Twin Rod Non Rotate Cylinders RDV and AZ

A range of twin rod cylinders designed for use in non rotate applications specifially suited to the handling and packaging environments. Offering a range of double acting cylinders with adjustable cushioning and magnetic variants.

RDV Series:

- Available as bore Ø 25mm
- Non rotating
- Double acting
- Adjustable cushioning
- Magnetic piston as standard

Operating information

Working pressure:	Max 10 bar
Working temperature:	-10°C to +70°C

Prelubricated, further lubrication is not normally necessary.
If additional lubrication is introduced it must be continued.

AZ Series:

- Available as bore Ø 32mm - Ø 100mm
- Non rotating
- Double acting
- Adjustable cushioning
- Magnetic piston as standard
- Drop in sensors

Operating information

Working pressure:	Max 10 bar
Working temperature:	-20°C to +80°C

Prelubricated, further lubrication is not normally necessary.
If additional lubrication is introduced it must be continued.

Order key - RDV

R D V 5 0 2 5 0 1 0 0

Version	
RDV	Ø25mm bore only

Function	
5	Double acting with magnetic function, Adjustable cushioning

Bore mm
025

Stroke (mm) e.g. 0100 = 100mm
Stroke lengths up to 500mm. Other sizes on request

Note:

Standard option specified.Other options available

Maximum 500mm

Order key - AZV, AZ3, AZ4

A 5 5 K 0 1 0 0 / 0 0 0 A A A A 0 0 0 0 A 0 0 0 0

Version		
5	AZV	Single set twin rods
6	AZ4	Double set twin rods
7	AZ3	Single set twin rods with single rod

Function	
1	Double acting, No magnetic function, Adjustable cushioning
2	Double acting, No magnetic function, No adjustable cushioning
5	Double acting, With magnetic function, Adjustable cushioning
6	Double acting, With magnetic function, No adjustable cushioning

Bore mm	
K	032
L	040
M	050
N	063
P	080
Q	100

Stroke (mm) e.g. 0100 = 100mm
Stroke lengths up to 500mm. Other sizes on request

Note:

Standard option specified.
Other options available

Maximum 2000mm

Twin Rod Cylinder Cylinder Mounts

Body Mounts	RDV	AZV / AZ3 / AZ4 Bore Ø					
	25mm	32mm	40mm	50mm	63mm	80mm	100mm
Foot mounting - MS3 / MS1	**KK28.302**	**PD27917**	**PD27918**	**PD28072**	**PD28073**	**PD28074**	**PD28075**
Rear Double Clevis - AB3 / MP2	**KZ1420**	**PD22704**	**PD22705**	**PD22706**	**PD22707**	**PD22708**	**PD22709**
Rear Single Clevis - MP4	**-**	**PD23412**	**PD23413**	**PD23414**	**PD23415**	**PD23416**	**PD23417**
Front Flange - Type MF1 for AZV / AZ3 / AZ4	**-**	**PD57042**	**PD57043**	**PD57044**	**PD57045**	**PD57046**	**PD57047**
Rear Flange - MF2	**-**	**PD23403**	**PD23404**	**PD23405**	**PD23406**	**PD23407**	**PD23408**
Trunnion - MT4	**-**	**PD39195**	**PD39196**	**PD39197**	**PD39198**	**PD39199**	**PD39200**
Trunnion Blocks - MT4	**-**	**PD23381**	**PD23382**	**PD23382**	**PD23383**	**PD23383**	**PD23384**
Pivot Mount - (w / o Bolts)	**-**	**PD25621**	**PD25622**	**PD25623**	**PD25624**	**PD25625**	**PD25626**
Groove Nut - for RDV5	**ZP2125**						

Delivery information: All mounts are sold separately and are not mounted for shipment, except for the trunnion mount which requires factory installation.

