Pneumatic cylinder in plastic according to ISO

- Corrosion-resistant
- Also suitable for aggressive environments
- Light-weight
- Optionally with foodstuffs approval
- Optionally in completely metal-free design

Product variants described in the data sheet may differ from the product presentation and description.

Type description

Single-acting pneumatic cylinder (Type 0045) and double-acting pneumatic cylinder (Type 0044) according to ISO 6432 (Ø 12...25 mm) without end position damping and according to ISO 15552 (Ø 32...50 mm) with end position damping with piston rod nut.

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Visit product website

Table of contents

1. General technical data 3

2. Approvals and conformities 3

2.1. General notes ... 3
2.2. Conformity ... 3
2.3. Standards ... 3

3. Control functions 3

4. Materials 4

4.1. Bürkert resistApp ... 4

5. Dimensions 4

5.1. DN 12...25 ... 4
5.2. DN 32...50 ... 5

6. Performance specifications 5

6.1. Force chart ... 5
Type 0045, single-acting, without end position cushioning (according to ISO 6432) ... 5
Type 0044, double-acting, without end position cushioning (according to ISO 6432) ... 5
Type 0044, double-acting, with end position cushioning (according to ISO 15552) ... 5

7. Ordering information 6

7.1. Bürkert eShop ... 6
7.2. Bürkert product filter ... 6
7.3. Ordering chart cylinders ... 6
Type 0045 single-acting, without end position cushioning (according to ISO 6432) ... 6
Type 0044 double-acting, without end position cushioning (according to ISO 6432) ... 6
Type 0044 double-acting, with end position cushioning (according to ISO 15552) ... 7
7.4. Ordering chart accessories ... 7
Bearing support ... 7
Foot fastener ... 8
Mounting and piston rod nut set ... 8
Fork head according to DIN 71 752 ... 8
Fork fastener ... 9
End support for fork fastener ... 9

DTS 1000010837 EN Version: - Status: RL (released | freigegeben | valide) printed: 28.10.2026

1. General technical data

Product properties	
Dimensions	Further information can be found in chapter "5. Dimensions" on page 4.
Material	
Seal	NBR with PA6 (optional FKM), P5600 with PA12
Piston rod	Stainless steel 1.4401
Solenoid piston	On request
Cylinder tube	PA6 und PA12, both fibreglass-reinforced (optional PP Ø 32...50 mm)
Performance data	
Pressure range	1...10 bar [1.)]
Medium data	
Operating medium	Filtered oil-free compressed dry air
Medium temperature	- 20 °C...+ 70 °C
Environment and installation	
Installation position	As required
Ambient temperature	- 20 °C...+ 70 °C

1.) Measured as overpressure to the atmospheric pressure

2. Approvals and conformities

2.1. General notes

- The approvals and conformities listed below must be stated when making enquiries. This is the only way to ensure that the product complies with all required specifications.
- Not all available variants can be supplied with the below mentioned approvals or conformities.

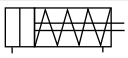
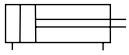
2.2. Conformity

In accordance with the Declaration of Conformity, the product is compliant with the EU Directives.

2.3. Standards

The applied standards which are used to demonstrate compliance with the EU Directives are listed in the EU-Type Examination Certificate and/or the EU Declaration of Conformity.

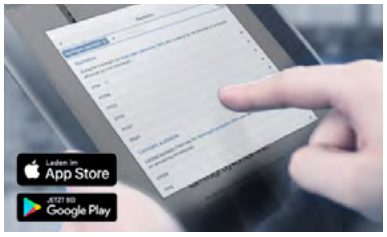
3. Control functions

Symbol	Description
	Single-acting, single-rod cylinder, return stroke by spring force, spring chamber with connection
	Double-acting, single-rod cylinder

DTS 1000010837 EN Version: - Status: RL (released | freigegeben | valide) printed: 28.10.2026

4. Materials

4.1. Bürkert resistApp



Bürkert resistApp – Chemical resistance chart

You want to ensure the reliability and durability of the materials in your individual application case? Verify your combination of media and materials on our website or in our resistApp.

