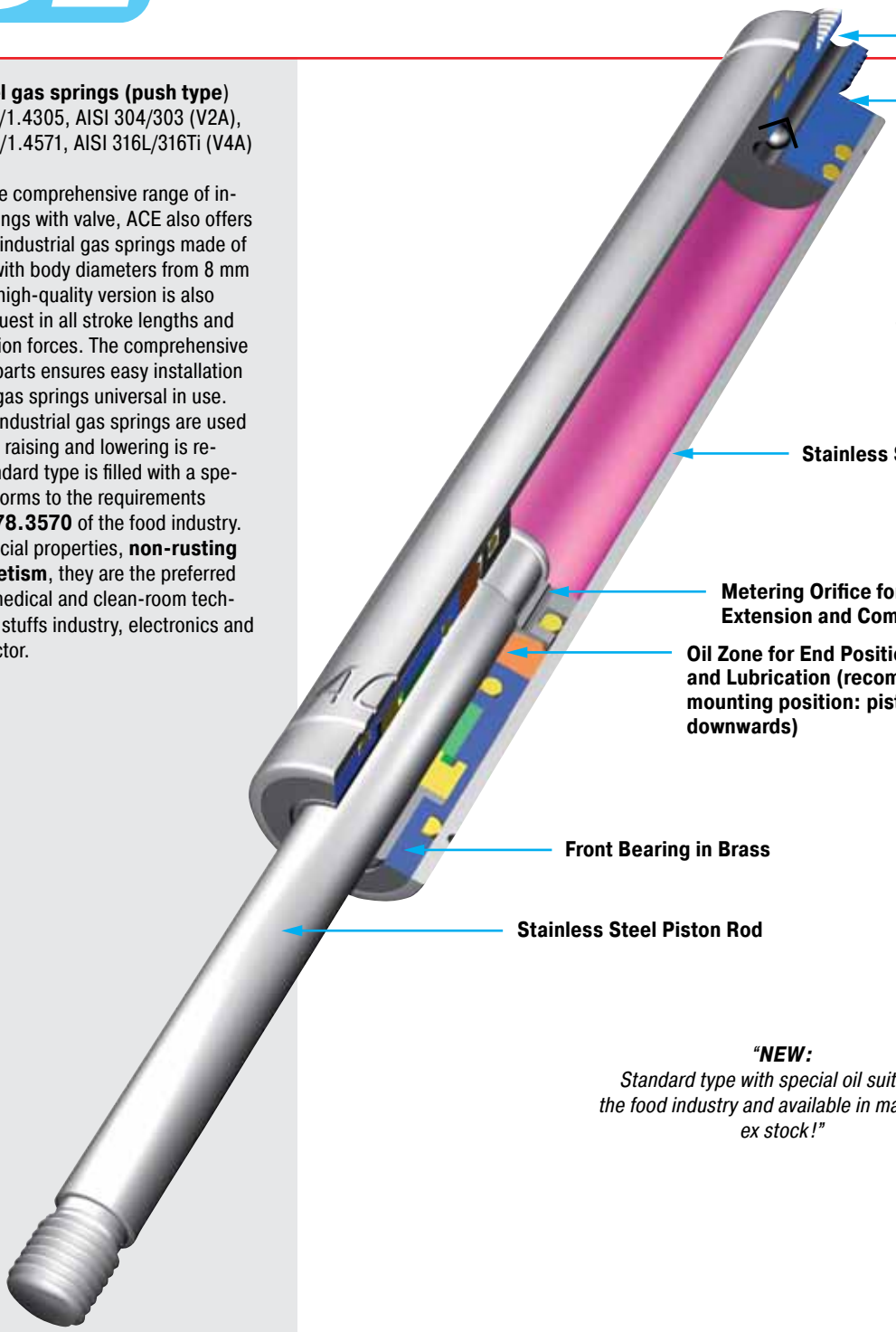
Stainless steel gas springs (push type)
Material 1.4301/1.4305, AISI 304/303 (V2A),
Material 1.4404/1.4571, AISI 316L/316Ti (V4A)

In addition to the comprehensive range of industrial gas springs with valve, ACE also offers a wide range of industrial gas springs made of stainless steel with body diameters from 8 mm to 70 mm. This high-quality version is also available on request in all stroke lengths and possible extension forces. The comprehensive range of fitting parts ensures easy installation and makes the gas springs universal in use. Stainless steel industrial gas springs are used everywhere that raising and lowering is required. The standard type is filled with a special oil that conforms to the requirements **FDA 21 CFR 178.3570** of the food industry. Due to their special properties, **non-rusting and low magnetism**, they are the preferred equipment for medical and clean-room technology, the foodstuffs industry, electronics and shipbuilding sector.



*"**NEW:***
Standard type with special oil suited for the food industry and available in many sizes ex stock!"



Operating fluid: Nitrogen gas and HLP oil according to DIN 51 524, part 2

Material: Piston rod, body and end fittings: Material 1.4301/1.4305, AISI 304/303 (V2A) or material 1.4404/1.4571, AISI 316L/316Ti (V4A).

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

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

On request: Without damping, strong end position damping, special force curves, wiper, special lengths, alternative end fittings.