Rod Accessories	AZ3 Bore Ø					
	32mm	40mm	50mm	63mm	80mm	100mm
Rod Nut	**ZP 1810**	**ZP 2189**	**ZP 0178**	**ZP 0178**	**ZP 0185**	**ZP 0185**
Rod Clevis AP2	**KY 6135**	**KY 6136**	**KY 6139**	**KY 6139**	**KY 6141**	**KY 6141**
Rod Eye AP6	**KY 6147**	**KY 6148**	**KY 6150**	**KY 6150**	**KY 6151**	**KY 6151**
Clevis Pin	**KY 6153**	**KY 6154**	**KY 6157**	**KY 6156**	**KY 6158**	**KY 6159**
Flexo coupling	**KY 1129**	**KY 1131**	**KY 1133**	**KY 1133**	**KY 1134**	**KY 1134**

Weights (kg)

	RDV		AZV Bore Ø											
	25mm		32mm		40mm		50mm		63mm		80mm		100mm	
	*1	*2	*1	*2	*1	*2	*1	*2	*1	*2	*1	*2	*1	*2
Basic Cylinder	0.46	0.11	0.80	0.25	1.00	0.35	1.70	0.5	2.60	0.6	4.20	0.9	6.20	1.0
Type MS3 / MS1	0.10		0.95		1.19		2.04		2.99		4.99		7.20	
Type AB3 / MP2	0.08		0.87		1.09		1.87		2.82		4.69		6.94	
Type MP4			0.90		1.13		1.91		2.90		4.77		7.11	
Type MP6			0.90		1.15		1.92		2.92		4.76		7.06	
Type MF1 / MF2			0.90		1.15		1.92		2.92		4.76		7.06	
Type MT4			0.91		1.18		1.93		3.25		5.03		7.76	

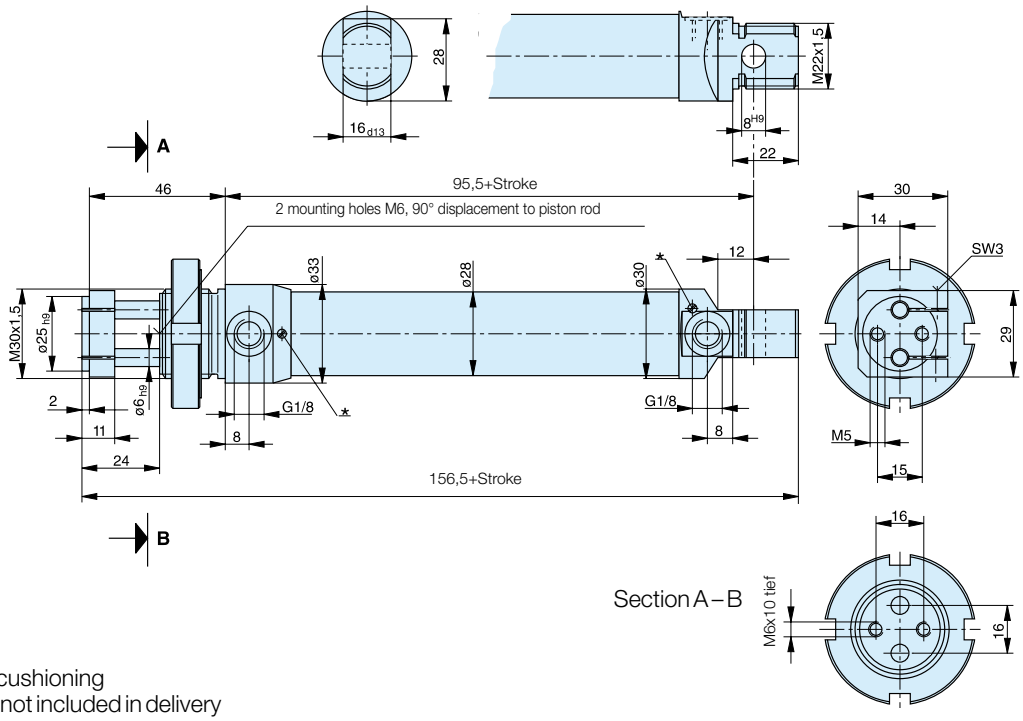
	AZ3											
Basic Cylinder	1.0	0.30	1.5	0.45	2.5	0.7	3.2	0.85	5.3	1.3	7.5	1.5
Type MS1	0.95		1.19		2.04		2.99		4.99		7.20	
Type MF1 / MF2	0.90		1.15		1.92		2.92		4.76		7.06	
Type MT4	0.91		1.18		1.93		3.25		5.03		7.76	