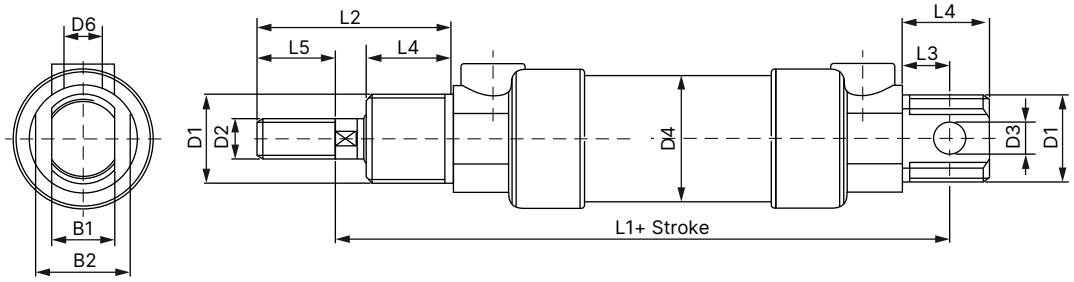
Start chemical resistance check

5. Dimensions

5.1. DN 12...25

Note:

- Dimensions in mm
- Cylinder with piston diameter 12...25 according to ISO 6432 (CETOP) Rp 52 P



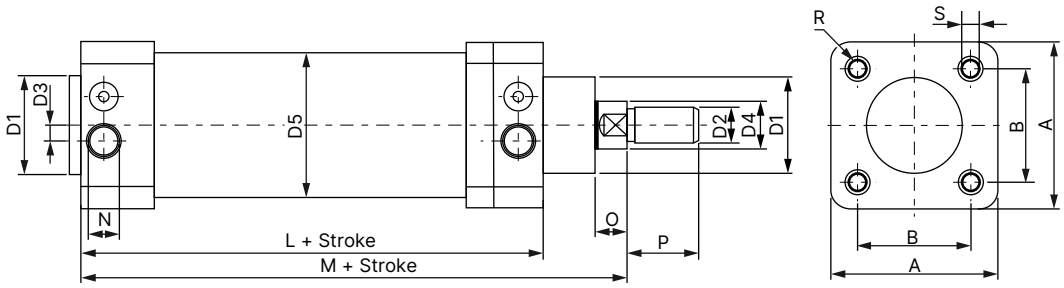
Piston diameter [mm]	D1	D2	D3	D4	D6	L1	L2	L3	L4	L5	B1	B2
12	M16 × 1.5	M6	6	18	M5	75	38	9	17	15	12	17
16	M16 × 1.5	M6	6	22	M5	82	38	9	17	15	12	17
20	M22 × 1.5	M8	8	26	G ⅛	95	44	12	20	18	16	22
25	M22 × 1.5	M10 × 1.25	8	31	G ⅛	104	50	12	22	20	16	24

DTS 1000010837 EN Version: - Status: RL (released | freigegeben | valide) printed: 28.10.2026

5.2. DN 32...50

Note:

- Dimensions in mm
- Cylinder with piston diameter 32...50 mm according to ISO 6431



Piston diameter [mm]	D1	D2	D3	D4	D5	L	M	N	O	P	A	B	R	S
32	30	M10 × 1.25	4.5	12	40	94	120	G ⅛	9	22	47	32.5	5.5	M5
40	34	M12 × 1.25	6	16	48	105	135	G ¼	11	24	57	38	6.5	M6
50	40	M16 × 1.5	6	20	58	106	143	G ¼	13	32	68	46.5	9	M8

6. Performance specifications

6.1. Force chart

Type 0045, single-acting, without end position cushioning (according to ISO 6432)

Piston diameter	Extension force at operating pressure					Minimum retraction force 1.)	
	2 bar	4 bar	6 bar	8 bar	10 bar	Stroke 25 mm	Stroke 50 mm
[mm]	[N]	[N]	[N]	[N]	[N]	[N]	[N]
12	7	24.5	46.5	69.5	92.5	8.5	6.5
16	13	53	93	133	173	10	7
20	24	87	150	213	276	13.5	10
25	43	141	239	337	435	18	15

