

End Fitting

Standard Dimensions

End Fitting

**B3,5**

**A3,5-V4A**

**C3,5-V4A**

**D3,5-V4A**

**G3,5-V4A**

**Rod Shroud W3,5-8-V4A**

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<sub>1</sub> 30 N \_\_\_\_\_

Indicated by K.-No. on delivery \_\_\_\_\_

**The end fittings are interchangeable.  
For mounting accessories see page 202.**

**Stud Thread B3,5**

**Eye A3,5-V4A  
max. force 370 N**

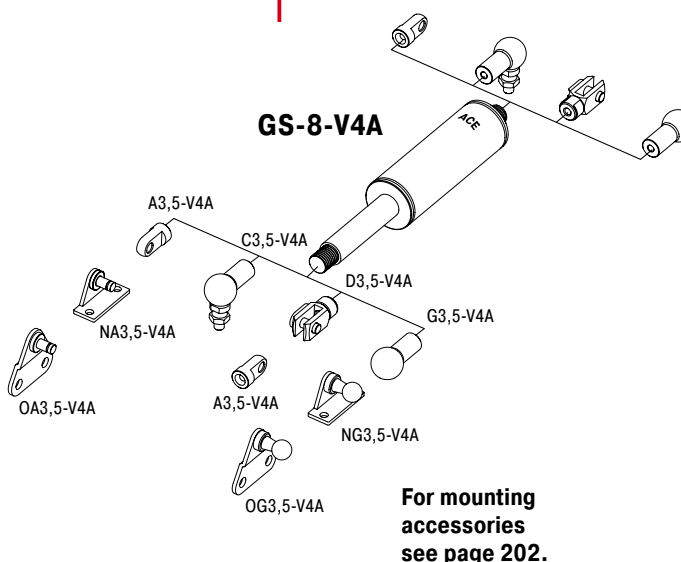
**Angle Ball Joint C3,5-V4A  
max. force 370 N**

