



GAS SPRINGS
STAINLESS STEEL GAS SPRINGS
GAS TRACTION SPRINGS
DAMPERS
ACCESSORIES

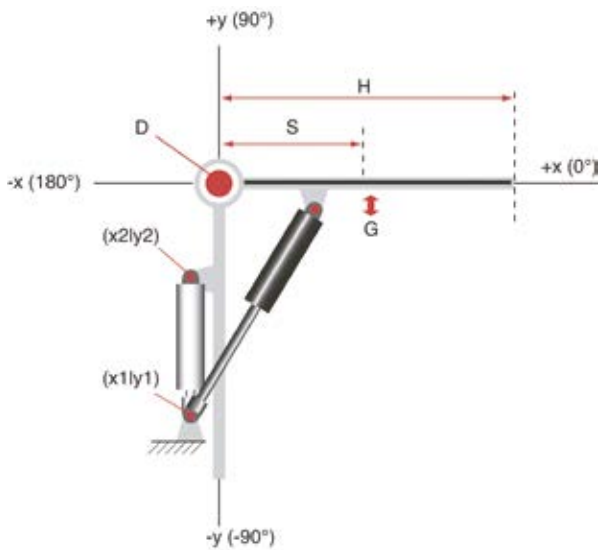
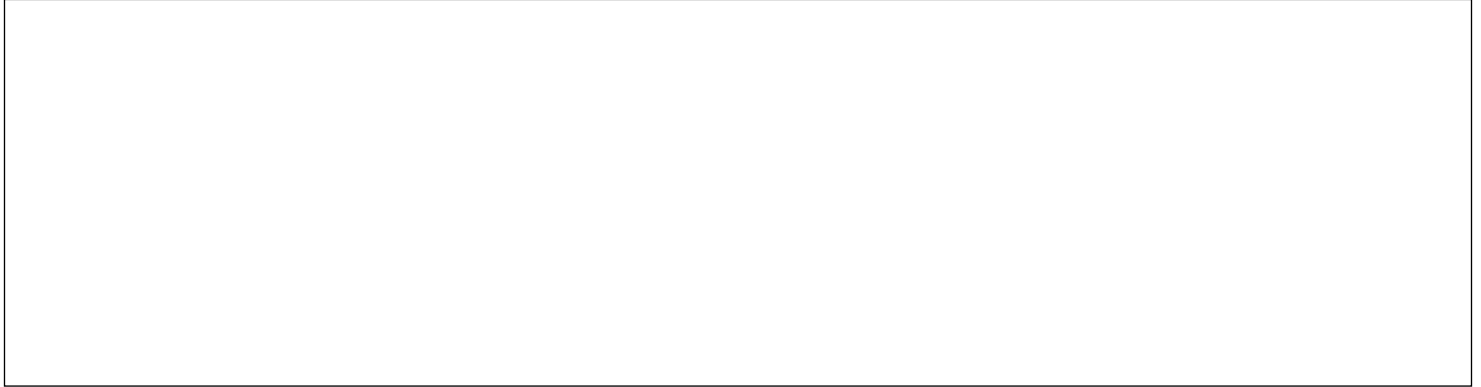
DO YOU HAVE A PROJECT ? WE CAN HELP YOU ...

Can I use a gas spring in my application?

If so, which one is best suited for my application and how should it be designed?

It is very easy – we would be pleased to help you. Just make a simple sketch (similar to the one below) of a application and be sure to note: weight, center of gravity, dimensions, pening angle in degrees and the requested hand-force (holding- force).

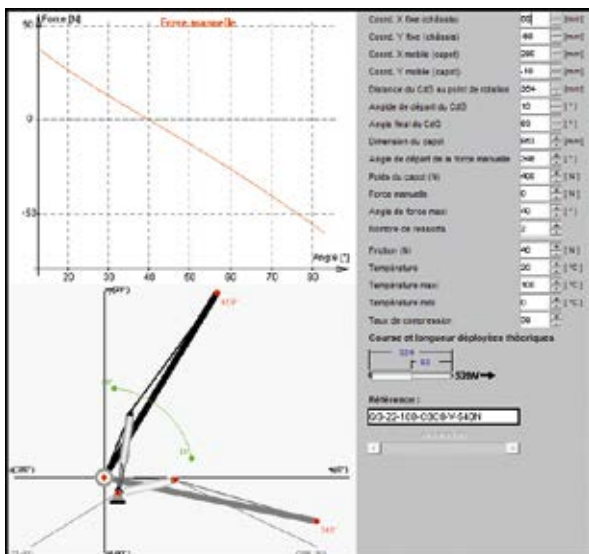
Please note that all dimensions should be measured from the pivot (hinge).



Data to communicate to us:

- Hood length (L*): _____ mm
 - Center of gravity distance (S*): _____ mm
 - Mass of the element to be balanced (G): _____ kg
 - Starting angle // horizontally : _____ °
 - Opening angle: _____ °
 - Number of gas springs in parallel _____
 - Number of motion: _____ / day
 - Ambient temperature: _____ °C
 - Type of connecting parts - piston rod / cylinder side: ____ / ____
- (*): in relation to the rotational center

OUR TOOLS



We have a software to simulate your application and produce the effort curve in relation to the motion. Thus, our commercial offers are systematically accompanied by a full report detailing:

- The model of the selected gas spring
- The evolution of the manual force
- The installation of the gas spring on the fixed part and on the moving part
- The effort curve, respecting the maximum permitted by the occupational medicine

These elements will allow you a simplified installation of the gas spring, thus an efficiency gain.

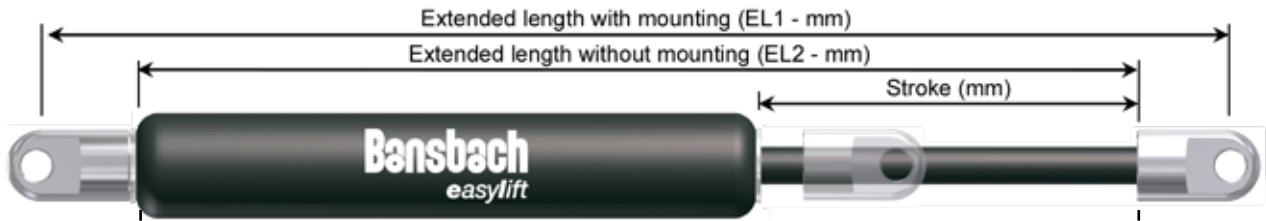
This determination service is provided free of charge.

Move without effort



<i>Gas Spring</i>	3
<i>Stainless Steel Gas Spring</i>	10
<i>Gas Traction Spring</i>	13
<i>Damper</i>	15
<i>Accessories</i>	19

QS-8 : F₁ from 10 to 100N (F_{2 max} = 120N) QS-10 : F₁ from 10 to 100N (F_{2 max} = 120N)



Item	Stroke (+/- 2mm)	EL2 (+/- 2mm)
QS-8-20	20	72
QS-8-30	30	92
QS-8-40	40	112
QS-8-50	50	132
QS-8-60	60	152
QS-8-80	80	192

(*) In stock

Diameter piston rod/cylinder: Ø 3mm / Ø 8mm

Valve: without

Fitting: thread piston rod/cylinder: M3*4 / M3*4

Progressivity: approx. 28%

Speed & damping: normal speed – normal damping over 5 mm

Materials: ceramic treatment on the piston rod (Corrosion resistance 216 h according to DIN 50021 SS) - brass cylinder

Item	Stroke (+/- 2mm)	EL2 (+/- 2mm)
QS-10-20	20	72
QS-10-30	30	92
QS-10-40	40	112
QS-10-50	50	132
QS-10-60	60	152
QS-10-80	80	192

(*) In stock

Diameter piston rod/cylinder: Ø 3mm / Ø 10mm

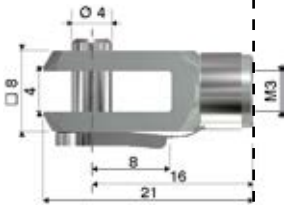
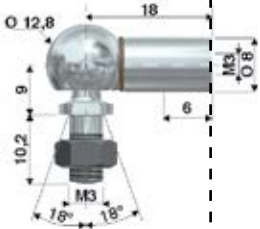
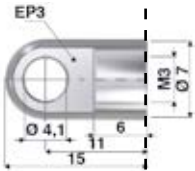
Valve: without

Fitting: thread piston rod/cylinder: M3*4 / M3*4

Progressivity: approx. 16%

Speed & damping: normal speed – normal damping over 10 mm

Materials: ceramic treatment on the piston rod (Corrosion resistance 216 h according to DIN 50021 SS) - Black epoxy paint on the cylinder



