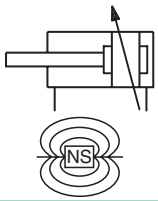
ANTI-CORROSIVE CYLINDERS WITH TIE RODS

Ø 32 to 125 mm - double acting - ISO 15552
with adjustable pneumatic cushioning

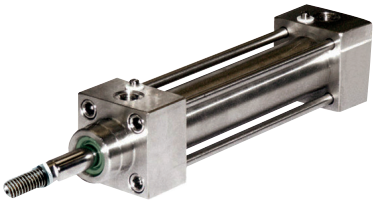


Series **S**

FEATURES

The cylinders are designed for use in corrosive environments:

- *chemical, salty or humid admospheres*
- *food processing, dairy and meat industries: high resistance to lactic acid and bactericidal sprays*



GENERAL

Detection	**Equipped or not for magnetic position detectors**
Fluid	Air or neutral gas, filtered, lubricated or not
Operating pressure	10 bar max.
Ambient temperature	-20°C to +80°C
Standards	ISO 15552

CONSTRUCTION

Barrel	Stainless steel 1.4301 AISI 304
Piston rod	Stainless steel 1.4571 AISI 316 TI
Tie rods	Ø 32 to 100 : Stainless steel 1.4571 AISI 316 TI Ø 125 : Stainless steel 1.4301 AISI 304
Front and rear covers	Stainless steel 1.4301 AISI 304
Piston rod nut	Stainless steel 1.4301 AISI 304
Seals	PUR (polyurethane) - NBR (nitrile)
Bearing	Sintered bronze
Cushioning	Adjustable pneumatic

SPECIFICATIONS

DEFINING THE CYLINDER CATALOGUE NUMBER

Standard version: tie rods with adjustable pneumatic cushioning, equipped for magnetic position detectors

To order, please specify:

■ CYLINDER : - The cylinder type (single rod, through rod)
- The cylinder diameter and its stroke

■ DETECTORS : The magnetic position detectors must be ordered separately :
- **IP69K Magnetic position detector**

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cushionning	position detection	type: single rod	type: through rod
With	Not Equipped	**E**	**F**
With	Equipped	**G**	**H**

cylinder Ø (1) type	Ø (mm)
032	32
040	40
050	50
063	63
080	80
100	100
125	125

(1) Ø 160 and 200mm on request.

Ø (mm)	standard stroke (mm) (2) (recommended standard strokes) 25	50	80	100	125	160	200	250	320	400	500
32	●	●	●	●	●	●	●	●	●	●	●
40	●	●	●	●	●	●	●	●	●	●	●
50-63	●	●	●	●	●	●	●	●	●	●	●
80	●	●	●	●	●	●	●	●	●	●	●
100	●	●	●	●	●	●	●	●	●	●	●
125	●	●	●	●	●	●	●	●	●	●	●

(2) Other strokes on request.

Ordering example:
- Cylinder single rod with pneumatic cushioning equipped for detectors = **G**
- Cylinder Ø 63 mm = **063**
- Stroke 80 mm = **080**

Ordering catalogue number: **SG063/008000000**

OPTIONS

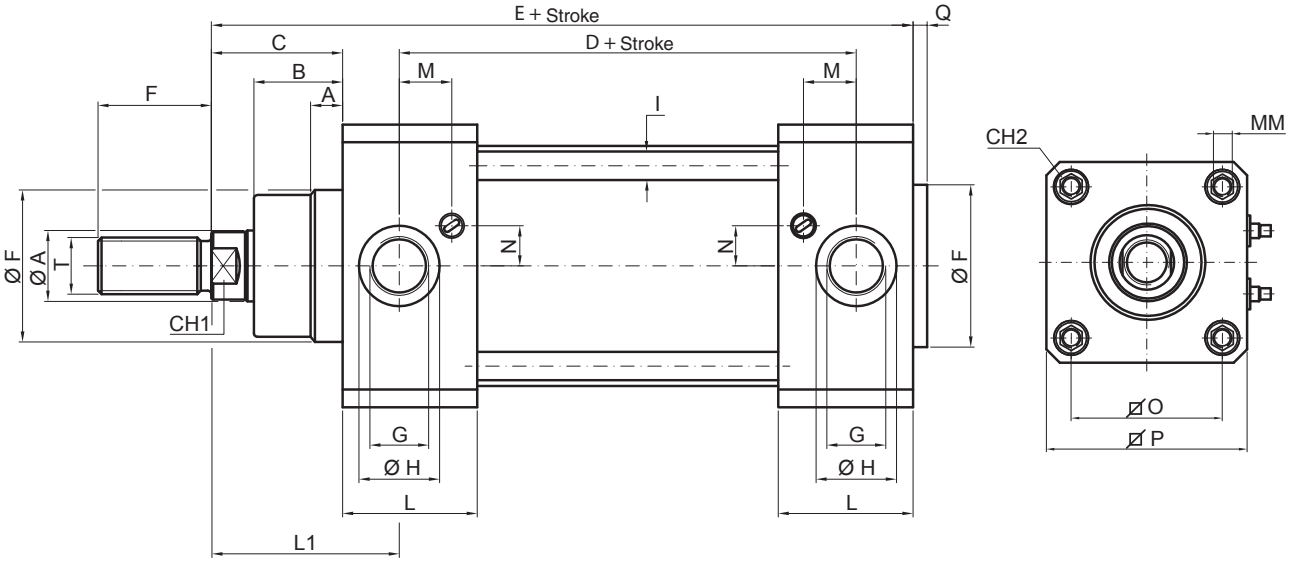
- Grease for food processing, replace the 2 last digits by **N2**, example : SG063/0080000**N2**