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

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

**Adjuster Knob U3,5  
See page 163.**

Issue 6.2011 Specifications subject to change



### Technical Data

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

**Available force range F<sub>1</sub> at 20 °C:** 25 N to 100 N

**Mounting:** In any position

**Advice:** 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<sub>2</sub> max. 130 N

End Fitting

Standard Dimensions

End Fitting

**B3,5**

**A3,5-V4A**

**C3,5-V4A**

**D3,5-V4A**

**G3,5-V4A**

**Rod Shroud W3,5-10-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 202.**

Stud Thread **B3,5**

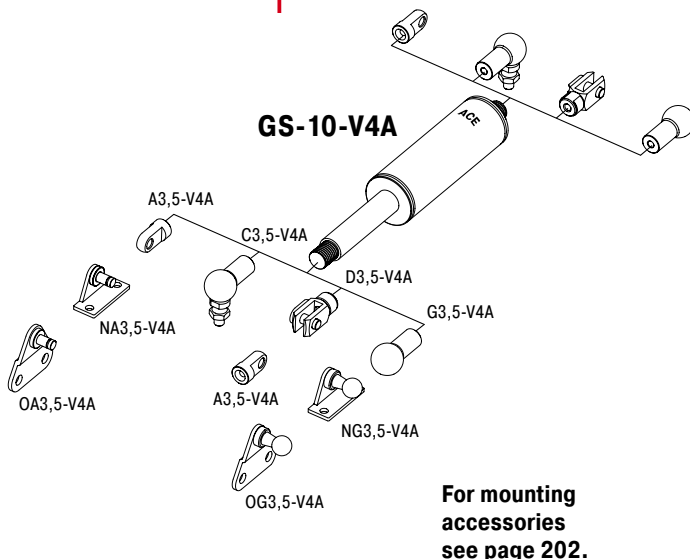
**Eye A3,5-V4A**  
max. force 370 N

**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 U3,5**  
See page 163.



### Technical Data

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

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

**Mounting:** In any position

**Advice:** 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

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

**W3,5-12-V4A** Rod Shroud  
Ø 15.5  
L = Stroke + 10

**Adjuster Knob U3,5**  
See page 163.

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

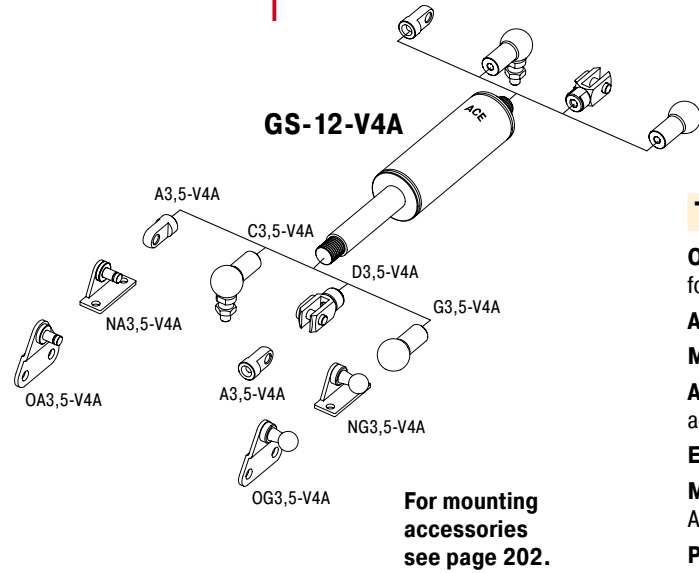
**Ordering Example**

**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<sub>1</sub> 30 N \_\_\_\_\_  
 Indicated by K.-No. on delivery \_\_\_\_\_

The end fittings are interchangeable.  
For mounting accessories see page 202.

Issue 6.2011 Specifications subject to change



### Technical Data

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

**Available force range F<sub>1</sub> at 20 °C:** 25 N to 200 N

**Mounting:** In any position

**Advice:** 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<sub>2</sub> max. 235 N

### End Fitting

### Standard Dimensions

### End Fitting

**B5**

**A5-VA**

**C5-VA**

**D5-VA**

**E5-VA**

**G5-VA**

**Rod Shroud W5-15-VA**

#### 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**

Type (Push Type) \_\_\_\_\_ **GS-15-150-AC-150-VA**

Body Ø (15.6 mm) \_\_\_\_\_

Stroke (150 mm) \_\_\_\_\_

Piston Rod End Fitting A5-VA \_\_\_\_\_

Body End Fitting C5-VA \_\_\_\_\_

Nominal Force F<sub>1</sub> 150 N \_\_\_\_\_

Indicated by K.-No. on delivery \_\_\_\_\_

**The end fittings are interchangeable.  
Strokes also available up to 300 mm.  
For mounting accessories see page 202.**

**Stud Thread B5**

**Eye A5-VA**  
max. force 490 N

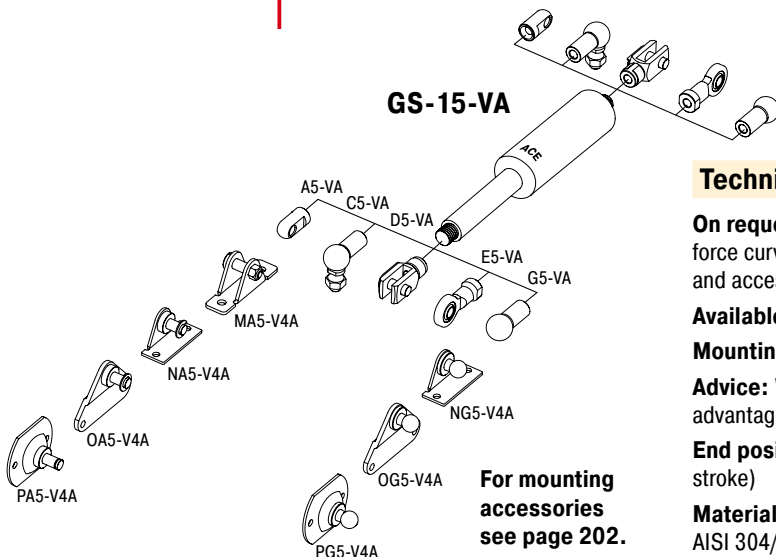
**Angle Ball Joint C5-VA**  
max. force 430 N

**Clevis Fork D5-VA**  
max. force 490 N

**Swivel Eye E5-VA**  
max. force 490 N

**Ball Socket G5-VA**  
max. force 430 N

**Adjuster Knob U5**  
See page 163.



**For mounting accessories see page 202.**

### Technical Data

**On request:** Without damping, increased 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<sub>1</sub> at 20 °C:** 40 N to 400 N