XX

Q1



Load max. 370N

Q3



Load max. 370N

Q5



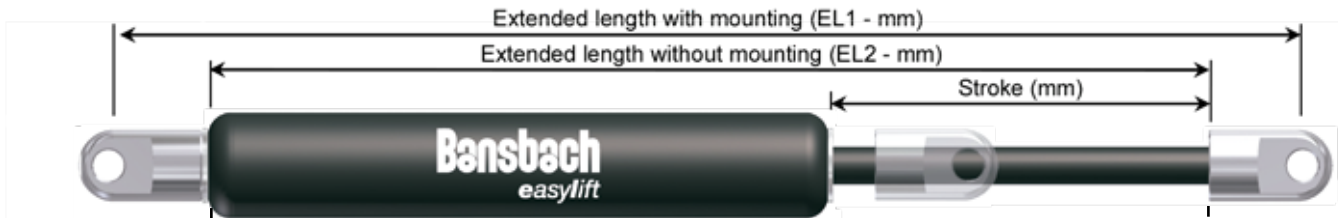
Load max. 370N

Q6



Load max. 370N

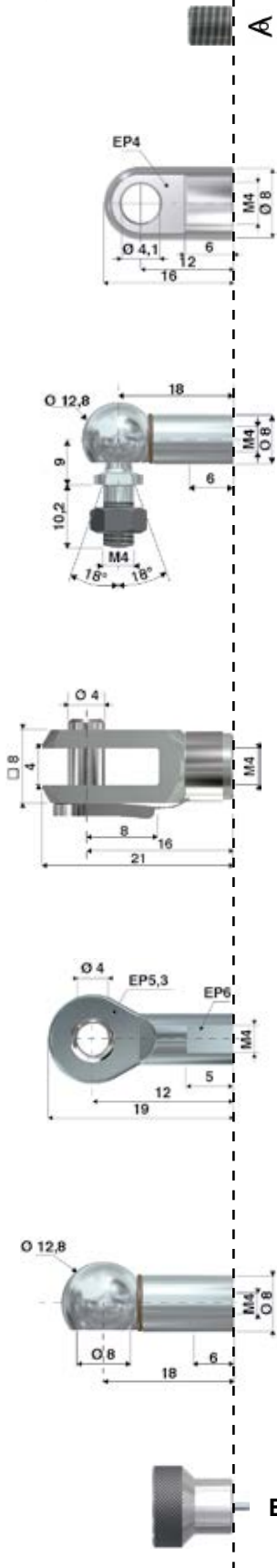
QS-12 : F₁ from 10 to 180N (F₂ max = 225N)



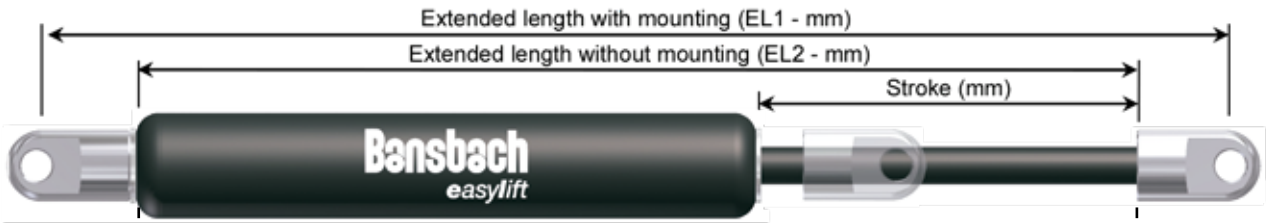
Item	Stroke (+/- 2mm)	EL2 (+/- 2mm)
QS-12-20	20	72
QS-12-30	30	92
QS-12-40 *	40	112
QS-12-50 *	50	132
QS-12-60 *	60	152
QS-12-80 *	80	192
QS-12-100 *	100	232
QS-15-120	120	272
QS-12-150 *	150	332

(*) In stock

Diameter piston rod/cylinder: Ø 4mm / Ø 12mm
Valve: integrated
Fitting: thread piston rod/cylinder: M4*4 / M4*4
Progressivity: approx. 21%
Speed & damping: normal speed – normal damping over 10 mm
Materials: ceramic treatment on the piston rod (Corrosion resistance 216 h according to DIN 50021 SS) - Black epoxy paint on the cylinder



QS-15 : F₁ from 20 to 400N (F₂ max = 500N)



Item	Stroke (+/- 2mm)	EL2 (+/- 2mm)
QS-15-20	20	67
QS-15-40 *	40	107
QS-15-50 *	50	127
QS-15-60 *	60	147
QS-15-80 *	80	187
QS-15-100 *	100	227
QS-15-120 *	120	267
QS-15-150 *	150	327
QS-15-200 *	200	427

(*) In stock

Diameter piston rod/cylinder: Ø 6mm / Ø 15mm

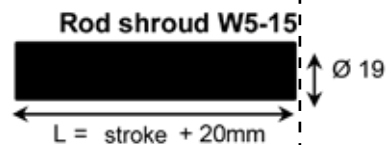
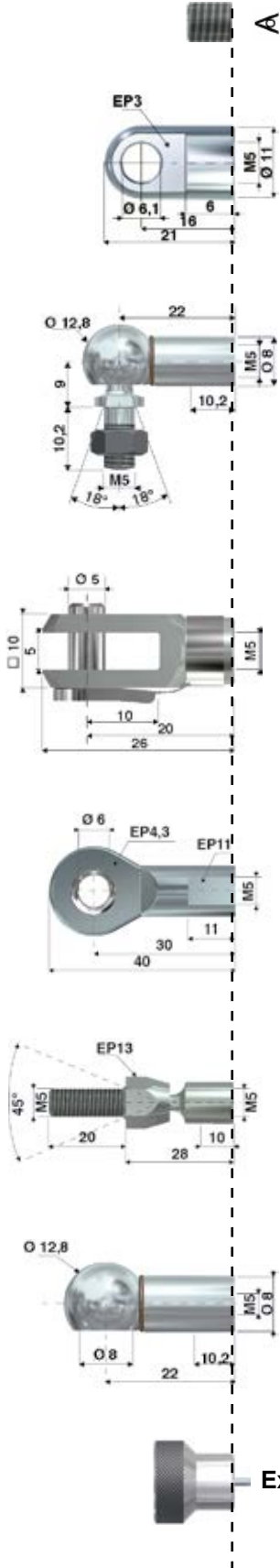
Valve: integrated

Fitting: thread piston rod/cylinder: M5*5 / M5*5

Progressivity: approx. 34%

Speed & damping: normal speed – normal damping over 10 mm

Materials: ceramic treatment on the piston rod (Corrosion resistance 216 h according to DIN 50021 SS) - Black epoxy paint on the cylinder





Item	Stroke (+/- 2mm)	EL2 (+/- 2mm)
QS-19-50 *	50	164
QS-19-100 *	100	264
QS-19-150 *	150	364
QS-19-200 *	200	464
QS-19-250 *	250	564
QS-19-300 *	300	664

(*) In stock

Diameter piston rod/cylinder: Ø 8mm / Ø 19mm
Valve: integrated
Fitting: thread piston rod/cylinder: M8*9 / M8*8
Progressivity: approx. 40%
Speed & damping: low speed – high damping between 20mm to 60mm according to the stroke

Item	Stroke (+/- 2mm)	EL2 (+/- 2mm)
QS-22-50 *	50	164
QS-22-80 *	80	224
QS-22-100 *	100	264
QS-22-125 *	125	314
QS-22-150 *	150	364
QS-22-200 *	200	464
QS-22-225 *	225	514
QS-22-250 *	250	564
QS-22-300 *	300	664
QS-22-350 *	350	764
QS-22-400 *	400	864
QS-22-450 *	450	964
QS-22-500 *	500	1064
QS-22-550 *	550	1164
QS-22-600 *	600	1264
QS-22-650 *	650	1364

(*) In stock

Diameter piston rod/cylinder: Ø 10mm / Ø 22mm
Valve: integrated
Fitting: thread piston rod/cylinder: M8*9 / M8*8
Progressivity: approx. 45%
Speed & damping: low speed – high damping between 20mm to 70mm according to the stroke
Materials: ceramic treatment on the piston rod
 (Corrosion resistance 216 h according to DIN 50021 SS) -
 Black epoxy paint on the cylinder

XX



S3

Load max. 3000N

A3



Load max. 1300N

C5



Load max. 3000N

A7



Load max. 3000N

B6



Load max. 1200N

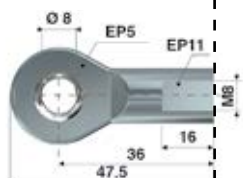
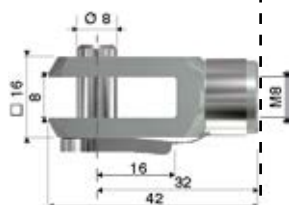
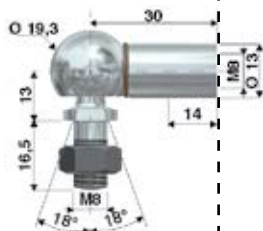
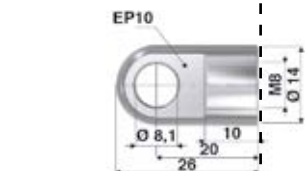
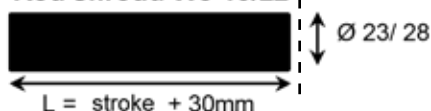
P3