	AZ4											
Basic Cylinder	1.0	0.30	1.4	0.40	2.3	0.6	3.2	0.9	5.6	1.4	7.4	1.50
Type MS1	1.15		1.59		2.64		3.59		6.39		8.40	
Type MT4	1.11		1.58		2.53		3.59		6.13		8.16	

*1 = Weight for cylinder with 100mm stroke
*2 = Weight for every additional 100mm stroke length

Dimensions – Double acting, non-rotating, Ø 25 mm

Series RDV5...

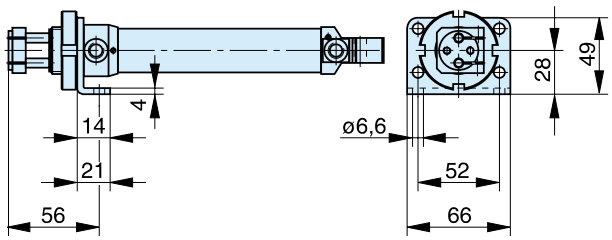


* adjustable end cushioning
Mounting nut is not included in delivery

Mounting instruction:
When mounting the front plate onto the piston rods tighten the screws with a torque M_a = 4 N.

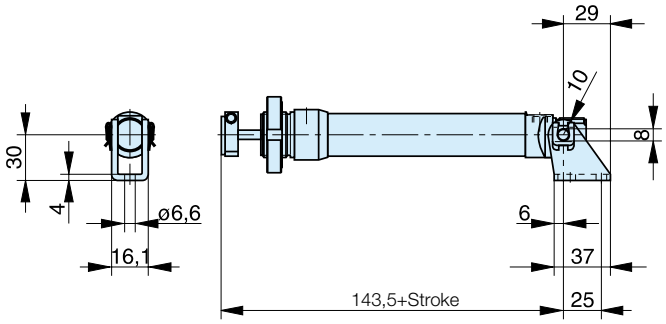
Mountings – Series RDV...., Ø 25 mm

Dimensions (mm) – Foot mounting type MS3



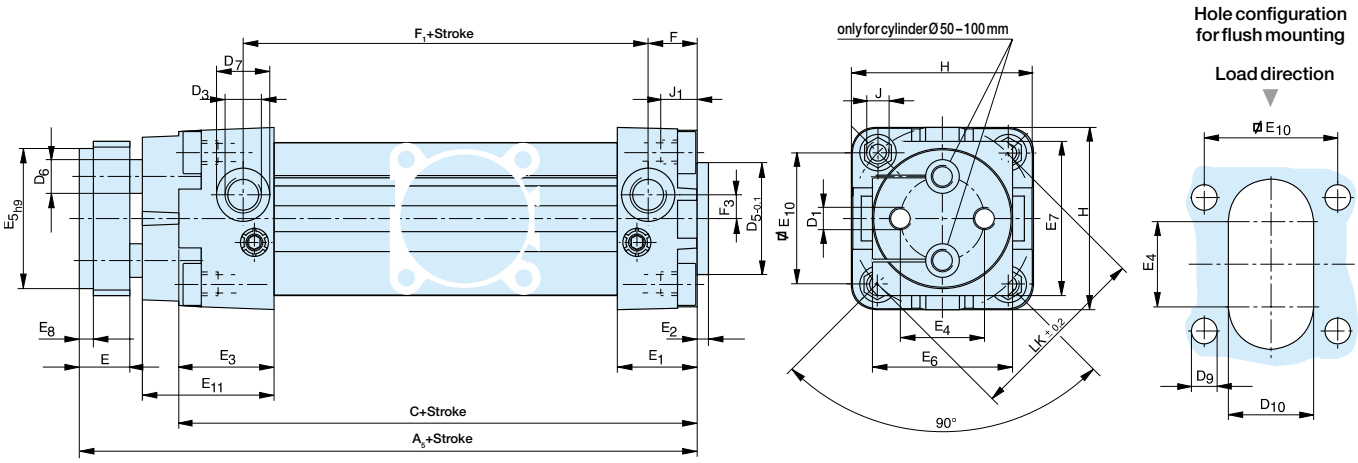
Material: steel, passivated

Dimensions (mm) – Clevis bracket type AB3



Material: steel, passivated

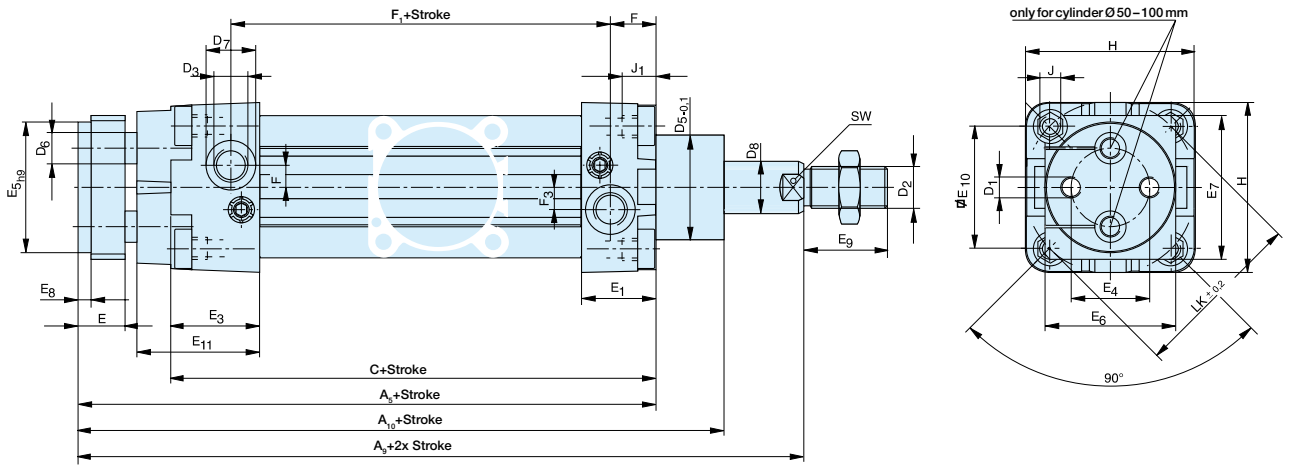
Dimensions – Basic Cylinder, non-rotating, Series AZV...., Ø 32 – 100 mm



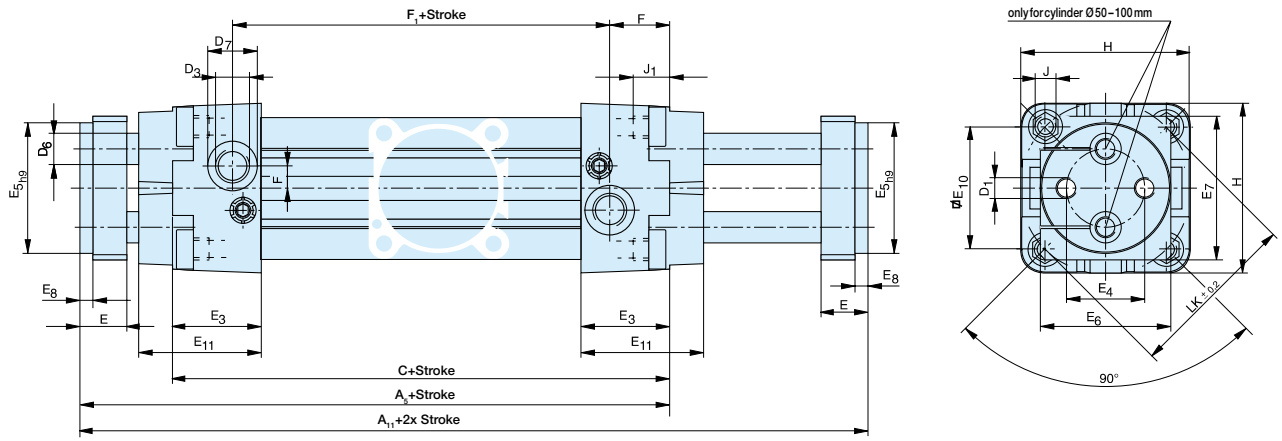
Dimension Table (mm) – Basic Cylinder AZV...., AZ3...., AZ4....

