

GS-8-V4A to GS-40-VA

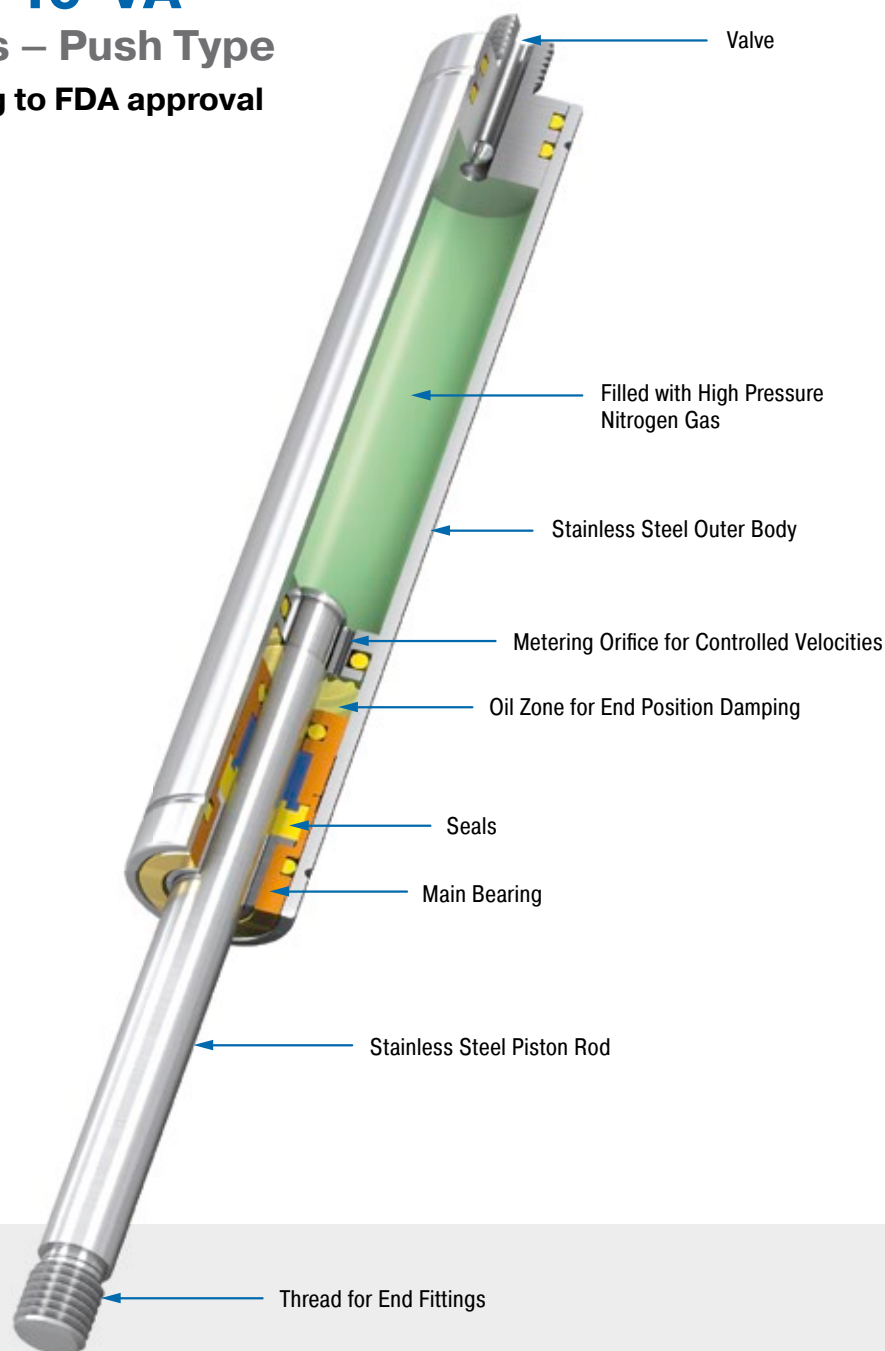
Industrial Gas Springs – Push Type

With food grade oil according to FDA approval

Protection against corrosion and superior optics for even more sophisticated requirements: Based on ACE's industrial gas push type springs GS-8 to 40 made of steel, these models combine all advantages of stainless steel: they look great and are rust free. They are filled with food-grade oil as standard, which conforms to the requirements of FDA 21 CFR 178.3570.

