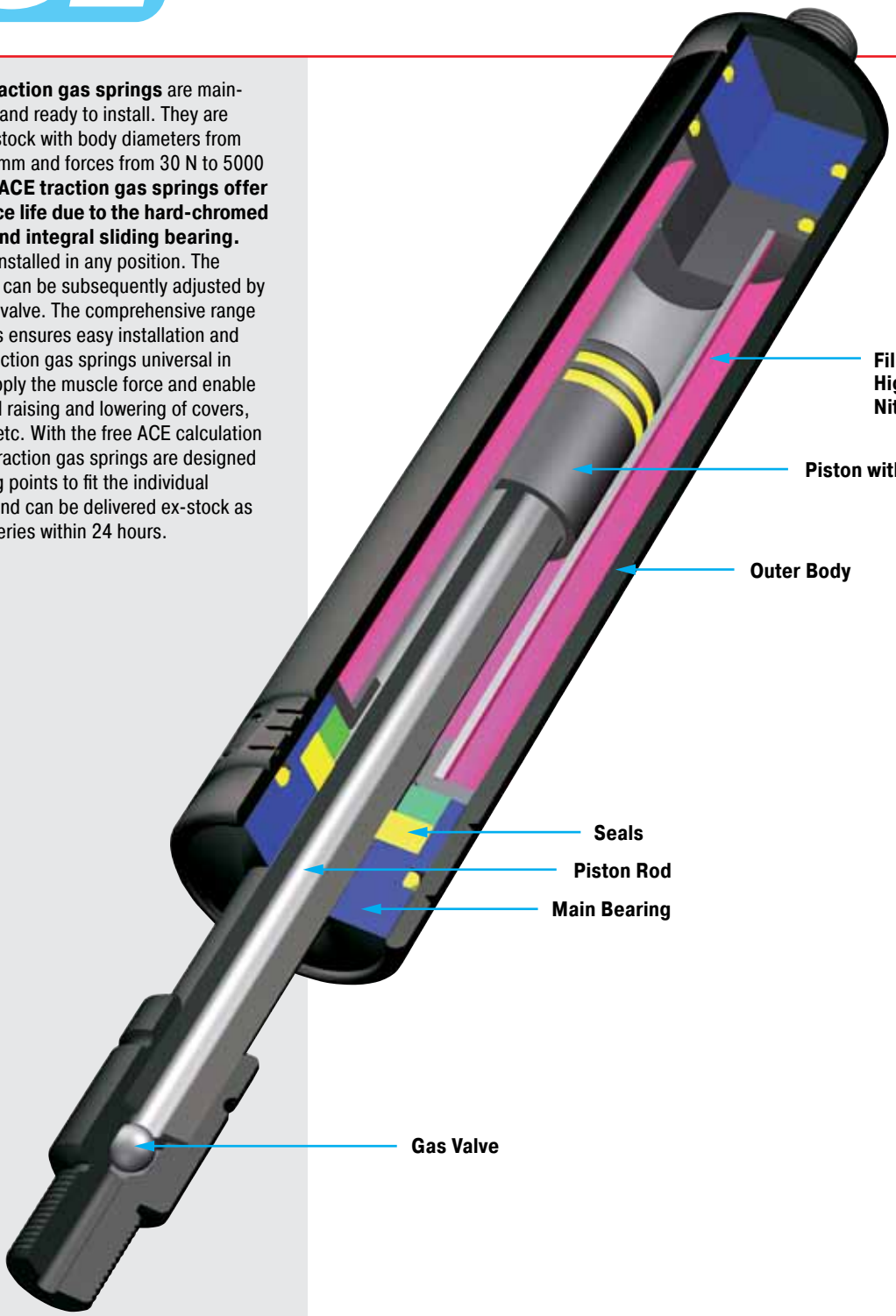
Traction Gas Springs GZ-15 to GZ-40 (Pull Type)

Industrial traction gas springs are maintenance-free and ready to install. They are available ex-stock with body diameters from 15 mm to 40 mm and forces from 30 N to 5000 N with valve. **ACE traction gas springs offer a long service life due to the hard-chromed piston rod and integral sliding bearing.** They can be installed in any position. The traction force can be subsequently adjusted by means of the valve. The comprehensive range of fitting parts ensures easy installation and makes the traction gas springs universal in use. They supply the muscle force and enable the controlled raising and lowering of covers, hoods, flaps etc. With the free ACE calculation service, the traction gas springs are designed with mounting points to fit the individual application, and can be delivered ex-stock as express deliveries within 24 hours.



