

FEATURES

- Easy to install with a threaded front cover and trunnion rear end
- Compact threaded mount for direct attachment of front or rear covers on machine
- Double acting cylinders with or without pneumatic cushioning

GENERAL

Detection	Equipped for magnetic position detectors
Fluid	Air or inert gas, filtered, lubricated or not
Operating pressure	10 bar, max. [1 bar =100 kPa]
Ambient temperature	-10°C to +70°C
Optimal max. speed	≤ 1 m/s (for optimal service life)
Max. speed rate	2 m/s
Standards	ISO 6431



B

CONSTRUCTION

Barrel	Anodised aluminium alloy
Rod	Hard chromed steel (stainless steel option)
Front and rear ends	Anodised light alloy
Cushioning seals	PUR (polyurethane)
Cushioning ^(a)	Pneumatic, adjustable from both sides with captive screw
Rod nut	Galvanised steel
Piston	POM (polyacetal), steel, aluminium fitted with an annular permanent magnet
Piston seals	PUR (polyurethane)
Dismounting	Ø50-63: double acting only

Double acting ^(a) cushioning length
Ø 32 mm = 14 mm
Ø 40 mm = 18 mm
Ø 50 mm = 18 mm
Ø 63 mm = 21 mm

^(a) CSH option

2D/3D CAD models - *In 3D*

HOW TO ORDER

15-DIGIT PRODUCT CODE

G 438 A - S K - - - - A00

Thread connection
G = ISO 16030

Product series
438

Revision letter
A = Initial release

Diameter (mm)
3 = 32 5 = 50
4 = 40 6 = 63

Rod options 1

- S** = Double acting
 - 1** = Single acting rod in
 - 2** = Through rod (double acting)
 - 3** = Double acting-Stainless steel rod
 - 4** = Double acting-Stainless steel rod-Through rod
 - 5** = Single acting rod in - Stainless steel rod
- All cylinders delivered with rod nut, in stainless steel for options 3, 4 and 5.

Options

- A00** = Not cushioned piston, prepared for magnetic detection
- NDM** = Not cushioned piston, not prepared for magnetic detection
- CSH** = Pneumatic cushioned piston, prepared for magnetic detection
- CSM** = Pneumatic cushioned piston, not prepared for magnetic detection

Recommended standard strokes (mm) ⁽¹⁾

Ø mm	connect. Ø	connect.										max. stroke				
		25	50	80	100	125	160	200	250	320	400	500	S	D		
32	G1/8	SD	SD	D	D	D	D	D	D	D	D	D	D	D	50	1000
40	G1/4	SD	SD	D	D	D	D	D	D	D	D	D	D	D	50	1000
50	G1/4	SD	SD	D	D	D	D	D	D	D	D	D	D	D	50	1000
63	G3/8	SD	SD	D	D	D	D	D	D	D	D	D	D	D	50	1000

Strokes range available up to "max. stroke" column on the right.
Please note strokes marked in grey exceed the maximum recommended.

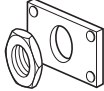
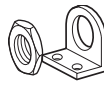
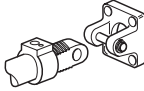


⁽¹⁾ Other strokes on request. / Min. stroke: 5 mm
D = Double acting only / SD = Single & Double acting

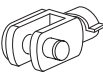



POSITION DETECTORS (double acting)

Magnetic position detectors must be ordered separately: "T" model (see page P291), reed switch or magneto-resistive type

INSTALLATION

- The cylinders can be mounted in any position without affecting operation
- Each cylinder is delivered with a rod nut
- Mountings: **catalogue number**

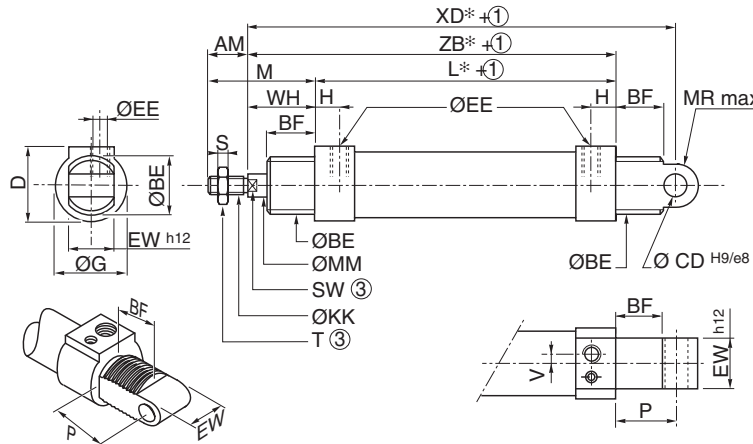
Ø (mm)	 Front or rear flange MF1 - MF2	 Foot mounting (2 neck nuts) MS3	 Rear male trunnion MP4	 Complete trunnion MP2	 Rear trunnion (not standardised)
32	P493A3326000A00	P493A3325000A00	integrated (with the cylinder rear cover)	P493A3321110A00	P493A332C000A00
40	P493A4326000A00	P493A4325000A00		P493A4321110A00	P493A432C000A00
50	P493A5326000A00	P493A5325000A00		P493A5321110A00	P493A532C000A00
63	P493A6326000A00	P493A6325000A00		P493A6321110A00	P493A632C000A00