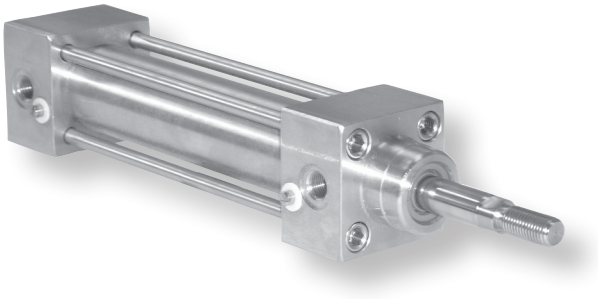
MOUNTINGS: see following pages

DIMENSIONS (mm)

Double Acting Cylinder with/without Magnetic Piston

Single Rod End, Types SE or SG





Thrust and retract forces (6 bar) single rod end

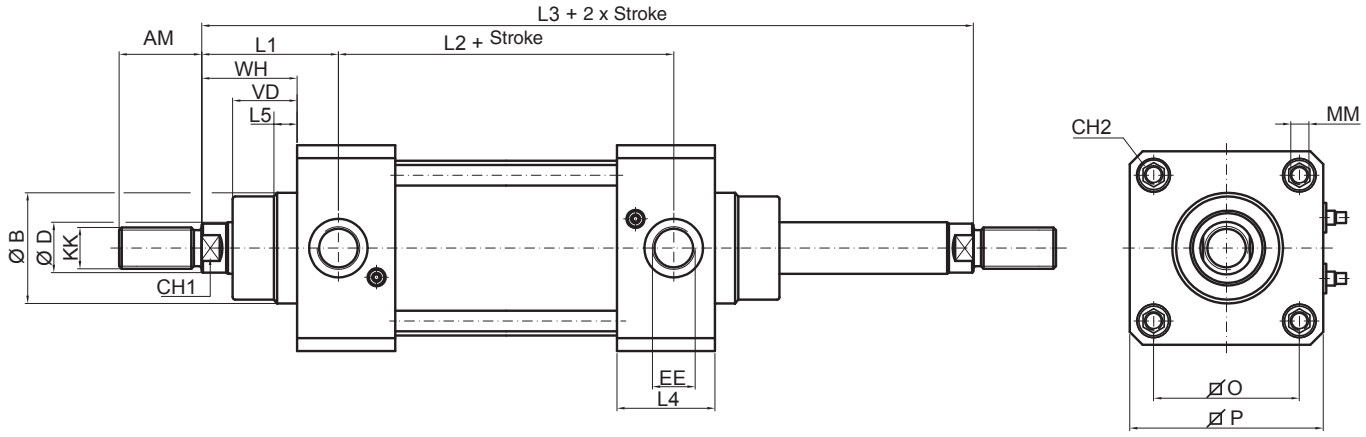
Ø (mm)	Thurst force (N)	Retract force (N)
32	458	394
40	716	601
50	1180	939
63	1775	1596
80	2863	2583
100	4474	4194
125	6991	6532

Type	Ø (mm)	Ø A	A	B	C	D	E	F	Ø F	G	L
SE; SG	32	12,0	9,0	18,0	26,0	67,0	121,0	22,0	30,0	G 1/8	30,8
SE; SG	40	16,0	9,0	22,0	30,0	77,0	135,0	24,0	35,0	G 1/4	33,0
SE; SG	50	20,0	9,0	25,5	37,0	78,0	143,0	32,0	40,0	G 1/4	33,7
SE; SG	63	20,0	9,0	25,0	37,0	89,0	158,0	32,0	45,0	G 3/8	38,0
SE; SG	80	25,0	9,0	35,0	46,0	96,0	174,0	40,0	45,0	G 3/8	40,0
SE; SG	100	25,0	9,0	38,0	51,0	102,0	189,0	40,0	55,0	G 1/2	43,5
SE; SG	125	32,0	11,0	46,0	65,0	124,0	225,0	54,0	60,0	G 1/2	53,2