Function: ACE industrial traction gas springs are maintenance-free, closed systems, which are filled with pressurised nitrogen gas. Compared to the push type, ACE traction gas springs work in the reverse way. The piston rod is retracted by the gas pressure in the cylinder. The surface of the piston ring between the piston rod and the inner tube determines the force of the gas spring. Traction gas springs are always mounted with the stroke fully compressed.

Operating fluid: Nitrogen gas

Mounting: In any position

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

On request: Special force curves, special lengths, alternative seals and end fittings.

174

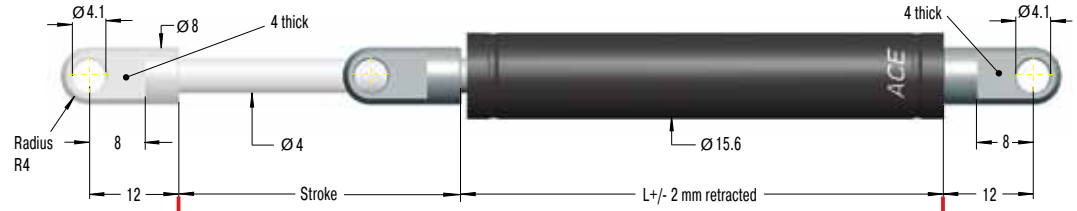
Issue 1.2013 Specifications subject to change

Industrial Traction Gas Springs GZ-15 (Pull Type)

Traction (Pull) Forces 50 N to 150 N
(when Piston Rod Extended up to 185 N)

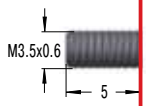
End Fitting | **Standard Dimensions** | **End Fitting**