Cyl. Ø	A_5 + Stroke	A_9 + 2x Stroke	A_{10} + Stroke	A_{11} + 2x Stroke	C + Stroke	D_1	D2	D_3	ØD_5	ØD_6	ØD_7	ØD_8	ØD_9	D_{10}	E	E_1	E_2	E_3
32	128	154	146	154	102	M6	M10x1.25	G1/8	30	8	15	12	7	23	15	29	4	26
40	142	172	163	172	112	M8	M12x1.25	G1/4	35	10	19	16	7	25	15	27	4	30
50	151	188	177	185	117	M8	M16x1.5	G1/4	40	12	19	20	9	30	18	29	4	34
63	161	198	187	197	125	M10	M16x1.5	G3/8	45	16	23	20	9	34	22	30	4	34
80	174	220	206	212	136	M12	M20x1.5	G3/8	45	20	23	25	10	38	22	34	4	39
100	181	232	218	219	143	M12	M20x1.5	G1/2	55	20	28	25	10	38	22	35	4	40

Dimensions – Basic Cylinder, non-rotating, with through piston rod, series AZ3...., Ø 32 – 100 mm



Dimensions – Basic Cylinder, non-rotating, with through piston rods, series AZ4...., Ø 32 – 100 mm



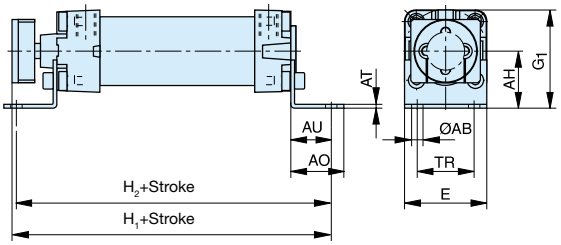
Dimension Table (mm) – Basic Cylinder AZV...., AZ3...., AZ4....

Cyl. Ø	A_5 + Stroke	A_9 + 2x Stroke	A_{10} + Stroke	A_{11} + 2x Stroke	C + Stroke	D_1	D2	D_3	$ØD_5$	$ØD_6$	$ØD_7$	$ØD_8$	$ØD_9$	D_{10}	E	E_1	E_2	E_3
32	128	154	146	154	102	M6	M10x1.25	G 1/8	30	8	15	12	7	23	15	29	4	26
40	142	172	163	172	112	M8	M12x1.25	G 1/4	35	10	19	16	7	25	15	27	4	30
50	151	188	177	185	117	M8	M16x1.5	G 1/4	40	12	19	20	9	30	18	29	4	34
63	161	198	187	197	125	M10	M16x1.5	G 3/8	45	16	23	20	9	34	22	30	4	34
80	174	220	206	212	136	M12	M20x1.5	G 3/8	45	20	23	25	10	38	22	34	4	39
100	181	232	218	219	143	M12	M20x1.5	G 1/2	55	20	28	25	10	38	22	35	4	40

Cyl. Ø	$ØE_4$	E_{5h9}	E_6	E_7	E_8	E_9	E_{10}	E_{11}	F AZV, AZ3	F AZ4	F_1+Stroke AZV, AZ3	F_1+Stroke AZ4	F_3 AZV, AZ4	F_3 AZ3	F_4	J	J_{1max}	H	ØLK	SW
32	19	32	32	40	4	20	32.5	34	14.5	17.5	74	75	6	6	6	M6	16	47	46	10
40	22.5	40	40	45	4	24	38	42	16	19	77.5	75	7	7	7	M6	16	53	54	14
50	30	50	50	55	5	32	46.5	47	17.5	23	77	72	9.5	9.5	9.5	M8	16	65	66	17
63	38	63	63	70	5	32	56.5	45	17.5	21.5	87	83	10	10	10	M8	16	75	80	17
80	50	80	80	95	5	40	72	52	20.5	26	90	85	9	9	9	M10	16	95	102	22
100	70	100	100	115	5	40	89	53	19	24.5	100	95	13	13	13	M10	16	115	126	22

