

## Duble acting cylinders

<b>ASC</b> Pivot Type	
<b>ASC..B</b> Pivot Type (with Cushion)	
<b>ASA</b> Front Nose Mounting Type	
<b>ASA..B</b> Front Nose Mounting Type (with Cushion)	
<b>ASD</b> Double End Rod Type	
<b>ASD..B</b> Double End Rod Type (with Cushion)	
<b>ASN..N..A, ASN..N..B</b> Adjustable Foward Stroke Type	A: 25mm B: 50mm 
<b>ASN..B..A, ASN..B..B</b> Adjustable Foward Stroke Type	A: 25mm B: 50mm 



- Hydro-pneumatic cylinders are incorporated with converters that make for slow and stable operation and can be applied for cutting, drilling or middle positioning.

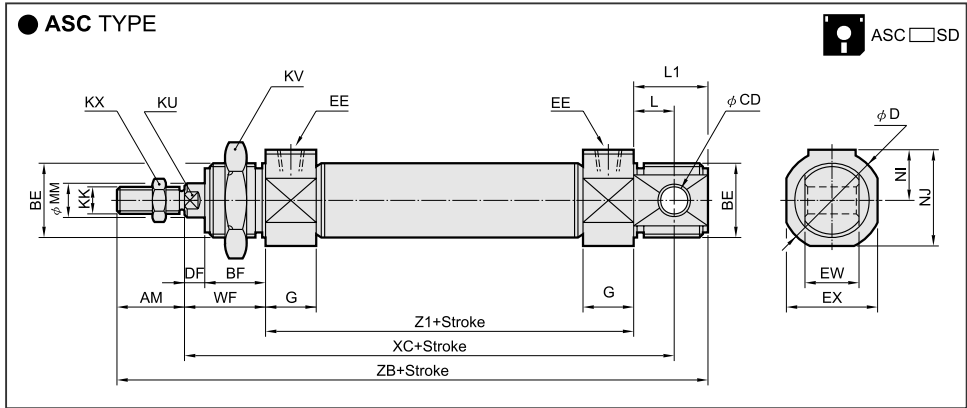
## Specification

Bore sizes of cylinder (mm)	φ 20	φ 25	φ 32	φ 40
Standard Stroke (mm)	Max. 500			
Power fluid	Filtered air or hydraulic oil			
Material of cylinder barrel	Stainless steel			
The range of pressure (MPa)	0.1~1.03			
The range of temperature (°C)	-10~+60			
The range of speed (mm/sec)	3~300			

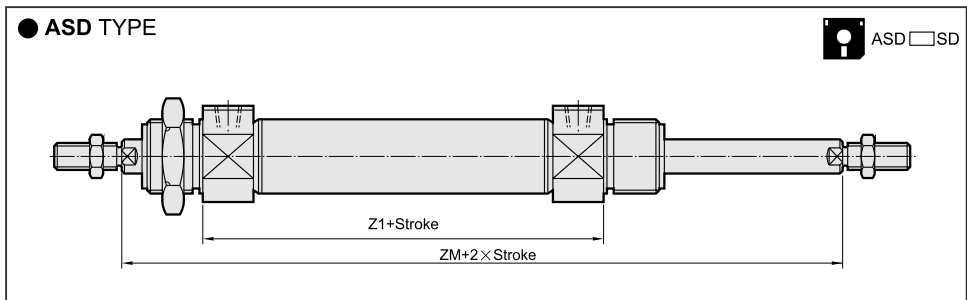
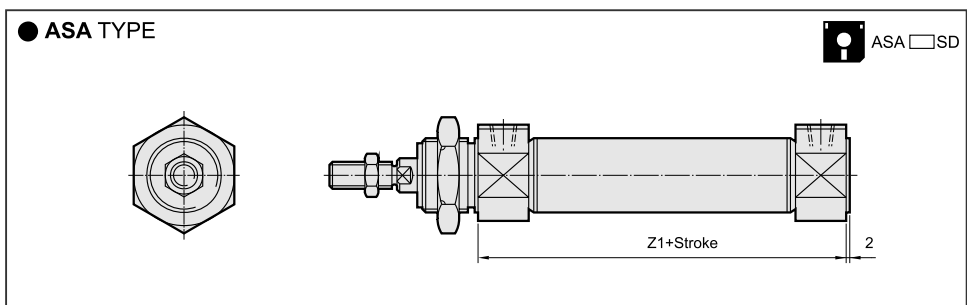
## How to order

Type	Bore	Cushion	Stroke	Adjustable stroke	Oil in	Accessory	Sensor switch	Quantity
<p>ASC</p>	20—φ 20mm 25—φ 25mm 32—φ 32mm 40—φ 40mm	B: 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.	1: Oil in rod side 2: Oil in head side 3: Oil in both side	<p>FA FB LB CU Y I G K</p>	<p>LN01B LN48R</p>	1: 1pc 2: 2pcs
<p>ASA</p>	Note: Pneumatic cylinder side can be attached with cushions.							
<p>ASD</p>								
<p>ASN</p>								

