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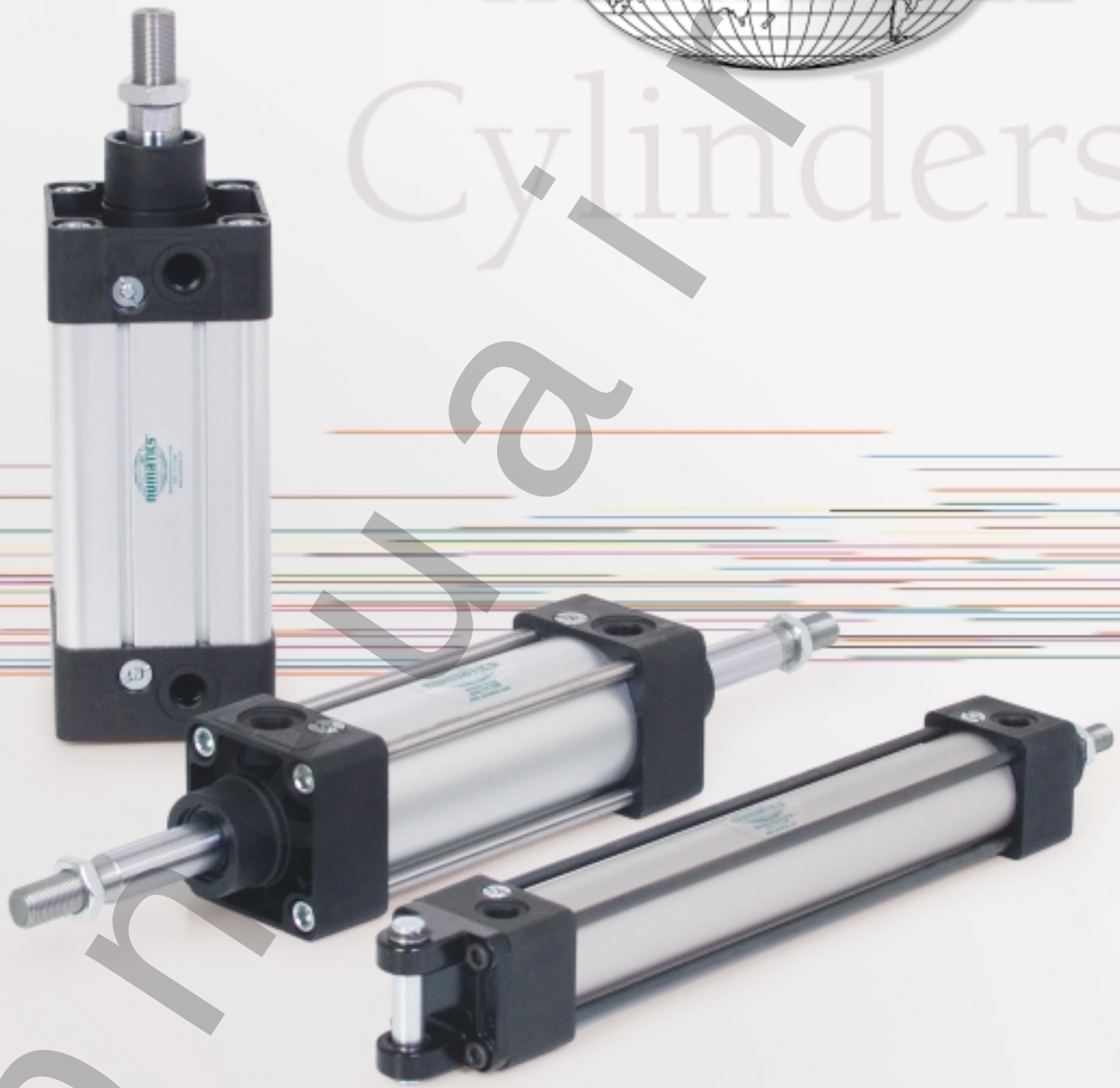
Cylinders



ISO/VDMA Series

ISO 6431 and VDMA 24562 Cylinder Line

We're everywhere you need us to be!

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ISO/VDMA Series 3-16

Rev. 2/04

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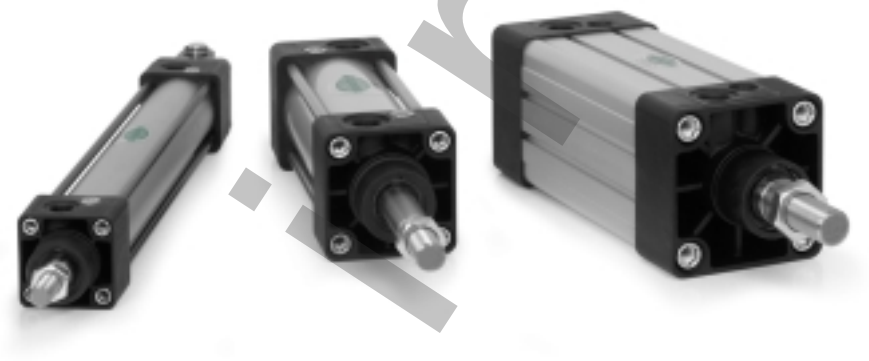
ISO/VDMA Series
Metric Standard Interchangeable

The ISO/VDMA Series is an aluminum body air cylinder line that is designed to meet all of your international cylinder requirements. In fact, our ISO/VDMA Series cylinders are designed to meet the requirements of ISO 6431 (International) and VDMA 24562 (Germany). The combination of lightweight aluminum construction and proven reliability makes our ISO/VDMA Series the Superior Interchangeable metric, international standard air cylinder line.

Standard Specifications:



- Conforms to the following standards:
  - o ISO 6431 (International)
  - o VDMA 24562 (Germany)
- Bore sizes from 32 mm through 250 mm
- Nominal pressure rating is 10 bar (150 psi)
- Magnetic piston standard
- Complete range of mounting accessories:
  - ~ Flange mounts
    - Front and rear
  - ~ Clevis mounts
    - Rear clevis
    - Rod clevis
    - Rod eye
  - ~ Foot brackets
  - ~ Oscillating brackets
- Double acting
- Single and double rod end
- Tube made from anodized aluminum with wear resistant coating
- Flush switch mounting in cylinder tube (when using profile tubing)
- Adjustable cushions
- Temperature range:
  - ~ -20° C to + 80° C
  - ~ -5° F to + 175° F
- Seals made from Buna-N and Polyurethane
- Non-lube added service

ORDER ONLINE

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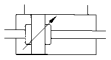
How to Order

Z G 050 / 0080 C08 A1

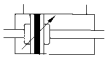
Cylinder Series
Z = Tie-Rod Version
W = Profile Version

Cylinder Function / Cylinder Type

A =  Heat Resistant Type Up to +180˚C (Viton® - Seals) Single Rod End w/o Magnet

B =  Heat Resistant Type Up to +180˚C (Viton® - Seals) Double Rod End w/o Magnet

G =  Single Rod End with Magnet

H =  Double Rod End with Magnet

Piston Diameter
032 = 32 mm (1.26)
040 = 40 mm (1.57)
050 = 50 mm (1.97)
063 = 63 mm (2.48)
080 = 80 mm (3.15)
100 = 100 mm (3.94)
125* = 125 mm (4.92)
160* = 160 mm (6.30)
200* = 200 mm (7.78)
*Only for tie-rod version.

Stroke*
0025 = 25 mm (0.98)
0050 = 50 mm (1.97)
0080 = 80 mm (3.15)
0100 = 100 mm (3.94)
0125 = 125 mm (4.92)
0160 = 160 mm (6.30)
0200 = 200 mm (7.78)
0250 = 250 mm (9.84)
0320 = 320 mm (12.60)
0400 = 400 mm (15.75)
0500 = 500 mm (19.69)
* Further strokes on request.

