

Series ICS and ICL Pneumatic Cylinders

Corrosion resistant stainless steel and aluminum cylinders



Series ICS and ICL cylinders

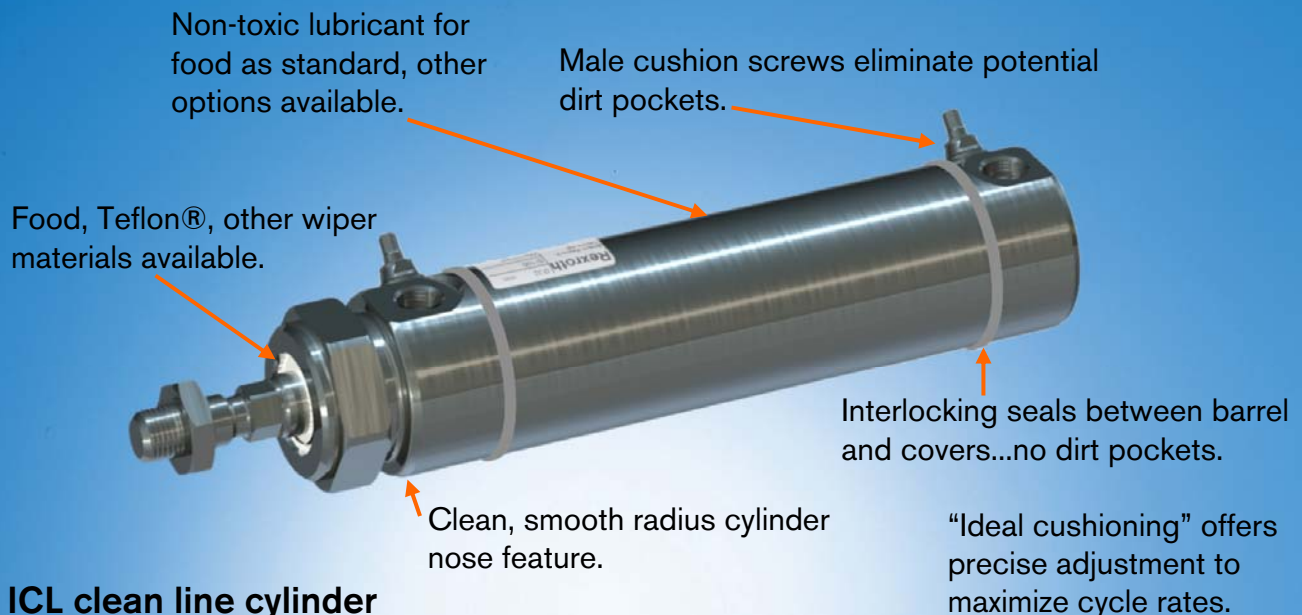
New generation of stainless steel and “clean line” cylinders.

Rexroth
Bosch Group

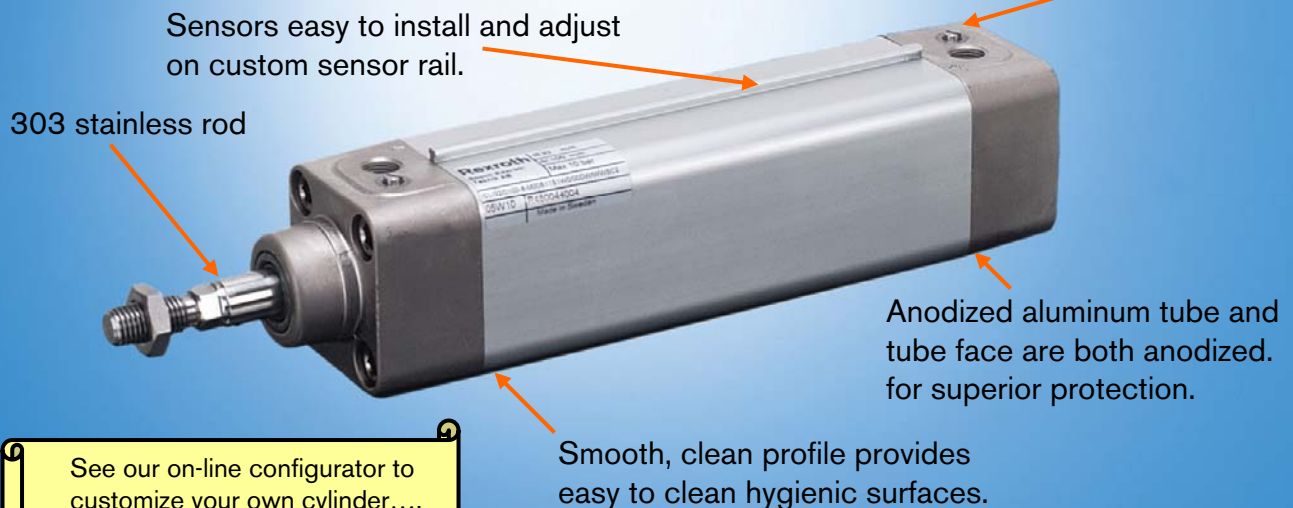
Series ICS from Bosch Rexroth – The new ICS pneumatic cylinders for wash-down applications are hygienically designed with smooth surfaces and no open cavities for easy cleanup. The ICS is offered in both 316 and 304 stainless steel.