### Dimensional features



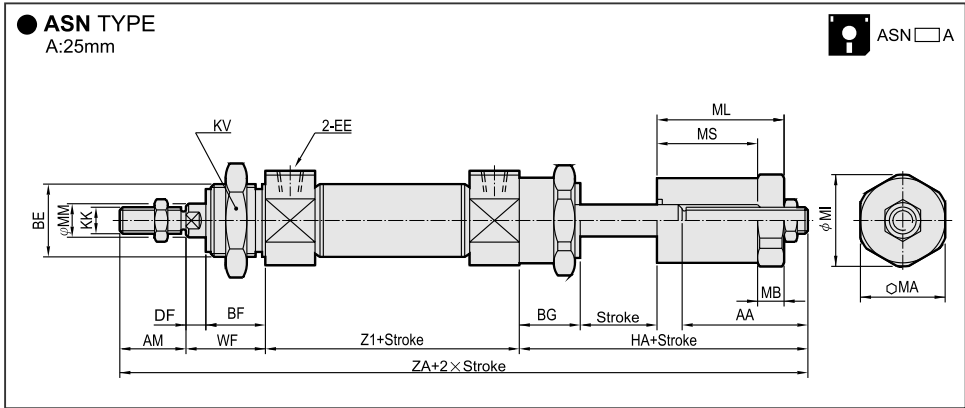
- AS
- AN
- AO
- AH
- AP



### Dimensional Table

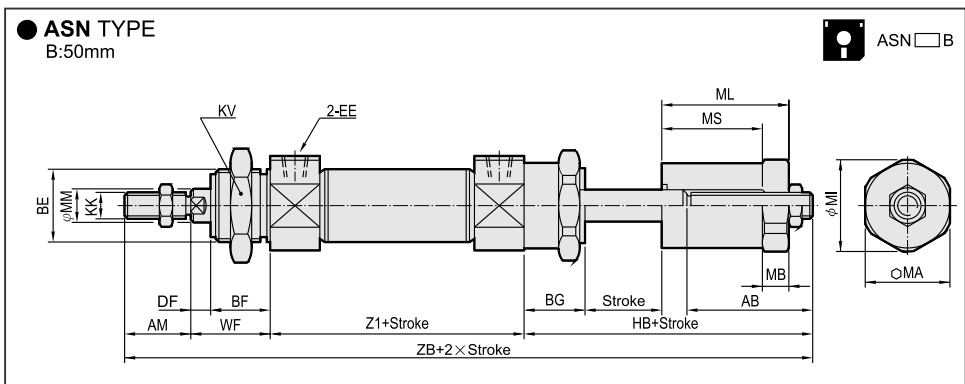
Bore	AM	BE	BF	CD	D	DF	EE	EX	EW	G	KK	KU	KV	KX	L	L1	MM	NI	NJ	WF	XC	Z1	ZB	ZM
φ 20	20	M22×1.5	18	8	30	6	G1/8	27	16	15	M8×1.25	7	27	14	12	22	8	15	28.5	24	95	59	125	107
φ 25	22	M22×1.5	20	8	30	8	G1/8	27	16	16	M10×1.25	9	27	17	12	22	10	15	28.5	28	104	64	136	120
φ 32	23	M27×2.0	20	10	38	8	G1/8	35	20	16	M10×1.25	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

### Dimensional features



### Dimensional Table

Bore	AA	AM	BE	BF	BG	DF	EE	HA	KK	KV	MA	MB	MI	ML	MM	MS	WF	Z1	ZA
φ 20	45	20	M22×1.5	18	25	6	G 1/8	78	M8×1.25	27	22	8	24	43	8	33	24	59	181
φ 25	46	22	M22×1.5	20	25	8	G 1/8	79	M10×1.25	27	22	8	24	45	10	35	28	64	193
φ 32	46	23	M27×2.0	20	25	8	G 1/8	79	M10×1.25	35	27	10	29	45	12	35	28	72	202
φ 40	50	23	M33×2.0	20	25	8	G 1/8	83	M14×1.5	41	32	10	35	47	16	35	28	72	206

