

Shock Absorbers

Hydraulic Industrial Shock Absorbers

Type:

- Non-adjustable

Series SA

SA 10N

- For smaller effective masses

SA 10SN

- For intermediate effective masses

SA 10S2N

- For larger effective masses

Basic Version with:

- Integral stop collar
- 1 mounting nut
- Soft pad

Accessories:

- Universal flange

Energy Capacity

Type	Stroke (mm)	Effective Mass (kg)		Max. Energy Capacity (Nm)	
		Min.	Max.	per stroke W_3	per hour W_4
SA 10N	6.5	0.7	2.2	2.8	22500
SA 10SN	6.5	1.8	5.4	2.8	22500
SA 10S2N	6.5	4.6	13.6	2.8	22500

Technical Data

Characteristic	Unit	Comments
Impact velocity	m/s	0.15 - 2.2
Operating temperature range	°C	0 to 65
Installation		In any position
Force of internal return spring	N	3 - 6
Max. deviation of impacting force from centre axis of shock absorber		±2°
Weight (mass)	kg	0.020
Min. mounting strength required	N	1080 ¹⁾
Materials		
Body		Steel, black oxide finish
Piston rod		Steel, hardened, ground, hard-chrome plated
Accessories		Steel, black oxide finish or aluminium, anodized

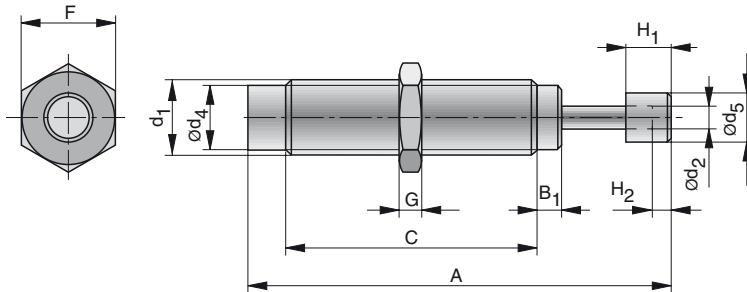
¹⁾ based on $\frac{2.5 \cdot W_3}{\text{stroke}}$



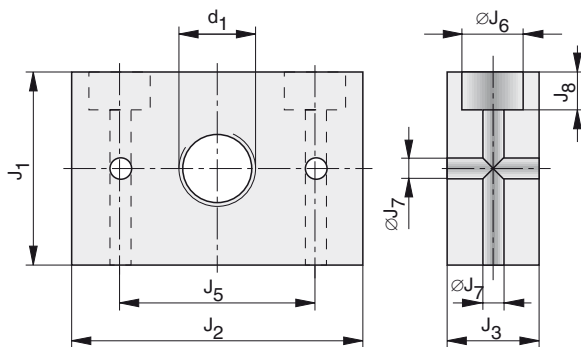
For product group overview see page 16 + 17
For design and installation notes see from page 4

Dimensions (mm) – Shock Absorbers

Type: SA 10N, SA 10 SN, SA 10 S2N



Dimensions (mm) – Universal Flange



Dimensions Table (mm)

A	B ₁	C	d ₁	ød ₂	ød ₄	ød ₅	F	G	H ₁	H ₂	J ₁	J ₂	J ₃	J ₅	øJ ₆	øJ ₇	J ₈
57.6	5.0	33.0	M10x1	3.2	8.4	7.6	12.0	4	8.0	3.0	25.4	38	12	25.4	8	4.5	5

Order Instructions

Product	Order Instructions	
	Type	Order No.
Shock absorber for smaller effective masses	SA 10N	7717
Shock absorber for intermediate effective masses	SA 10 SN	7718
Shock absorber for larger effective masses	SA 10 S2N	7721
Additional mounting nut	LN 10	7909
Universal flange	UM 10	7902

Shock Absorbers

Hydraulic Industrial Shock Absorbers

Type:

- Non-adjustable

Series SA

SA 12N

- For smaller effective masses

SA 12SN

- For intermediate effective masses

SA 12S2N

- For larger effective masses

Basic Version with:

- Integral stop collar
- 1 mounting nut
- Soft pad

Accessories:

- Universal flange

Energy Capacity

Type	Stroke (mm)	Effective Mass (kg)		Max. Energy Capacity (Nm)	
		Min.	Max.	per stroke W_3	per hour W_4
SA 12N	10	0.3	1.1	9.0	28200
SA 12SN	10	0.9	4.8	9.0	28200
SA 12S2N	10	2.7	36.2	9.0	28200

Technical Data

Characteristic	Unit	Comments
Impact velocity	m/s	0.15 - 5
Operating temperature range	°C	0 to 65
Installation		In any position
Force of internal return spring	N	4 - 9
Max. deviation of impacting force from centre axis of shock absorber		±2°
Weight (mass)	kg	0.030
Min. mounting strength required	N	2250 ¹⁾
Materials		
Body		Steel, black oxide finish
Piston rod		Steel, hardened, ground, hard-chrome plated
Accessories		Steel, black oxide finish or aluminium, anodized

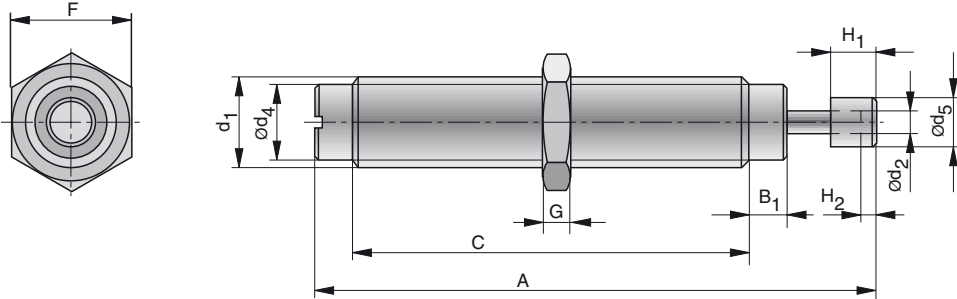
¹⁾ based on $\frac{2.5 \cdot W_3}{\text{stroke}}$