Series ICL from Bosch Rexroth – The new ICL pneumatic cylinders meet ISO/VDMA standards. Based on a clean design to minimize potential pocket areas. The ICL features the “ideal cushioning” design and can be used in lighter wash-down applications.

ICS stainless steel cylinders: D1 series –316 stainless and D2 series –304



ICL clean line cylinder



See our on-line configurator to customize your own cylinder....
www.boschrexroth-us.com

Corrosion resistant mounts and accessories available for both ICS and ICL

- Both ICS and ICL meet ISO / VDMA standards...available in both metric and inch versions.
- Both ICS and ICL feature the Bosch “Ideal Cushioning” system maximizing production. See your local Bosch Rexroth representative for more details on this unique cushioning solution.

Series ICS-D1 (316 Stainless Steel) Metric and Inch



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Series ICS-D2 (304 Stainless Steel) Metric and Inch



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Series ICL (Anodized Aluminum) Metric and Inch



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Round cylinders, Series ICS-D1 in acid-proof steel



Double-acting with magnetic piston and adjustable cushioning,
32–100 mm Ø

Rexroth
Bosch Group



Technical Data

Standard	Complies with ISO 6431, appropriate parts	
Working pressure, max	10 bar (145 psi)	
Ambient temperature range	-25 °C to +70 °C (-13 °F to +158 °F)	
Medium	Compressed air	ISO 8573-1:2001, class 6-4-3 or lower*
Materials	Piston rod	Acid-proof steel, BS 316 S 31, AISI 316, hard chromium plated/unplated
	Piston rod bearing	Steel with PVDF+PTFE plain bearing
	Cylinder barrel	Acid-proof steel, BS 316 S 31, AISI 316
	End covers	Acid-proof steel, BS 316 S 31, AISI 316
	Cushioning screws	Acid-proof steel, BS 316 S 31, AISI 316
	Nut	Acid-proof steel, BS 316 S 31, AISI 316
	Wiper	Polyester (PEE)/Polyethylene HD/Teflon (PTFE)
	Piston	Polyamide (Ø 32–63 mm) Aluminium (Ø 80–100 mm)
	Piston rod seal	Nitrile rubber (NBR)
	Other seals	Nitrile rubber (NBR)/Polyurethane and Teflon (PTFE)



Application Areas

Specifically designed for industries with very high demands on hygiene and corrosion resistance, like food and pharmaceuticals.
Also suitable for pulp and paper, chemical and petrochemical industries.

* Particle size ≤ 5 µm, dew point ≤ 3 °C, oil content ≤ 1 mg/m³

Technical information

Piston Ø		[mm]	32	40	50	63	80	100
Theoretical piston force	push stroke	[N]	483	754	1178	1870	3016	4712
		(lbf)	(109)	(170)	(265)	(420)	(678)	(1060)
at 6 bar (87 psi)	pull stroke	[N]	415	633	990	1682	2721	4418
		(lbf)	(93.3)	(142)	(223)	(378)	(612)	(993)
Cushioning length		[mm]	11,5	14	17	16	19	22
Cushioning energy		[Nm]	4,8	9	15	27	54	88
		(in.lbs)	(42.48)	(79.66)	(132.76)	(238.97)	(477.94)	(788.86)
Cylinder weight	0 mm stroke	[kg]	0,6	1,2	1,7	3,0	4,0	7,7
		(lbs)	(1.32)	(2.65)	(3.75)	(6.61)	(8.82)	(17)
	add. per 100 mm	[kg]	0,25	0,36	0,5	0,65	1,0	1,35
	add. per 4"	(lbs)	(0.55)	(0.79)	(1.1)	(1.43)	(2.65)	(2.87)

Part no.

	Piston Ø	32 - 100
	Stroke	
	Rec. max. stroke: 15x Ø. Longer strokes available on request.	For ordering, see our Internet configurator or contact the nearest Bosch Rexroth office.

Accessories (to be ordered separately)

Symbol	Type	32	40	50	63
	Piston Ø				
	Basic seal kit*	R404052668	R404052669	R404052670	R404052671
	Piston rod seal kit**	R404052674	R404052675	R404052676	R404052677
	Piston Ø				
	Basic seal kit*	R404052672	R404052673		
	Piston rod seal kit**	R404052678	R404052679		