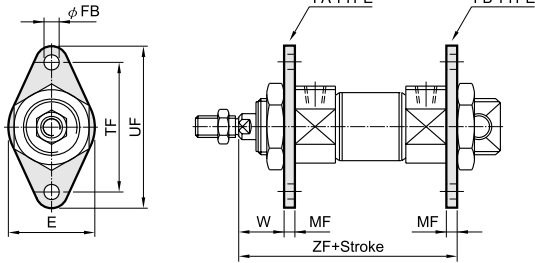


### Dimensional Table

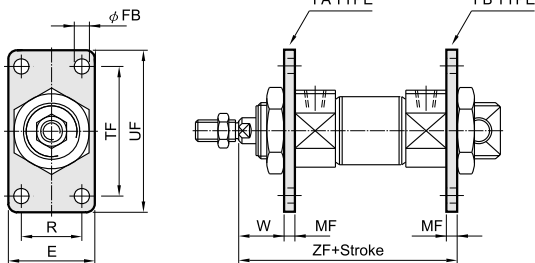
Bore	AB	AM	BE	BF	BG	DF	EE	HB	KK	KV	MA	MB	MI	ML	MM	MS	WF	Z1	ZB
φ 20	70	20	M22×1.5	18	25	6	G 1/8	103	M8×1.25	27	22	8	24	68	8	58	24	59	206
φ 25	71	22	M22×1.5	20	25	8	G 1/8	104	M10×1.25	27	22	8	24	70	10	60	28	64	218
φ 32	71	23	M27×2.0	20	25	8	G 1/8	104	M10×1.25	35	27	10	29	70	12	60	28	72	227
φ 40	75	23	M33×2.0	20	25	8	G 1/8	108	M14×1.5	41	32	10	35	72	16	60	28	72	231

### Accessories

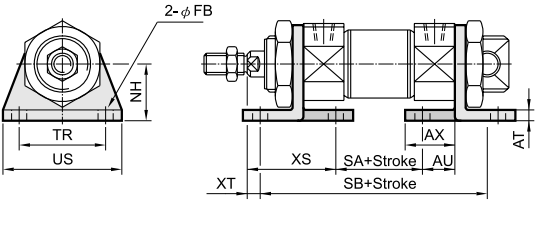
● **FA(FB) TYPE**  
Bore φ 20~φ 25



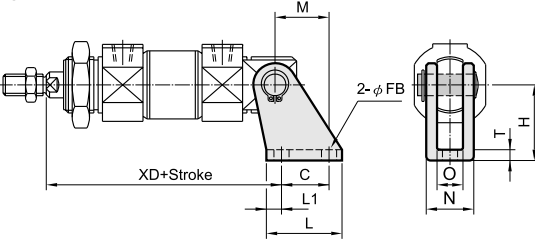
Bore φ 32 · φ 40



● **LB TYPE**



● **CU TYPE**



### Dimensional Table



Type	Bore	E	FB	MF	R	TF	UF
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-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				

AS

AN

AO

AH

AP

### Dimensional Table



Type	Bore	AT	AU	AX	FB	NH	SA
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-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	

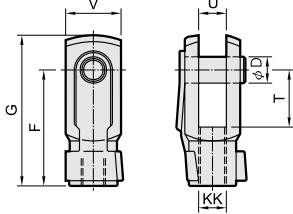
### Dimensional Table



Type	Bore	C	FB	H	L	L1	M
CU-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-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		

## Accessories

### ● Y Rod Clevis (With Pin)



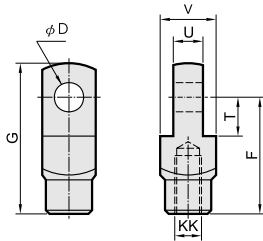
### Dimensional Table

Type	Bore	D	F	G	KK	T	U	V
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-M8 × 1.25	YM08125
Y-M10 × 1.25	YM10125
Y-M14 × 1.5	YM14150

### ● I Rod end mounting



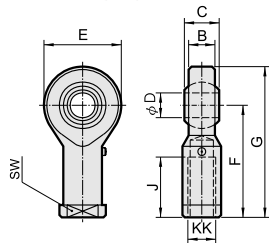
### Dimensional Table

Type	Bore	D	F	G	KK	T	U	V
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-M8 × 1.25	IM08125
I-M10 × 1.25	IM10125
I-M14 × 1.5	IM14150

### ● Oscillating Eye



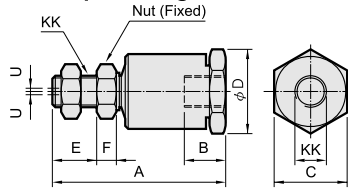
### Dimensional Table

Type	Bore	B	C	D	E	F	G	J	KK	SW
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-M8 × 1.25	GM08125
G-M10 × 1.25	GM10125
G-M14 × 1.5	GM14150

### ● Compensating Joint



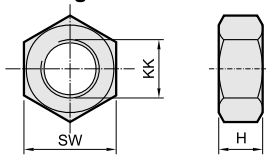
### Dimensional Table

Type	Bore	A	B	C	D	E	F	KK	U
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
K-M8 × 1.25	KM08125
K-M10 × 1.25	KM10125
K-M14 × 1.5	KM14150