type	Ø (mm)	L1	M	MM	N	O	P	Q	T	CH1	CH2
SE; SG	32	39,5	11,3	M6	6,0	32,5	50,0	4,0	M10x1,25	10	6
SE; SG	40	44,0	13,0	M6	8,0	38,0	55,0	4,0	M12x1,25	13	6
SE; SG	50	51,0	12,7	M8	11,8	46,5	65,0	4,0	M16x1,5	16	8
SE; SG	63	53,0	15,8	M8	11,7	56,5	75,0	4,0	M16x1,5	16	8
SE; SG	80	62,0	16,3	M10	15,5	72,0	95,0	4,0	M20x1,5	21	10
SE; SG	100	69,0	15,5	M10	15,5	89,0	110,0	4,0	M20x1,5	21	10
SE; SG	125	83,0	25,0	M12	19,0	110,0	139,0	6,0	M27x2,0	28	12

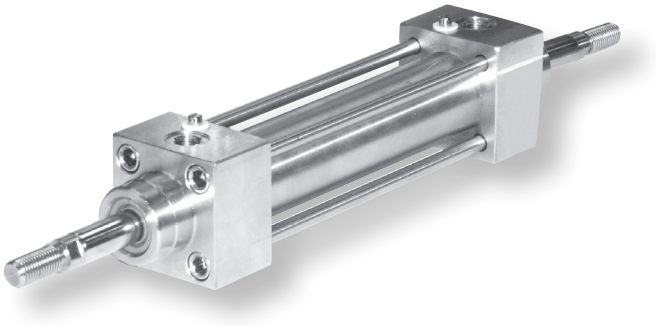
DIMENSIONS (mm)

Double Acting Cylinder with/without Magnetic Piston
Double Rod End, Types SF or SH



Retract and thrust forces (6 bar)
double rod end

Ø (mm)	thrust/retract force (N)
32	394
40	601
50	939
63	1596
80	2583
100	4194
125	6532



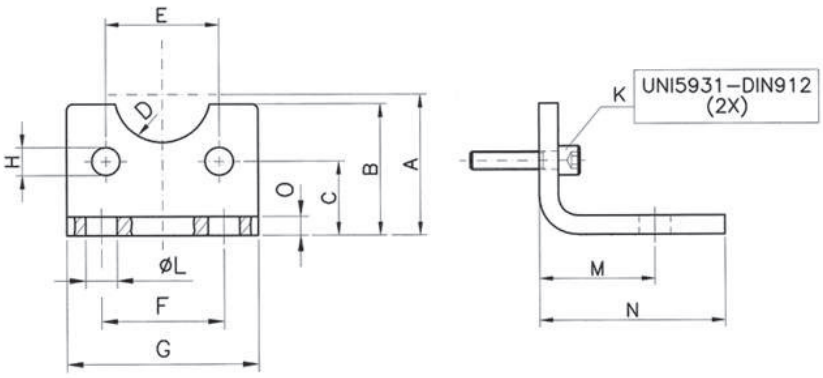
type	Ø (mm)	Ø D	L5	VD	WH	L2	L3	AM	Ø B	EE	L4
SF; SH	32	12,0	9,0	18,0	26,0	67,0	121,0	22,0	30,0	G 1/8	30,8
SF; SH	40	16,0	9,0	22,0	30,0	77,0	135,0	24,0	35,0	G 1/4	33,0
SF; SH	50	20,0	9,0	25,5	37,0	78,0	143,0	32,0	40,0	G 1/4	33,7
SF; SH	63	20,0	9,0	25,0	37,0	89,0	158,0	32,0	45,0	G 3/8	38,0
SF; SH	80	25,0	9,0	35,0	46,0	96,0	174,0	40,0	45,0	G 3/8	40,0
SF; SH	100	25,0	9,0	38,0	51,0	102,0	189,0	40,0	55,0	G 1/2	43,5
SF; SH	125	32,0	11,0	46,0	65,0	124,0	225,0	54,0	60,0	G 1/2	53,2

type	Ø (mm)	L1	M	MM	N	O	P	Q	T	CH1	CH2
SF; SH	32	39,5	11,3	M6	6,0	32,5	50,0	4,0	M10x1,25	10	6
SF; SH	40	44,0	13,0	M6	8,0	38,0	55,0	4,0	M12x1,25	13	6
SF; SH	50	51,0	12,7	M8	11,8	46,5	65,0	4,0	M16x1,5	16	8
SF; SH	63	53,0	15,8	M8	11,7	56,5	75,0	4,0	M16x1,5	16	8
SF; SH	80	62,0	16,3	M10	15,5	72,0	95,0	4,0	M20x1,5	21	10
SF; SH	100	69,0	15,5	M10	15,5	89,0	110,0	4,0	M20x1,5	21	10
SF; SH	125	83,0	25,0	M12	19,0	110,0	139,0	6,0	M27x2	28	12

DIMENSIONS (mm), **WEIGHT** (kg)