A3,5



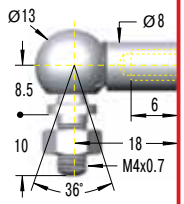
Eye A3,5
max. force 370 N

B3,5

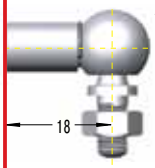


Stud Thread B3,5

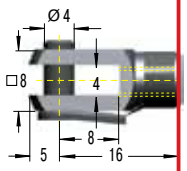
C3,5



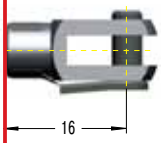
Angle Ball Joint C3,5
max. force 370 N



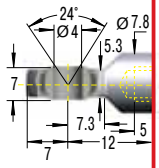
D3,5



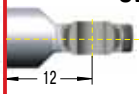
Clevis Fork D3,5
max. force 370 N



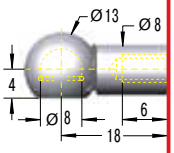
E3,5



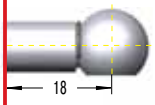
Swivel Eye E3,5
max. force 370 N

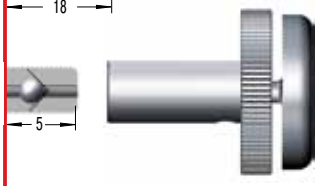


G3,5



Ball Socket G3,5
max. force 370 N





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

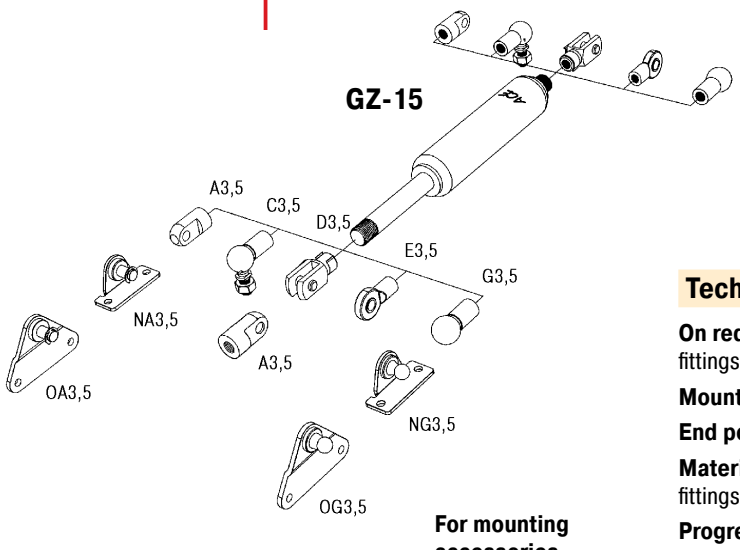
Dimensions

Type	Stroke mm	L retracted
GZ-15-20	20	87
GZ-15-40	40	107
GZ-15-50	50	117
GZ-15-60	60	127
GZ-15-80	80	147
GZ-15-100	100	167
GZ-15-120	120	187
GZ-15-150	150	217

Ordering Example **GZ-15-150-AC-150**

Type (Pull Type)
Body Ø (15 mm)
Stroke (150 mm)
Piston Rod End Fitting A3,5
Body End Fitting C3,5
Traction Force F_1 150 N

The end fittings are interchangeable and must be positively secured by the customer to prevent unscrewing (i.e. Loctite).
For mounting accessories see page 185.



For mounting accessories see page 185.

Technical Data

On request: Special force curves, special lengths, alternative end fittings, rod shroud.

Mounting: In any position. Install mechanical stop in extended position.

End position damping length: Without damping

Material: Piston rod: Hard chrome plated. Body: Black coated. End fittings: Zinc plated steel.

Progression: Approx. 23 %, F_2 max. 185 N

Available traction force range F_1 at 20 °C: 50 N to 150 N

Note: Lifetime approx. 2000 m

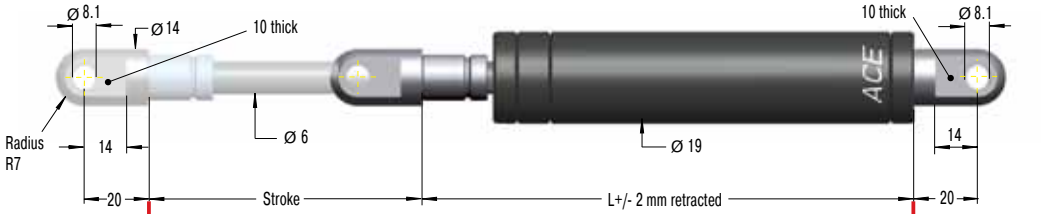
Issue 1.2013 Specifications subject to change

Industrial Traction Gas Springs GZ-19 (Pull Type)

Traction (Pull) Forces 30 N to 300 N
(when Piston Rod Extended up to 330 N)

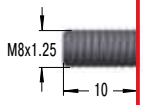
End Fitting | **Standard Dimensions** | **End Fitting**

A8



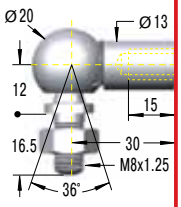
Eye A8
max. force 3000 N

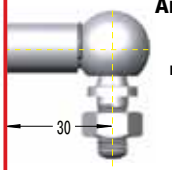
B8



Stud Thread B8

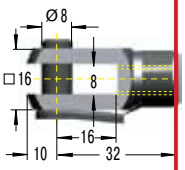
C8

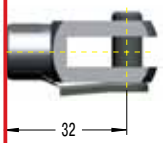




Angle Ball Joint C8
max. force 1200 N

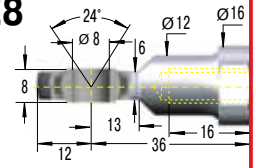
D8

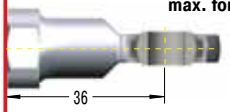




Clevis Fork D8
max. force 3000 N

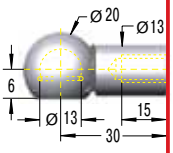
E8

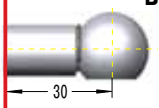




Swivel Eye E8
max. force 3000 N

G8





Ball Socket G8
max. force 1200 N

Dimensions

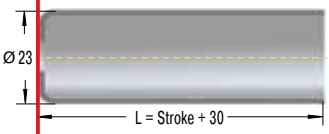
Type	Stroke mm	L retracted
GZ-19-30	30	112
GZ-19-50	50	132
GZ-19-100	100	182
GZ-19-150	150	232
GZ-19-200	200	282
GZ-19-250	250	332