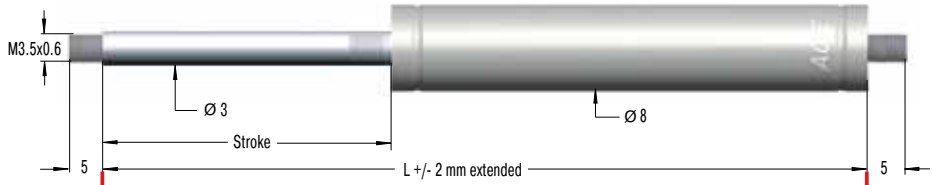
164

Stainless Steel Gas Springs GS-8-V4A (Push Type)

Extension Forces 25 N to 100 N
(when Piston Rod Compressed up to 130 N)

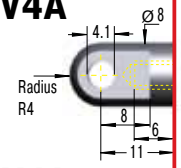
End Fitting | **Standard Dimensions** | **End Fitting**

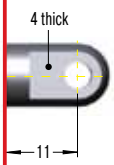
B3,5



Stud Thread **B3,5**

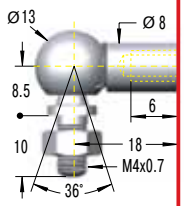
A3,5-V4A

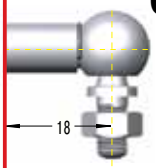




Eye
A3,5-V4A
max. force 370 N

C3,5-V4A





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

Dimensions

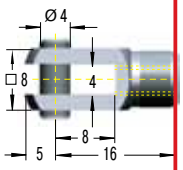
Type	Stroke mm	L extended
GS-8-20-V4A	20	72
GS-8-30-V4A	30	92
GS-8-40-V4A	40	112
GS-8-50-V4A	50	132
GS-8-60-V4A	60	152
GS-8-80-V4A	80	192

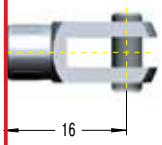
Ordering Example **GS-8-30-AC-30-V4A**

- Type (Push Type)
- Body Ø (8 mm)
- Stroke (30 mm)
- Piston Rod End Fitting A3,5-V4A
- Body End Fitting C3,5-V4A
- Nominal Force F_1 30 N
- Indicated by K.-No. on delivery

The end fittings are interchangeable.
For mounting accessories see page 188.

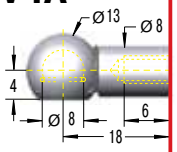
D3,5-V4A

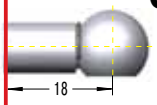




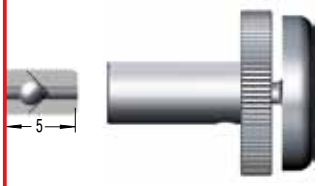
Clevis Fork
D3,5-V4A
max. force 370 N

G3,5-V4A

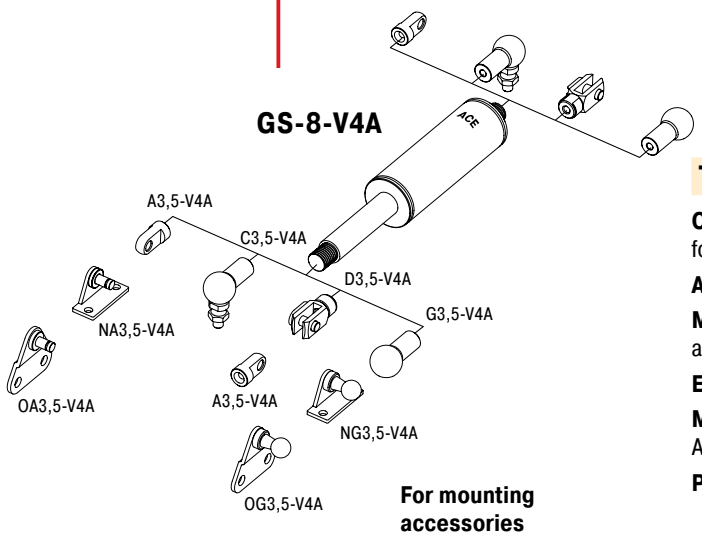




Ball Socket
G3,5-V4A
max. force 370 N



Adjuster Knob
DE-GAS-3,5
See page 149.



For mounting accessories see page 188.

Technical Data

On request: Without damping, strong end position damping, special force curves, special end fittings.

Available force range F_1 at 20 °C: 25 N to 100 N

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

Material: Piston rod, body and end fittings: Material 1.4404/1.4571, AISI 316L/316Ti (V4A).

Progression: Approx. 27 %, F_2 max. 130 N

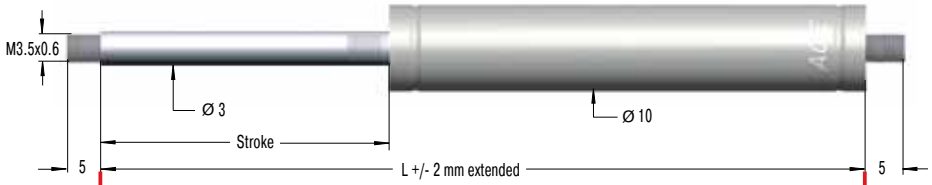
Issue 1.2013 Specifications subject to change

Stainless Steel Gas Springs GS-10-V4A (Push Type)

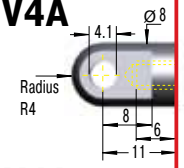
Extension Forces 30 N to 100 N
(when Piston Rod Compressed up to 115 N)

End Fitting | **Standard Dimensions** | **End Fitting**

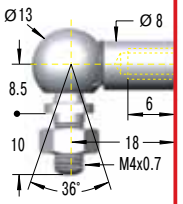
B3,5



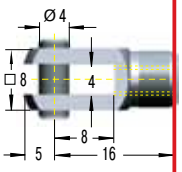
A3,5-V4A



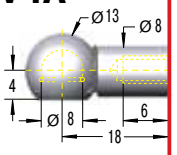
C3,5-V4A



D3,5-V4A



G3,5-V4A



Dimensions

Type	Stroke mm	L extended
GS-10-20-V4A	20	72
GS-10-30-V4A	30	92
GS-10-40-V4A	40	112
GS-10-50-V4A	50	132
GS-10-60-V4A	60	152
GS-10-80-V4A	80	192

Ordering Example **GS-10-30-AC-30-V4A**

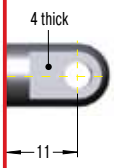
- Type (Push Type)
- Body Ø (10 mm)
- Stroke (30 mm)
- Piston Rod End Fitting A3,5-V4A
- Body End Fitting C3,5-V4A
- Nominal Force F_1 30 N
- Indicated by K.-No. on delivery

The end fittings are interchangeable.
For mounting accessories see page 188.

