

Standards-based cylinders DSNA

FESTO



Key features

At a glance

- Double-acting standards-based cylinder
- With piston rod at one end or through piston rod
- With adjustable cushioning at both ends
- Range of mounting options
- The variants can be configured according to individual needs using a modular product system

System of units

[N] Imperial

Piston rod type

[] At one end



- The piston rod can be used for connection at one end of the standards-based cylinder

Piston rod type

[T] Through piston rod



- The piston rod can be used for connection at both ends of the standards-based cylinder
- Identical forces in forward and return stroke

Piston rod thread type

[] Male thread



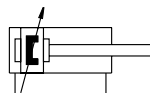
Piston rod thread type

[F] Female thread



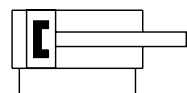
Cushioning

[PPV] Pneumatic cushioning, adjustable at both ends



Position sensing

[A] For proximity switch



Standard

[N5] Conforms to ANSI/NFPA

- The standards-based cylinder conforms to ANSI/NFPA standards T3.6.7 R3-2009 T3, Section 8.3 "Pneumatic cylinders"

Temperature range

[] Standard

- The standards-based cylinder can be used at an ambient temperature of $-5 \dots +60^{\circ}\text{C}$

Temperature range

[T23] $-5 \dots +80^{\circ}\text{C}$

- The standards-based cylinder can be used at an ambient temperature of $-5 \dots +80^{\circ}\text{C}$

Piston rod thread

[U12] 1/2-20 UNF-2A

Piston rod thread

[U1S] 1-14 UNS

Piston rod thread

[U58] 5/8-18 UNF-2A

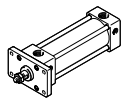
Piston rod thread

[U78] 7/8-14 UNF-2A

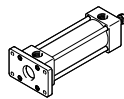
Key features

Type of mounting

[MF1] Flange plate, bearing cap

**Type of mounting**

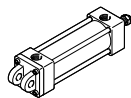
[MF2] Flange plate, end cap



- Cannot be combined with through piston rod

Type of mounting

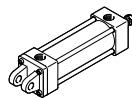
[MP1] Swivel bearing



- Cannot be combined with through piston rod

Type of mounting

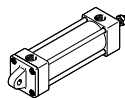
[MP2] Swivel mounting



- Cannot be combined with through piston rod

Type of mounting

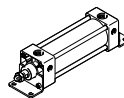
[MP4] Swivelling rod eye mounting



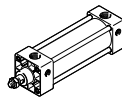
- Cannot be combined with through piston rod

Type of mounting

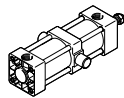
[MS1] Foot mounting

**Type of mounting**

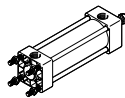
[MS4] Direct mounting

**Type of mounting**

[MT4] Central swivel mounting

**Type of mounting**

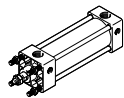
[MX2] Threaded rod, end cap



- Cannot be combined with through piston rod

Type of mounting


[MX3] Threaded rod, bearing cap



Type codes

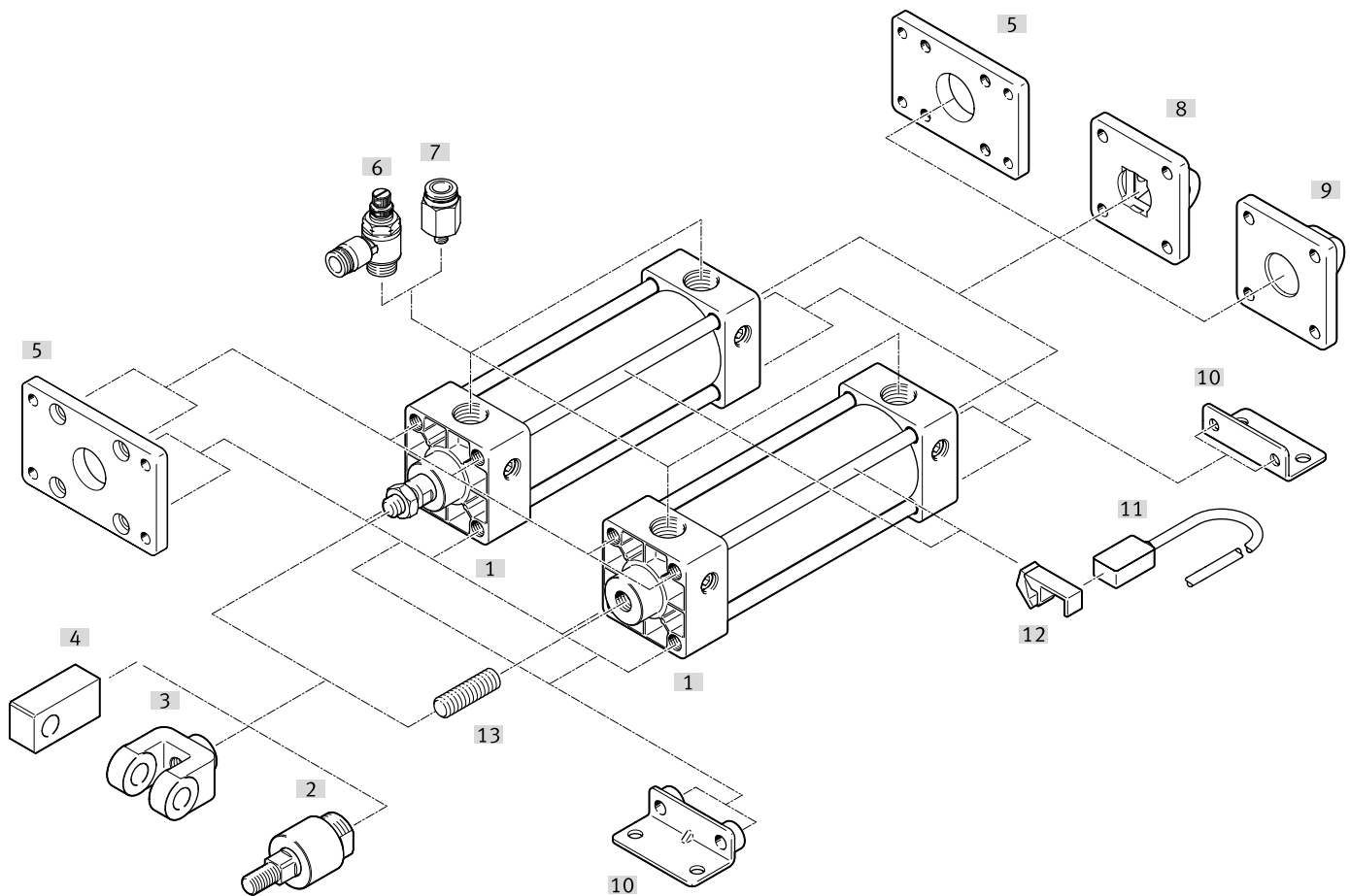
001	Series	
DSNA	Standards-based cylinder	
002	System of units	
N	Imperial	
003	Piston diameter [„]	
1 1/2“	1 1/2“	
2“	2“	
2 1/2“	2 1/2“	
3 1/4“	3 1/4“	
4“	4“	
004	Stroke range [„]	
...	0.25 ... 48	
005	Function	
	Double-acting	
006	Piston rod type	
	At one end	
T	Through piston rod	
007	Cushioning	
PPV	Pneumatic cushioning, adjustable at both ends	

008	Position sensing	
A	For proximity sensor	
009	Standard	
N5	In accordance with ANSI/NFPA	
010	Temperature range	
	Standard	
T23	-5 ... +80°C	
011	Piston rod thread	
	Standard	
U12	1/2-20 UNF	
U58	5/8-18 UNF	
U15	1-14 UNS	
U78	7/8-14 UNF-2A	
012	Type of mounting	
MF1	Flange plate, bearing cap	
MF2	Flange plate end cap	
MP1	Swivel bearing	
MP2	Swivel mounting	
MP4	Swivelling rod eye mounting	
MS1	Foot mounting	
MS4	Direct mounting	
MT4	Central swivel mounting	
MX2	Threaded rod, end cap	
MX3	Threaded rod, bearing cap	

 - Note

The strokes are available in increments of 0.25 inches.