**Mounting:** In any position

**Advice:** 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<sub>2</sub> max. 490 N

Extension Forces 50 N to 700 N  
(when Piston Rod Compressed up to 910 N)

### End Fitting

### Standard Dimensions

### End Fitting

**B8**

**A8-VA**

**C8-VA**

**D8-VA**

**E8-VA**

**G8-VA**

**Rod Shroud W8-19-VA**

**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<sub>1</sub> 600 N \_\_\_\_\_

Indicated by K.-No. on delivery \_\_\_\_\_

**The end fittings are interchangeable.**  
**Strokes also available up to 500 mm.**  
**For mounting accessories see page 203.**

**Stud Thread B8**

**Eye A8-VA**  
max. force 1560 N

**Angle Ball Joint C8-VA**  
max. force 1140 N

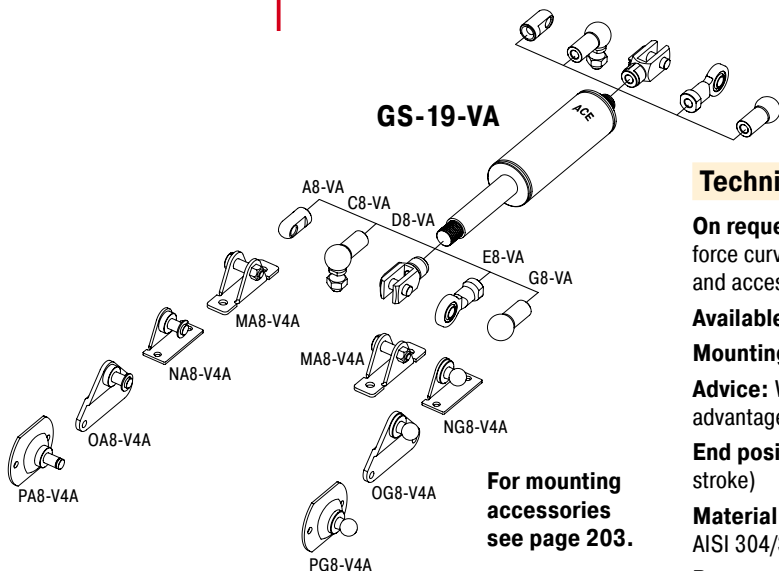
**Clevis Fork D8-VA**  
max. force 1560 N

**Swivel Eye E8-VA**  
max. force 1560 N

**Ball Socket G8-VA**  
max. force 1140 N

**Adjuster Knob U8**  
See page 163.

Issue 6.2011 Specifications subject to change



**For mounting accessories see page 203.**

### Technical Data

**On request:** Without damping, increased 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<sub>1</sub> at 20 °C:** 50 N to 700 N

**Mounting:** In any position

**Advice:** 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<sub>2</sub> max. 910 N

### End Fitting

### Standard Dimensions

### End Fitting

**B8**

M8x1.25

Ø10

Stroke

Ø23

L +/- 2 mm extended

10

10 thick

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<sub>1</sub> 800 N \_\_\_\_\_