Stud Thread B3,5

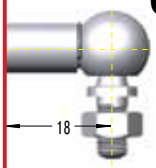
Eye A3,5-V4A

max. force 370 N



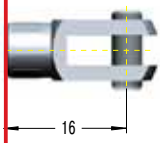
Angle Ball Joint C3,5-V4A

max. force 370 N



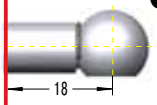
Clevis Fork D3,5-V4A

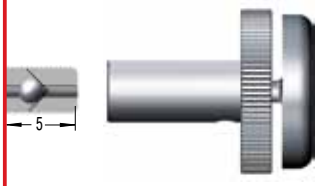
max. force 370 N



Ball Socket G3,5-V4A

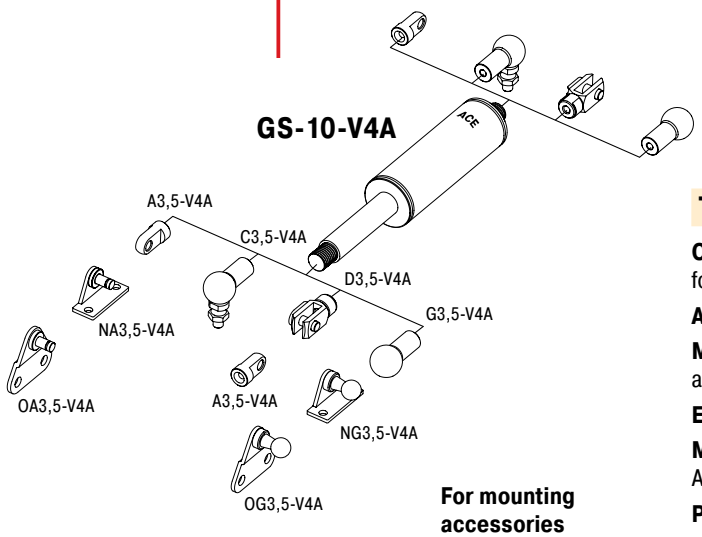
max. force 370 N





Adjuster Knob DE-GAS-3,5

See page 149.



For mounting accessories see page 188.

Technical Data

On request: Without damping, strong end position damping, special force curves, special end fittings.

Available force range F_1 at 20 °C: 30 N to 100 N

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

Material: Piston rod, body and end fittings: Material 1.4404/1.4571, AISI 316L/316Ti (V4A).

Progression: Approx. 12 %, F_2 max. 115 N

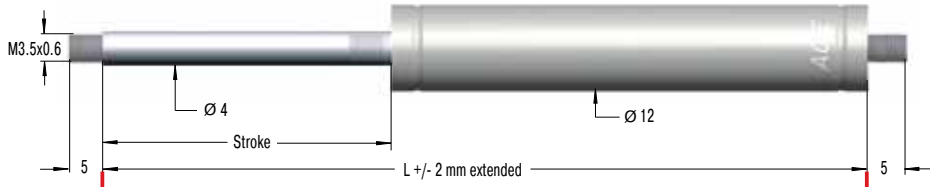
Issue 1.2013 Specifications subject to change

Stainless Steel Gas Springs GS-12-V4A (Push Type)

Extension Forces 25 N to 200 N
(when Piston Rod Compressed up to 235 N)

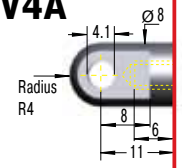
End Fitting | **Standard Dimensions** | **End Fitting**

B3,5

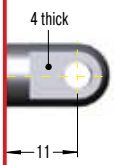


Stud Thread B3,5

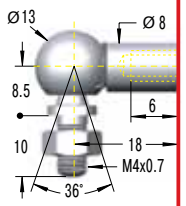
A3,5-V4A



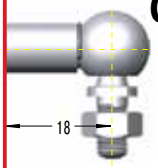
Eye
A3,5-V4A
max. force 370 N



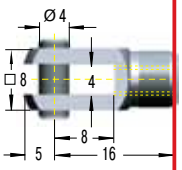
C3,5-V4A



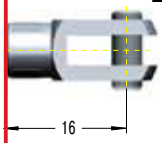
Angle Ball Joint
C3,5-V4A
max. force 370 N



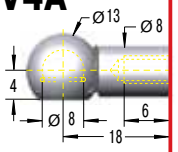
D3,5-V4A



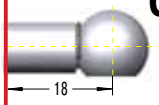
Clevis Fork
D3,5-V4A
max. force 370 N

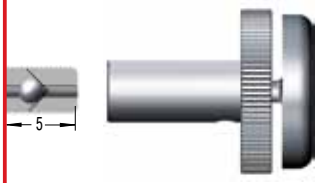


G3,5-V4A



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





Adjuster Knob
DE-GAS-3,5
See page 149.

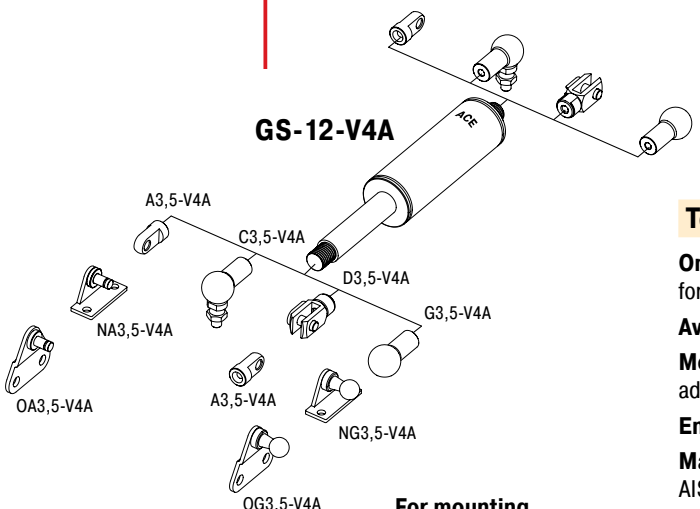
Dimensions

Type	Stroke mm	L extended
GS-12-20-V4A	20	72
GS-12-30-V4A	30	92
GS-12-40-V4A	40	112
GS-12-50-V4A	50	132
GS-12-60-V4A	60	152
GS-12-80-V4A	80	192
GS-12-100-V4A	100	232
GS-12-120-V4A	120	272
GS-12-150-V4A	150	332

Ordering Example **GS-12-100-AA-30-V4A**

- Type (Push Type)
- Body Ø (12 mm)
- Stroke (100 mm)
- Piston Rod End Fitting A3,5-V4A
- Body End Fitting A3,5-V4A
- Nominal Force F_1 30 N
- Indicated by K.-No. on delivery

The end fittings are interchangeable.
For mounting accessories see page 188.