Foot Brackets (outside) to ISO 15552

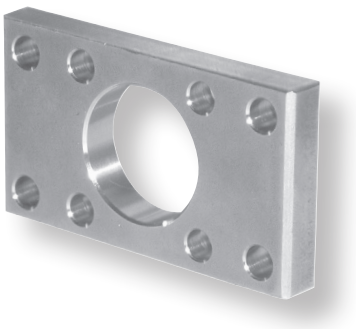
for Cylinder with Piston Diameter 32 to 125 mm
Stainless steel AISI 304

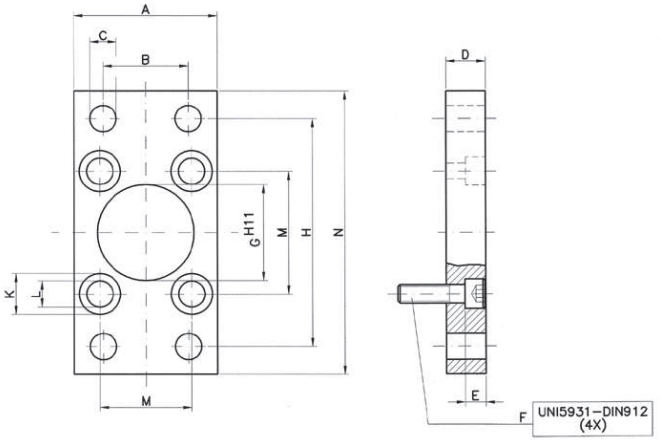


Ø (mm)	A	B	C	D	E	F	G	H	K	L	M	N	O	weight	catalogue number
32	32,0	30,0	15,75	R 15,0	32,5	32,0	45,0	7,0	M6x20	7,0	24,0	35,0	4,0	0,130	**VC01/032-VA**
40	36,0	30,0	17,0	R 17,5	38,0	36,0	52,0	7,0	M6x20	9,0	28,0	36,0	4,0	0,160	**VC01/040-VA**
50	45,0	36,0	21,75	R 2,00	46,5	45,0	65,0	9,0	M8x25	9,0	32,0	47,0	5,0	0,340	**VC01/050-VA**
63	50,0	35,0	21,75	R 22,5	56,5	50,0	75,0	9,0	M8x25	9,0	32,0	45,0	5,0	0,380	**VC01/063-VA**
80	63,0	47,0	27,0	R 22,5	72,0	63,0	95,0	11,0	M10x25	12,0	41,0	55,0	6,0	0,765	**VC01/080-VA**
100	71,0	53,0	26,5	R 27,5	89,0	75,0	115,0	11,0	M10x30	14,0	41,0	57,0	6,0	0,905	**VC01/100-VA**
125	90,0	70,0	35,0	R 30,0	110,0	90,0	140,0	14,0	M12x30	16,0	45,0	70,0	8,0	2,180	**VC01/125-VA**

Flange to ISO 15552

for Cylinder with Piston Diameter 32 to 125 mm
Stainless steel AISI 304





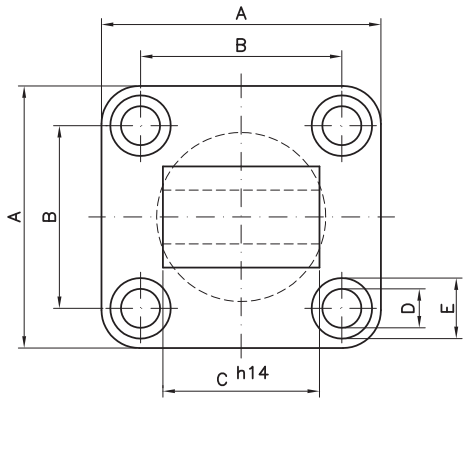
Ø (mm)	A	B	C	D	E	F	G	H	K	L	M	N	weight	catalogue number
32	45,0	32,0	7,0	10,0	6,5	M6x16	30,0	64,0	10,5	6,5	32,5	80,0	0,190	**VC02/032-VA**
40	52,0	36,0	9,0	10,0	6,5	M6x16	35,0	72,0	10,5	6,5	38,0	90,0	0,250	**VC02/040-VA**
50	65,0	45,0	9,0	12,0	8,5	M8x20	40,0	90,0	13,5	8,5	46,5	110,0	0,480	**VC02/050-VA**
63	75,0	50,0	9,0	12,0	8,5	M8x20	45,0	100,0	13,5	8,5	56,5	120,0	0,620	**VC02/063-VA**
80	95,0	63,0	12,0	16,0	10,5	M10x25	45,0	126,0	16,5	10,5	72,0	150,0	1,415	**VC02/080-VA**
100	115,0	75,0	14,0	16,0	10,5	M10x25	55,0	150,0	16,5	10,5	89,0	170,0	1,985	**VC02/100-VA**
125	140,0	90,0	16,0	20,0	9,5	M12x30	60,0	180,0	20,0	13,5	110,0	205,0	3,750	**VC02/125-VA**