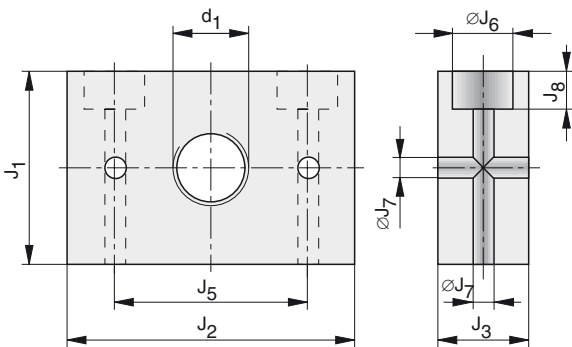
For product group overview see page 16 + 17
For design and installation notes see from page 4

Dimensions (mm) – Shock Absorbers

Type: SA 12N, SA 12 SN, SA 12 S2N



Dimensions (mm) – Universal Flange



Dimensions Table (mm)

A	B	B ₁	C	d ₁	ød ₂	ød ₄	ød ₅	F	G	H ₁	H ₂	J ₁	J ₂	J ₃	J ₅	øJ ₆	øJ ₇	J ₈
67	10	3.0	44	M12x1	3.2	10.4	7.6	14	5	8	3	25.4	38	12	25.4	8	4.5	5

Order Instructions

Product	Order Instructions	
	Type	Order No.
Shock absorber for smaller effective masses	SA 12N	7719
Shock absorber for intermediate effective masses	SA 12 SN	7722
Shock absorber for larger effective masses	SA 12 S2N	7723
Additional mounting nut	LN 12	7919
Universal flange	UM 12	7912

Shock Absorbers

Hydraulic Industrial Shock Absorbers

- Type:**
- Non-adjustable

Series SA SA 14

- For smaller effective masses

SA 14 S

- For intermediate effective masses

SA 14 S2

- For larger effective masses

Basic Version with:

- Integral stop collar
- 1 mounting nut

Accessories:

- Soft pad
- Universal Flange

Energy Capacity

Type	Stroke (mm)	Effective Mass (kg)		Max. Energy Capacity (Nm)	
		Min.	Max.	per stroke W_3	per hour W_4
SA 14	12.5	0.9	10	17	34000
SA 14S	12.5	8.6	86	17	34000
SA 14S2	12.5	68	205	17	34000

Technical Data

Characteristic	Unit	Comments
Impact velocity	m/s	0.3 - 4.5
Operating temperature range	°C	0 to 65
Installation		In any position
Force of internal return spring	N	4 - 7
Max. deviation of impacting force from centre axis of shock absorber		±3°
Weight (mass)	kg	0.125
Min. mounting strength required	N	3400 ¹⁾
Materials		
Body		Steel, black oxide finish
Piston rod		Steel, hardened, ground, hard-chrome plated
Accessories		Steel, black oxide finish or aluminium, anodized

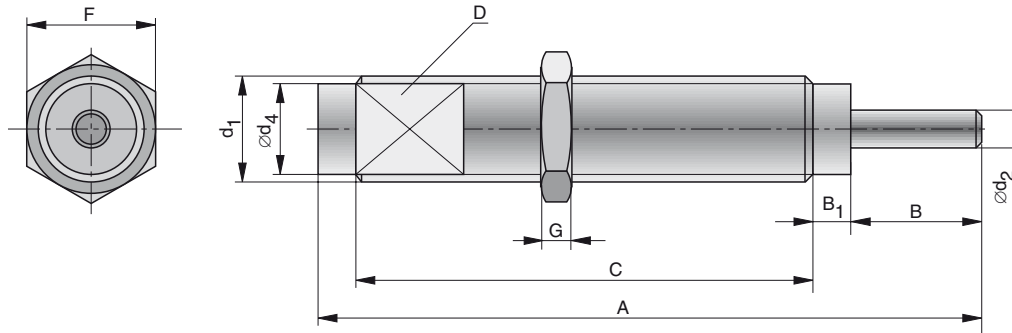
¹⁾ based on $\frac{2.5 \cdot W_3}{\text{stroke}}$



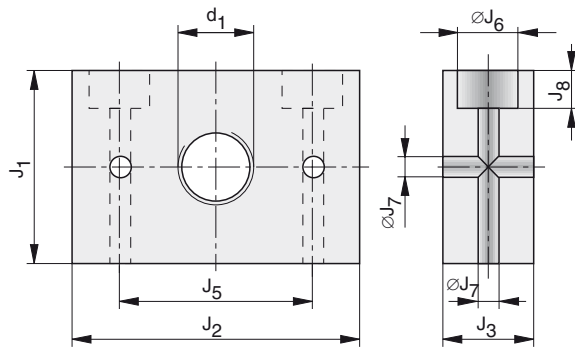
For product group overview see page 16 + 17
For design and installation notes see from page 4

Dimensions (mm) – Shock Absorbers

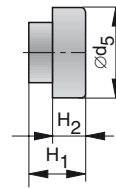
Type: SA 14, SA 14 S, SA 14 S2



Dimensions (mm) – Universal Flange



Dimensions (mm) – Soft Pad



Dimensions Table (mm)

A	B	B ₁	C	D	d ₁	ød ₂	ød ₄	ød ₅	F	G	H ₁	H ₂	J ₁	J ₂	J ₃	J ₅	øJ ₆	øJ ₇	J ₈
87	12	4	61	12	M14x1.5 ¹⁾	4.8	12	11.9	17	5	10.9	6.9	29	45	16	35	8	4.5	5

¹⁾ Option: M14x1 thread (d₁)

Order Instructions

Product	Order Instructions	
	Type	Order No.
Shock absorber for smaller effective masses	SA 14	7920
Shock absorber for intermediate effective masses	SA 14 S	7927
Shock absorber for larger effective masses	SA 14 S2	7928
Soft pad	SP 14	7924
Additional mounting nut	LN 14	7929
Universal flange	UM 14	7922

