



CUSTOM PRODUCTS MADE IN BRAZIL

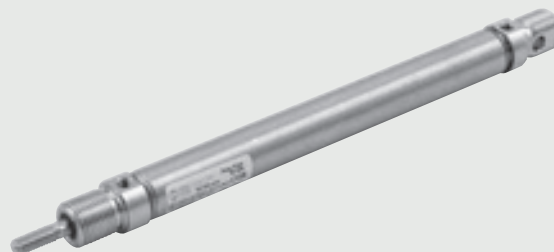
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# STAINLESS STEEL ISO 6432 MINI-CYLINDER

ISO 6432 stainless steel micro-cylinders are available in various versions with a wide range of accessories

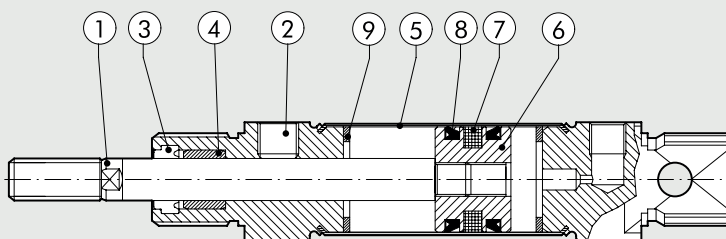
- with or without magnet execution
- double-acting - single or through-rod
- gaskets: Polyurethane or FKM/FPM (for high temperatures)
- fixing accessories



TECHNICAL DATA			Ø16	Ø20	Ø25
Max operating pressure		bar		10	
		MPa		1	
Temperature range	POLYURETHANE	°C		-20 to +80	
	FKM/FPM	°C		-10 to +150 (non-magnetic cylinders)	
Design				Chamfered heads	
Fluid				Unlubricated air. Lubrication, if used, must be continuous	
Standard strokes †		mm		0 to 500	
Versions				Double-acting, Double Through-rod	
Sensor magnet				Available magnetic and non-magnetic versions.	
Weights				See cylinder "General technical data" at the beginning of the chapter	
Notes				† Maximum recommended strokes. Higher values can create operating problems	

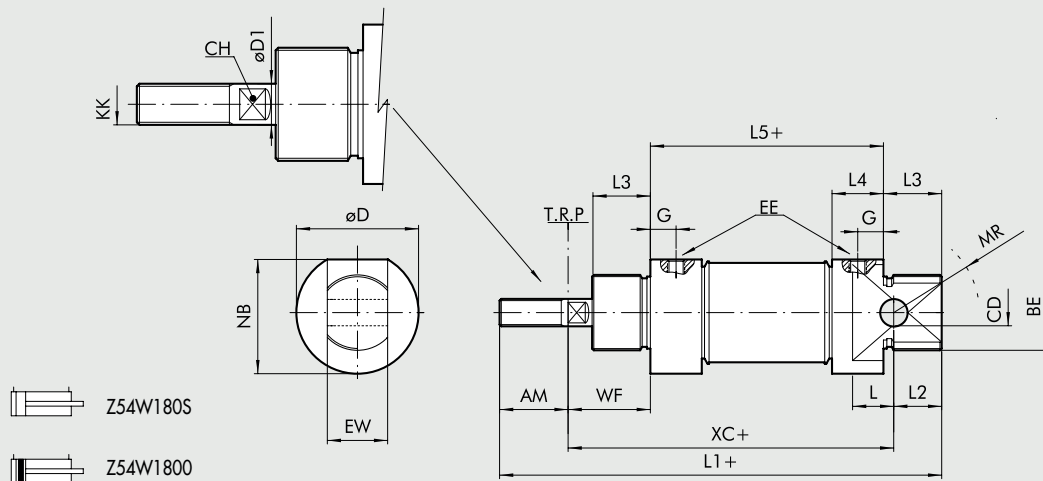
## COMPONENTS

- ① PISTON ROD: AISI 303 steel
- ② HEAD: AISI 304 steel
- ③ PISTON ROD GASKET: polyurethane or FKM/FPM
- ④ GUIDE BUSHING: sintered bronze
- ⑤ BARREL: AISI 304 steel
- ⑥ PISTON: aluminum
- ⑦ PISTON GASKET: polyurethane or FKM/FPM
- ⑧ MAGNET: plastoferrite
- ⑨ Static O-rings: NBR or FKM/FPM



**DIMENSIONS OF DOUBLE-ACTING**

+ = ADD STROKE

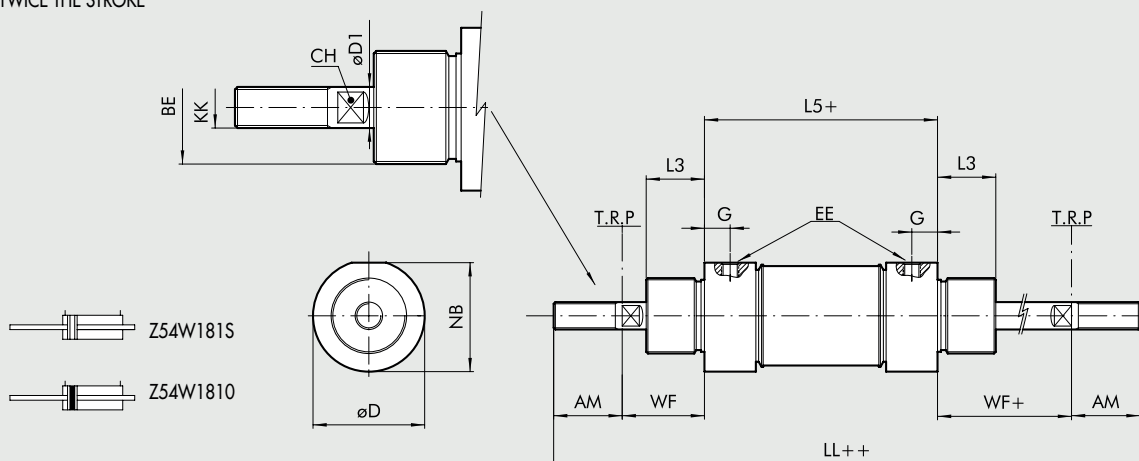


$\varnothing$	AM	BE	$\varnothing CD$ <sup>H9</sup>	CH	$\varnothing D$	$\varnothing D1$	EE	EW <sup>d13</sup>	G	KK	L	L1	L2	L3	L5	MR	NB	WF	XC
16	16	M16x1.5	6	5	19	6	M5	12	5	M6	9	109	11	18	53	16	18	22	82
20	20	M22x1.5	8	7	27	8	G 1/8	16	8	M8	12	131	16	20	67	18	25.5	24	95
25	22	M22x1.5	8	9	30	10	G 1/8	16	8	M10x1.25	12	140	14	22	68	21	28.5	28	104

**DIMENSIONS DOUBLE-ACTING THROUGH-ROD**

+ = ADD STROKE

++ = ADD TWICE THE STROKE



$\varnothing$	AM	BE	CH	$\varnothing D$	$\varnothing D1$	EE	G	KK	LL	L3	L5	NB	WF <sup>±1,2</sup>
16	16	M16x1.5	5	19	6	M5	5	M6	129	18	53	18	22
20	20	M22x1.5	7	27	8	G 1/8	8	M8	155	20	67	25.5	24
25	22	M22x1.5	9	30	10	G 1/8	8	M10x1.25	168	22	68	28.5	28

**KEY TO CODES**

Z54W 1 8	0	0	1 6	0 0 2 0
	TYPE	VERSION	DIAMETER	STROKE
Stainless steel cylinder	0 DAM 1 DAM through-rod	0 Standard (magnetic) S Non-magnetic ● V FKM/FPM gasket	16 20 25	+ 0 to 500 mm

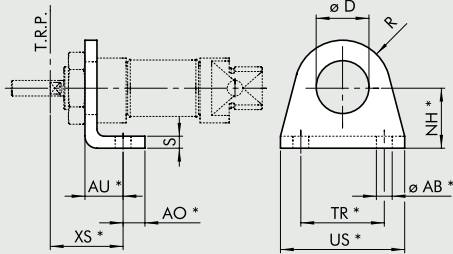
DAM: Magnetic double-acting (non-cushioned)

+ Maximum recommended strokes. Higher values can create operating problems

● For this version the cylinder will be not magnetic

# ACCESSORIES FOR STAINLESS STEEL ISO 6432 MINI-CYLINDER: FIXINGS

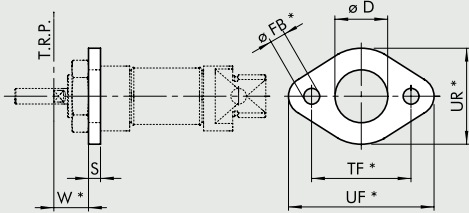
## STAINLESS STEEL LEG MODEL A



Code	Ø	ØAB	AU	AO	D	NH	XS <sup>±1.4</sup>	R	S	TR	US	Weight [g]
W095X120001	16	5.5	14	6	16.1	20	22	13	4	32	42	42
W095X200001	20	6.6	17	8	22.1	25	36	20	5	40	54	90
W095X200001	25	6.6	17	8	22.1	25	40	20	5	40	54	90

\*ISO 6432 values  
Note: Individually packed

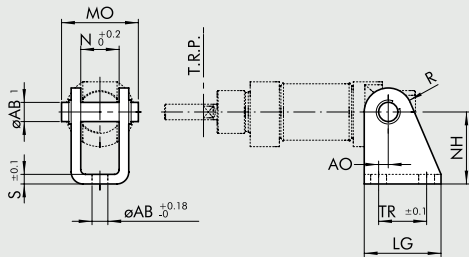
## STAINLESS STEEL FLANGE MODEL C



Code	Ø	D	FB	W <sup>±1.4</sup>	S	TF	UF	UR	Weight [g]
W095X120002	16	16	5.5	18	4	40	52	30	26
W095X200002	20	22	6.6	19	5	50	66	40	52
W095X200002	25	22	6.6	23	5	50	66	40	52

\*ISO 6432 values  
Note: Individually packed

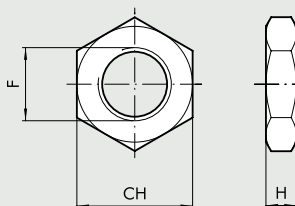
## STAINLESS STEEL COUNTER-HINGE MODEL BC



Code	Ø	AB1	AB	AO	LG	MO	N	NH	R	S	TR	Weight [g]
W095X120005	16	6	5.5	2	25	24	12.1	27	7	3	15	40
W095X200005	20	8	6.6	4	32	31	16.1	30	10	4	20	78
W095X200005	25	8	6.6	4	32	31	16.1	30	10	4	20	78

Note: Supplied complete with 1 pin and 2 snap rings

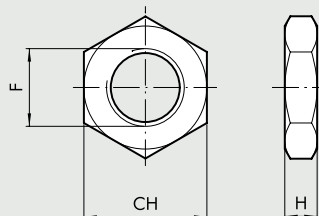
## STAINLESS STEEL NUT FOR HEADS



Code	Ø	CH	F	H
W095X120010	16	22	M16x1.5	5
W095X200010	20	27	M22x1.5	8
W095X200010	25	27	M22x1.5	8

Note: Individually packed

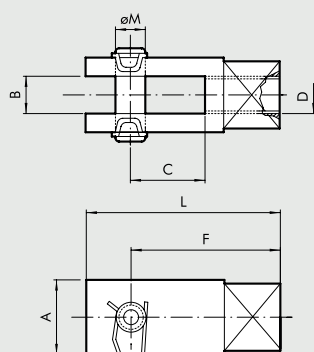
### STAINLESS STEEL NUT FOR PISTON RODS



Code	Ø	CH	F	H	Weight [g]
W095X120011	16	10	M6	4	1
W095X200011	20	13	M8	5	3
W095X322011	25	17	M10x1.25	6	7

Note: Individually packed

### STAINLESS STEEL FORK-MODEL GK-M



Code	Ø	A	B	C	D	F	L	ØM
W095X120020	16	12	6	12	M6	24	31	6
W095X200020	20	16	8	16	M8	32	42	8
W095X322020	25	20	10	20	M10x1.25	40	52	10

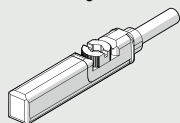
Note: Individually packed

## ACCESSORIES: MAGNETIC SENSORS

### RETRACTABLE SENSOR

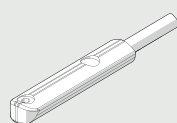
#### SENSOR, SQUARE TYPE

Latest generation,  
secure fixing



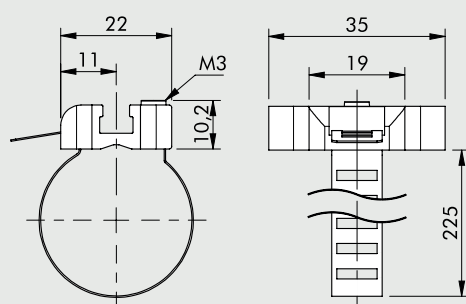
#### SENSOR, OVAL TYPE

Traditional



For codes and technical data, see **chapter A6**.

### SENSOR BRACKET



Code	Bore	Description
W0950001103	16 to 25	Sensor bracket 8 to 63

Note: Individually packed

#### MATERIAL

Bracket: stainless steel  
Sensor holder: zamak

# STAINLESS STEEL ROUND CYLINDER RNDC

Stainless steel clean profile cylinders available in different versions:

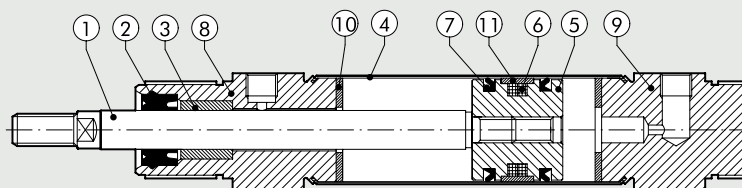
- with or without magnet execution
- double-acting - single or through-rod
- gaskets: Polyurethane or FKM/FPM (for high temperatures)



TECHNICAL DATA		Ø32	Ø40	Ø50	Ø63
Max operating pressure	bar			10	
	MPa			1	
	psi			145	
Temperature range	POLYURETHANE °C			-20 to +80	
	FKM/FPM °C			-10 to +150 (non-magnetic cylinders)	
Design				Screwed heads	
Fluid				Unlubricated air. Lubrication, if used, must be continuous	
Standard strokes †	mm			0 to 500	
Versions				Double-acting, Double Through-rod	
Sensor magnet				Available magnetic and non-magnetic versions.	
Weights				See cylinder "General technical data" at the beginning of the chapter	
Notes				† Maximum recommended strokes. Higher values can create operating problems	

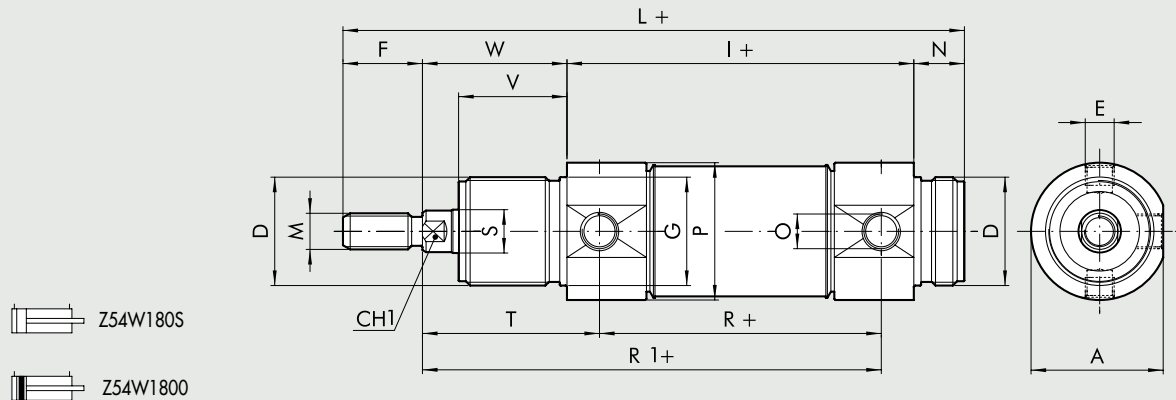
## COMPONENTS

- ① PISTON ROD: AISI 303 steel
- ② PISTON ROD GASKET: polyurethane or FKM/FPM
- ③ GUIDE BUSHING: sintered bronze
- ④ BARREL: AISI 304 steel
- ⑤ PISTON: aluminium
- ⑥ MAGNET: plastoferrite
- ⑦ PISTON GASKET: polyurethane or FKM/FPM
- ⑧ ⑨ HEAD: AISI 304 steel
- ⑩ BUFFER: polyurethane
- ⑪ GUIDE RING: PTFE



## DIMENSIONS OF DOUBLE-ACTING

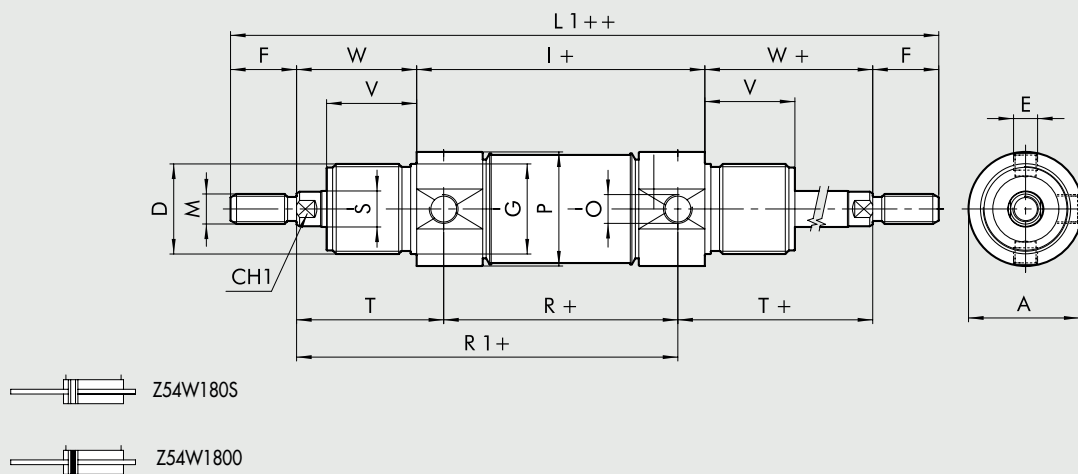
+ = ADD STROKE



## DIMENSIONS DOUBLE-ACTING THROUGH-ROD

+ = ADD STROKE

++ = ADD TWICE THE STROKE



Ø	A	CH1	D	E	F	ØG	I	L	L1	M	N	O	ØP	R	ØS	T	V	W
32	36.5	10	M30x1.25	M8x1	20	30	96	168	212	M10x1.5	14	G1/8	38	78	12	47	30	38
40	44	13	M38x1.5	M10x1	24	38	113	198	251	M12x1.75	16	G1/4	46	89	16	57	35	45
50	55	17	M45x1.75	M12x1.5	32	45	120	220	284	M16x2	18	G1/4	57	96	20	62	38	50
63	67.5	17	M45x2	M14x1.5	32	45	124	224	288	M16x2	18	G3/8	70	98	20	63	38	50

## KEY TO CODES

Z54W 1 8	0 TYPE	0 VERSION	3 2 DIAMETER	0 0 3 2 STROKE
Stainless steel cylinder	0 DAM 1 DAM through-rod	0 Standard (magnetic) S Non-magnetic ● V FKM/FPM gasket	32 40 50 63	+ Ø 32 to 63 stroke 0 to 500 mm

DAM: Magnetic double-acting (non-cushioned)

+ Maximum recommended strokes. Higher values can create operating problems

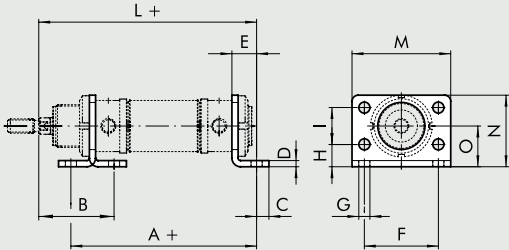
● For this version the cylinder will be not magnetic



# ACCESSORIES FOR STAINLESS STEEL ROUND CYLINDER: FIXINGS

## STAINLESS STEEL LEG MODEL AC

+ = ADD STROKE

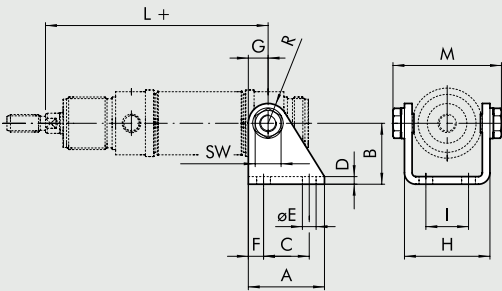


Code	Ø	A	B	C	D	E	F	G	H	I	L	M	N	O
W095X320002	32	124	48	7	4	14	52	7	14	28	148	66	49	28
W095X400002	40	153	60	10	5	20	60	9	18	30	178	80	58	33
W095X500002	50	160	64	10	6	20	70	9	20	40	190	90	70	40
W095X630002	63	164	64	10	6	20	76	9	20	50	194	96	80	45

Note: Individually packed

## STAINLESS STEEL COUNTER-HINGE MODEL BC

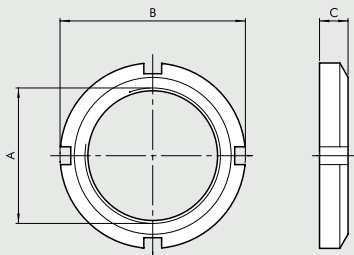
+ = ADD STROKE



Code	Ø	A	B	C	D	E	F	G	H	I	L	M	R
W095X320005BR	32	40	35	24	4	7	8	12	46.1	20	125	58.1	12
W095X400005BR	40	50	40	30	5	9	10	13	56.1	28	146	70.1	13
W095X500005BR	50	54	45	34	6	9	10	14	69.1	36	158	86.1	14
W095X630005BR	63	65	50	35	6	9	15	16	82.1	42	161	99.1	16

Note: Supplied complete with 2 screws

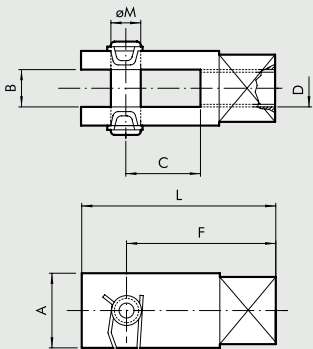
## STAINLESS STEEL HEAD RING NUT MODEL G



Code	Ø	A	B	C
W095X320010	32	M30x1.5	45	7
W095X400010	40	M38x1.5	52	8
W095X500010	50	M45x1.5	58	9
W095X500010	63	M45x1.5	58	9

Note: Individually packed

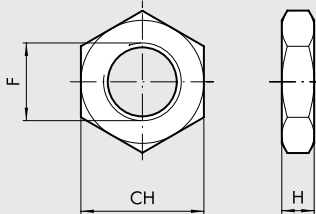
## STAINLESS STEEL FORK-MODEL GK-M



Code	Ø	A	B	C	D	F	L	Ø M
W095X320020	32	20	10	20	M10x1.5	40	52	10
W095X400020	40	24	12	24	M12x1.75	48	62	12
W095X500020	50	32	16	32	M16x2	64	83	16
W095X500020	63	32	16	32	M16x2	64	83	16

Note: Individually packed

### STAINLESS STEEL NUT FOR PISTON RODS

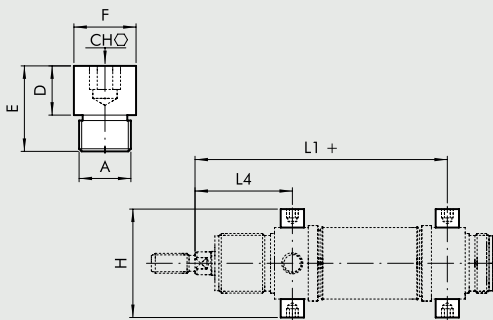


Code	Ø	F	CH	H	Weight [g]
W095X320011	32	M10x1.5	17	6	6
W095X400011	40	M12x1.75	19	7	12
W095X500011	50	M16x2	24	8	20
W095X500011	63	M16x2	24	8	20

Note: Individually packed

### STAINLESS STEEL OSCILLATING PIN

+ = ADD STROKE



Code	Ø	A	CH	D	E	øF	H	L1	L4
W095X320007BR	32	M8X1.25	5	8	14	10	51	125	47
W095X400007BR	40	M10X1.50	6	9.5	16.5	12	61	146	57
W095X500007BR	50	M12X1.75	6	11	20	14	75	158	62
W095X630007BR	63	M14X2	8	13	26	16	92	161	63

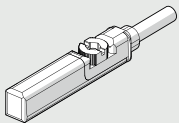
Note: 2- piece pack

## ACCESSORIES: MAGNETIC SENSORS

### RETRACTABLE SENSOR

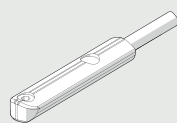
#### SENSOR, SQUARE TYPE *y*

Latest generation,  
secure fixing



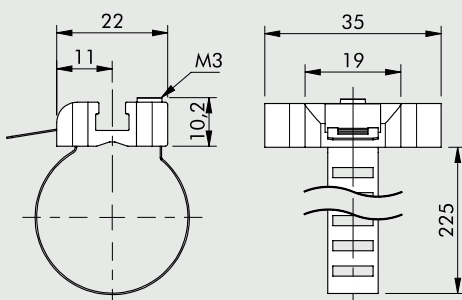
#### SENSOR, OVAL TYPE *y*

Traditional



For codes and technical data, see **chapter A6**.