Peripherals overview

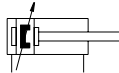


Accessories			→ Page/Internet
Type/order code	Description		
[1] Standards-based cylinder DSNA	Double-acting		6
[2] Self-aligning rod coupler DARP-C7	For connection to the piston rod		18
[3] Rod clevis DARC-C7	Permits swivel motion in one plane		18
[4] Rod eye DARC-C7B	Permits swivel motion in one plane		18
[5] Flange plate DAMF-C7	For bearing or end caps		15
[6] One-way flow control valve GRLA	For regulating speed		21
[7] Push-in fitting QB/QBL	For connecting tubing with standard O.D.		21
[8] Swivel flange DAMS-C7-...-D/DS	For end caps		16
[9] Swivel flange DAMS-C7-...-C	For end caps		16
- Swivel mounting DAMC-C7-...-C/-D	For rod eye, rod clevis and swivel flange		17
[10] Foot mounting DAMH-C7	For bearing or end caps		15
[11] Proximity switch SDBF-FCR/SDBF-FCS	Can be integrated into sensor bracket SAMH-FC-SH		21
[12] Sensor bracket SAMH-FC-SH	For proximity switches SDBF-FCR/SDBF-FCS		20
[13] Threaded bolt DARA-...-M	For connection to the cylinder		19
- Pivot pin DADG-B-C7/-AS	For rod eye, rod clevis, swivel flange and swivel mounting		19

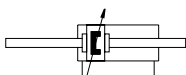
Data sheet



Function

DSNA-N



DSNA-N-...T



-  - Diameter
1 1/2 ... 4 inch
-  - Stroke length
0.25 ... 48 inch



General technical data		1 1/2	2	2 1/2	3 1/4	4
Piston \varnothing		1 1/2	2	2 1/2	3 1/4	4
Design	Piston					
	Piston rod					
	Tie rod					
	Cylinder barrel					
Mode of operation	Double-acting					
Pneumatic connection	3/8 NPT	3/8 NPT	3/8 NPT	1/2 NPT	1/2 NPT	
Piston rod end	Male thread					
	Female thread					
Piston rod thread						
Standard		7/16-20 UNF-2A			3/4-16 UNF-2A	
[F]		7/16-20 UNF-2B			3/4-16 UNF-2B	
[U12] ²⁾		1/2-20 UNF-2A			-	
[U58] ²⁾		5/8-18 UNF-2A			-	
[U78] ²⁾		-			7/8-14 UNF-2A	
[U1S] ²⁾		-			1-14 UNS	
Stroke ¹⁾	[in]	0.25 ... 48				
Cushioning	Pneumatic cushioning, adjustable at both ends					
Position sensing	Via proximity switch					
Type of mounting	Direct mounting via thread					
	Via accessories					
Mounting position	Any					

1) The strokes are available in increments of 0.25 inches.

2) Not in combination with piston rod thread type [F], female thread

Operating and environmental conditions		1 1/2	2	2 1/2	3 1/4	4
Piston \varnothing		1 1/2	2	2 1/2	3 1/4	4
Conforms to standard	NFPA					
	T3.6.7					
Operating pressure						
	[MPa]	0.089 ... 0.965			0.048 ... 0.965	
	[psi]	13 ... 140			7 ... 140	
	[bar]	0.89 ... 9.65			0.48 ... 9.65	
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]					
Note on the operating/pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)					
Ambient temperature ¹⁾						
Standard	[°C]	-5 ... +60				
	[°F]	+23 ... +140				
Temperature range [T23]	[°C]	-5 ... +80				
	[°F]	+23 ... +176				
Corrosion resistance class CRC ²⁾		1				

1) Note operating range of proximity switches

2) Corrosion resistance class CRC 1 to Festo standard FN 940070

Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Data sheet

Forces [lbs] at 80 psi					
Piston \varnothing	1 1/2	2	2 1/2	3 1/4	4
Theoretical force, advancing	156	243.2	386.4	623.2	973.6
Theoretical force, retracting	131.2	218.4	361.6	560.8	911.2

Weight [lb] based on the type of mounting ¹⁾					
Piston \varnothing	1 1/2	2	2 1/2	3 1/4	4
Basic weight with 0 inch stroke					
[MS4]/[T-MS4]	1.49/2.12	2.16/2.80	2.94/3.64	5.53/6.82	7.28/9.29
[MT4]/[T-MT4]	2.71/3.34	3.58/4.22	4.79/5.49	7.95/9.24	10.48/12.49
[MS1]/[T-MS1]	1.84/2.47	2.69/3.33	3.60/4.30	6.93/8.22	9.39/11.40
[MF1]/[T-MF1]	2.03/2.62	3.05/3.63	4.21/4.79	8.63/9.69	11.72/13.30
[MF2]/[T-MF2]					
[MP1]	2.13	3.13	4.23	8.79	11.68
[MP2]					
[MP4]					
[MX2]	1.55	2.26	3.04	5.70	7.45
[MX3]	3.34	4.22	5.49	9.24	12.49
Additional weight per 1 inch stroke					
[MS4]/[T-MS4]	0.17/0.26	0.21/0.30	0.22/0.37	0.44/0.66	0.49/0.71
[MT4]/[T-MT4]					
[MS1]/[T-MS1]					
[MF1]/[T-MF1]					
[MF2]/[T-MF2]	0.17	0.21	0.22	0.44	0.49
[MP1]					
[MP2]					
[MP4]					
[MX2]					
[MX3]					

1) Types of mounting

[MS4]/[T-MS4]	Direct mounting/through piston rod and direct mounting
[MT4]/[T-MT4]	Central swivel mounting/through piston rod and central swivel mounting
[MS1]/[T-MS1]	Foot mounting/through piston rod and foot mounting
[MF1]/[T-MF1]	Flange plate, bearing cap/through piston rod and flange plate, bearing cap
[MF2]/[T-MF2]	Flange plate, end cap/through piston rod and flange plate, end cap
[MP1]	Swivel bearing
[MP2]	Swivel mounting
[MP4]	Swivelling rod eye mounting
[MX2]	Threaded rod, end cap
[MX3]	Threaded rod, bearing cap

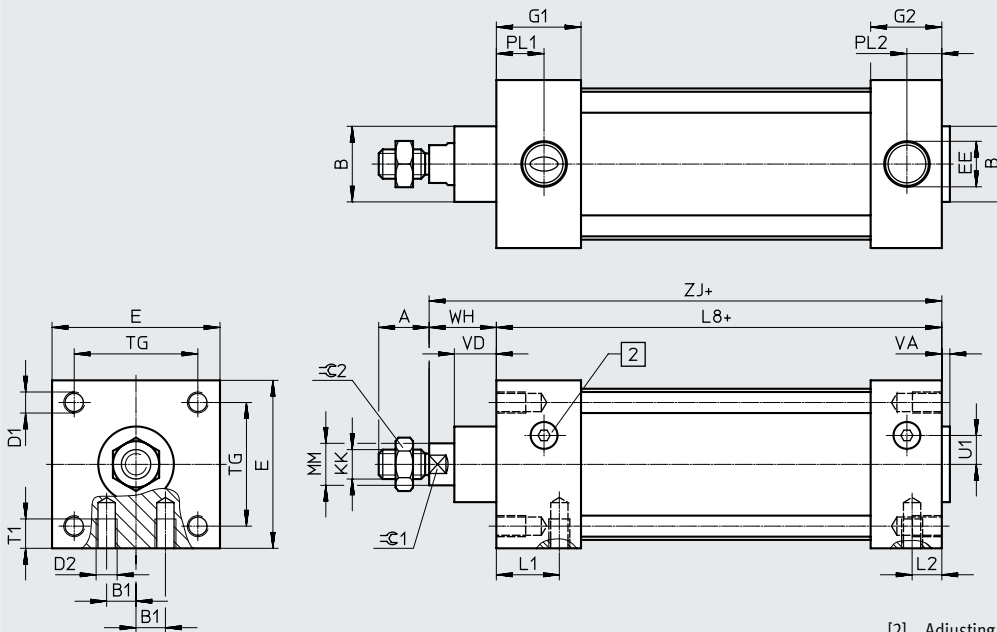
Materials					
Piston \varnothing	1 1/2	2	2 1/2	3 1/4	4
Material: Cover	Coated die-cast aluminium				
Material: Seals	FPM				
	NBR				
Material: Piston rod	High-alloy stainless steel				
Material: Cylinder barrel	Smooth-anodised wrought aluminium alloy				
Note on materials	Contains paint-wetting impairment substances				
	RoHS-compliant				