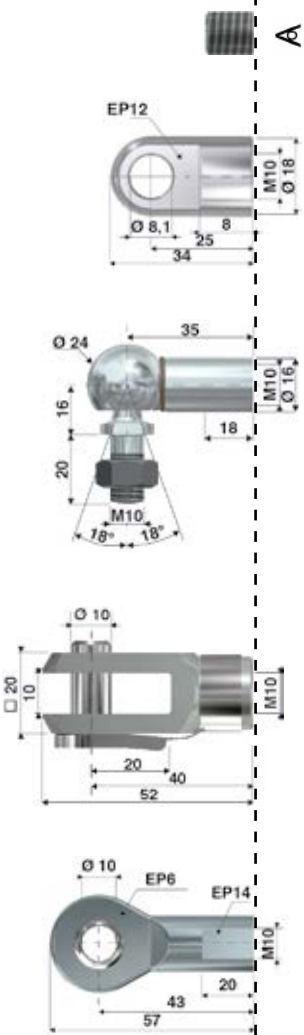
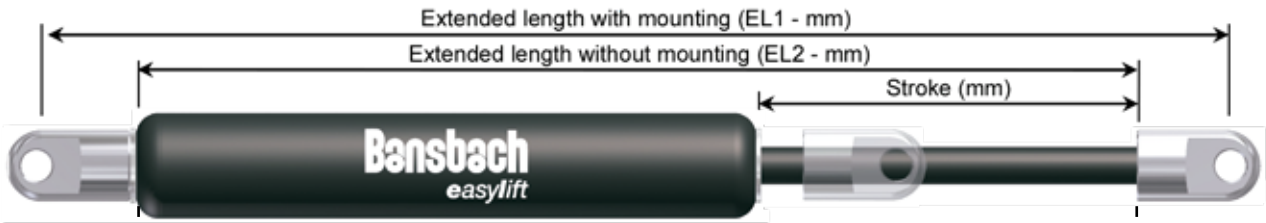
Load max. 1300N

Exhaust screw AS19

Rod shroud W8-19/22



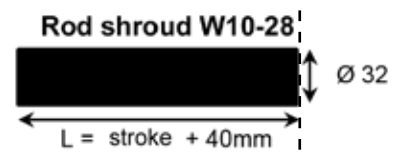
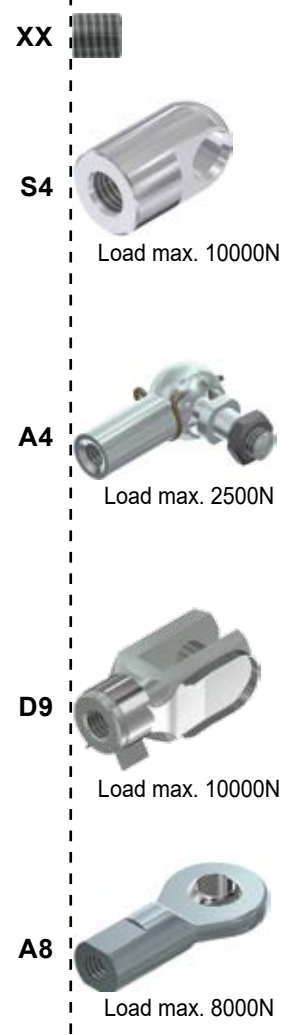
QS-28 : F₁ from 150 de 2500N (F₂ max = 3800N)



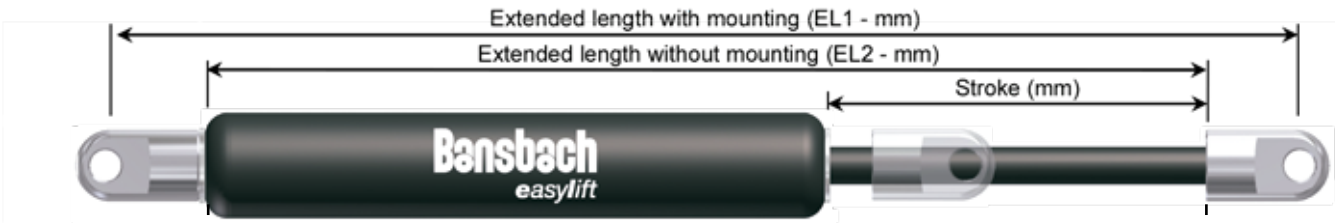
Item	Stroke (+/- 2mm)	EL2 (+/- 2mm)
QS-28-100 *	100	262
QS-28-150 *	150	362
QS-28-200 *	200	462
QS-28-250 *	250	562
QS-28-300 *	300	662
QS-28-350 *	350	762
QS-28-400 *	400	862
QS-28-450	450	962
QS-28-500 *	500	1062
QS-28-550	550	1162
QS-28-600	600	1262
QS-28-650	650	1362
QS-28-700	700	1462
QS-28-750	750	1562

(*) In stock

Diameter piston rod/cylinder: Ø 14mm / Ø 28mm
Valve: integrated
Fitting: thread piston rod/cylinder: M10*9 / M10*13
Progressivity: approx. 80% for stroke from 100 to 350mm
 65% for stroke from 400 to 750mm
Speed & damping: low speed – high damping between 30mm to 70mm according to the stroke
Materials: ceramic treatment on the piston rod
 (Corrosion resistance 216 h according to DIN 50021 SS) -
 Black epoxy paint on the cylinder



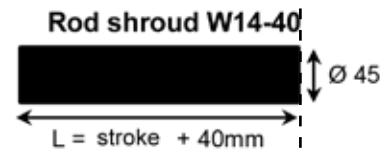
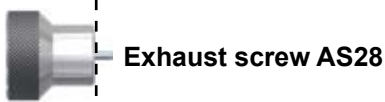
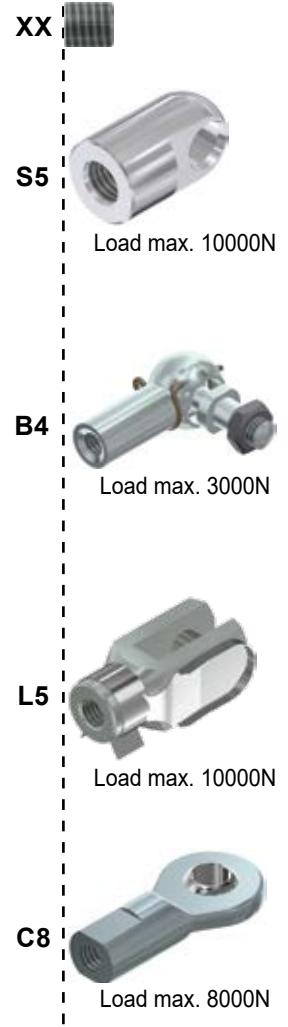
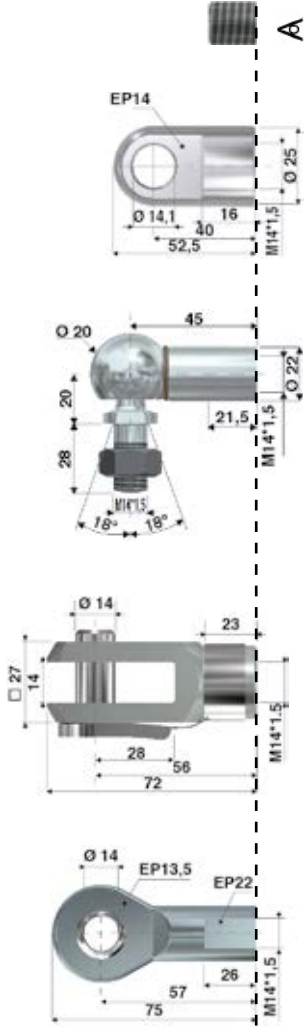
QS-40 : F₁ from 500 to 5000N (F_{2 max} = 7250N)



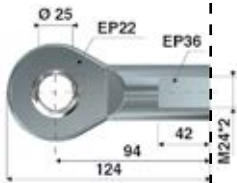
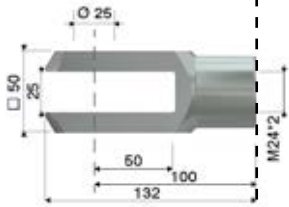
Item	Stroke (+/- 2mm)	EL2 (+/- 2mm)
QS-40-100	100	317
QS-40-150	150	417
QS-40-200	200	517
QS-40-300	300	717
QS-40-400	400	917
QS-40-500	500	1117
QS-40-600	600	1317
QS-40-800	800	1717
QS-40-1000	1000	2117