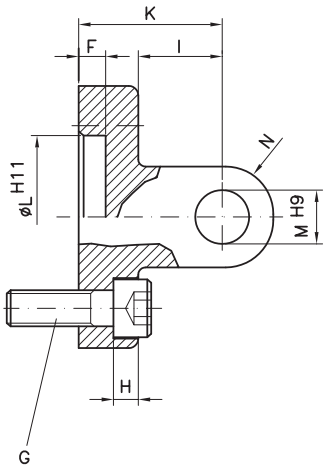
All leaflets are available on: **www.asco.com**

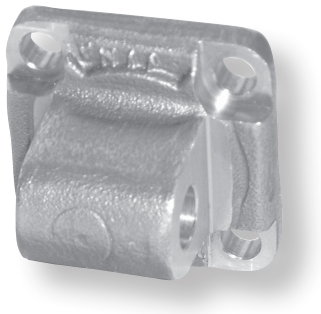
DIMENSIONS (mm), **WEIGHT** (kg)

Oscillating Brackets with Lugs to ISO 15552

for Cylinder with Piston Diameter 32 to 125 mm
Stainless steel AISI 304



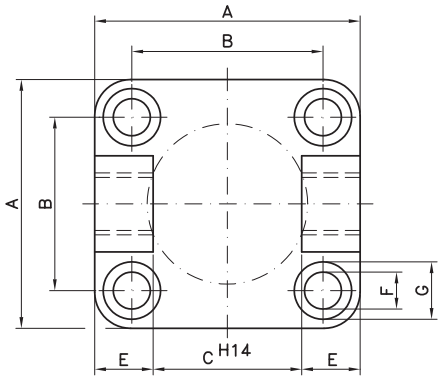


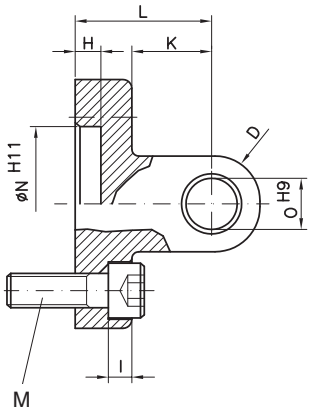


Ø (mm)	A	B	C	D	E	F	G	H	I	K	L	M	N	weight	catalogue number
32	45,0	32,5	26,0	6,6	11,0	5,0	M6x16	3,5	13,0	22,0	30,0	10,0	10,0	0,410	**VC07/032-VA**
40	52,0	38,0	28,0	6,6	11,0	5,0	M6x16	3,5	16,0	25,0	35,0	12,0	12,0	0,670	**VC07/040-VA**
50	65,0	46,5	32,0	9,0	15,0	5,0	M8x25	4,5	16,0	27,0	40,0	12,0	12,0	0,970	**VC07/050-VA**
63	75,0	56,5	40,0	9,0	15,0	5,0	M8x25	4,5	21,0	32,0	45,0	16,0	16,0	1,585	**VC07/063-VA**
80	95,0	72,0	50,0	11,0	18,0	5,0	M10x25	4,0	22,0	36,0	45,0	16,0	16,0	3,460	**VC07/080-VA**
100	115,0	89,0	60,0	11,0	18,0	5,0	M10x25	4,0	27,0	41,0	55,0	20,0	20,0	5,350	**VC07/100-VA**
125	140,0	110,0	70,0	14,0	20,0	7,0	M12x30	10,0	30,0	50,0	60,0	25,0	25,0	10,320	**VC07/125-VA**