Options*
00 = Stainless Steel Rod and Jam Nut
A1 = Hard Piston Rod, Chrome Plated (Standard)
1A = Rod Extension (must specify length)
2A = Thread Extension (must specify length)
1R = Special Rod End
* More Options on Request

Cylinder Including Mounting Parts
C01 = Foot Bracket (MS1)
CF2 = Flange to VDMA 24562 T.2 (MF1, MF2), Front Side
CR2 = Flange to VDMA 24562 T.2 (MF1, MF2), Back Side
C03 = Foot Bracket (Plain)
CF4 = Rod Clevis, Front Side
CD4 = Rod Clevis, Both Sides (Only Type H)
CF5 = Oscillating Clevis, Front Side
CD5 = Oscillating Clevis, Both Sides (Only Type H)
C07 = Oscillating Brackets to VDMA 24562 T.2 (MP4), with Lugs
C08 = Oscillating Brackets to VDMA 24562 T.2 (MP2), Fork Type
C09 = Pivot to VDMA 24562 T.2 (MT4), Only for Cylinders of Tie-Rod Version
CV9 = Pivot to VDMA 24562 T.2 (MT4) Swivelled, Only for Tie-Rod Version
C10 = Pivot Fastening, End Cap Mounting Front Side
C13 = Oscillating Joint Bracket (Spherical)
C14 = Oscillating Brackets to VDMA 24562 T.2, Fork Type, Narrow Clevis
BOV = Piston rod extended for mounting of RL Series Rod Locking Unit
BMV = RL Series Rod Locking Unit assembled to the cylinder
BOI = Piston rod extended for mounting of *Nu* Lock Series Rod Locking Unit
BMI = *Nu* Lock Series Rod Locking Unit assembled to the cylinder

Order example: ZG050/0080C08A1

Here we have a double acting tie rod version cylinder with single rod end. Piston diameter is 50 mm and stroke 80 mm. The cylinder is equipped with a magnet for switch sensing and has cushioning.
The cylinder will be mounted with oscillating brackets, fork type.
Optionally it has a hard chrome plated piston rod.

Technical Information

Theoretical Force Table for Double Acting Cylinders with Piston Diameters 32 mm (1.26) to 200 mm (7.78)

PISTON DIAMETER mm (inches)	PISTON ROD DIAMETER mm (inches)	EFFECTIVE PISTON SURFACE (cm²)		PRESSURE (bar) 2	3	4	5	6	7	8	9	10
				EXTEND OR RETRACT (N)								
32 (1.26)	12.0 (0.47)	for extend	8.0 (0.12)	141	212	282	353	424	494	565	636	706
		for retract	6.9 (0.11)	122	182	243	304	366	427	488	549	610
40 (1.57)	16.0 (0.63)	for extend	12.6 (0.20)	223	334	445	555	667	780	893	1001	1109
		for retract	10.6 (0.16)	187	281	375	468	561	655	748	843	936
50 (1.97)	16.0 (0.63)	for extend	19.6 (0.30)	346	520	692	865	1040	1207	1383	1560	1727
		for retract	17.6 (0.27)	310	464	618	772	926	1080	1234	1338	1542
63 (2.48)	20.0 (0.79)	for extend	31.2 (0.48)	551	827	1099	1373	1648	1933	2207	2482	2757
		for retract	28.1 (0.44)	495	746	991	1236	1491	1736	1982	2237	2482
80 (3.15)	25.0 (0.98)	for extend	50.3 (0.78)	889	1334	1776	2217	2668	3110	3551	4002	4444
		for retract	45.3 (0.70)	800	1197	1599	2001	2403	2806	3198	3600	4002
100 (3.94)	25.0 (0.98)	for extend	78.5 (1.22)	1383	2080	2776	3463	4159	4856	5543	6239	6926
		for retract	73.6 (1.14)	1295	1952	2600	3247	3895	4552	5199	5847	6794
125 (4.92)	30.0 (1.18)	for extend	122.7 (1.90)	2168	3247	4336	5415	6497	7583	8662	9751	10830
		for retract	115.7 (1.79)	2036	3054	4072	5090-	6108	7126	8144	9162	10180
160 (6.30)	40.0 (1.57)	for extend	201.1 (3.12)	3551	5327	7102	8878	10654	12429	14205	15980	17756
		for retract	188.5 (2.92)	3326	4993	6651	8319	9987	11644	13312	14970	16638
200 (7.87)	40.0 (1.57)	for extend	314.2 (4.87)	5563	8319	11095	13871	16648	19424	22190	24966	27743
		for retract	301.6 (4.68)	5327	7985	10654	13312	15971	18639	21297	23966	26624

Friction losses are considered with 10%

Table on air consumption for double acting cylinders with piston diameter 1.26 (32mm) to 7.87 (200mm)

PISTON DIAMETER mm (inches)	PRESSURE (bar) 2	3	4	5	6	7	8	9	10
	AIR CONSUMPTION (l) PER 100 MM STROKE (UNCOMPRESSED AIR)								
32 (1.26)	0.47	0.65	0.80	0.96	1.13	1.25	1.43	1.60	1.95
40 (1.57)	0.75	1.02	1.25	1.49	1.70	2.10	2.25	2.50	2.69
50 (1.97)	1.20	1.58	2.02	2.40	2.80	3.12	3.52	3.96	4.31
63 (2.48)	1.94	2.53	3.16	3.78	4.39	5.08	5.60	6.18	6.86
80 (3.15)	3.03	4.07	5.03	6.07	7.02	8.01	9.02	9.92	10.95
100 (3.94)	4.76	6.33	7.93	9.50	11.05	12.68	14.25	15.81	17.59
125 (4.92)	7.90	10.41	12.92	15.73	17.91	20.62	23.20	25.70	29.50
160 (6.30)	12.51	16.60	20.85	25.80	28.90	34.39	38.62	41.95	46.72
200 (7.87)	19.82	26.31	33.82	39.95	46.81	52.90	59.30	66.90	72.90

Value for 1 double stroke

Weights (kg)

CYLINDER TYPE WA; OR WG, PISTON DIAMETER	32	40	50	63	80	100				
0 mm stroke	0.57	0.82	1.32	1.70	2.79	3.86				
to be added per 3.94 (100mm) stroke	0.28	0.42	0.55	0.59	0.94	1.12				
CYLINDER TYPE WB; OR WH, PISTON DIAMETER	32	40	50	63	80	100				
0 mm stroke	0.65	0.93	1.57	1.98	1.92	4.34				
to be added per 3.94 (100mm) stroke	0.36	0.57	0.79	0.83	1.31	1.49				
CYLINDER TYPE ZA; OR ZG, PISTON DIAMETER	32	40	50	63	80	100	125	160	200	250*
0 mm stroke	0.55	0.76	1.29	1.67	2.72	3.70	5.37	10.75	14.75	31.45
to be added per 3.94 (100mm) stroke	0.23	0.32	0.51	0.54	0.81	0.87	1.39	1.80	2.20	8.20

* not for cylinder type ZG

CYLINDER TYPE ZB; OR ZH, PISTON DIAMETER mm (inches)	32 (1.26)	40 (1.57)	50 (1.97)	63 (2.48)	80 (3.15)	100 (3.94)	125 (4.92)	160 (6.30)	200 (7.78)	250* (9.87)
0 mm stroke	0.68	0.88	1.54	1.95	3.15	4.18	6.27	12.49	17.14	36.55
to be added per 3.94 (100mm) stroke	0.31	0.47	0.75	0.78	1.18	1.24	2.02	2.60	3.18	10.70