These ACE gas push type springs do not only look good, they also are available in various stroke lengths and possible extension forces. A comprehensive range of accessories in stainless steel guarantees easy assembly and a broad range of uses.

ACE industrial gas pressure springs made of stainless steel are used in the automotive sector, in industrial applications, mechanical engineering and medical cleanroom technology as well as in the food, electronics and shipbuilding industries.



Technical Data

Force range: 10 N to 5,000 N

Piston rod diameter: Ø 3 mm to Ø 20 mm

Progression: Approx. 12 % to 40 %
(depending on size and stroke)

Lifetime: Approx. 10.000 m

Operating temperature range: -20 °C to +80 °C

Material: Outer body, Piston rod, End fittings: Stainless steel (1.4301/1.4305, AISI 304/303 and 1.4404/1.4571, AISI 316L/316Ti)

Operating fluid: Nitrogen gas and HLP oil according to DIN 51524, part 2

Mounting: We recommend mounting with piston rod downwards to take advantage of the built-in end position damping.

End position damping length: Approx. 5 mm to 30 mm (depending on the stroke)

Positive stop: External positive stop at the end of stroke provided by the customer.

Application field: Hoods, Shutters, Machine housing, Conveyor systems

Note: Special oil according to FDA 21 CFR 178.3570 of the food industry

End fittings: They are interchangeable and must be positively secured by the customer to prevent unscrewing.

Safety instructions: Gas pressure springs should not be installed under pre-tension.

On request: Special oils and other special options. Alternative accessories. Different end position damping and extension speed. Other gas springs material 1.4404/1.4571, AISI 316L/316Ti (V4A) available on request.

Valve Technology, Stainless Steel, Force range 10 N to 100 N (compressed up to 130 N)

End Fitting

Standard Dimensions

End Fitting

B3,5 M3.5x0.6

A3,5-V4A Radius R4

C3,5-V4A Ø13 Ø8 8.5 10 36° M4x0.7

D3,5-V4A Ø4 8 4 16

G3,5-V4A Ø13 Ø8 4 18

Stud Thread B3,5

Eye A3,5-V4A max. force 370 N

Angle Ball Joint C3,5-V4A max. force 370 N

Clevis Fork D3,5-V4A max. force 370 N

Ball Socket G3,5-V4A max. force 370 N

Adjuster Knob DE-GAS-3,5 See page 171.

Performance and Dimensions

TYPES	Stroke mm	L extended mm	Force Range max. N
GS-8-20-V4A	20	72	100
GS-8-30-V4A	30	92	100
GS-8-40-V4A	40	112	100
GS-8-50-V4A	50	132	100
GS-8-60-V4A	60	152	100
GS-8-80-V4A	80	192	100

Ordering Example

Type (Push Type) **GS-8-30-AC-30-V4A**

Body Ø (8 mm)

Stroke (30 mm)

Piston Rod End Fitting A3,5-V4A

Body End Fitting C3,5-V4A

Nominal Force F₁ 30 N

Material (1.4404/1.4571, AISI 316L/316Ti, V4A)

Mounting accessories see from page 202.

Technical Data

Force range: 10 N to 100 N (compressed up to 130 N)

Progression: Approx. 27 %

Operating temperature range: -20 °C to +80 °C

Material: Outer body, Piston rod, End fittings: Stainless steel (1.4404/1.4571, AISI 316L/316Ti)

Mounting: We recommend mounting with piston rod downwards to take advantage of the built-in end position damping.