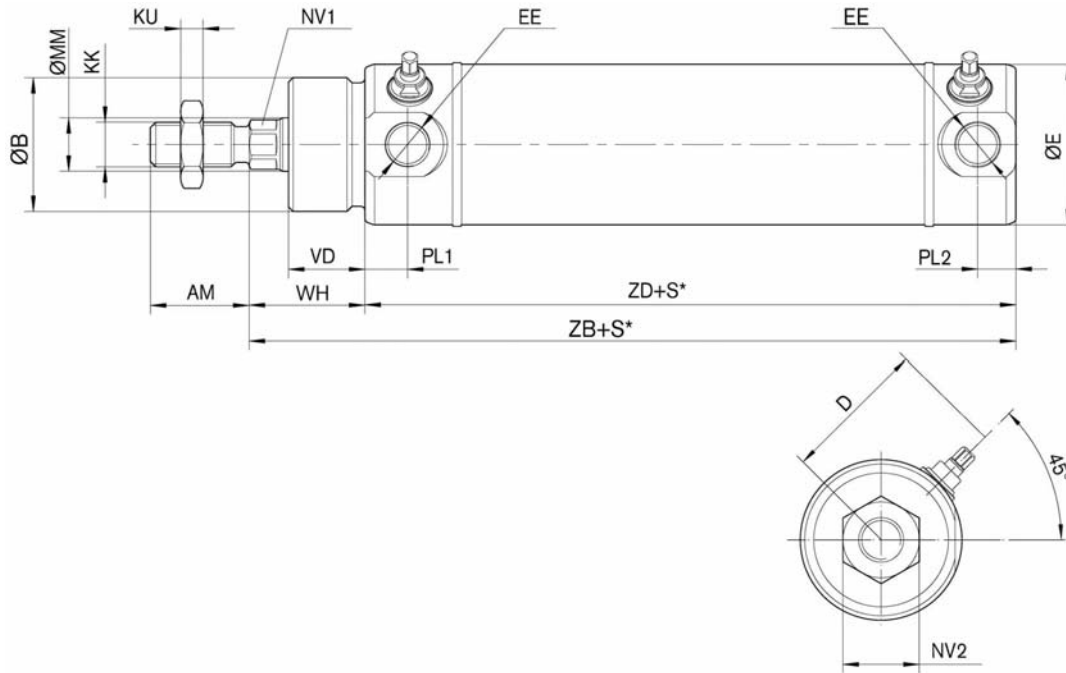
* Basic seal kit consists of seals for one cylinder including PEE and Polyethylene wipers. Piston rod seals in nitrile.

** Piston rod seal kit includes both PEE and Polyethylene wipers. Piston rod seals in both nitrile and viton are included.

Round cylinders, Series ICS-D1 in acid-proof steel

Double-acting with magnetic piston and adjustable cushioning,
32–100 mm Ø

Rexroth
Bosch Group



S* = Stroke
The cylinder is supplied with a nut in accordance with ISO 4035; DIN 439.

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Piston Ø	AM	B e 11	D	E	EE (metric)	EE (inch)	KK (metric)	KK (inch)	KU	MM g 8	NV1
32	22	30	34	36	G 1/8	1/8" NPTF	M 10 x 1,25	3/8-24	5	12	10
40	24	35	38	44	G 1/4	1/4" NPTF	M 12 x 1,25	1/2-20	6	16	13
50	32	40	50	54	G 1/4	1/4" NPTF	M 16 x 1,5	5/8-18	8	20	17
63	32	45	57	68	G 3/8	3/8" NPTF	M 16 x 1,5	5/8-18	8	20	17
80	40	55	70,5	86	G 3/8	3/8" NPTF	M 20 x 1,5	3/4-16	10	25	22
100	40	65	80,5	106	G 1/2	1/2" NPTF	M 20 x 1,5	3/4-16	10	25	22

Piston Ø	NV2	PL1	PL2	VD	WH	ZB	ZD
32	17	9,5	8,5	17	26	121	95
40	18	11	11	25	35	143	108
50	24	12	12	25	35	150	115
63	24	14	13,5	30	40	165	125
80	30	14	14	30	42	184	142
100	30	20	19	30	42	198	156

Round cylinders, Series ICS-D1 in acid-proof steel



Double-acting for high temperatures <120° C (<248° F), adjustable cushioning
32–100 mm Ø

Rexroth
Bosch Group



Technical Data

Standard	Complies with ISO 6431, appropriate parts	
Working pressure, max	10 bar (145 psi)	
Ambient temperature range	-25 °C to +120 °C (-13 °F to +248 °F)	
Medium	Compressed air	ISO 8573-1:2001, class 6-4-3 or lower*
Materials	Piston rod	Acid-proof steel, BS 316 S 31, AISI 316 hard chromium plated/unplated
	Piston rod bearing	Steel with PVDF+PTFE plain bearing
	Cylinder barrel	Acid-proof steel, BS 316 S 31, AISI 316
	End covers	Acid-proof steel, BS 316 S 31, AISI 316
	Cushioning screws	Acid-proof steel, BS 316 S 31, AISI 316
	Nut	Acid-proof steel, BS 316 S 31, AISI 316
	Wiper	Teflon (PTFE)
	Piston	Aluminum
	Piston rod seal	FPM-rubber (Viton)
	Other seals	FPM-rubber (Viton) and Teflon (PTFE)



Application Areas

Specifically designed for industries with very high demands on hygiene and corrosion resistance, like food and pharmaceuticals.
Also suitable for pulp and paper, chemical and petrochemical industries.

* Particle size ≤ 5 µm, dew point ≤ 3 °C, oil content ≤ 1 mg/m³

Technical information

Piston Ø	[mm]	32	40	50	63	80	100
Theoretical piston force at 6 bar (87 psi)	push stroke [N]	483	754	1178	1870	3016	4712
	pull stroke [N] (lbf)	415 (93.3)	633 (142)	990 (223)	1682 (378)	2721 (612)	4418 (993)
Cushioning length	[mm]	11,5	14	17	16	19	22
Cushioning energy	[Nm]	4,8	9	15	27	54	88
	(in.lbs)	(42.48)	(79.66)	(132.76)	(238.97)	(477.94)	(788.86)
Cylinder weight	0 mm stroke [kg] (lbs)	0,6 (1.32)	1,2 (2.65)	1,7 (3.75)	3,0 (6.61)	4,0 (8.82)	7,7 (17)
	add. per 100 mm [kg]	0,25	0,36	0,5	0,65	1,2	1,3
	add. per 4" (lbs)	(0.55)	(0.79)	(1.1)	(1.43)	(2.65)	(2.87)

Part no.