* not for cylinder type ZH

ISO/VDMA Series
Metric Standard Interchangeable

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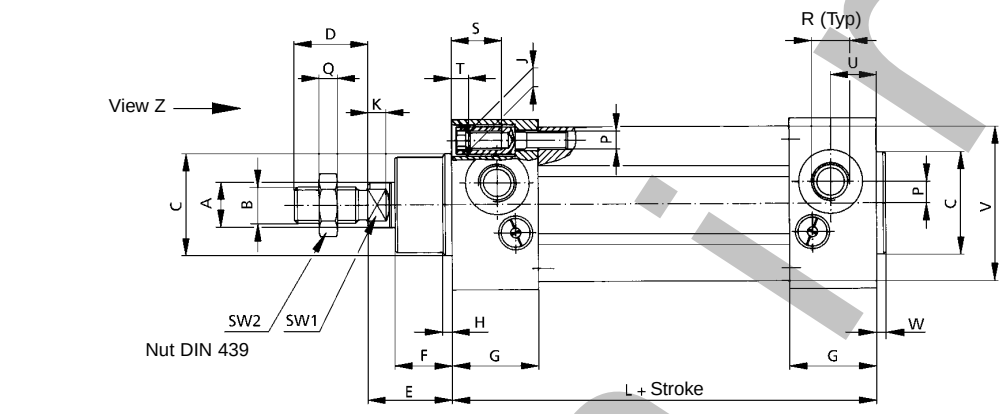
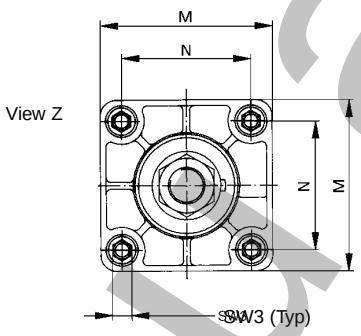
Profile Version

Double Acting Cylinder, Single Rod End, Types WA or WG



X = cushioning length



Repair Kits

CYLINDER TYPE	ORDER CODE
WA032/... ↓ WA100/...	VA032/RK ↓ VA100/RK
WG032/... ↓ WG100/...	VG032/RK ↓ VG100/RK

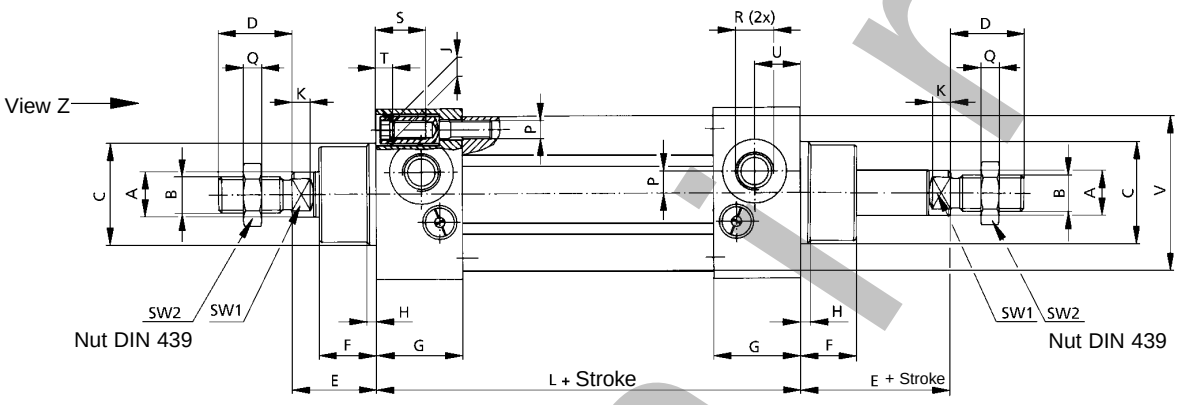
Dimensions (mm)

TYPE	PISTON DIAMETER	A Ø	B	C Ø e11	D±0.3	E±0.9	F±0.1	G	H	J	K	L	M
WA; WG	32	12.0	M10 x 1.25	30.0	22.0	26.0	16.0	33.0	4.0	M6	6.0	94 ± 0.4	47.0
WA; WG	40	16.0	M12 x 1.25	35.0	24.0	30.0	20.0	33.5	4.0	M6	6.5	105 ± 0.7	52.0
WA; WG	50	20.0	M16 x 1.5	40.0	32.0	37.0	25.0	36.0	4.0	M8	8.0	106 ± 0.7	65.0
WA; WG	63	20.0	M16 x 1.5	45.0	32.0	37.0	25.0	38.0	4.0	M8	8.0	121 ± 0.8	75.0
WA; WG	80	25.0	M20 x 1.5	45.0	40.0	46.0	30.0	41.5	4.0	M10	10.0	128 ± 0.8	95.0
WA; WG	100	25.0	M20 x 1.5	55.0	40.0	51.0	35.0	41.5	4.0	M10	10.0	138 ± 1	115.0

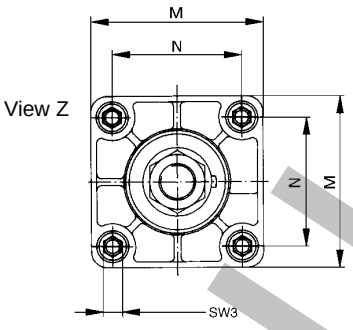
TYPE	PISTON DIAMETER	N	P	Q	R	S min.	T	U	V	W -0.1	X	SW1	SW2	SW3
WA; WG	32	32.5 ± 0.5	5.0	5.0	G 1/8	16.0	5.0	14.0	42.5	4.0	15.0	10	17	6
WA; WG	40	38.0 ± 0.5	6.0	6.0	G 1/4	16.0	5.0	15.0	50.5	4.0	19.0	13	19	6
WA; WG	50	46.5 ± 0.6	6.0	8.0	G 1/4	16.0	6.0	15.0	60.0	4.0	22.0	16	24	8
WA; WG	63	56.5 ± 0.7	9.5	8.0	G 3/8	16.0	6.0	20.0	70.0	4.0	30.0	16	24	8
WA; WG	80	72.0 ± 0.7	9.5	10.0	G 3/8	16.0	7.5	20.0	88.0	4.0	30.0	21	30	10
WA; WG	100	89.0 ± 0.7	12.0	10.0	G 1/2	16.0	7.5	25.0	106.0	4.0	27.0	21	30	10

Profile Version

Double Acting Cylinder with/without Sensor, Double Rod End, Types WB or WH



X=Cushing Length



Repair Kits

CYLINDER TYPE	ORDER CODE
WB032/... ↓ WB100/...	VB032/RK ↓ VB100/RK
WH032/... ↓ WH100/...	VH032/RK ↓ VH100/RK

Dimensions (mm)

TYPE	PISTON DIAMETER	A Ø	B	C Ø e11	D ±0.3	E ±0.9	F ±0.1	G	H	J	K	L
WB; WH	32	12.0	M10 x 1.25	30.0	22.0	26.0	16.0	33.0	4.0	M6	6.0	94 ± 0.4
WB; WH	40	16.0	M12 x 1.25	35.0	24.0	30.0	20.0	33.5	4.0	M6	6.5	105 ± 0.7
WB; WH	50	20.0	M16 x 1.5	40.0	32.0	37.0	25.0	36.0	4.0	M8	8.0	106 ± 0.7
WB; WH	63	20.0	M16 x 1.5	45.0	32.0	37.0	25.0	38.0	4.0	M8	8.0	121 ± 0.8
WB; WH	80	25.0	M20 x 1.5	45.0	40.0	46.0	30.0	41.5	4.0	M10	10.0	128 ± 0.8
WB; WH	100	25.0	M20 x 1.5	55.0	40.0	51.0	35.0	41.5	4.0	M10	10.0	138 ± 1

TYPE	PISTON DIAMETER	M	N	P	Q	R	S min.	T	U	V	X	SW1	SW2	SW3
WB; WH	32	47.0	32.5 ± 0.5	5.0	5.0	G 1/8	16.0	5.0	14.0	42.5	15.0	10	17	6
WB; WH	40	52.0	38.0 ± 0.5	6.0	6.0	G 1/4	16.0	5.0	15.0	50.5	19.0	13	19	6
WB; WH	50	65.0	46.5 ± 0.6	6.0	8.0	G 1/4	16.0	6.0	15.0	60.0	22.0	16	24	8
WB; WH	63	75.0	56.5 ± 0.7	9.5	8.0	G 3/8	16.0	6.0	20.0	70.0	30.0	16	24	8
WB; WH	80	95.0	72.0 ± 0.7	9.5	10.0	G 3/8	16.0	7.5	20.0	88.0	30.0	21	30	10
WB; WH	100	115.0	89.0 ± 0.7	12.0	10.0	G 1/2	16.0	7.5	25.0	106.0	27.0	21	30	10