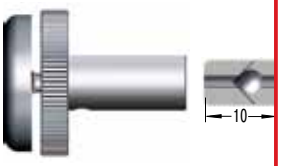
Ordering Example **GZ-19-150-AC-250**

- Type (Pull Type)
- Body Ø (19 mm)
- Stroke (150 mm)
- Piston Rod End Fitting A8
- Body End Fitting C8
- Traction Force F_1 250 N

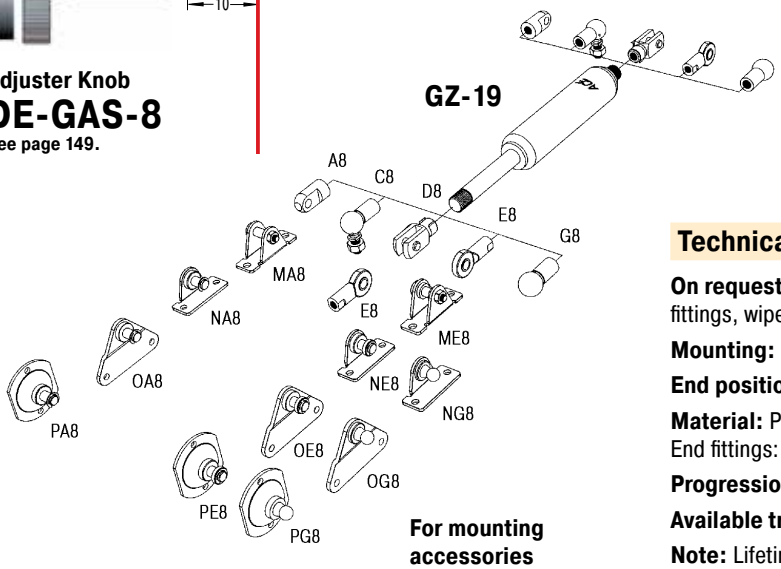
The end fittings are interchangeable and must be positively secured by the customer to prevent unscrewing (i.e. Loctite).
For mounting accessories see page 186.

Rod Shroud
W8-19





Adjuster Knob
DE-GAS-8
See page 149.



For mounting accessories see page 186.

Technical Data

On request: Special force curves, special lengths, alternative end fittings, wiper, stainless steel.

Mounting: In any position. Install mechanical stop in extended position.

End position damping length: Without damping.

Material: Piston rod: Hard chrome plated. Body: Black coated. End fittings: Zinc plated steel.

Progression: Approx. 10 %, F_2 max. 330 N

Available traction force range F_1 at 20 °C: 30 N to 300 N

Note: Lifetime approx. 2000 m

Issue 1.2013 Specifications subject to change

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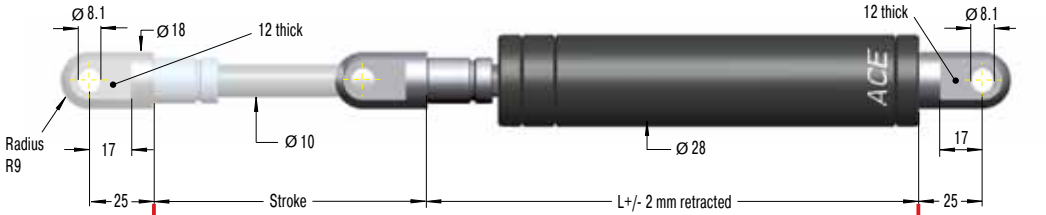
Industrial Traction Gas Springs GZ-28 (Pull Type)

Traction (Pull) Forces 150 N to 1200 N
(when Piston Rod Extended up to 1440 N)

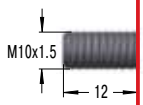
End Fitting | **Standard Dimensions** | **End Fitting**