### SENSOR BRACKET



Code	Bore	Description
W0950001103	32 to 63	Sensor bracket 8 to 63

Note: Individually packed

#### MATERIAL

Bracket: stainless steel  
Sensor holder: zamak

# OVAL CYLINDERS

## HR SERIES Ø40, 50 AND 63mm

The oval cylinders are used in applications in which a load attached to the rod must be moved and must not be rotated. For example: welding devices. With the use of oval cylinders, it is possible to dispense the use of external guides to perform the cylinder stroke. Its heads possess fixing side screws that can be used for fixation. Therefore, no other fixing accessory is necessary.



TECHNICAL DATA		NBR		
Pressure range	bar	0,5 to 10		
Temperature range	°C	-10 to 70		
Fluid	°C	Unlubricated air. Lubrication, if used, must be continuous		
Bores	mm	40, 50, 63		
Design		Oval barrel with tie rods		
Maximum strokes	mm	500		
Versions		For higher strokes, contact sales department. Application will be analyzed.		
Magnetic sensors		Double acting cushioned Reed or Hall Effect		
Inrush Pressure	bar	ø40 = 1,0	ø50 = 1,0	ø63 = 1,0
Maximum torque on piston rod	nm	ø40 = 1,2	ø50 = 1,7	ø63 = 2,0
Maximum rotation on piston rod	°	ø40 = 0,75	ø50 = 0,65	ø63 = 0,65
Mass stroke = 0	kg	ø40 = 0,690	ø50 = 1,220	ø63 = 1,700
Note		Vertical use		

### KEY TO CODES

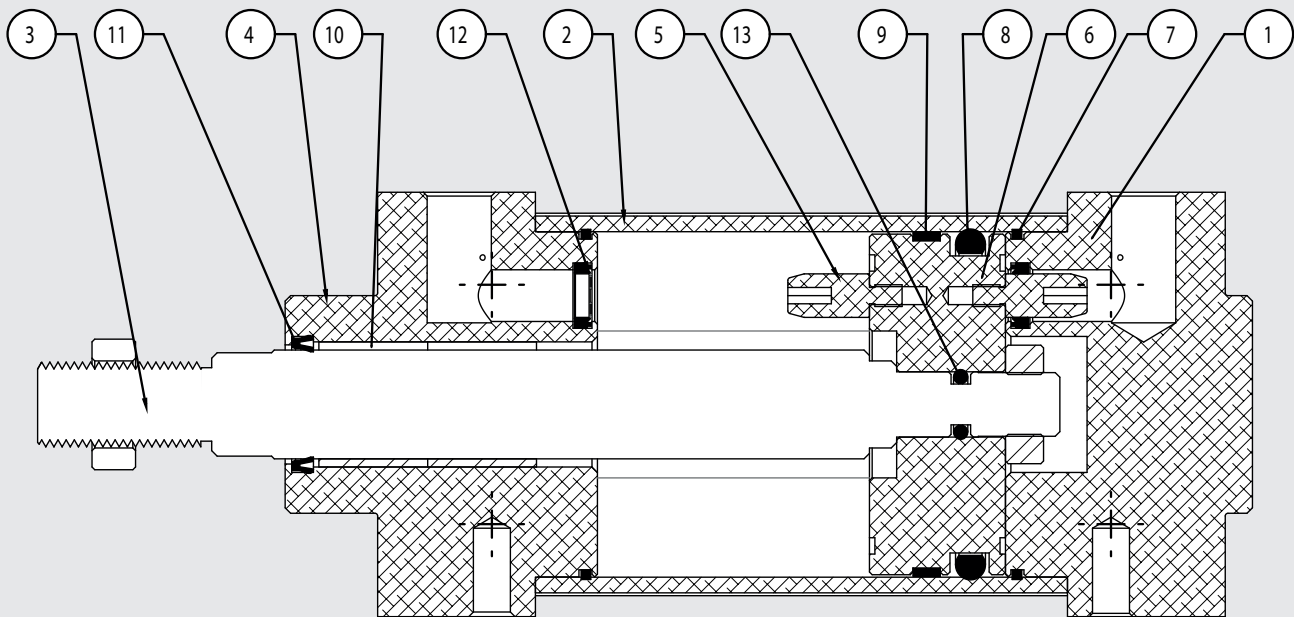
OVAL RH SERIES	TYPE	BORE	STROKE	MATERIAL	GASKETS	
15	5 Double acting cushioned	0 Magnetic	40	25 to 500mm	A Rod in chromed C45 steel, aluminium piston.	NB NBR gaskets for all cylinders.
	6 Double acting not cushioned					
	7 Tandem*					
				Z Rod in chromed stainless steel 303, aluminium piston.		

\* Please verify availability with sales department.

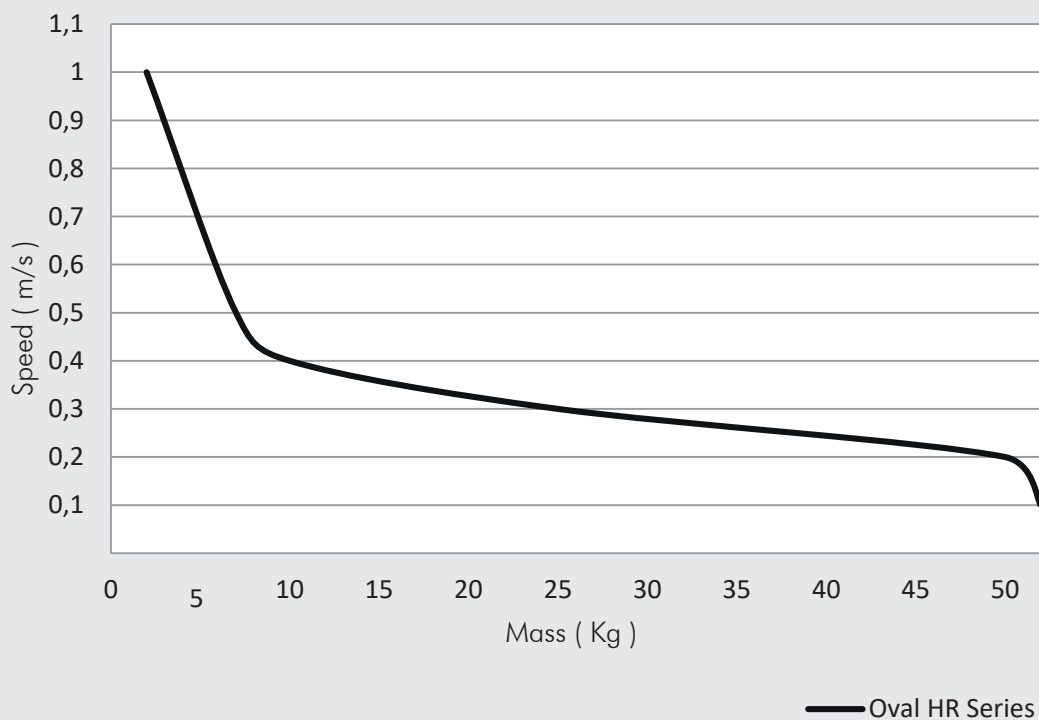
## COMPONENTS

1 REAR HEAD: Die cast aluminium  
 2 BARREL: Drawn anodised calibrated aluminium  
 3 ROD: Steel C45 or Stainless Steel 303  
 4 FRONT HEAD: Die cast aluminium  
 5 CUSHIONING SLEEVE: Die cast aluminium  
 6 PISTON: Aluminium  
 7 STATIC O'RING: NBR

8 PISTON GASKETS: NBR  
 9 GUIDE RING: PTFE  
 10 GUIDE BUSHING: Steel Strip with bronze and PTFE insert  
 11 PISTON ROD GASKET: NBR  
 12 CUSHIONING GASKET: NBR  
 13 PISTON GASKET: NBR



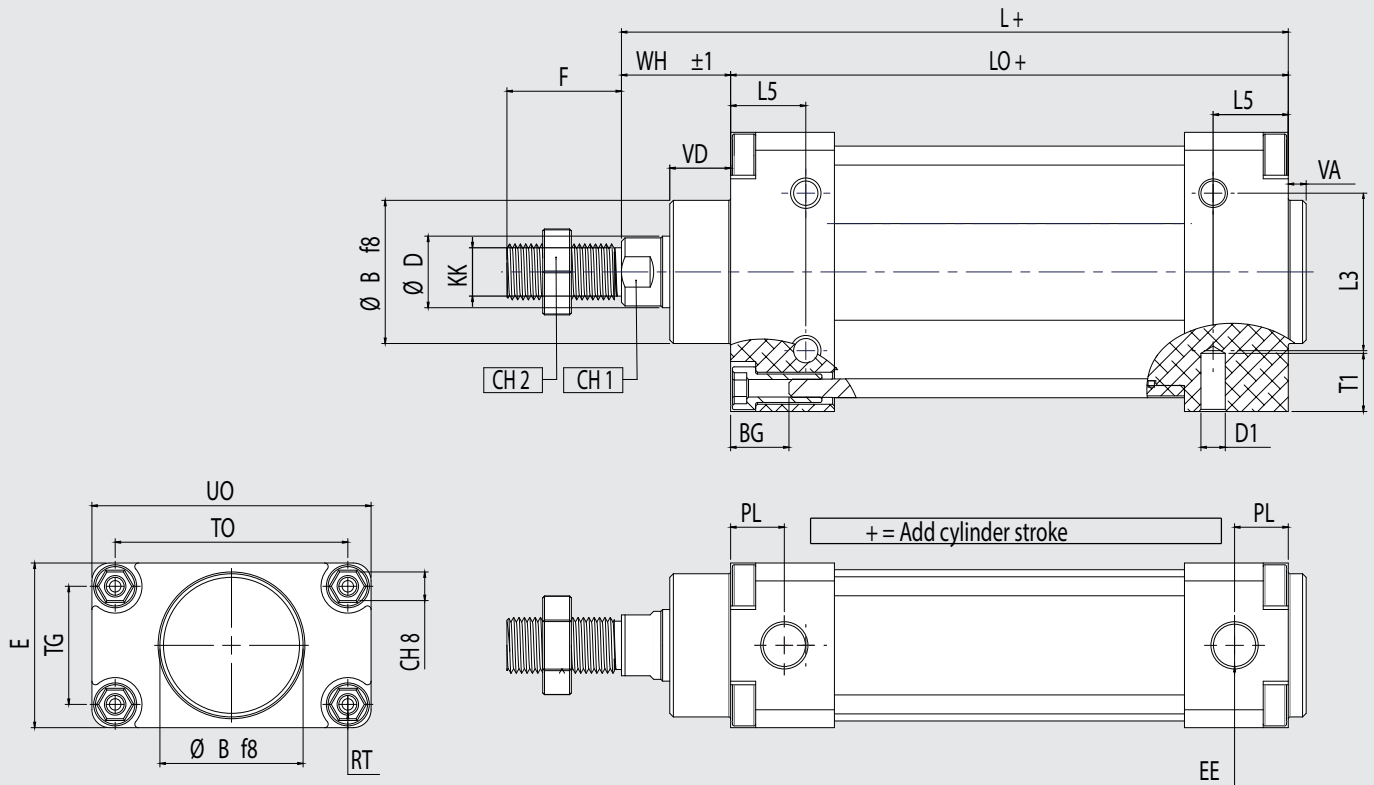
## MAXIMUM CUSHIONING DIAGRAM



# OVAL CYLINDERS

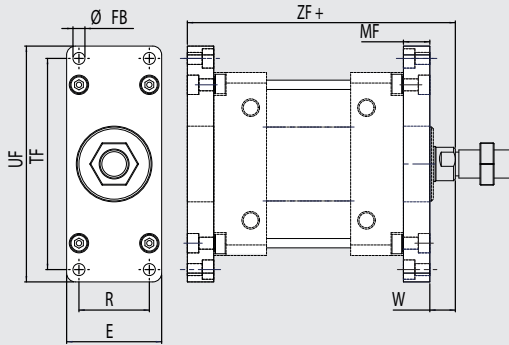
## HR SERIES Ø40, 50 AND 63mm

### DIMENSIONS



Ø	PL	VD	B	WH	CH1	CH2	KK	D	TG	VA	F	EE	RT	E	L+	LO+	TO	UO	L3	L5	D1	T1	BG
40	16,5	10	35	20	13	19	M12X1.25	16	28	5,5	24	G1/4	M5	40	115	95	50	62	32	16,5	M6	8	12
50	15	17	40	30,5	17	24	M16X1.5	20	33	5	32	G1/4	M6	46	136,3	105,8	65	78	44	21	M8	8	13
63	15	17	42	29,5	17	24	M16X1.5	20	40	6	32	G3/8	M6	54	137,3	107,8	90	104	64	21	M10	10	13

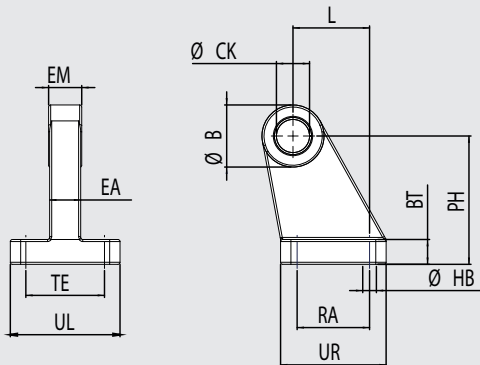
## OVAL SERIES FLANGE



Code	Ø	ØFB	R	E	TF	UF	W	MF	ZF+	Weight [g]
F00402012	40	5,8	28	40	78	90	32	10	125	216
F00502012	50	6,8	32	46	94	108	32	12	148,3	212
F00632012	63	6,8	40	54	120	134	50	15	152,3	440

Note: Kit supplied with 1 flange + 4 screws + 4 washers

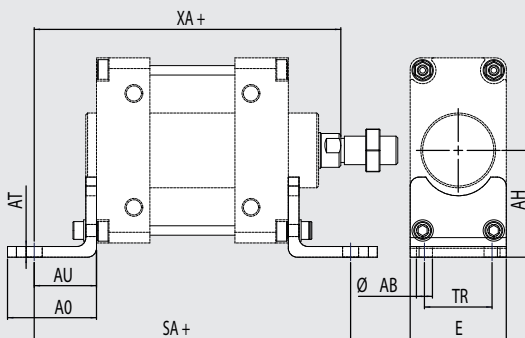
## OVAL SERIES ARTICULATED MALE HINGE



Code	Ø	ØB	ØCK	EM	EA	TE	UL	L	BT	PH	RA	UR	ØHB	Weight [g]
AR0402012	40	23	12	12	11	28	39	24	10	40	22	35	5,5	138
AR0502012	50	26	12	14	13	30	45	33	12	51,5	30	45	6,6	252
AR0632012	63	30	16	16	15	38	55	37	12	62	35	51	6,6	350

Note: Screws aren't supplied

## OVAL SERIES VERTICAL FOOT



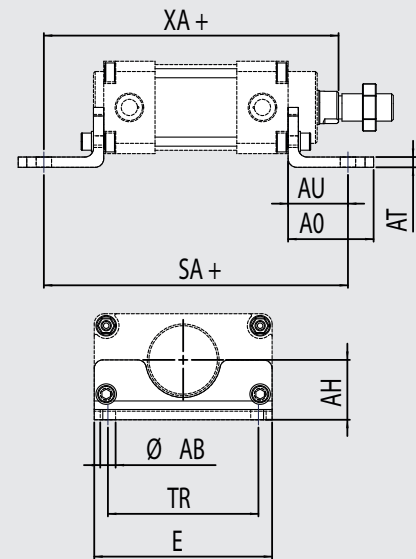
Code	Ø	AO	AU	E	AH	TR	ØAB	AT	XA+	SA+	Weight [g]
CV0402012	40	38	28	40	39	25	9	5	143	151	290
CV0502012	50	42	32	46	47,5	30	9	6	168,3	169,8	522
CV0632012	63	50	35	54	60	38	9	6	172,3	177,8	670

Note: Kit supplied with 1 foot + 2 screws

**OVAL SERIES HORIZONTAL FOOT**

Code	Ø	AO	AU	E	AH	TR	ØAB	AT	XA+	SA+	Weight [g]
CH0402012	40	38	28	62	28	46	9	5	143	151	290
CH0502012	50	42	32	78	31,5	60	9	6	168,3	169,8	522
CH0632012	63	50	35	104	35	88	9	6	172,3	177,8	670

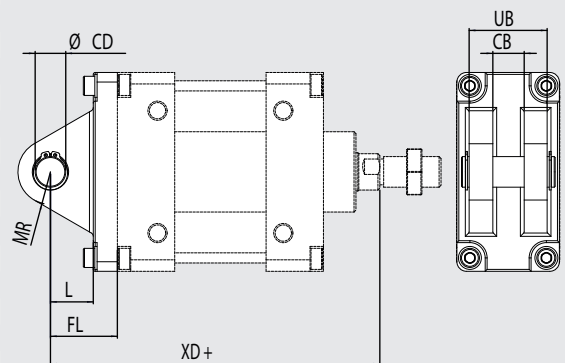
Note: Kit supplied with 1 foot + 2 screws



**OVAL SERIES VERTICAL FEMALE HINGE**

Code	Ø	ØCD	MR	L	FL	XD+	UB	CB	Weight [g]
AV0402012	40	12	13	15,5	25	140	28,8	12,4	148
AV0502012	50	12	13	15,5	27	163,3	34,8	14,4	340
AV0632012	63	16	17	22,4	35	172,3	40,8	16,4	340

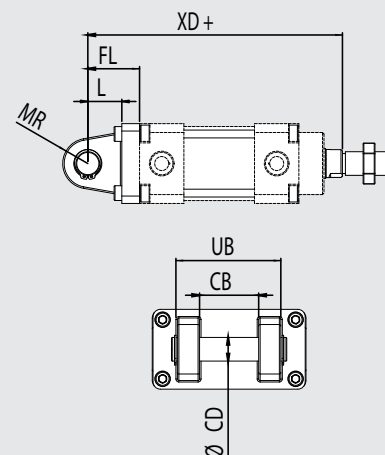
Note: Kit supplied with 1 Hinge + 4 screws



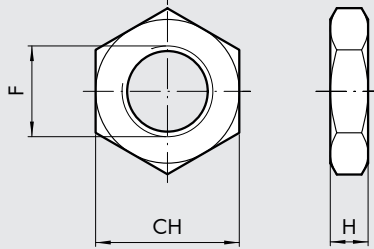
**OVAL SERIES HORIZONTAL FEMALE HINGE**

Code	Ø	ØCD	MR	L	FL	XD+	UB	CB	Weight [g]
AH0402012	40	12	13	15,5	25	140	52	28	148
AH0502012	50	12	13	16	27	163,3	60	32	340
AH0632012	63	16	17	23	35	172,3	70	40	340

Note: Kit supplied with 1 Hinge + 4 screws



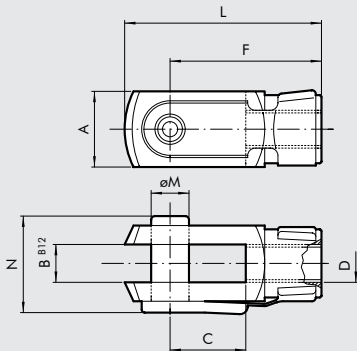
## ROD NUT - MODEL S



Code	Ø	F	H	CH	Weight [g]
0950402010	40	M12x1,25	7	19	12
0950502010	50/63	M16x1,5	8	24	20