For mounting accessories see page 188.

Technical Data

On request: Without damping, strong end position damping, special force curves, special end fittings.

Available force range F_1 at 20 °C: 25 N to 200 N

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

Material: Piston rod, body and end fittings: Material 1.4404/1.4571, AISI 316L/316Ti (V4A).

Progression: Approx. 18 %, F_2 max. 235 N

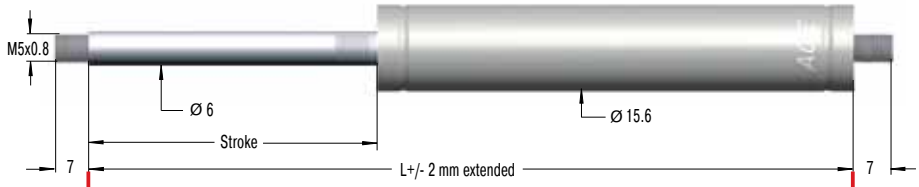
Issue 1.2013 Specifications subject to change

Stainless Steel Gas Springs GS-15-VA (Push Type)

Extension Forces 40 N to 400 N
(when Piston Rod Compressed up to 535 N)

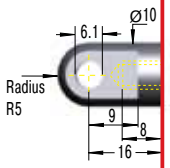
End Fitting | **Standard Dimensions** | **End Fitting**

B5

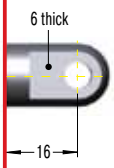


Stud Thread B5

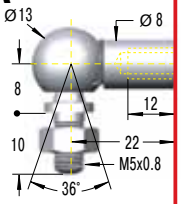
A5-VA



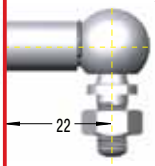
Eye A5-VA
max. force 490 N



C5-VA



Angle Ball Joint C5-VA
max. force 430 N



Dimensions

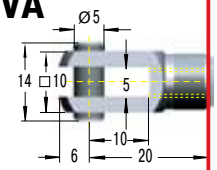
Type	Stroke mm	L extended
GS-15-20-VA	20	74
GS-15-40-VA	40	114
GS-15-50-VA	50	134
GS-15-60-VA	60	154
GS-15-80-VA	80	194
GS-15-100-VA	100	234
GS-15-120-VA	120	274
GS-15-150-VA	150	334

Ordering Example **GS-15-150-AC-150-VA**

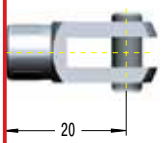
Type (Push Type)
Body Ø (15.6 mm)
Stroke (150 mm)
Piston Rod End Fitting A5-VA
Body End Fitting C5-VA
Nominal Force F_1 150 N
Indicated by K.-No. on delivery

The end fittings are interchangeable.
Strokes also available up to 150 mm ex stock.
For mounting accessories see page 188.

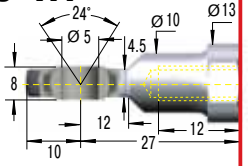
D5-VA



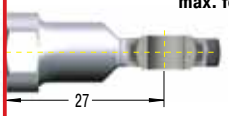
Clevis Fork D5-VA
max. force 490 N



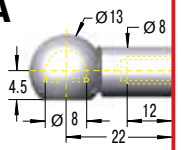
E5-VA



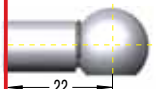
Swivel Eye E5-VA
max. force 490 N



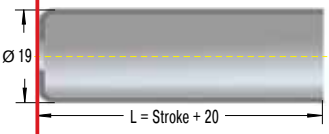
G5-VA

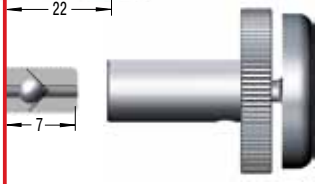


Ball Socket G5-VA
max. force 430 N



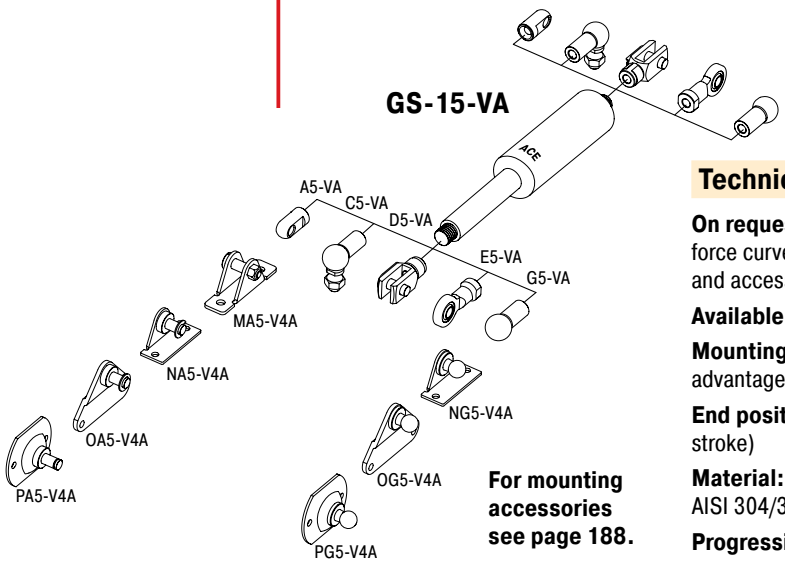
Rod Shroud
W5-15-VA





Adjuster Knob DE-GAS-5
See page 149.