Oscillating Brackets Fork Type to ISO 15552

for Cylinder with Piston Diameter 32 to 125 mm
Stainless steel AISI 304



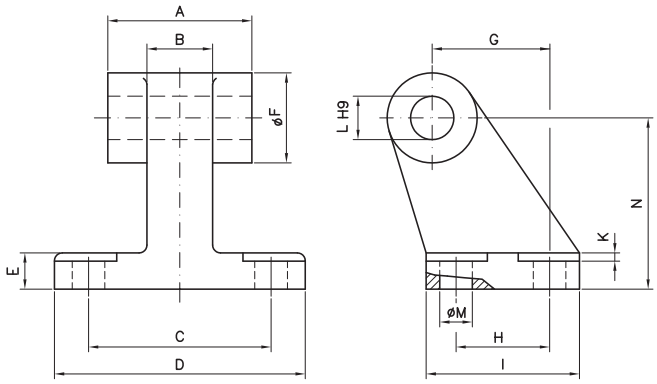


Ø (mm)	A	B	C	D	E	F	G	H	I	K	L	M	N	O	weight	catalogue number
32	45,0	32,5	26,0	10,0	9,5	6,6	11,0	5,0	3,5	13,0	22,0	M6x16	30,0	10,0	0,410	**VC08/032-VA**
40	52,0	38,0	28,0	12,0	12,0	6,6	11,0	5,0	3,5	16,0	25,0	M6x16	35,0	12,0	0,670	**VC08/040-VA**
50	65,0	46,5	32,0	12,0	14,0	9,0	15,0	5,0	4,5	16,0	27,0	M8x20	40,0	12,0	0,970	**VC08/050-VA**
63	75,0	56,5	40,0	16,0	15,0	9,0	15,0	5,0	4,5	21,0	32,0	M8x20	45,0	16,0	1,585	**VC08/063-VA**
80	95,0	72,0	50,0	16,0	20,0	11,0	18,0	5,0	4,0	22,0	36,0	M10x30	45,0	16,0	3,460	**VC08/080-VA**
100	115,0	89,0	60,0	20,0	25,0	11,0	18,0	5,0	4,0	27,0	41,0	M10x30	55,0	20,0	5,350	**VC08/100-VA**
125	140,0	110,0	70,0	25,0	30,0	14,0	20,0	7,0	10,0	30,0	50,0	M12x30	60,0	25,0	10,320	**VC08/125-VA**

DIMENSIONS (mm), **WEIGHT** (kg)

Right-angle Articulated Joint to ISO 15552

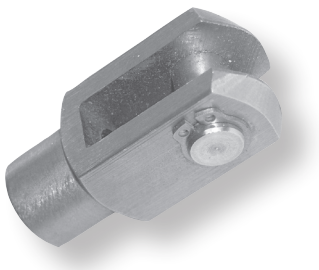
for Cylinder with Piston Diameter 32 to 125 mm
Stainless steel AISI 304

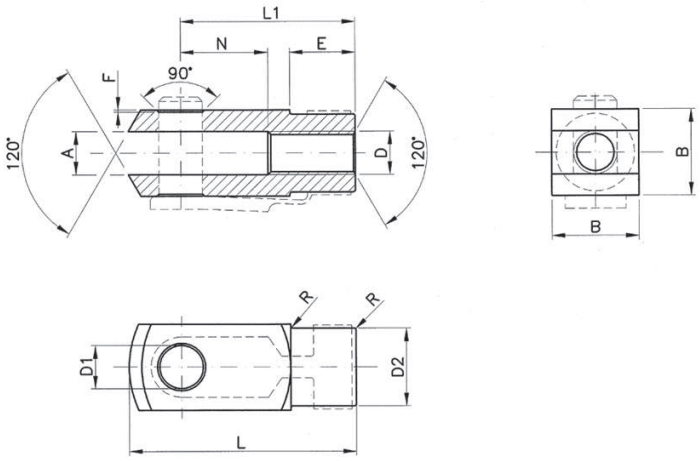


Ø (mm)	A	B	C	D	E	ØF	G	H	I	K	L	ØM	N	weight	catalogue number
32	26,0	10,0	38,0	51,0	8,0	20,0	21,0	18,0	31,0	1,6	10,0	6,6	32,0	0,160	**VC11/032-VA**
40	28,0	15,0	41,0	54,0	10,0	22,0	24,0	22,0	35,0	1,6	12,0	6,6	36,0	0,240	**VC11/040-VA**
50	32,0	16,0	50,0	65,0	12,0	26,0	33,0	30,0	45,0	1,6	12,0	9,0	45,0	0,420	**VC11/050-VA**
63	40,0	16,0	52,0	67,0	14,0	30,0	37,0	35,0	50,0	1,6	16,0	9,0	50,0	0,525	**VC11/063-VA**
80	50,0	20,0	66,0	86,0	14,0	30,0	47,0	40,0	60,0	2,5	16,0	11,0	63,0	1,055	**VC11/080-VA**
100	60,0	20,0	76,0	96,0	17,0	38,0	55,0	50,0	70,0	2,5	20,0	11,0	71,0	1,360	**VC11/100-VA**
125	70,0	30,0	94,0	124,0	20,0	45,0	70,0	60,0	90,0	3,2	25,0	14,0	90,0	2,500	**VC11/125-VA**