### ● Mounting Nut



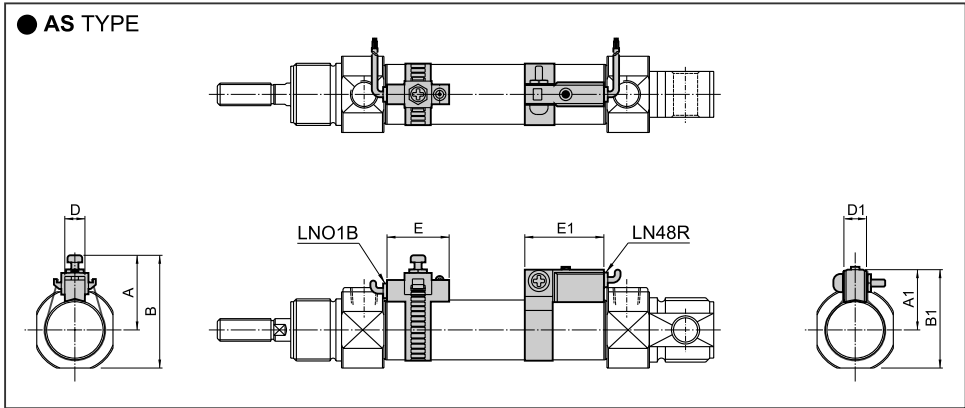
### Dimensional Table

Type	Bore	H	KK	SW
N-M8 × 1.25	φ 20	5	M8 × 1.25	14
N-M10 × 1.25	φ 25, φ 32	6	M10 × 1.25	17
N-M14 × 1.5	φ 40	7	M14 × 1.5	22
N-M22 × 1.5	φ 20, φ 25	6	M22 × 1.5	27
N-M27 × 2.0	φ 32	8	M27 × 2.0	35
N-M33 × 2.0	φ 40	8	M33 × 2.0	41



Type	Filename
N-M8 × 1.25	NM08125
N-M10 × 1.25	NM10125
N-M14 × 1.5	NM14150
N-M22 × 1.5	NM22150
N-M27 × 2.0	NM27200
N-M33 × 2.0	NM33200

## Dimensional features



- AS
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## 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

## Cylinder weight (including the mounting nut)

Unit: kg

Bore	Basic weight	Stroke 25 mm	Basic weight	Stroke 25 mm	Basic weight	Stroke 25 mm	Sensor switch	
							LN01G	LN48R
φ 20	0.150	0.019	0.141	0.019	0.176	0.029	0.030	0.030
φ 25	0.190	0.027	0.185	0.027	0.236	0.043	0.030	0.030
φ 32	0.323	0.040	0.313	0.040	0.385	0.062	0.030	0.030
φ 40	0.495	0.059	0.482	0.059	0.610	0.098	0.030	0.030

## Cylinder weight (including the mounting nut)

Unit: kg

Bore	Basic weight	Stroke 25 mm	Basic weight	Stroke 25 mm
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	CU	Y	I	G	K	Nut (Rod)	Nut (Cover)
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

### Duble acting cylinders

<b>ANB</b> Standard Type	
<b>ANB..M</b> Single End Rod Type (with Magnet)	
<b>AND</b> Double End Rod Type	
<b>AND..M</b> Double End Rod Type (with Magnet)	
<b>ANN..N..A, ANN..N..B</b> Adjustable Foward Stroke Type	 A:25mm B:50mm
<b>ANN..M..A, ANN..M..B</b> Adjustable Foward Stroke Type	 A:25mm B:50mm



- Hydro-pneumatic cylinders are incorporated with converters that make for slow and stable operation and can be applied for cutting, drilling or middle positioning.

### Specification

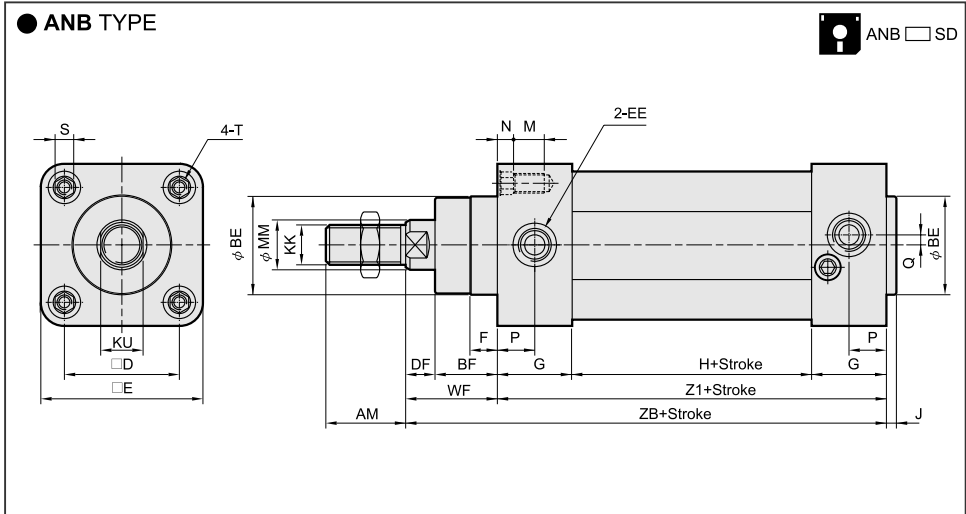
Bore sizes of cylinder (mm)	φ 32	φ 40	φ 50	φ 63	φ 80	φ 100
Standard Stroke (mm)	Max. 800		Max. 1200		Max. 2000	
Power fluid	Filtered air or hydraulic oil					
Material of cylinder barrel	Aluminium alloy					
The range of pressure (MPa)	0.1~1.03					
The range of temperature (°C)	-10~+60					
The range of speed (mm/sec)	3~300					