(*) In stock

Diameter piston rod/cylinder: Ø 20mm / Ø 40mm
Valve: integrated
Fitting: thread piston rod/cylinder: MF14*15 / MF14*15
Progressivity: approx. 48%
Speed & damping: low speed – high damping between 30mm to 70mm according to the stroke
Materials: ceramic treatment on the piston rod (Corrosion resistance 216 h according to DIN 50021 SS) - Black epoxy paint on the cylinder



QS-70 : F₁ from 2000 to 13000N (F₂ max = 16250N)



Item	Stroke (+/- 2mm)	EL2 (+/- 2mm)
QS-70-100	100	320
QS-70-200	200	520
QS-70-300	300	720
QS-70-400	400	920
QS-70-500	500	1120
QS-70-600	600	1320
QS-70-700	700	1520
QS-70-800	800	1720

(*) In stock

Diameter piston rod/cylinder: Ø 30mm / Ø 70mm

Valve: integrated - Exhaust screw type «bike»

Fitting: thread piston rod/cylinder: M24*2*35 / M24*2*35

Progressivity: approx. 25%

Speed & damping: normal speed – normal damping over 10 mm

Materials: ceramic treatment on the piston rod (Corrosion resistance 216 h according to DIN 50021 SS) - Black epoxy paint on the cylinder

XX



M5

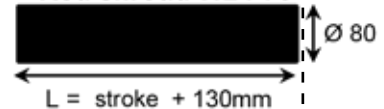
Load max. 50000N

M8

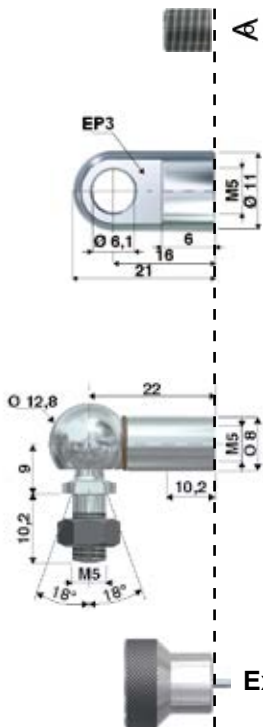
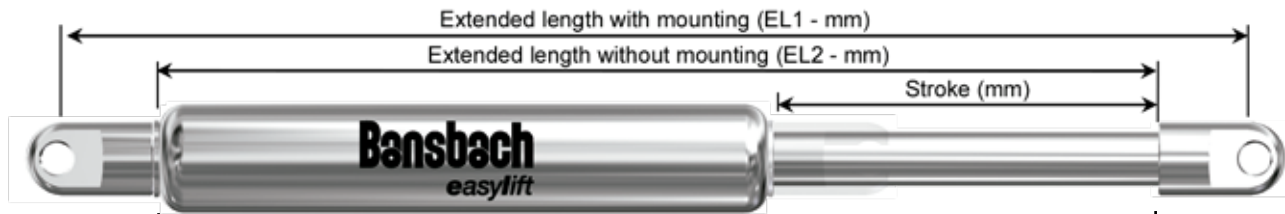


Load max. 30000N

Rod shroud W24-70



QSI-15 INOX 316L : F₁ from 20 to 400N (F_{2 max} = 500N)



Item	Stroke (+/- 2mm)	EL2 (+/- 2mm)
QSI-15-60	60	147
QSI-15-100	100	227
QSI-15-150	150	327

(*) In stock

Diameter piston rod/cylinder: Ø 6mm / Ø 15mm

Valve: integrated

Fitting: thread piston rod/cylinder: M5*5 / M5*5

Progressivity: around 27%

Speed & damping: normal speed – high damping

Materials: piston rod and cylinder in stainless steel 316L

A5
INOX 316L



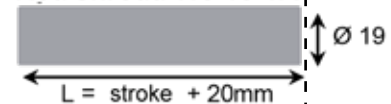
Load max. 490N

C5
INOX 303

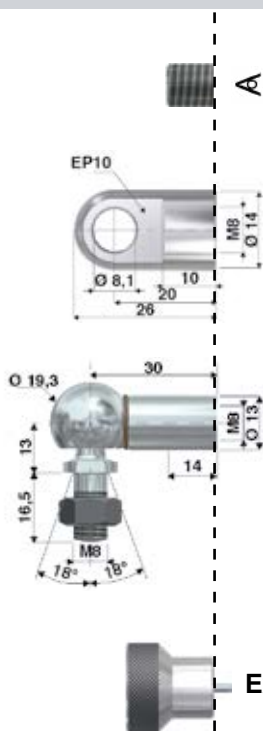


Load max. 430N

Rod shroud W5-15-VA



QSI-19 INOX 316L : F₁ from 50 to 700N (F_{2 max} = 930N)



Item	Stroke (+/- 2mm)	EL2 (+/- 2mm)
QSI-19-100	100	264
QSI-19-200	200	464
QSI-19-250	250	564

(*) In stock

Diameter piston rod/cylinder: Ø 8mm / Ø 19mm

Valve: integrated

Fitting: thread piston rod/cylinder: M8*8 / M8*8

Progressivity: around 33%

Speed & damping: low speed – high damping

Materials: piston rod and cylinder in stainless steel 316L

B8
INOX 316L



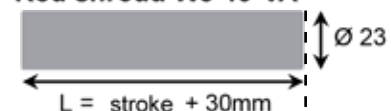
Load max. 1560N

C8
INOX 303



Load max. 1430N

Rod shroud W8-19-VA



QSI-22 INOX 316L : F₁ from 80 to 1300N (F_{2 max} = 1800N)

Item	Stroke (+/- 2mm)	EL2 (+/- 2mm)
QSI-22-50 *	50	164
QSI-22-100 *	100	264
QSI-22-150 *	150	364
QSI-22-200 *	200	464
QSI-22-250 *	250	564
QSI-22-300 *	300	664
QSI-22-400 *	400	864

(*) In stock

Diameter piston rod/cylinder: Ø 10mm / Ø 22mm
Valve: integrated
Fitting: thread piston rod/cylinder: M8*9 / M8*8
Progressivity: approx. 39%
Speed & damping: low speed – high damping
Materials: piston rod and cylinder in stainless steel 316L

A8 INOX 316L
 Load max. 1560N

C8 INOX 303
 Load max. 1430N

Exhaust screw U8

Rod shroud W8-22-VA
 Ø 28
 L = stroke + 30mm

QSIN-22 INOX 304 : F₁ from 80 to 1300N (F_{2 max} = 1800N)

Item	Stroke (+/- 2mm)	EL2 (+/- 2mm)
QSIN-22-50 *	50	164
QSIN-22-100 *	100	264
QSIN-22-150 *	150	364
QSIN-22-200 *	200	464
QSIN-22-250 *	250	564
QSIN-22-300 *	300	664

(*) In stock

Diameter piston rod/cylinder: Ø 10mm / Ø 22mm
Valve: integrated
Fitting: thread piston rod/cylinder: M8*9 / M8*8
Progressivity: approx. 39%
Speed & damping: low speed – high damping
Materials: piston rod and cylinder in stainless steel 304

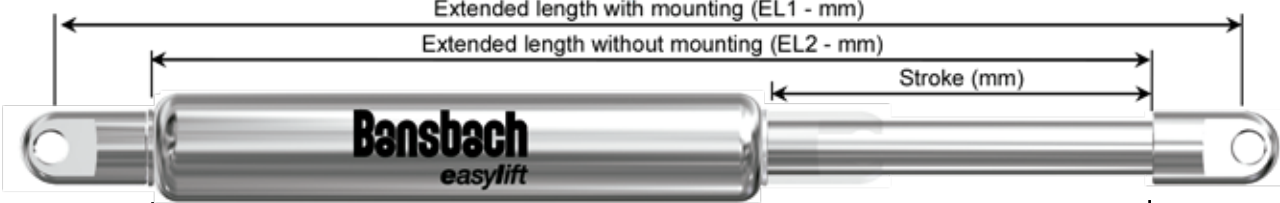
A8 INOX 316L
 Load max. 1560N

C8 INOX 303
 Load max. 1430N

Exhaust screw U8

Rod shroud W8-22-VA
 Ø 28
 L = stroke + 30mm

QSI-28 INOX 316L : F₁ from 150 to 2500N (F_{2 max} = 3800N)



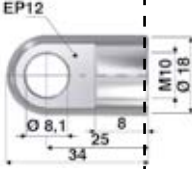
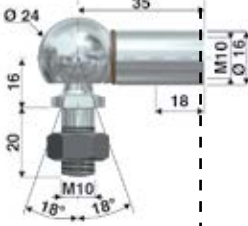
Extended length with mounting (EL1 - mm)
 Extended length without mounting (EL2 - mm)
 Stroke (mm)

Item	Stroke (+/- 2mm)	EL2 (+/- 2mm)
QSI-28-100	100	262
QSI-28-200	200	462
QSI-28-250	250	562
QSI-28-300	300	662

(*) In stock

Diameter piston rod/cylinder: Ø 14mm / Ø 28mm
Valve: integrated
Fitting: thread piston rod/cylinder: M10*9 / M10*13
Progressivity: around 52%
Speed & damping: low speed – high damping
Materials: piston rod and cylinder in stainless steel 316L