Note: Individually packed

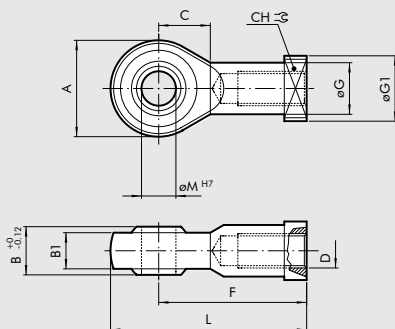
## MOD.GK-M



Code	Ø	ØM	C	B	A	L	F	D	N	Weight [g]
W0950402020	40	12	24	12	24	62	48	M12x1,25	32	148
W0950502020	50	16	32	16	32	83	64	M16x1,5	40	340
W0950502020	63	16	32	16	32	83	64	M16x1,5	40	340

Note: Individually packed

## ROD EYE - MODEL GA-M



Code	Ø	ØM	C	B1	B	A	L	F	D	ØG	CH	ØG1	Weight [g]
W0950402025	40	12	17	12	16	32	66	50	M12x1,25	17,5	19	19	116
W0950502025	50	16	20	16	21	42	85	64	M16x1,5	22	22	22	226
W0950502025	63	16	20	16	21	42	85	64	M16x1,5	22	22	22	226

Note: Individually packed

\*\* For other accessories, please contact sales department

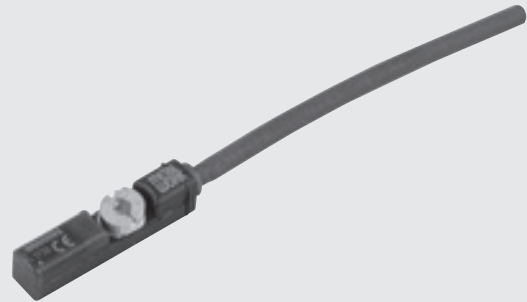


# RETRACTABLE SENSOR, SQUARE TYPE



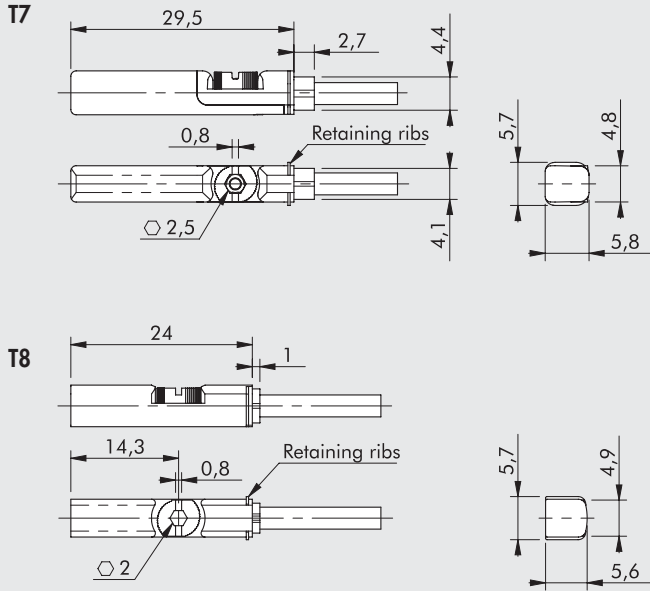
Traditional sensor, featuring:

- secure fixing by means of a steel eccentric pin that engages the sides of the seat;
- fixing screw suitable for flat screwdriver or a 2.5 mm Allen wrench;
- equipped with retaining tabs to hold the sensor in position during installation;
- increased resistance to atmospheric agents and moisture;
- compatible for use with both traditional T-slots and rectangular slots.



TECHNICAL DATA	RZT7	MRZT7	ATEX MZT8	HCR
Type of contact	REED	HALL EFFECT	HALL EFFECT	HALL EFFECT
Switch	N.O.	N.O.	N.O.	N.O.
Supply voltage (Ub)	V 5 to 30 AC/DC	10 to 30 DC	10 to 26 DC	10 to 30 DC
Power	W 3 (peak value = 6)	-	≤ 1.7	-
Voltage variation	-	≤ 10% of Ub	≤ 10% of Ub	-
Voltage drop at I <sub>max</sub>	V ≤ 3.5	≤ 2.5	≤ 2.2	≤ 2.2
Input current	mA -	≤ 8	≤ 10	≤ 10
Output current	mA ≤ 100	≤ 100	≤ 50	≤ 200
Switching frequency	Hz ≤ 400	≤ 1000	≤ 1000	≤ 1000
Short-circuit protection	-	Yes	Yes	Yes
Over-voltage suppression	-	-	Yes	Yes
Polarity inversion protection	-	Yes	Yes	Yes
EMC	EN 60947-5-2	EN 60947-5-2	EN 60947-5-2	EN 60947-5-2
LED display	Yellow	Yellow	Yellow	Yellow
Magnetic sensitivity	mT 2.1 - 3.5	2.4 - 3.6	2.45 - 2.75	2.4 - 3.6
Repeatability	mT ≤ 0.1	≤ 0.1	≤ 0.1 (Ub and ta fixed)	≤ 0.1
Degree of protection (EN 60529)	IP 67	IP 67	IP 67	IP 68 (M8) - IP69K 2m
Vibration and shock resistance		30 g, 11 ms, 10 to 55 Hz, 1 mm		
Operating life	10 <sup>7</sup> impulses	10 <sup>9</sup> impulses	10 <sup>9</sup> impulses	-
Temperature range	°C			
with polyurethane cable	-30 to 80 (static installation) / -20 to 80 (dynamic installation)		-	-30 to 80 (static installation)
with PVC cable	-30 to 80 (static installation) / -5 to 80 (dynamic installation)		-20 to 50	-
Sensor capsule material	PA	PA	PA12	PA12
2.5 m/2 m connecting cable	PVC; 2 x 0.12 mm <sup>2</sup>	PVC; 3 x 0.12 mm <sup>2</sup>	PVC; 3 x 0.12 mm <sup>2</sup>	PUR; 3 x 0.14 mm <sup>2</sup>
Connecting cable with M8x1	Polyurethane; 2 x 0.14 mm <sup>2</sup>	Polyurethane; 3 x 0.14 mm <sup>2</sup>	-	PUR; 3 x 0.14 mm <sup>2</sup>
Wire NO.	2	3	3	3
Category ATEX	-	-	II 3G Ex nA IIC T4 Gc X II 3D Ex tc IIIC T135°C Dc IP67 X	-
Certifications	CE	CE	CE Ex	CE UL
<b>ROBOTICS VERSIONS</b>				
Angle of twist		±270° / 10 cm		-
No. of cycles torsion		> 350.000 (±270° / 0.1 mm)		-
Bending cycles		> 5 Mio (bending radius 29 mm)		-
Maximum acceleration	m/s <sup>2</sup>	max 5		-
Maximum traverse speed at 5 m horizontal path	m/min	max 200		-

OVERALL DIMENSIONS AND ORDERING CODES

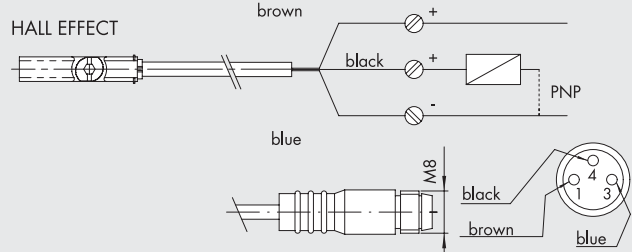
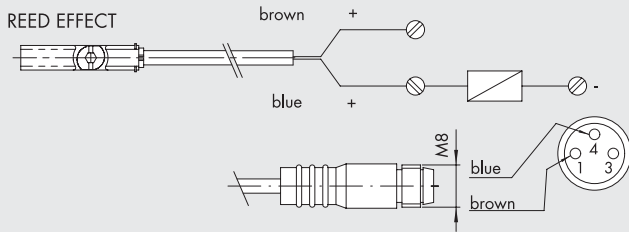


Code	Description
<b>T7</b>	
W095414	REED sensor, T7 SQUARE, 2 wires 2.5 m
W095415	REED sensor, T7 SQUARE, 2 wires 5 m
W095416	REED sensor, T7 SQUARE, 2 wires 10 m
W09541C	REED sensor, T7 SQUARE, 2 wires 2.5 m robotics
W095411	REED sensor, T7 SQUARE, 2 wires 300 mm M8 robotics
W095434	HALL sensor, T7 SQUARE, 3 wires 2.5 m
W095435	HALL sensor, T7 SQUARE, 3 wires 5 m
W09543C	HALL sensor, T7 SQUARE, 3 wires 2.5 m robotics
W095431	HALL sensor, T7 SQUARE, 3 wires 300 mm M8 robotics

<b>T8 ATEX</b>	
W0955A9	HALL sensor, T8 SQUARE, 3 wires ATEX 2 m SH.OV. robotics
<b>T8 (for corrosive environments)</b>	
W0952125396	HALL sensor, T8 SQUARE, 3 wires 2 m HCR
W0952129394	HALL sensor, T8 SQUARE, 3 wires 300 mm M8 HCR

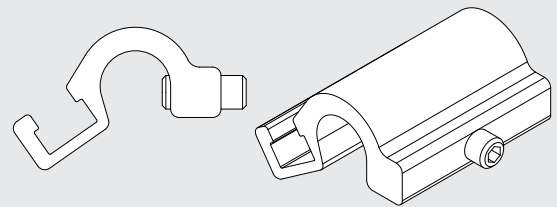
**Note: Not to be used with rodless cylinders Ø 25 having "V" guide.**  
For this type of cylinder use only the HS version of the oval type.

WIRING DIAGRAM



SENSOR BRACKET

Code	Description
155SS	Sensor bracket Oval HR Series



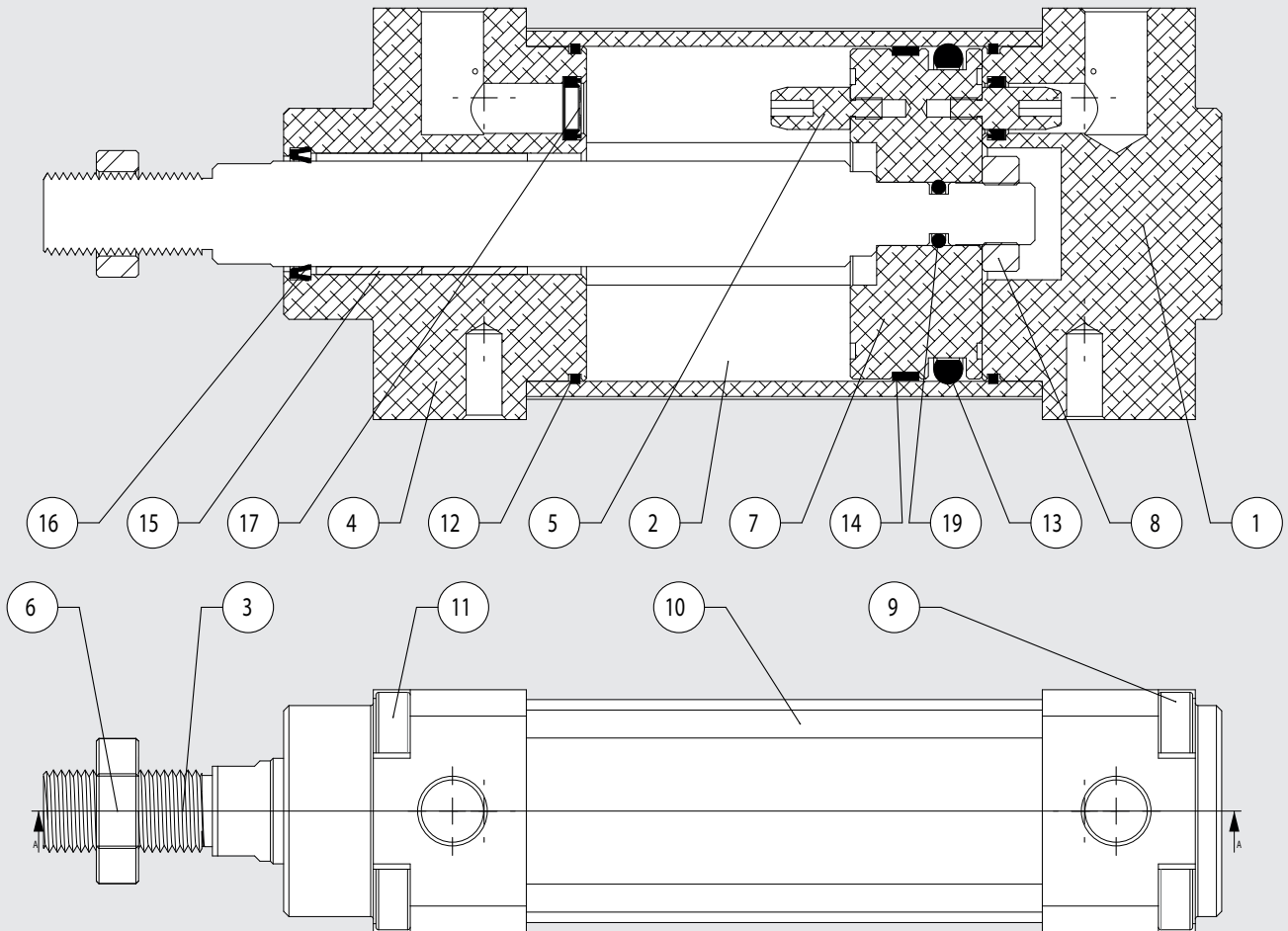
# OVAL CYLINDERS

## HR SERIES Ø40, 50 AND 63mm



### SPARE PARTS AND MOUNTING KITS

ACTUATORS



CODE	BORE	DESCRIPTION	ITEMS
009 . . . 0502HR	40 to 63 mm	Complete Kit NBR gaskets	12-13-14-16-17-19
009 . . . 0304HR	40 to 63 mm	Complete Front Head Kit NBR	4-11-12-15-16-17
009 . . . 0305HR	40 to 63 mm	Complete Rear Head Kit NBR	1-9-12-17
009 . . . 0602HR	40 to 63 mm	Complete Piston Kit NBR	5-7-8-13-14-18-19
009 . . . 0702HR	40 to 63 mm	Complete F + R Heads + Piston Kit NBR	1-4-5-7-8-9-11-12-13-14-15-16-17-18-19
0090400800HR	40 to 63	Magnet	18

CODE	BORE	DESCRIPTION	Kg/m	MINIMUM QUANTITY
TI5300	40 mm	Tie rod in C45 Steel Ø 3.5 h9 mm length 3000-3200 mm	0,08	10 bars per code
TI5300	50/63 mm	Tie rod in C45 Steel Ø 5.29 h9 mm length 3000-3200 mm	0,18	10 bars per code
A16C45	40mm	Rod in C45 Steel ø16mm Length 3000-3200mm	1,58	04 bars per code
A16303	40mm	Rod in Stainless Steel 303 ø16mm Length 3000-3200mm	1,58	04 bars per code
A20C45	50 a 63mm	Rod in C45 Steel ø20mm Length 3000-3200mm	2,47	03 bars per code
A20303	50 a 63mm	Rod in Stainless Steel 303 ø20mm Length 3000-3200mm	2,47	03 bars per code
OVAL40	40 mm	Oval Barrel 40mm Length 3000-3200mm	1,20	01 bars per code
OVAL50	50 mm	Oval Barrel 50mm Length 3000-3200mm	1,40	01 bars per code
OVAL63	63 mm	Oval Barrel 63mm Length 3000-3200mm	2,50	01 bars per code

# ISO 15552 CYLINDER RHV SERIES

RHV economic series cylinders have been designed to provide Metal Work customers with yet another alternative, while still adding innovations to the performance of the assembly. This series can be supplied with adjustable or fixed cushioning, which has been designed after extensive analysis of customer applications, so that most of them can be supplied efficiently and quickly, as they do not require adjustment. In addition, it has channels on 3 sides of its barrel to allow easy installation of sensors even in hard-to-reach places.

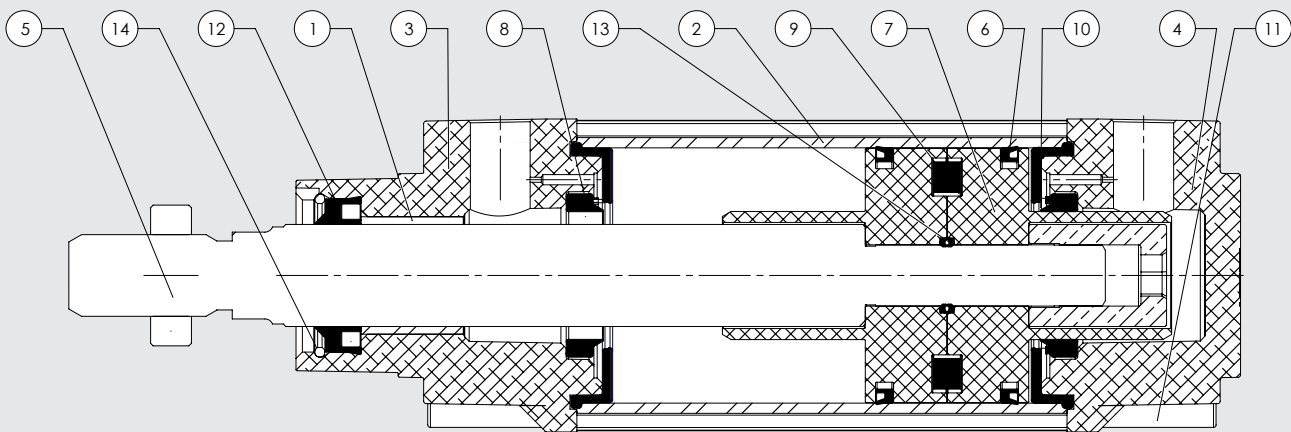


- With or without magnet
- Double acting through rod or single rod
- Choice of Polyurethane, NBR, FKM and Tandem\*\*

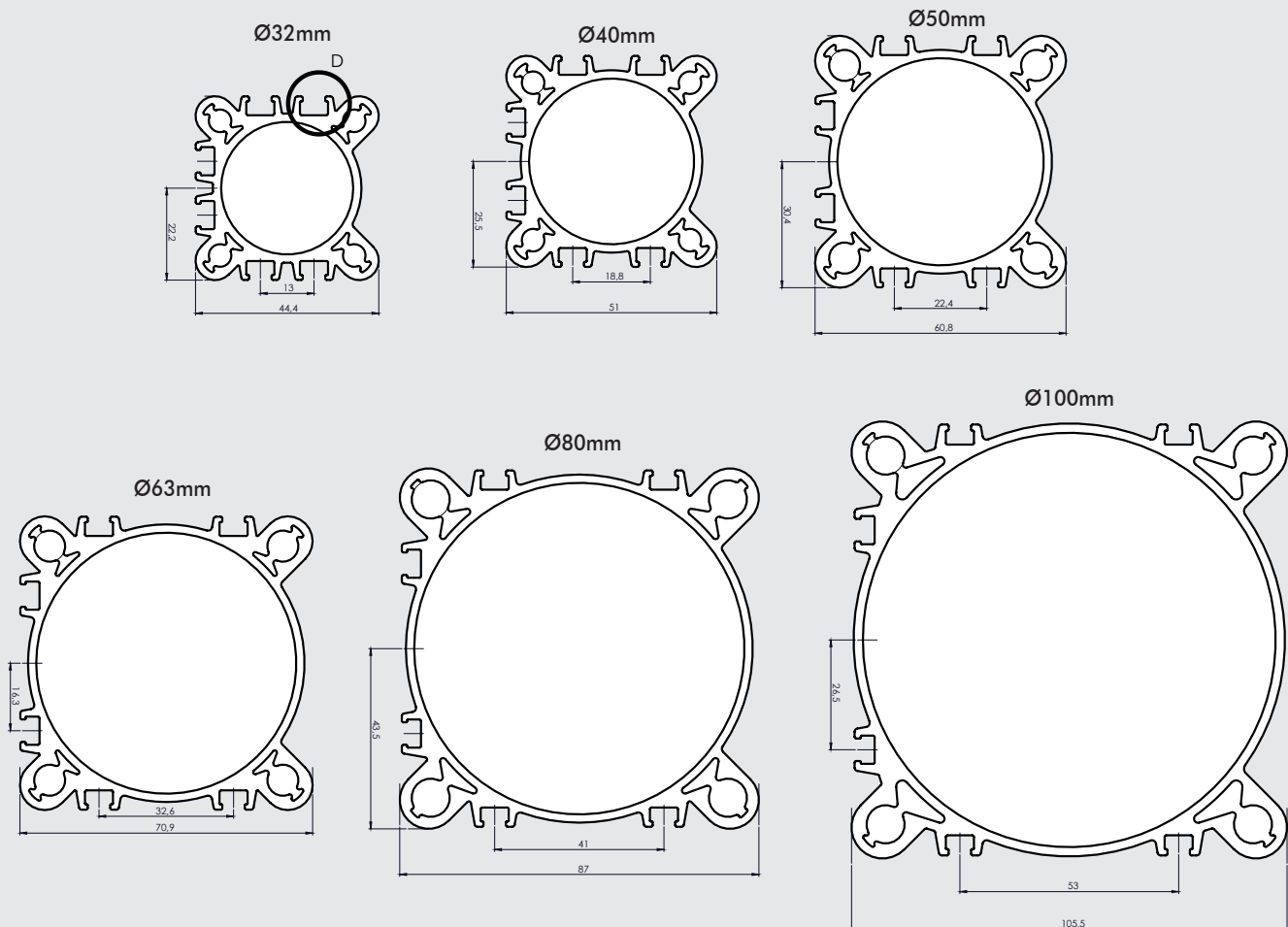
TECHNICAL DATA		POLYURETHANE	NBR	FKM/FPM
Maximum Operating Pressure	bar		10	
Operating Temperature	°C	-25 to 80	-10 to 80	-10 to 150 (non-magnetic cylinders)
Fluid	°C	50µm filtered compressed air, lubricated or not. If lubricated, this must be continuous		
Diameters	mm	32;40;50;63;80;100		
Design		Heads with trilobe screws		
Standard Strokes	mm	Single-acting: Diameters ø32 to 63mm Strokes from 1 to 250mm* Double acting: Diameters ø32 to 80mm Strokes from 1 to 2800mm* Diameter ø100mm Strokes from 1 to 2600mm*		
Versions		Damped double-acting, Non-damped double-acting, Damped Through Rod**, High Temperature, no-stick slip		
Magnetic for Sensor		All versions supplied with magnet. Supplied without magnet on request.		
Operating Pressure		ø32 and ø40mm: 0.4 bar ø50 and ø63mm, stroke < 1500mm: 0.3 bar ø50 and ø63mm, stroke > 1500mm: 0.4 bar ø80 to ø100mm, stroke < 1500mm: 0.2 bar ø80 to ø100mm, stroke > 1500mm: 0.4 bar		
Notes		For speeds below 0.2m/s, use the no-stick slip version and air without lubrication. * Maximum recommended strokes. Higher values may cause operating problems. ** Check the possibility of sale with the sales department. ***For other versions not mentioned in this catalog, consult the sales department.		