Energy Capacity

Type	Stroke (mm)	Effective Mass (kg)		Max. Energy Capacity (Nm)	
		Min.	Max.	per stroke W_3	per hour W_4
SA 20	12.5	2.3	25	25	45000
SA 20S	12.5	23	230	25	45000
SA 20S2	12.5	182	910	25	45000
SA 20x25	24.6	2.3	16	50.8	68000
SA 20Sx25	24.6	9	59	50.8	68000
SA 20S2x25	24.6	36	227	50.8	68000

Technical Data

Characteristic	Unit	Comments
Impact velocity	m/s	0.3 - 4.5
Operating temperature range	°C	0 to 65
Installation		in any position
Force of internal return spring	N	6 - 10
Max. deviation of impacting force from centre axis of shock absorber		$\pm 3^\circ$
Weight (mass)	kg	0.176 (Type SA20), 0.207 (Type SA20x25)
Min. mounting strength required	N	5000 ¹⁾
Materials		
Body		Steel, black oxide finish
Piston rod		Steel, hardened, ground, hard-chrome plated
Accessories		Steel, black oxide finish or aluminium, anodized

¹⁾ based on $\frac{2.5 \cdot W_3}{\text{stroke}}$

Shock Absorbers

Hydraulic Industrial Shock Absorbers

Type:

- Non-adjustable

Series SA

- **SA 20**
Stroke 12.5 mm
- **SA 20x25**
Stroke 24.6 mm
For smaller effective masses
- **SA 20S**
Stroke 12.5 mm
- **SA 20Sx25**
Stroke 24.6 mm
For intermediate effective masses
- **SA 20S2**
Stroke 12.5 mm
- **SA 20S2x25**
Stroke 24.6 mm
For larger effective masses

Basic Version with:

- Integral stop collar
- 1 mounting nut

Accessories:

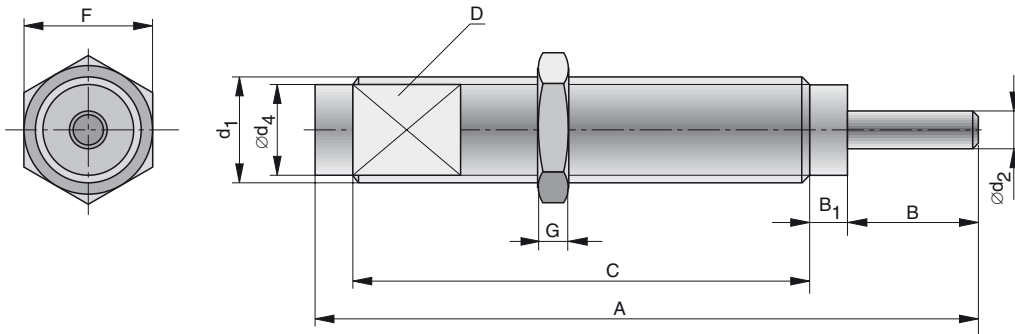
- Soft pad
- Universal flange



For product group overview see page 16 + 17
For design and installation notes see from page 4

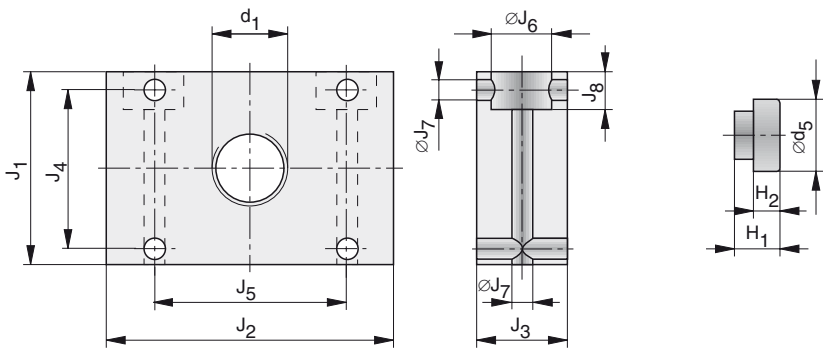
Dimensions (mm) – Shock Absorbers

Typ: SA 20, SA 20 S, SA 20 S2



Dimensions (mm) – Universal Flange

Dimensions (mm) – Soft Pad



Dimensions Table (mm)

Type	A	B	B ₁	C	D	d ₁	ød ₂	ød ₄	ød ₅	F
SA 20	89	12	5.6	61.7	17	M20x1.5	6.4	17	17	23.9
SA 20x25	140.5	24.6	5.6	100.3	17	M20x1.5	6.4	17	17	25.4

Type	G	H ₁	H ₂	J ₁	J ₂	J ₃	J ₄	J ₅	øJ ₆	øJ ₇	J ₈
SA 20	6	10.7	4.7	35	46	16	25.4	35	10.4	5.5	10.4
SA 20x25	6	10.7	4.7	35	46	16	25.4	35	10.4	5.5	10.4

Order instructions

Product		Order Instructions	
		Type	Order No.
Shock absorber for smaller effective masses	– stroke 12.5 mm	SA 20	7930
	– stroke 24.6 mm	SA 20x25	7700
Shock absorber for intermediate effective masses	– stroke 12.5 mm	SA 20 S	7937
	– stroke 24.6 mm	SA 20 Sx25	7701
Shock absorber for larger effective masses	– stroke 12.5 mm	SA 20 S2	7938
	– stroke 24.6 mm	SA 20 S2x25	7702
Soft pad		SP 20	7934
Additional mounting nut		LN 20	7939
Universal flange		UM 20	7932