Data sheet

Dimensions

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[MS4] Direct mounting



[2] Adjusting screw for adjustable end-position cushioning
+ = plus stroke length

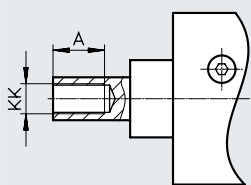
∅	A	B ∅	B1	D1	D2	KK				
						[U12]	[U58]	[U78]	[U1S]	
1 1/2	0.75	1.13	0.31	1/4-28	1/4-20	7/16-20 UNF-2A	1/2-20 UNF-2A	5/8-18 UNF-2A	-	-
2	0.75	1.13	0.44	5/16-24	5/16-18	7/16-20 UNF-2A	1/2-20 UNF-2A	5/8-18 UNF-2A	-	-
2 1/2	0.75	1.13	0.63	5/16-24	3/8-16	7/16-20 UNF-2A	1/2-20 UNF-2A	5/8-18 UNF-2A	-	-
3 1/4	1.13	1.5	0.75	3/8-24	1/2-13	3/4-16 UNF-2A	-	-	7/8-14 UNF-2A	1-14 UNS
4	1.13	1.5	1.03	3/8-24	1/2-13	3/4-16 UNF-2A	-	-	7/8-14 UNF-2A	1-14 UNS

∅	E	EE	G1	G2	L1	L2	L8	MM ∅	PL1	PL2	T1	TG	VA	VD	WH	ZJ	⊖C1	⊖C2
1 1/2	2	3/8	1.26	1.01	0.94	0.44	3.63	0.63	0.71	0.56	0.28	1.43	0.12	0.63	1	4.63	0.56	0.69
2	2.5	3/8	1.26	1.06	0.94	0.44	3.63	0.63	0.71	0.52	0.44	1.84	0.12	0.63	1	4.63	0.56	0.69
2 1/2	3	3/8	1.30	1.06	0.94	0.44	3.75	0.63	0.75	0.52	0.59	2.19	0.13	0.63	1	4.75	0.56	0.69
3 1/4	3.75	1/2	1.57	1.18	1.06	0.56	4.25	1	0.97	0.57	0.63	2.76	0.21	0.88	1.38	5.63	0.88	1.12
4	4.5	1/2	1.57	1.18	1.06	0.56	4.25	1	0.97	0.57	0.63	3.32	0.21	0.88	1.38	5.63	0.88	1.12

Dimensions

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[F] Female thread



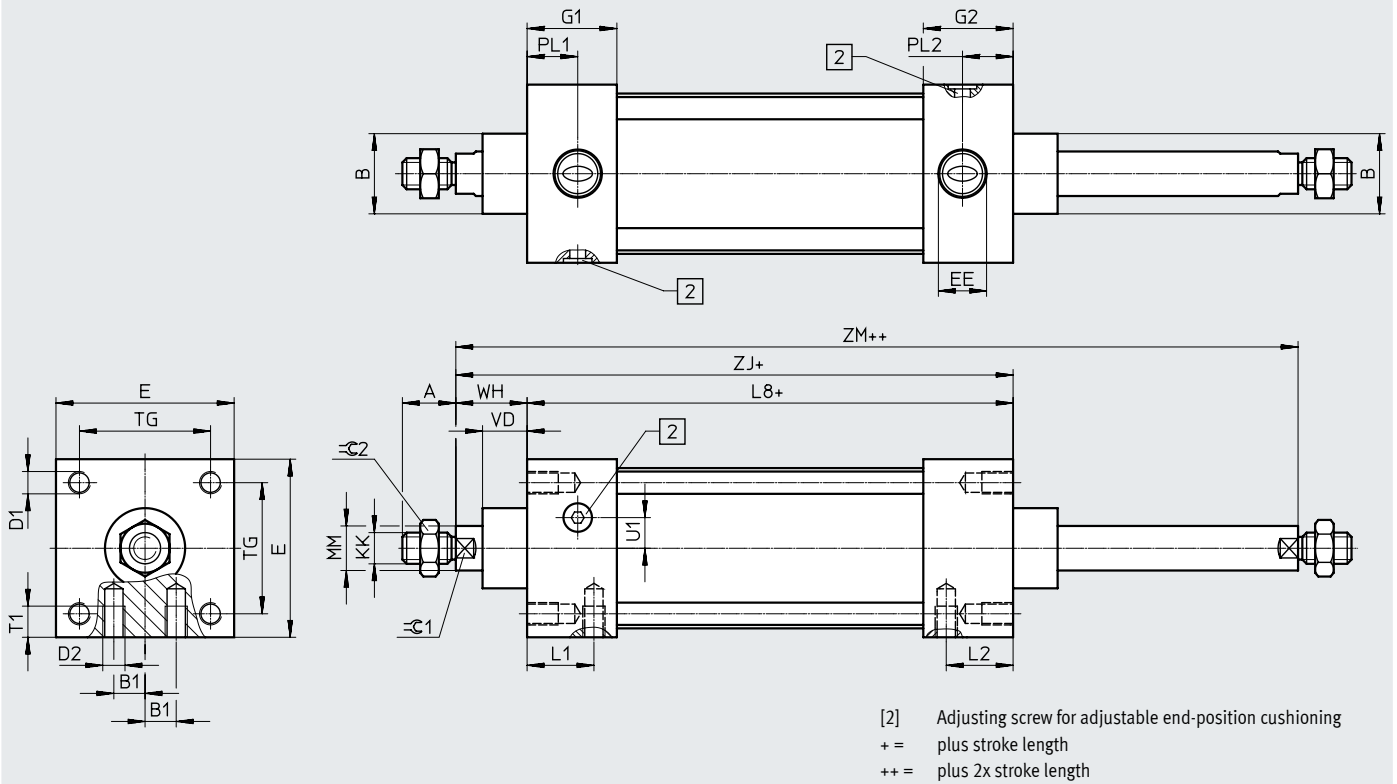
∅	A	KK
1 1/2	0.75	7/16-20 UNF-2B
2	0.75	7/16-20 UNF-2B
2 1/2	0.75	7/16-20 UNF-2B
3 1/4	1.13	3/4-16 UNF-2B
4	1.13	3/4-16 UNF-2B

Data sheet

Dimensions

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[T] Through piston rod



∅ [in]	A	B ∅	B1	D1	D2	KK				
						[U12]	[U58]	[U78]	[U1S]	
1 1/2	0.75	1.13	0.31	1/4-28	1/4-20	7/16-20 UNF-2A	1/2-20 UNF-2A	5/8-18 UNF-2A	-	-
2	0.75	1.13	0.444	5/16-24	5/16-18	7/16-20 UNF-2A	1/2-20 UNF-2A	5/8-18 UNF-2A	-	-
2 1/2	0.75	1.13	0.63	5/16-24	3/8-16	7/16-20 UNF-2A	1/2-20 UNF-2A	5/8-18 UNF-2A	-	-
3 1/4	1.13	1.5	0.75	3/8-24	1/2-13	3/4-16 UNF-2A	-	-	7/8-14 UNF-2A	1-14 UNS
4	1.13	1.5	1.03	3/8-24	1/2-13	3/4-16 UNF-2A	-	-	7/8-14 UNF-2A	1-14 UNS