## COMPONENTS

- |  |   |
|--|---|
| 1 GUIDE BUSHING: Steel with PTFE coating                           | 7 HALF-PISTON: Self-lubricating technopolymer or aluminum |
| 2 BARREL: Calibrated and Anodized Extruded Aluminum                | 8 CUSHIONING GASKETS: Polyurethane, NBR or FKM            |
| 3 FRONT HEAD: Injected Natural Aluminum                            | 9 MAGNET: Plasto-ferrite                                  |
| 4 REAR HEAD: Injected Natural Aluminum                             | 10 BUFFER + STATIC O'RINGS: NBR or FKM/FPM                |
| 5 PISTON ROD: C45 steel or 303 stainless steel, both chrome-plated | 11 SCREWS: Zinc-plated steel                              |
| 6 PISTON GASKET: Polyurethane, NBR or FKM                          | 12 PISTON ROD GASKET: Polyurethane, NBR or FKM            |

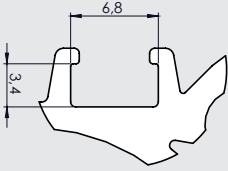


## LINER PROFILES



# ISO 15552 CYLINDER RHV SERIES

## DETAIL VIEW OF SENSOR CHANNELS



## KEY TO CODES

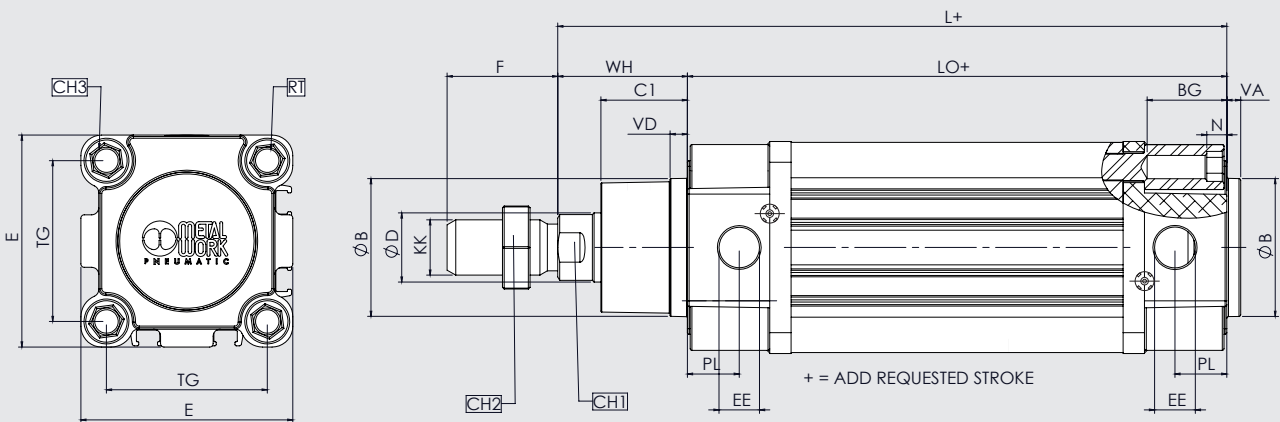
SERIE RHV	1 TYPOLOGY	3 MAGNETIC	32 DIAMETER	0050 STROKE	C MATERIAL	P SEALS
Z54	1 Double action, fixed cushioned	3 Magnetic	32	32 to 80	A SAE 1045 chromed piston rod, aluminum piston: standard for all cylinders with > 1000 mm-stroke cylinders and for cylinder with Ø 80 mm and over	N NBR gasket
	2 Double acting, through rod, fixed cushioned*	5 Non-magnetic	40	0025 to 2800mm		
	3 Double-acting adjustable cushioned		50	100		
	4 Non-cushioned		63	0025 to 2600mm	C SAE 1045 chromed piston rod, technopolymer piston: standard for cylinders of Ø 32 to 63 mm with < 1000 mm strokes	P Polyurethane gasket
	5 Tandem two-stage*		80			
	6 Opposed*		A1=100			
	7 Tandem two-stage adjustable cushioned*				Z Stainless steel piston rod and nut aluminum piston	V FKM/FPM Gasket**
	8 Twin adjustable cushioned *					
	9 Double acting, through rod, adjustable cushioned***					
					X Stainless steel piston rod and nut technopolymer piston	

\*Check sales availability with the sales department.

\*\*For Viton gaskets, aluminum plungers must be used.

\*\*\*For through rod version, aluminum plungers must be used.

## DIMENSIONS

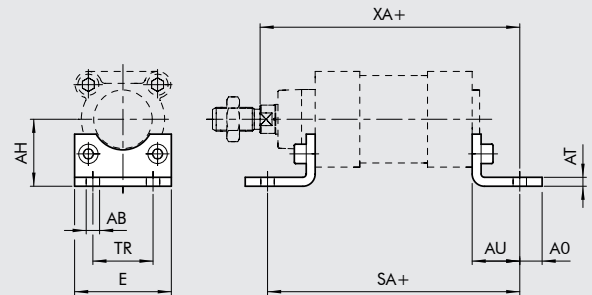


Ø	PL	VD	A	B	B1	WH	C1	CH1	CH2	CH3	KK	D	TG	VA	F	EE	RT	E	L	LO	BG	N
32	10	6,5	10	30	28	26	16	10	17	6	M10X1.25	12	32,5	4	22	G 1/8	M6	46	120	94	14,5	4,5
40	12	8	10	35	33	30	20	13	19	6	M12X1.25	16	38	4	24	G1/4	M6	54	135	105	14,5	4,5
50	14	13	10	40	38	37	25	17	24	8	M16X1.5	20	46,5	4	32	G1/4	M8	64,5	143	106	17,5	5,5
63	16	14	10	45	40	37	25	17	24	8	M16X1.5	20	56,5	4	32	G3/8	M8	75,5	158	121	17,5	5,5
80	18	12	12	45	43	46	33	22	30	10	M20X1.5	25	72	4	40	G3/8	M10	94	174	128	21,5	5,5
100	20	14	12	55	49	51	38	22	30	10	M20X1.5	25	89	4	40	G1/2	M10	111	189	138	21,5	5,5

# ACCESSORIES RHV SERIES CYLINDER

## FOOT - MOD A

Code	∅	∅ AB	AH	AO	AT	AU	TR	E	XA	SA	Weight [g]
W0950322001	32	7	32	11	4	24	32	45	144	142	76
W0950402001	40	9	36	15	4	28	36	52	163	161	100
W0950502001	50	9	45	15	4	32	45	65	175	170	162
W0950632001	63	9	50	15	6	32	50	75	190	185	266
W0950802001	80	12	63	20	6	41	63	95	215	210	456
W0951002001	100	14	71	25	6	41	75	115	230	220	572
W0951252001	125	16	90	15	7	45	90	140	270	250	1130

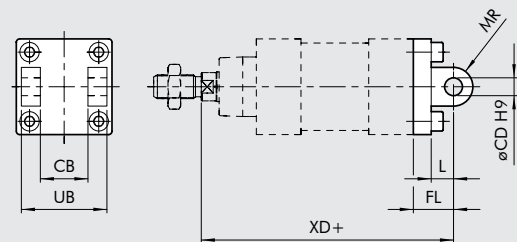


Note: 1 piece per package complete with 2 screws

+= ADD STROKE

## FEMALE HINGE - MOD B

Code	∅	UB	CB	FL	∅CD	XD	MR	L	Weight [g]
W0950322003	32	45	26	22	10	142	10	10	116
W0950402003	40	52	28	25	12	160	12	10	160
W0950502003	50	60	32	27	12	170	12	12	252
W0950632003	63	70	40	32	16	190	16	12	394
W0950802003	80	90	50	36	16	210	16	16	670
W0951002003	100	110	60	41	23	230	20	16	1085
W0951252003	125	130	70	50	25	275	25	20	2000

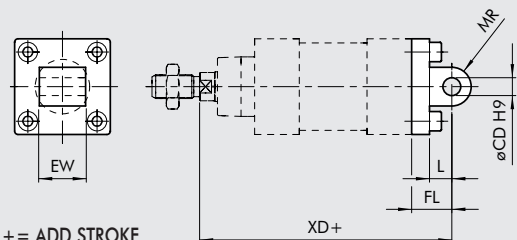


Note: supplied complete with 4 screws, 4 washers, 2 seeger and 1 pin.

+= ADD STROKE

## MALE HINGE - MOD BA

Code	∅	EW	FL	MR	∅CD	L	XD	Weight [g]
W0950322004	32	26	22	11	10	12	142	94
W0950402004	40	28	25	13	12	15	160	124
W0950502004	50	32	27	13	12	15	170	220
W0950632004	63	40	32	17	16	20	190	316
W0950802004	80	50	36	17	16	20	210	578
W0951002004	100	60	41	21	20	25	230	850
W0951252004	125	70	50	26	25	30	275	1590

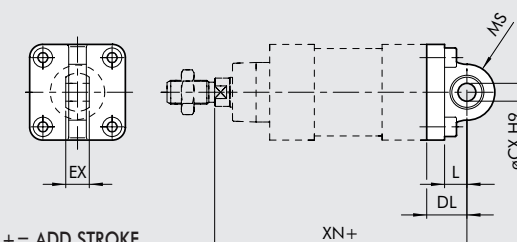


Note: supplied complete with 4 screws and 4 washers.

+= ADD STROKE

## ARTICULETED MALE HINGE - MOD BAS

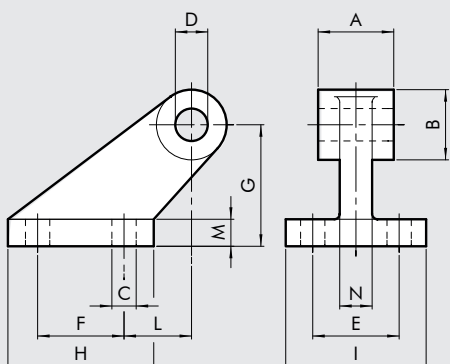
Code	∅	DL	MS	L	XN	CX	EX	Weight [g]
W0950322006	32	22	16	12	142	10	14	106
W0950402006	40	25	19	15	160	12	16	142
W0950502006	50	27	19	15	170	12	16	236
W0950632006	63	32	24	20	190	16	21	336
W0950802006	80	36	24	20	210	16	21	572
W0951002006	100	41	30	25	230	20	25	840
W0951252006	125	50	36	30	275	25	31	1520



Note: supplied complete with 4 screws and 4 washers.

+= ADD STROKE

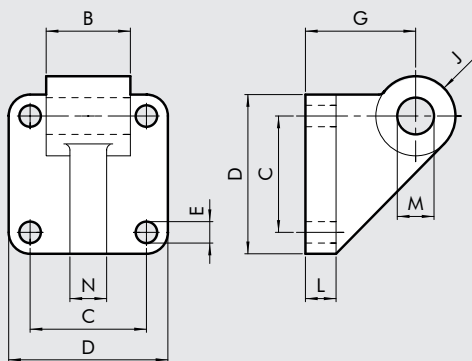
CETOP HINGE FOR MOD B - MOD GL



Code	Ø	A	B	C	D	E	F	G	H	I	L	M	N	Weight [g]
W0950322008	32	26	19	7	10	25	20	32	37	41	18	8	10	96
W0950402008	40	28	26	9	12	32	32	45	54	52	25	10	12	216
W0950502008	50	32	26	9	12	32	32	45	54	52	25	10	12	212
W0950632008	63	40	33	11	16	40	50	63	75	63	32	12	15	440
W0950802008	80	50	33	11	16	40	50	63	75	63	32	12	15	464
W0951002008	100	60	44	14	20	50	70	90	103	80	40	16	22	985
W0951252008	125	70	44	14	25	50	70	90	103	80	40	16	22	1000

Note: supplied complete with 4 screws and 4 washers.

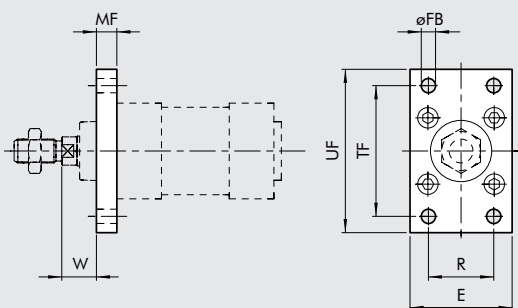
COUNTER-HINGE MOD B - MOD GS



Code	Ø	B	C	D	E	G	J	L	M	N	Weight [g]
W0950322108	32	25.5	32.5	45	7	32	11	10	10	10	106
W0950402108	40	27.5	38	52	7	36	13	10	12	12	138
W0950502108	50	31.5	46.5	65	9	45	13	12	12	12	252
W0950632108	63	39.5	56.5	75	9	50	17	12	16	15	350
W0950802108	80	49.5	72	95	11	63	17	16	16	15	655
W0951002108	100	59.5	89	115	11	73	21	16	20	22	980

Note: supplied complete with 4 screws and 4 washers.

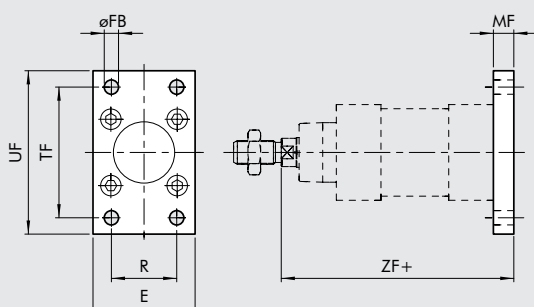
FRONT FLANGE - MOD C



Code	Ø	TF	UF	E	MF	R	ØFB	W	Weight [g]
W0950322002	32	64	80	50	10	32	7	16	246
W0950402002	40	72	90	55	10	36	9	20	290
W0950502002	50	90	110	65	12	45	9	25	522
W0950632002	63	100	120	75	12	50	9	25	670
W0950802002	80	126	153	95	16	63	12	30	1420
W0951002002	100	150	178	115	16	75	14	35	2040
W0951252002	125	180	220	140	20	90	16	45	4300

Nota: fornecida completa com 4 parafusos e 4 arruelas.

REAR FLANGE - MOD. C



Code	Ø	TF	UF	E	MF	R	ØFB	ZF	Weight [g]
W0950322002	32	64	80	50	10	32	7	130	246
W0950402002	40	72	90	55	10	36	9	145	290
W0950502002	50	90	110	65	12	45	9	155	522
W0950632002	63	100	120	75	12	50	9	170	670
W0950802002	80	126	153	95	16	63	12	190	1420
W0951002002	100	150	178	115	16	75	14	205	2040
W0951252002	125	180	220	140	20	90	16	245	3000

Note: supplied complete with 4 screws.

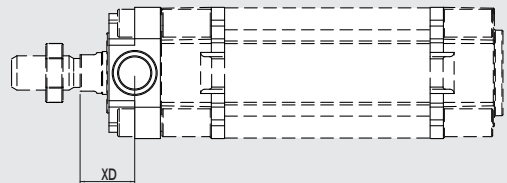
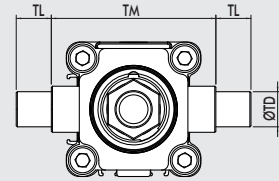
+ = ADD STROKE



### FRONT HINGE

Código	Ø	TD	TL	TM	XD
CNKF-032KT	32	12	12	50	18
CNKF-040KT	40	16	16	63	20
CNKF-050KT	50	16	16	75	25
CNKF-063KT	63	20	20	90	25
CNKF-080KT	80	20	20	110	32
CNKF-100KT	100	25	25	132	32

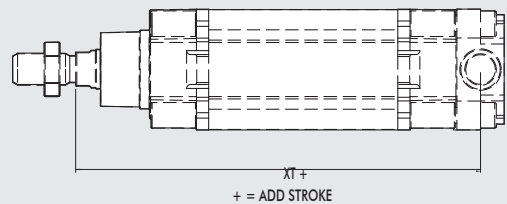
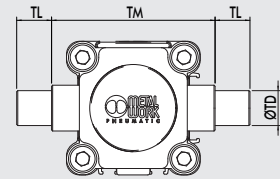
Note: n. 1 piece per package



### REAR HINGE

Code	Ø	TD	TL	TM	XT
CNKF-032KT	32	12	12	50	138
CNKF-040KT	40	16	16	63	145
CNKF-050KT	50	16	16	75	155
CNKF-063KT	63	20	20	90	170
CNKF-080KT	80	20	20	110	188
CNKF-100KT	100	25	25	132	208

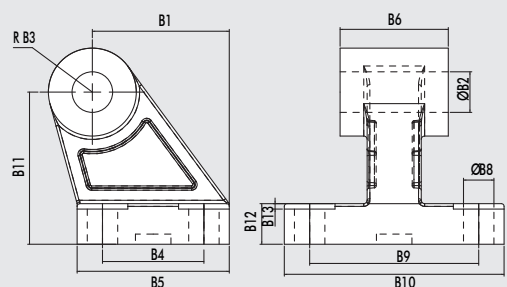
Note: n. 1 piece per package



### ISO 15552 COUNTER-HINGE

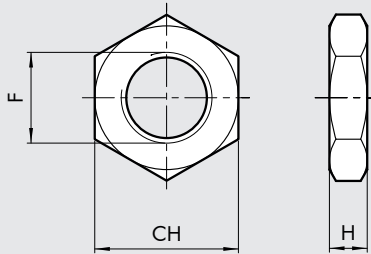
Code	Ø	B1	B2	B3	B4	B5	B6	B8	B9	B10	B11	B12	B13
CNKF-032SA	32	21	10	10	18	31	26	6.6	38	51	32	8	1
CNKF-040SA	40	24	12	11	22	35	28	6.6	41	54	36	10	1
CNKF-050SA	50	33	12	13	30	45	32	9	50	65	45	12	1.6
CNKF-063SA	63	37	16	15	35	50	40	9	52	67	50	12	1.6
CNKF-080SA	80	47	16	15	40	60	50	11	66	86	63	14	1.6
CNKF-100SA	100	55	20	19	50	70	60	11	76	96	71	15	1.6

Note: n. 1 piece per package



# ACCESSORIES RHV SERIES CYLINDER

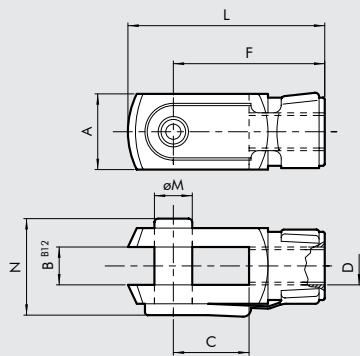
## ROD NUT - MOD. S



Code	Ø	F	H	CH	Weight [g]
0950322010	32	M10x1.25	6	17	6
0950402010	40	M12x1.25	7	19	12
0950502010	50/63	M16x1.5	8	24	20
0950802010	80/100	M20x1.5	9	30	32
0951252010	125	M27x2	12	41	74

Note: n. 1 piece per package

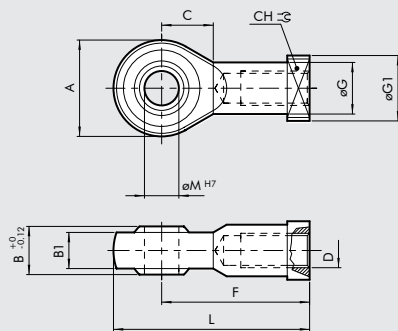
## FORK MOD. GK-M



Code	Ø	ØM	C	B	A	L	F	D	N	Weight [g]
W0950322020	32	10	20	10	20	52	40	M10x1,25	26	92
W0950402020	40	12	24	12	24	62	48	M12x1,25	32	148
W0950502020	50	16	32	16	32	83	64	M16x1,5	40	340
W0950502020	63	16	32	16	32	83	64	M16x1,5	40	340
W0950802020	80	20	40	20	40	105	80	M20x1,5	48	690
W0950802020	100	20	40	20	40	105	80	M20x1,5	48	690
W0951252020	125	30	54	30	55	148	110	M27x2	65	1835

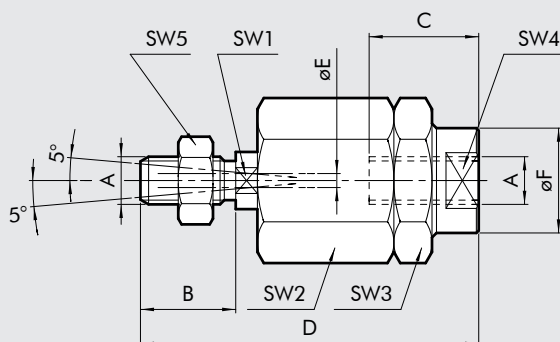
Note: n. 1 piece per package

## ROD EYE - MOD GA-M



Code	Ø	ØM	C	B1	B	A	L	F	D	ØG CH	ØG1	Weight [g]
W0950322025	32	10	15	10.5	14	28	57	43	M10x1,25	15 17	19	78
W0950402025	40	12	17	12	16	32	66	50	M12x1,25	17,5 19	19	116
W0950502025	50	16	22	15	21	42	85	64	M16x1,5	22 22	22	226
W0950502025	63	16	22	15	21	42	85	64	M16x1,5	22 22	22	226
W0950802025	80	20	26	18	25	50	102	77	M20x1,5	27,5 30	27	404
W0950802025	100	20	26	18	25	50	102	77	M20x1,5	27,5 30	27	404
W0951252025	125	30	36	25	37	70	145	110	M27x2	40 41	50	1190