Indicated by K.-No. on delivery \_\_\_\_\_

**The end fittings are interchangeable.  
For mounting accessories see page 203.**

**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

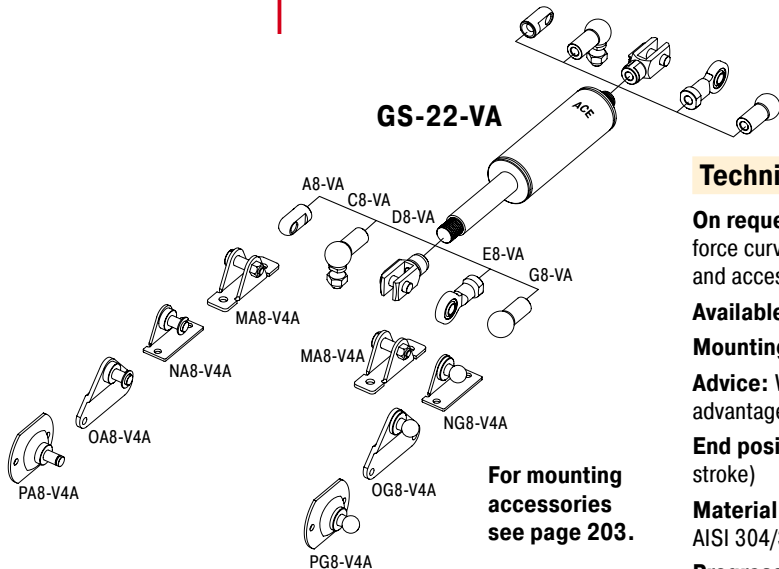
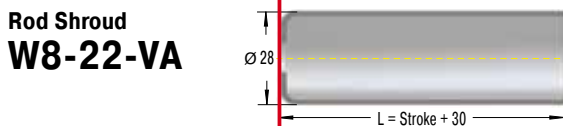
**Swivel Eye E8-VA**  
max. force 1560 N

**Ball Socket G8-VA**  
max. force 1140 N

**Adjuster Knob U8**  
See page 163.

**End Fitting Details:**

- A8-VA:** Radius R7, Ø14, 8.1, 11.5, 10
- C8-VA:** Ø20, Ø13, 12, 15, 16.5, 30, M8x1.25, 36°
- D8-VA:** Ø8, 22, 16, 8, 10, 16, 32
- E8-VA:** 24°, Ø8, 6, Ø12, Ø16, 12, 13, 36, 16
- G8-VA:** Ø20, Ø13, 6, Ø13, 15, 30
- Rod Shroud W8-22-VA:** Ø28, L = Stroke + 30



**For mounting accessories see page 203.**

### Technical Data

**On request:** Without damping, increased 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<sub>1</sub> at 20 °C:** 100 N to 1200 N

**Mounting:** In any position

**Advice:** 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).

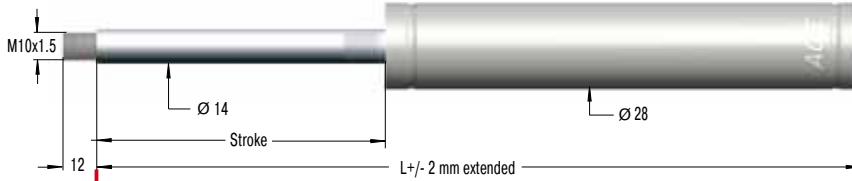
**Progression:** Approx. 32%, F<sub>2</sub> max. 1560 N

### End Fitting

### Standard Dimensions

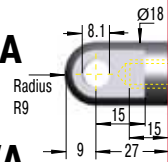
### End Fitting

#### B10



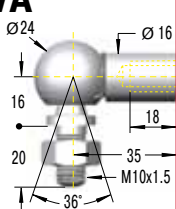
#### Stud Thread B10

#### A10-VA



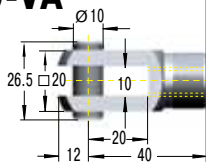
#### Eye A10-VA max. force 3800 N

#### C10-VA



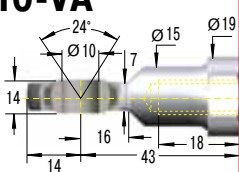
#### Angle Ball Joint C10-VA max. force 1750 N

#### 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

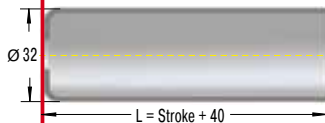
### Ordering Example

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<sub>1</sub> 1200 N \_\_\_\_\_  
 Indicated by K.-No. on delivery \_\_\_\_\_

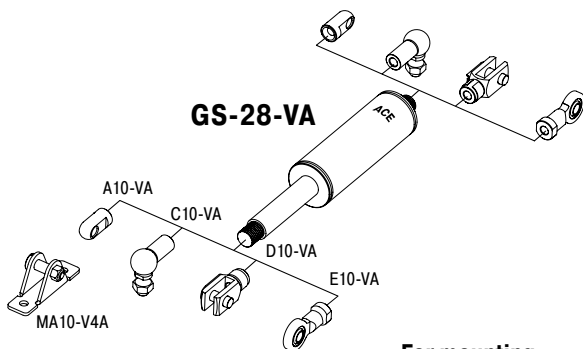
The end fittings are interchangeable.  
 Strokes also available up to 750 mm.  
 For mounting accessories see page 203.