ISO/VDMA Series
Metric Standard Interchangeable

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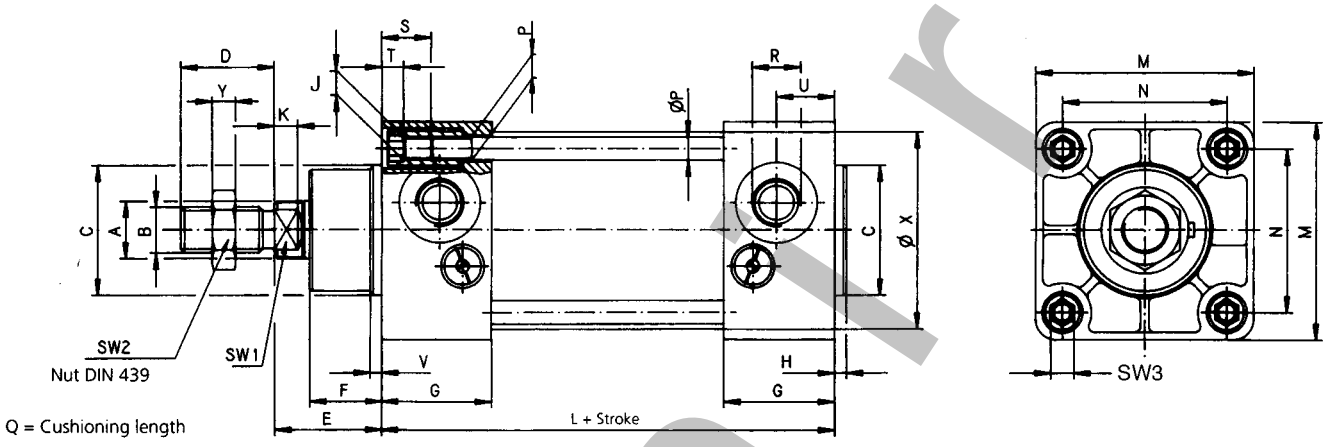
Tie-Rod Version

Double Acting Cylinder, Single Rod End, Types ZA or ZG



Repair Kits

CYLINDER TYPE	ORDER CODE
ZA032/... ↓ ZA250/...	VA032/RK ↓ VA250/RK
ZG032/... ↓ ZG250/...	VG032/RK ↓ VG250/RK

Dimensions (mm)

TYPE	PISTON DIAMETER	A Ø	B	C Ø e11	D ±0.3	E ±0.9	F ±0.1	G	H	J	K	L	M
ZA; ZG	32	12.0	M10 x 1.25	30.0	22.0	26.0	16.0	33.0	4.0	M6	6.0	94 ± 0.4	47.0
ZA; ZG	40	16.0	M12 x 1.25	35.0	24.0	30.0	20.0	33.5	4.0	M6	6.5	105 ± 0.7	52.0
ZA; ZG	50	20.0	M16 x 1.5	40.0	32.0	37.0	25.0	36.0	4.0	M8	8.0	106 ± 0.7	65.0
ZA; ZG	63	20.0	M16 x 1.5	45.0	32.0	37.0	25.0	38.0	4.0	M8	8.0	121 ± 0.8	75.0
ZA; ZG	80	25.0	M20 x 1.5	45.0	40.0	46.0	30.0	41.5	4.0	M10	10.0	128 ± 0.8	95.0
ZA; ZG	100	25.0	M20 x 1.5	55.0	40.0	51.0	35.0	41.5	4.0	M10	10.0	138 ± 1	115.0
ZA; ZG	125	32.0	M27 x 2	60.0	54.0	65.0	40.0	45.0	5.0	M12	13.0	160 ± 1	140.0
ZA; ZG	160	40.0	M36 x 2	65.0	72.0	80.0	50.0	47.5	8.0	M16	16.0	180 ± 1.1	180.0
ZA; ZG	200	40.0	M36 x 2	75.0	72.0	95.0	65.0	47.5	8.0	M16	16.0	180 ± 1.6	220.0

TYPE	PISTON DIAMETER	N	P	Q	R	S min.	T	U	V	W	XØ	Y	SW1	SW2	SW3
ZA; ZG	32	32.5 ± 0.5	M6	15	G 1/8	16.0	5.0	14.0	4	6.0	36	5	10	17	6
ZA; ZG	40	38.0 ± 0.5	M6	19	G 1/4	16.0	5.0	15.0	4	6.0	45	6	13	19	6
ZA; ZG	50	46.5 ± 0.6	M8	22	G 1/4	16.0	6.0	15.0	4	8.0	55	8	16	24	8
ZA; ZG	63	56.5 ± 0.7	M8	30	G 3/8	16.0	6.0	20.0	4	8.0	68	8	16	24	8
ZA; ZG	80	72.0 ± 0.7	M10	30	G 3/8	16.0	7.5	20.0	4	10.0	86	10	21	30	10
ZA; ZG	100	89.0 ± 0.7	M10	27	G 1/2	16.0	7.5	25.0	4	10.0	107	10	21	30	10
ZA; ZG	125	110.0 ± 1	M12	27	G 1/2	20.0	10.0	30.0	5.5	12.0	132	13.5	27	41	12
ZA; ZG	160	140.0 ± 1	M16	36	G 3/4	24.0	-	27.5	25	16.0	170	18	36	55	-
ZA; ZG	200	175.0 ± 1	M16	39	G 3/4	24.0	-	27.5	25	16.0	210	18	36	55	-

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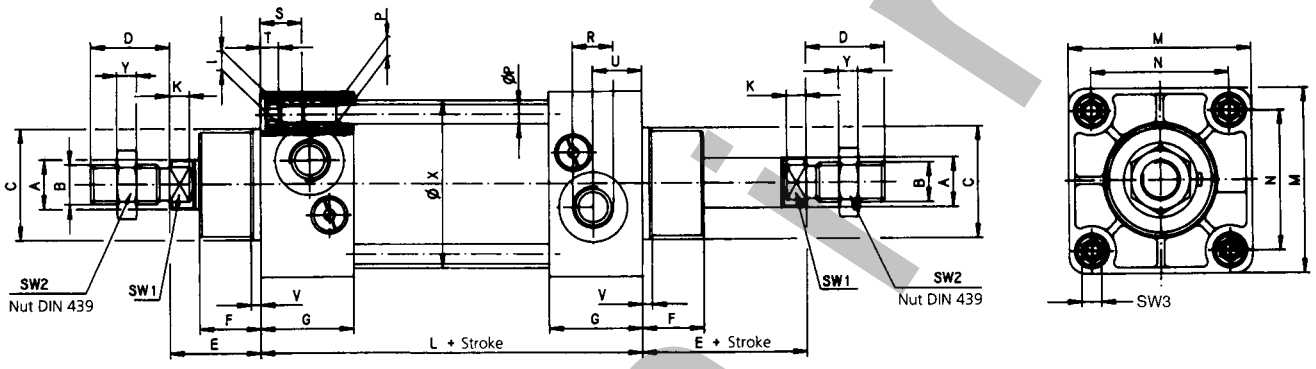
ISO/VDMA Series
Metric Standard Interchangeable