A10



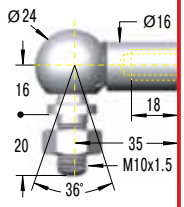
Eye A10
max. force 10 000 N

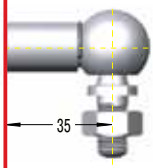
B10



Stud Thread B10

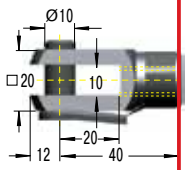
C10

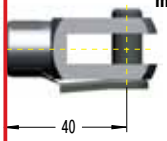




Angle Ball Joint
C10
max. force 1800 N

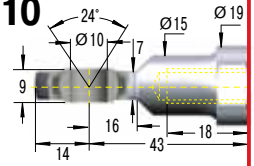
D10

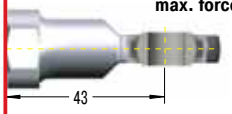




Clevis Fork D10
max. force 10 000 N

E10





Swivel Eye E10
max. force 10 000 N

Dimensions

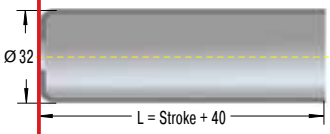
Type	Stroke mm	L retracted
GZ-28-30	30	130
GZ-28-50	50	150
GZ-28-100	100	200
GZ-28-150	150	250
GZ-28-200	200	300
GZ-28-250	250	350
GZ-28-300	300	400
GZ-28-350	350	450
GZ-28-400	400	500
GZ-28-450	450	550
GZ-28-500	500	600
GZ-28-550	550	650
GZ-28-600	600	700
GZ-28-650	650	750

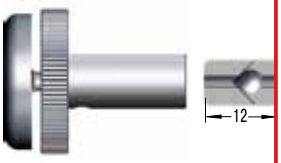
Ordering Example **GZ-28-150-EE-800**

- Type (Pull Type)
- Body Ø (28 mm)
- Stroke (150 mm)
- Piston Rod End Fitting E10
- Body End Fitting E10
- Traction Force F_1 800 N

The end fittings are interchangeable and must be positively secured by the customer to prevent unscrewing (i.e. Loctite).
For mounting accessories see page 186.

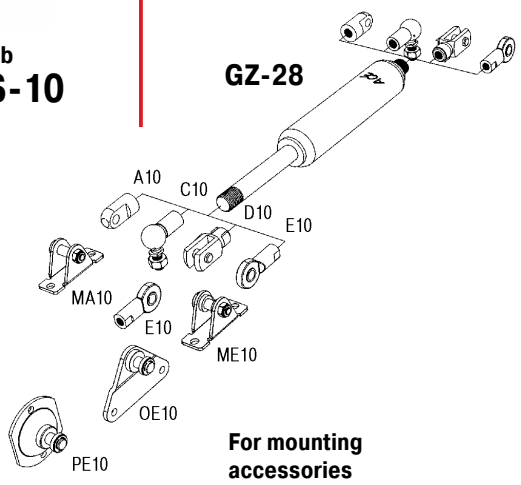
Rod Shroud
W10-28





Adjuster Knob
DE-GAS-10
See page 149.

GZ-28



For mounting accessories see page 186.

Technical Data

On request: Special force curves, special lengths, alternative end fittings, wiper, stainless steel.

Mounting: In any position. Install mechanical stop in extended position.

End position damping length: Without damping.

Material: Piston rod: Hard chrome plated. Body: Black coated. End fittings: Zinc plated steel.

Progression: Approx. 20 %, F_2 max. 1440 N

Available traction force range F_1 at 20 °C: 150 N to 1200 N

Note: Lifetime approx. 2000 m

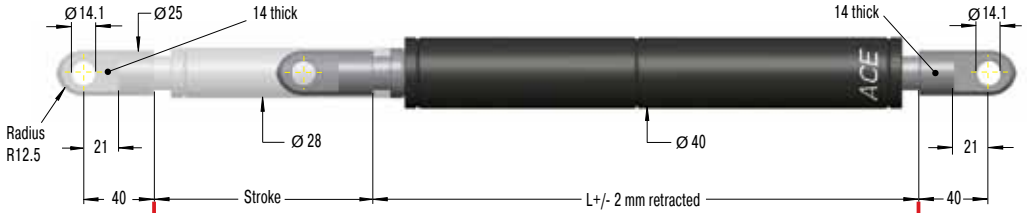
Issue 1.2013 Specifications subject to change

