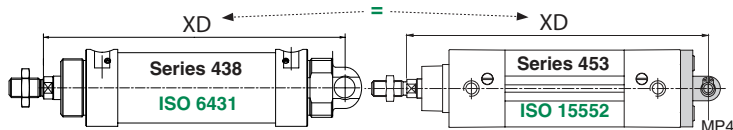


FEATURES

- 438 series comply with ISO 6431 specifications, making it interchangeable with ISO 15552 cylinders assembled with a rear trunnion mounting.



XD dimension (distance between the beginning of the rod thread and the center of the trunnion) is identical on ISO 6431 and ISO 15552 cylinders equipped with an MP4.

GENERAL

Detection

Equipped for magnetic position detectors

Fluid

Air or inert gas, filtered, lubricated or not

Operating pressure

[1 bar = 100 kPa]

single acting

1 to 10 bar

double acting

10 bar, max.

Ambient temperature

-20°C to +70°C

Max. speed rate

2 m/s (for higher and lower speed rate, see LFS option)

Standards

ISO 6431

CONSTRUCTION

Barrel	Anodised aluminium alloy
Front and rear ends	Anodised light alloy
Bearing	Self-lubricating metal
Cushioning seals	PUR (polyurethane)
Cushioning	Pneumatic, adjustable from both sides with captive screw
Rod	Hard chromed steel (stainless steel option)
Rod nut	Galvanised steel
Piston	POM (polyacetal) fitted with an annular permanent magnet
Piston seals	PUR (polyurethane)

HOW TO ORDER

15-DIGIT PRODUCT CODE

G 438 B - S K - - - A00

Thread connection

G = ISO 16030

Product series

438

Revision letter

B = Release version

Diameter (mm)

3 = 32

5 = 50

4 = 40

6 = 63

Rod options 1

S = Double acting, single rod

1 = Single acting rod in ⁽³⁾

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 ⁽³⁾

⁽³⁾ Single acting cylinders have no pneumatic cushion.

All cylinders delivered with rod nut, in stainless steel for options 3, 4 and 5.

Double acting cushioning length:

Ø32 mm = 16 mm / Ø40 mm = 20 mm

Ø50 mm = 26 mm / Ø63 mm = 30 mm

POSITION DETECTORS (double acting)

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



B

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

Options

A00 = Without

LFS = Low friction piston seals ⁽²⁾

Recommended standard strokes (mm) ⁽¹⁾

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

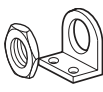
⁽²⁾ Special characteristics for this option:

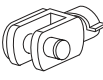
. piston material: light alloy

. max. speed rate: 3 m/s

INSTALLATION

- The cylinders can be mounted in any position without affecting operation
- 438B cylinders are not repairable
- The mountings are always delivered separately
- Mountings: **catalogue number**

Ø (mm)			
	Foot mounting (2 neck nuts) MS3	Rear male trunnion MP4	Complete trunnion MP2
32	P493A3325000A00	integrated (with the cylinder rear cover)	P493A3121110A00
40	P493A4325000A00		P493A4121110A00
50	P493A5325000A00		P493A5121110A00
63	P493A6325000A00		P493A6121110A00
			Rear trunnion (not standardised)
32			P493A332C000A00
40			P493A432C000A00
50			P493A532C000A00
63			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
32	P493A3131000A00	P493A3132000A00	P493A332F000A00
40	P493A4131000A00	P493A4132000A00	P493A432F000A00
50	P493A5131000A00	P493A5132000A00	P493A532F000A00
63			