1.) Tensile force at retracted piston rod

Type 0044, double-acting, without end position cushioning (according to ISO 6432)

Piston diameter	Extension force at operating pressure					Minimum retraction force in % of extension force
	2 bar	4 bar	6 bar	8 bar	10 bar	
[mm]	[N]	[N]	[N]	[N]	[N]	[%]
12	16	39	61	84	107	75
16	30	70	110	150	190	85
20	46	109	172	235	298	84
25	73	171	269	367	465	84

Type 0044, double-acting, with end position cushioning (according to ISO 15552)

Piston diameter	Extension force at operating pressure					Minimum retraction force in % of extension force
	2 bar	4 bar	6 bar	8 bar	10 bar	
[mm]	[N]	[N]	[N]	[N]	[N]	[%]
32	145	290	430	580	729	86
40	230	450	680	900	1130	84
50	350	710	1060	1410	1770	84

DTS 1000010837 EN Version: - Status: RL (released | freigegeben | valide) printed: 28.10.2026

7. Ordering information

7.1. Bürkert eShop

Bürkert eShop – Easy ordering and quick delivery

You want to find your desired Bürkert product or spare part quickly and order directly? Our online shop is available for you 24/7. Sign up and enjoy all the benefits.

Order online now

7.2. Bürkert product filter

Bürkert product filter – Get quickly to the right product

You want to select products comfortably based on your technical requirements?
Use the Bürkert product filter and find suitable articles for your application quickly and easily.

Try out our product filter

7.3. Ordering chart cylinders

Type 0045 single-acting, without end position cushioning (according to ISO 6432)

Note:
Further variants on request

Piston diameter [mm]	Stroke [mm]	Article no. PA6 variant	Article no. PA12 FDA variant
12	25	074440	773171
	50	074805	773172
16	25	074868	773173
	50	074642	773174
20	25	074265	773175
	50	074181	773176
25	25	074580	773177
	50	074287	773178

Type 0044 double-acting, without end position cushioning (according to ISO 6432)

Note:
Further variants on request

Piston diameter [mm]	Stroke [mm]	Article no. PA6 variant	Article no. PA12 FDA variant
12	25	073049	773179
	50	073211	773180
	80	072820	773181
	100	074130	773182
16	25	073204	773183
	50	072876	773184
	80	072835	773185
	100	073084	773186

DTS 1000010837 EN Version: - Status: RL (released | freigegeben | valide) printed: 28.10.2026

Piston diameter [mm]	Stroke [mm]	Article no. PA6 variant	Article no. PA12 FDA variant
20	25	072833	773187
	50	072787	773188
	80	072905	773189
	100	072808	773190
25	25	072832	773191
	50	072829	773192
	80	072803	773193
	100	072854	773194

Type 0044 double-acting, with end position cushioning (according to ISO 15552)

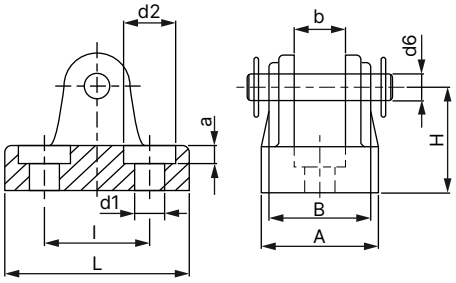
Note:
Further variants on request

Piston diameter [mm]	Stroke [mm]	Article no. PA6 variant	Article no. PA12 FDA variant
32	50	075748	773195
	100	075219	773196
	150	075756	773197
	200	075220	773198
	300	075221	773199
40	50	075758	773200
	100	075222	773201
	150	075976	773202
	200	075759	773203
	300	076228	773204
50	50	075483	773205
	100	075225	773206
	150	075382	773207
	200	075226	773208
	300	773210	773209