### How to order

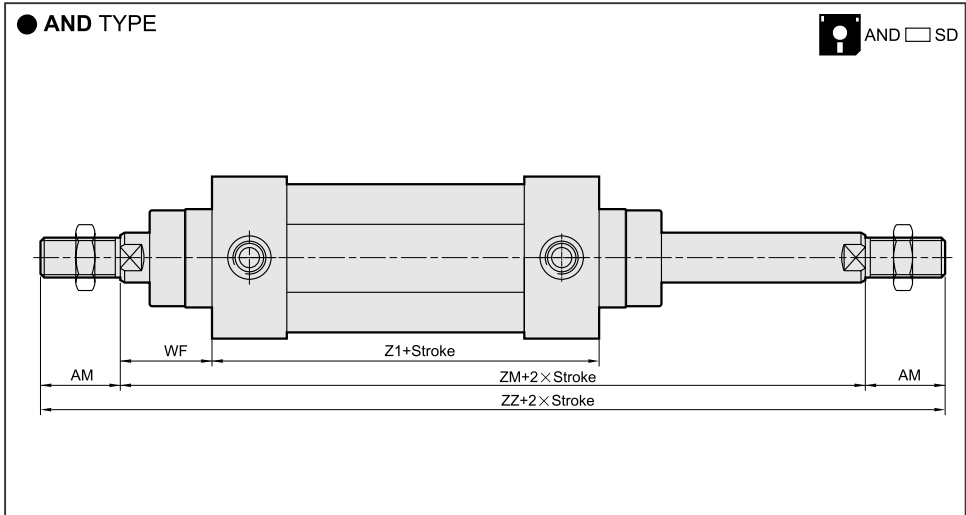
**ANN 32 M 125 B 3 FA Y-LN01A × 2**

Type	Bore	Magnet	Stroke	Adjustable stroke	Oil in	Accessory	Sensor switch	Quantity
ANB AND ANN	32—φ 32mm 40—φ 40mm 50—φ 50mm 63—φ 63mm 80—φ 80mm 100—φ 100mm	M: With magnet N: No magnet	25—25mm 50—50mm 75—75mm 100—100mm 125—125mm 150—150mm 175—175mm 200—200mm 250—250mm 300—300mm 350—350mm 400—400mm 450—450mm 500—500mm	None: standard A: Adjustable 25mm B: Adjustable 50mm  Note: this number can only be used for the adjustable type.	1.Oil in rod side 2.Oil in head side 3.Oil in both side	FA FB TC CA CB LB Y G K	LN01A LN01A: Suited for φ 32, φ 40 LN02A: Suited for φ 50, φ 63 LN03A: Suited for φ 80, φ 100  Note: 1.Can choose NPN or PNP type (3-Wire type, 24VDC). 2.Can choose plug-in cable. 3.For details see page 4-1.1.	1: 1pc 2: 2pcs

### Dimensional features



- AS
- AN
- AO
- AH
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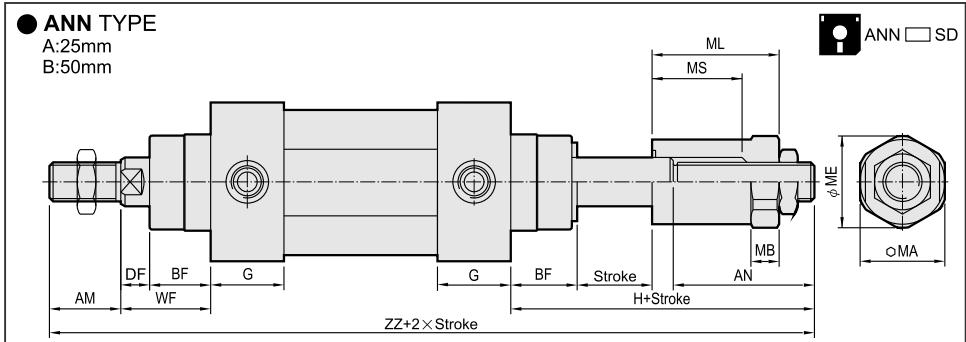


### Dimensional Table

Bore	AM	BE	BF	D	DF	E	EE	F	G	H	J	KK	KU	M	MM	N	P	Q	S	T	WF	Z1	ZB	ZM	ZZ
φ 32	22	30	16	32.5	10	47	G 1/8	7	26	42	4	M10 × 1.25	10	9	12	6	13	4.5	6	M6	26	94	120	146	190
φ 40	24	35	20	38	10	53	G 1/4	9	30	45	5	M12 × 1.25	14	9	16	6	15	5	6	M6	30	105	135	165	213
φ 50	32	40	25	46.5	12	65	G 1/4	11	30	46	5	M16 × 1.5	17	12	20	6	15	6	8	M8	37	106	143	180	244
φ 63	32	45	25	56.5	12	75	G 3/8	4	32	57	5	M16 × 1.5	17	12	20	6	16	8	8	M8	37	121	158	195	259
φ 80	40	45	33	72	13	95	G 3/8	15	38	52	6	M20 × 1.5	22	16	25	6	19	9	10	M10	46	128	174	220	300
φ 100	40	55	35	89	16	115	G 1/2	15	40	58	6	M20 × 1.5	22	16	25	6	20	7	10	M10	51	138	189	240	320