	Piston Ø Stroke	32 - 100
	Rec. max. stroke: 15x Ø. Longer strokes available on request.	For ordering, see our Internet configurator or contact the nearest Bosch Rexroth office.

Accessories (to be ordered separately)

Symbol	Type	32	40	50	63
	Piston Ø				
	Basic seal kit*	R404052680	R404052681	R404052682	R404052683
	Piston rod seal kit**	R404052686	R404052687	R404052688	R404052689
	Piston Ø	80	100		
Basic seal kit*	R404052684	R404052685			
Piston rod seal kit**	R404052690	R404052691			

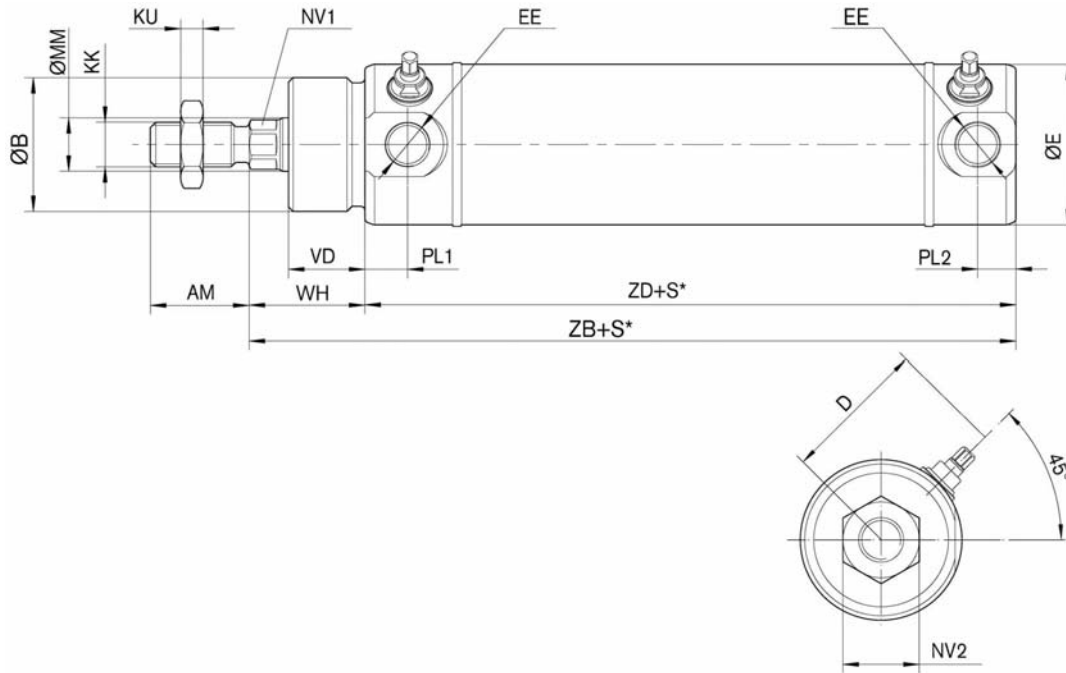
* Basic seal kit consists of seals for one cylinder including PTFE wiper and viton piston rod seal.

** Piston rod seal kit with PTFE wiper and piston rod seals in both viton and nitrile.

Round cylinders, Series ICS-D1 in acid-proof steel

Double-acting for high temperatures <120° C (<248° F), adjustable cushioning
32–100 mm Ø

Rexroth
Bosch Group



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S* = Stroke, tolerance 32–50 mm dia. = +2/-0, 63–100 mm dia. = +2,5/-0.
The cylinder is supplied with a nut in accordance with ISO 4035; DIN 439.

Piston Ø	AM	B e 11	D	E	EE (metric)	EE (inch)	KK (metric)	KK (inch)	KU	MM g 8	NV1
32	22	30	34	36	G 1/8	1/8" NPTF	M 10 x 1,25	3/8-24	5	12	10
40	24	35	38	44	G 1/4	1/4" NPTF	M 12 x 1,25	1/2-20	6	16	13
50	32	40	50	54	G 1/4	1/4" NPTF	M 16 x 1,5	5/8-18	8	20	17
63	32	45	57	68	G 3/8	3/8" NPTF	M 16 x 1,5	5/8-18	8	20	17
80	40	55	70,5	86	G 3/8	3/8" NPTF	M 20 x 1,5	3/4-16	10	25	22
100	40	65	80,5	106	G 1/2	1/2" NPTF	M 20 x 1,5	3/4-16	10	25	22

Piston Ø	NV2	PL1	PL2	VD	WH	ZB	ZD
32	17	9,5	8,5	17	26	121	95
40	18	11	11	25	35	143	108
50	24	12	12	25	35	150	115
63	24	14	13,5	30	40	165	125
80	30	14	14	30	42	184	142
100	30	20	19	30	42	198	156

Round cylinders, Series ICS-D1 in acid-proof steel



Double-acting, through piston rod with magnetic piston and adjustable cushioning, 32–100 mm Ø