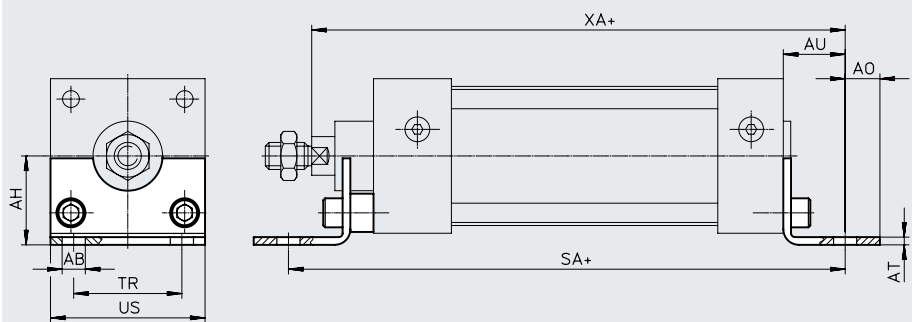
∅ [in]	E	EE	G1	G2	L1	L2	L8	MM ∅	PL1	PL2	T1	TG	VD	WH	ZJ	ZM	≅G1	≅G2
1 1/2	2	3/8	1.26	1.26	0.94	0.94	3.78	0.63	0.71	0.71	0.28	1.43	0.63	1	4.78	5.78	0.56	0.69
2	2.5	3/8	1.26	1.26	0.94	0.94	3.82	0.63	0.71	0.71	0.44	1.84	0.63	1	4.82	5.82	0.56	0.69
2 1/2	3	3/8	1.30	1.30	0.94	0.94	3.98	0.63	0.75	0.75	0.59	2.19	0.63	1	4.98	5.98	0.56	0.69
3 1/4	3.75	1/2	1.57	1.57	1.06	1.06	4.64	1	0.97	0.96	0.63	2.76	0.88	1.38	6.02	7.40	0.88	1.12
4	4.5	1/2	1.57	1.57	1.06	1.06	4.64	1	0.97	0.96	0.63	3.32	0.88	1.38	6.02	7.40	0.88	1.12

Data sheet

Dimensions

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[MS1] Foot mounting



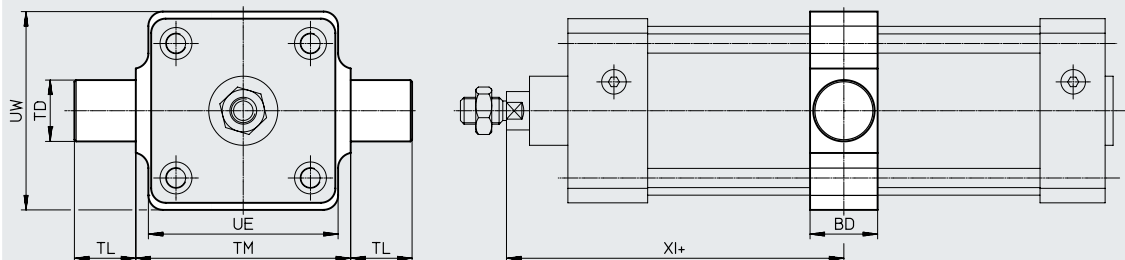
+ = plus stroke length

∅	AB ∅	AH	AO	AT	AU	SA	TR	US	XA	XS
[in]										
1 1/2	0.38	1.19	0.44	0.13	1	6	1.25	2	5.63	1.38
2	0.38	1.44	0.56	0.13	1	6	1.75	2.5	5.63	1.38
2 1/2	0.38	1.63	0.56	0.13	1	6.13	2.25	3	5.75	1.38
3 1/4	0.5	1.94	0.75	0.17	1.26	7.38	2.75	3.75	6.88	1.76
4	0.5	2.25	0.75	0.23	1.26	7.38	3.50	4.5	6.88	1.76

Dimensions

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[MT4] Trunnion mounting



+ = plus 1/2x stroke length

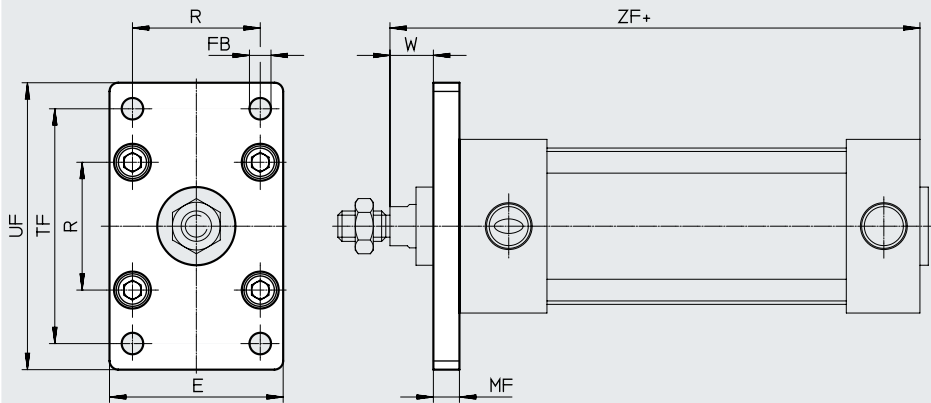
∅	BD	TD	TL	TM	UE	UW	XI
[in]		±0.001					±0.08
1 1/2	1.04	1	1	2.5	2.11	2.28	2.28
2	1.04	1	1	3	2.6	2.6	2.6
2 1/2	1.1	1	1	3.5	3.09	3.23	3.23
3 1/4	1.18	1	1	4.5	3.7	4.17	4.17
4	1.22	1	1	5.25	4.49	4.96	4.96

Data sheet

Dimensions

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[MF1] Flange plate, bearing cap



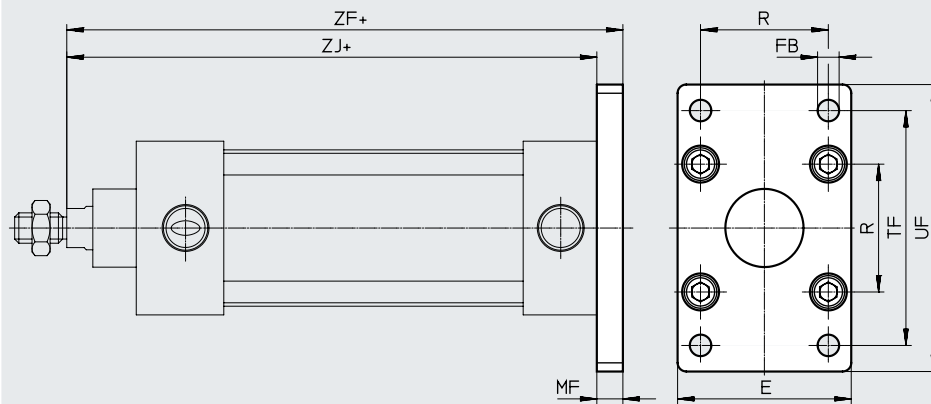
+ = plus stroke length

∅	E	FB ∅	MF	R	TF	UF	W	ZF
[in]								
1 1/2	2	0.25	0.38	1.43	2.75	3.38	0.63	4.63
2	2.5	0.31	0.38	1.84	3.38	4.13	0.63	4.63
2 1/2	3	0.31	0.38	2.19	3.88	4.63	0.63	4.75
3 1/4	3.75	0.38	0.63	2.76	4.68	5.50	0.75	5.63
4	4.5	0.38	0.63	3.32	5.44	6.25	0.75	5.63

Dimensions

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[MF2] Flange plate, end cap



+ = plus stroke length

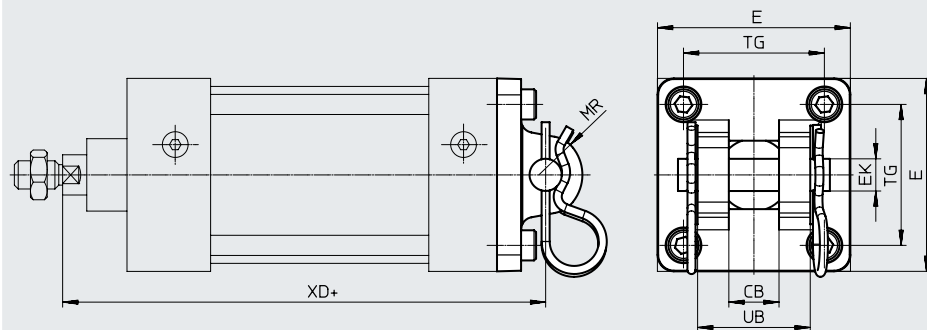
∅	E	FB ∅	MF	R	TF	UF	ZF	ZJ
[in]								
1 1/2	2	0.25	0.38	1.43	2.75	3.38	5	4.63
2	2.5	0.31	0.38	1.84	3.38	4.13	5	4.63
2 1/2	3	0.31	0.38	2.19	3.88	4.63	5.13	4.75
3 1/4	3.75	0.38	0.63	2.76	4.68	5.50	6.25	5.63
4	4.5	0.38	0.63	3.32	5.44	6.25	6.25	5.63