Ø (mm)	 Female rod clevis ISO 8140 - RP 102 P AP2	 Spherical rod end ISO 8139 - RP 103 P AP6	 Front neck nut MR3	 Front trunnion mounting (not standardised)
32	P493A3131000A00	P493A3132000A00	P493A332F000A00	P493A332D000A00
40	P493A4131000A00	P493A4132000A00	P493A432F000A00	P493A432D000A00
50	P493A5131000A00	P493A5132000A00	P493A532F000A00	P493A532D000A00
63			P493A632F000A00	P493A632D000A00

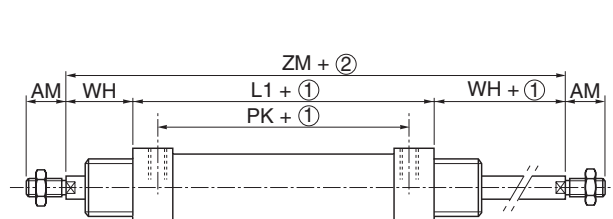
- Installation/maintenance instructions are included with each cylinder

DIMENSIONS (mm), WEIGHT (kg)

SINGLE-ROD TYPE CYLINDER
 Round cylinder, single and double acting
 Supplied with front cover nut
 ISO 6431 - 8139 - 8140



THROUGH-ROD TYPE CYLINDER
 Round cylinder, double acting
 Supplied with front cover nut
 ISO 6431 - 8139 - 8140



- ① Stroke
- ② Stroke x 2
- ③ Width across flats

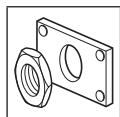
Ø	AM	ØBE	BF	ØCD	D	ØEE	EW	ØEG	H	ØKK	L*	L1	M	ØMM	MR	P	PK	S
32	22	M30 x 1,5	16	10	39	G1/8	26	38	13,5	M10 x 1,25	92	102	49	12	10	24	75	5
40	24	M36 x 1,5	19	12	46	G1/4	28	45	16,5	M12 x 1,25	107	126	53	18	12	24	93	6
50	32	M45 x 1,5	⁽⁶⁾	12	60	G1/4	32	60	14	M16 x 1,5	110	129	67	18	12	25,5	101	8
63	32	M45 x 1,5	23	16	75	G3/8	40	75,5	17	M16 x 1,5	125	143	67	22	16	31	109	8

Ø	SW	T	V	WH	XD*	ZB*	ZM	weight	
								⁽⁴⁾	⁽⁵⁾
32	10	16	3,5	27	143	119	156	0,280	0,260
40	13	18	4,7	29	160	136	184	0,600	0,400
50	16	24	5,2	35	170	145	199	0,950	0,450
63	16	24	5,5	35	191	160	213	1,400	0,700

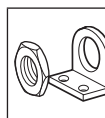
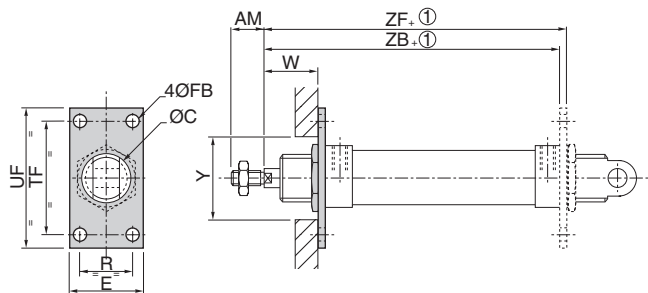
- * +25 mm for the single acting cylinders with 50 mm strokes.
- ⁽⁴⁾ Cylinder weight at 0 mm stroke.
- ⁽⁵⁾ Weight to be added per additional 100 mm length.
- ⁽⁶⁾ Front cover: 23,5 mm - Rear cover: 18,5 mm.