GS-15-VA



For mounting accessories see page 188.

Technical Data

On request: Without damping, strong end position damping, special force curves, special lengths, alternative end fittings, wiper. Gas springs and accessories: Material 1.4404/1.4571, AISI 316L/316Ti (V4A).

Available force range F_1 at 20 °C: 40 N to 400 N

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)

Material: Piston rod, body and end fittings: Material 1.4301/1.4305, AISI 304/303 (V2A).

Progression: Approx. 34 %, F_2 max. 535 N

Issue 1.2013 Specifications subject to change

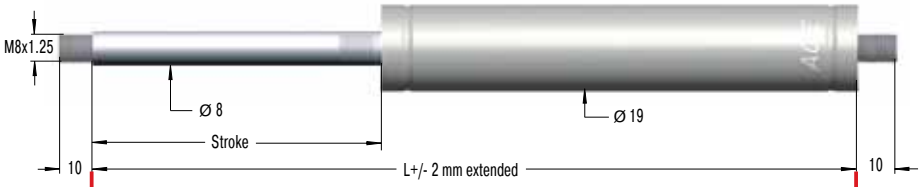
168 ACE Stoßdämpfer GmbH · PO Box 1510 · DE-40740 Langenfeld · Tel. +49-2173-9226-4100 · Fax +49-2173-9226-89 · E-Mail: info@ace-int.eu

Stainless Steel Gas Springs GS-19-VA (Push Type)

Extension Forces 50 N to 700 N
(when Piston Rod Compressed up to 930 N)

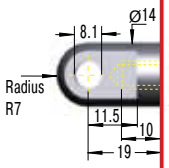
End Fitting | **Standard Dimensions** | **End Fitting**

B8

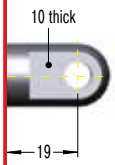


Stud Thread B8

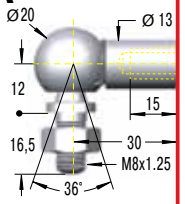
A8-VA



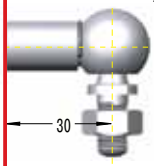
Eye A8-VA
max. force 1560 N



C8-VA



Angle Ball Joint
C8-VA
max. force 1140 N



Dimensions

Type	Stroke mm	L extended
GS-19-50-VA	50	164
GS-19-100-VA	100	264
GS-19-150-VA	150	364
GS-19-200-VA	200	464
GS-19-250-VA	250	564
GS-19-300-VA	300	664

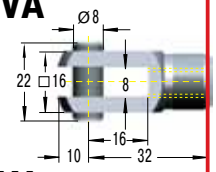
Ordering Example

GS-19-150-AC-600-VA

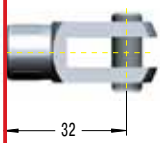
- Type (Push Type)
- Body Ø (19 mm)
- Stroke (150 mm)
- Piston Rod End Fitting A8-VA
- Body End Fitting C8-VA
- Nominal Force F_1 600 N
- Indicated by K.-No. on delivery

The end fittings are interchangeable.
Strokes also available up to 300 mm ex stock.
For mounting accessories see page 189.

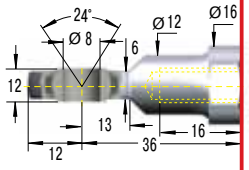
D8-VA



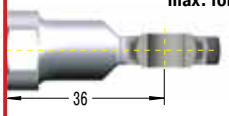
Clevis Fork D8-VA
max. force 1560 N



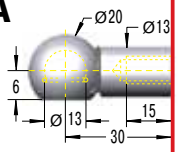
E8-VA



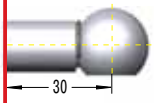
Swivel Eye E8-VA
max. force 1560 N



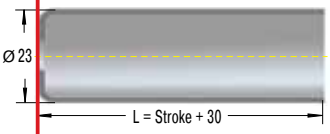
G8-VA

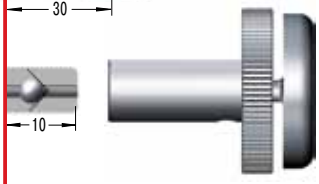


Ball Socket G8-VA
max. force 1140 N

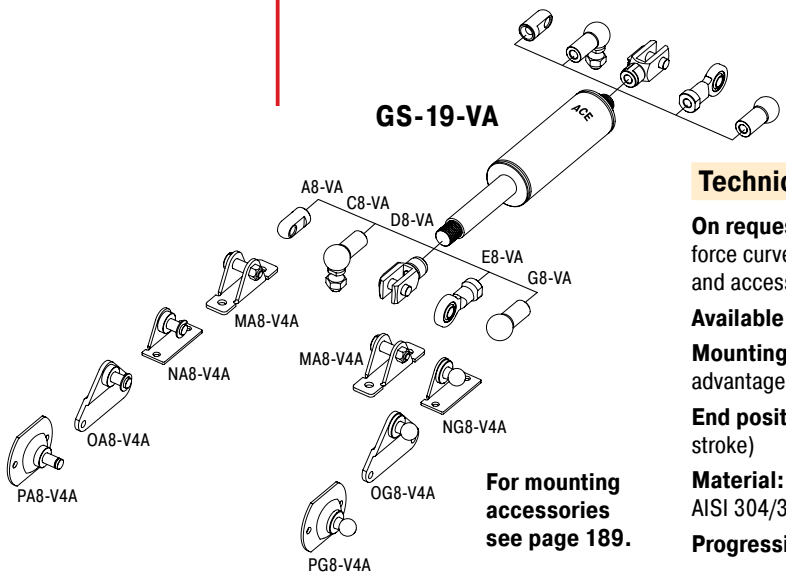


Rod Shroud
W8-19-VA





Adjuster Knob
DE-GAS-8
See page 149.



For mounting accessories see page 189.

Technical Data

On request: Without damping, strong end position damping, special force curves, special lengths, alternative end fittings, wiper. Gas springs and accessories: Material 1.4404/1.4571, AISI 316L/316Ti (V4A).

