

AZV Twin Rod Cylinder



Specifications

Features	
Type	Twin Rod
Series	AZV
Configurations	AZV: Double Acting, Double Rod, Magnetic Piston, Cushions AZV 3D: Double Acting, 3 Rods, Magnetic Piston, Cushions AZV 4D: Double Acting, 4 Rods, Magnetic Piston, Cushions
Construction Materials	
Barrel	Extruded Aluminum, Anodized (10µ)
End Caps	Die Cast Aluminum
Piston Rod	Steel Hard Chrome Plated (Optional: Stainless Steel)
Rod Bearing	Teflon Impregnated Bronze
Piston	Brass
Piston Bearing	Fiber Reinforced Nylon
Captive Cushion Screw	Brass (Optional: Stainless)
Seals	NBR (Optional: Viton)
End Cap Screws	Steel, Zinc Plated (Optional: Stainless)
Tooling Plate	Bore: 32, 40, 50 Steel, Black Oxide Treated Bore: 63, 80, 100 Aluminum, Black Oxide Treated
Characteristics	
Operating Temperature	Min: -5° F (-20°C) Max: +176 °F (+80°C)
Operating Pressure	Min: 15 PSI (1 bar) Max: 145 PSI (10 bar)
Normal Operating Pressure	90 PSI (6 bar)
Lubrication	Pre-lubricated at factory. If additional lubrication is required, use oil compatible for NBR seal and designed for use in pneumatic systems.
Media	Filtered and Regulated Compressed Air
Installation	In any Position
Weight	See Page 44
Stroke Length	Up to 20 inches—Longer Contact Factory
Theoretical Forces	See Technical Information Section
Load Capacity	See Technical Information Section
Specifications	
Piston Diameter	RDV 25 32 40 50 63 80 100
Port Sizes	NPT -- 1/8 1/4 1/4 3/8 3/8 1/2
	Metric (G) 1/8 1/8 1/4 1/4 3/8 3/8 1/2
Rod Diameter	
AZV (RDV) (2 Pcs)	mm 6 8 10 12 16 20 20
AZV 3D (2 Pcs)	mm -- 8 10 12 16 20 20
(1 Pc)	mm -- 12 16 20 20 25 25
AZV 4D (4 Pcs)	mm -- 8 10 12 16 20 20
Cushion Lengths	Inch 0.67 0.78 0.98 0.98 0.98 1.10 1.18
All Cylinders	mm 17 20 25 25 25 28 30

Series AZV

Ø32mm - 100mm

Series RDV

Ø25mm

AZV 5: Double Acting, Double Rod, Magnets, Cushions



AZV3D 5: Double Acting, 3 Rods, Magnets, Cushions



AZV4D 5: Double Acting, 4 Rods, Magnets, Cushions



Features:

- Magnetic Piston
- Adjustable Cushions
- Pre-Lubricated Design
- Inch or Metric Construction

AZV Twin Rod Cylinder



Ordering Information

Example: AZV3D - U5050/10-V
 Twin Rod Cylinder
 Single Set of Twin Rods w/Single Rod
 U.S. Option
 Double Acting, Magnets, Cushions
 50mm Bore
 10" Stroke
 Viton Seals

A Z V 3 D - U 5 0 5 0 / 1 0 - V

Versions:

RDV - Ø 25mm Bore Only (Metric Only)

AZV Series

- AZV - Single Set Twin Rods
- AZV 3D - Single Set Twin Rods with Single Rod
- AZV 4D - Double Set Twin Rods

Design:

- - Metric Construction
- U - US Construction: Inch Stroke, NPT Ports, & UNC Threads

Actuation:

- 5 - Double Acting, Magnets, Cushions
- 1 - Double Acting, Cushions
- 6 - Double Acting, Magnets
- 2 - Double Acting

Options:

- - Standard
- V - Viton
- EN - Trunnion, Adjustable
- R - Ø32 Piston Rods Tapped 10•32
- 3D Version Only
- T - Rod Thread: Ø32 - 5/16•18
 Ø40,50,63 - 7/16•20

Stroke:

INCH:

- any inch increment up to 20" standard
- contact factory for special stroke lengths

MM:

- any mm increment up to 500mm standard
- contact factory for special stroke lengths

Bore:

- 025 - 25mm (nom. 1")
 (Available Only in Metric Construction)
- 032 - 32 mm (nom. 1 1/4")
- 040 - 40 mm (nom. 1 1/2")
- 050 - 50 mm (nom. 2")
- 063 - 63 mm (nom. 2 1/2")
- 080 - 80 mm (nom. 3 1/8")
- 100 - 100 mm (nom. 4")

Proximity Sensors/Brackets: See Page 73

AZV Twin Rod Cylinder



Cylinder Mounts

Body Mounts		25mm	32mm	Bore Ø			80mm	100mm
				40mm	50mm	63mm		
Foot Mounting Type: A-	INCH Metric	-- KK 29.302	4170-0352 PD 27917	4170-0452 PD 27918	4170-0552 PD 28072	4170-0652 PD 28073	4170-0852 PD 28074	4170-1052 PD 28075
Rear Double Clevis Type: B-	INCH Metric	-- --	4172-0351 PD 22704	4172-0451 PD 22705	4172-0551 PD 22706	4172-0651 PD 22707	4172-0851 PD 22708	4172-1051 PD 22709
Rear Single Clevis Type: BA-	INCH Metric	-- KB 28.303	4174-0351 PD 23412	4174-0451 PD 23413	4174-0551 PD 23414	4174-0651 PD 23415	4174-0851 PD 23416	4174-1051 PD 23417
Rear Clevis w/Spherical Bearing Type: BAS-	INCH Metric	-- --	4173-0351 PD 23843	4173-0451 PD 23844	4173-0551 PD 23845	4173-0651 PD 23846	4173-0851 PD 23847	4173-1051 PD 23848
Front Flange Type: CA for AZV 5/3D/4D	INCH Metric	-- --	4175-0351 PD 57042	4175-0451 PD 57043	4175-0551 PD 57044	4175-0651 PD 57045	4175-0851 PD 57046	4175-1051 PD 57047
Rear Flange Type: D	INCH Metric	-- --	4176-0351 PD 23403	4176-0451 PD 23404	4176-0551 PD 23405	4176-0651 PD 23406	4176-0851 PD 23407	4176-1051 PD 23408
Trunnion Type: EN	INCH/mm	--	PD 39195	PD 39196	PD 39197	PD 39198	PD 39199	PD 39200
Trunnion Blocks Type: EL (Pair) (See Page 76)	INCH/mm	--	PD 23381	PD 23382	PD 23382	PD 23383	PD 23383	PD 23384
Pivot Mount (w/o Bolts)	INCH/mm	--	PD 25621	PD 25622	PD 25623	PD 25624	PD 25625	PD 25626

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

Rod Accessories		25mm	32mm	Bore Ø			80mm	100mm
				40mm	50mm	63mm		
Rod Nut	INCH Metric	-- ZP 3848	ZP-U 1810 ZP 1810	ZP-U 2189 ZP 2189	ZP-U 0178 ZP 0178	ZP-U 0178 ZP 0178	ZP-U 0185 ZP 0185	ZP-U 0185 ZP 0185
Rod Clevis	INCH Metric	-- --	-- KY 6135	-- KY 6136	-- KY 6139	-- KY 6139	-- KY 6141	-- KY 6141
Rod Eye	INCH Metric	-- --	-- KY 6147	-- KY 6148	-- KY 6150	-- KY 6150	-- KY 6151	-- KY 6151
Clevis Pin	INCH/mm	--	KY 6153	KY 6154	KY 6157	KY 6156	KY 6158	KY 6159
Rod Alignment Coupling	INCH Metric	-- --	-- KY 1129	-- KY 1131	-- KY 1133	-- KY 1133	-- KY 1134	-- KY 1134

NOTES:

- * Body Nut for RDV type cylinder
- ** Items in **BOLD** type either include Inch mounting hardware or indicate Inch threads.