Rexroth
Bosch Group



Technical Data

Standard	Complies with ISO 6431, appropriate parts	
Working pressure, max	10 bar (145 psi)	
Ambient temperature range	-25 °C to +70 °C (-13 °F to +158 °F)	
Medium	Compressed air	ISO 8573-1:2001, class 6-4-3 or lower*
Materials	Piston rod	Acid-proof steel, BS 316 S 31, AISI 316 hard chromium plated/unplated
	Piston rod bearing	Steel with PVDF+PTFE plain bearing
	Cylinder barrel	Acid-proof steel, BS 316 S 31, AISI 316
	End covers	Acid-proof steel, BS 316 S 31, AISI 316
	Cushioning screws	Acid-proof steel, BS 316 S 31, AISI 316
	Nut	Acid-proof steel, BS 316 S 31, AISI 316
	Piston	Polyamide (Ø 32–63 mm) Aluminum (Ø 80–100 mm)
	Wiper	Polyester (PEE)/Polyethylene HD/Teflon (PTFE)
	Piston rod seal	Nitrile rubber (NBR)
	Other seals	Nitrile rubber (NBR)/Polyurethane and Teflon (PTFE)



Application Areas

Specifically designed for industries with very high demands on hygiene and corrosion resistance, like food and pharmaceuticals.
Also suitable for pulp and paper, chemical and petrochemical industries.

* Particle size ≤ 5 µm, dew point ≤ 3 °C, oil content ≤ 1 mg/m³

Technical information

Piston Ø	[mm]	32	40	50	63	80	100
Theoretical piston force at 6 bar (87 psi)	[N]	415	633	990	1682	2721	4418
	(lbf)	(93.3)	(142)	(223)	(378)	(612)	(993)
Cushioning length	[mm]	11,5	14	17	16	19	22
Cushioning energy	[Nm]	4,8	9	15	27	54	88
	(in.lbs)	(42.48)	(79.66)	(132.76)	(238.97)	(477.94)	(788.86)
Cylinder weight	0 mm stroke	[kg]	0,7	1,4	2	3,5	4,7
		(lbs)	(1.54)	(3.09)	(4.41)	(7.72)	(10.4)
	add. per 100 mm	[kg]	0,38	0,6	0,75	1	1,4
	add. per 4"	(lbs)	(0.84)	(1.32)	(1.65)	(2.2)	(3.09)

Part no.

	Piston Ø	32 - 100
	Stroke	
	Rec. max. stroke: 15x Ø. Longer strokes available on request.	For ordering, see our Internet configurator or contact the nearest Bosch Rexroth office.

Accessories (to be ordered separately)

Symbol	Type	32	40	50	63
	Piston Ø				
	Basic seal kit*	R404052668	R404052669	R404052670	R404052671
	Piston rod seal kit**	R404052674	R404052675	R404052676	R404052677
	Piston Ø				
	Basic seal kit*	R404052672	R404052673		
	Piston rod seal kit**	R404052678	R404052679		

To get all seals for one cylinder, order one basic seal kit and one piston rod seal kit.

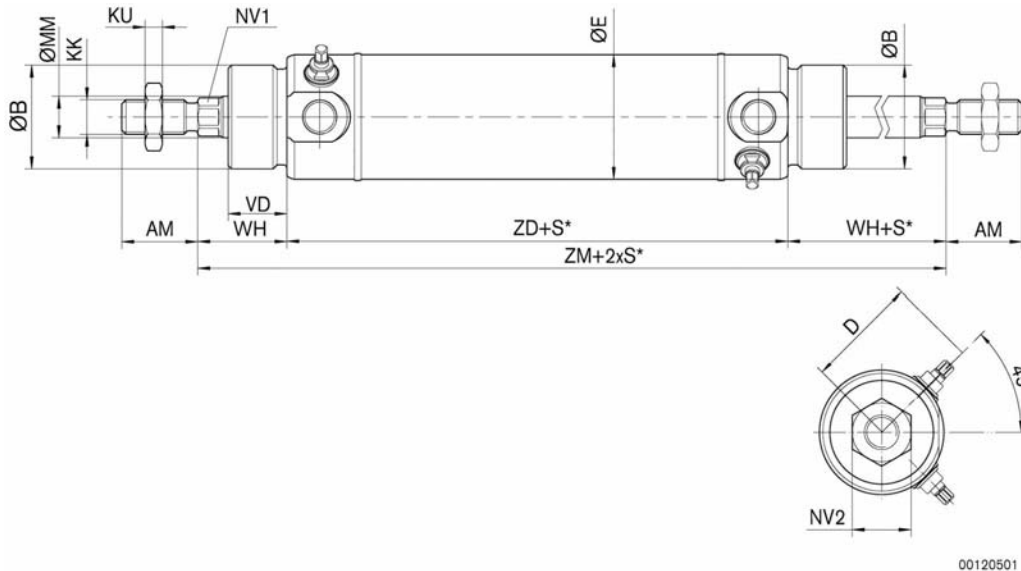
* Basic seal kit consists of seals for one cylinder including PEE and Polyethylene wipers. Piston rod seals in nitrile.

** Piston rod seal kit includes both PEE and Polyethylene wipers, piston rod seals in both nitrile and viton, (for one end cover).