Data sheet

Dimensions

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- [MP1] Swivel bearing
- [MP2] Swivel mounting



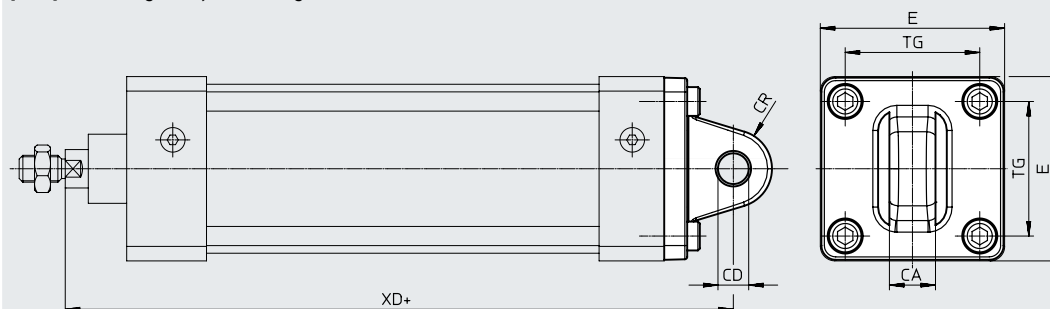
+ = plus stroke length

∅ [in]	CB	E	EK ∅	MR ∅	TG	UB	XD+	
							[MP1]	[MP2]
1 1/2	0.78	2	0.50	1.24	1.43	1.75	5.38	5.75
2	0.78	2.5	0.50	1.24	1.84	1.75	5.38	5.75
2 1/2	0.78	3	0.50	1.24	2.19	1.75	5.50	5.88
3 1/4	1.13	3.75	0.75	1.88	2.76	2.50	6.88	7.50
4	1.13	4.5	0.75	1.88	3.32	2.50	6.88	7.50

Dimensions

Download CAD data → www.festo.com

- [MP4] Swivelling rod eye mounting



+ = plus stroke length

∅ [in]	CA	CD ∅	E	CR	TG	XD ±0.06
1 1/2	0.75	0.5	2	0.63	1.43	5.75
2	0.75	0.5	2.5	0.63	1.84	5.75
2 1/2	0.75	0.5	3	0.63	2.19	5.88
3 1/4	1.25	0.75	3.75	0.87	2.76	7.5
4	1.25	0.75	4.5	0.87	3.32	7.5

Data sheet

Dimensions

Download CAD data → www.festo.com

[MX2] Threaded rod, end cap

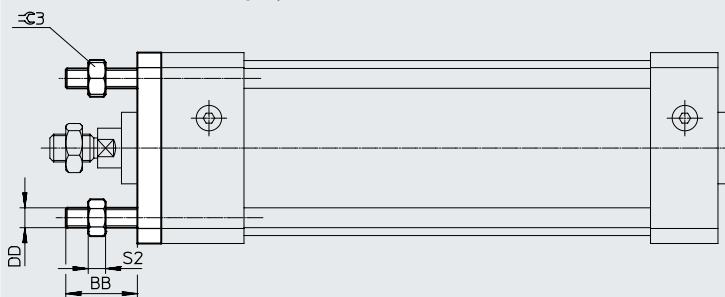


\varnothing	BB	DD	S2	≈ 3
[in]				
1 1/2	1	1/4-28	0.22	0.44
2	1.13	5/16-24	0.27	0.5
2 1/2	1.13	5/16-24	0.27	0.5
3 1/4	1.38	3/8-24	0.33	0.56
4	1.38	3/8-24	0.33	0.56

Dimensions

Download CAD data → www.festo.com

[MX3] Threaded rod, bearing cap



\varnothing	BB	DD	S2	≈ 3
[in]				
1 1/2	1	1/4-28	0.22	0.44
2	1.13	5/16-24	0.27	0.5
2 1/2	1.13	5/16-24	0.27	0.5
3 1/4	1.38	3/8-24	0.33	0.56
4	1.38	3/8-24	0.33	0.56

Ordering data – Modular product system

Ordering table								
Piston ø	1 1/2	2	2 1/2	3 1/4	4	Conditions	Code	Enter code
Module no.	8117043	8117044	8117045	8117046	8117047			
Function	Standards-based cylinder, double-acting						DSNA	DSNA
System of units	Imperial						-N	-N
Piston ø [in]	1 1/2	2	2 1/2	3 1/4	4		-..."	
Stroke [in]	0.25 ... 48						-..."	
Piston rod type	At one end							
	Through piston rod						-T	
Piston rod thread type	Male thread							
	Female thread						F	
Cushioning	Pneumatic cushioning, adjustable at both ends						-PPV	-PPV
Position sensing	For proximity switch						A	A
Standard	Conforms to ANSI/NFPA						-N5	-N5
Temperature range [°C]	Standard							
	-5 ... +80						T23	
Piston rod thread	Standard							
	1/2-20 UNF-2A			-		[1]	-U12	
	-			5/8-18 UNF-2A		[1]	-U58	
	7/8-14 UNF-2A			-		[1]	-U78	
	-			1-14 UNS		[1]	-U15	
Type of mounting	Flange plate, bearing cap						-MF1	
	Flange plate, end cap					[2]	-MF2	
	Swivel bearing					[2]	-MP1	
	Swivel mounting					[2]	-MP2	
	Swivelling rod eye mounting					[2]	-MP4	
	Foot mounting						-MS1	
	Direct mounting						-MS4	
	Central swivel mounting						-MT4	
	Threaded rod, end cap					[2]	-MX2	
Threaded rod, bearing cap						-MX3		

[1] U12, U58, U78, U15

Not with piston rod thread type F, female thread

The mounting nut on the male piston rod thread is included in the scope of delivery

[2] MF2, MP1, MP2, MP4, MX2

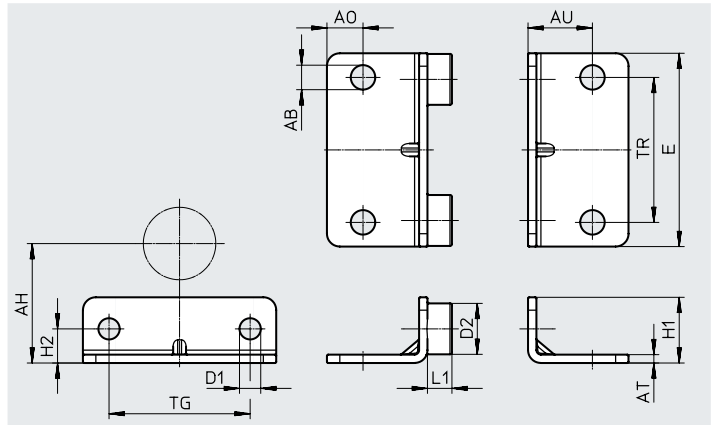
Not with piston rod type T, through piston rod