Proximity Sensors/Brackets: See Page 73

AZV Twin Rod Cylinder



Weights

AZV

Weight	25mm		32mm		40mm		Bore Ø 50mm		63mm		80mm		100mm		
	1	2	*1	*2	1	2	1	2	1	2	1	2	1	2	
Basic Cylinder	lbs	1.01	0.18	1.76	0.55	2.21	0.77	3.75	1.10	5.73	1.32	9.26	1.98	13.67	2.21
	kg	0.46	0.08	0.8	0.25	1.0	0.35	1.7	0.5	2.6	0.6	4.2	0.9	6.2	1.0
Type A (RA)	lbs	0.22	--	2.21	--	2.76	--	4.41	--	6.62	--	11.03	--	15.66	--
	kg	0.10	--	1.0	--	1.25	--	2.0	--	3.0	--	5.0	--	7.1	--
Type B (RA)	lbs	--	--	1.98	--	2.43	--	4.08	--	6.17	--	10.14	--	14.99	--
	kg	--	--	0.9	--	1.1	--	1.85	--	2.8	--	4.6	--	6.8	--
Type BA	lbs	--	--	2.21	--	2.65	--	4.19	--	6.62	--	11.03	--	16.10	--
	kg	--	--	1.0	--	1.2	--	1.9	--	3.0	--	5.0	--	7.3	--
Type BAS	lbs	--	--	2.09	--	2.65	--	4.19	--	6.39	--	10.36	--	15.44	--
	kg	--	--	0.95	--	1.2	--	1.9	--	2.9	--	4.7	--	7.0	--
Type D	lbs	--	--	1.98	--	2.43	--	4.08	--	6.28	--	10.36	--	15.44	--
	kg	--	--	0.9	--	1.1	--	1.85	--	2.85	--	4.7	--	7.0	--
Type EN	lbs	--	--	2.65	--	3.75	--	5.73	--	8.60	--	13.23	--	19.18	--
	kg	--	--	1.2	--	1.7	--	2.6	--	3.90	--	6.0	--	8.7	--

*1 = Weight for cylinder with 4" (100 mm) stroke

*2 = Weight for every additional 4" (100 mm) stroke length

AZV 3D

Weight	32mm		40mm		Bore Ø 50mm		63mm		80mm		100mm		
	*1	*2	1	2	1	2	1	2	1	2	1	2	
Basic Cylinder	lbs	2.21	0.66	3.31	0.99	5.51	1.54	7.06	1.87	11.69	2.87	16.54	3.31
	kg	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 A	lbs	2.65	--	3.97	--	6.17	--	8.38	--	13.23	--	18.74	--
	kg	1.2	--	1.8	--	2.8	--	3.8	--	6.0	--	8.5	--
Type C	lbs	2.43	--	3.53	--	5.84	--	7.61	--	12.79	--	18.08	--
	kg	1.1	--	1.6	--	2.65	--	3.45	--	5.8	--	8.2	--
Type EN	lbs	3.09	--	4.85	--	7.5	--	9.92	--	15.88	--	22.05	--
	kg	1.4	--	2.2	--	3.4	--	4.5	--	7.2	--	10.0	--

*1 = Weight for cylinder with 4" (100 mm) stroke

*2 = Weight for every additional 4" (100 mm) stroke length

AZV 4D

Weight	32mm		40mm		Bore Ø 50mm		63mm		80mm		100mm		
	*1	*2	1	2	1	2	1	2	1	2	1	2	
Basic Cylinder	lbs	2.21	0.66	3.09	0.88	5.07	1.32	7.06	1.98	12.35	3.09	16.32	3.31
	kg	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 A	lbs	2.65	--	3.75	--	5.73	--	7.94	--	13.89	--	18.30	--
	kg	1.2	--	1.70	--	2.6	--	3.6	--	6.3	--	8.3	--
Type EN	lbs	3.09	--	4.63	--	7.06	--	9.92	--	16.54	--	22.05	--
	kg	1.4	--	2.1	--	3.2	--	4.5	--	7.5	--	10.0	--