### Rod Shroud W10-28-VA



#### Adjuster Knob U10-VA See page 163.

Issue 6.2011 Specifications subject to change



For mounting accessories see page 203.

### Technical Data

**On request:** Without damping, increased 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<sub>1</sub> at 20 °C:** 150 N to 2500 N

**Mounting:** In any position

**Advice:** 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).

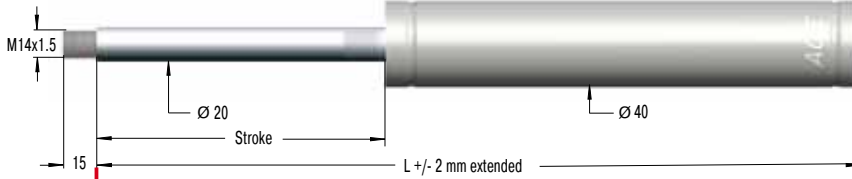
**Progression:** Approx. 52%, F<sub>2</sub> max. 3800 N

### End Fitting

### Standard Dimensions

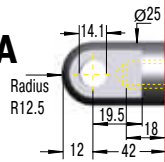
### End Fitting

**B14**



**Stud Thread B14**

**A14-VA**

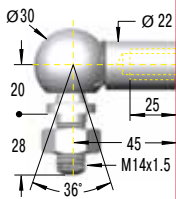


#### Dimensions

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

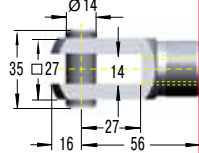
**Eye A14-VA**  
max. force 7000 N

**C14-VA**



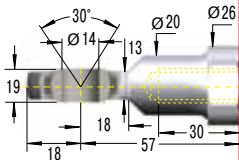
**Angle Ball Joint C14-VA**  
max. force 3200 N

**D14-VA**



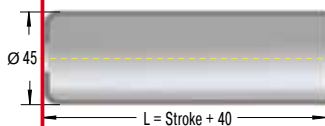
**Clevis Fork D14-VA**  
max. force 7000 N

**E14-VA**



**Swivel Eye E14-VA**  
max. force 7000 N

**Rod Shroud W14-40-VA**



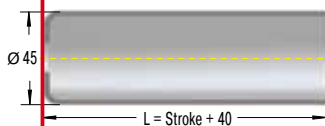
#### Ordering Example

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

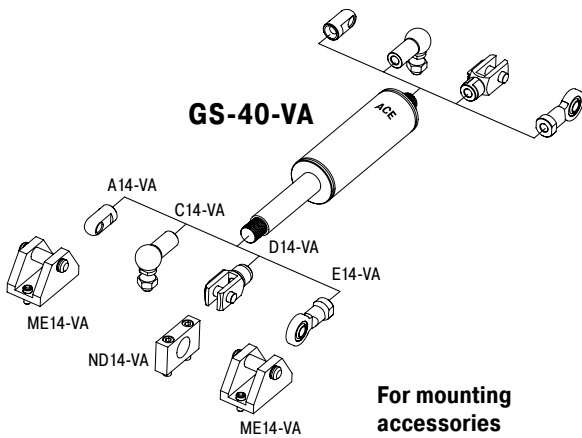
Type (Push Type) \_\_\_\_\_  
 Body Ø (40 mm) \_\_\_\_\_  
 Stroke (150 mm) \_\_\_\_\_  
 Piston Rod End Fitting D14-VA \_\_\_\_\_  
 Body End Fitting D14-VA \_\_\_\_\_  
 Nominal Force F<sub>1</sub> 3500 N \_\_\_\_\_  
 Indicated by K.-No. on delivery \_\_\_\_\_

The end fittings are interchangeable.  
 Strokes also available up to 1000 mm.  
 For mounting accessories see page 204.

**Rod Shroud W14-40-VA**



**Adjuster Knob U14-VA**  
See page 163.



For mounting accessories see page 204.

#### Technical Data

**On request:** Without damping, increased 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<sub>1</sub> at 20 °C:** 500 N to 5000 N

**Mounting:** In any position

**Advice:** 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<sub>2</sub> max. 7000 N