Accessories

Foot mounting DAMH-C7

Material:
Bracket, sleeve: Nickel-plated steel
Screws: Steel

RoHS-compliant
Contains paint-wetting impairment substances

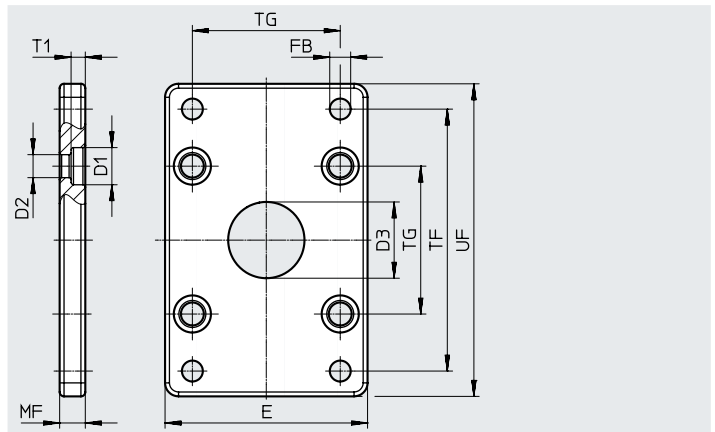
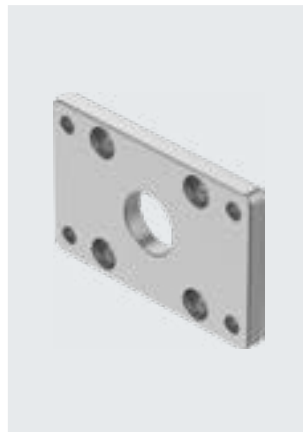


Dimensions and ordering data															
For \varnothing [in]	AB \varnothing	AH	AO	AT	AU	D1 \varnothing	D2 \varnothing	E	H1	H2	L1	TG	TR	Part no.	Type
1 1/2	0.38	1.19	0.44	0.13	1	0.27	0.55	2	0.87	0.47	0.38	1.43	1.25	8148942	DAMH-C7-1 1/2"
2	0.38	1.44	0.56	0.13	1	0.33	0.63	2.5	0.95	0.53	0.38	1.84	1.75	8148943	DAMH-C7-2"
2 1/2	0.38	1.63	0.56	0.13	1	0.33	0.79	3	1.02	0.53	0.38	2.19	2.25	8148944	DAMH-C7-2 1/2"
3 1/4	0.5	1.94	0.75	0.17	1.25	0.39	0.99	3.75	1.1	0.55	0.63	2.76	2.75	8148945	DAMH-C7-3 1/4"
4	0.5	2.25	0.75	0.23	1.25	0.39	1.16	4.5	1.18	0.59	0.63	3.32	3.5	8148946	DAMH-C7-4"

Flange plate DAMF-C7

Material:
Flange: Painted cast steel
Screws: Steel

RoHS-compliant
Contains paint-wetting impairment substances



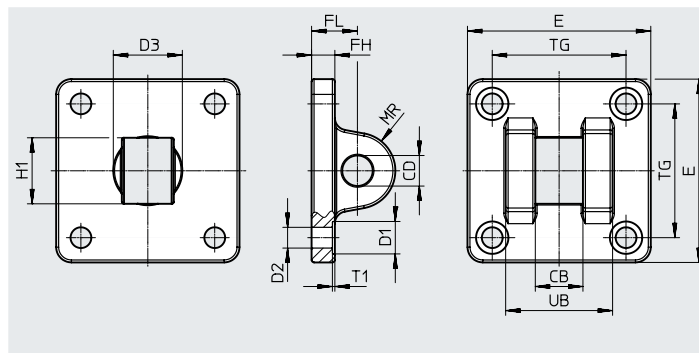
Dimensions and ordering data												
For \varnothing [in]	D1 \varnothing	D2 \varnothing	D3 \varnothing	E	FB \varnothing	MF	T1	TG	TF	UF	Part no.	Type
1 1/2	0.45	0.27	1.13	2	0.25	0.38	0.21	1.43	2.75	3.38	8148922	DAMF-C7-1 1/2"
2	0.55	0.34	1.13	2.5	0.31	0.38	0.21	1.84	3.38	4.13	8148923	DAMF-C7-2"
2 1/2	0.55	0.34	1.13	3	0.31	0.38	0.21	2.19	3.88	4.63	8148924	DAMF-C7-2 1/2"
3 1/4	0.67	0.39	1.51	3.75	0.38	0.63	0.3	2.76	4.68	5.5	8148925	DAMF-C7-3 1/4"
4	0.67	0.39	1.51	4.5	0.38	0.63	0.3	3.32	5.44	6.25	8148926	DAMF-C7-4"

Accessories

Swivel flange DAMS-C7-...-D
Swivel flange DAMS-C7-...-DS

Material:
Swivel flange: Painted cast steel
Bolts; cotter pins; screws: Steel

RoHS-compliant
Contains paint-wetting impairment
substances

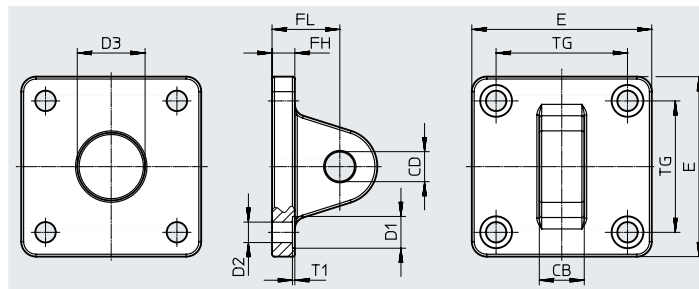


Dimensions and ordering data															
For \varnothing [in]	CB	CD \varnothing	D1 \varnothing	D2 \varnothing	D3 \varnothing	E	FH	FL	H1	MR	T1	TG	UB	Part no.	Type
1 1/2	0.78	0.5	0.41	0.28	1.13	2	0.38	1,13	-	0,5	0,08	1.43	1.75	8148932	DAMS-C7-1 1/2"-D
								0,75	1,02	1,24	0,04			8148927	DAMS-C7-1 1/2"-DS
2	0,78	0,5	0,53	0,34	1,13	2,5	0,38	1,13	-	0,5	0,08	1,84	1,75	8148933	DAMS-C7-2"-D
								0,75	1,08	1,24	0,04			8148928	DAMS-C7-2"-DS
2 1/2	0.78	0.5	0.53	0.34	1.13	3	0.38	1,13	-	0,5	0,08	2.19	1.75	8148934	DAMS-C7-2 1/2"-D
								0,75	1,08	1,24	0,04			8148929	DAMS-C7-2 1/2"-DS
3 1/4	1.28	0.75	0.65	0.39	1.51	3.75	0.63	1,88	-	0,75	0,09	2.76	2.5	8148935	DAMS-C7-3 1/4"-D
								1,25	1,53	1,88	0,04			8148930	DAMS-C7-3 1/4"-DS
4	1.28	0.75	0.65	0.39	1.51	4.5	0.63	1,88	-	0,75	0,09	3.32	2.5	8148936	DAMS-C7-4"-D
								1,25	1,53	1,88	0,04			8148931	DAMS-C7-4"-DS

Swivel flange DAMS-C7-...-C

Material:
Swivel flange: Painted cast steel
Screws: Steel

RoHS-compliant
Contains paint-wetting impairment
substances



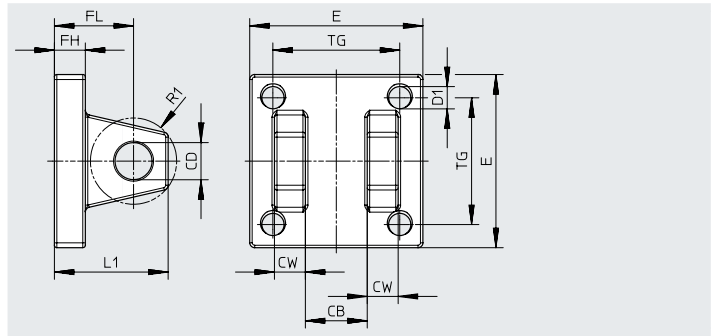
Dimensions and ordering data															
For \varnothing [in]	CB	CD \varnothing	D1 \varnothing	D2 \varnothing	D3 \varnothing	E	FH	FL	MR	T1	TG	Part no.	Type		
1 1/2	0.75	0.5	0.41	0.28	1.13	2	0.38	0.75	1.25	0.08	1.43	8148937	DAMS-C7-1 1/2"-C		
2	0.75	0.5	0.53	0.34	1.13	2.5	0.38	0.75	1.25	0.08	1.84	8148938	DAMS-C7-2"-C		
2 1/2	0.75	0.5	0.53	0.34	1.13	3	0.38	0.75	1.25	0.08	2.19	8148939	DAMS-C7-2 1/2"-C		
3 1/4	1.25	0.75	0.65	0.39	1.51	3.75	0.63	1.25	1.75	0.09	2.76	8148940	DAMS-C7-3 1/4"-C		
4	1.25	0.75	0.65	0.39	1.51	4.5	0.63	1.25	1.75	0.09	3.32	8148941	DAMS-C7-4"-C		