End position damping length: Approx. 5 mm (depending on the stroke)

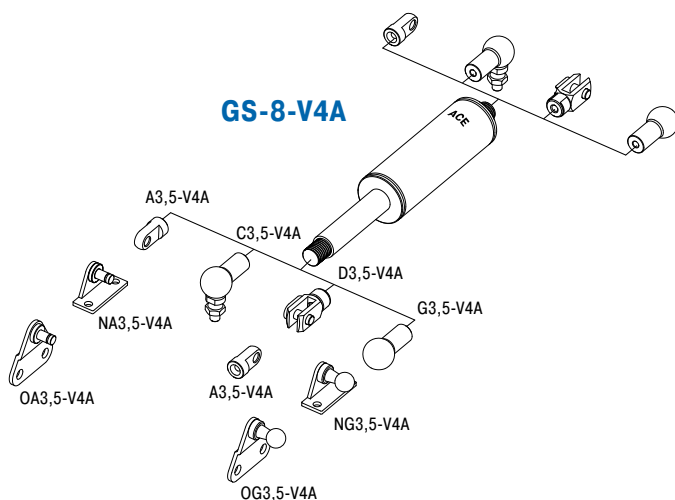
Positive stop: External positive stop at the end of stroke provided by the customer.

Note: Special oil according to FDA 21 CFR 178.3570 of the food industry

End fittings: They are interchangeable and must be positively secured by the customer to prevent unscrewing.

Safety instructions: Gas pressure springs should not be installed under pre-tension.

GS-8-V4A



End Fitting

Standard Dimensions

End Fitting

B3,5

Stud Thread B3,5

A3,5-V4A

Eye A3,5-V4A

max. force 370 N

C3,5-V4A

Angle Ball Joint C3,5-V4A

max. force 370 N

D3,5-V4A

Clevis Fork D3,5-V4A

max. force 370 N

G3,5-V4A

Ball Socket G3,5-V4A

max. force 370 N

Performance and Dimensions

TYPES	Stroke mm	L extended mm	Force Range max. N
GS-10-20-V4A	20	72	100
GS-10-30-V4A	30	92	100
GS-10-40-V4A	40	112	100
GS-10-50-V4A	50	132	100
GS-10-60-V4A	60	152	100
GS-10-80-V4A	80	192	100

Ordering Example

Type (Push Type) _____
 Body Ø (10 mm) _____
 Stroke (30 mm) _____
 Piston Rod End Fitting A3,5-V4A _____
 Body End Fitting C3,5-V4A _____
 Nominal Force F_1 30 N _____
 Material (1.4404/1.4571, AISI 316L/316Ti, V4A) _____

GS-10-30-AC-30-V4A

Mounting accessories see from
page 202.

Technical Data

Force range: 10 N to 100 N (compressed up to 115 N)

Progression: Approx. 12 %

Operating temperature range: -20 °C to +80 °C

Material: Outer body, Piston rod, End fittings: Stainless steel
(1.4404/1.4571, AISI 316L/316Ti)

Mounting: We recommend mounting with piston rod downwards to take advantage of the built-in end position damping.

End position damping length: Approx. 5 mm
(depending on the stroke)

Positive stop: External positive stop at the end of stroke provided by the customer.

Note: Special oil according to FDA 21 CFR 178.3570 of the food industry

End fittings: They are interchangeable and must be positively secured by the customer to prevent unscrewing.

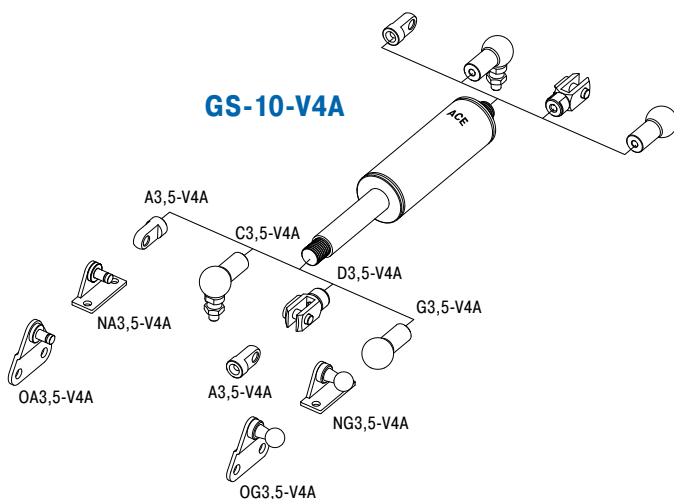
Safety instructions: Gas pressure springs should not be installed under pre-tension.

Adjuster Knob

DE-GAS-3,5

See page 171.