Tie-Rod Version

Double Acting Cylinder, Double Rod End, ZB or ZH



Repair Kits

CYLINDER TYPE	ORDER CODE
ZB032/... ↓ ZB250/...	VB032/RK ↓ VB250/RK
ZH032/... ↓ ZH250/...	VH032/RK ↓ VH250/RK

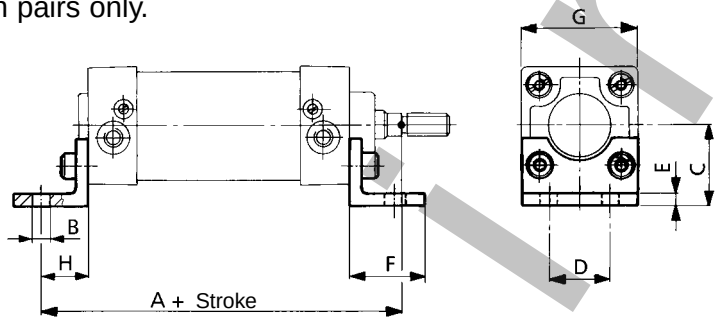
Dimensions (mm)

TYPE	PISTON DIAMETER	A Ø	B	C Ø e11	D ±0.3	E ±0.9	F ±0.1	G	V	J	K	L	M
ZB; ZH	32	12.0	M10 x 1.25	30.0	22.0	26.0	16.0	33.0	4.0	M6	6.0	94 ± 0.4	47.0
ZB; ZH	40	16.0	M12 x 1.25	35.0	24.0	30.0	20.0	33.5	4.0	M6	6.5	105 ± 0.7	52.0
ZB; ZH	50	20.0	M16 x 1.5	40.0	32.0	37.0	25.0	36.0	4.0	M8	8.0	106 ± 0.7	65.0
ZB; ZH	63	20.0	M16 x 1.5	45.0	32.0	37.0	25.0	38.0	4.0	M8	8.0	121 ± 0.8	75.0
ZB; ZH	80	25.0	M20 x 1.5	45.0	40.0	46.0	30.0	41.5	4.0	M10	10.0	128 ± 0.8	95.0
ZB; ZH	100	25.0	M20 x 1.5	55.0	40.0	51.0	35.0	41.5	4.0	M10	10.0	138 ± 1	115.0
ZB; ZH	125	32.0	M27 x 2	60.0	54.0	65.0	40.0	45.0	5.5	M12	13.0	160 ± 1	140.0
ZB; ZH	160	40.0	M36 x 2	65.0	72.0	80.0	50.0	47.5	25.0	M16	16.0	180 ± 1.1	180.0
ZB; ZH	200	40.0	M36 x 2	75.0	72.0	95.0	65.0	47.5	25.0	M16	16.0	180 ± 1.6	220.0

TYPE	PISTON DIAMETER	N	P	Y	R	S min.	T	U	ØX	Q	SW1	SW2	SW3
ZB; ZH	32	32.5 ± 0.5	M6	5.0	G 1/8	16.0	5.0	14.0	36.0	15.0	10	17	6
ZB; ZH	40	38.0 ± 0.5	M6	6.0	G 1/4	16.0	5.0	15.0	45.0	19.0	13	19	6
ZB; ZH	50	46.5 ± 0.6	M8	8.0	G 1/4	16.0	6.0	15.0	55.0	22.0	16	24	8
ZB; ZH	63	56.5 ± 0.7	M8	8.0	G 3/8	16.0	6.0	20.0	68.0	30.0	16	24	8
ZB; ZH	80	72.0 ± 0.7	M10	10.0	G 3/8	16.0	7.5	20.0	86.0	30.0	21	30	10
ZB; ZH	100	89.0 ± 0.7	M10	10.0	G 1/2	16.0	7.5	25.0	107.0	27.0	21	30	10
ZB; ZH	125	110.0 ± 1	M12	13.5	G 1/2	20.0	10.0	30.0	132.0	27.0	27	41	12
ZB; ZH	160	140.0 ± 1	M16	18.0	G 3/4	24.0	-	27.5	170.0	34.0	36	55	-
ZB; ZH	200	175 ± 1	M16	18.0	G 3/4	24.0	-	27.5	210.0	34.0	36	55	-

Mounting Parts

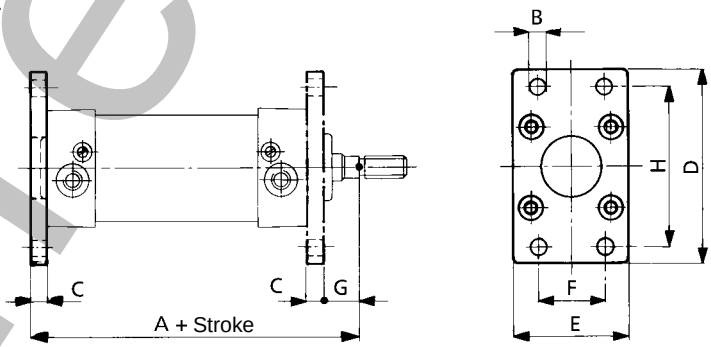
Foot Brackets to VDMA 24562 T.2 (MS1)
for Cylinder with Piston Diameter 32 mm -- 200 mm
Includes bolts
Foot brackets are supplied in pairs only.
Material: Steel



Dimensions (mm)

PISTON DIA.	A	B Ø H14	C Js15	D Js 14	E ±0.5	F	G -0.2	H ±0.2	EACH BRACKET WEIGHT APPROX. (kg)	ORDER CODE
32	144.0	7.0	32.0	32.0	4.0	35.0	45.0	24.0	0.066	VC01/032
40	163.0	9.0	36.0	36.0	4.0	36.0	52.0	28.0	0.078	VC01/040
50	175.0	9.0	45.0	45.0	5.0	47.0	65.0	32.0	0.168	VC01/050
63	190.0	9.0	50.0	50.0	5.0	45.0	75.0	32.0	0.190	VC01/063
80	215.0	12.0	63.0	63.0	6.0	55.0	95.0	41.0	0.382	VC01/080
100	230.0	14.0	71.0	75.0	6.0	57.0	115.0	41.0	0.452	VC01/100
125	270.0	16.0	90.0	90.0	8.0	70.0	140.0	45.0	1.090	VC01/125
160	320.0	18.0	115.0	115.0	10.0	80.0	180.0	60.0	1.188	VC01/160
200	345.0	22.0	135.0	135.0	12.0	90.0	220.0	70.0	3.450	VC01/200

Front and Rear Flange to VDMA 24562 T.2 (MF1, MF2)
for Cylinder with Piston Diameter 32 mm - 250 mm
Includes bolts
Material: Steel to ISO 6431

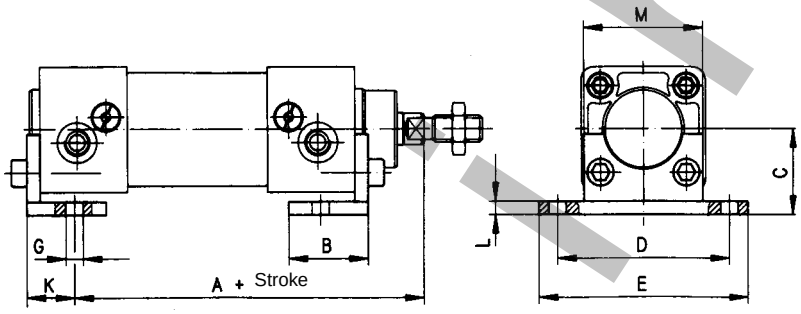


Dimensions (mm)

PISTON DIA.	A	B H13	C ±0.2	D	E	F Js14	G	H Js14	WEIGHT APPROX. (kg)	ORDER CODE
32	130.0	7.0	10.0	80.0	45.0	32.0	16.0	64.0	0.192	VC02/032
40	145.0	9.0	10.0	90.0	52.0	36.0	20.0	72.0	0.250	VC02/040
50	155.0	9.0	12.0	110.0	65.0	45.0	25.0	90.0	0.480	VC02/050
63	170.0	9.0	12.0	120.0	75.0	50.0	25.0	100.0	0.620	VC02/063
80	190.0	12.0	16.0	150.0	95.0	63.0	30.0	126.0	1.415	VC02/080
100	205.0	14.0	16.0	170.0	115.0	75.0	35.0	150.0	1.985	VC02/100
125	245.0	16.0	20.0	205.0	140.0	90.0	45.0	180.0	3.750	VC02/125
160	280.0	18.0	20.0	260.0	180.0	115.0	60.0	230.0	6.350	VC02/160
200	300.0	22.0	25.0	300.0	220.0	135.0	70.0	270.0	11.300	VC02/200
250*	330.0	26.0	25.0	390.0	280.0	165.0	80.0	330.0	20.100	VC02/250

