

A1½ to A3

Deceleration of heavy loads and progressive adjustment

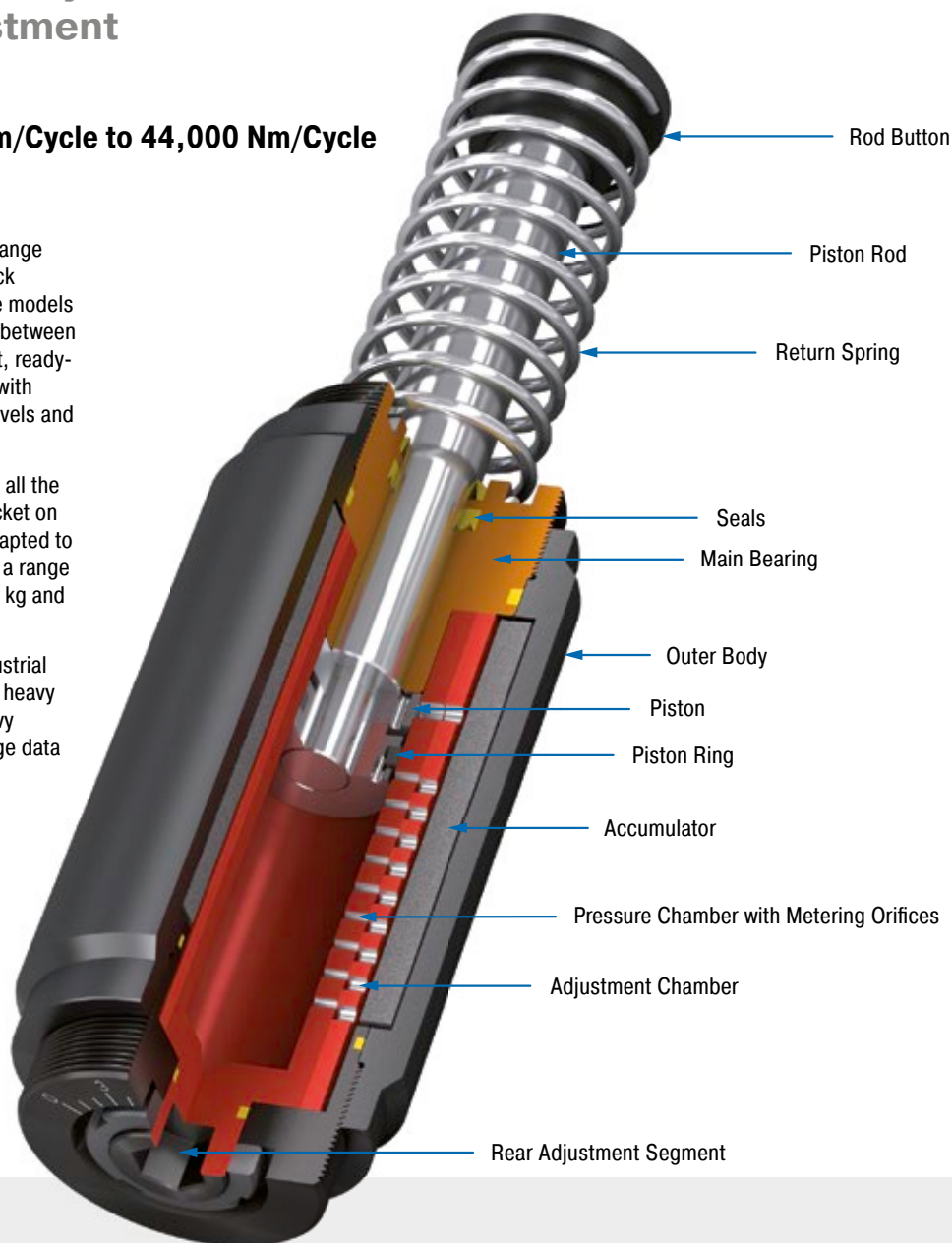
Adjustable

Energy capacity 2,350 Nm/Cycle to 44,000 Nm/Cycle
Stroke 50 mm to 305 mm

Strong and adjustable: Also in ACE's range of units are heavy duty industrial shock absorbers, which can be adjusted. The models from the A1½ to 3 range, which weigh between 7.55 and 35.5 kg, are extremely robust, ready-to-install hydraulic machine elements with impressively high energy absorption levels and a wide range of damping rates.