Available force range F_1 at 20 °C: 50 N to 700 N

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)

Material: Piston rod, body and end fittings: Material 1.4301/1.4305, AISI 304/303 (V2A).

Progression: Approx. 33 %, F_2 max. 930 N

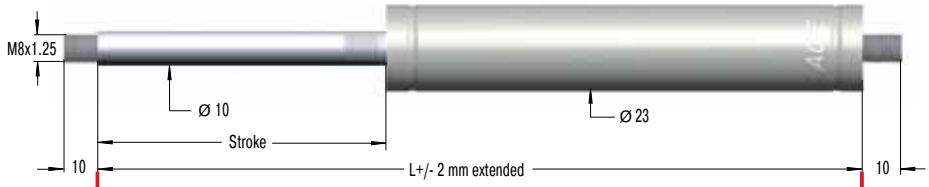
Issue 1.2013 Specifications subject to change

Stainless Steel Gas Springs GS-22-VA (Push Type)

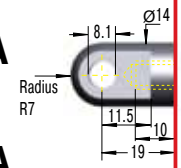
Extension Forces 100 N to 1200 N
(when Piston Rod Compressed up to 1585 N)

End Fitting | **Standard Dimensions** | **End Fitting**

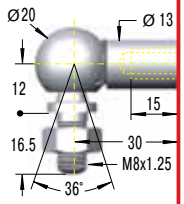
B8



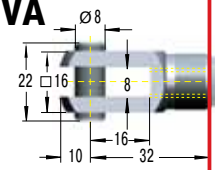
A8-VA



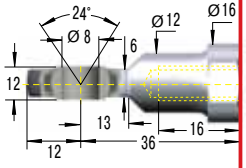
C8-VA



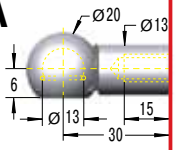
D8-VA



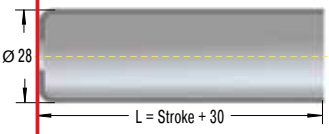
E8-VA



G8-VA



Rod Shroud W8-22-VA



Dimensions

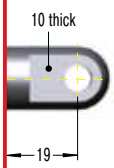
Type	Stroke mm	L extended
GS-22-50-VA	50	164
GS-22-100-VA	100	264
GS-22-150-VA	150	364
GS-22-200-VA	200	464
GS-22-250-VA	250	564
GS-22-300-VA	300	664
GS-22-350-VA	350	764
GS-22-400-VA	400	864
GS-22-450-VA	450	964
GS-22-500-VA	500	1 064
GS-22-550-VA	550	1 164
GS-22-600-VA	600	1 264
GS-22-650-VA	650	1 364
GS-22-700-VA	700	1 464

Ordering Example **GS-22-150-AE-800-VA**

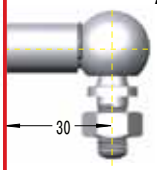
- Type (Push Type)
- Body Ø (23 mm)
- Stroke (150 mm)
- Piston Rod End Fitting A8-VA
- Body End Fitting E8-VA
- Nominal Force F_1 800 N
- Indicated by K.-No. on delivery

The end fittings are interchangeable.
Strokes also available up to 400 mm ex stock.
For mounting accessories see page 189.

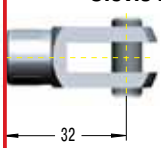
Stud Thread B8



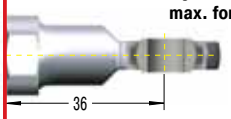
Eye A8-VA
max. force 1560 N



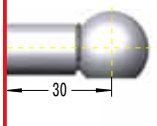
Angle Ball Joint C8-VA
max. force 1140 N



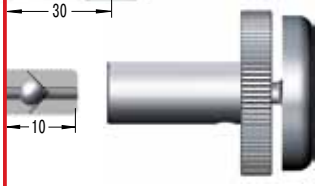
Clevis Fork D8-VA
max. force 1560 N



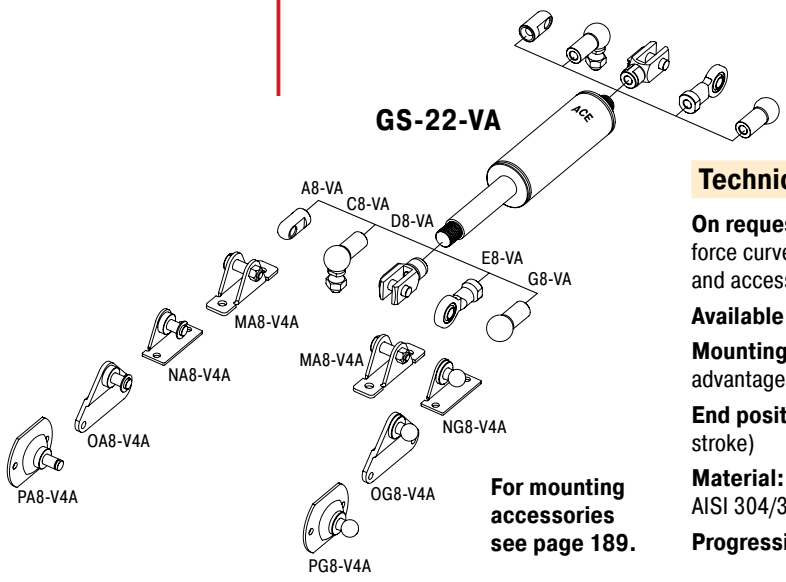
Swivel Eye E8-VA
max. force 1560 N



Ball Socket G8-VA
max. force 1140 N



Adjuster Knob DE-GAS-8
See page 149.



For mounting accessories see page 189.

Technical Data

On request: Without damping, strong end position damping, special force curves, special lengths, alternative end fittings, wiper. Gas springs and accessories: Material 1.4404/1.4571, AISI 316L/316Ti (V4A).

Available force range F_1 at 20 °C: 100 N to 1200 N

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)

Material: Piston rod, body and end fittings: Material 1.4301/1.4305, AISI 304/303 (V2A).