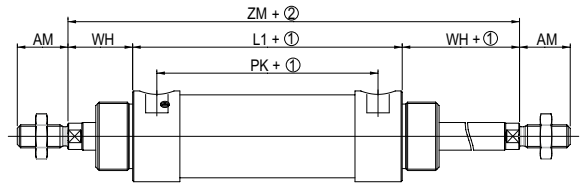
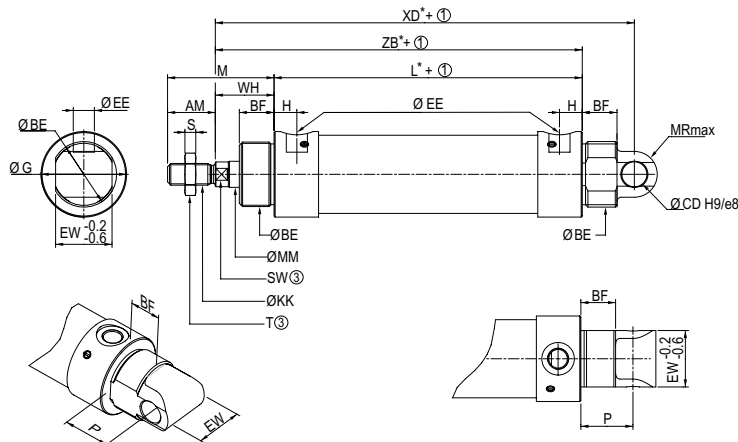
DIMENSIONS (mm), WEIGHT (kg)



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

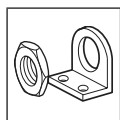
Double acting cushioning length:
Ø32 mm = 16 mm / Ø40 mm = 20 mm
Ø50 mm = 26 mm / Ø63 mm = 30 mm

Ø	AM	ØBE	BF	ØCD	ØEE	EW	ØG	H	ØKK	L*	L1	M	ØMM	MR	P	PK	S
32	22	M30 x 1,5	16	10	G1/8	26	39,4	10,5	M10 x 1,25	92	92	49	12	10,5	24	71	5
40	24	M36 x 1,5	19	12	G1/4	28	46,5	12,5	M12 x 1,25	107	108	53	16	13	24,3	81	6
50	32	M45 x 1,5	23,5/18,5	12	G1/4	32	56,8	12,8	M16 x 1,5	110	110	67	20	13	25,5	84,5	8
63	32	M45 x 1,5	23	16	G3/8	40	70	16,5	M16 x 1,5	125	125	67	20	17	31	92	8

Ø	SW	T	WH	XD*	ZB*	ZM	weight	
							(4)	(5)
32	10	17	27	143	119	147	0,367	0,0017
40	13	19	29	160	136	167	0,639	0,0024
50	17	24	35	170	145	181	1,017	0,0033
63	17	24	35	191	160	196	1,506	0,0038

- * Single acting cylinders dimension:
- stroke 25 = Double acting
- stroke 50 = Double acting + 25 mm
(4) Cylinder weight at 0 mm stroke.
(5) Weight to be added per additional 1 mm length.

DIMENSIONS (mm), WEIGHT (kg)

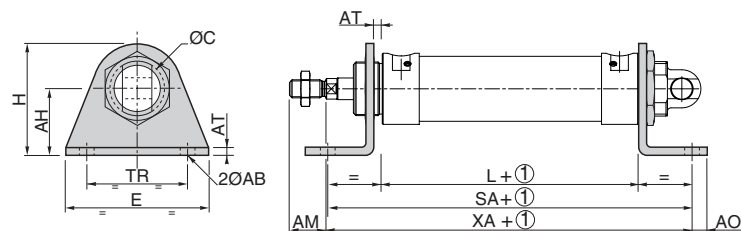


MOUNTING

Foot mounting

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

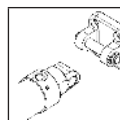
MS3



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 stroke.

① Stroke

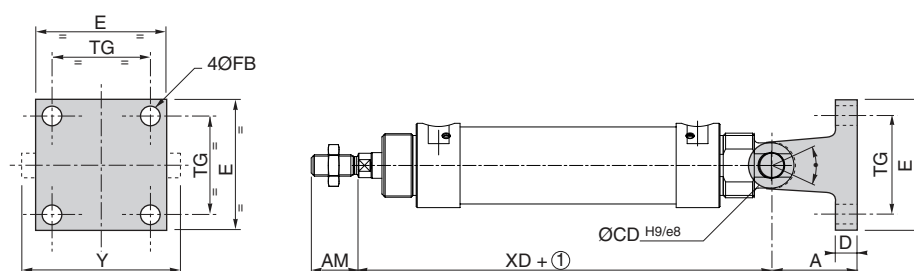


MOUNTING

Complete trunnion

MP2 + MP4

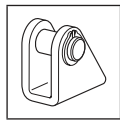
MP4 fixing being integral with the cylinder rear cover, only MP2 mounting needs to be ordered.