Shock Absorbers

Hydraulic Industrial Shock Absorbers

Type:
 ▪ Non-adjustable

Series SAI

SAI 25
 ▪ For smaller effective masses

SAI 25 S
 ▪ For intermediate effective masses

SAI 25 S2
 ▪ For larger effective masses

Basic Version with:
 ▪ Integral stop collar
 ▪ 1 mounting nut

Accessories:
 ▪ Soft pad
 ▪ Universal flange



Energy Capacity

Type	Stroke (mm)	Effective Mass (kg)		Max. Energy Capacity (Nm)	
		Min.	Max.	per stroke W_3	per hour W_4
SAI 25	25.4	9	136	68	68000
SAI 25S	25.4	113	1130	68	68000
SAI 25S2	25.4	400	2273	68	68000

Technical Data

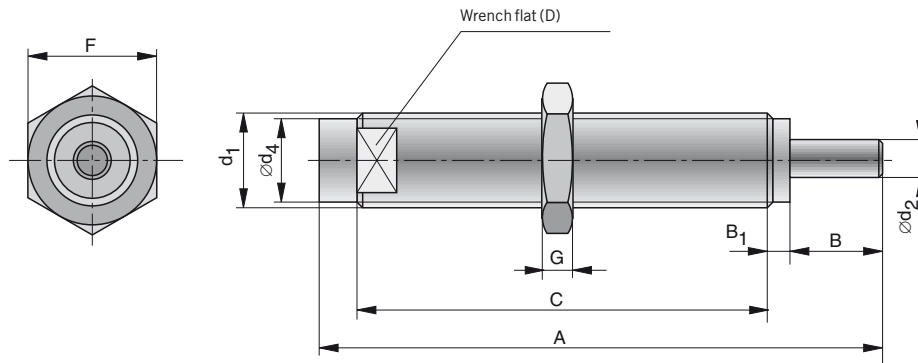
Characteristic	Unit	Comments
Impact velocity	m/s	0.3 - 4.5
Operating temperature range	°C	0 to 65
Installation		in any position
Force of internal return spring	N	19 - 37
Max. deviation of impacting force from centre axis of shock absorber		±3°
Weight (mass)	kg	0.327
Min. mounting strength required	N	6700 ¹⁾
Materials		
Body		Steel, black oxide finish
Piston rod		Steel, hardened, ground, hard-chrome plated
Accessories		Steel, black oxide finish or aluminium, anodized

¹⁾ based on $\frac{2.5 \cdot W_3}{\text{stroke}}$

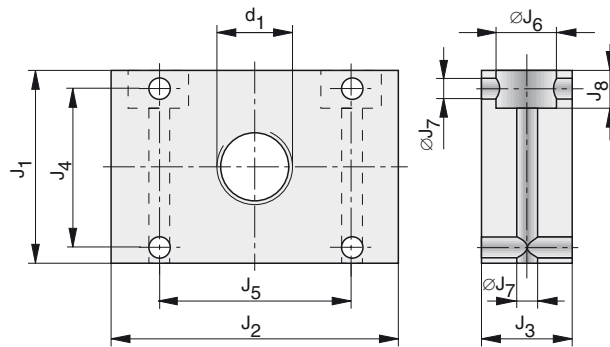
For product group overview see page 16 + 17
 For design and installation notes see from page 4

Dimensions (mm) – Shock Absorbers

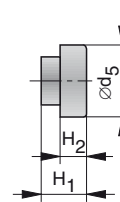
Type: SAI 25, SAI 25 S, SAI 25 S2



Dimensions (mm) – Universal Flange



Dimensions (mm) – Soft Pad



Dimensions Table (mm)

A	B	B ₁	C	D	d ₁ *	$\varnothing d_2$	$\varnothing d_4$	$\varnothing d_5$	F	G	H ₁	H ₂	J ₁	J ₂	J ₃	J ₄	J ₅	$\varnothing J_6$	$\varnothing J_7$	J ₈
149.1	24.6	4.6	107.2	22	M25x1.5	7.9	22.4	22.3	30	8	11	4.7	35	47	16	25.5	35	10.4	5.5	10.4

* Option M27x3 on request

Order Instructions

Product	Order Instructions	
	Type	Order No.
Shock absorber for smaller effective masses	SAI 25	7834
Shock absorber for intermediate effective masses	SAI 25 S	7835
Shock absorber for larger effective masses	SAI 25 S2	7836
Soft pad	SP-25	7837
Additional mounting nut	LN-25	7959
Universal flange	UM-25	7952

Energy Capacity

Type	Stroke (mm)	Effective Mass (kg)		Max. Energy Capacity (Nm)	
		Min.	Max.	per stroke W_3	per hour W_4
SA 33x25	25.4	9	40	153	75000
SA 33Sx25	25.4	30	120	153	75000
SA 33S2x25	25.4	100	420	153	75000
SA 33S3x25	25.4	350	1420	153	75000
SA 33x50	50.8	18	70	305	85000
SA 33Sx50	50.8	60	250	305	85000
SA 33S2x50	50.8	210	840	305	85000
SA 33S3x50	50.8	710	2830	305	85000

Technical Data

Characteristic	Unit	Comments
Impact velocity	m/s	0.15 to 5
Operating temperature range	°C	-12 to +70
Installation		in any position
Force of internal return spring	N	on request
Max. deviation of impacting force from centre axis of shock absorber		Type SA33...-25 – 4° Type SA33...-50 – 3°
Weight (mass)	kg	Type SA33...-25 – 0.45 Type SA33...-50 – 0.54
Min. mounting strength required	N	on request ¹⁾
Materials		
Body		Steel, black oxide finish
Piston rod		Steel, hardened, ground, hard-chrome plated
Accessories		Steel, black oxide finish or aluminium, anodized

¹⁾ based on $\frac{2.5 \cdot W_3}{\text{stroke}}$

Shock Absorbers

Hydraulic Industrial Shock Absorbers

Type:

- Non-adjustable

Series SA

- **SA 33x25**
Stroke 25.4 mm
- **SA 33x50**
Stroke 50.8 mm
For smaller effective masses
- **SA 33Sx25**
Stroke 25.4 mm
- **SA 33Sx50**
Stroke 50.8 mm
For intermediate effective masses
- **SA 33S2x25**
Stroke 25.4 mm
- **SA 33S2x50**
Stroke 50.8 mm
For larger effective masses
- **SA 33S3x25**
Stroke 25.4 mm
- **SA 33S3x50**
Stroke 50.8 mm
For high effective masses

Basic Version with:

- 1 mounting nut

Accessories:

- Soft pad
- Rectangular flange
- Foot mounting
- Stop collar

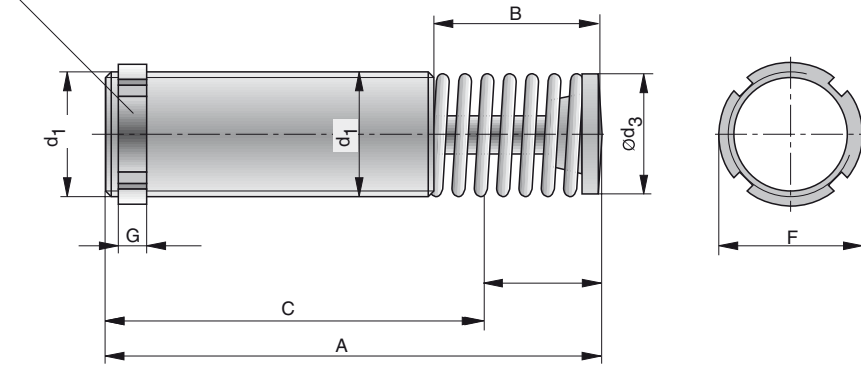


For product group overview see page 16 + 17
For design and installation notes see from page 4

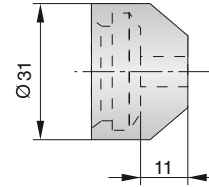
Dimensions (mm) – Shock Absorbers

Type: SA 33..x25, SA 33..x50

Mounting nut

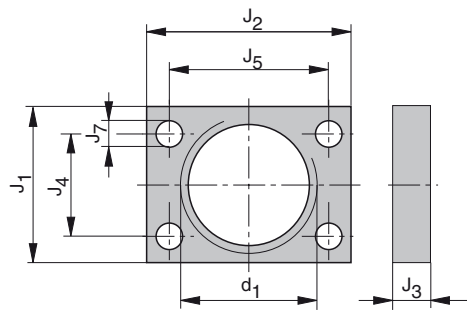


**Dimensions (mm)
Soft Pad**

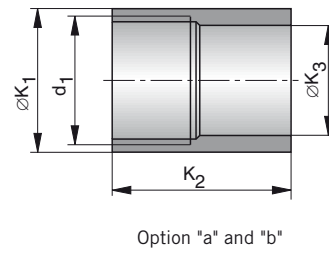


Note:
Cannot be used with stop collar.

Dimensions (mm) – Rectangular Flange



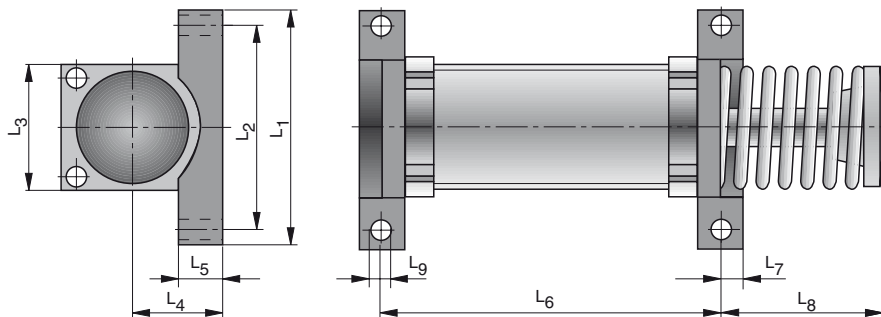
Dimensions (mm) – Stop Collar



Option "a" and "b"

Option "a" - for rear mounting
Option "b" - for front mounting

Dimensions (mm) – Foot Mounting



Dimensions Table (mm)

Type	Stroke	A	B	C	d ₁	Ød ₃	ØF	G	Ød ₅	H ₁	H ₂	J ₁
SA 33..x25	25.4	138	55	83	M33x1.5	25	39.6	6.5	31.8	19.1	11.2	38.1
SA 33..x50	50.8	189	81	108	M33x1.5	25	39.6	6.5	31.8	19.1	11.2	38.1

Type	J ₂	J ₃	J ₄	J ₅	ØK ₁	K _{2,a}	K _{2,b}	ØK ₃	L ₁	L ₂	L ₃	L ₄	L ₅	L ₆	L ₇	L ₈	L ₉
SA 33..x25	50,8	9,7	28,7	41,4	38,1	47,6	41,3	28,6	69,9	60,3	50,8	22,2	12,7	95,3	6,4	49,2	5,6
SA 33..x50	50,8	9,7	28,7	41,4	38,1	47,6	41,3	28,6	69,9	60,3	50,8	22,2	12,7	121	6,4	74,6	5,6

Order Instructions

Product	Order Instructions	
	Type	Order No.
Shock absorber for smaller effective masses	– Stroke 25.4 mm	SA 33x25 8041
	– Stroke 50.8 mm	SA 33x50 8045
Shock absorber for intermediate masses	– Stroke 25.4 mm	SA 33Sx25 8042
	– Stroke 50.8 mm	SA 33Sx50 8046
Shock absorber for larger masses	– Stroke 25.4 mm	SA 33S2x25 8043
	– Stroke 50.8 mm	SA 33S2x50 8047
Shock absorber for high masses	– Stroke 25.4 mm	SA 33S3x25 8044
	– Stroke 50.8 mm	SA 33S3x50 8048
Stop collar Option "a"	for rear mounting	SC1/2A 7971
Stop collar Option "b"	for front mounting	SC1/2B 7977
Soft pad		SP1/2 7974
Additional mounting nut		LN1/2 7979
Rectangular flange		RF1/2 7972
Foot mounting		FM1/2 7973