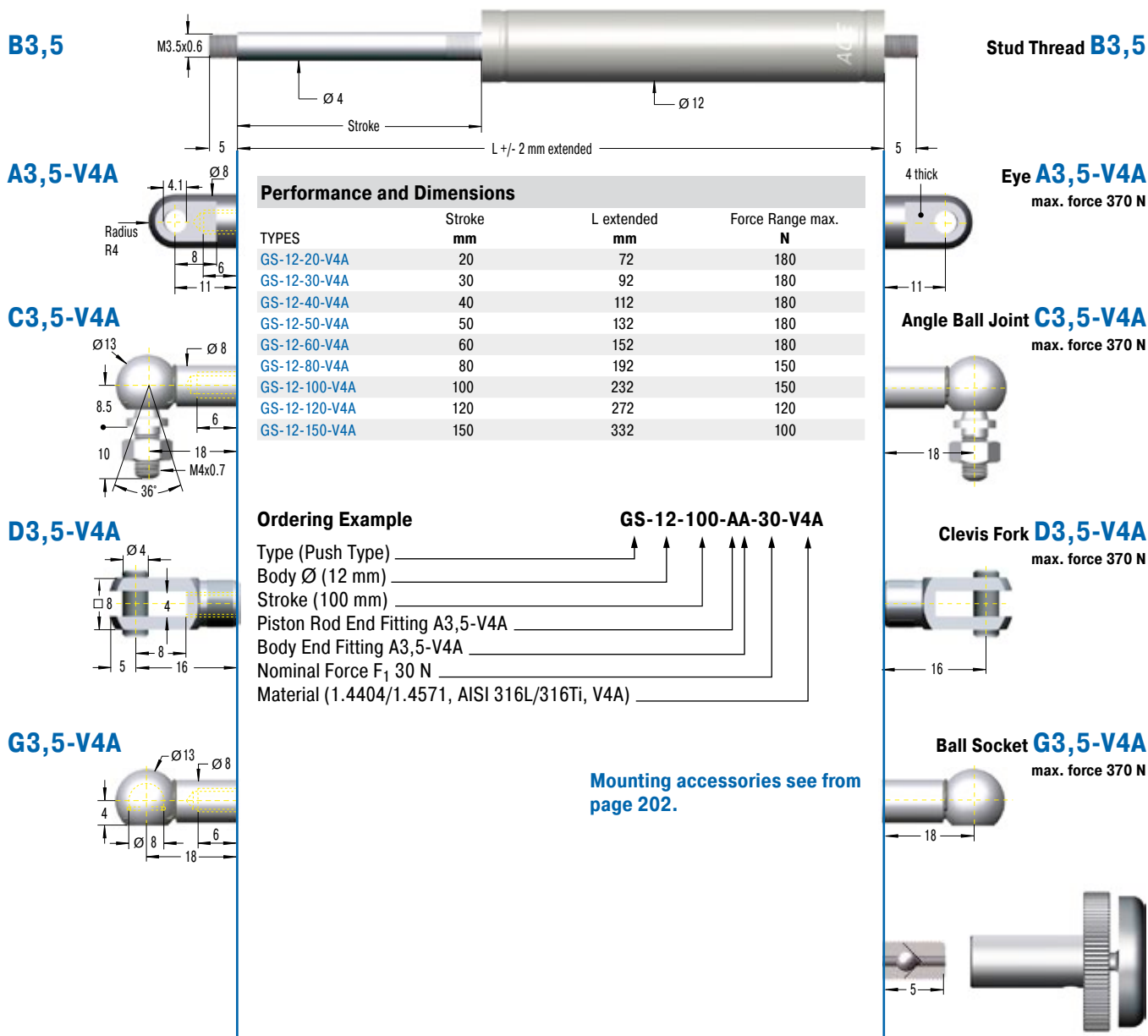
GS-10-V4A



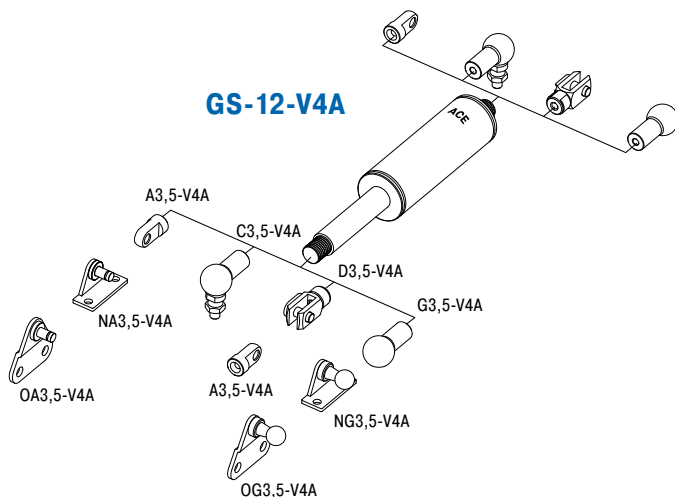
End Fitting

Standard Dimensions

End Fitting



GS-12-V4A



Technical Data

Force range: 15 N to 180 N (compressed up to 212 N)

Progression: Approx. 18 %

Operating temperature range: -20 °C to +80 °C

Material: Outer body, Piston rod, End fittings: Stainless steel (1.4404/1.4571, AISI 316L/316Ti)