Their special aspect is the flexibility, as all the absorbers can be adjusted using a socket on the absorber base and be perfectly adapted to the required data. The A models cover a range of effective loads from 195 to 204,000 kg and can absorb up to 44,000 Nm energy.

These heavy duty, adjustable ACE industrial shock absorbers are the first choice in heavy duty applications and generally in heavy mechanical engineering when the usage data has not been exactly determined.



Technical Data

Energy capacity: 2,350 Nm/Cycle to 44,000 Nm/Cycle

Impact velocity range: 0.1 m/s to 5 m/s. Other speeds on request.

Operating temperature range: -12 °C to +66 °C. Other temperatures on request.

Mounting: In any position

Positive stop: External positive stops 2.5 mm to 3 mm before the end of stroke provided by the customer.

Adjustment: Hard impact at the start of stroke, adjust the ring towards 9. Hard impact at the end of stroke, adjust the ring towards 0.

Material: Outer body: Steel corrosion-resistant coating; Piston rod: Hard chrome plated steel; Rod end button: Hardened steel and corrosion-resistant coating; Return spring: Zinc plated steel

Damping medium: Automatic Transmission Fluid (ATF)

Application field: Portal systems, Machines and plants, Conveyor systems, Crane systems, Loading and lifting equipment, Impact panels, Heavy load applications, Swivel units, Shelf storage systems

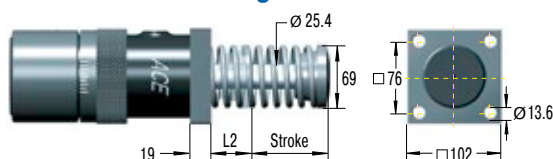
Note: For emergency use only applications and for continuous use it is possible to exceed

the published max. capacity ratings. In this case, please consult ACE.

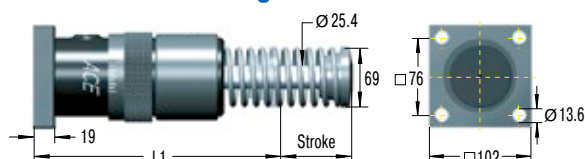
Safety instructions: External materials in the surrounding area can attack the seal components and lead to a shorter service life. Please contact ACE for appropriate solution suggestions. Do not paint the shock absorbers due to heat emission.

On request: Special oils, nickel-plated, increased corrosion protection or other special options are available on request.

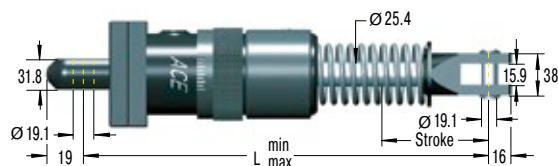
A1½EU-F Front Flange



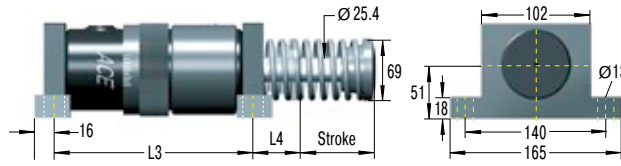
A1½EU-R Rear Flange



A1½EU-C Clevis Mount



A1½EU-S Foot Mount



The calculation and selection of the most suitable damper should be carried out or be approved by ACE.

Model Type Prefix

Standard Models

A: Self-contained with return spring, adjustable

Special Models

AA: Air/Oil return without return spring.

Use only with external air/oil tank.