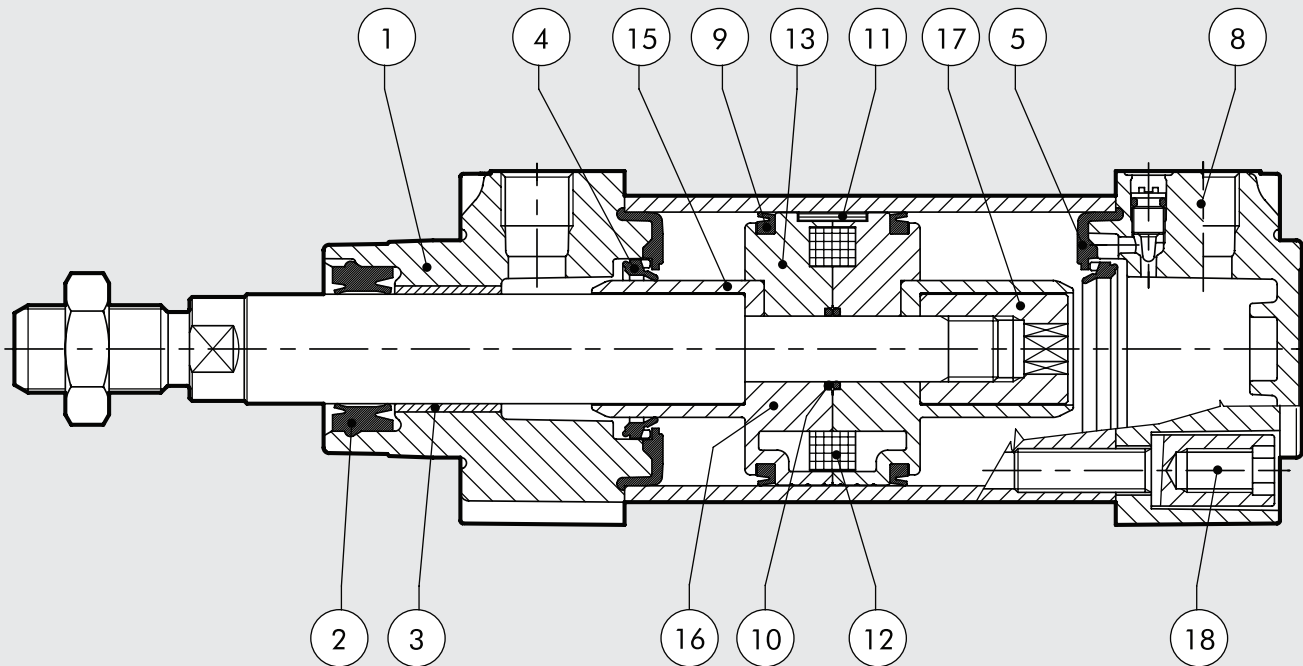
## ARTICULATED JOINT - MOD GA-K



Code	Ø	A	B	C	D	ØF	ØE	SW <sub>1</sub>	SW <sub>2</sub>	SW <sub>3</sub>	SW <sub>4</sub>	SW <sub>5</sub>	Weight [g]
W0950322030	32	M10x1.25	20	20	71	22	4	12	30	30	19	17	216
W0950402030	40	M12x1.25	24	20	75	22	4	12	30	30	19	19	220
W0950502030	50	M16x1.5	32	32	103	32	4	20	41	41	30	24	620
W0950502030	63	M16x1.5	32	32	103	32	4	20	41	41	30	24	620
W0950802030	80	M20x1.5	40	40	119	32	4	20	41	41	30	30	680
W0950802030	100	M20x1.5	40	40	119	32	4	20	41	41	30	30	680

Note: n. 1 piece per package

ASSEMBLY AND REPAIRS KITS



CODES	DIAMETER	DESCRIPTION	ITENS
009 ... 0101RHV	32 to 100mm	Complete kit for polyurethane gaskets	2 - 4 - 5 - 9 - 10
009 ... 0103RHV	32 to 100mm	Complete high-temperature gaskets	2 - 4 - 5 - 9 - 10
009 ... 0502RHV	32 to 100mm	Complete kit for NBR seals	2 - 4 - 5 - 9 - 10
009 ... 0110RHV	32 to 100mm	Complete PU fixed cushioned front head kit	1 - 2 - 3 - 4 - 5 - 18
009 ... 0110RHVA	32 to 100mm	Complete PU adjustable cushioned front head kit	1 - 2 - 3 - 4 - 5 - 18
009 ... 0304RHV	32 to 100mm	Complete NBR fixed cushioned front head kit	1 - 2 - 3 - 4 - 5 - 18
009 ... 0304RHVA	32 to 100mm	Complete NBR adjustable cushioned front head kit	1 - 2 - 3 - 4 - 5 - 18
009 ... 0111RHV	32 to 100mm	Complete PU fixed cushioned rear head kit	4 - 5 - 8 - 18
009 ... 0111RHVA	32 to 100mm	Complete PU adjustable cushioned rear head kit	4 - 5 - 8 - 18
009 ... 0305RHV	32 to 100mm	Complete NBR fixed cushioned rear head kit	4 - 5 - 8 - 18
009 ... 0305RHVA	32 to 100mm	Complete NBR adjustable cushioned rear head kit	4 - 5 - 8 - 18
009 ... 0604RHV	32 to 63mm	Complete kit for polyurethane gasket	9 - 10 - 16 - 17
009 ... 0604RHV	80 to 100mm	Complete kit for polyurethane gasket	9 - 10 - 11 - 13 - 15 - 17
009 ... 0602RHV	32 to 63mm	Complete kit for NBR gasket	9 - 10 - 16 - 17
009 ... 0602RHV	80 to 100mm	Complete kit for NBR gasket	9 - 10 - 11 - 13 - 15 - 17
009 ... 0700RHV	32 to 100mm	D + T fixed cushioned cylinder head kit without seals	1 - 8
009 ... 0701RHV	32 to 100mm	D + T adjustable cushioned cylinder head kit without seals	1 - 8
009 ... 0704RHV	32 to 63mm	Complete fixed cushioned head kit D + T + PU gasket	1 - 2 - 3 - 4 - 5 - 8 - 9 - 10 - 16 - 17 - 18
009 ... 0704RHV	80 to 100mm	Complete fixed cushioned head kit D + T + PU gasket	1 - 2 - 3 - 4 - 5 - 8 - 9 - 10 - 11 - 13 - 15 - 17 - 18
009 ... 0704RHVA	32 to 63mm	Complete adjustable cushioned head kit D + T + PU gasket	1 - 2 - 3 - 4 - 5 - 8 - 9 - 10 - 16 - 17 - 18
009 ... 0704RHVA	80 to 100mm	Complete adjustable cushioned head kit D + T + PU gasket	1 - 2 - 3 - 4 - 5 - 8 - 9 - 10 - 11 - 13 - 15 - 17 - 18
009 ... 0702RHV	32 to 63mm	Complete fixed cushioned head kit D + T + NBR gasket	1 - 2 - 3 - 4 - 5 - 8 - 9 - 10 - 16 - 17 - 18
009 ... 0702RHV	80 to 100mm	Complete fixed cushioned head kit D + T + NBR gasket	1 - 2 - 3 - 4 - 5 - 8 - 9 - 10 - 11 - 13 - 15 - 17 - 18
009 ... 0702RHVA	32 to 63mm	Complete adjustable cushioned head kit D + T + NBR gasket	1 - 2 - 3 - 4 - 5 - 8 - 9 - 10 - 16 - 17 - 18
009 ... 0702RHVA	80 to 100mm	Complete adjustable cushioned head kit D + T + NBR gasket	1 - 2 - 3 - 4 - 5 - 8 - 9 - 10 - 11 - 13 - 15 - 17 - 18
009 ... 0800RHV	32 to 100mm	Magnet	12
A0100912	32mm	C45 steel rod ø12mm Length 3000-3200mm	
A0100913	32mm	303 Stainless Steel Rod ø12mm Length 3000-3200mm	
A0101312	40mm	C45 Steel rod ø16mm Length 3000-3200mm	
A0101313	40mm	303 Stainless Steel Rod ø16mm Length 3000-3200mm	
A0101712	50 to 63mm	C45 Steel rod ø20mm Length 3000-3200mm	
A0101713	50 to 63mm	303 Stainless Steel Rod ø20mm Length 3000-3200mm	
A0102212	80 to 100mm	C45 Steel rod ø25mm Length 3000-3200mm	
A0102213	80 to 100mm	303 Stainless Steel Rod ø25mm Length 3000-3200mm	
A03 ... 94RHV	32 to 100mm	Liner Length 3000-3200mm	

# VALVES

## VALVES SERIES PEV - PEDAL OPERATED



### TECHNICAL DATA

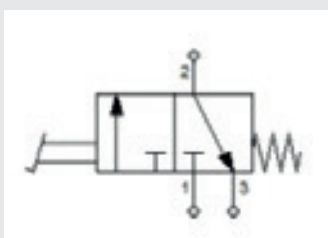
1/4"

Operating pressure range:		
• version with direct control	bar	Vacuum to 10
Operating temperature range	°C	- 10 to +60
Nominal diameter	mm	7.5
Conductance C	NI/min · bar	264.26
Critical ratio b	bar/bar	0.27
Flow rate at 6 bar	NI/min	750
Flow rate at 6 bar	NI/min	1100

## PEDAL OPERATED 3/2, 1/4"



### SYMBOL



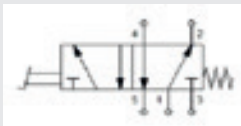
CODE  
W31200006011

WEIGHT [g]  
350

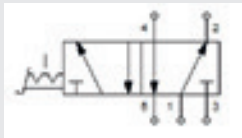
PEDAL OPERATED 5/2, 1/4"



SYMBOL



CODE	WEIGHT [g]
W31200006012	450

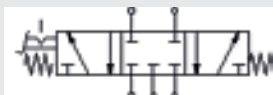


CODE	WEIGHT [g]
W31200006014	450

PEDAL OPERATED 5/2, 1/4"



SYMBOL



CODE	WEIGHT [g]
W31200006013	460



CODE	WEIGHT [g]
W31200006015	460



CODE	WEIGHT [g]
W31200006017	460

VALVES SERIES 70 - HAND OPERATED



TECHNICAL DATA

1/4"

Operating pressure range:		
• version with direct control	bar	Vacuum to 10
Operating temperature range	°C	- 10 to +60
Nominal diameter	mm	7.5
Conductance C	NI/min · bar	264.26
Critical ratio b	bar/bar	0.27
Flow rate at 6 bar ΔP 0.5 bar	NI/min	750
Flow rate at 6 bar ΔP 1 bar	NI/min	1100

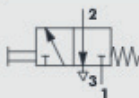
FRONT LEVER, BLACK DRAWER 3/2, 1/4"



SYMBOL



CODE Z54VLVS703214BTR WEIGHT [g] 200

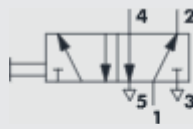


CODE Z54VLVS703214BMO WEIGHT [g] 200

FRONT LEVER, BLACK DRAWER 5/2, 1/4"



SYMBOL



CODE	WEIGHT [g]
Z54VLVS705214BTR	200

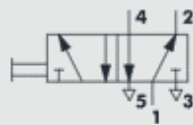


CODE	WEIGHT [g]
Z54VLVS705214BMO	200

FRONT LEVER 3/2, 1/8"



SYMBOL



CODE	WEIGHT [g]
Z54VLVS703218ATR	130

FRONT LEVER 5/2, 1/8"



SYMBOL



CODE	WEIGHT [g]
Z54VLVS705218ATR	160

CUSTOM VALVES SERIES 70 - 5/3, 1/4"

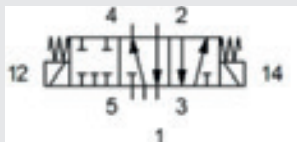


TECHNICAL DATA

1/4"

Operating pressure:		
• monostable and bistable differential	bar	2.5 to 10
• bistable	bar	1 to 10
• asserved	bar	Vacuum to 10
Minimum pilot pressure	bar	2.5
Operating temperature range	°C	-10 to +60
Nominal diameter	mm	7.5
Conductance C	NI/mim - bar	264.26
Critical ratio b	bar/bar	0.27
Flow rate at 6 bar ΔP 0.5 bar	NI/min	750
Flow rate at 6 bar ΔP 1 bar	NI/mim	1100
TRA / TRR monostable at 6 bar	ms	19/45
TRA / TRR bistable at 6 bar	ms	21/21
Coil voltage values		
Power		2W (DC) 3.5VA (AC)
Voltage tolerance	%	-10 TO +15
Insulation class		F 155
Maximum coil nut torque	Nm	1
Hand operator		Bistable

SYMBOL



CODE  
Z54VLV5314CFP

WEIGHT [g]  
160



# CUSTOM VALVES SERIES 70

## 5/3, 1/4" AISI 316



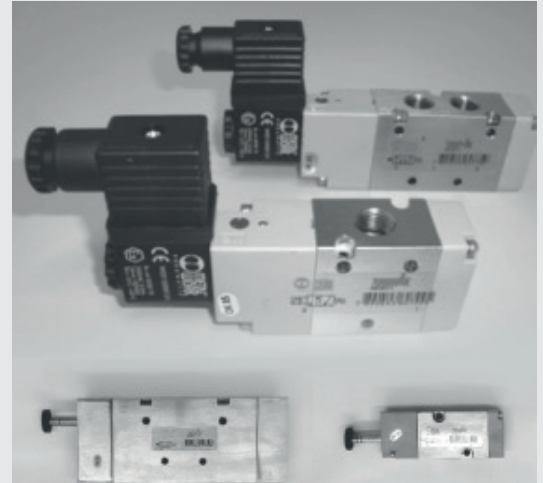
### CUSTOM VALVES SERIES 70 - 5/3, 1/4"

These valves are a variation of the traditional Series 70 and NAMUR valves produced by Metal Work.

**APPLICATION:** Environments with a corrosive atmosphere, such as acids, corrosive gases, salts or when the valve is exposed to wether conditions.

They are available in 1/4" and 1/2" sizes, BSPP with body and internals in AISI 316 stainless steel, which provides resistance to corrosion or external attacks from the environment where they are installed or from the gas being directed internally by the valves.

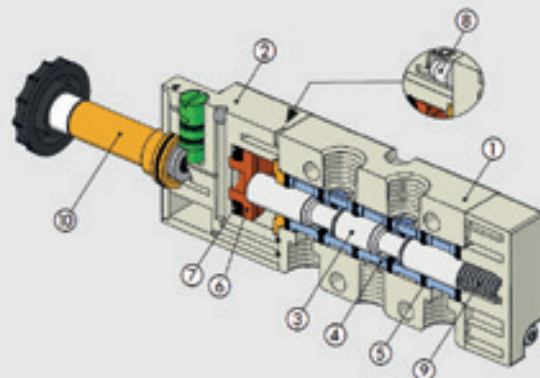
They work with or without lubrication.  
They can be installed in any position, however, mounting in a vertical position is not recommended when the valves are subject to vibrations.



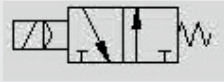
TECHNICAL DATA	1/4"	1/2"
Operating pressure:		
• monostable and bistable differential	2.5 to 10	2.5 to 10
• bistable	1 to 10	1 to 10
• asserved	Vacuum to 10	Vacuum to 10
Minimum pilot pressure	2.5	2.5
Operating temperature range	-10 to +60	-10 to +60
Nominal diameter	7.5	15
Conductance C	264.26	971.43
Critical ratio b	0.27	0.43
Flow rate at 6 bar ΔP 0.5 bar	750	3200
Flow rate at 6 bar ΔP 1 bar	1100	4600
TRA / TRR monostable at 6 bar	19/45	36/100
TRA / TRR bistable at 6 bar	21/21	25/25
Coil voltage values	12;24 VDC - 24; 110; 220V AC 50/60Hz	
Power	2W (DC) 3.5VA (AC)	
Voltage tolerance	-10 to +15	
Insulation class	F155	
Maximum coil nut torque	1	
Hand operator	Bistable	

### COMPONENTS

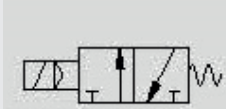
- 1 VALVE BODY: AISI 316
- 2 CONTROL/END CAP: plastic
- 3 SPOOL: chemically nickel-plated aluminium
- 4 DISTANCE PLATES: plastic
- 5 GASKETS: NBR
- 6 PISTONS: Hostaform®
- 7 PISTON GASKET: NBR
- 8 FILTER: plastic
- 9 SPRINGS: special steel
- 10 OPERATOR: Brass pipe - Stainless steel core



3/2, 1/4" AISI 316

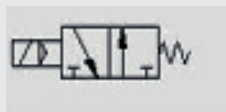


CODE	WEIGHT [g]
7020020400IX	160

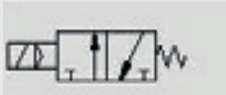


CODE	WEIGHT [g]
7020020200IX	160

3/2, 1/2" AISI 316



CODE	WEIGHT [g]
7030020400IX	160



CODE	WEIGHT [g]
7030020200IX	160

5/2, 1/4" AISI 316



CODE	WEIGHT [g]
7020021100IX	160



CODE	WEIGHT [g]
7020021200IX	160



CODE	WEIGHT [g]
7020021500IX	160

5/2, 1/2" AISI 316

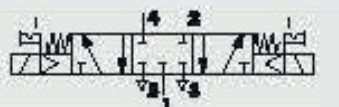


CODE	WEIGHT [g]
7030021100IX	160



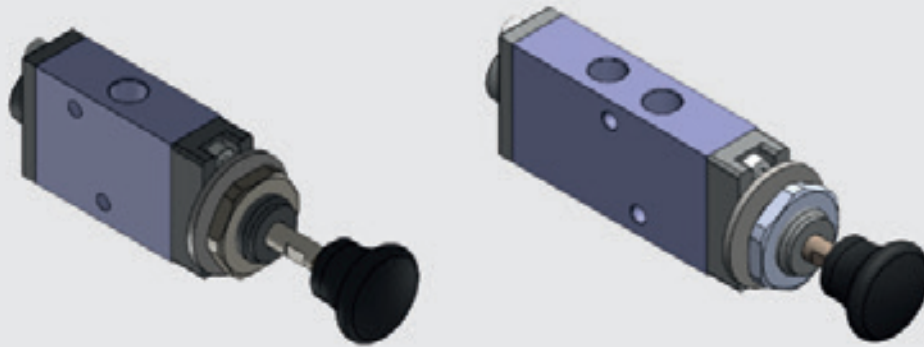
CODE	WEIGHT [g]
7030021200IX	160

5/3, 1/4" AISI 316



CODE	WEIGHT [g]
7020022100IX	160

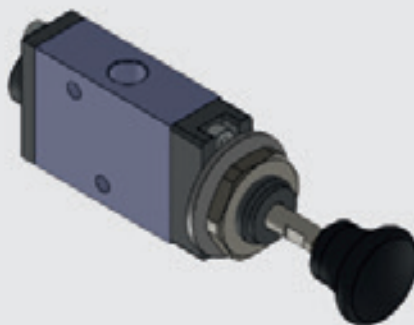
SERIES BUS - HAND OPERATED



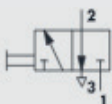
TECHNICAL DATA

		1/8"
Operating pressure range:		
• version with direct control	bar	Vacuum to 10
Operating temperature range		- 10 to +60
Nominal diameter		5,
Conductance C		121.43
Critical ratio b		0,32
Flow rate at 6 bar ΔP 0.5 bar		400
Flow rate at 6 bar ΔP 1 bar		550

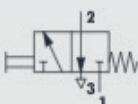
DRAWER 3/2, 1/8"



SYMBOL

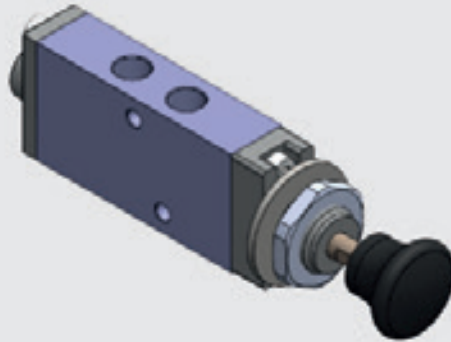


CODE 77550021B WEIGHT [g] 200

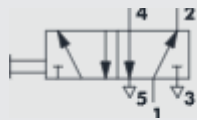


CODE 77550022B WEIGHT [g] 200

**DRAWER 5/2, 1/8"**



**SYMBOL**

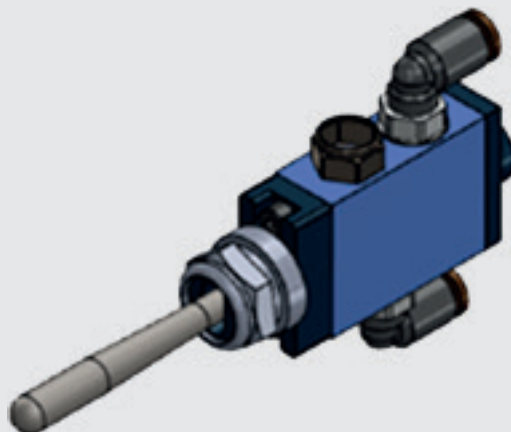


CODE	WEIGHT [g]
77550016B	200



CODE	WEIGHT [g]
77550029B	200

**FRONT LEVER 3/2, 1/8"**

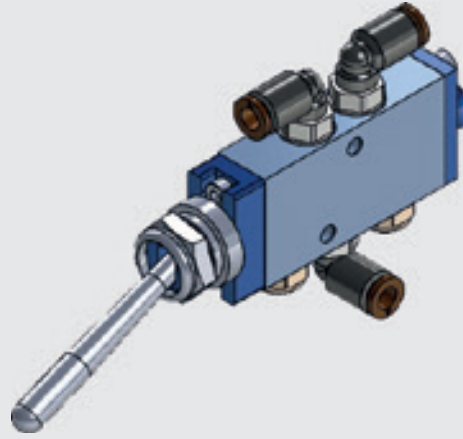


**SYMBOL**



CODE	WEIGHT [g]
Z54VLV304194A	180
* Pipe Ø 6mm	

FRONT LEVER 5/2, 1/8"



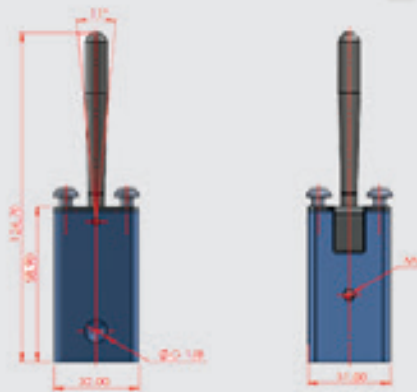
SYMBOL



CODE  
Z54VLV304194B  
\* Pipe Ø 6mm

WEIGHT [g]  
200

JOY STICK, 5/3



SYMBOL



CODE  
77593135

WEIGHT [g]  
200

## Comparison of Compressed Air Distribution Networks: the advantage of Metal Work

---

The compressed air network is vital in many industrial sectors, from factories to workshops.