7.4. Ordering chart accessories

Bearing support

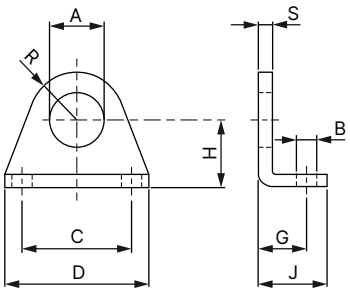
Note:
For cylinder DN 12...25, ISO 6432

Dimensions	Piston Ø	L	A	H	B	b	l	a	d1	d2	d6	Article no. plastic variant
	12/16	32	24	24	22	12	20	4	5.4	10	6	192373
	20/25	42	32	28	30.5	16	24	5	6.4	11	8	192374

DTS 1000010837 EN Version: - Status: RL (released | freigegeben | valide) printed: 28.10.2026

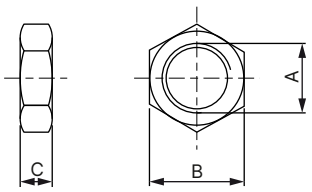
Foot fastener

Note:
Consists of an angle bracket and 2 fastening screws

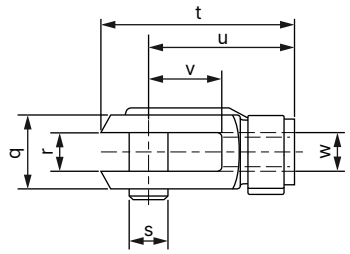
Dimensions	Piston Ø	A	B	C	D	G	H	J	R	S	Article no. steel variant	Article no. stainless steel
	12/16	16	5.5	32	40	14	20	20	13.4	4	780754	192380
	20/25	22	6.6	40	54	17	25	25	18	5	780755	192381

Mounting and piston rod nut set

Note:
Each consists of a fastening nut and a piston rod nut

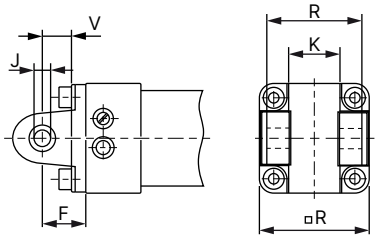
Dimensions	Piston Ø	Fastening nut			Piston rod nut			Article no. steel variant	Article no. stainless steel variant
		A	B	C	A	B	C		
	12/16	M16 × 1.5	22	5	M6	10	3	780766	192385
	20	M22 × 1.5	27	8	M8 × 1.25	13	4	780768	192386
	25	M22 × 1.5	27	8	M10 × 1.25	17	6	780769	192387

Fork head according to DIN 71 752

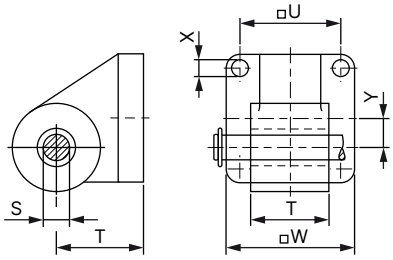
Dimensions	Piston Ø	q	r	s	t	u	v	w	Article no. steel variant	Article no. stainless steel variant
	12/16	12	6	6	31	24	12	M6	192360	192361
	20	16	8	8	42	32	16	M8	192360	192363
	25/32	20	10	10	52	40	20	M10 × 1.25	192364	192365
	40	24	12	12	62	48	24	M12 × 1.25	192366	192367
	50	32	16	16	83	64	32	M16 × 1.5	192368	192369

DTS 1000010837 EN Version: - Status: RL (released | freigegeben | valide) printed: 28.10.2026

Fork fastener

Dimensions	Piston Ø	F	J	K	R	V	W	Article no. cast aluminium variant
	32	22	10	26	45	15	46	192370
	40	25	12	28	52	17	56	192371
	50	27	12	32	60	17	66	192372

End support for fork fastener

Dimensions	Piston Ø	S H1	T± 0.2	U± 0.15	V± 0.1	W	XH13	Y	Article no. cast aluminium variant
	32	10	30	32.5	25.8	45	5.5	11	192375
	40	12	36	38	27.8	56	6.6	14	192376
	50	12	45	46.5	31.8	66	9	18	192377

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