- NOTE:
- Single and double acting cylinders, 25 mm stroke, have the same dimensions.
 - The mountings are always delivered separately

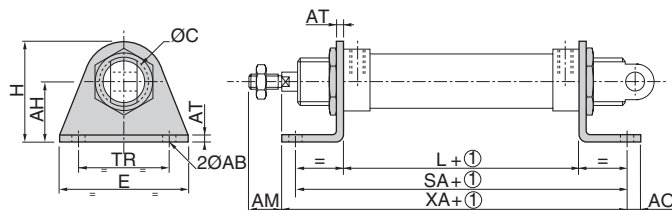
DIMENSIONS (mm), WEIGHT (kg)



MOUNTING
Front or rear flange
MF1 - MF2
Rectangular



MOUNTING
Foot mounting
Feet mounting are supplied in batch of two with 2 neck nuts.
MS3

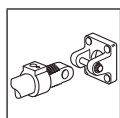


① Stroke

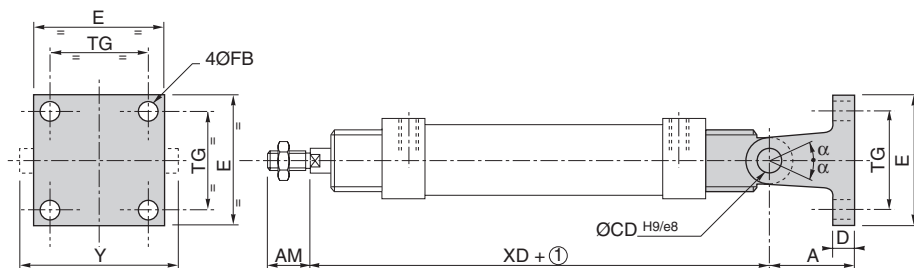
Ø	AM	ØC	E	ØFB	R	TF	UF	W	ZB*	ZF*	weight
32	22	30	45	7	32	64	80	16	119	130	0,09
40	24	36	52	9	36	72	90	20	136	145	0,13
50	32	45	75	9	45	90	110	25	145	155	0,29
63	32	45	75	9	50	100	120	25	160	170	0,33

Ø	ØAB	AH	AM	AO	AT	ØC	E	H	L*	SA*	TR	XA*	weight
32	7	32	22	6,5	3	30	45	51	92	142	32	144	0,16
40	9	36	24	8	3	36	52	60	107	161	36	163	0,23
50	9	45	32	10	4	45	75	73	110	170	45	175	0,54
63	9	50	32	10	4	45	75	85	125	185	50	190	0,64

* +25 mm for single-acting cylinders with 50 mm strokes.



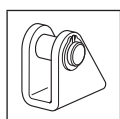
MOUNTING
Complete trunnion
MP2 + MP4
MP4 fixing being integral with the cylinder rear cover, only MP2 mounting needs to be ordered.



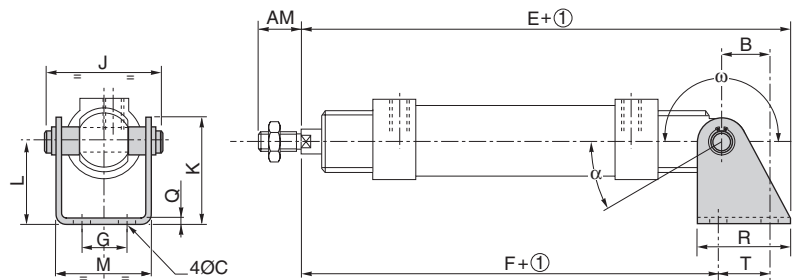
Ø	A	AM	ØCD	D	E	FB	TG	XD*	Y	α max.	weight (complete trunnion)
32	20	22	10	8	45	7	33	143	53	76°	0,042
40	23	24	10	8	52	7	40	160	60	61°	0,060
50	25	32	12	10	65	9	49	170	68	58°	0,108
63	30	32	16	10	75	9	50	191	78	76°	0,155

① Stroke

* +25 mm for single-acting cylinders with 50 mm strokes.