NA: Self-contained without return spring

SA: Air/Oil return with return spring.

Use only with external air/oil tank.

Ordering Example

Adjustable _____
Bore Size Ø 1½" _____
Stroke Length 2" = 50.8 mm _____
EU Compliant _____
Rear Flange Mounting _____

A1½x2EUR

Dimensions

TYPES	Stroke mm	L min. mm	L max. mm	L1 mm	L2 mm	L3 mm	L4 mm
A1½x2EU	50	277.8	328.6	195.2	54.2	-	-
A1½x3½EU	89	316.6	405.6	233	54.2	170	58.6
A1½x5EU	127	354.8	481.8	271.5	54.2	208	58.6
A1½x6½EU	165	412	577	329	73	246	78

Performance

TYPES	Max. Energy Capacity			Effective Weight		Return Force min. N	Return Force max. N	Return Time s	Side Load Angle max. °	Weight kg
	¹ W ₃ Nm/cycle	² W ₄ Nm/h	² W ₄ with Air/Oil Tank Nm/h	³ me min. kg	³ me max. kg					
A1½x2EU	2,350	362,000	452,000	195	32,000	160	210	0.10	5	7.6
A1½x3½EU	4,150	633,000	791,000	218	36,000	110	210	0.25	4	8.9
A1½x5EU	5,900	904,000	1,130,000	227	41,000	90	230	0.40	3	9.4
A1½x6½EU	7,700	1,180,000	1,469,000	308	45,000	90	430	0.40	2	12.0

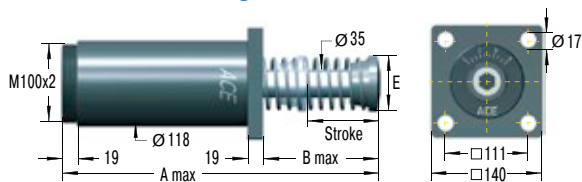
¹ For emergency use only applications it is sometimes possible to exceed the above ratings. Please consult ACE for further details.

² Figures for oil recirculation systems on request.

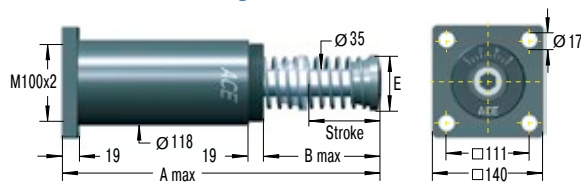
³ The effective weight range limits can be raised or lowered to special order.

Adjustable

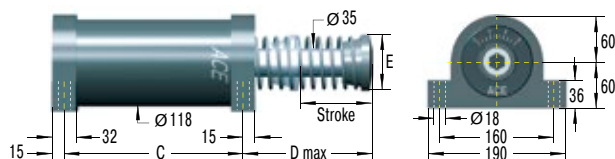
A2EU-F Front Flange



A2EU-R Rear Flange



A2EU-SM Foot Mount



The calculation and selection of the most suitable damper should be carried out or be approved by ACE.

Model Type Prefix

Standard Models

A: Self-contained with return spring, adjustable

Special Models

AA: Air/Oil return without return spring.

Use only with external air/oil tank.

NA: Self-contained without return spring

SA: Air/Oil return with return spring.

Use only with external air/oil tank.

Ordering Example

Adjustable _____
 Bore Size Ø 2" _____
 Stroke Length 6" = 152 mm _____
 EU Compliant _____
 Rear Flange Mounting _____

A2x6EU-R

Dimensions

TYPES	Stroke mm	A max. mm	B max. mm	C mm	D max. mm	E mm
A2X2EU	50	313	110	173	125	70
A2X4EU	102	414	160	224	175	70
A2X6EU	152	516	211	275	226	70
A2X8EU	203	643	287	326	302	92
A2X10EU	254	745	338	377	353	108

