight (Including The Mounting Nut) Unit: kg

Bore	Basic weight DSN	Stroke 25 mm DSN	Basic weight DSN	Stroke 25 mm DSN
	Adjustable Stroke 25 mm		Adjustable Stroke 50 mm	
φ 12	0.182	0.020	0.225	0.020
φ 16	0.195	0.024	0.238	0.024
φ 20	0.275	0.029	0.337	0.029
φ 25	0.377	0.043	0.473	0.043
φ 32	0.495	0.062	0.590	0.062
φ 40	0.788	0.098	0.927	0.098

Mounting weight

Unit: kg

Bore	FA	FB	LB	Y	I	G	K	Nut(Rod)	Nut(Cover)	Sensor switch	
										LN01B	LN48R
											
φ 12	0.026	0.079	0.018	0.019	0.030	0.024	0.002	0.017	0.030	0.030	
φ 16	0.026	0.079	0.018	0.019	0.030	0.024	0.002	0.017	0.030	0.030	
φ 20	0.049	0.173	0.046	0.044	0.053	0.061	0.005	0.011	0.030	0.030	
φ 25	0.049	0.173	0.088	0.080	0.080	0.113	0.008	0.011	0.030	0.030	
φ 32	0.099	0.218	0.088	0.080	0.080	0.113	0.008	0.030	0.030	0.030	
φ 40	0.132	0.315	0.151	0.157	0.175	0.245	0.016	0.038	0.030	0.030	

Hollow rod cylinders

DSG

Double Acting - Double End Rod Type



DSG..B

Double Acting - Double End Rod with End Cushion Type



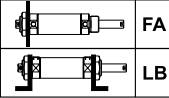
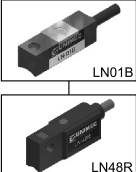
Hollow shaft cylinders can be incorporated with:

- Suction cup – sucking
- Tested component – concealed wire
- Fluid path -- flushing, gluing, stuffing and cooling
- Clamp -- clamping

Specification

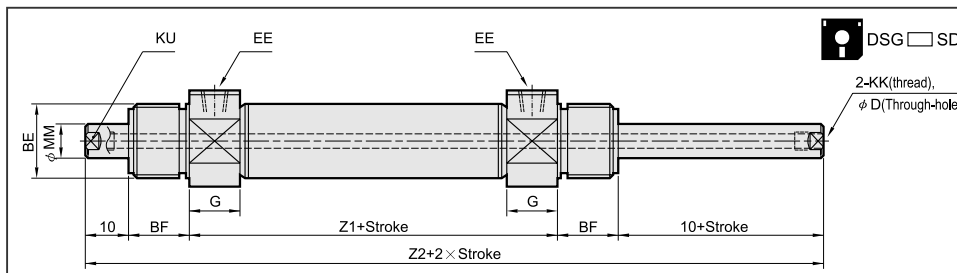
Bore sizes of cylinder (mm)	φ 25	φ 32	φ 40
Standard stroke (mm)	25,50,75,100,125,150		
Power fluid	Filtered air with or without lubrication		
Material of cylinder barrel	Stainless steel		
The range of pressure (MPa)	0.1~1.03		
The range of temperature (°C)	-10~+60		

How to order

DSG	32	N	100	LB	—	LN01B	×	2
Type	Bore	Cushion	Stroke	Accessory		Sensor switch		Quantity
	25—φ 25mm 32—φ 32mm 40—φ 40mm	R: Rod cover with cushion H: End cap with cushion B: Both end with cushion N: No cushion	25—25mm 50—50mm 75—75mm 100—100mm 125—125mm 150—150mm					1: 1pc 2: 2pcs

Note:
1. Can choose NPN or PNP type (3-Wire type, 24VDC).
2. Can choose plug-in cable.
3. For details see page 4-1, 2 or 4-1, 7.