Mounting: We recommend mounting with piston rod downwards to take advantage of the built-in end position damping.

End position damping length: Approx. 10 mm (depending on the stroke)

Positive stop: External positive stop at the end of stroke provided by the customer.

Note: Special oil according to FDA 21 CFR 178.3570 of the food industry

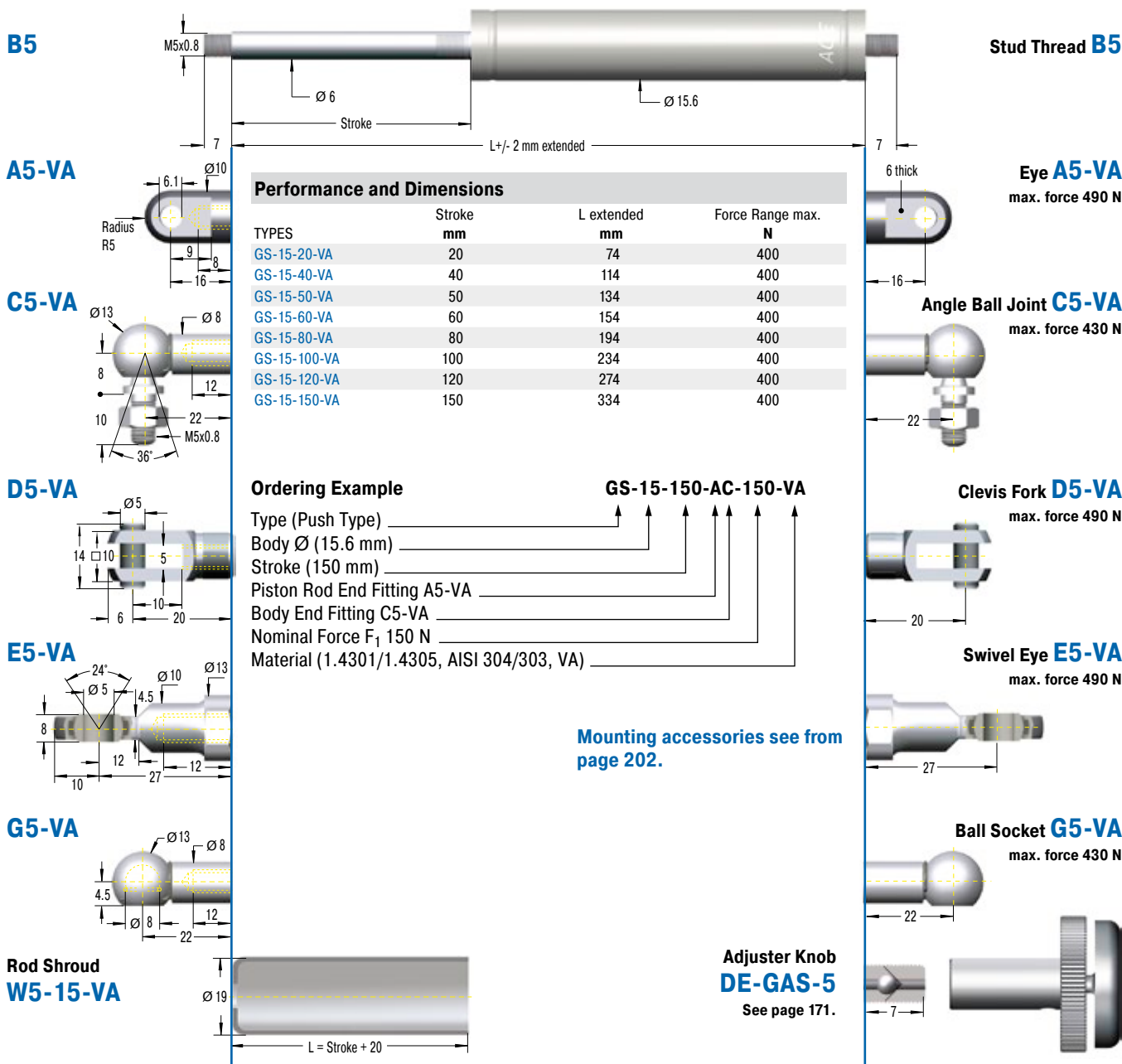
End fittings: They are interchangeable and must be positively secured by the customer to prevent unscrewing.