The choice of material for the pipes in this network plays a crucial role in the efficiency and reliability of the system. Among common materials, such as steel and plastic, aluminum emerges as an option with several differentiators. Aluminum pipes stand out for their compatibility with modern monitoring and control systems. Its smooth surface and corrosion resistance ensure reliable operation, even in environments where precision and automation are essential.

### Durability and Resistance:

Metal Work Pipes are made from aluminum and, for this reason, are recognized for their exceptional durability and resistance. Unlike steel, they do not corrode, even in humid or aggressive environments. This ensures a longer system life, reducing long-term maintenance and replacement costs.

### Weight and Easy Installation:

Metal Work fittings are also made of aluminum and are therefore lighter than those developed in steel and due to their constructive design, making the pipes installation easier and faster, without tools to shape the tube, reducing assembly time by up to 8x.

### Flexibility and Adaptability:

Aluminum piping offers excellent flexibility, allowing for curves and contours that would be difficult or impossible with steel piping. This simplifies layout and can reduce the need for additional fittings, minimizing potential leak points.

### Energy Efficiency:

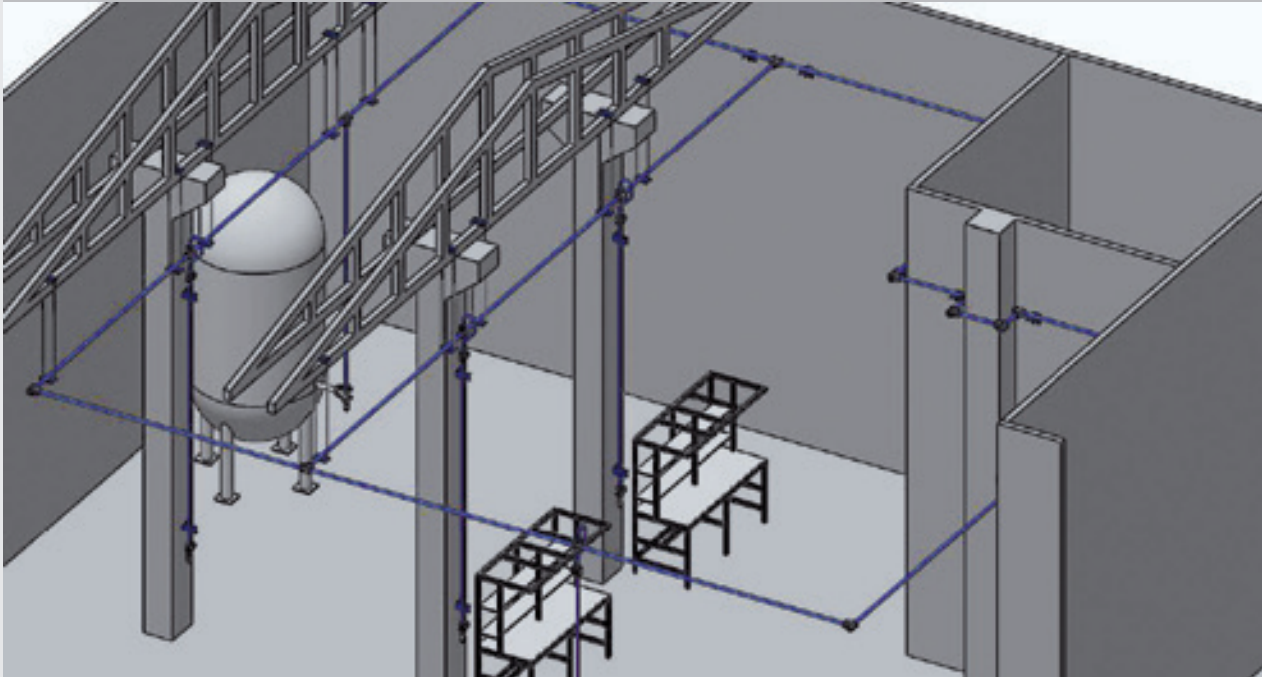
The Metal Work fitting, due to its construction model has a higher thermal conductivity than steel, which means that energy losses, due to compressed air cooling, are lower in aluminum piping systems. This translates into significant energy savings over time, contributing to sustainability and reducing operating costs.

In summary, the Metal Work Compressed Air Distribution Network offers a number of significant advantages compared to other manufacturers. Its durability, light weight, easy installation, flexibility and energy efficiency make it an ideal choice for companies looking to maximize the performance of their systems, while reducing long-term operating and maintenance cost.

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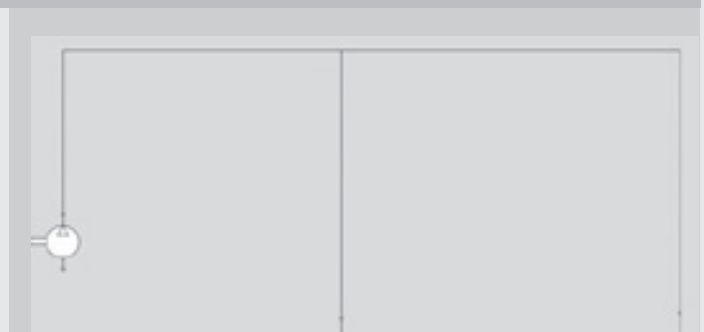
COMPRESSED AIR DISTRIBUTION NETWORK



- Up to 16 bar working pressure
- Easy installation
- Injected aluminum fittings
- No special tools required for installation
- Quick maintenance
- Factory externally painted piping
- Main network diameters: Ø63 / Ø50 / Ø40 / Ø32
- Secondary network diameters: Ø25 / Ø20
- Compatible with the entire pneumatic line of Metal Work products

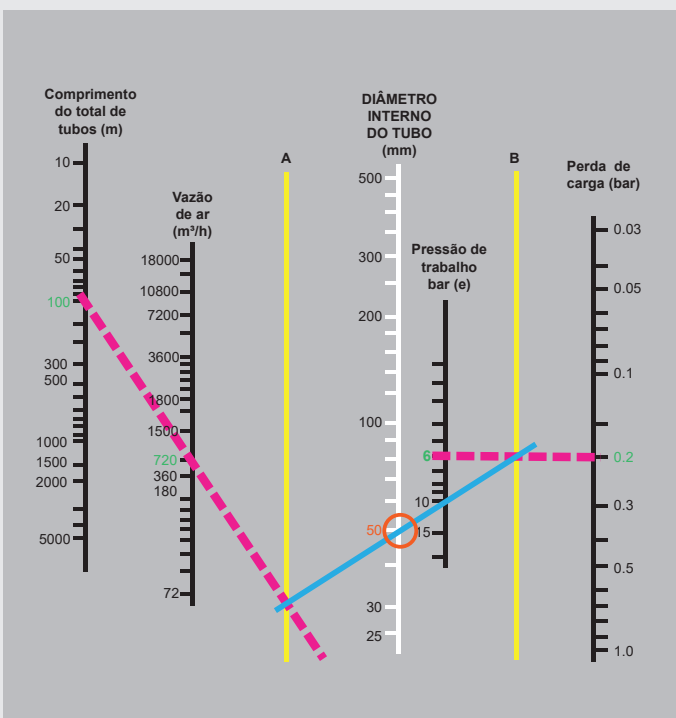
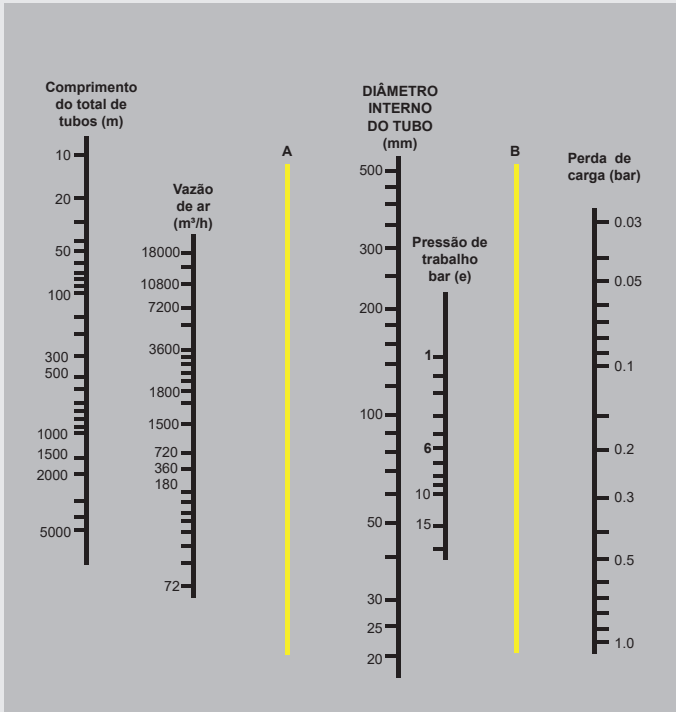
DATA SHEET

- Working pressure range from -0,99 to 16 bar
- Temperature range from -10 to 60 °C
- High mechanical resistance
- Low maintenance
- Easy installation
- Aluminum product
- Quick connect
- Project prepared based on the ASME standard





## DETERMINATION OF THE INTERNAL Ø OF THE PIPE VIA NOMOGRAM



1. On the SECTION LENGTH scale, mark a point on the equivalent length of the network you need to determine;

2. On the AIR FLOW scale, mark a point on the average air flow compressed air flowing through the piping;

3. Connect the two points with a straight line to COLUMN A;

4. On the WORKING PRESSURE scale, repeat operation 1;

5. On the LOAD LOSS scale, repeat operation 2;

6. Repeat operation 3 on the WORKING PRESSURE and LOSS OF LOAD, but in COLUMN B;

7. Draw a straight line between the two points of COLUMN A and COLUMN B;

8. The intersection of this straight line drawn BLUE line between AXIS 1 and AXIS 2 will indicate the internal Ø sought;

EXAMPLE:

Pipe length: 100 meters

Average compressed air flow: 720 m<sup>3</sup>/h

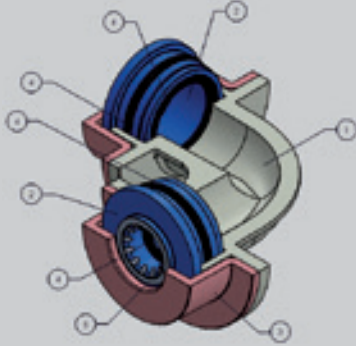
Initial pressure: 6 bar

Desired pressure loss: 0.20 bar

Internal diameter of the pipe: In this example Ø 50, pipe of external Ø 60mm.

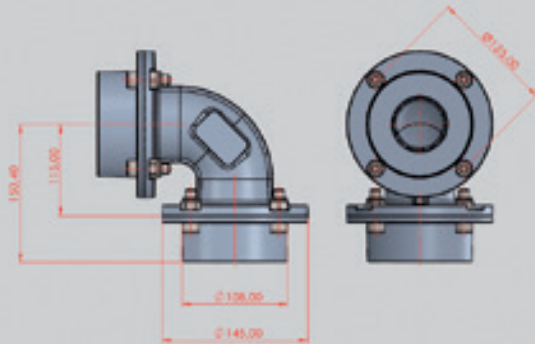
# COMPRESSED AIR DISTRIBUTION NETWORK FITTINGS COMPONENTS

## ELBOW FITTINGS FOR PIPES (Ø63/Ø50/Ø40/Ø32/Ø25)



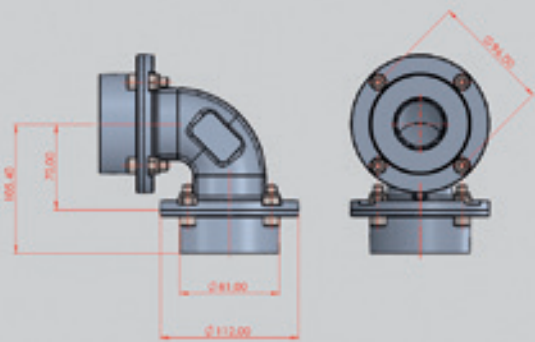
- ① FITTING - Aluminum
- ② SUPPORTING RING - Aluminum
- ③ FLANGE - Aluminum
- ④ SEAL - NBR
- ⑤ CLAMPING SPRING - Stainless steel

## ELBOW FITTINGS Ø63



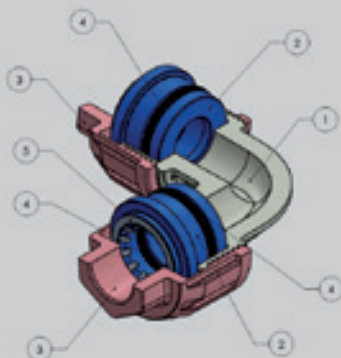
Code	Descrição
Z54RDACC6363	Elbow fitting - Ø63mm - 1,80Kg
Z54RDACC6350	Elbow fitting reduction for pipes Ø63mm-Ø50mm
Z54RDACC6340	Elbow fitting reduction for pipes Ø63mm-Ø40mm
Z54RDACC5050	Elbow fitting Ø50mm
Z54RDACC5040	Elbow fitting reduction for pipes Ø50mm-Ø40mm

## ELBOW FITTINGS Ø40



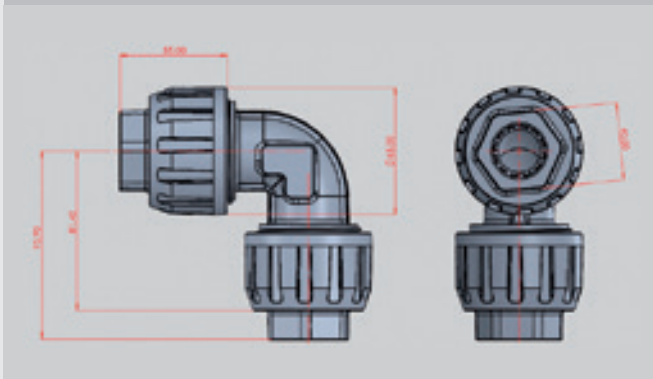
Code	Description
Z54RDACC4040	Elbow fitting Ø40mm - 0,80Kg
Z54RDACC4032	Elbow fitting reduction for pipes Ø40mm-Ø32mm
Z54RDACC4025	Elbow fitting reduction for pipes Ø40mm-Ø25mm
Z54RDACC40R0	Elbow fitting 1x Ø40mm 1x G.1/2"
Z54RDACC3232	Elbow fitting Ø32mm
Z54RDACC3225	Elbow fitting reduction for pipes Ø32mm-Ø25mm
Z54RDACC32R0	Elbow fitting 1x Ø32mm 1x G.1/2" Female

## ELBOW FITTINGS COMPONENTS FOR PIPES (Ø25/Ø20)



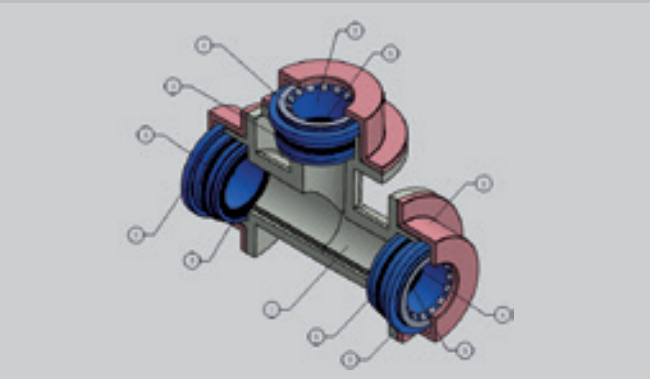
- ① FITTING - Aluminum
- ② SUPPORTING RING - Aluminum
- ③ THREADED FLANGE - Aluminum
- ④ SEAL - NBR
- ⑤ CLAMPING SPRING - Stainless steel

### ELBOW FITTINGS Ø25, Ø20



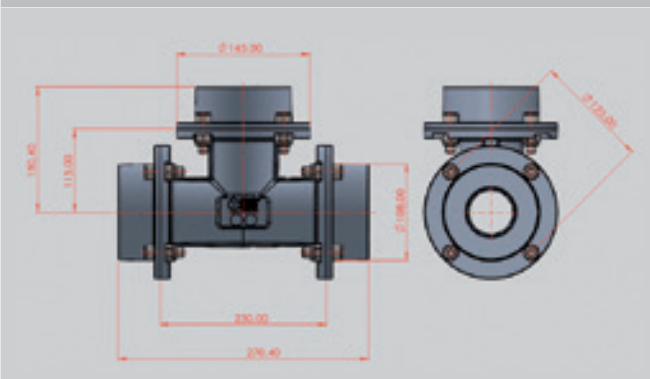
Code	Description
Z54RDACC2020	Elbow fitting Ø20mm
Z54RDACC2525	Elbow fitting Ø25mm - 0,37Kg Female
Z54RDACC2520	Elbow fitting reduction for pipes Ø25mm-Ø20mm
Z54RDACC20RO	Elbow fitting 1x Ø20mm 1x G.1/2" Female
Z54RDACC25RO	Elbow fitting 1x Ø25mm 1x G.1/2" Female

### TEE FITTINGS COMPONENTS FOR PIPES (Ø63/Ø50/Ø40/Ø32/Ø25)



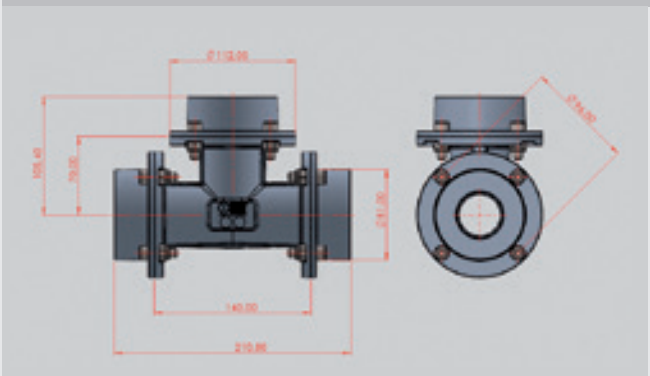
- ① FITTING - Aluminum
- ② SUPPORTING RING - Aluminum
- ③ FLANGE - Aluminum
- ④ CLAMPING SPRING - Stainless steel
- ⑤ SEAL - NBR

### TEE FITTINGS Ø63



Code	Description
Z54RDACT6363	Tee fitting Ø63 - 2,65Kg
Z54RDACT6350	Tee fitting with reduction of 2x Ø63mm - 1x Ø50mm
Z54RDACT6340	Tee fitting with reduction of 2x Ø63mm - 1x Ø40mm
Z54RDACT5050	Tee fitting Ø50
Z54RDACT5040	Tee fitting with reduction 2x Ø50mm - 1x Ø40mm

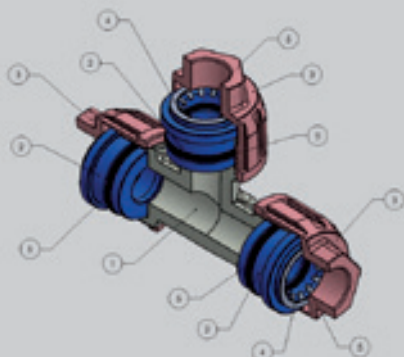
### TEE FITTINGS Ø40



Code	Description
Z54RDACT3225	Tee fitting with reduction 2x Ø32mm - 1x Ø25mm
Z54RDACT3232	Tee fitting for pipes of Ø32mm
Z54RDACT32RO	Tee fitting 2x Ø32mm - 1x G.1/2", female
Z54RDACT4025	Tee fitting with reduction 2x Ø40mm - 1x Ø25mm
Z54RDACT4032	Tee fitting with reduction 2x Ø40mm - 1x Ø32mm
Z54RDACT4040	Tee fitting for pipes of Ø40mm
Z54RDACT40RO	Tee fitting 2x Ø40mm - 1x G.1/2" female

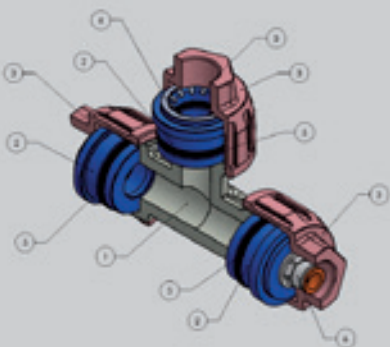
# COMPRESSED AIR DISTRIBUTION NETWORK FITTINGS COMPONENTS

## TEE FITTINGS COMPONENTS (Ø25/Ø20)



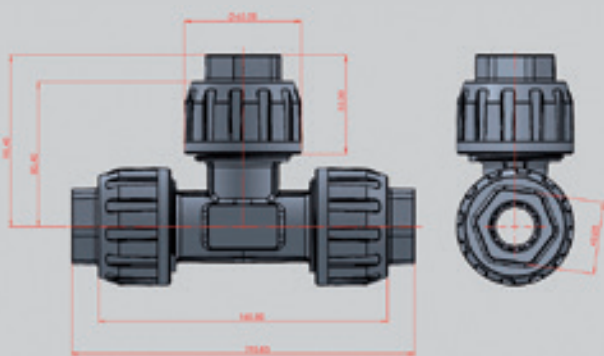
- ① FITTING – Aluminum
- ② SUPPORTING RING - Aluminum
- ③ THREADED FLANGE - Aluminum
- ④ CLAMPING SPRING – Stainless steel
- ⑤ SEAL – NBR

## TEE FITTINGS COMPONENTS FOR PIPE WITH REDUCTION (MM)



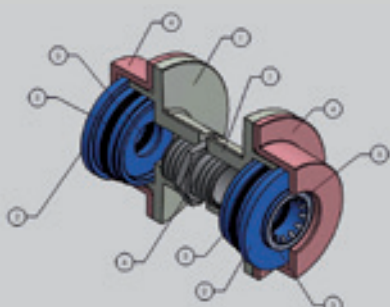
- ① FITTING – Aluminum
- ② SUPPORTING RING - Aluminum
- ③ THREADED FLANGE - Aluminum
- ④ CLAMPING SPRING – Stainless steel
- ⑤ SEAL – NBR
- ⑥ FITTING - Brass