Dimensional features



Dimensional Table

Bore	BE	BF	D	EE	G	KK	KU	MM	Z1	Z2
φ 25	M22×1.5	20	4	G 1/8	16	M5×0.8	9	10	64	124
φ 32	M27×2.0	20	5	G 1/8	16	PT 1/8	11	12	72	132
φ 40	M33×2.0	20	6	G 1/8	16	PT 1/8	14	16	72	132

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Multiple position cylinders

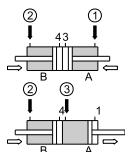
DSE

Double Acting - Back To Back Standard Type



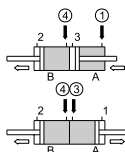
DSE..B

Double Acting - Back To Back with End Cushion Type



①② Air intake, cylinders A&B retract

②③ Air intake, cylinder B retracts, cylinder A extends



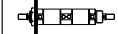
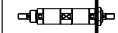
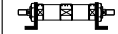
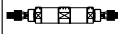
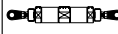
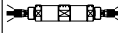
①④ Air intake, cylinder B extends, cylinder A retracts

④③ Air intake, cylinders A&B extend

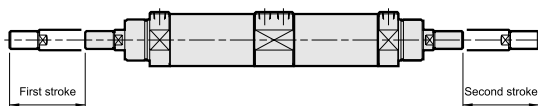
Specification

Bore sizes of cylinder (mm)	φ 20	φ 25	φ 32	φ 40
Standard stroke (mm)	25,50,75,100,125,150,175,200			
The range of stroke (mm)	Max. 300			
Power fluid	Filtered air with or without lubrication			
Material of cylinder barrel	Stainless steel			
The range of pressure (MPa)	0.1~1.03			
The range of temperature (°C)	-10~+60			

How to order

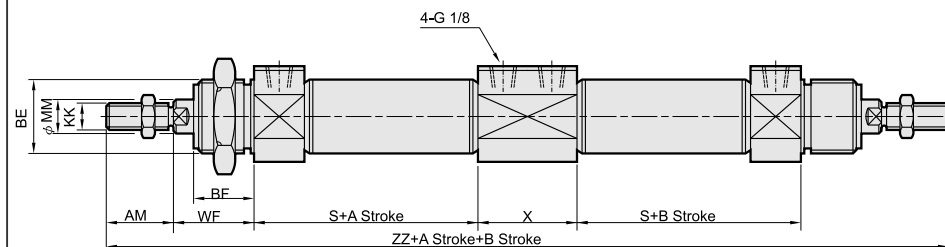
DSE	25	N	50 / 100	LB - Y - LN01B × 2	
Type	Bore	Cushion	First stroke	Second stroke	Accessory
	20—φ 20mm 25—φ 25mm 32—φ 32mm 40—φ 40mm	B: Both end with cushion N: No cushion	25—25mm 50—50mm 75—75mm 100—100mm 125—125mm 150—150mm 175—175mm 200—200mm	25—25mm 50—50mm 75—75mm 100—100mm 125—125mm 150—150mm 175—175mm 200—200mm	 FA  FB  LB  Y  I  G  K
					Sensor switch
					 LN01B
					 LN48R
					Quantity
					1: 1pc 2: 2pcs

Note:
1.Can choose NPN or PNP type (3-Wire type, 24VDC).
2.Can choose plug-in cable.
3.For details see page 4-1.2 or 4-1.7.