Performance

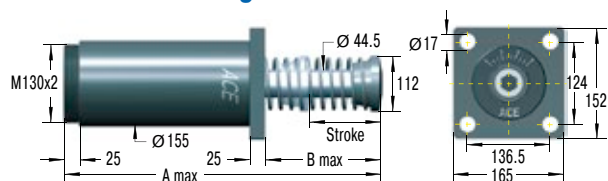
TYPES	Max. Energy Capacity			Effective Weight		Return Force min. N	Return Force max. N	Return Time s	Side Load Angle max. °	Weight kg
	¹ W ₃ Nm/cycle	² W ₄ Nm/h	² W ₄ with Air/Oil Tank Nm/h	³ me min. kg	³ me max. kg					
A2X2EU	3,600	1,100,000	1,350,000	250	77,000	210	285	0.25	3	14.3
A2X4EU	9,000	1,350,000	1,700,000	250	82,000	150	285	0.50	3	16.7
A2X6EU	13,500	1,600,000	2,000,000	260	86,000	150	400	0.60	3	19.3
A2X8EU	19,200	1,900,000	2,400,000	260	90,000	230	650	0.70	3	22.3
A2X10EU	23,700	2,200,000	2,700,000	320	113,000	160	460	0.80	3	26.2

¹ For emergency use only applications it is sometimes possible to exceed the above ratings. Please consult ACE for further details.

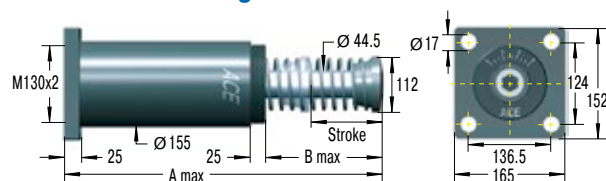
² Figures for oil recirculation systems on request.

³ The effective weight range limits can be raised or lowered to special order.

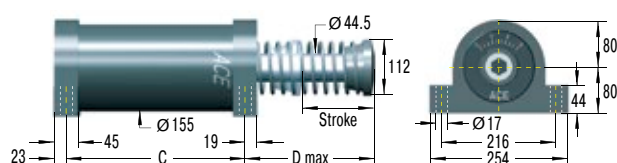
A3EU-F Front Flange



A3EU-R Rear Flange



A3EU-S Foot Mount



The calculation and selection of the most suitable damper should be carried out or be approved by ACE.

Model Type Prefix

Standard Models

A: Self-contained with return spring, adjustable

Special Models

AA: Air/Oil return without return spring.

Use only with external air/oil tank.

NA: Self-contained without return spring

SA: Air/Oil return with return spring.

Use only with external air/oil tank.

Ordering Example

Adjustable _____
Bore Size Ø 3" _____
Stroke Length 8" = 203 mm _____
EU Compliant _____
Rear Flange Mounting _____

A3x8EUR

Dimensions

TYPES	Stroke mm	A max. mm	B max. mm	C mm	D max. mm
A3X5EU	127	490.5	211	254	224
A3X8EU	203	641	286	330	300
A3X12EU	305	890	434	432	447

Performance

TYPES	Max. Energy Capacity			Effective Weight		Return Force min. N	Return Force max. N	Return Time s	Side Load Angle max. °	Weight kg
	¹ W ₃ Nm/cycle	² W ₄ Nm/h	² W ₄ with Air/Oil Tank Nm/h	³ me min. kg	³ me max. kg					
A3X5EU	15,800	2,260,000	2,800,000	480	154,000	270	710	0.6	3	32.7
A3X8EU	28,200	3,600,000	4,520,000	540	181,500	280	740	0.8	3	38.5
A3X12EU	44,000	5,400,000	6,780,000	610	204,000	270	730	1.2	3	48.0

¹ For emergency use only applications it is sometimes possible to exceed the above ratings. Please consult ACE for further details.

² Figures for oil recirculation systems on request.

³ The effective weight range limits can be raised or lowered to special order.