A

B10

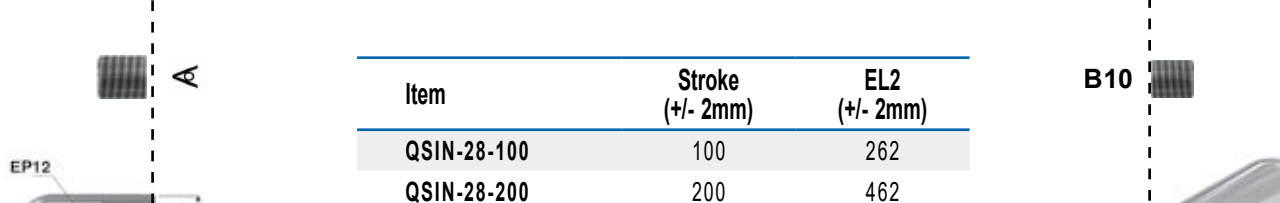
A10 INOX 316L
 Charge max. 3800N

C10 INOX 303
 Charge max. 2500N

Exhaust screw U10

Rod shroud W10-28-VA
 Ø 32
 L = stroke + 40mm

QSIN-28 INOX 304 : F₁ from 150 to 2500N (F_{2 max} = 3800N)



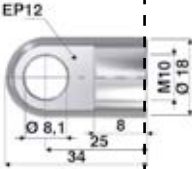
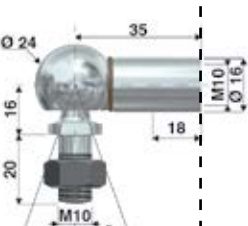
Extended length with mounting (EL1 - mm)
 Extended length without mounting (EL2 - mm)
 Stroke (mm)

Item	Stroke (+/- 2mm)	EL2 (+/- 2mm)
QSIN-28-100	100	262
QSIN-28-200	200	462
QSIN-28-250	250	562
QSIN-28-300	300	662

(*) In stock

Diameter piston rod/cylinder: Ø 14mm / Ø 28mm
Valve: integrated
Fitting: thread piston rod/cylinder: M10*9 / M10*13
Progressivity: around 52%
Speed & damping: low speed – high damping
Materials: piston rod and cylinder in stainless steel 304

A

B10

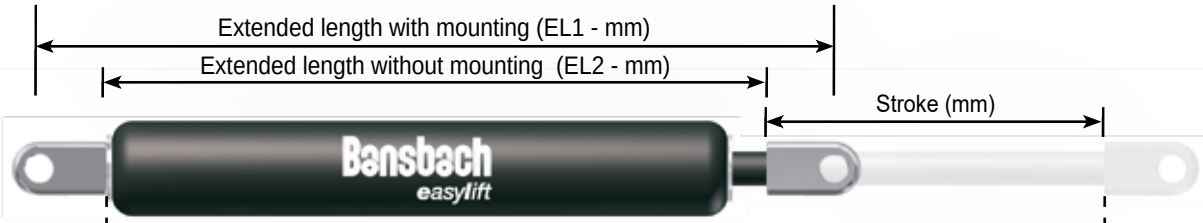
A10 INOX 316L
 Charge max. 3800N

C10 INOX 303
 Charge max. 2500N

Exhaust screw AS28

Rod shroud W10-28-VA
 Ø 32
 L = stroke + 40mm

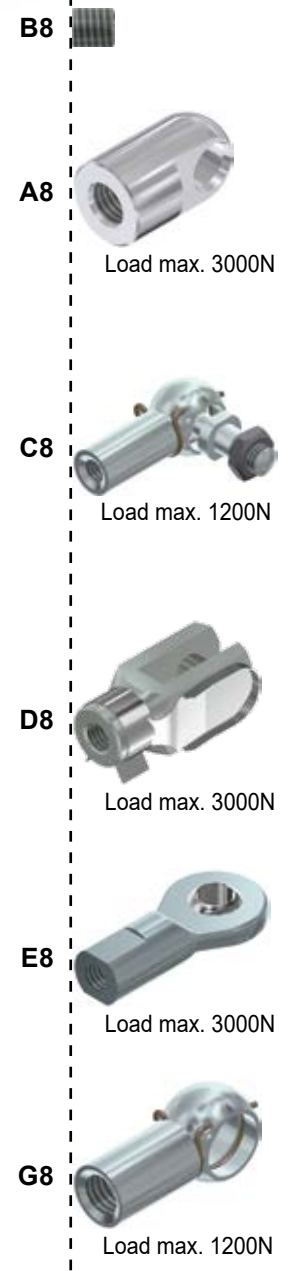
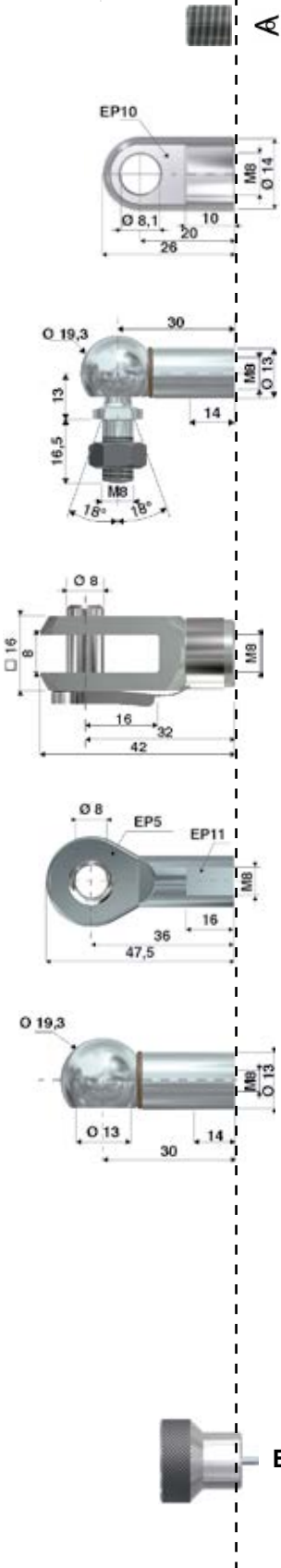
QZ-19 : F1 from 30 to 330N (F2 max = 390N)



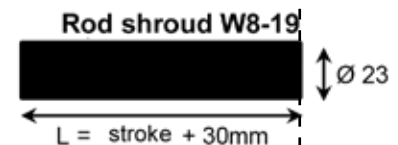
Item	Stroke (+/- 2mm)	EL2 (+/- 2mm)
QZ-19-30	30	112
QZ-19-50	50	132
QZ-19-100	100	182
QZ-19-150	150	232
QZ-19-200	200	282
QZ-19-250	250	332

(*) In stock

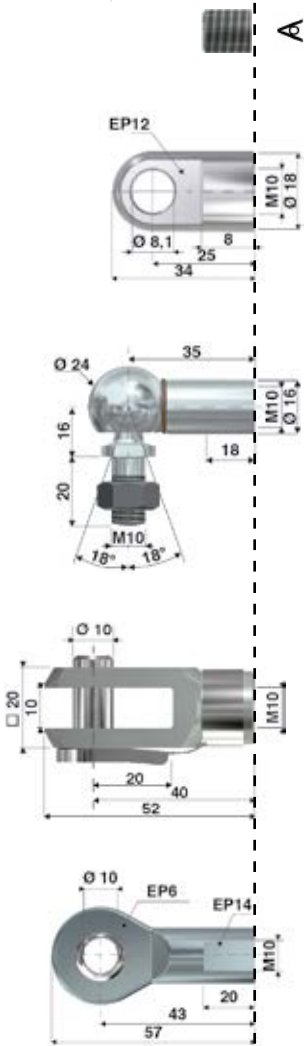
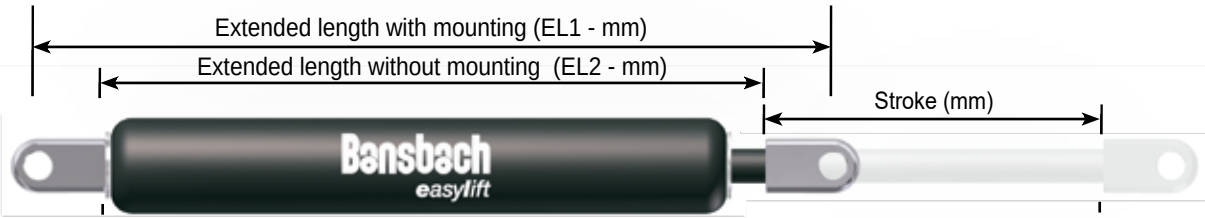
Diameter piston rod/cylinder: Ø 6mm / Ø 19mm
Valve: integrated
Fitting: thread piston rod/cylinder: M8*9 / M8*8
Progressivity: approx. 20%
Speed & damping: normal speed – without damping
Materials: ceramic treatment on the piston rod
 (Corrosion resistance 216 h according to DIN 50021 SS) -
 Black epoxy paint on the cylinder