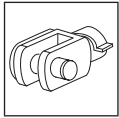


MOUNTING
Rear trunnion
(The rear trunnion mounting is delivered separately)

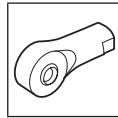
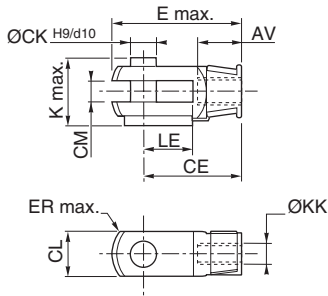


Ø	AM	B	ØC	E	F	G	J	K	L	M	Q	R	T	α	ω	weight
32	22	20	7	171	139	20	52	47	35	46	4	40	24	35°	180°	0,14
40	24	27	9	197	157	28	62	53	40	56	5	50	30	30°	170°	0,25
50	32	30	9	210	166	36	75	59	45	69	6	54	34	20°	165°	0,36
63	32	38	9	243	193	42	89	66	50	82	6	65	35	20°	160°	0,52

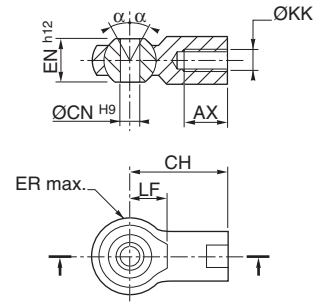
① Stroke



MOUNTING
Female rod clevis
ISO 8140
AP2

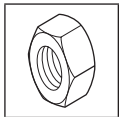


MOUNTING
Spherical rod end
ISO 8139
AP6

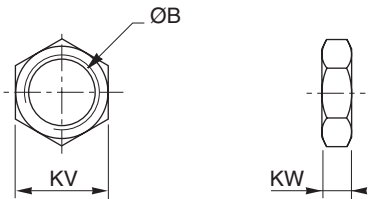


Ø	AV	CE	ØCK	CL	CM	E	ER	K	ØKK	LE	weight
32	20	40	10	20	10 ^{+0,5} _{+0,15}	57	14	26	M10x1,25	20	0,10
40	22	48	12	24	12 ^{+0,5} _{+0,15}	67	16	32	M12x1,25	24	0,15
50	28	64	16	32	16 ^{+0,5} _{+0,15}	89	21	41	M16x1,5	32	0,33
63	28	64	16	32	16 ^{+0,5} _{+0,15}	89	21	41	M16x1,5	32	0,33

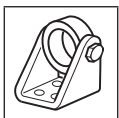
Ø	AX	CH	ØCN	EN	ER	ØKK	LF	α max.	weight
32	20	43	10	14	14	M10x1,25	15	4°	0,07
40	22	50	12	16	16	M12x1,25	17	4°	0,12
50	28	64	16	21	21	M16x1,5	22	4°	0,22
63	28	64	16	21	21	M16x1,5	22	4°	0,22



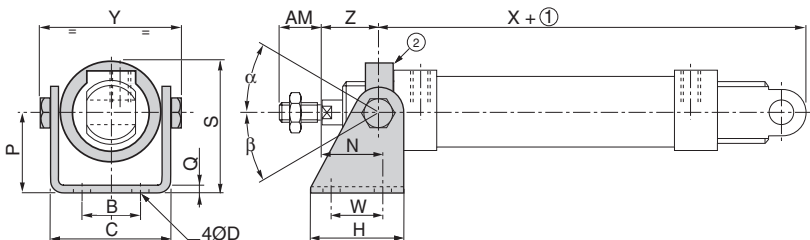
MOUNTING
Front neck nut
MR3



Ø	ØB	KV	KW	weight
32	M30x1,5	35	10	0,03
40	M36x1,5	42	10	0,04
50	M45x1,5	60	12	0,14
63	M45x1,5	60	12	0,14



MOUNTING
Front trunnion mounting
(The cylinder and front trunnion mounting are not supplied assembled)



Ø	AM	B	C	ØD	H	N	P	Q	S	W	X	Y	Z	α	β	weight
32	22	28	56	9	50	22 ⁰ _{-0,5}	40	5	63	30	135 ^{+0,5} ₀	64,5	19 ⁰ _{-0,5}	30°	30°	0,26
40	24	36	69	9	54	23,5 ^{+0,5} _{-0,5}	45	6	73,5	34	153,5 ^{+0,5} ₀	77,5	19,5 ⁰ _{-0,5}	30°	30°	0,40
50	32	42	82	9	65	24 ⁰ ₋₁	50	6	85	35	159,5 ⁺¹ ₀	90,5	23 ⁰ ₋₁	30°	30°	0,45
63	32	60	106	11	80	28,5 ⁰ ₋₁	65	6	110	50	184,5 ⁺¹ ₀	116,5	23,5 ⁰ ₋₁	30°	30°	0,70

- ① Stroke
- ② Ring