Dimensional features

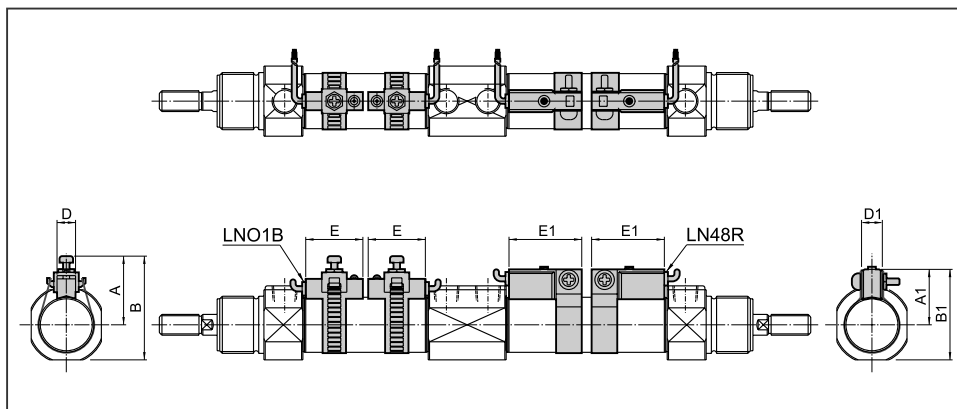
● DSE TYPE



Dimensional Table

Bore	AM	BE	BF	KK	MM	S	WF	X	ZZ
φ 20	20	M22 × 1.5	18	M8 × 1.25	8	44	24	30	206
φ 25	22	M22 × 1.5	20	M10 × 1.25	10	48	28	32	228
φ 32	23	M27 × 2.0	20	M10 × 1.25	12	56	28	32	246
φ 40	23	M33 × 2.0	20	M14 × 1.5	16	56	28	32	246

Installation of sensor switches



Dimensional Table

Bore	Sensor switch	A	B	D	E	Bore	Sensor switch	Clamp NO.	A1	B1	D1	E1
φ 20	LN01B	25.5	39	7	22	φ 20	LN48R	BS-S20	22	36	8	28
φ 25	LN01B	28.4	41.9	7	22	φ 25	LN48R	BS-S25	24	38	8	28
φ 32	LN01B	32	49.5	7	22	φ 32	LN48R	BS-S32	28	46	8	28
φ 40	LN01B	36.3	57.3	7	22	φ 40	LN48R	BS-S40	32	53	8	28

DSF

Multiple Position Cylinders - Standard Type



DSF..B

Multiple Position Cylinders - with End Cushion Type



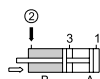
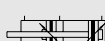
DSL

Tandem Cylinders - Standard Type

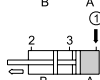


DSL..B

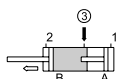
Tandem Cylinders - with End Cushion Type



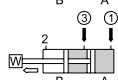
② Air intake, cylinders A&B retract.



① Air intake, cylinder A extends.



③ Air intake, cylinder B extends.

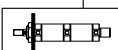
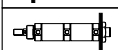
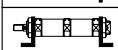
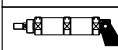
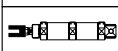
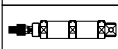
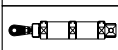


①③ Simultaneous air intake with double output force.
Note: strokes of two stages shall be identical.

Specification

Bore sizes of cylinder (mm)	φ 20	φ 25	φ 32	φ 40
Standard stroke (mm)	25,50,75,100,125,150,175,200			
The range of stroke (mm)	Max. 300			
Power fluid	Filtered air with or without lubrication			
Material of cylinder barrel	Stainless steel			
The range of pressure (MPa)	0.1~1.03			
The range of temperature (°C)	-10~+60			