Safety instructions: Gas pressure springs should not be installed under pre-tension.

End Fitting

Standard Dimensions

End Fitting



Technical Data

Force range: 40 N to 400 N (compressed up to 535 N)

Progression: Approx. 34 %

Operating temperature range: -20 °C to +80 °C

Material: Outer body, Piston rod, End fittings: Stainless steel (1.4301/1.4305, AISI 304/303)

Mounting: We recommend mounting with piston rod downwards to take advantage of the built-in end position damping.

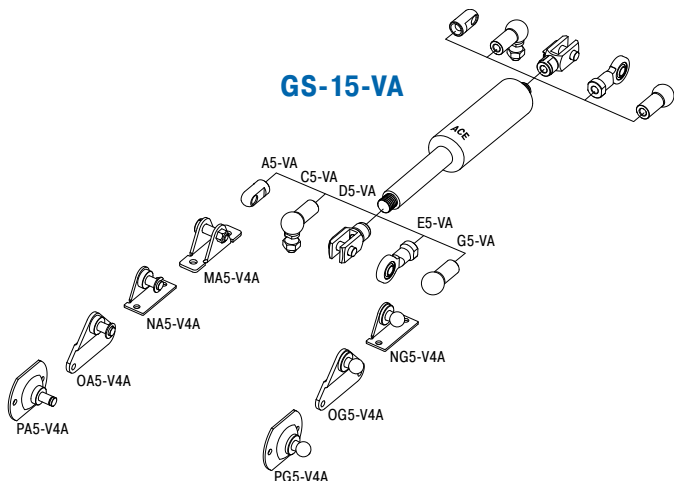
End position damping length: Approx. 20 mm (depending on the stroke)

Positive stop: External positive stop at the end of stroke provided by the customer.

Note: Special oil according to FDA 21 CFR 178.3570 of the food industry

End fittings: They are interchangeable and must be positively secured by the customer to prevent unscrewing.

Safety instructions: Gas pressure springs should not be installed under pre-tension.



Valve Technology, Stainless Steel, Force range 50 N to 700 N (compressed up to 930 N)

End Fitting

Standard Dimensions

End Fitting

Performance and Dimensions

TYPES	Stroke mm	L extended mm	Force Range max. N
GS-19-50-VA	50	164	700
GS-19-100-VA	100	264	700
GS-19-150-VA	150	364	700
GS-19-200-VA	200	464	700
GS-19-250-VA	250	564	700
GS-19-300-VA	300	664	700

Ordering Example

GS-19-150-AC-600-VA

Type (Push Type) _____
 Body Ø (19 mm) _____
 Stroke (150 mm) _____
 Piston Rod End Fitting A8-VA _____
 Body End Fitting C8-VA _____
 Nominal Force F₁ 600 N _____
 Material (1.4301/1.4305, AISI 304/303, VA) _____

Mounting accessories see from page 202.