Rod Clevis

for Cylinder with Piston Diameter 32 to 125 mm
Stainless steel AISI 303



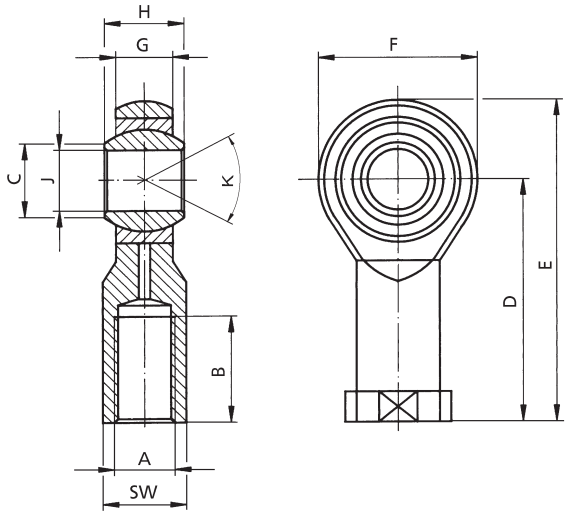


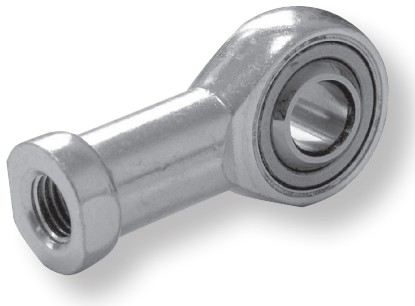
Ø (mm)	A	B	D	D1	D2	E	F	L	L1	N	R	weight	catalogue number
32	10,0	20,0	M10x1,25	10,0	18,0	15,0	0,5	52,0	40,0	20,0	0,5	0,090	**SC4/032-VA**
40	12,0	24,0	M12x1,25	12,0	20,0	18,0	0,5	62,0	48,0	24,0	0,5	0,150	**SC4/040-VA**
50/63	16,0	32,0	M16x1,5	16,0	26,0	24,0	1,0	83,0	64,0	32,0	1,0	0,340	**SC4/050-VA**
80/100	20,0	40,0	M20x1,5	20,0	34,0	30,0	1,0	105,0	80,0	40,0	1,0	0,690	**SC4/080-VA**
125	30,0	55,0	M27x2	30,0	48,0	38,0	1,0	148,0	110,0	54,0	1,0	1,820	**SC4/125-VA**

DIMENSIONS (mm), **WEIGHT** (kg)

Oscillating Clevis

for Cylinders with Piston Diameters 32 to 125 mm
Stainless steel AISI 304

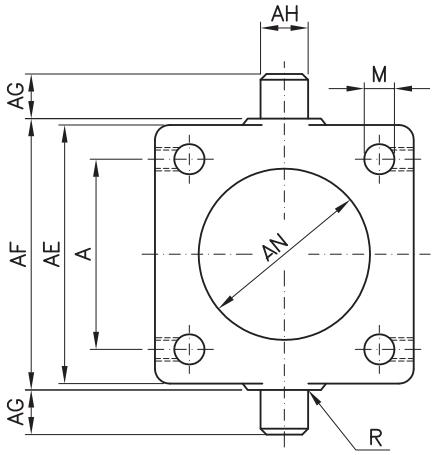


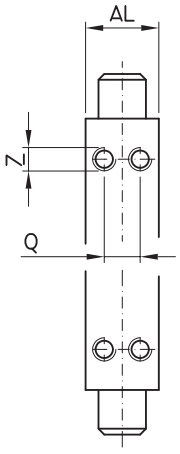


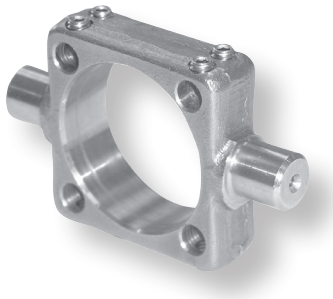
Ø (mm)	A	B	C Ø	D	E	F	G	H	J Ø H7	N	R	weight	catalogue number
32	M10x1,25	20,0	13,0	43,0	57,0	28,0	10,5	14,0	10,0	8°	17	0,075	**SC5/025-VA**
40	M12x1,25	22,0	15,5	50,0	66,0	32,0	12,0	16,0	12,0	8°	19	0,115	**SC5/040-VA**
50/63	M16x1,5	28,0	19,5	64,0	85,0	42,0	15,0	21,0	16,0	8°	22	0,230	**SC5/050-VA**
80/100	M20x1,5	33,0	24,5	77,0	102,0	50,0	18,0	25,0	20,0	8°	30	0,415	**SC5/080-VA**
125	M27x2	51,0	34,5	110,0	145,0	70,0	25,0	37,0	30,0	6°	41	1,130	**SC5/125-VA**

Pivot Variable

for Cylinder with Piston Diameter 32 to 125 mm
Stainless steel AISI 304







Ø (mm)	A	AE	AL	AH	AG	AF	AN	R	M	Q	Z	weight	catalogue number
32	32,5	46,0	15,0	12,0	12,0	50,0	37,0	1,0	6,25	7,0	M5	0,130	**ZCV9/032-VA**
40	38,0	59,0	20,0	16,0	16,0	63,0	46,0	1,5	6,25	8,0	M5	0,310	**ZCV9/040-VA**
50	46,5	69,0	20,0	16,0	16,0	75,0	56,0	1,6	8,25	8,0	M6	0,370	**ZCV9/050-VA**
63	56,5	84,0	25,0	20,0	20,0	90,0	69,0	1,6	8,25	12,0	M6	0,690	**ZCV9/063-VA**
80	72,0	102,0	25,0	20,0	20,0	110,0	87,0	1,6	10,25	12,0	M8	0,895	**ZCV9/080-VA**
100	89,0	125,0	30,0	25,0	25,0	132,0	107,0	2,0	12,25	15,0	M8	1,585	**ZCV9/100-VA**
125	110,0	155,0	32,0	25,0	25,0	160,0	133,0	2,0	12,25	15,0	M10	2,600	**ZCV9/125-VA**