Accessories

Swivel mounting DAMC-C7-...-D

Material:
Swivel mounting: Cast steel

RoHS-compliant
Contains paint-wetting impairment
substances

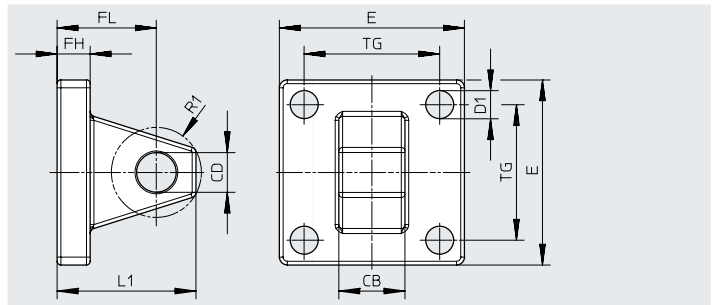
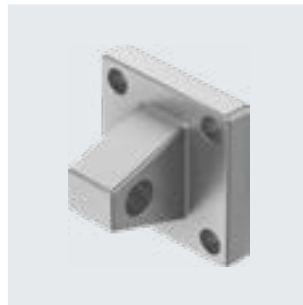


Dimensions and ordering data												
For \varnothing [in]	CB	CD \varnothing	CW	D1	E	FH	FL	L1	R1	TG	Part no.	Type
1 1/2; 2; 2 1/2	0.75	0.5	0.5	3/8-24	2.5	0.38	1.13	0.88	0.5	1.63	8148947	DAMC-C7-1 1/2"-D
3 1/4; 4	1.25	0.75	0.63	1/2-20	3.5	0.63	1.88	1.38	1.06	2.56	8148948	DAMC-C7-3 1/4"-D

Swivel mounting DAMC-C7-...-C

Material:
Swivel mounting: Painted cast steel

RoHS-compliant
Contains paint-wetting impairment
substances



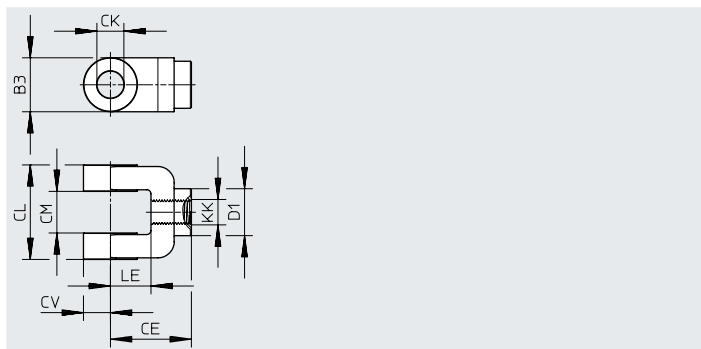
Dimensions and ordering data												
For \varnothing [in]	CB	CD \varnothing	D1	E	FH	FL	L1	R1	TG	Part no.	Type	
1 1/2; 2; 2 1/2	0.75	0.5	0.41	2.5	0.38	1.13	1.63	0.75	1.63	8148949	DAMC-C7-1 1/2"-C	
3 1/4; 4	1.25	0.75	0.53	3.5	0.63	1.88	2.63	1.25	2.56	8148950	DAMC-C7-3 1/4"-C	

Accessories

Rod clevis DARC-C7

Material:
Painted cast steel

RoHS-compliant
Contains paint-wetting impairment
substances



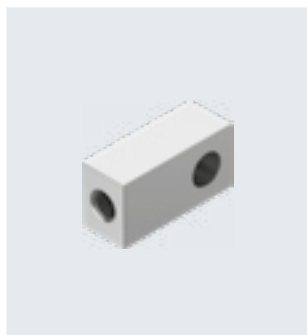
Dimensions and ordering data

For \varnothing [in]	B3	CE	CK \varnothing	CL	CM	CV	D1 \varnothing	KK	LE	Part no.	Type
1 1/2; 2; 2 1/2	1	1.5	0.5	1.75	0.77	0.5	0.87	7/16-20	0.75	8117048	DARC-C7-U716
3 1/4; 4	1.5	2.38	0.75	2.5	1.27	0.75	1.34	3/4-16	1.25	8117049	DARC-C7-U34

Rod eye DARC-C7B

Material:
Nickel-plated steel

RoHS-compliant
Contains paint-wetting impairment
substances



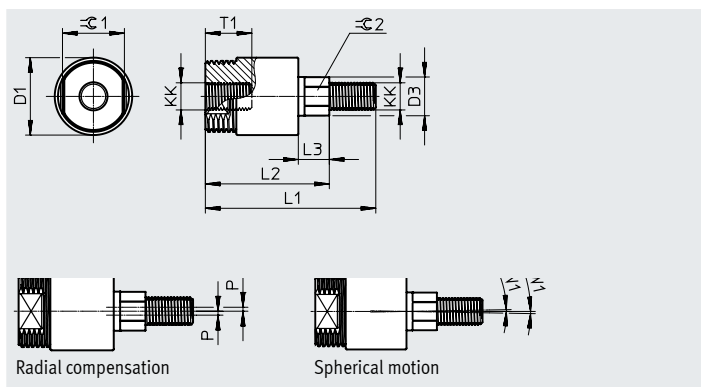
Dimensions and ordering data

For \varnothing [in]	B1	D1 \varnothing	H1	KK	L1	L2	T1	Part no.	Type
1 1/2; 2; 2 1/2	0.75	0.5	1	7/16-20	2	1.5	0.75	8117050	DARC-C7B-U716
3 1/4; 4	1.25	0.75	1.5	3/4-16	2.81	2.06	1.13	8117051	DARC-C7B-U34

Self-aligning rod coupler DARP-C7

Material:
Housing; bushing; ball stud; spherical
washer: Oxidised steel

RoHS-compliant
Contains paint-wetting impairment
substances



Dimensions and ordering data

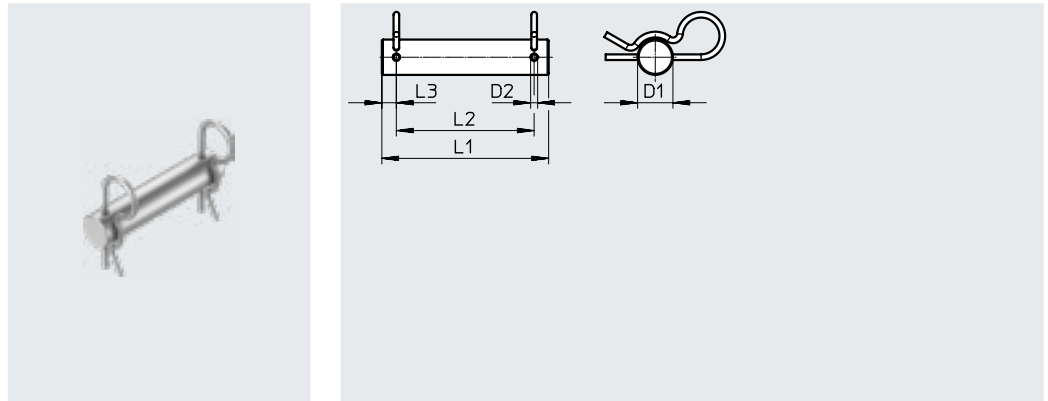
For \varnothing [in]	D1 \varnothing	D3 \varnothing	KK	L1	L2	L3	T1	$\approx \varnothing 1$	$\approx \varnothing 2$	P	W1	Part no.	Type
1 1/2; 2; 2 1/2	1.25	0.63	7/16-20	2.75	2	0.5	0.75	1 1/8	9/16	0.0625	1°	8117054	DARP-C7-U716-F
3 1/4; 4	1.75	0.97	3/4-16	3.44	2.31	0.31	1.13	1 1/2	7/8	0.0625	1°	8117055	DARP-C7-U34-F