Exhaust screw AS19



QZ-28 : F1 from 100 to 1500N (F2 max = 2400N)

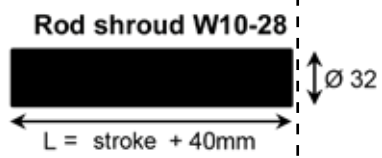
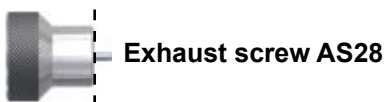


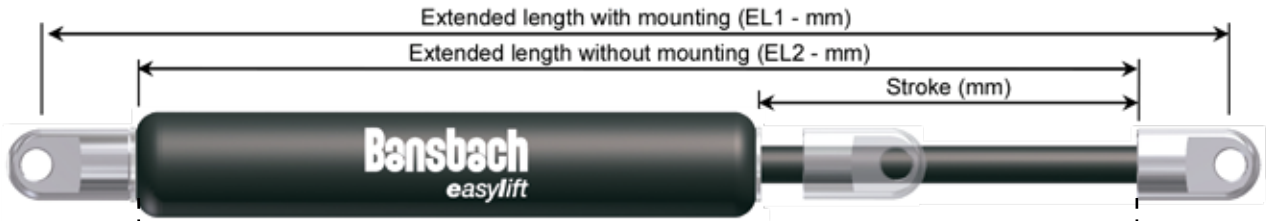
Item	Stroke (+/- 2mm)	EL2 (+/- 2mm)
QZ-28-30	30	130
QZ-28-50	50	150
QZ-28-100	100	200
QZ-28-150	150	250
QZ-28-200	200	300
QZ-28-250	250	350
QZ-28-300	300	400
QZ-28-350	350	450
QZ-28-400	400	500
QZ-28-450	450	550
QZ-28-500	500	600
QZ-28-550	550	650
QZ-28-600	600	700
QZ-28-650	650	750



(*) In stock

Diameter piston rod/cylinder: Ø 10mm / Ø 28mm
Valve: integrated
Fitting: thread piston rod/cylinder: M10*9 / M10*13
Progressivity: approx. 60%
Speed & damping: normal speed – without damping
Materials: ceramic treatment on the piston rod
 (Corrosion resistance 216 h according to DIN 50021 SS) -
 Black epoxy paint on the cylinder





Item	Stroke (+/- 2mm)	EL2 ** (+/- 2mm)	Max. damping in push out direction (N)	Max. damping in pull in direction (N)
QHB-15-25	25	90	800	800
QHB-15-50	50	140	800	800
QHB-15-75	75	190	800	800
QHB-15-100	100	240	800	800
QHB-15-150	150	340	800	800

(*) In stock

(**) The speed adjustment system can increase EL1 and EL2 measures up to + 6mm max.

Diameter piston rod/cylinder: Ø 6mm / Ø 15mm

Fitting: thread piston rod/cylinder: M5*5 / M5*5

Materials: ceramic treatment on the piston rod (Corrosion resistance 216 h according to DIN 50021 SS) - Black epoxy paint on the cylinder

Control Type:
 «B» = dual effect
 «A» = pull direction
 «E» = push direction

Free travel effect: 20 % of the stroke

Option: «without free travel effect» (with floating piston) on request
 Please note «Y/xxN» where «xx» is the force at the end of the item
 EL2 = stroke x 2,45 + 47 (max. force = 50N)

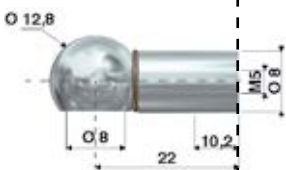
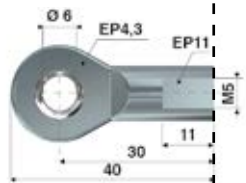
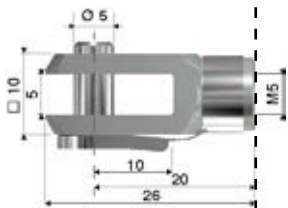
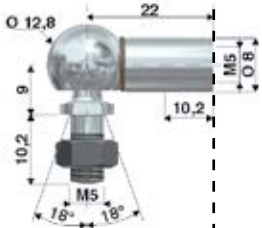
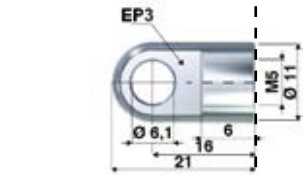
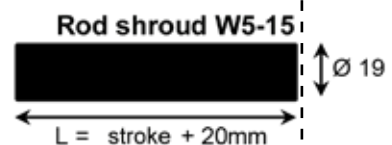
Adjustment: only possible when the piston rod is in its entirety in or out (in case of model with «Y» option, only piston rod in out position)

1. Hold the cylinder in one hand and the piston rod with the other
2. Adjust the damper by turning the piston rod. For an adjustment piston rod in «out position», pull slowly the piston rod and turn it in the same time in order to hook the piston. For an adjustment piston rod in «in position», push slowly the piston rod and turn it in the same time in order to hook the piston.
3. Warning: Don't use pliers to manipulate the piston rod at the risk of damage it and create a leak.

Turn on the right side :
 Increase the control,
 speed lower.



Turn on the left side:
 Decrease the control,
 speed faster.





Item	Stroke (+/- 2mm)	EL2 ** (+/- 2mm)	Max. damping in push out direction (N)	Max. damping in pull in direction (N)
QHB-22-50	50	150	1800	1800
QHB-22-100	100	250	1800	1800
QHB-22-150	150	350	1800	1800
QHB-22-200	200	450	1800	1800
QHB-22-250	250	550	1800	1800

(*) In stock

(**) The speed adjustment system can increase EL1 and EL2 measures up to + 6mm max.

Diameter piston rod/cylinder: Ø 8mm / Ø 22mm

Fitting: thread piston rod/cylinder: M8*9 / M8*8

Materials: ceramic treatment on the piston rod (Corrosion resistance 216 h according to DIN 50021 SS) - Black epoxy paint on the cylinder

Control Type: «B» = dual effect
«A» = pull direction
«E» = push direction

Free travel effect: 20 % of the stroke

Option: «without free travel effect» (with floating piston) on request
Please note «Y/xxN» where «xx» is the force at the end of the item
EL2 = stroke x 2,38 + 55 (max. force = 50N)

Adjustment: only possible when the piston rod is in its entirety in or out (in case of model with «Y» option, only piston rod in out position)

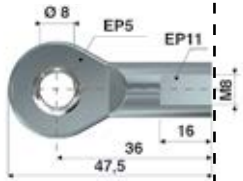
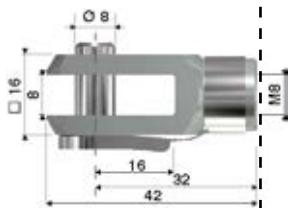
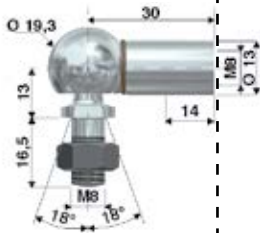
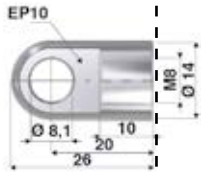
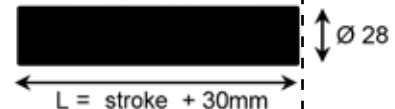
1. Hold the cylinder in one hand and the piston rod with the other
2. Adjust the damper by turning the piston rod. For an adjustment piston rod in «out position», pull slowly the piston rod and turn it in the same time in order to hook the piston. For an adjustment piston rod in «in position», push slowly the piston rod and turn it in the same time in order to hook the piston.
3. Warning: Don't use pliers to manipulate the piston rod at the risk of damage it and create a leak.

Turn on the right side :
Increase the control,
speed lower.



Turn on the left side:
Decrease the control,
speed faster.

Rod shroud W8-22



A8



Load max. 3000N

C8



Load max. 1300N

D8



Load max. 3000N

E8

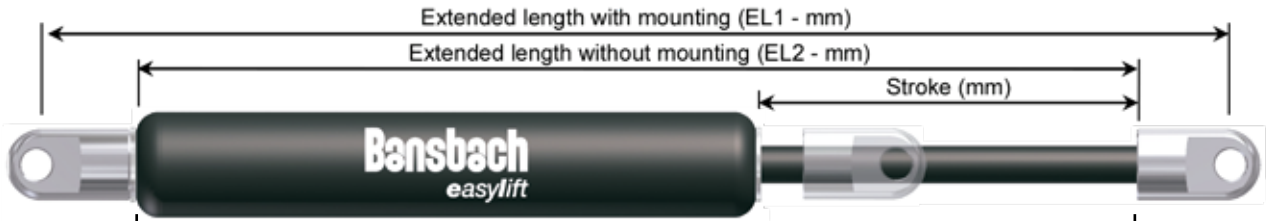


Load max. 3000N

G8



Load max. 1300N



Item	Stroke (+/- 2mm)	EL2 ** (+/- 2mm)	Max. damping in push out direction (N)	Max. damping in pull in direction (N)
QHB-28-100	100	260	3000	3000
QHB-28-150	150	360	3000	3000
QHB-28-200	200	460	3000	3000
QHB-28-250	250	560	3000	3000
QHB-28-300	300	660	2500	3000
QHB-28-350	350	760	2000	3000
QHB-28-400	400	860	1500	3000
QHB-28-500	500	1060	1000	3000

(*) In stock

(**) The speed adjustment system can increase EL1 and EL2 measures up to + 6mm max.