Progression: Approx. 32 %, F_2 max. 1585 N

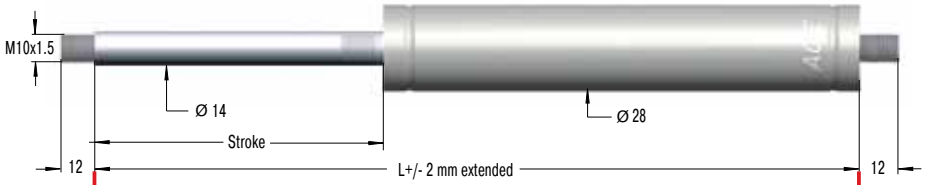
Issue 1.2013 Specifications subject to change

Stainless Steel Gas Springs GS-28-VA (Push Type)

Extension Forces 150 N to 2500 N
(when Piston Rod Compressed up to 3800 N)

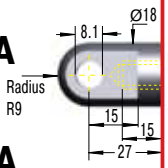
End Fitting | **Standard Dimensions** | **End Fitting**

B10



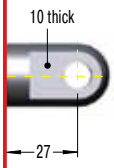
Stud Thread B10

A10-VA

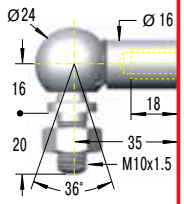


Eye A10-VA

max. force 3800 N

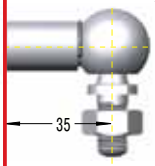


C10-VA

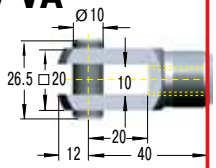


Angle Ball Joint C10-VA

max. force 1750 N

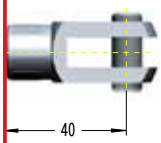


D10-VA

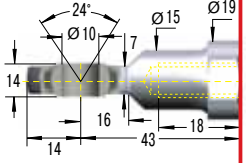


Clevis Fork D10-VA

max. force 3800 N

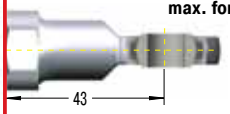


E10-VA



Swivel Eye E10-VA

max. force 3800 N



Dimensions

Type	Stroke mm	L extended
GS-28-100-VA	100	262
GS-28-150-VA	150	362
GS-28-200-VA	200	462
GS-28-250-VA	250	562
GS-28-300-VA	300	662
GS-28-350-VA	350	762
GS-28-400-VA	400	862
GS-28-450-VA	450	962
GS-28-500-VA	500	1 062
GS-28-550-VA	550	1 162
GS-28-600-VA	600	1 262
GS-28-650-VA	650	1 362

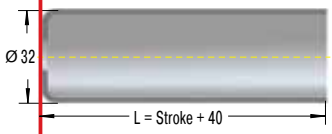
Ordering Example

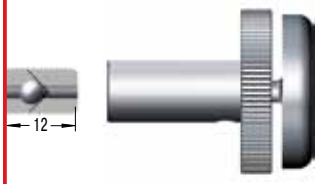
GS-28-150-EE-1200-VA

- Type (Push Type)
- Body Ø (28 mm)
- Stroke (150 mm)
- Piston Rod End Fitting E10-VA
- Body End Fitting E10-VA
- Nominal Force F_1 1200 N
- Indicated by K.-No. on delivery

The end fittings are interchangeable.
Strokes also available up to 400 mm ex stock and up to 750 mm on request.
For mounting accessories see page 189.

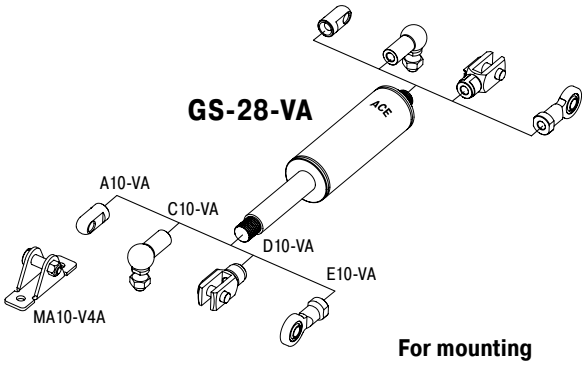
Rod Shroud W10-28-VA





Adjuster Knob DE-GAS-10

See page 149.



For mounting accessories see page 189.

Technical Data

On request: Without damping, strong end position damping, special force curves, special lengths, alternative end fittings, wiper. Gas springs and accessories: Material 1.4404/1.4571, AISI 316L/316Ti (V4A).

Available force range F_1 at 20 °C: 150 N to 2500 N

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)

Material: Piston rod, body and end fittings: Material 1.4301/1.4305, AISI 304/303 (V2A).

Progression: Approx. 52 %, F_2 max. 3800 N

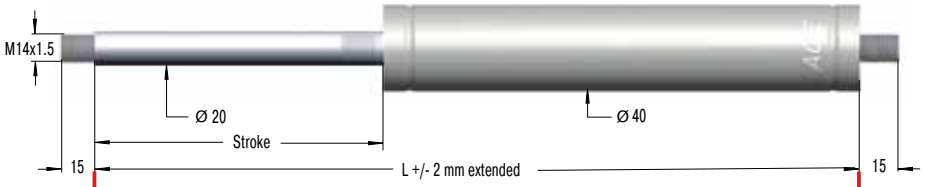
Issue 1.2013 Specifications subject to change

Stainless Steel Gas Springs GS-40-VA (Push Type)

Extension Forces 500 N to 5000 N
(when Piston Rod Compressed up to 7000 N)

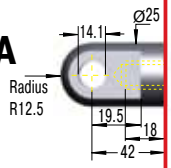
End Fitting | **Standard Dimensions** | **End Fitting**