## TEE FITTINGS Ø25



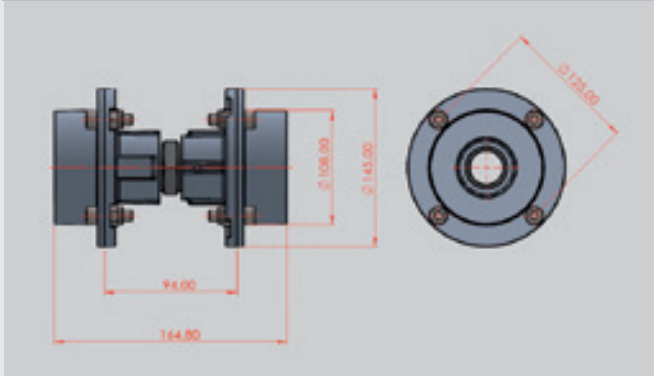
Code	Description
Z54RDACT2020	Tee fitting Ø20 - 0,53Kg
Z54RDACT2025	Tee fitting with reduction 1x Ø25mm - 2x Ø20mm
Z54RDACT2525	Tee fitting Ø25 - 0,53Kg
Z54RDACT2520	Tee fitting with reduction 2x Ø25mm - 1x Ø20mm
Z54RDACT20RO	Tee fitting female 2x Ø20mm 1x G.1/2"
Z54RDACT25RO	Tee fitting female 2x Ø25mm 1x G.1/2"
Z54RDACTRO20	Tee fitting female 2x G.1/2" 1x Ø20mm
Z54RDACTRO25	Tee fitting female 2x G.1/2" 1x Ø25mm

## STRAIGHT FITTINGS FOR PIPES (Ø63/Ø50/Ø40/Ø32/Ø25)



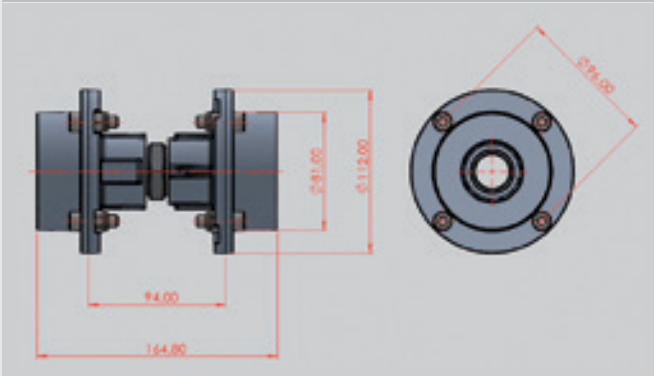
- ① STRAIGHT FITTING – Aluminum
- ② SUPPORTING RING - Aluminum
- ③ FLANGE - Aluminum
- ④ CLAMPING SPRING – Stainless Steel
- ⑤ SEAL – NBR
- ⑥ NIPLÉ – Aluminum

### STRAIGHT FITTINGS Ø63



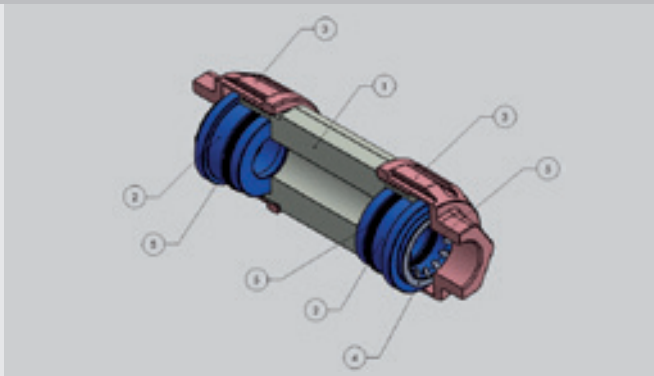
Code	Description
Z54RDACR6363	Straight Fitting Ø63mm - 0,58Kg
Z54RDACR6350	Straight Fitting Reduction Ø63mm-Ø50mm
Z54RDACR6340	Straight Fitting Reduction Ø63mm-Ø40mm
Z54RDACR5050	Straight Fitting Ø50mm
Z54RDACR5040	Straight Fitting Reduction Ø50mm-Ø40mm

### STRAIGHT FITTINGS Ø40



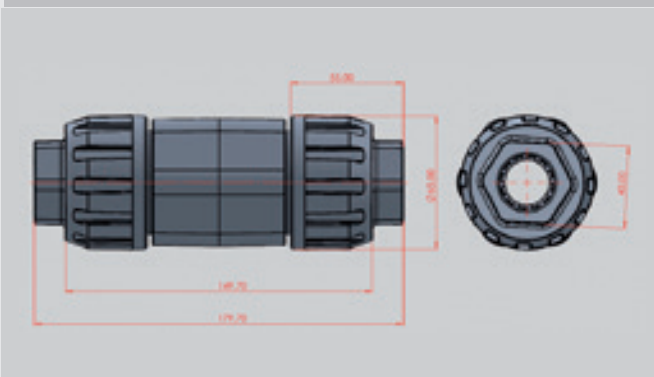
Code	Description
Z54RDACR4040	Straight Fitting Ø40mm - 0,33Kg
Z54RDACR4032	Straight Fitting Reduction Ø40mm-Ø32mm
Z54RDACR4025	Straight Fitting Reduction Ø40mm-Ø25mm
Z54RDACR40RO	Straight Fitting 1x Ø40mm 1x G.1/2" Female
Z54RDACR3232	Straight Fitting Ø32mm
Z54RDACR3225	Straight Fitting Reduction Ø32mm-Ø25mm
Z54RDACR32RO	Straight Fitting 1x Ø32mm 1x G.1/2" Female

### STRAIGHT FITTINGS COMPONENTS FOR PIPE (Ø25/Ø20)



- ① STRAIGHT FITTING - Aluminum
- ② SUPPORTING RING - Aluminum
- ③ THREADED FLANGE - Aluminum
- ④ CLAMPING SPRING - Stainless steel
- ⑤ SEAL - NBR

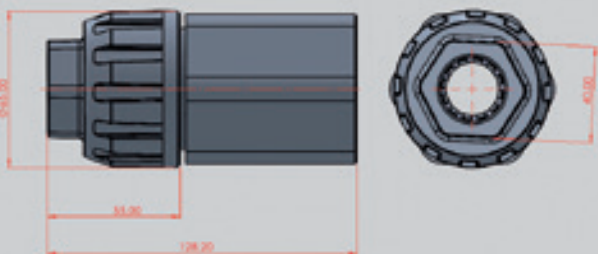
### STRAIGHT FITTINGS Ø25/Ø20



Code	Description
Z54RDACR2020	Straight Fitting Ø20mm
Z54RDACR2525	Straight Fitting Ø25mm
Z54RDACR2520	Straight Fitting Reduction Ø25mm-Ø20mm

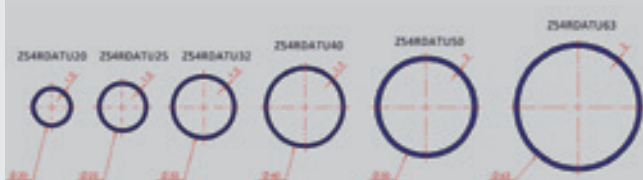
# COMPRESSED AIR DISTRIBUTION NETWORK FITTINGS COMPONENTS

## STRAIGHT FITTINGS Ø25 WITH FEMALE THREAD



Code	Description
Z54RDACR20RO	Straight Fitting 1x Ø20mm 1x G.1/2" Female
Z54RDACR25RO	Straight Fitting 1x Ø25mm 1x G.3/4" Female

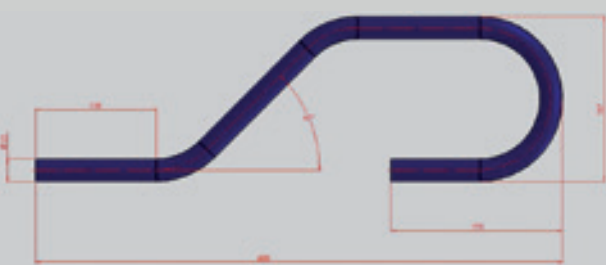
## STRAIGHT PIPES



Ø (mm)	Code	Description
63	Z54RDATU63	Straight pipe
50	Z54RDATU50	Straight pipe
40	Z54RDATU40	Straight pipe
32	Z54RDATU32	Straight pipe
25	Z54RDATU25	Straight pipe
20	Z54RDATU20	Straight pipe

- Aluminum pipes
- Exterior painting: Color 2,5 PB 4/10 (safety blue)
- Does not require any type of intervention on the piping such as threads or grooves.
- Bars with a standard length of 6,0 m

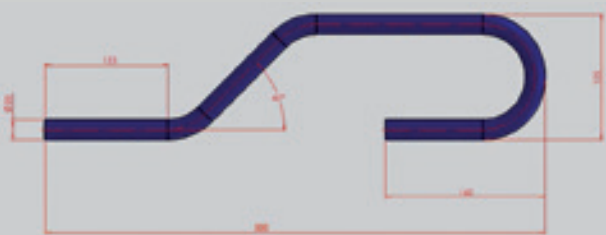
## CURVED TUBE 180° - Ø25



Ø (mm)	Code	Description
25	Z54RDABE25	Aluminum curved tube

- Aluminum curved tube
- Exterior painting: Color 2,5 PB 4/10 (safety blue)
- Does not require any type of intervention on the piping such as threads or grooves.

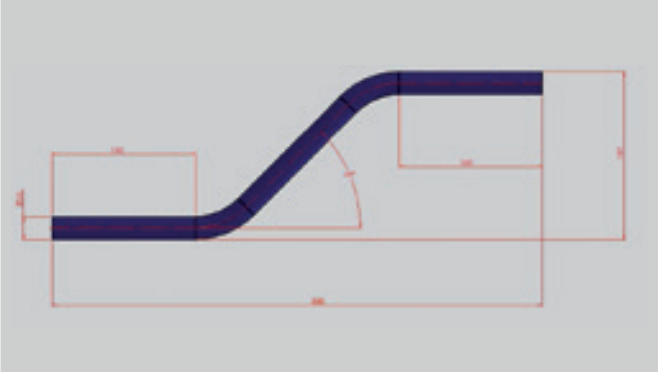
## CURVED TUBE 180° - Ø20



Ø (mm)	Code	Description
20	Z54RDABE20	Aluminum curved tube

- Aluminum curved tube 180°
- Exterior painting: Color 2,5 PB 4/10 (safety blue)
- Does not require any type of intervention on the piping such as threads or grooves.

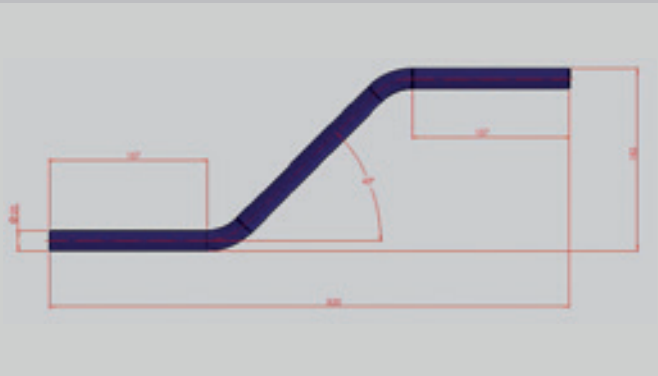
**BYPASS – Ø25**



Ø (mm)	Code	Description
25	Z54RDADS25	Aluminum bypass

- Aluminum bypass
- Exterior painting: Color 2,5 PB 4/10 (safety blue)
- Does not require any type of intervention on the piping such as threads or grooves.

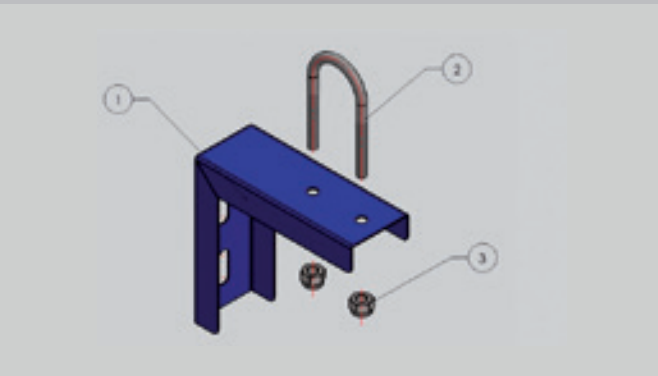
**BYPASS – Ø20**



Ø (mm)	Code	Description
20	Z54RDADS20	Aluminum bypass

- Aluminum bypass
- Exterior painting: Color 2,5 PB 4/10 (safety blue)
- Does not require any type of intervention on the piping such as threads or grooves.

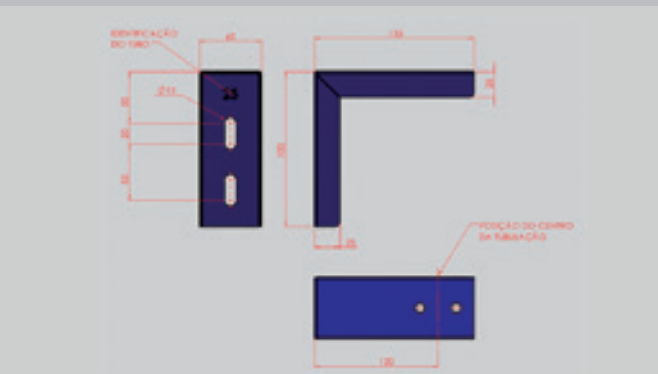
**FIXING TO BEAMS AND WALLS**



Position	Description
1	Bracket – Steel
2	Type “U” clamp - Steel
3	Nut - Steel

- Bracket according to pipe diameters.
- Fixing the bracket to the masonry, using parabol anchor with Ø3/8”x3.3/4” that comes with the bracket.
- Fixes vertical and horizontal pipes.

**FIXING TO BEAMS AND WALLS**

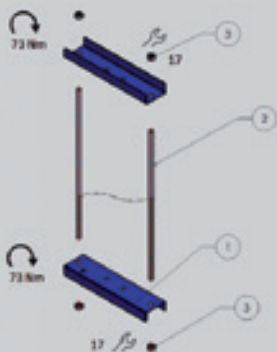


Ø Piping (mm)	Bracket Kit code
Ø63	KRDASUP80063
Ø50	KRDASUP80050
Ø40	KRDASUP80040
Ø32	KRDASUP80032
Ø25	KRDASUP80025
Ø20	KRDASUP80020

- Dimensions for installing the bracket
- The code is already supplied with 2 supports, tie rod and nuts for assembly.

# COMPRESSED AIR DISTRIBUTION NETWORK - FIXING COMPONENTS

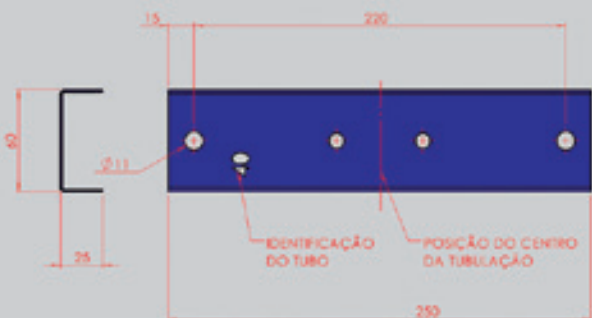
## AERIAL FIXING



Position	Description
1	Bracket - Steel
2	Tie rod - Steel
3	Nut - Steel

- Standard length of M10 threaded bars of 1,0 m.
- For longer lengths and/or larger bases the company must be contacted.
- Fixes vertical pipes.

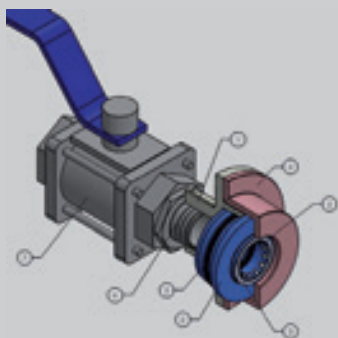
## AERIAL FIXING



Ø Piping(mm)	Bracket Kit code
Ø63	KRDASUP90063
Ø50	KRDASUP90050
Ø40	KRDASUP90040
Ø32	KRDASUP90032
Ø25	KRDASUP90025
Ø20	KRDASUP90020

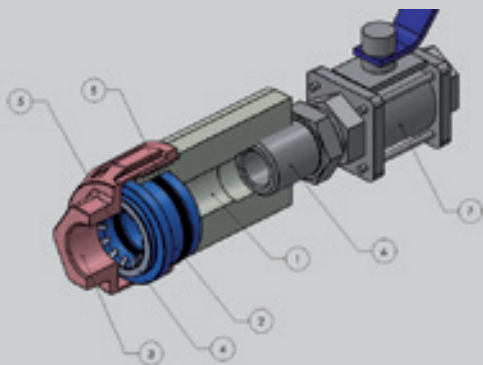
- Dimensions for installing the bracket
- The code is already supplied with 2 supports, tie rod and nuts for assembly.

## BALL VALVE CONNECTION COMPONENTS (Ø63/Ø50/Ø40 / Ø32 / Ø25)



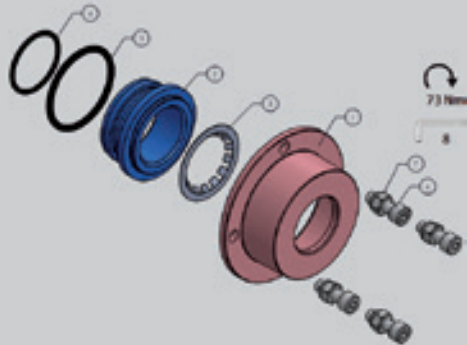
- ① STRAIGH FITTING - Aluminum
- ② SUPPORTING RING - Aluminum
- ③ THREADED FLANGE - Aluminum
- ④ CLAMPING SPRING - Stainless steel
- ⑤ SEAL - NBR
- ⑥ NIPLÉ - Aluminum
- ⑦ BALL VALVE - Stainless steel

## BALL VALVE CONNECTION COMPONENTS(Ø25 / Ø20)

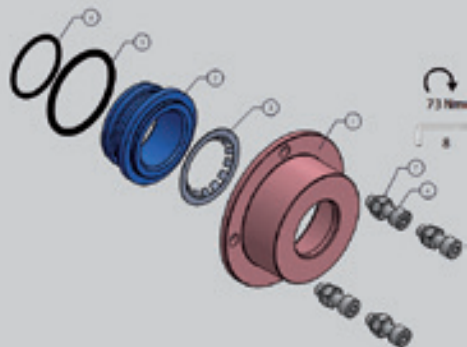


- ① STRAIGH FITTING - Aluminum
- ② SUPPORTING RING - Aluminum
- ③ THREADED FLANGE - Aluminum
- ④ CLAMPING SPRING - Stainless steel
- ⑤ SEAL - NBR
- ⑥ NIPLÉ - Aluminum
- ⑦ BALL VALVE - Stainless steel

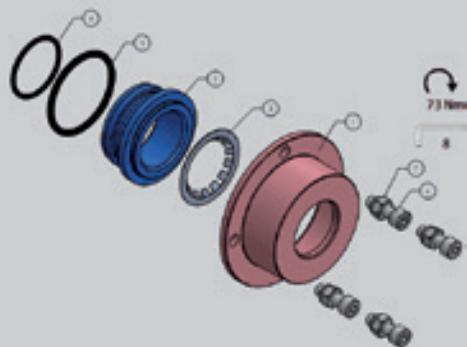


**KRDA6363 – FLANGE FITTINGS Ø63 / PIPE Ø63**


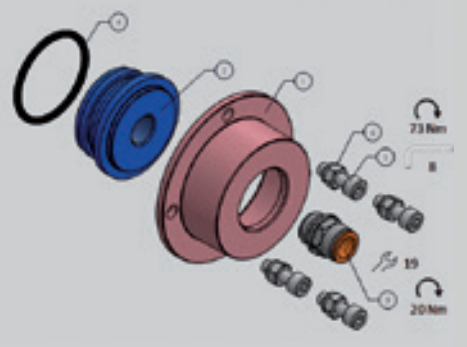
Position	Code	Description	Quantity
1	Z54RDA4006363	Flange Ø63 CT 63	1
2	Z54RDA2006363	Supporting ring Ø63	1
3	RDA3006363	Clamping spring Ø63	1
4	77593082	O Ring	1
5	77593083	O Ring	1
6	700295	Allen screw M10x30	4
7	710005	Self-locking nut M10	4

**KRDA6363 – FLANGE FITTINGS Ø63 / PIPE Ø50**


Position	Code	Description	Quantity
1	Z54RDA4006350	Flange Ø50 CT 63	1
2	Z54RDA2006350	Supporting ring Ø50	1
3	RDA3006350	Clamping spring Ø50	1
4	77593082	O Ring	1
5	77593083	O Ring	1
6	700295	Allen screw M10X30	4
7	710005	Self-locking nut M10	4

**KRDA6363 – FLANGE FITTINGS Ø63 / PIPE Ø40**


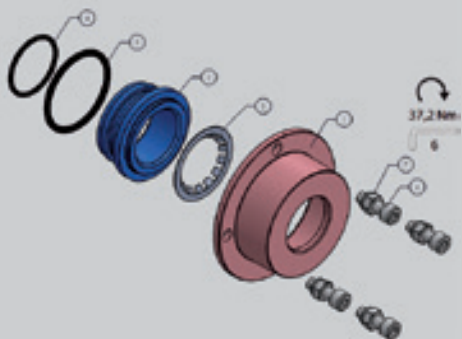
Position	Code	Description	Quantity
1	Z54RDA4006340	Flange Ø40 CT 63	1
2	Z54RDA2006340	Supporting ring Ø40	1
3	RDA3006340	Clamping spring Ø40	1
4	77593082	O Ring	1
5	77593083	O Ring	1
6	700295	Allen screw M10X30	4
7	710005	Self-locking nut M10	4

**KRDA6312 – FLANGE FITTINGS Ø63 WITH FEMALE THREAD OUTLET G1/2**


Position	Code	Description	Quantity
1	Z54RDA4006363	Flange Ø63 CT 63	1
2	Z54RDA2006312	Supporting ring G1/2	1
3	2101018	Male cylindrical straight fitting	1
4	77593082	O Ring	1
5	700295	Allen screw M10x30	4
6	710005	Self-locking nut M10	4

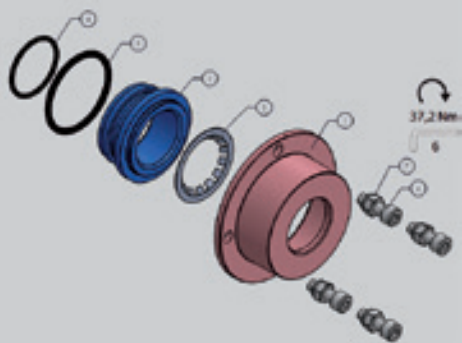
Standard configuration for other assembly options in position 3, the company must be contacted.