Mounting Parts

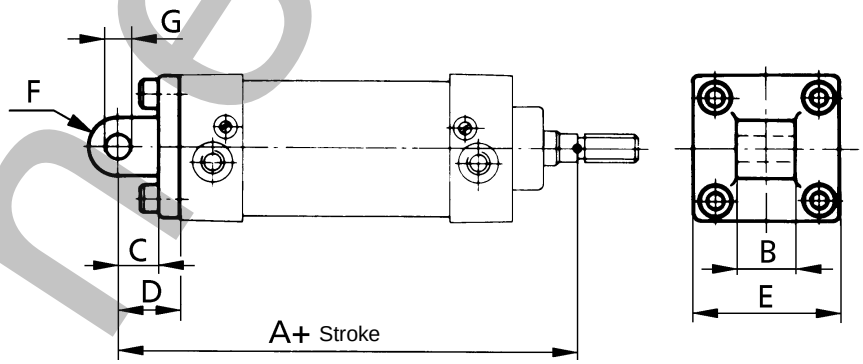
Foot Brackets (plain) for Cylinders with Piston Diameter 32 mm to 100 mm
Includes bolts
Foot brackets are supplied in pairs only.
Material: Steel



Dimensions (mm)

PISTON DIA.	A	B H14	C Js15	D Js14	E -0.2	F +1	G ±0.2	K ±0.3	EACH BRACKET WEIGHT APPROX (kg)	ORDER CODE
32	107.0	30	32.0	65.0	79.0	30.0	6.5	18	0.122	VC03/032
40	122.0	30	36.0	75.0	90.0	30.0	6.5	18	0.146	VC03/040
50	127.0	35	45.0	90.0	110.0	35.0	8.5	21	0.218	VC03/050
63	142.0	35	50.0	100.0	120.0	35.0	8.5	21	0.238	VC03/063
80	153.0	45	63.0	128.0	153.0	45.0	10.5	27	0.488	VC03/080
100	168.0	45	71.0	148.0	178.0	45.0	10.5	27	0.580	VC03/100

Oscillating Brackets to VDMA 24562 T.2 (MP4) with Lugs
for Cylinder with Piston Diameter 32 mm to 200 mm
Includes bolts
Material: Aluminum

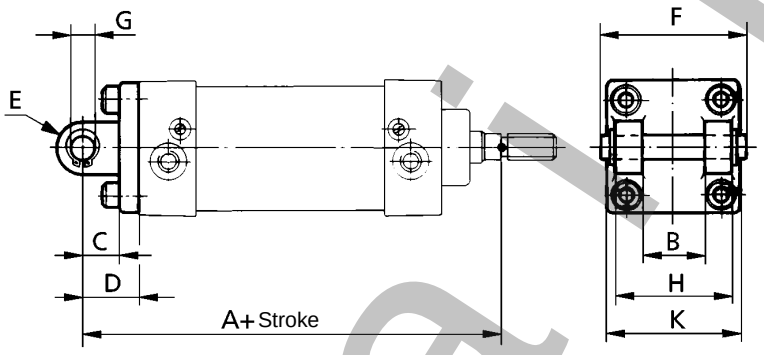


Dimensions (mm)

PISTON DIA.	A	B -0.2 -0.6	C	D ±0.1	E	F	G H9	WEIGHT APPROX. (kg)	ORDER CODE
32	142.0	26.0	13.0	22.0	45.0	10.0	10.0	0.140	VC07/032
40	160.0	28.0	16.0	25.0	52.0	12.0	12.0	0.230	VC07/040
50	170.0	32.0	16.0	27.0	65.0	12.0	12.0	0.336	VC07/050
63	190.0	40.0	21.0	32.0	75.0	16.0	16.0	0.546	VC07/063
80	210.0	50.0	22.0	36.0	95.0	16.0	16.0	1.190	VC07/080
100	230.0	60.0	27.0	41.0	115.0	20.0	20.0	1.840	VC07/100
125	275.0	70.0	30.0	50.0	140.0	25.0	25.0	3.550	VC07/125
160	315.0	90.0	35.0	55.0	180.0	25.0	30.0	7.020	VC07/160
200	335.0	90.0	35.0	60.0	220.0	25.0	30.0	9.350	VC07/200

Mounting Parts

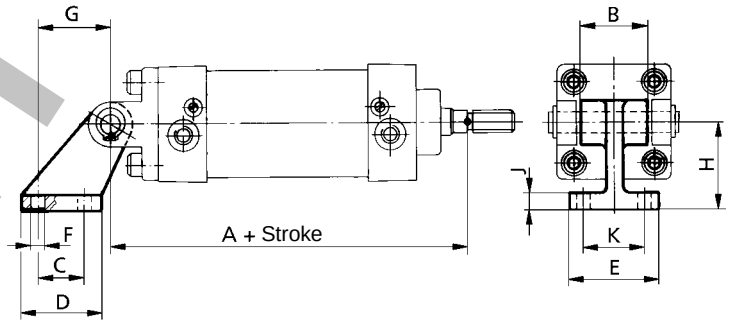
Oscillating Brackets to VDMA 24562 T.2 (MP2) Clevis
for Cylinders with Piston Diameter 32 mm to 200 mm
Includes pin and bolts
Material: Aluminum; pin made from steel



Dimensions (mm)

PISTON DIA.	A	B H14	C	D ±0.2	E	F	G H9	H h14	K	WEIGHT APPROX. (kg)	ORDER CODE
32	142.0	26.0	13.0	22.0	10.0	53.0	10.0	45.0	45.0	0.140	VC08/032
40	160.0	28.0	16.0	25.0	12.0	60.0	12.0	52.0	52.0	0.230	VC08/040
50	170.0	32.0	16.0	27.0	12.0	68.0	12.0	60.0	65.0	0.336	VC08/050
63	190.0	40.0	21.0	32.0	16.0	78.0	16.0	70.0	75.0	0.546	VC08/063
80	210.0	50.0	22.0	36.0	18.0	98.0	16.0	90.0	95.0	1.190	VC08/080
100	230.0	60.0	27.0	41.0	20.0	118.0	20.0	110.0	115.0	1.840	VC08/100
125	275.0	70.0	30.0	50.0	25.0	139.0	25.0	130.0	140.0	3.550	VC08/125
160	315.0	90.0	35.0	55.0	25.0	178.0	30.0	170.0	180.0	5.750	VC08/160
200	335.0	90.0	35.0	60.0	25.0	178.0	30.0	170.0	220.0	8.900	VC08/200

Right-Angle Articulated Joint to VDMA 24562 T.2 (Cetop RP 107 P)
for Cylinders with Piston Diameter 32 mm to 100 mm
Material: Steel

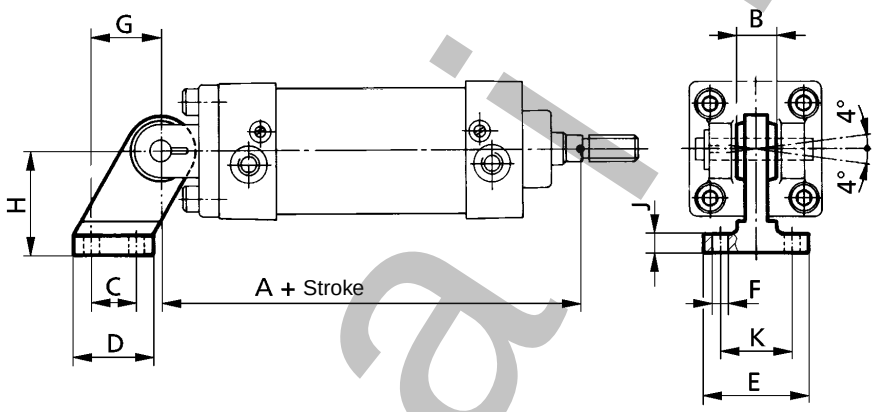


Dimensions (mm)