Diameter piston rod/cylinder: Ø 10mm / Ø 28mm

Fitting: thread piston rod/cylinder: M8*9 / M8*8

Materials: ceramic treatment on the piston rod (Corrosion resistance 216 h according to DIN 50021 SS) - Black epoxy paint on the cylinder

Control Type:
 «B» = dual effect
 «A» = pull direction
 «E» = push direction

Free travel effect: 20 % of the stroke

Option: «without free travel effect» (with floating piston) on request
 Please note «Y/xxN» where «xx» is the force at the end of the item
 EL2 = stroke x 2,35 + 60 (max. force = 100N)

Adjustment: only possible when the piston rod is in its entirety in or out (in case of model with «Y» option, only piston rod in out position)

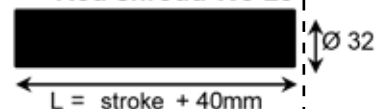
1. Hold the cylinder in one hand and the piston rod with the other
2. Adjust the damper by turning the piston rod. For an adjustment piston rod in «out position», pull slowly the piston rod and turn it in the same time in order to hook the piston. For an adjustment piston rod in «in position», push slowly the piston rod and turn it in the same time in order to hook the piston.
3. Warning: Don't use pliers to manipulate the piston rod at the risk of damage it and create a leak.

Turn on the right side :
 Increase the control,
 speed lower.



Turn on the left side:
 Decrease the control,
 speed faster.

Rod shroud W8-28



A8

Load max. 3000N



C8

Load max. 1300N



D8

Load max. 3000N

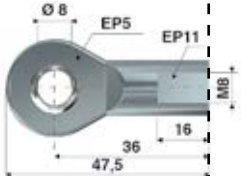
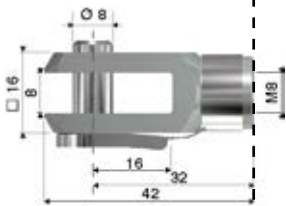
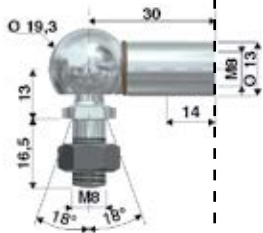
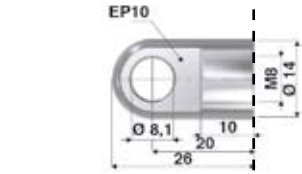


E8

Load max. 3000N



Load max. 1300N





Item	Stroke (+/- 2mm)	EL2 ** (+/- 2mm)	Max. damping in push out direction (N)	Max. damping in pull in direction (N)
QHB-40-100	100	275	10000	10000
QHB-40-150	150	375	10000	10000
QHB-40-200	200	475	10000	10000
QHB-40-300	300	675	10000	10000
QHB-40-400	400	875	8000	10000
QHB-40-500	500	1075	6000	10000
QHB-40-600	600	1275	4000	10000
QHB-40-700	700	1475	3000	10000
QHB-40-800	800	1675	3000	10000

(*) In stock

(**) The speed adjustment system can increase EL1 and EL2 measures up to + 6mm max.

Diameter piston rod/cylinder: Ø 14mm / Ø 40mm

Fitting: thread piston rod/cylinder: M14*15 / M14*15

Materials: ceramic treatment on the piston rod
(Corrosion resistance 216 h according to DIN 50021 SS) - Black epoxy paint on the cylinder

Control Type: «B» = dual effect
«A» = pull direction
«E» = push direction

Free travel effect: 20 % of the stroke

Option: «without free travel effect» (with floating piston) on request

Please note «Y/xxN» where «xx» is the force at the end of the item

EL2 = stroke x 2,32 + 82 (max. force = 200N)

Adjustment: only possible when the piston rod is in its entirety in or out (in case of model with «Y» option, only piston rod in out position)

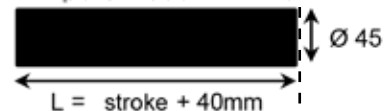
1. Hold the cylinder in one hand and the piston rod with the other
2. Adjust the damper by turning the piston rod. For an adjustment piston rod in «out position», pull slowly the piston rod and turn it in the same time in order to hook the piston. For an adjustment piston rod in «in position», push slowly the piston rod and turn it in the same time in order to hook the piston.
3. Warning: Don't use pliers to manipulate the piston rod at the risk of damage it and create a leak.

Turn on the right side :
Increase the control,
speed lower.



Turn on the left side:
Decrease the control,
speed faster.

Rod shroud W14-40



A14

Load max. 10000N



C14

Load max. 3000N



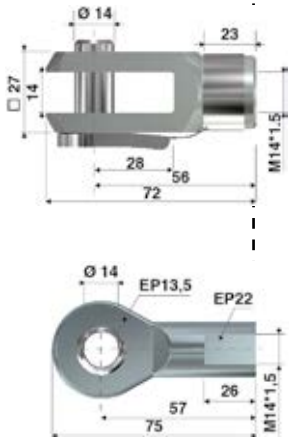
D14

Load max. 10000N



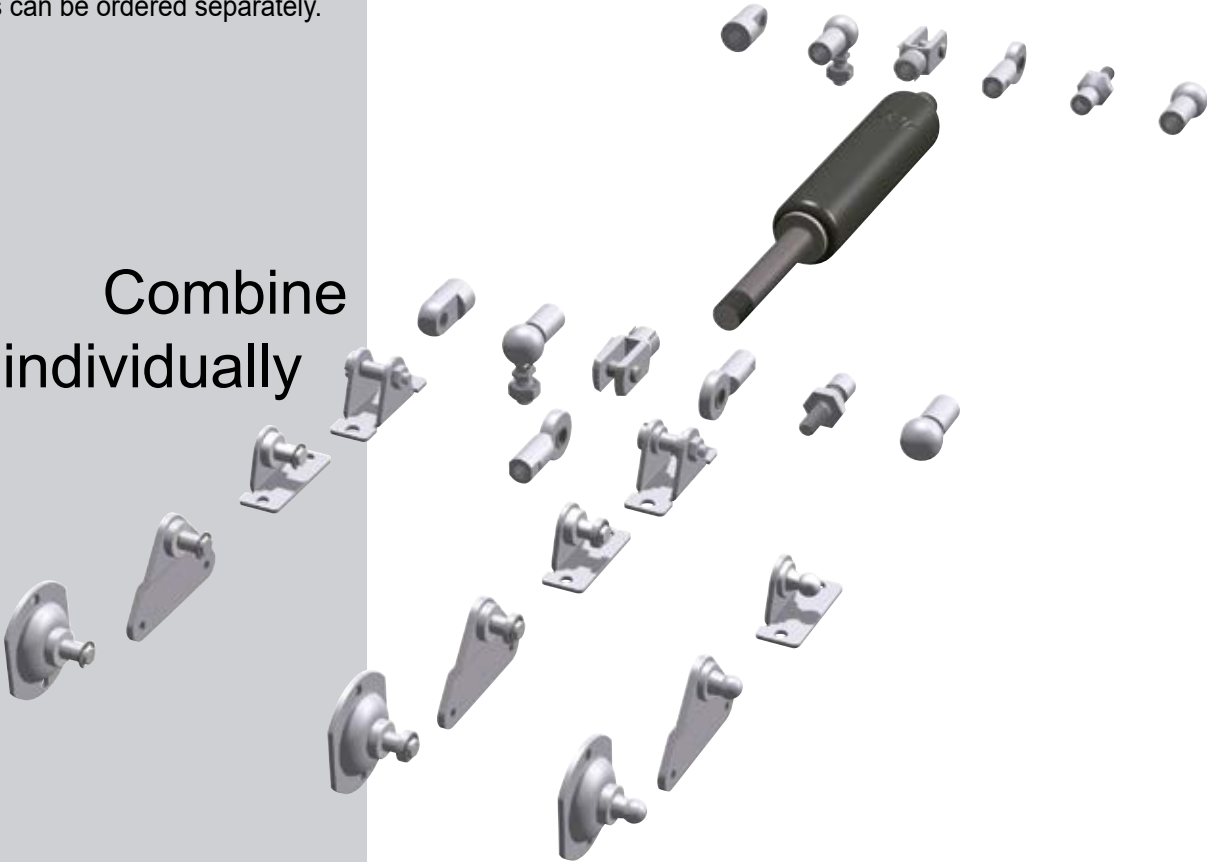
E14

Load max. 8000N



Accessories can be ordered separately.