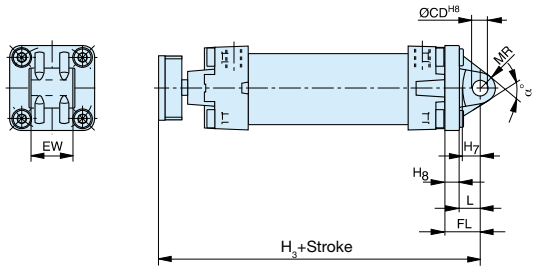
Mountings – Series AZV...., AZ3...., AZ4...., Ø 32 – 100 mm

Dimensions for foot mounting MS1



Material: steel, passivated

Dimensions for clevis bracket MP4



Material: cast aluminium

Dimension Table (mm)

Cyl. Ø	E	G_1	H_1 + Stroke	H_2 + Stroke	AH	ØAB	AO	AT	AU	TR
32	47	55.5	152	150	32	7	32	4	24	32
40	53	62.5	170	168	36	9	38	4	28	36
50	65	77.5	183	181	45	9	42	5	32	45
63	75	87.5	193	189	50	9	42	5	32	50
80	95	110.5	215	218	63	12	55	6	41	63
100	115	128.5	222	225	71	14	56	6	41	75

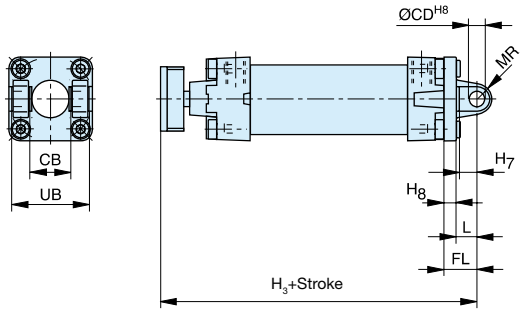
Included in delivery: 2 foot brackets, 4 screws

Dimension Table (mm)

Cyl. Ø	H_3 + Stroke	H_7	H_8	L	ØCDH8	FL	MR	EW	a°
32	150	10	10	12	10	22	10.5	26	60
40	167	13	10	15	12	25	13	28	60
50	178	12	11	16	12	27	13	32	70
63	193	17	11	21	16	32	17	40	60
80	210	16	15	21	16	36	17	50	70
100	222	20.5	16	25	20	41	21	60	70

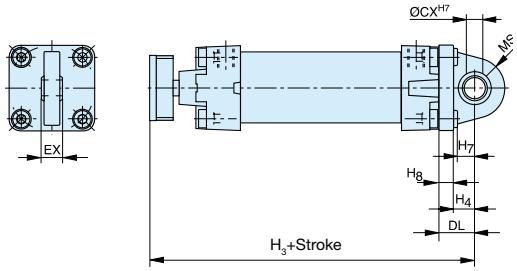
Included in delivery: 1 clevis bracket, 4 screws

Dimensions for clevis bracket MP2



Material: cast aluminium

Dimensions for Swivel eye bracket MP6
(Rear mounting with spherical bearing)



Material: cast aluminium

Dimension Table (mm)

Cyl. Ø	H_3 + Stroke	H_7	H_8	L	CB	ØCDH8	FL	MR	UB
32	150	10	10	12	26	10	22	9	45
40	167	13	10	15	28	12	25	11	52
50	178	12	11	16	32	12	27	12	60
63	193	17	11	21	40	16	32	15	70
80	210	16	15	22	50	16	36	16	90
100	222	20.5	16	25	60	20	41	20	110