Adjuster Knob DE-GAS-8
See page 171.

Technical Data

Force range: 50 N to 700 N (compressed up to 930 N)

Progression: Approx. 33 %

Operating temperature range: -20 °C to +80 °C

Material: Outer body, Piston rod, End fittings: Stainless steel (1.4301/1.4305, AISI 304/303)

Mounting: We recommend mounting with piston rod downwards to take advantage of the built-in end position damping.

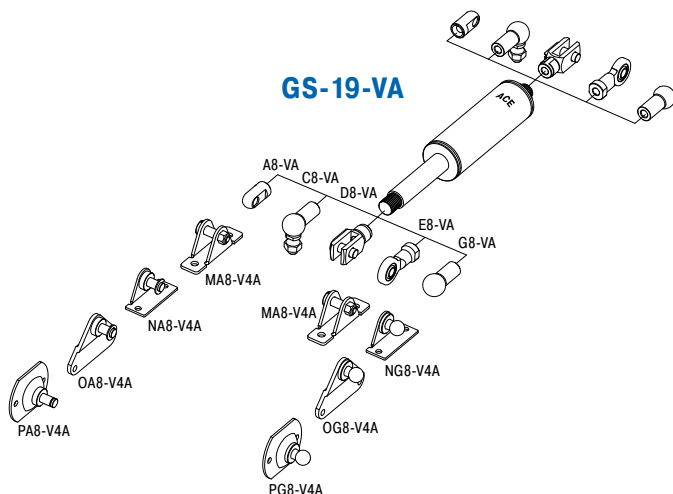
End position damping length: Approx. 20 mm (depending on the stroke)

Positive stop: External positive stop at the end of stroke provided by the customer.

Note: Special oil according to FDA 21 CFR 178.3570 of the food industry

End fittings: They are interchangeable and must be positively secured by the customer to prevent unscrewing.

Safety instructions: Gas pressure springs should not be installed under pre-tension.



Valve Technology, Stainless Steel, Force range 150 N to 2,500 N (compressed up to 3,800 N)

End Fitting

Standard Dimensions

End Fitting

B10 M10x1.5 Ø 14 Stroke Ø 28 L +/- 2 mm extended 12 10 thick 27

A10-VA Radius R9 Ø 18 8.1 15 27

C10-VA Ø 24 Ø 16 16 18 20 35 36° M10x1.5

D10-VA Ø 10 26.5 20 10 12 20 40

E10-VA 24° Ø 10 7 Ø 15 Ø 19 14 16 43 18

Rod Shroud W10-28-VA Ø 32 L = Stroke + 40

Stud Thread B10

Eye A10-VA max. force 3,800 N

Angle Ball Joint C10-VA max. force 1,750 N

Clevis Fork D10-VA max. force 3,800 N

Swivel Eye E10-VA max. force 3,800 N

Adjuster Knob DE-GAS-10 See page 171.

Performance and Dimensions

TYPES	Stroke mm	L extended mm	Force Range max. N
GS-28-100-VA	100	262	2,500
GS-28-150-VA	150	362	2,500
GS-28-200-VA	200	462	2,500
GS-28-250-VA	250	562	2,500
GS-28-300-VA	300	662	2,500
GS-28-350-VA	350	762	2,500
GS-28-400-VA	400	862	2,500
GS-28-450-VA	450	962	2,500
GS-28-500-VA	500	1,062	2,500
GS-28-550-VA	550	1,162	2,500
GS-28-600-VA	600	1,262	2,500
GS-28-650-VA	650	1,362	2,500

Ordering Example

GS-28-150-EE-1200-VA

Type (Push Type) _____
 Body Ø (28 mm) _____
 Stroke (150 mm) _____
 Piston Rod End Fitting E10-VA _____
 Body End Fitting E10-VA _____
 Nominal Force F₁ 1200 N _____
 Material (1.4301/1.4305, AISI 304/303, VA) _____

Mounting accessories see from page 202.

Technical Data

Force range: 150 N to 2,500 N (compressed up to 3,800 N)

Progression: Approx. 52 %

Operating temperature range: -20 °C to +80 °C

Material: Outer body, Piston rod, End fittings: Stainless steel (1.4301/1.4305, AISI 304/303)

Mounting: We recommend mounting with piston rod downwards to take advantage of the built-in end position damping.