Combine
individually



Accessories	20
Stainless Steel Accessories	22

QS-8 / QS-10 / QS-12

<p>¹ Load max. 180 N</p>	<p>NA3,5</p>	<p>NG3,5</p>	<p>¹ Load max. 180 N</p>	<p>OA3,5</p>	<p>OG3,5</p>
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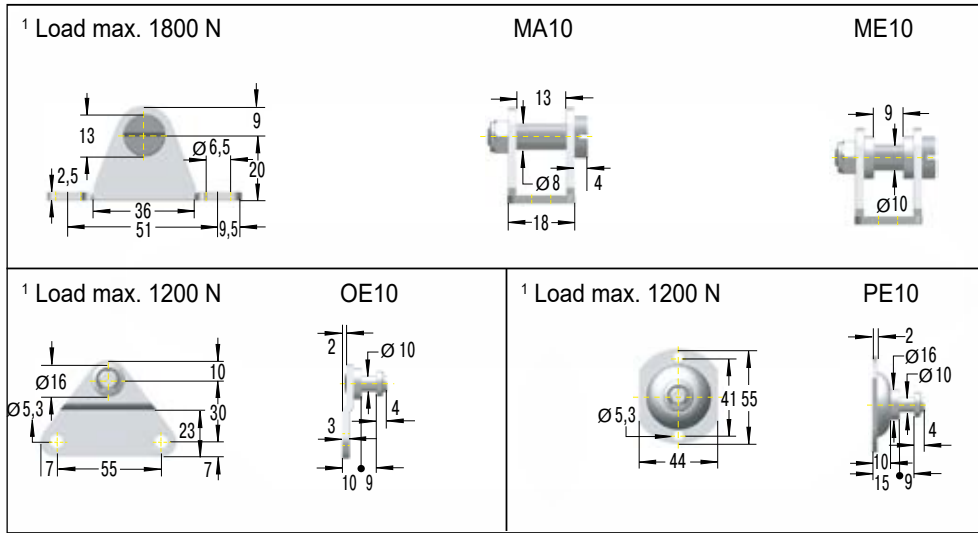
QS-15 / HB-15

<p>¹ Load max. 500 N</p>	<p>MA5</p>	<p>¹ Load max. 400 N</p>	<p>NA5</p>	<p>NG5</p>	
<p>¹ Load max. 180 N</p>	<p>OA5</p>	<p>OG5</p>	<p>¹ Load max. 500 N</p>	<p>PA5</p>	<p>PG5</p>

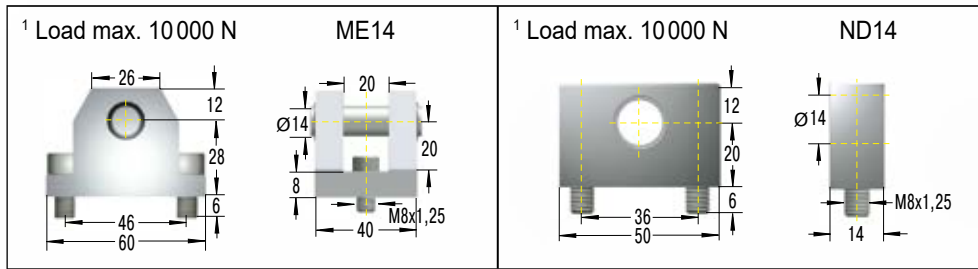
QS-19 / QS-22 / QZ-19 / HB-22 / HB-28

<p>¹ Load max. 1800 N</p>	<p>MA8</p>	<p>ME8</p>	<p>¹ Load max. 1000 N</p>	<p>NA8</p>	<p>NE8</p>	<p>NG8</p>	
<p>¹ Load max. 1200 N</p>	<p>OA8</p>	<p>OE8</p>	<p>OG8</p>	<p>¹ Load max. 1200 N</p>	<p>PA8</p>	<p>PE8</p>	<p>PG8</p>

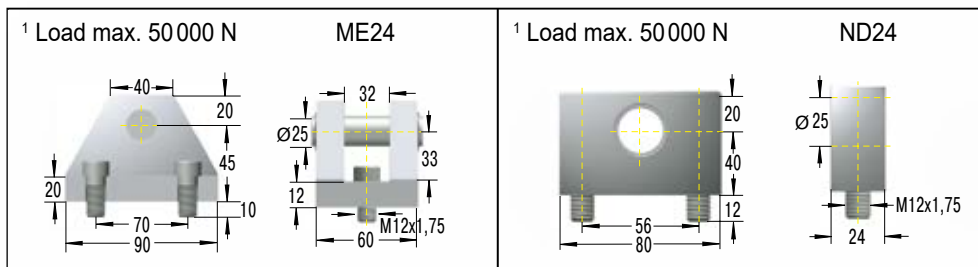
QS-28 / QZ-28



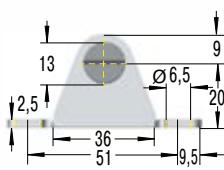
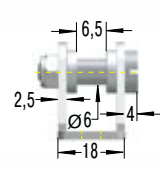
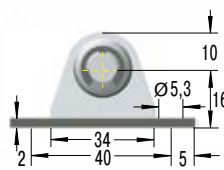
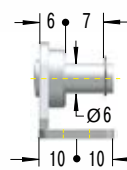
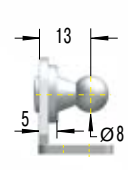
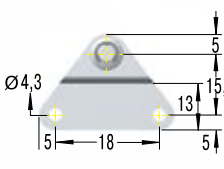
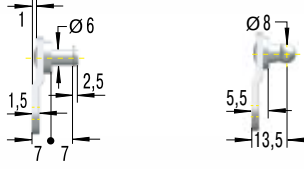
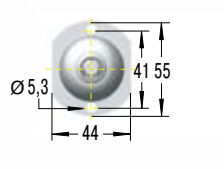

QS-40 / HB-40



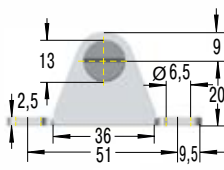
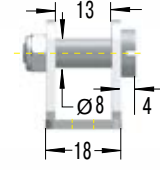
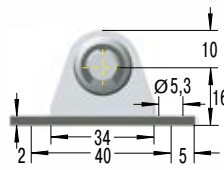
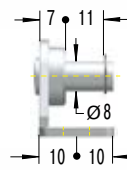
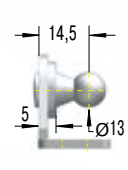
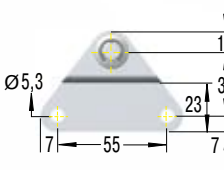
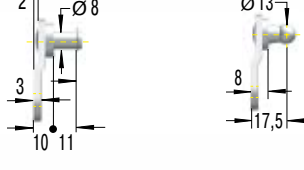
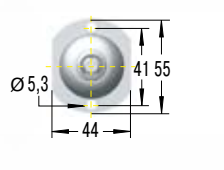
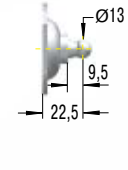
QS-70



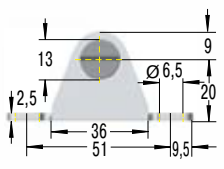
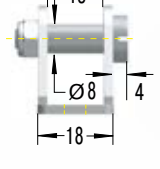
QSI-15

<p>¹ Load max. 500 N</p> <p style="text-align: center;">MA5-V4A</p>  	<p>¹ Load max. 400 N</p> <p style="text-align: center;">NA5-V4A</p>  	<p>NG5-V4A</p> 	
<p>¹ Load max. 180 N</p> <p style="text-align: center;">OA5-V4A</p> 	<p style="text-align: center;">OG5-V4A</p> 	<p>¹ Load max. 500 N</p> <p style="text-align: center;">PA5-V4A</p> 	<p style="text-align: center;">PG5-V4A</p> 

QSI-19 / QSI-22 / QSIN-22

<p>¹ Load max. 1800 N</p> <p style="text-align: center;">MA8-V4A</p>  	<p>¹ Load max. 1000 N</p> <p style="text-align: center;">NA8-V4A</p>  	<p style="text-align: center;">NG8-V4A</p> 	
<p>¹ Load max. 1200 N</p> <p style="text-align: center;">OA8-V4A</p> 	<p style="text-align: center;">OG8-V4A</p> 	<p>¹ Load max. 1200 N</p> <p style="text-align: center;">PA8-V4A</p> 	<p style="text-align: center;">PG8-V4A</p> 

QSI-28

<p>¹ Load max. 1800 N</p> <p style="text-align: center;">MA10-V4A</p>  
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All designs, dimensions and specifications are subject to change without notification. (May 2020)



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