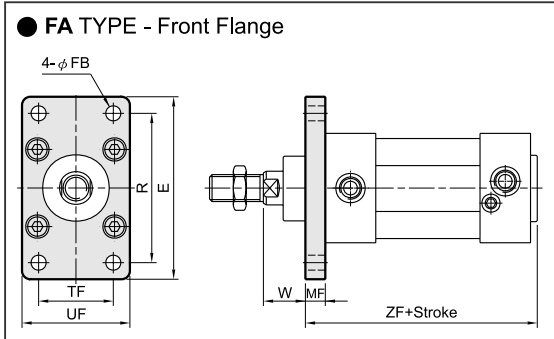
## Dimensional features



## Dimensional Table

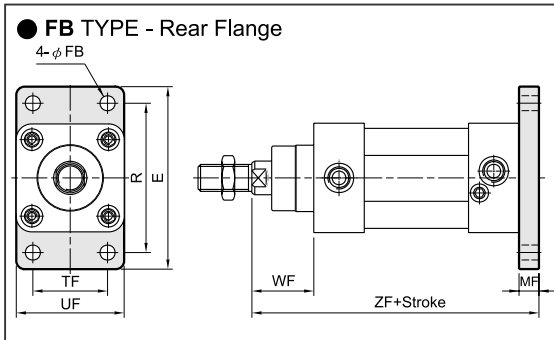
Bore	AM	AN		BF	DF	G	H		MA	MB	ME	ML		MS		WF	ZZ	
		A	B				A	B				A	B	A	B			
φ 32	22	47	72	16	10	26	73	98	27	10	29	47	72	35	60	26	215	240
φ 40	24	48	73	20	10	30	78	103	32	10	35	47	72	37	62	30	237	262
φ 50	32	52	77	25	12	30	92	117	41	12	44	56	81	41	66	37	267	292
φ 63	32	52	77	25	12	32	92	117	41	12	44	56	81	41	66	37	282	307
φ 80	40	58	83	33	13	38	107	132	50.8	15	55	63	88	43	68	46	321	346
φ 100	40	58	83	35	16	40	107	132	50.8	15	55	63	88	43	68	51	336	361

## Accessories



## Dimensional Table

Bore	E	FB	MF	R	TF	UF	W	ZF
φ 32	79	7	10	64	32	50	16	108
φ 40	90	9	10	72	36	55	20	120
φ 50	110	9	12	90	45	65	25	123
φ 63	120	9	12	100	50	75	25	138
φ 80	153	12	16	126	63	95	30	150
φ 100	178	14	16	150	75	115	35	160

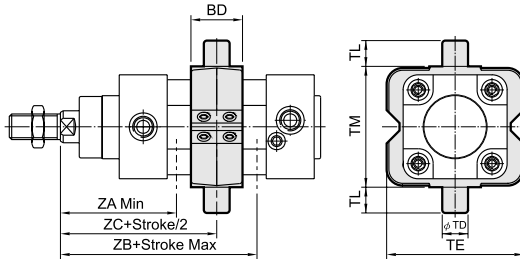


## Dimensional Table

Bore	E	FB	MF	R	TF	UF	WF	ZF
φ 32	79	7	10	64	32	50	26	130
φ 40	90	9	10	72	36	55	30	145
φ 50	110	9	12	90	45	65	37	155
φ 63	120	9	12	100	50	75	37	170
φ 80	153	12	16	126	63	95	46	190
φ 100	178	14	16	150	75	115	51	205

### Accessories

#### ● TC TYPE - Intermediate Pivot



#### Dimensional Table



Bore	BD	TD	TE	TL	TM	ZA	ZB	ZC
φ 32	22	12	58	12	50	63	83	73
φ 40	28	16	70	16	63	74	91	82.5
φ 50	32	16	85	16	75	83	97	90
φ 63	35	20	100	20	90	86.5	108.5	97.5
φ 80	40	20	120	20	110	104	116	110
φ 100	45	25	145	25	132	113.5	126.5	120

AS

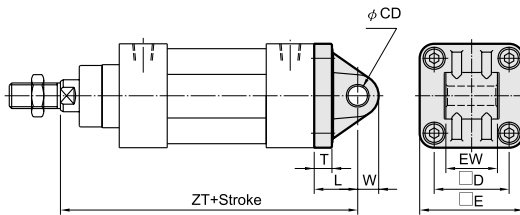
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#### ● CA TYPE - Male Pivot