Round cylinders, Series ICS-D1 in acid-proof steel

Double-acting, through piston rod with magnetic piston and adjustable cushioning, 32–100 mm Ø

Rexroth
Bosch Group



00120501

S* = Stroke, tolerance 32–50 mm dia. = +2/-0, 63–100 mm dia. = +2,5/-0.
The cylinder is supplied with a nut in accordance with ISO 4035; DIN 439.
For other dimensions, see basic version.

Piston Ø	AM	B e 11	D	E	KK (metric)	KK (inch)	KU	MM g 8	NV1	NV2	VD	WH	ZD	ZM
32	22	30	34	36	M 10 x 1,25	3/8-24	5	12	10	17	17	26	95	148
40	24	35	38	44	M 12 x 1,25	1/2-20	6	16	13	18	25	35	108	179
50	32	40	50	54	M 16 x 1,5	5/8-18	8	20	17	24	25	35	115	186
63	32	45	57	68	M 16 x 1,5	5/8-18	8	20	17	24	30	40	125	206
80	40	55	70,5	86	M 20 x 1,5	3/4-16	10	25	22	30	30	42	142	227
100	40	65	80,5	106	M 20 x 1,5	3/4-16	10	25	22	30	30	42	156	241

Round cylinders, Series ICS-D1 in acid-proof steel



Double-acting, through piston rod for high temperatures <120° C (<248° F), adjustable cushioning, 32–100 mm Ø

Rexroth
Bosch Group

Technical Data

Standard	Complies with ISO 6431, appropriate parts	
Working pressure, max	10 bar (145 psi)	
Ambient temperature range	-25 °C to +120 °C (-13 °F to +248 °F)	
Medium	Compressed air	ISO 8573-1:2001, class 6-4-3 or lower*
Materials	Piston rod	Acid-proof steel, BS 316 S 31, AISI 316 hard chromium plated/unplated
	Piston rod bearing	Steel with PVDF+PTFE plain bearing
	Cylinder barrel	Acid-proof steel, BS 316 S 31, AISI 316
	End covers	Acid-proof steel, BS 316 S 31, AISI 316
	Cushioning screws	Acid-proof steel, BS 316 S 31, AISI 316
	Nut	Acid-proof steel, BS 316 S 31, AISI 316
	Wiper	Teflon (PTFE)
	Piston	Aluminum
	Piston rod seal	FPM-rubber (Viton)
	Other seals	FPM-rubber (Viton) and Teflon (PTFE)



Application Areas

Specifically designed for industries with very high demands on hygiene and corrosion resistance, like food and pharmaceuticals. Also suitable for pulp and paper, chemical and petrochemical industries.

* Particle size ≤ 5 µm, dew point ≤ 3 °C, oil content ≤ 1 mg/m³

Technical information

Piston Ø	[mm]	32	40	50	63	80	100	
Theoretical piston force at 6 bar (87 psi)	[N]	415	633	990	1682	2721	4418	
	(lbf)	(93.3)	(142)	(223)	(378)	(612)	(993)	
Cushioning length	[mm]	11,5	14	17	16	19	22	
Cushioning energy	[Nm]	4,8	9	15	27	54	88	
	(in.lbs)	(42.48)	(79.66)	(132.76)	(238.97)	(477.94)	(788.86)	
Cylinder weight	0 mm stroke	[kg]	0,7	1,4	2	3,5	4,7	9
		(lbs)	(1.54)	(3.09)	(4.41)	(7.72)	(10.4)	(19.8)
	add. per 100 mm	[kg]	0,38	0,6	0,75	1	1,4	1,7
		(lbs)	(0.84)	(1.32)	(1.65)	(2.2)	(3.09)	(3.75)

Part no.

	Piston Ø	32 - 100
	Stroke Rec. max. stroke: 15x Ø. Longer strokes available on request.	For ordering, see our Internet configurator or contact the nearest Bosch Rexroth office.

Accessories (to be ordered separately)

Symbol	Type	32	40	50	63
	Piston Ø				
	Basic seal kit*	R404052680	R404052681	R404052682	R404052683
	Piston rod seal kit**	R404052686	R404052687	R404052688	R404052689
	Piston Ø	80	100		
	Basic seal kit*	R404052684	R404052685		
	Piston rod seal kit**	R404052690	R404052691		

To get all seals for one cylinder, order one basic seal kit and one piston rod seal kit.