B14

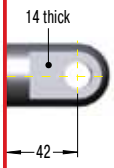


Stud Thread B14

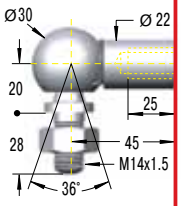
A14-VA



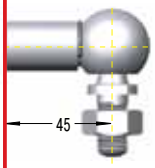
Eye A14-VA
max. force 7000 N



C14-VA



Angle Ball Joint
C14-VA
max. force 3200 N



Dimensions

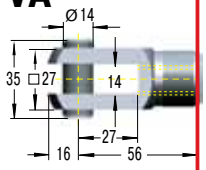
Type	Stroke mm	L extended
GS-40-100-VA	100	317
GS-40-150-VA	150	417
GS-40-200-VA	200	517
GS-40-300-VA	300	717
GS-40-400-VA	400	917
GS-40-500-VA	500	1 117
GS-40-600-VA	600	1 317

Ordering Example **GS-40-150-DD-3500-VA**

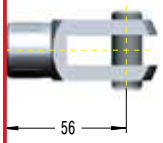
- Type (Push Type)
- Body Ø (40 mm)
- Stroke (150 mm)
- Piston Rod End Fitting D14-VA
- Body End Fitting D14-VA
- Nominal Force F_1 3500 N
- Indicated by K.-No. on delivery

The end fittings are interchangeable.
Strokes also available up to 1000 mm.
For mounting accessories see page 190.

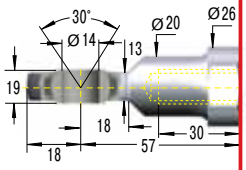
D14-VA



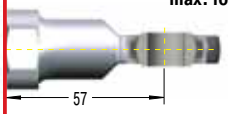
Clevis Fork D14-VA
max. force 7000 N



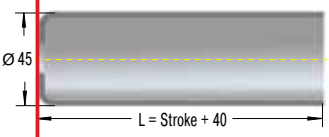
E14-VA

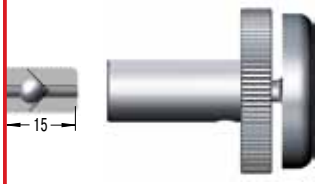


Swivel Eye E14-VA
max. force 7000 N

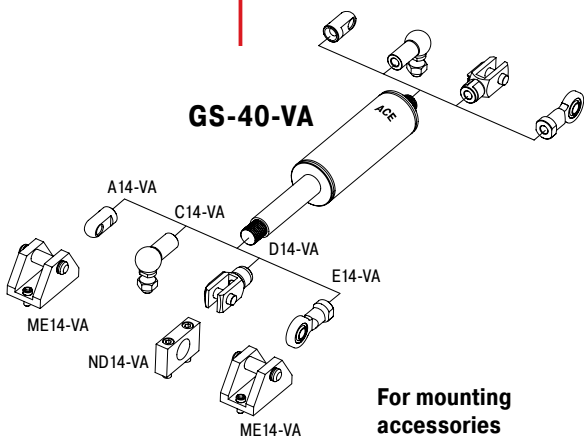


Rod Shroud
W14-40-VA





Adjuster Knob
DE-GAS-14
See page 149.



For mounting accessories see page 190.

Technical Data

On request: Without damping, strong end position damping, special force curves, special lengths, alternative end fittings, wiper. Gas springs and accessories: Material 1.4404/1.4571, AISI 316L/316Ti (V4A).

Available force range F_1 at 20 °C: 500 N to 5000 N

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

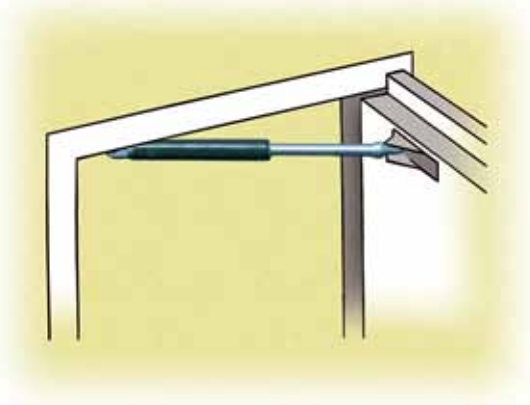
End position damping length: Approx. 30 mm (depending on the stroke)

Material: Piston rod, body and end fittings: Material 1.4301/1.4305, AISI 304/303 (V2A).

Progression: Approx. 40 %, F_2 max. 7000 N

Issue 1.2013 Specifications subject to change

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Doors open and close safely

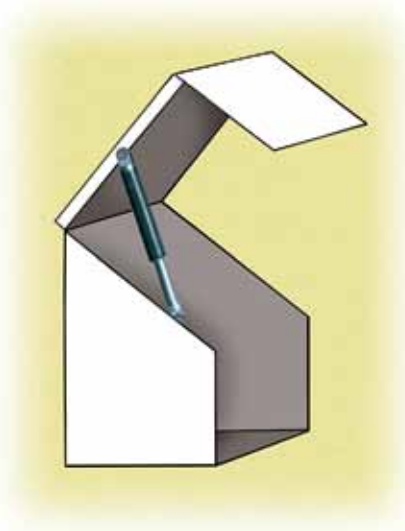
ACE industrial gas springs make opening and closing doors of rescue helicopters easier.

The maintenance-free, sealed systems are installed in the access doors of helicopters of the type EC 135. There, they allow the crew to enter or exit the helicopter quickly, thus contributing to enhanced safety.

The **GS-19-300-CC** gas springs provide a defined retraction speed and secure engagement of the door lock. The integrated end position damper allows gentle closing of the door and saves wear and tear on the valuable, lightweight material.



Industrial gas springs: For safe entry and exit



Protection under the hood

ACE industrial gas springs prevent injuries during maintenance work on harvesting machines.

The blades of corn pickers are arranged under plastic hoods, which assure proper material flow within the machine. For maintenance purposes, the hoods, weighing about 7 kg, must be lifted up. To protect maintenance personnel from injury by falling hoods, they are kept in the open position by industrial gas springs of the type **GS-22-250-DD**.

Another advantage they offer is their stability under rough operating conditions due to their wear-resistant coating on the piston rod and the coated housing.



Enhanced protection: Industrial gas springs secure heavy hoods