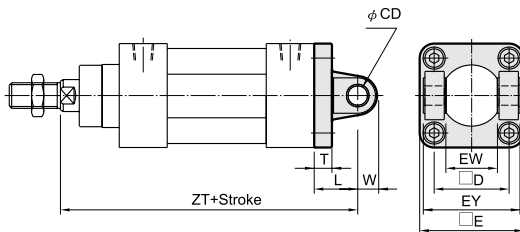


#### Dimensional Table



Bore	CD	D	E	EW	L	T	W	ZT
φ 32	10	32.5	47	26	22	10	10.5	142
φ 40	12	38	53	28	25	10	13	160
φ 50	12	46.5	65	32	27	11	13	170
φ 63	16	56.5	75	40	32	11	17	190
φ 80	16	72	95	50	36	15	17	210
φ 100	20	89	115	60	41	15	21	230

#### ● CB TYPE - Female Pivot

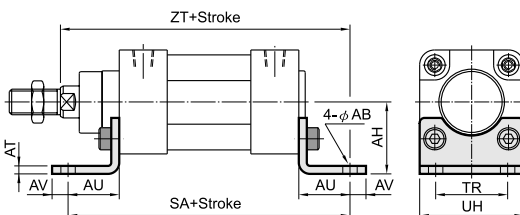


#### Dimensional Table



Bore	CD	D	E	EW	EY	L	T	W	ZT
φ 32	10	32.5	47	26	45	22	10	10.5	142
φ 40	12	38	53	28	52	25	10	13	160
φ 50	12	46.5	65	32	60	27	11	13	170
φ 63	16	56.5	75	40	70	32	11	17	190
φ 80	16	72	95	50	90	36	15	17	210
φ 100	20	89	115	60	110	41	15	21	230

#### ● LB TYPE - Foot Mounting



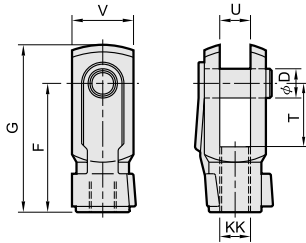
#### Dimensional Table



Bore	AB	AH	AT	AU	AV	SA	TR	UH	ZT
φ 32	7	32	5	24	8	142	32	47	144
φ 40	9	36	5	28	10	161	36	53	163
φ 50	9	45	5	32	10	170	45	65	175
φ 63	9	50	5	32	10	185	50	75	190
φ 80	12	63	6	41	13	210	63	95	215
φ 100	14	71	6	41	13	220	75	115	230

### Accessories

#### ● Y Rod Clevis (With Pin)



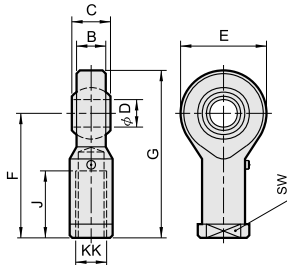
#### Dimensional Table

Type	Bore	D	F	G	KK	T	U	V
<b>Y-M10 × 1.25</b>	φ 32	10	40	52	M10 × 1.25	20	10	20
<b>Y-M12 × 1.25</b>	φ 40	12	48	62	M12 × 1.25	24	12	24
<b>Y-M16 × 1.5</b>	φ 50, φ 63	16	64	83	M16 × 1.5	32	16	32
<b>Y-M20 × 1.5</b>	φ 80, φ 100	20	80	105	M20 × 1.5	40	20	40



Type	Filename
<b>Y-M10 × 1.25</b>	YM10125
<b>Y-M12 × 1.25</b>	YM12125
<b>Y-M16 × 1.5</b>	YM16150
<b>Y-M20 × 1.5</b>	YM20150

#### ● Oscillating Eye



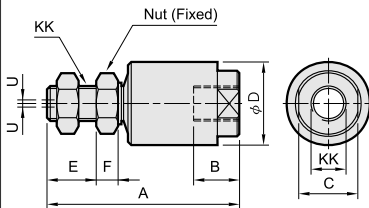
#### Dimensional Table

Type	Bore	B	C	D	E	F	G	J	KK	SW
<b>G-M10 × 1.25</b>	φ 32	10.5	14	10	28	43	57	20	M10 × 1.25	17
<b>G-M12 × 1.25</b>	φ 40	12	16	12	30	50	65	24	M12 × 1.25	19
<b>G-M16 × 1.5</b>	φ 50, φ 63	15	21	16	38	64	83	33	M16 × 1.5	22
<b>G-M20 × 1.5</b>	φ 80, φ 100	18	25	20	46	77	100	40	M20 × 1.5	30



Type	Filename
<b>G-M10 × 1.25</b>	GM10125
<b>G-M12 × 1.25</b>	GM12125
<b>G-M16 × 1.5</b>	GM16150
<b>G-M20 × 1.5</b>	GM20150