Energy Capacity

Type	Stroke (mm)	Effective Mass (kg)		Max. Energy Capacity (Nm)	
		Min.	Max.	per stroke W_3	per hour W_4
SA 45x25	25.4	20	90	339	107000
SA 45Sx25	25.4	80	310	339	107000
SA 45S2x25	25.4	260	1050	339	107000
SA 45S3x25	25.4	890	3540	339	107000
SA 45x50	50.8	45	180	678	112000
SA 45Sx50	50.8	150	620	678	112000
SA 45S2x50	50.8	520	2090	678	112000
SA 45S3x50	50.8	1800	7100	678	112000
SA 45x75	76.2	70	270	1017	146000
SA 45Sx75	76.2	230	930	1017	146000
SA 45S2x75	76.2	790	3140	1017	146000
SA 45S3x75	76.2	2650	10600	1017	146000

Technical Data

Characteristic	Unit	Comments
Impact velocity	m/s	0.15 to 5
Operating temperature range	°C	-12 to +70°
Installation		in any position
Force of internal return spring	N	on request
Max. deviation of impacting force from centre axis of shock absorber		Type SA45...-25 – 4° Type SA45...-50 – 3° Type SA45...-75 – 2°
Weight (mass)	kg	Type SA45...-25 – 1,13 Type SA45...-50 – 1,36 Type SA45...-75 – 1,59
Min. mounting strength required	N	on request ¹⁾
Materials		
Body		Steel, black oxide finish
Piston rod		Steel, hardened, ground, hard-chrome plated
Accessories		Steel, black oxide finish or aluminium, anodized

¹⁾ based on $\frac{2.5 \cdot W_3}{\text{stroke}}$

Shock Absorbers

Hydraulic Industrial Shock Absorbers

Type:

- Non-adjustable

Series SA

- **SA 45x25**
Stroke 25.4 mm
- **SA 45x50**
Stroke 50.8 mm
- **SA 45x75**
Stroke 76.2 mm
For smaller effective masses
- **SA 45Sx25**
Stroke 25.4 mm
- **SA 45Sx50**
Stroke 50.8 mm
- **SA 45Sx75**
Stroke 76.2 mm
For intermediate effective masses
- **SA 45S2x25**
Stroke 25.4 mm
- **SA 45S2x50**
Stroke 50.8 mm
- **SA 45S2x75**
Stroke 76.2 mm
For higher effective masses
- **SA 45S3x25**
Stroke 25.4 mm
- **SA 45S3x50**
Stroke 50.8 mm
- **SA 45S3x75**
Stroke 76.2 mm
For high effective masses

Basic Version with:

- 1 Mounting nut

Accessories:

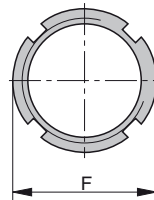
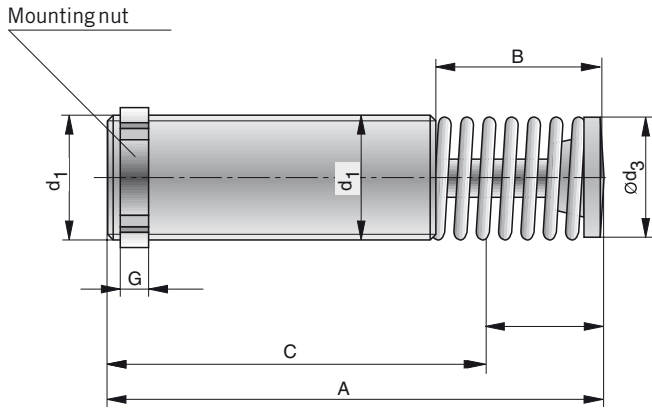
- Soft pad
- Rectangular flange
- Foot mounting
- Stop collar



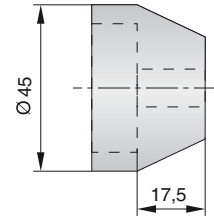
For product group overview see page 16 + 17
For design and installation notes see from page 4

Dimensions (mm) – Shock Absorbers

Type: SA 45..x25, SA 45..x50, SA45..x75

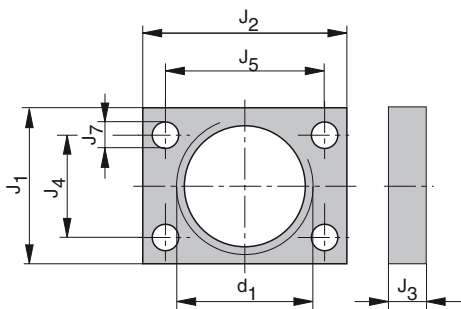


**Dimensions (mm)
Soft Pad**

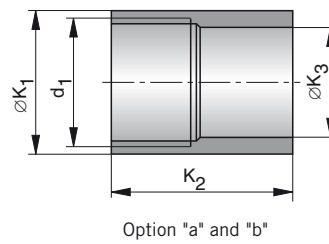


Note:
Cannot be used with stop collar.