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	12	8	52	7	40	160	60	61°	0,060
50	25	32	12	10	65	9	49	171	68	58°	0,108
63	30	32	16	10	75	9	50	191	78	76°	0,155

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

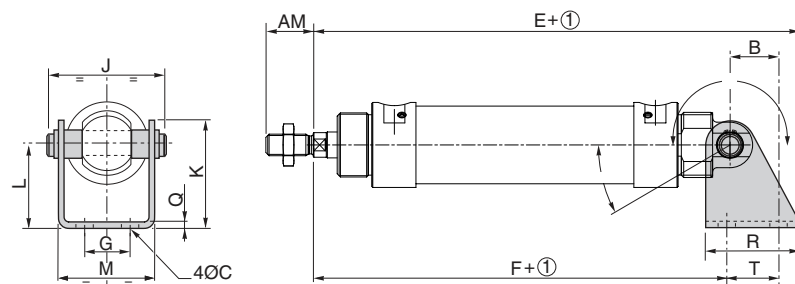
① Stroke



MOUNTING

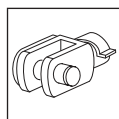
Rear trunnion

(The rear trunnion mounting is delivered separately)

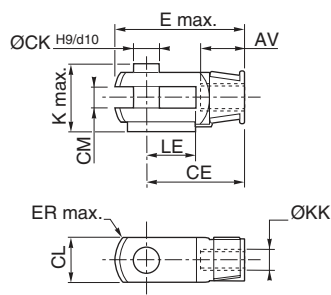


Ø	AM	B	ØC	E	F	G	J	K	L	M	Q	R	T	α	ω	weight
32	22	20	7	171	139	20	52	47	35	46	4	40	24	35°	180°	0,14
40	24	27	9	197	157	28	62	53	40	56	5	50	30	30°	170°	0,25
50	32	30	9	210	166	36	75	59	45	69	6	54	34	20°	165°	0,36
63	32	38	9	243	193	42	89	66	50	82	6	65	35	20°	160°	0,52

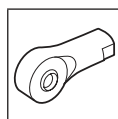
① Stroke



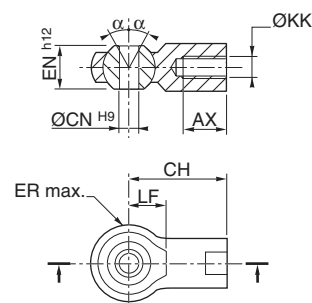
MOUNTING
Female rod clevis
ISO 8140
AP2



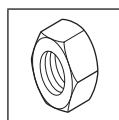
Ø	AV	CE	ØCK	CL	CM	E	ER	K	ØKK	LE	weight
32	20	40	10	20	10 ^{+0,5 +0,15}	57	14	26	M10x1,25	20	0,10
40	22	48	12	24	12 ^{+0,5 +0,15}	67	16	32	M12x1,25	24	0,15
50	28	64	16	32	16 ^{+0,5 +0,15}	89	21	41	M16x1,5	32	0,33
63	28	64	16	32	16 ^{+0,5 +0,15}	89	21	41	M16x1,5	32	0,33



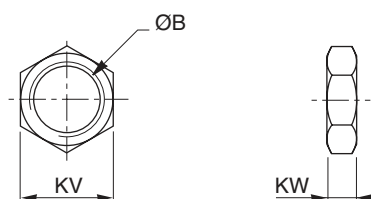
MOUNTING
Spherical rod end
ISO 8139
AP6



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



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