PISTON DIA.	A	B -0.2 -0.6	C Js14	D	E	F Ø	G Js14	H Js15	J	K Js15	WEIGHT APPROX. (kg)	ORDER CODE
32	142.0	26.0	18.0	31.0	51.0	6.5	21.0	32.0	8.0	38.0	0.158	VC11/032
40	160.0	28.0	22.0	35.0	54.0	6.5	24.0	36.0	10.0	41.0	0.238	VC11/040
50	170.0	32.0	30.0	45.0	65.0	6.5	33.0	45.0	12.0	50.0	0.418	VC11/050
63	190.0	40.0	35.0	50.0	67.0	6.5	37.0	50.0	12.0	52.0	0.526	VC11/063
80	210.0	50.0	40.0	60.0	86.0	8.5	47.0	63.0	14.0	66.0	1.055	VC11/080
100	230.0	60.0	50.0	70.0	96.0	8.5	55.0	71.0	15.0	76.0	1.360	VC11/100

Mounting Parts

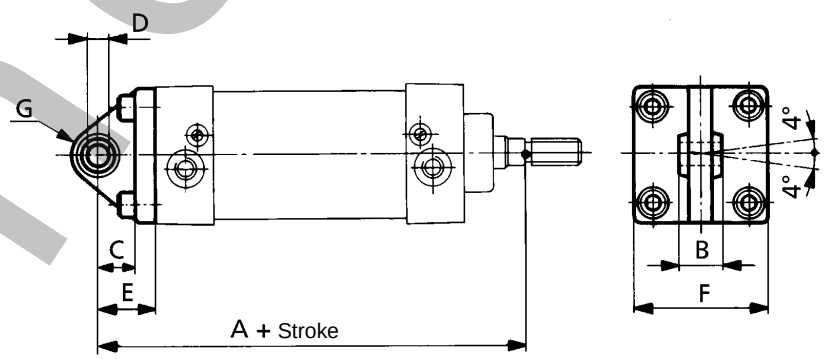
Right-Angle Articulated Joint with Spherical Bushing to VDMA 24562 T.2
for Cylinders with Piston Diameter 32 mm to 100 mm
Material: Steel



Dimensions (mm)

PISTON DIA.	A	B -0.1	C Js14	D	E	F Ø	G Js14	H Js15	J	K Js14	WEIGHT APPROX. (kg)	ORDER CODE
32	142.0	14.0	18.0	31.0	51.0	6.5	21.0	32.0	8.0	38.0	0.178	VC12/032
40	160.0	16.0	22.0	35.0	54.0	6.5	24.0	36.0	10.0	41.0	0.268	VC12/040
50	170.0	21.0	30.0	45.0	65.0	8.5	33.0	45.0	12.0	50.0	0.458	VC12/050
63	190.0	21.0	35.0	50.0	67.0	8.5	37.0	50.0	12.0	52.0	0.550	VC12/063
80	210.0	25.0	40.0	60.0	86.0	10.5	47.0	63.0	14.0	66.0	0.970	VC12/080
100	230.0	25.0	50.0	70.0	96.0	10.5	55.0	71.0	15.0	76.0	1.326	VC12/100

Oscillating Joint Bracket (Spherical) for Cylinders
with Piston Diameter 32 mm to 100 mm
Includes bolts
Material: Steel

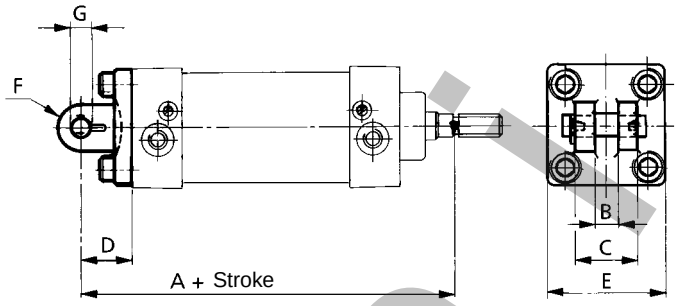


Dimensions (mm)

PISTON DIA.	A	B -0.1	C	D H7	E Js15	F	G max.	WEIGHT APPROX. (kg)	ORDER CODE
32	142.0	14.0	12.0	10.0	22.0	45.0	15.0	0.158	VC13/032
40	160.0	16.0	15.0	12.0	25.0	55.0	18.0	0.254	VC13/040
50	170.0	21.0	17.0	16.0	27.0	65.0	20.0	0.360	VC13/050
63	190.0	21.0	20.0	16.0	32.0	75.0	23.0	0.588	VC13/063
80	210.0	25.0	20.0	20.0	36.0	95.0	27.0	1.118	VC13/080
100	230.0	25.0	25.0	20.0	41.0	115.0	30.0	1.810	VC13/100

Mounting Parts

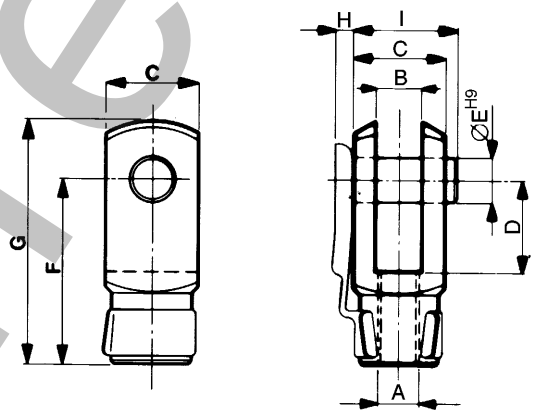
Oscillating Brackets to VDMA 24562 T.2, Fork Type Narrow Clevis
for Cylinders with Piston Diameter 32 mm to 100 mm
Includes pin and bolts
Material: Steel



Dimensions (mm)

PISTON DIA.	A	B H14	C	D ±0.2	E	F	G H7	WEIGHT APPROX. (kg)	ORDER CODE
32	142.0	14.0	34.0	22.0	45.0	11.0	10.0	0.140	VC14/032
40	160.0	16.0	40.0	25.0	55.0	13.0	12.0	0.230	VC14/040
50	170.0	21.0	45.0	27.0	65.0	18.0	16.0	0.336	VC14/050
63	190.0	21.0	51.0	32.0	75.0	18.0	18.0	0.546	VC14/063
80	210.0	25.0	65.0	38.0	95.0	22.0	20.0	1.190	VC14/080
100	230.0	25.0	75.0	41.0	115.0	22.0	20.0	1.840	VC14/100

Rod Clevis for Cylinders with Piston Diameter 32 mm to 250 mm
Material: galvanized steel

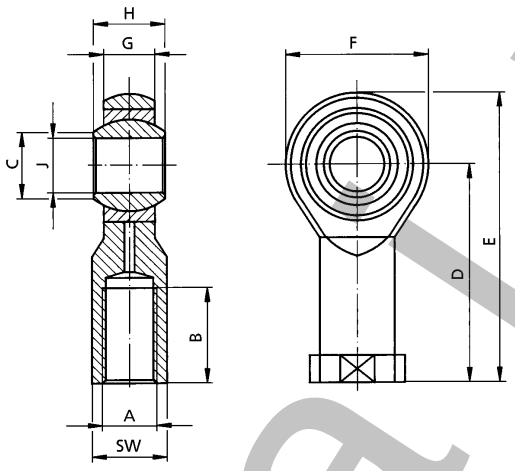


Dimensions (mm)