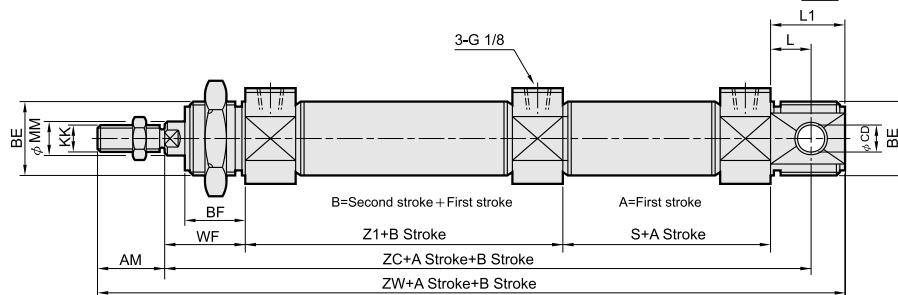
How to order

DSF	25	N	50 / 100	LB	Y	LN01B ×	2
Type	Bore	Cushion	First stroke	Second stroke	Accessory	Sensor switch	Quantity
 DSF  DSL	20—φ 20mm 25—φ 25mm 32—φ 32mm 40—φ 40mm	B: Both end with cushion N: No cushion	25—25mm 50—50mm 75—75mm 100—100mm 125—125mm 150—150mm 175—175mm 200—200mm	25—25mm 50—50mm 75—75mm 100—100mm 125—125mm 150—150mm 175—175mm 200—200mm	 FA  FB  LB  CU  Y  I  G  K	 LN01B  LN48R	1: 1pc 2: 2pcs

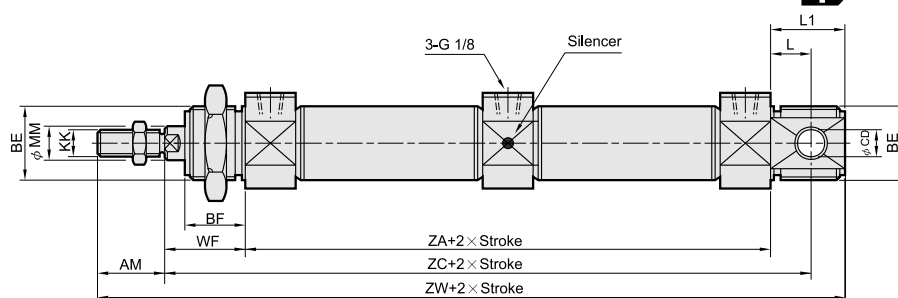
Note:
1.Can choose NPN or PNP type (3-Wire type, 24VDC).
2.Can choose plug-in cable.
3.For details see page 4-1.2 or 4-1.7.

Dimensional features

● DSF TYPE (Multiple position cylinders)



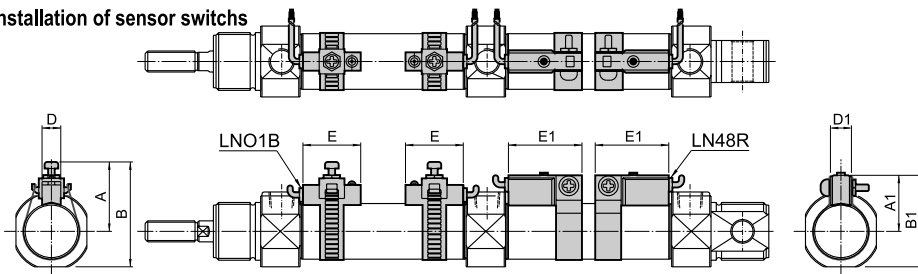
● DSL TYPE (Tandem Cylinders)



Dimensional Table

Bore	AM	BE	BF	CD	KK	L	L1	MM	S	WF	Z1	ZA	ZC	ZW
φ 20	20	M22×1.5	18	8	M8×1.25	12	22	8	44	24	59	103	139	169
φ 25	22	M22×1.5	20	8	M10×1.25	12	22	10	48	28	64	112	152	184
φ 32	23	M27×2.0	20	10	M10×1.25	15	27	12	56	28	72	128	171	206
φ 40	23	M33×2.0	20	10	M14×1.5	15	27	16	56	28	72	128	171	206

Installation of sensor switches



Dimensional Table

Bore	Sensor switch	A	B	D	E
φ 20	LN01B	25.5	39	7	22
φ 25	LN01B	28.4	41.9	7	22
φ 32	LN01B	32	49.5	7	22
φ 40	LN01B	36.3	57.3	7	22

Bore	Sensor switch	Clamp NO.	A1	B1	D1	E1
φ 20	LN48R	BS-S20	22	36	8	28
φ 25	LN48R	BS-S25	24	38	8	28
φ 32	LN48R	BS-S32	28	46	8	28
φ 40	LN48R	BS-S40	32	53	8	28