#### ● Compensating Joint



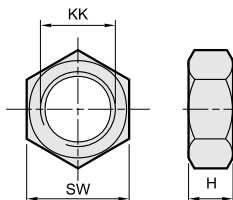
#### Dimensional Table

Type	Bore	A	B	C	D	E	F	KK	U
<b>K-M10 × 1.25</b>	φ 32	54	13	24	25.5	14.5	6	M10 × 1.25	1
<b>K-M12 × 1.25</b>	φ 40	70	17	29	31	19	7	M12 × 1.25	1.15
<b>K-M16 × 1.5</b>	φ 50, φ 63	88	21	27	38	29	8	M16 × 1.5	1.65
<b>K-M20 × 1.5</b>	φ 80, φ 100	105	25	32	50	27.5	16	M20 × 1.5	2.15



Type	Filename
<b>K-M10 × 1.25</b>	KM10125
<b>K-M12 × 1.25</b>	KM12125
<b>K-M16 × 1.5</b>	KM16150
<b>K-M20 × 1.5</b>	KM20150

#### ● Mounting Nut



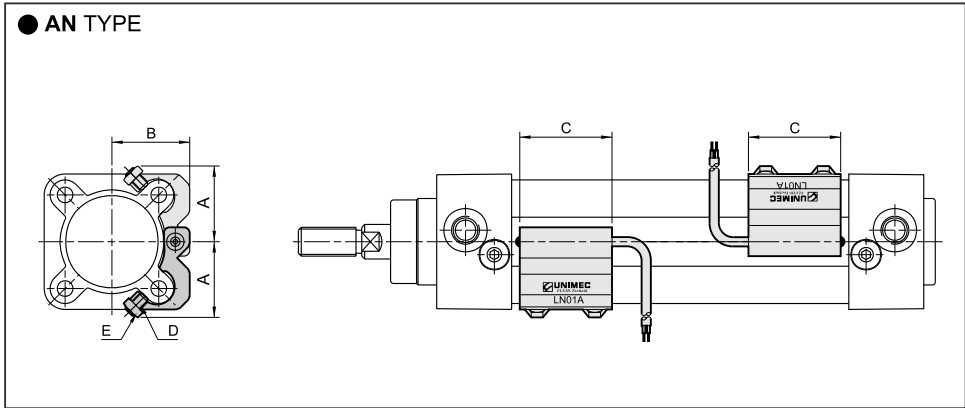
#### Dimensional Table

Type	Bore	H	KK	SW
<b>N-M10 × 1.25</b>	φ 32	6	M10 × 1.25	17
<b>N-M12 × 1.25</b>	φ 40	7	M12 × 1.25	19
<b>N-M16 × 1.5</b>	φ 50, φ 63	8	M16 × 1.5	24
<b>N-M20 × 1.5</b>	φ 80, φ 100	8	M20 × 1.5	27



Type	Filename
<b>N-M10 × 1.25</b>	NM10125
<b>N-M12 × 1.25</b>	NM12125
<b>N-M16 × 1.5</b>	NM16150
<b>N-M20 × 1.5</b>	NM20150

## Dimensional features



## Dimensional Table

Bore	Sensor switch	A	B	C	D	E
φ 32	LN01A	26.3	27	32	M4 × 12L	M4
φ 40	LN01A	29	32	32	M4 × 12L	M4
φ 50	LN02A	35.5	36.5	32	M4 × 12L	M4
φ 63	LN02A	40	43	32	M4 × 12L	M4
φ 80	LN03A	49.5	52	32	M4 × 12L	M4
φ 100	LN03A	57.5	62	32	M4 × 12L	M4

## How to order the seal kit

**ANB SK 80**

Type                      Bore size

## 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
					Adjustable Stroke 25 mm		Adjustable Stroke 50 mm	
φ 32	0.56	0.056	0.62	0.078	0.78	0.078	0.86	0.078
φ 40	0.85	0.080	0.98	0.120	1.09	0.120	1.22	0.120
φ 50	1.22	0.117	1.46	0.179	1.82	0.179	2.07	0.179
φ 63	1.72	0.128	1.96	0.189	2.26	0.189	2.51	0.189
φ 80	3.25	0.188	3.69	0.285	4.45	0.285	4.79	0.285
φ 100	4.28	0.220	4.87	0.317	5.63	0.317	5.97	0.317

## Cylinder weight (including the mounting screws)

Unit: kg

Bore	FA	FB	CA	CB	LB	TC	Y	G	Nut (Rod)	Sensor switch
φ 32	0.224	0.225	0.197	0.170	0.171	0.088	0.080	0.008	0.065	
φ 40	0.266	0.306	0.221	0.219	0.409	0.147	0.112	0.010	0.065	
φ 50	0.480	0.473	0.420	0.344	0.604	0.335	0.202	0.017	0.066	
φ 63	0.602	0.743	0.600	0.405	1.023	0.335	0.202	0.017	0.066	
φ 80	1.424	1.366	1.134	0.839	-	0.677	0.368	0.020	0.086	
φ 100	1.974	2.156	1.795	1.045	-	0.677	0.368	0.020	0.086	