Dimensions (mm) – Rectangular Flange

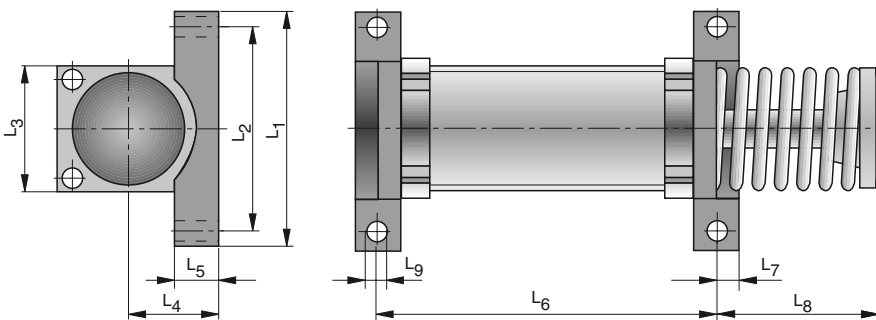


Dimensions (mm) – Stop Collar



Option "a" - for rear mounting
Option "b" - for front mounting

Dimensions (mm) – Foot Mounting



Dimensions Table (mm)

Type	Hub	A	B	C	d ₁	Ød ₃	ØF	G	Ød ₅	H ₁	H ₂	J ₁
SA 45..x25	25.4	145	50	95	M45x1.5	35	55.6	9.5	44.5	25.4	17.5	57.2
SA 45..x50	50.8	195	75	120	M45x1.5	35	55.6	9.5	44.5	25.4	17.5	57.2
SA 45..x75	76.2	246	101	145	M45x1.5	35	55.6	9.5	44.5	25.4	17.5	57.2

Type	J ₂	J ₃	J ₄	J ₅	ØK ₁	K _{2,a}	K _{2,b}	ØK ₃	L ₁	L ₂	L ₃	L ₄	L ₅	L ₆	L ₇	L ₈	L ₉
SA 45..x25	76.2	12.7	41.4	60.5	on request				95.3	72.2	57.2	29.4	14.2	85.5	9.5	52.3	8.7
SA 45..x50	76.2	12.7	41.4	60.5	on request				95.3	72.2	57.2	29.4	14.2	111	9.5	77.7	8.7
SA 45..x75	76.2	12.7	41.4	60.5	on request				95.3	72.2	57.2	29.4	14.2	111	9.5	103	8.7

Order Instructions

Product	Order Instructions		
		Type	Order No.
Shock absorber for smaller effective masses	– Stroke 25.4 mm	SA 45x25	8049
	– Stroke 50.8 mm	SA 45x50	8053
	– Stroke 76.2 mm	SA 45x75	8057
Shock absorber for intermediate masses	– Stroke 25.4 mm	SA 45Sx25	8050
	– Stroke 50.8 mm	SA 45Sx50	8054
	– Stroke 76.2 mm	SA 45Sx75	8058
Shock absorber for larger masses	– Stroke 25.4 mm	SA 45S2x25	8051
	– Stroke 50.8 mm	SA 45S2x50	8055
	– Stroke 76.2 mm	SA 45S2x75	8059
Shock absorber for high masses	– Stroke 25.4 mm	SA 45S3x25	8052
	– Stroke 50.8 mm	SA 45S3x50	8056
	– Stroke 76.2 mm	SA 45S3x75	8060
Stop collar Option "a"	for rear mounting	SC ...	on request
Stop collar Option "b"	for front mounting	SC ...	on request
Soft pad		SP..	on request
Additional mounting nut		LN..	on request
Rectangular flange		RF..	on request
Foot mounting		FM..	on request

Energy Capacity

Type	Stroke (mm)	Effective Mass (kg)		Max. Energy Capacity (Nm)	
		Min.	Max.	per stroke W_3	per hour W_4
SA 64x50	50.8	140	540	1695	146000
SA 64Sx50	50.8	460	1850	1695	146000
SA 64S2x50	50.8	1600	6300	1695	146000
SA 64S3x50	50.8	5300	21200	1695	146000
SA 64x100	101.6	270	1100	3390	192000
SA 64Sx100	101.6	930	3700	3390	192000
SA 64S2x100	101.6	3150	12600	3390	192000
SA 64S3x100	101.6	10600	42500	3390	192000
SA 64x150	150.1	410	1640	5084	248000
SA 64Sx150	150.1	1390	5600	5084	248000
SA 64S2x150	150.1	4700	18800	5084	248000
SA 64S3x150	150.1	16000	63700	5084	248000

Technical Data

Characteristic	Unit	Comments
Impact velocity	m/s	0.15 to 5
Operating temperature range	°C	-12 to +70
Installation		in any position
Force of internal return spring	N	on request
Max. deviation of impacting force from centre axis of shock absorber		Type SA64...-50 – 4° Type SA64...-100 – 3° Type SA64...-150 – 2°
Weight (mass)	kg	Type SA64...-50 – 2.90 Type SA64...-100 – 3.70 Type SA64...-150 – 5.10
Min. mounting strength required	N	on request ¹⁾
Materials		
Body		Steel, black oxide finish
Piston rod		Steel, hardened, ground, hard-chrome plated
Accessories		Steel, black oxide finish or aluminium, anodized

¹⁾ based on $\frac{2.5 \cdot W_3}{\text{stroke}}$

Shock Absorbers

Hydraulic Industrial Shock Absorbers

Type:

- non-adjustable

Series SA

- **SA 64x50** – Stroke 50.8 mm
SA 64x100 – Stroke 101.6 mm
SA 64x150 – Stroke 150.1 mm
For smaller effective masses
- **SA 64Sx50** – Stroke 50.8 mm
SA 64Sx100 – Stroke 101.6 mm
SA 64Sx150 – Stroke 150.1 mm
For intermediate effective masses
- **SA 64S2x50** – Stroke 50.8 mm
SA 64S2x100 – Stroke 101.6 mm
SA 64S2x150 – Stroke 150.1 mm
For larger effective masses
- **SA 64S3x50** – Stroke 50.8 mm
SA 64S3x100 – Stroke 101.6 mm
SA 64S3x150 – Stroke 150.1 mm
For high effective masses

Basic Version with:

- 1 mounting nut

Accessories:

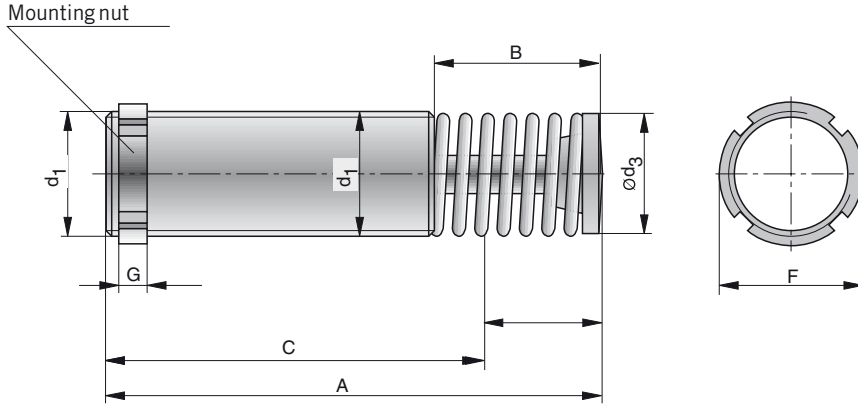
- Soft pad
- Square flange
- Foot mounting
- Stop collars



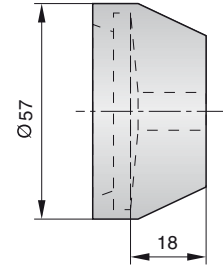
For product group overview see page 16 + 17
For design and installation notes see from page 4

Dimensions (mm) – Shock Absorbers

Type: SA 64..x50, SA 64..x100, SA 64..x150

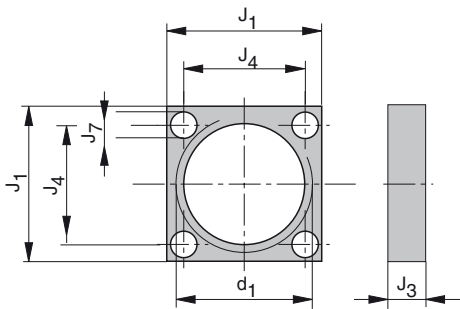


Dimensions (mm) – Soft Pad

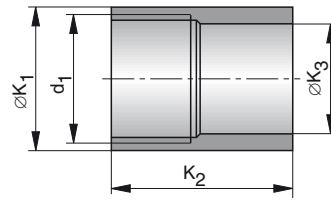


Note:
Cannot be used with stop collar.

Dimensions (mm) – Square Flange



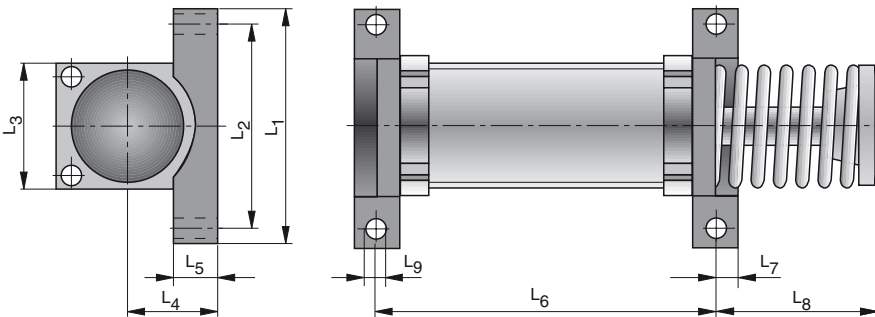
Dimensions (mm) – Stop Collar



Option "a" and "b"

Option "a" - for rear mounting
Option "b" - for front mounting

Dimensions (mm) – Foot Mounting



Dimensions Table (mm)

Type	Stroke	A	B	C	d ₁	Ød ₃	ØF	G	Ød ₅	H ₁	H ₂	J ₁
SA 64..x50	50.8	225	85	140	M64x2	48	76	9.5	57.2	25.4	17.5	88.9
SA 64..x100	101.6	326	135	191	M64x2	48	76	9.5	57.2	25.4	17.5	88.9
SA 64..x150	150.1	450	209	241	M64x2	48	76	9.5	57.2	25.4	17.5	88.9

Type	J ₃	J ₄	ØK ₁	K _{2a}	K _{2b}	ØK ₃	L ₁	L ₂	L ₃	L ₄	L ₅	L ₆	L ₇	L ₈	L ₉
SA 64..x50	16	69.9	76.2	62.7	50	60.3	143	124	88.9	44.5	19.1	127	14.2	90	10.3
SA 64..x100	16	69.9	76.2	62.7	50	60.3	143	124	88.9	44.5	19.1	178	14.2	141	10.3
SA 64..x150	16	69.9	76.2	62.7	50	60.3	143	124	88.9	44.5	19.1	229	14.2	214	10.3

Order Instructions

Product	Order Instructions	
	Type	Order No.
Shock absorber for smaller effective masses	– stroke 50.8 mm	SA 64x50 8061
	– stroke 101.6 mm	SA 64x100 8065
	– stroke 152.4 mm	SA 64x150 8069
Shock absorber for intermediate masses	– stroke 50.8 mm	SA 64Sx50 8062
	– stroke 101.6 mm	SA 64Sx100 8066
	– stroke 152.4 mm	SA 64Sx150 8070
Shock absorber for larger masses	– stroke 50.8 mm	SA 64S2x50 8063
	– stroke 101.6 mm	SA 64S2x100 8067
	– stroke 152.4 mm	SA 64S2x150 8071
Shock absorber for high masses	– stroke 50.8 mm	SA 64S3x50 8064
	– stroke 101.6 mm	SA 64S3x100 8068
	– stroke 152.4 mm	SA 64S3x150 8072
Stop collar Option "a"	for rear mounting	SC 1-1/8A 7991
for Type SA 64..x50 and SA 64..x100		
Stop collar Option "a"	for rear mounting	SC 1-1/8A 7891
for Type SA 64..x150		
Stop collar Option "b"	for front mounting	SC 1-1/8B 7997
for Type SA 64..x50 and SA 64..x100		
Stop collar Option "b"	for front mounting	SC 1-1/8B 7897
for Type SA 64..x150		
Soft pad		SP 1-1/8 7994
Additional mounting nut		LN 1-1/8 7999
Square flange		SF 1-1/8 7998
Foot mounting		FM 1-1/8 7993