KRDA4040 – FLANGE FITTINGS Ø40 / PIPE Ø40



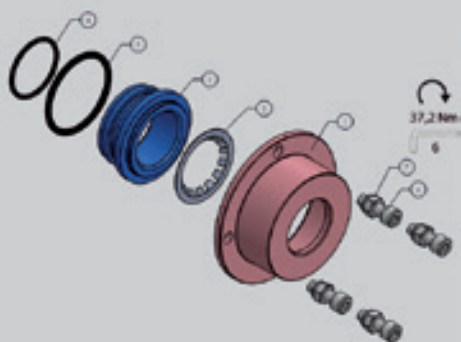
Position	Code	Description	Quantity
1	Z54RDA4004040	Flange Ø40 CT 40	1
2	Z54RDA2004040	Supporting Ring Ø40 C40	1
3	RDA3006340	Clamping Spring Ø40	1
4	77593086	O Ring	1
5	77593085	O Ring	1
6	700288	Allen Screw M8x25	4
7	710025	Self-Locking Nut M8	4

KRDA4032 – FLANGE FITTINGS Ø40 / PIPE Ø32



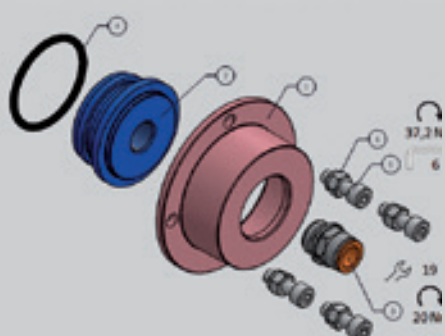
Position	Code	Description	Quantity
1	Z54RDA4004032	Flange Ø32 CT 40	1
2	Z54RDA2004032	Supporting ring Ø32	1
3	RDA3004032	Clamping spring Ø32	1
4	77593086	O Ring	1
5	77593087	O Ring	1
6	700288	Allen screw M8x25	4
7	710025	Self-locking nut M8	4

KRDA4025 – FLANGE FITTINGS Ø40 / PIPE Ø25



Position	Code	Description	Quantity
1	Z54RDA4004025	Flange Ø25 CT 40	1
2	Z54RDA2004025	Supporting ring Ø25	1
3	RDA3004025	Clamping spring Ø25	1
4	77593086	O Ring	1
5	77593088	O Ring	1
6	700288	Allen screw M8x25	4
7	710025	Self-locking nut M8	4

KRDA4012 – FLANGE FITTINGS Ø40 WITH FEMALE THREAD OUTLET G1/2

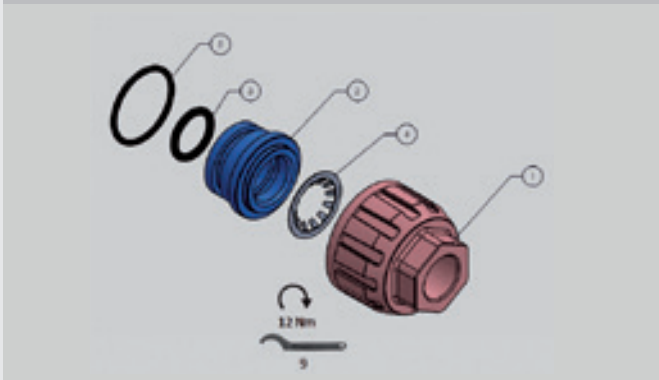


Position	Code	Description	Quantity
1	Z54RDA4004040	Flange Ø40 CT 40	1
2	Z54RDA2004012	Support ring G1/2	1
3	2101018	Male cylindrical straight fitting	1
4	77593086	O Ring	1
5	700288	Allen screw M8x25	4
6	710025	Self-locking nut M8	4

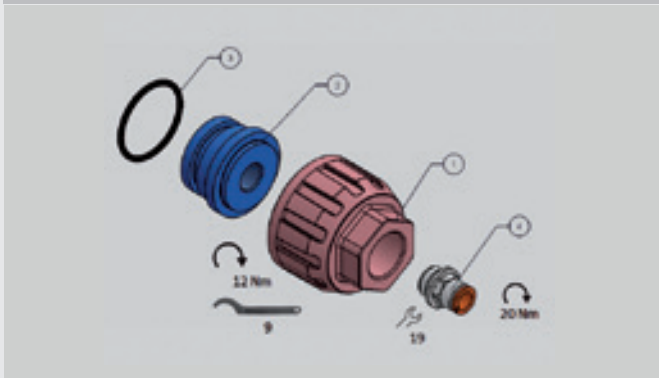
Standard configuration for other assembly options in position 3, the company must be contacted.

**KRDA2525 – FLANGE FITTINGS Ø25 / PIPE Ø25**


Position	Code	Description	Quantity
1	Z54RDA4002525	Threaded flange Ø25 CT 25	1
2	Z54RDA2002525	Supporting ring Ø25 CT 25	1
3	77593088	O Ring	1
4	RDA3004025	Clamping spring Ø25	1
5	77593089	O Ring	1

**KRDA2525 – FLANGE FITTINGS Ø25 / PIPE Ø20**


Position	Code	Description	Quantity
1	Z54RDA4002520	Threaded flange Ø20 CT 25	1
2	Z54RDA2002520	Supporting ring Ø20 CT 25	1
3	77593088	O Ring	1
4	RDA3004025	Clamping spring Ø20	1
5	77593089	O Ring	1

**KRDA2538 – FLANGE FITTINGS Ø25 WITH FEMALE THREAD OUTLET G3/8**


Position	Code	Description	Quantity
1	Z54RDA4002525	Threaded flange Ø25 CT 25	1
2	Z54RDA2002512	Supporting ring G3/8	1
	77593089	O Ring	
	2L01013	Male cylindrical straight fitting	

Standard configuration for other assembly options in position 4, the company must be contacted.

**NIPPLE FOR STRAIGHT FITTINGS**

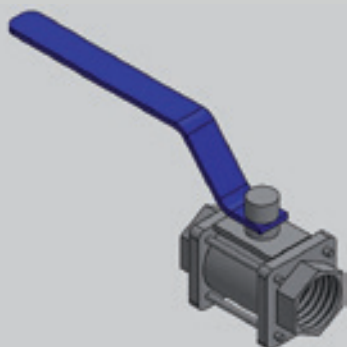

Ø Piping (mm)	Ø Fitting (mm)	Code	Description
Ø63	Ø63	RDANP112112	Male Nipple G1.1/2 X G1.1/2
Ø50	Ø63	RDANP112112	Male Nipple G1.1/2 X G1.1/2
Ø40	Ø63	RDANP112112	Male Nipple G1.1/2 X G1.1/2
Ø40	Ø40	RDANP114114	Male Nipple G1.1/4 x G1.1/4
Ø32	Ø40	RDANP114114	Male Nipple G1.1/4 x G1.1/4
Ø25	Ø40	RDANP114114	Male Nipple G1.1/4 x G1.1/4
Ø25	Ø25	RDANP034034	Male Nipple G3/4 X G3/4
Ø20	Ø25	RDANP034034	Male Nipple G3/4 X G3/4

NIPPLE FOR STRAIGHT FITTINGS WITH BALL VALVE



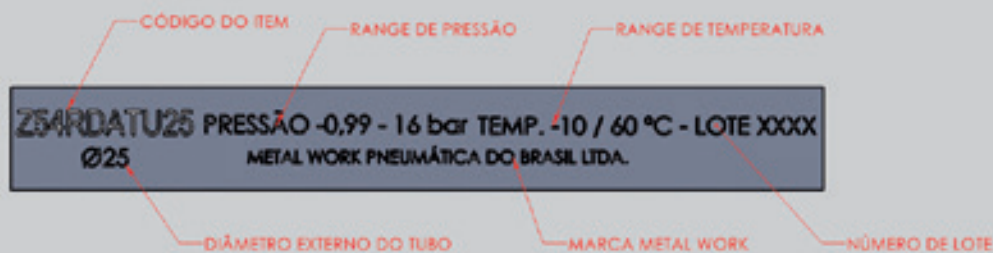
Ø Piping (mm)	Ø Fitting (mm)	Code	Description
Ø63	Ø65	RDANP212212	Male Nipple G1.1/2 X G2.1/2
Ø50	Ø50	RDANP200212	Male Nipple G2 X G1.1/2
Ø40	Ø40	RDANP112212	Male Nipple G1.1/2 X G1.1/2
Ø40	Ø40	RDANP114112	Male Nipple G1.1/4 X G1.1/2
Ø32	Ø40	RDANP114114	Male Nipple G1 X G1.1/4
Ø25	Ø40	RDANP114100	Male Nipple G1 X G1
Ø25	Ø25	RDANP034100	Male Nipple G3/4 X G1
Ø20	Ø20	RDANP034034	Male Nipple G3/4 X G3/4

NIPPLE FOR STRAIGHT FITTINGS WITH BALL VALVE



Ø Piping (mm)	Ø Fitting (mm)	Valve	Description
Ø63	Ø63	S60212G1	Ball valve Ø2.1/2
Ø50	Ø63	S60002G1	Ball valve Ø2
Ø40	Ø63	S60112G1	Ball valve Ø1.1/4
Ø40	Ø40	S60112G1	Ball valve Ø1.1/4
Ø32	Ø40	S60114G1	Ball valve Ø1.1/4
Ø25	Ø40	S60001G1	Ball valve Ø1
Ø25	Ø25	S60001G1	Ball valve Ø1
Ø20	Ø25	S600034G1	Ball valve Ø3/4

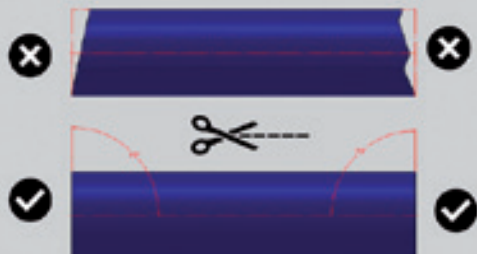
ALUMINUM PIPING IDENTIFICATION



NOTES

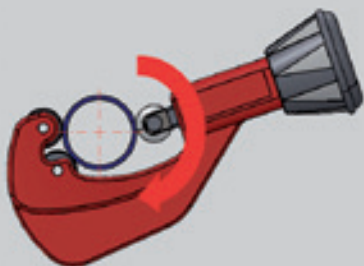
# ASSEMBLY INSTRUCTIONS

## ELEMENTS CUTTING



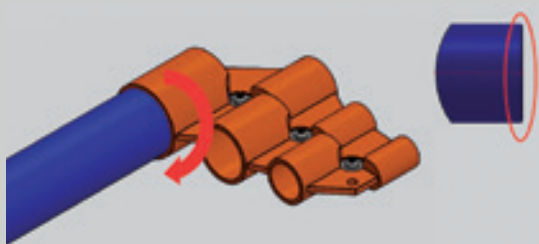
If any pipe needs to be cut, this operation must have a finish free of burrs and sharp edges to avoid damaging the seals and with a chamfer whenever possible, in addition to having a cutting face completely perpendicular to the center line of the item.

## PIPES CUTTING



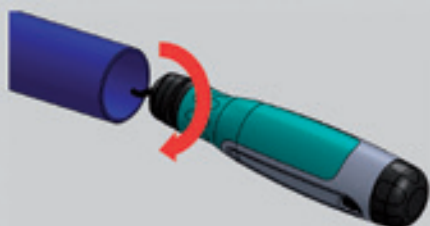
Align the blade with the making of the final dimension of the pipe to be cut, using circular movements.

## PIPES CUTTING



Insert the pipe until it reaches the internal stop of the tool and perform the chamfer, using circular movements.

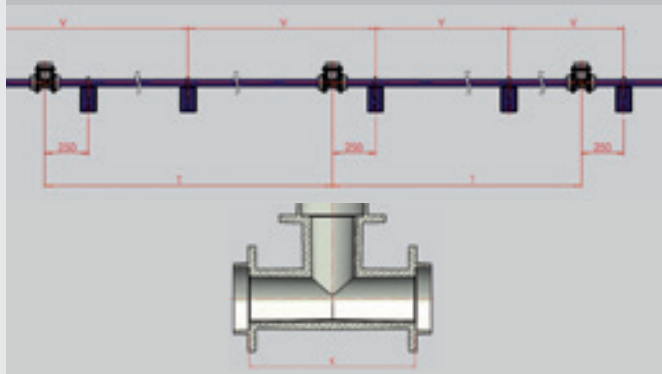
## PIPES CUTTING



Position the tool and perform deburring, using circular movements.

# ASSEMBLY INSTRUCTIONS

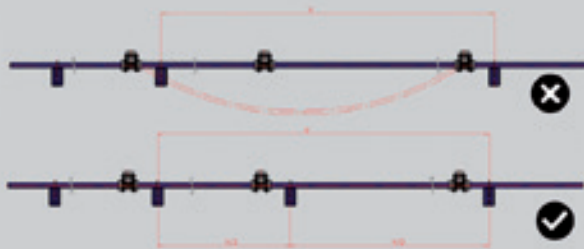
## FIXING - THE WALL MOUNTING BRACKET IN THE HORIZONTAL POSITION



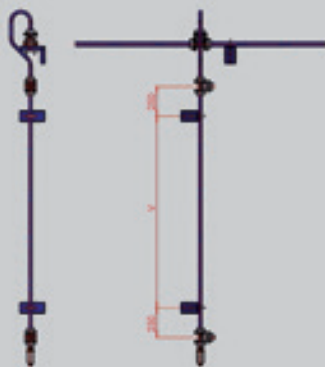
Pipe Ø (mm)	Max. "V" (m)	K (mm)
Ø63	4,5	288
Ø50	4	228
Ø40	3,5	228/138
Ø32	3	138/138
Ø25	2,5	138/138
Ø20	2,5	138

• The dimension "T" considered, consists of the standard length of the pipe (6m), plus the dimension "K" which varies depending on the diameter of the fittings.

## FIXING - THE WALL MOUNTING BRACKET IN THE HORIZONTAL POSITION

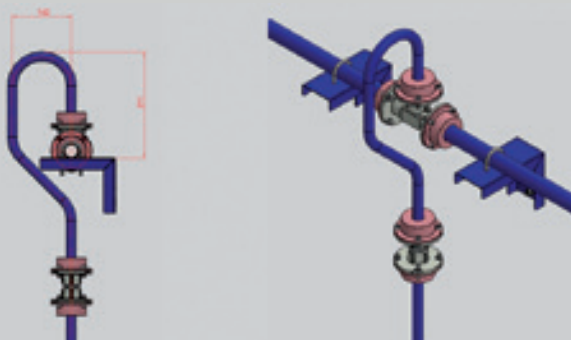


## FIXING - THE WALL MOUNTING BRACKET IN THE VERTICAL POSITION

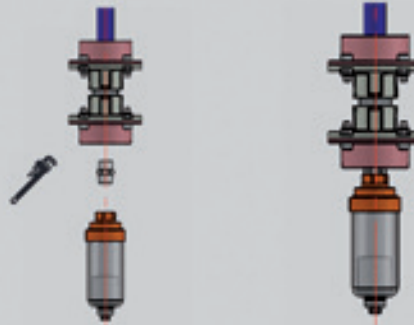


The "V" value must not exceed 3.0 m.

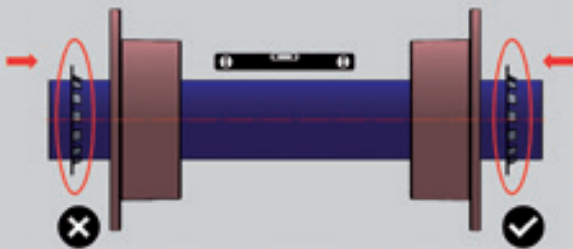
## FIXING - DROP BENDS



FIXING - ACCESSORIES ASSEMBLY

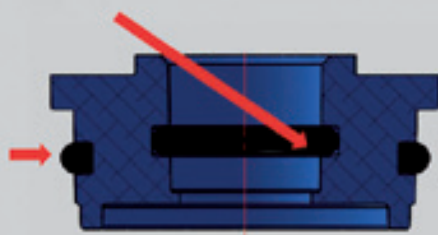


INSTALLATION



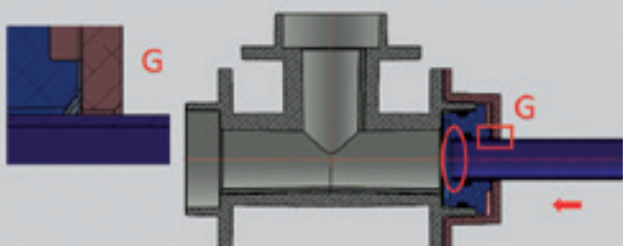
- Always observe the order and position of the elements when installing.

INSTALLATION



- Apply BERULUB FR16 grease around the fastening elements, as indicated below before assembly.
- In assemblies that use a hose connection, or any other accessory for using compressed air, this must be previously assembled, before inserting the clamping spring into the fitting.

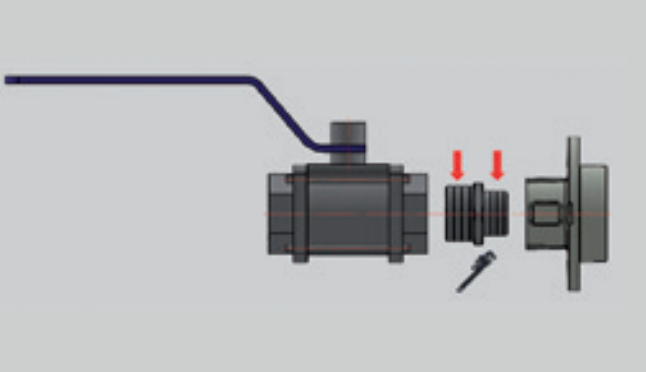
INSTALLATION



- Introduce the elements.
- Ensure that the pipe is inserted up to the stop as indicated.

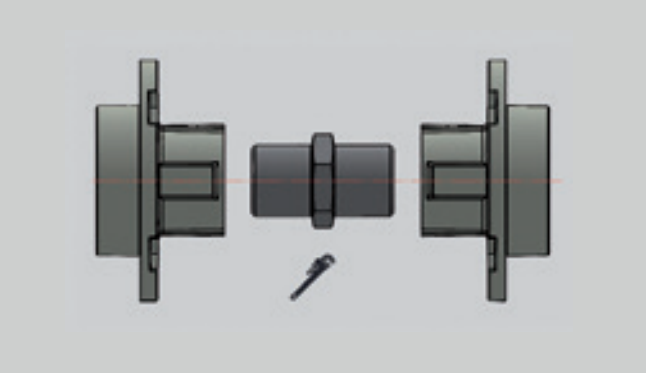
# FIXING

## INSTALLATION



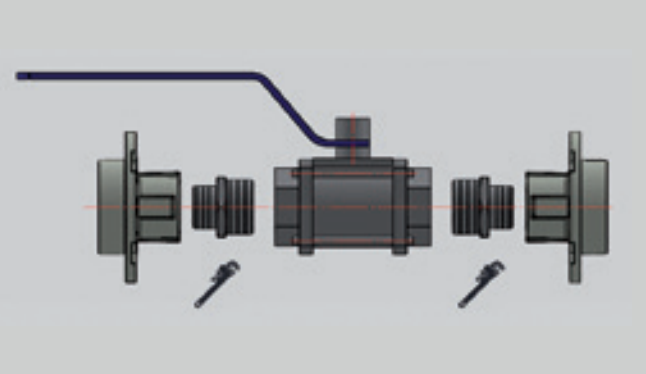
- Coupling components as shown in the imagem on the left.

## INSTALLATION



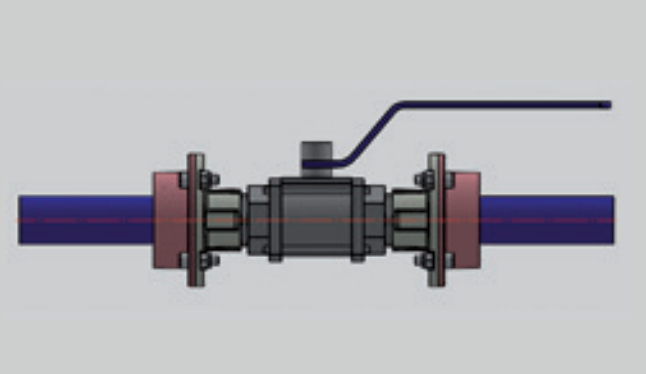
- Coupling components as shown in the imagem on the left.

## INSTALLATION



- Coupling components as shown in the imagem on the left.

## INSTALLATION



- Accessories assembly.





# WARNING AND WARRANTY

## WARNING

- Preventive maintenance of screws must be carried out at least once a year with the appropriate records established in the Regulatory Standard number 12 (NR-12).
- Preventive maintenance of seals must be carried out at least once every five years with the appropriate records established in the Regulatory Standard number 12 (NR-12).
- Personal Protective Equipment (PPE's) must be used for both installation and maintenance of the compressed air distribution network.
- All doubts must be solved before starting work, since an inadequate installation creates the risk of ejection of fluid under pressure, which could cause damage to the equipment and/or worker.
- Do not exceed an internal pressure of 16 bar inside the air distribution network.
- Check before installation that there are no missing elements included in this manual. Therefore, the manual must be read in full before starting the installation.
- Metal Work Pneumática do Brasil Ltda is exempt from any responsibility for any type of damage caused to property, people, animals which may have been caused by inadequate installation of the equipment.

## WARRANTY TERM

- The product has a full warranty against any and type of failure or manufacturing problems.
- The warranty does not cover problems and/or damages caused by improper transportation or storage of the product..
- The product warranty does not cover pressure ranges, temperatures or corrosion resistance degrees other than those specified throughout this manual.
- The product warranty does not cover failures and/or problems caused by improperty installation or use of product.
- The warranty does not apply if inappropriate fluid is used for the product.