PISTON DIA.	A	B	C	D	E Ø	F	G	H	J	WEIGHT APPROX. (kg)	ORDER CODE
32	M10 x 1.25	10.0	20.0	20.0	10.0 H9	40.0	52.0	3.0	23.0	0.084	SC4/025
40	M12 x 1.25	12.0	24.0	24.0	12.0 H9	48.0	62.0	4.0	28.0	0.154	SC4/040
50/63	M16 x 1.5	16.0	32.0	32.0	16.0 H9	64.0	83.0	4.0	36.0	0.352	SC4/050
80/100	M20 x 1.5	20.0	40.0	40.0	20.0 H9	80.0	105.0	4.0	44.0	0.520	SC4/080
125	M27 x 2	30.0	55.0	54.0	30.0 H9	110.0	148.0	-	65.0	1.990	SC4/125
160/200	M36 x 2	35.0	70.0	72.0	35.0 H9	144.0	188.0	-	84.0	4.350	SC4/160
250	M42 x 2	40.2	85.0	84.0	40.0 H11	168.0	232.0	-	92.5	6.376	SC4/250

Mounting Parts

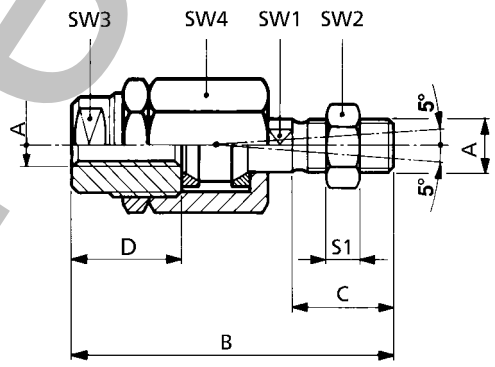
Oscillating Clevis for Cylinders with Piston Diameter 32 mm to 200 mm
Material: galvanized steel



Dimensions (mm)

PISTON DIA.	A	B	C Ø	D	E	F	G	H	J Ø H7	SW	WEIGHT APPROX. (kg)	ORDER CODE
32	M10 x 1.25	20.0	13.0	43.0	57.0	28.0	10.5	14.0	10.0	17	0.076	SC5/025
40	M12 x 1.25	22.0	15.5	50.0	66.0	32.0	12.0	16.0	12.0	19	0.115	SC5/040
50/63	M16 x 1.5	28.0	19.5	64.0	85.0	42.0	15.0	21.0	16.0	22	0.230	SC5/050
80/100	M20 x 1.5	33.0	24.5	77.0	102.0	50.0	18.0	25.0	20.0	30	0.415	SC5/080
125	M27 x 2	51.0	34.5	110.0	145.0	70.0	25.0	37.0	30.0	41	1.130	SC5/125
160/200	M36 x 2	56.0	37.7	125.0	165.0	80.0	28.0	43.0	35.0	50	1.600	SC5/160

Alignment Coupler for Cylinders with Piston Diameter 32 mm to 100 mm
Material: galvanized steel



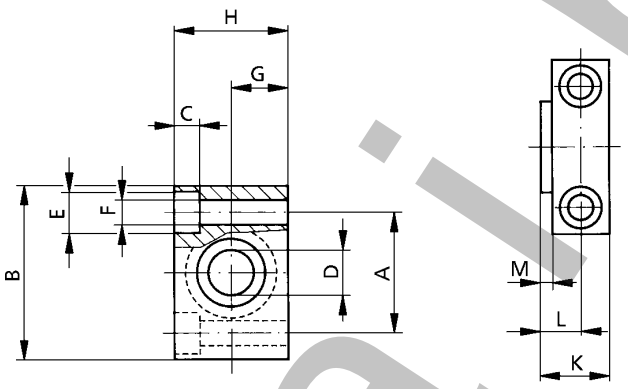
Max. 0.1 mm axial play

Dimensions (mm)

PISTON DIA.	A	B	C	D	S1	SW1	SW2	SW3	SW4	WEIGHT APPROX. (kg)	ORDER CODE
32	M10 x 1.25	72.0	20.0	26.0	6.0	12	17	19	30	0.210	SC16/032
40	M12 x 1.25	76.5	24.0	26.0	7.0	12	19	19	30	0.215	SC16/040
50/63	M16 x 1.5	108.0	32.0	34.0	8.0	19	24	30	42	0.650	SC16/050
80/100	M20 x 1.5	124.0	40.0	42.0	9.0	19	30	30	42	0.720	SC16/080

Mounting Parts

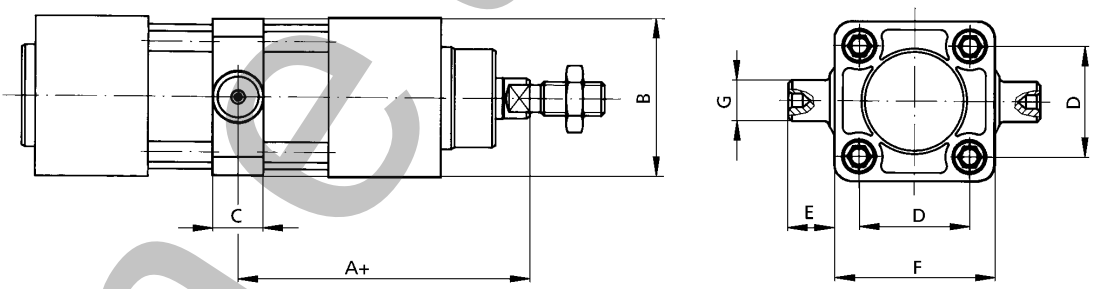
Mounting Block for Pivot to VDMA 24562 T.2 Only for Cylinders of Tie-Rod Version
Piston Diameter 32 mm to 200 mm
Mounting blocks are supplied in pairs only
Material: Aluminum; bearing bushing made from sintered bronze



Dimensions (mm)

PISTON DIA.	A ±0.1	B	C	D Ø H7	E Ø H13	F Ø H13	G ±0.1	H	K	L	M	WEIGHT APPROX. (kg)	ORDER CODE
32	32.0	46.0	6.8	12.0	11.0	6.6	15.0	30.0	15.0	7.5	3.0	0.100	VC15/032
40/50	36.0	55.0	9.0	16.0	15.0	9.0	18.0	36.0	18.0	9.0	3.0	0.150	VC15/040
63/80	42.0	65.0	11.0	20.0	18.0	11.0	20.0	40.0	20.0	10.0	3.0	0.234	VC15/063
100/125	50.0	75.0	13.0	25.0	20.0	14.0	25.0	50.0	25.0	12.5	3.5	0.435	VC15/100
160/200	60.0	92.0	17.5	32.0	26.0	18.0	30.0	60.0	36.0	18.5	4.0	0.850	VC15/160

Pivot to VDMA 24562 T.2 (MT4) Only for Cylinders of Tie-Rod Version
Piston Diameter 32 mm to 200 mm
Material: galvanized steel



Attention: Pivots are mounted on the center of the cylinder tube, dimension A + 1/2 stroke.
When another position is requested please indicate dimension of key surface of piston rod to center of pivot.

Dimensions (mm)

PISTON DIA.	A	B	C max.	D ±0.2	E h14	F h14	G Ø e9	WEIGHT APPROX. (kg)	ORDER CODE
32	73.0	46.0	15.0	32.5	12.0	50.0	12.0	0.128	ZC09/032
40	82.5	59.0	20.0	38.0	16.0	63.0	16.0	0.308	ZC09/040
50	90.0	69.0	20.0	46.5	16.0	75.0	16.0	0.370	ZC09/050
63	97.5	84.0	25.0	56.5	20.0	90.0	20.0	0.690	ZC09/063
80	110.0	102.0	25.0	72.0	20.0	110.0	20.0	0.894	ZC09/080
100	120.0	125.0	30.0	89.0	25.0	132.0	25.0	1.584	ZC09/100
125	145.0	155.0	32.0	110.0	25.0	160.0	25.0	2.600	ZC09/125
160	170.0	190.0	40.0	140.0	32.0	200.0	32.0	4.300	ZC09/160
200	185.0	240.0	40.0	175.0	32.0	250.0	32.0	7.450	ZC09/200

NOTE: Pivots are fastened strongly to the tie rod ex works. (Please refer to option C09 on *page 4*). Order codes in the left table are to be used when spare parts are to be ordered.