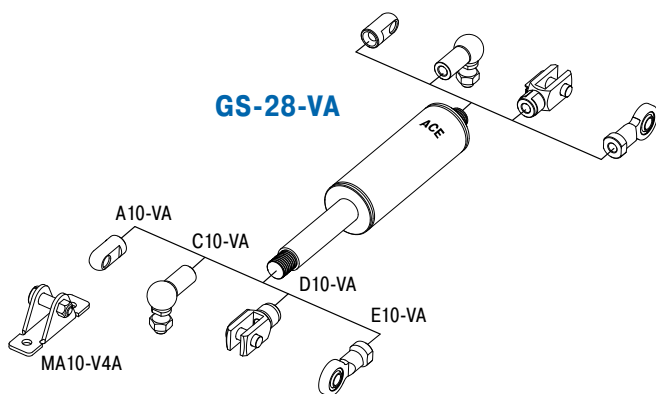
End position damping length: Approx. 20 mm (depending on the stroke)

Positive stop: External positive stop at the end of stroke provided by the customer.

Note: Special oil according to FDA 21 CFR 178.3570 of the food industry

End fittings: They are interchangeable and must be positively secured by the customer to prevent unscrewing.

Safety instructions: Gas pressure springs should not be installed under pre-tension.



Further Stainless Steel Gas Springs (Push Type), V4A

Performance			
TYPES	Stroke mm	L extended mm	Dimensions see Page
GS-15-20-V4A	20	74	144
GS-15-40-V4A	40	114	144
GS-15-50-V4A	50	134	144
GS-15-60-V4A	60	154	144
GS-15-80-V4A	80	194	144
GS-15-100-V4A	100	234	144
GS-15-120-V4A	120	274	144
GS-15-150-V4A	150	334	144
GS-19-50-V4A	50	164	145
GS-19-100-V4A	100	264	145
GS-19-150-V4A	150	364	145
GS-19-200-V4A	200	464	145
GS-19-250-V4A	250	564	145
GS-19-300-V4A	300	664	145
GS-22-50-V4A	50	164	146
GS-22-100-V4A	100	264	146
GS-22-150-V4A	150	364	146
GS-22-200-V4A	200	464	146
GS-22-250-V4A	250	564	146
GS-22-300-V4A	300	664	146
GS-22-350-V4A	350	764	146
GS-22-400-V4A	400	864	146
GS-22-450-V4A	450	964	146
GS-22-500-V4A	500	1,064	146
GS-22-550-V4A	550	1,164	146
GS-22-600-V4A	600	1,264	146
GS-22-650-V4A	650	1,364	146
GS-22-700-V4A	700	1,464	146
GS-28-100-V4A	100	262	147
GS-28-150-V4A	150	362	147
GS-28-200-V4A	200	462	147
GS-28-250-V4A	250	562	147
GS-28-300-V4A	300	662	147
GS-28-350-V4A	350	762	147
GS-28-400-V4A	400	862	147
GS-28-450-V4A	450	962	147
GS-28-500-V4A	500	1,062	147
GS-28-550-V4A	550	1,162	147
GS-28-600-V4A	600	1,262	147
GS-28-650-V4A	650	1,362	147
GS-40-100-V4A	100	317	148
GS-40-150-V4A	150	417	148
GS-40-200-V4A	200	517	148
GS-40-300-V4A	300	717	148
GS-40-400-V4A	400	917	148
GS-40-500-V4A	500	1,117	148
GS-40-600-V4A	600	1,317	148

Further Stainless Steel Accessories, V4A

End Fittings		End Fittings	
TYPES	Dimensions see Page	TYPES	Dimensions see Page
A5-V4A	204	A10-V4A	206
C5-V4A	204	C10-V4A	206
D5-V4A	204	D10-V4A	206
E5-V4A	204	E10-V4A	206
G5-V4A	204	A14-V4A	206
A8-V4A	205	C14-V4A	206
C8-V4A	205	D14-V4A	206
D8-V4A	205	E14-V4A	206
E8-V4A	205		
G8-V4A	206		