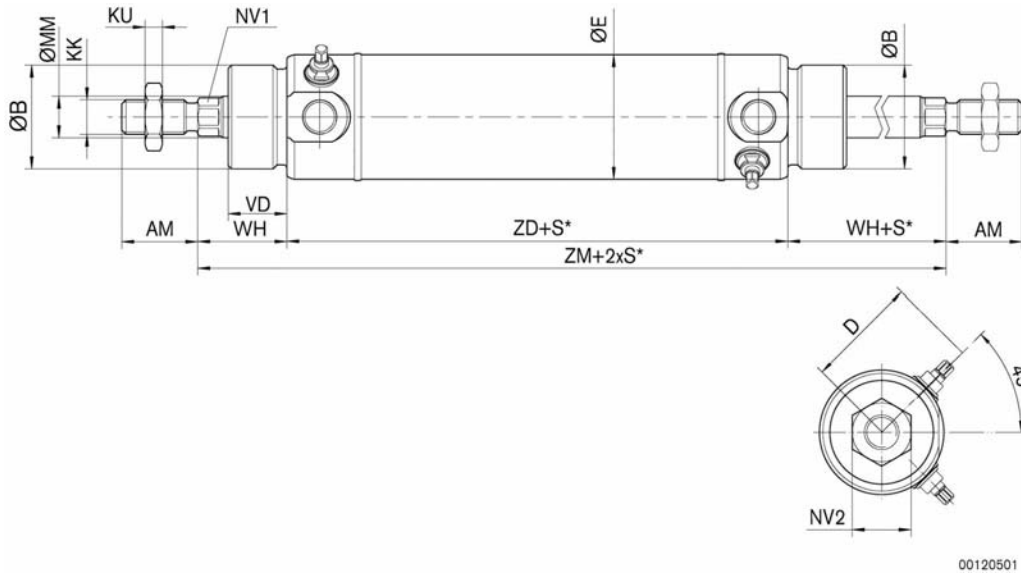
* Basic seal kit consists of seals for one cylinder including PTFE wiper and viton piston rod seal.

** Piston rod seal kit includes PTFE wiper and piston rod seal in both nitrile and viton, (for one end cover).

Round cylinders, Series ICS-D1 in acid-proof steel

Double-acting, through piston rod for high temperatures <math><120^{\circ}\text{C}</math> (<math><248^{\circ}\text{F}</math>), adjustable cushioning, 32–100 mm \varnothing

Rexroth
Bosch Group



00120501

S* = Stroke, tolerance 32–50 mm dia. = +2/-0, 63–100 mm dia. = +2,5/-0.
The cylinder is supplied with a nut in accordance with ISO 4035; DIN 439.
For other dimensions, see basic version.

Piston \varnothing	AM	B e 11	D	E	KK (metric)	KK (inch)	KU	MM g 8	NV1	NV2	VD	WH	ZD	ZM
32	22	30	34	36	M 10 x 1,25	3/8-24	5	12	10	17	17	26	95	148
40	24	35	38	44	M 12 x 1,25	1/2-20	6	16	13	18	25	35	108	179
50	32	40	50	54	M 16 x 1,5	5/8-18	8	20	17	24	25	35	115	186
63	32	45	57	68	M 16 x 1,5	5/8-18	8	20	17	24	30	40	125	206
80	40	55	70,5	86	M 20 x 1,5	3/4-16	10	25	22	30	30	42	142	227
100	40	65	80,5	106	M 20 x 1,5	3/4-16	10	25	22	30	30	42	156	241

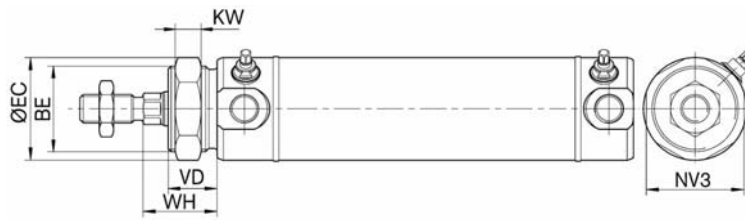
Round cylinders, Series ICS-D1 in acid-proof steel

Mountings and accessories

Rexroth
Bosch Group

★ Threaded neck with nut

MR 3



00120496

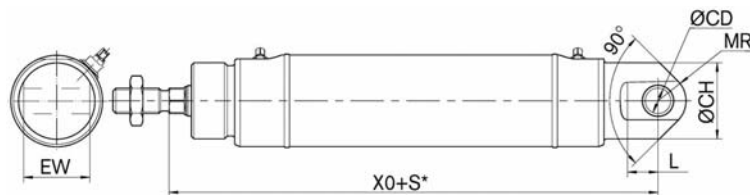


Piston Ø	EC	BE	VD	KW	NV3	WH
32	36	M 30 x 1,5	17	10	34	26
40	45	M 35 x 1,5	25	10	42	35
50	52	M40x1,5	25	10	48	35
63	58	M 45 x 1,5	30	12	54	40
80	80	M 55 x 1,5	30	13	72	42
100	90	M65x1,5	30	15	85	42

Material: Acid-proof steel, BS 316 S 31, AISI 316.

★ Rear end cover bushing (ISO 6431)

MP 4



00120498



S* = Stroke

Piston Ø	CD H 10	EW	L min.	MR	XO	CH
32	10	26	12	11	142 ±1,3	30
40	12	28	15	13	160 ±1,3	33
50	12	32	15	13	170 ±1,3	36
63	16	40	20	17	190 ±1,6	45
80	16	50	20	17	210 ±1,6	54
100	20	60	25	21	230 ±1,6	66

Material: Acid-proof steel, BS 316 S 31, AISI 316. Bushing in reinforced thermoplastic.