Accessories

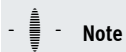
Pivot pin DADG-B-C7

Material:
Pin; clips: Steel

RoHS-compliant
Contains paint-wetting impairment substances



Dimensions and ordering data							
For \varnothing [in]	D1 \varnothing	D2 \varnothing	L1	L2	L3	Part no.	Type
1 1/2; 2; 2 1/2	0.5	0.16	2.36	1.95	0.2	8117052	DADG-B-C7-1/2"
3 1/4; 4	0.75	0.2	3.13	2.74	0.19	8117053	DADG-B-C7-3/4"



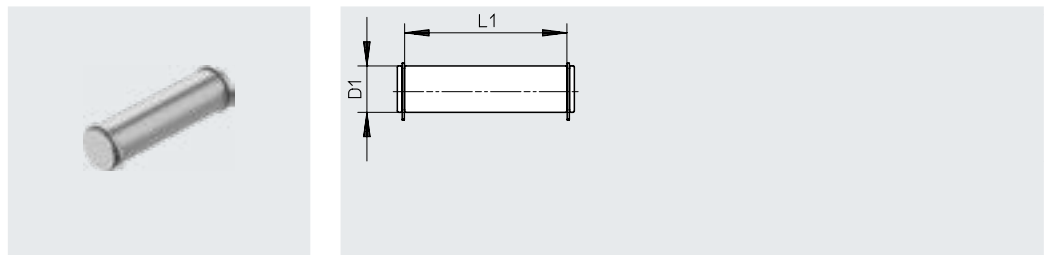
Note

In addition to the R-clips shown, two straight cotter pins are also included in the scope of delivery of pivot pin DADG-B-C7.

Pivot pin DADG-B-C7-AS

Material:
Pivot pin; guard ring: Steel

RoHS-compliant
Contains paint-wetting impairment substances

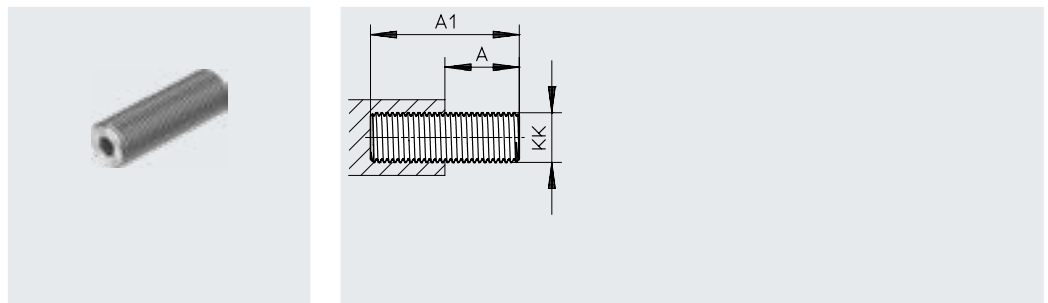


Dimensions and ordering data				
For \varnothing [in]	D1 \varnothing	L1	Part no.	Type
1 1/2; 2; 2 1/2	0.5	1.88	8148951	DADG-B-C7-1/2"-AS
3 1/4; 4	0.75	2.63	8148952	DADG-B-C7-3/4"-AS

Threaded bolt DARA-...-M

Material:
Threaded bolt: Steel

RoHS-compliant
Contains paint-wetting impairment substances



Dimensions and ordering data					
For \varnothing [in]	A	A1	KK	Part no.	Type
1 1/2; 2; 2 1/2	0.75	1.5	7/16-20 UNF-2B	8148953	DARA-U716-M
3 1/4; 4	1.13	2.25	3/4-16 UNF-2B	8148954	DARA-U34-M

Accessories

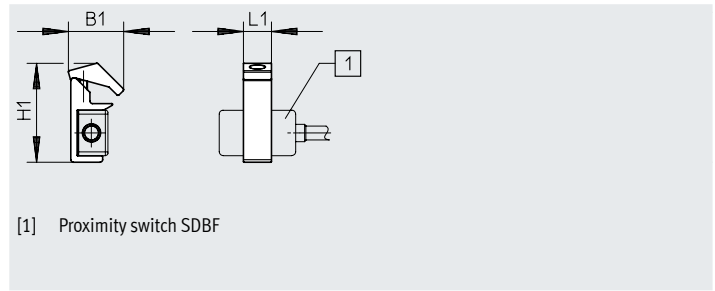
Sensor bracket SAMH-FC-SH

Material:

Mounting; screw: Steel (galvanised or nickel-plated)

RoHS-compliant

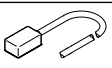
Contains paint-wetting impairment substances






Dimensions and ordering data


For \varnothing [in]	B1	H1	L1	Part no.	Type
1 1/2 ... 4	0.75	1.3	0.43	8117067	SAMH-FC-SH


Accessories


Ordering data – Proximity switch						Data sheets → Internet: sdbf
	For Ø [in]	Type of mounting	Switching output	Electrical connection	Part no.	Type
N/O contact						
	1 1/2 ... 4	Can be integrated into sensor bracket SAMH-FC-SH	PNP	Cable, 3-wire	8117062	SDBF-FCS-1L-PU-K-9-N-LE
				Plug M8, 3-pin	8117065	SDBF-FCS-1L-PU-K-N-M8
			NPN	Cable, 3-wire	8117063	SDBF-FCS-1L-NU-K-9-N-LE
				Plug M8, 3-pin	8117066	SDBF-FCS-1L-NU-K-N-M8

Ordering data – Connecting cables						Data sheets → Internet: nebu
	Electrical connection, left	Electrical connection, right	Cable length [m]	Part no.	Type	
	Straight socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541333	NEBU-M8G3-K-2.5-LE3	
			5	541334	NEBU-M8G3-K-5-LE3	
	Angled socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541338	NEBU-M8W3-K-2.5-LE3	
			5	541341	NEBU-M8W3-K-5-LE3	

Ordering data						Data sheets → Internet: grla
	For Ø [in]	Description	Part no.	Type		
One-way flow control valve GRLA						
	1 1/2 ... 2 1/2	For regulating speed	534664	GRLA-3/8-QB-1/4-U		
			534666	GRLA-3/8-QB-3/8-U		
			534667	GRLA-3/8-QB-1/2-U		
			564846	GRLA-1/2-QB-3/8-U		
			564847	GRLA-1/2-QB-1/2-U		
	3 1/4 ... 4					

Ordering data						Data sheets → Internet: qb
	For Ø [in]	Description	Part no.	Type		
Push-in fitting, straight						
	1 1/2 ... 2 1/2	For connecting tubing with standard O.D.	533279	QB-3/8-1/4-U		
			533281	QB-3/8-3/8-U		
			533282	QB-3/8-1/2-U		
			533283	QB-1/2-3/8-U		
			533284	QB-1/2-1/2-U		
	3 1/4 ... 4					

Ordering data						Data sheets → Internet: qbl
	For Ø [in]	Description	Part no.	Type		
Push-in fitting, angled						
	1 1/2 ... 2 1/2	For connecting tubing with standard O.D.	533298	QBL-3/8-1/4-U		
			533300	QBL-3/8-3/8-U		
			533301	QBL-3/8-1/2-U		
			533302	QBL-1/2-3/8-U		
			533303	QBL-1/2-1/2-U		
	3 1/4 ... 4					

Ordering data – Seal set						Data sheets → Internet: dadg
	For Ø [in]	Description	Part no.	Type		
Temperature range, standard: (-5 ... +60°C)						
	1 1/2	Spare parts	8117056	DADG-SK-C7-1 1/2"		
			8117057	DADG-SK-C7-2"		
			8117058	DADG-SK-C7-2 1/2"		
			8117059	DADG-SK-C7-3 1/4"		
			8117060	DADG-SK-C7-4"		
Temperature range T23 (-5 ... +80°C)						
	1 1/2		8148955	DADG-SK-C7-1 1/2"-T23		
			8148956	DADG-SK-C7-2"-T23		
			8148957	DADG-SK-C7-2 1/2"-T23		
			8148958	DADG-SK-C7-3 1/4"-T23		
			8148959	DADG-SK-C7-4"-T23		
	2					
	2 1/2					
	3 1/4					
	4					