Industrial Traction Gas Springs GZ-40 (Pull Type)

Traction (Pull) Forces 400 N to 5000 N
(when Piston Rod Extended up to 7000 N)

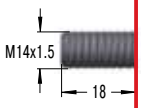
End Fitting | **Standard Dimensions** | **End Fitting**

A14



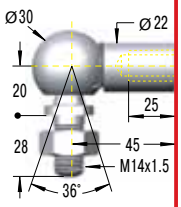
Eye A14
max. force 10 000 N

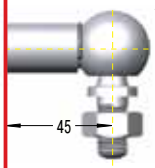
B14



Stud Thread B14

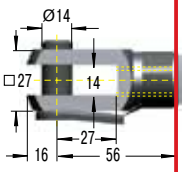
C14

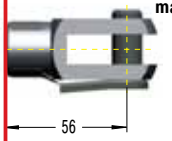




Angle Ball Joint C14
max. force 3200 N

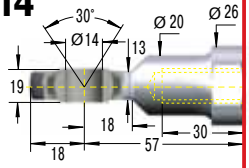
D14

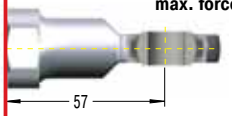




Clevis Fork D14
max. force 10 000 N

E14





Swivel Eye E14
max. force 10 000 N

Dimensions

Type	Stroke mm	L retracted
GZ-40-100	100	250
GZ-40-150	150	325
GZ-40-200	200	400
GZ-40-250	250	475
GZ-40-300	300	550
GZ-40-400	400	700
GZ-40-500	500	850
GZ-40-600	600	1 000

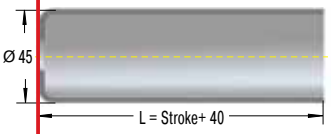
Ordering Example

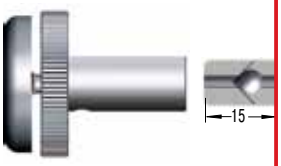
GZ-40-150-EE-800

- Type (Pull Type)
- Body Ø (40 mm)
- Stroke (150 mm)
- Piston Rod End Fitting E14
- Body End Fitting E14
- Traction Force F_1 800 N

The end fittings are interchangeable and must be positively secured by the customer to prevent unscrewing (i.e. Loctite).
For mounting accessories see page 187.

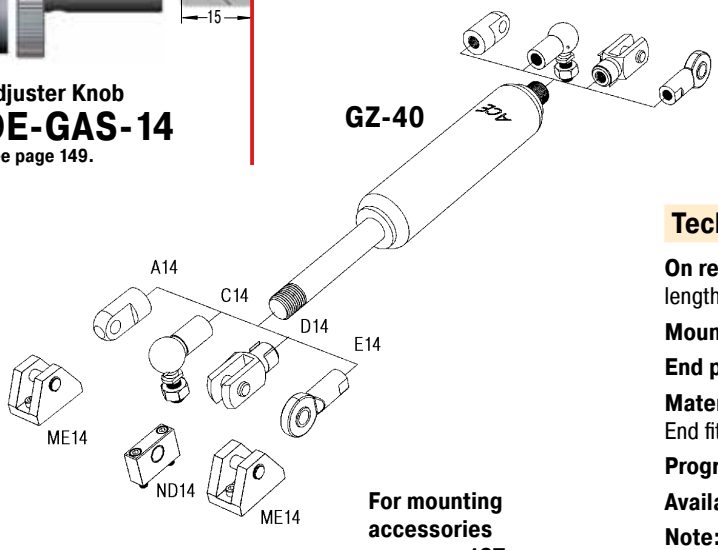
Rod Shroud
W14-40





Adjuster Knob
DE-GAS-14
See page 149.

GZ-40



For mounting accessories see page 187.

Technical Data

On request: Increased traction force, special force curves, special lengths, alternative end fittings, wiper, stainless steel.

Mounting: In any position. Install mechanical stop in extended position.

End position damping length: Without damping

Material: Piston rod: Hard chrome plated. Body: Black coated. End fittings: Zinc plated steel.

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

Available traction force range F_1 at 20 °C: 400 N to 5000 N

Note: Lifetime approx. 2000 m

Issue 1.2013 Specifications subject to change