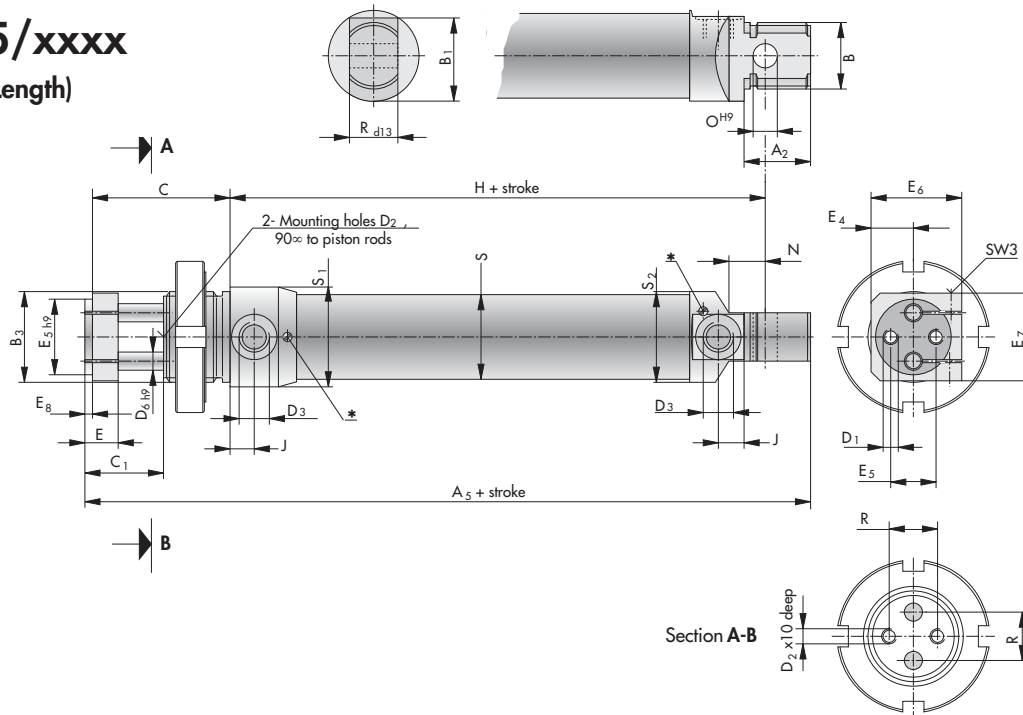
AZV Twin Rod Cylinder



Dimensional Data

Basic Cylinder RDV 5025/xxxx

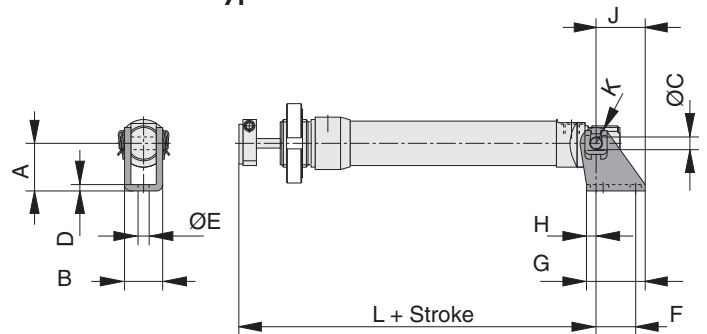
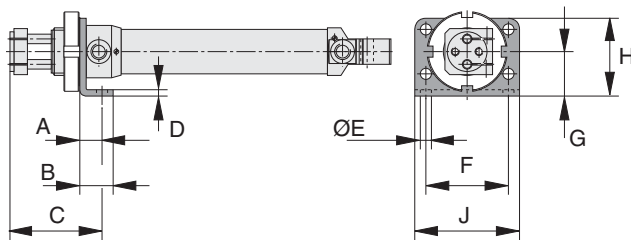
(xxxx= Stroke Length)



A2	A5+ stroke	B	B1	B3	C	D1	D3 h9	øD6	E	E4 h9	øE5	E6
0.87 22	6.16 156.5	-- M22 x 1.5	1.1 28	-- M30x1.5	1.81 46	-- M5	-- G1/8	0.24 6	0.43 11	0.59 15	0.98 25	1.14 29
E7	E8	F3 stroke	H+ H9	N	øO	øS	øS1 d13	øS2 d13	R	SW	*	
1.18 30	0.08 2	0.31 8	3.76 95.5	0.47 12	0.31 8	1.1 28	1.3 33	1.18 30	0.63 16	M3	M8x.75	

Foot Mount - Type RA

Rear Clevis - Type RB



	A	B	C	D	E	F	G	H	J	K	L+
RA	.55 14	.83 21	2.20 56	0.16 4	0.26 6.6	2.05 52	1.10 28	1.93 49	2.60 66		
RB	1.18 30	0.63 16.1	0.31 8	0.16 4	0.26 6.6	0.98 25	1.46 37	0.24 6	1.14 29	0.39 10	5.65 143.5

Dimensions: Bold Type= INCH, Standard= mm