Force Table for Double Acting Cylinders

with Piston Diameters 32 to 200 mm

Ø (mm)	Piston Rod Diameter (mm)		Effective Piston Surface (cm²)	Pressure (bar) 2	3	4	5	6	7	8	9	10
				Thrust or Tension (N)								
32	12	for thrust	8,0	141	212	282	353	424	494	565	636	706
		for tension	6,9	122	182	243	304	366	427	488	549	610
40	16	for thrust	12,6	223	334	445	555	667	780	893	1,001	1,109
		for tension	10,6	187	281	375	468	561	655	748	843	936
50	20	for thrust	19,6	346	520	692	865	1,040	1,207	1,383	1,560	1,727
		for tension	17,6	310	464	618	772	926	1,080	1,234	1,388	1,542
63	20	for thrust	31,2	551	827	1,099	1,373	1,648	1,933	2,207	2,482	2,757
		for tension	28,1	495	746	991	1,236	1,491	1,736	1,982	2,237	2,482
80	25	for thrust	50,3	889	1,334	1,776	2,217	2,668	3,110	3,551	4,002	4,444
		for tension	45,3	800	1,197	1,599	2,001	2,403	2,806	3,198	3,600	4,002
100	25	for thrust	78,5	1,383	2,080	2,776	3,463	4,159	4,856	5,543	6,239	6,926
		for tension	73,6	1,295	1,952	2,600	3,247	3,895	4,552	5,199	5,847	6,494
125	32	for thrust	122,7	2,168	3,247	4,336	5,415	6,497	7,583	8,662	9,751	10,830
		for tension	115,7	2,036	3,054	4,072	5,090	6,108	7,126	8,144	9,162	10,180
160	40	for thrust	201,1	3,551	5,327	7,102	8,878	10,654	12,429	14,205	15,980	17,756
		for tension	188,5	3,326	4,993	6,651	8,319	9,987	11,644	13,312	14,970	16,638
200	40	for thrust	314,2	5,563	8,319	11,095	13,871	16,648	19,424	22,190	24,966	27,743
		for tension	301,6	5,327	7,985	10,654	13,312	15,971	18,639	21,297	23,966	26,624

Friction losses are considered with 10%.

Table on Air Consumption for Double Acting Cylinders

with Piston Diameters 32 to 200 mm

Ø (mm)	Pressure (bar) 2	3	4	5	6	7	8	9	10
	Air Consumption (l) per 100 mm Stroke (uncompressed air)								
32	0,3	0,4	0,6	0,7	0,9	0,9	1,2	1,3	1,5
40	0,5	0,7	0,9	1,2	1,4	1,6	1,8	2,1	2,3
50	0,7	1,1	1,4	1,8	2,2	2,5	2,9	3,3	3,6
63	1,2	1,8	2,4	3,0	3,6	4,1	4,7	5,3	5,9
80	1,9	2,9	3,8	4,8	5,7	6,7	7,6	8,6	9,6
100	3,0	4,6	6,1	7,6	9,1	10,7	12,2	13,7	15,2
125	4,7	7,1	9,5	11,9	14,2	16,6	19,0	21,4	23,7
160	7,8	11,7	15,6	19,5	23,4	27,3	31,2	35,1	39,0
200	12,3	18,5	24,6	30,8	37,0	43,1	49,3	55,4	61,6

Value for 1 double stroke

Break-away Pressures for Double Acting Cylinders

with Piston Diameters 32 to 100 mm

Ø (mm)	Type WG (bar)	Type ZG (bar)
32	0,15-0,30 (0,70)	0,15-0,30 (0,80)
40	0,10-0,20 (0,60)	0,15-0,30 (0,70)
50	0,10-0,20 (0,60)	0,15-0,30 (0,60)
63	0,10-0,20 (0,40)	0,10-0,25 (0,50)
80	0,10-0,20 (0,40)	0,10-0,25 (0,50)
100	0,10-0,20 (0,40)	0,10-0,25 (0,50)

On request: break-away pressures Ø 125 mm to Ø 320 mm

The values in brackets refer to a cylinder which has remained in its final position for a longer period of time (several hours or days). Due to long rest periods the material elastomer can "flow" into the rough walls of the cylinder barrel and it can "interlock". For cylinders that are regularly in motion the first values without brackets are valid, as the "sticking effect" occurs only after a longer rest period.