Included in delivery: 1 rear trunnion mounting, 4 screws

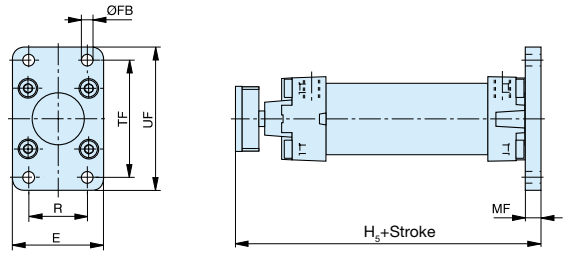
Dimension Table (mm)

Cyl. Ø	H_3 + Stroke	H_4	H_7	H_8	ØCXH7	DL	EX	MS
32	150	12	10	10	10	22	14	18
40	167	15	13	10	12	25	16	21
50	178	16	12	11	12	27	16	23
63	193	21	17	11	16	32	21	27
80	210	21	16	15	16	36	21	29
100	222	25	20.5	16	20	41	25	34

Included in delivery: 1 rear trunnion mounting with spherical bearing, 4 screws

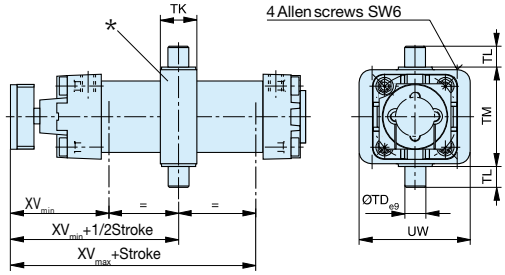
Mountings – Series AZV ...., AZ3...., AZ4...., Ø 32 – 100 mm

Dimensions for flange mouting MF2



Material: cast aluminium

Dimensions for trunnion mounting MT4
(profile cylinder barrel version)



Material: cast aluminium

* Position centre trunnion mounting
Standard position: Type EN1 – The taps of the EN attachment are horizontally aligned to the air supply
Option: Type EN2 – The taps of the EN attachment are vertically aligned to the air supply

Dimension Table (mm)

Cyl. Ø	E	H_5 + Stroke	R	ØFB	MF	TF	UF
32	50	138	32	7	10	64	79
40	56	152	36	9	10	72	90
50	70	163	45	9	12	90	110
63	77	173	50	9	12	100	120
80	100	190	63	12	16	126	153
100	120	197	75	14	16	150	178

Included in delivery: 1 flange, 4 screws

Dimension Table (mm)

Cyl. Ø	$ØTD_{e9}$	TK	TL	TM	UW	XV_{min}	XV+ 1/ Stroke	XV_{max} + Stroke
32	12	25	12	50	65	64	76	87
40	16	28	16	63	75	75	87	99
50	16	28	16	75	85	84	95	106
63	20	36	20	90	100	89	101	112
80	20	36	20	110	120	96	109	121
100	25	48	25	132	135	99	112	125

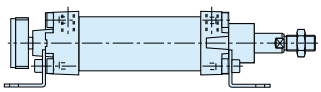
Included in delivery: 1 rear trunnion mounting

After loosening the locking screws, the trunnion mounting is infinitely variable between XV_{min} and XV_{max}.

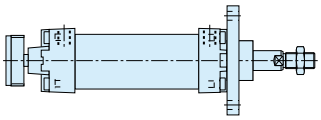
As standard, the position of the T-slots and dovetail slots is on the same side as the air connections. Exception: Ø 32 has only T-slots on the same side as the air connections, with a dovetail slot on the underside.

Mountings – Basic Cylinder, with through piston rod, series AZ3...., Ø 32 – 100 mm

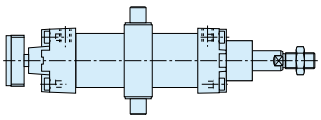
Foot mounting MS1



Rear flange mounting MF2

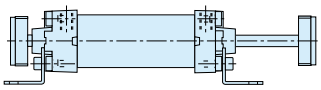
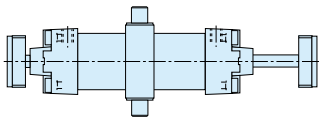


Trunnion mounting MT4



Mountings – Basic Cylinder, with through piston rods, series AZ4...., Ø 32 – 100 mm

Foot mounting MS1



Trunnion mounting MT4