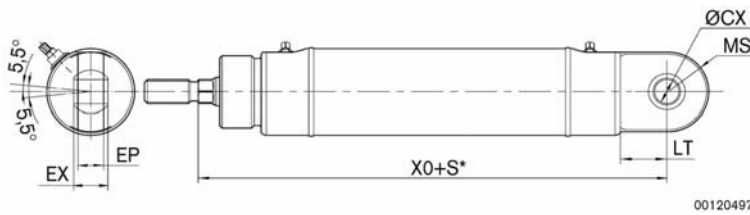
Round cylinders, Series ICS-D1 in acid-proof steel

Mountings and accessories

Rexroth
Bosch Group

★ Rear eye with spherical bearing

MP 5



00120497



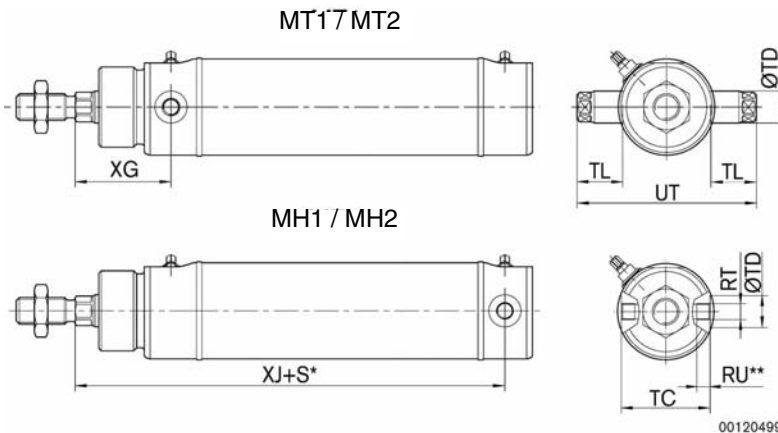
S* = Stroke

Piston Ø	CX H 7	EP	EX	LT	MS	XO
32	10	10,5	14	19	16,5	142 ±1,3
40	12	12	16	17	21	160 ±1,3
50	12	12	16	19,5	24,5	170 ±1,3
63	16	15	21	24	30	190 ±1,6
80	16	15	21	28	30	210 ±1,6
100	20	18	25	30	35	230 ±1,6

Material: Acid-proof steel, BS 316 S 31, AISI 316.

★ Trunnion mounting or threaded holes in front or rear end covers

MT1, MT2, MH1, MH2



00120499



S* = Stroke

Piston Ø	TC	TD h 9	TL	UT	XG	XJ	RT	RU min.
32	33	12	17	67	36	110,5	M6x0,5	5
40	40	12	17	74	47,5	129	M6x0,5	6
50	49	16	20	89	49,5	134,5	M8x0,75	7,5
63	61	16	24	109	55,5	149,5	M10x1	12,5
80	78	16	27	132	62	164	M12x1	16
100	100	20	32	164	63	177	M16x1,5	16

Material: Acid-proof steel, BS 316 S 31, AISI 316.

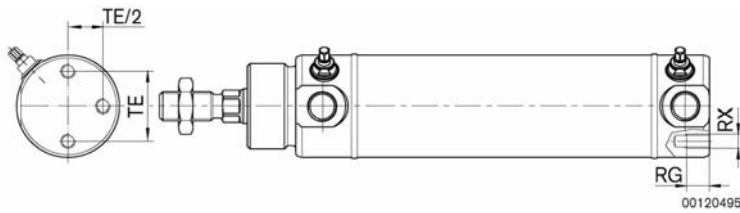
Round cylinders, Series ICS-D1 in acid-proof steel

Mountings and accessories

Rexroth
Bosch Group

★ Rear end cover with threaded holes

MX 6

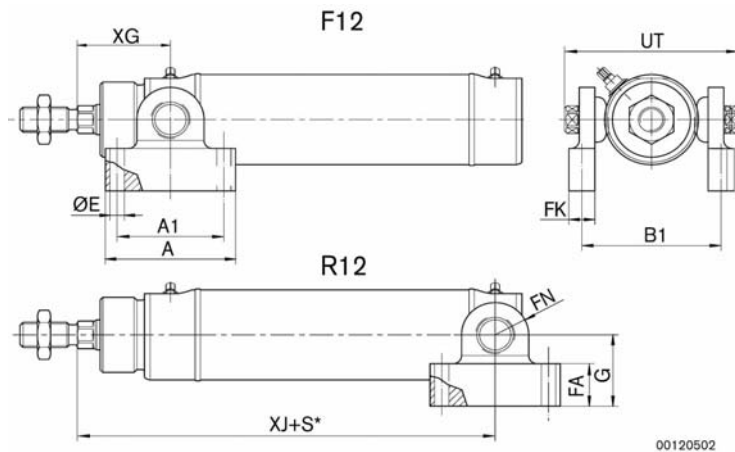


Piston Ø	RG	RX	TE
32	8	M5	24,5
40	10	M6	30
50	13	M6	39
63	12	M8	49
80	12	M8	65
100	16	M 10	85

Material: Acid-proof steel, BS 316 S 31, AISI 316.

★ Bearing blocks for trunnion mountings in front or rear end covers

F 12, R 12



S* = Stroke

Piston Ø	A	A1	B1	E	FA	FK	FN	G	XG	XJ	UT
32	50	41	53,5	5,5	17	10	13	28,5	36	110,5	67
40	55	46	58,5	5,5	17	10	15,5	38	47,5	129	74
50	64	53	71,5	6,5	18,5	12	17,5	38	49,5	134,5	89
63	66	56	89,5	6,5	18,5	12	19	46,5	55,5	149,5	109
80	82	72	106,5	6,5	18,5	12	26	50,5	62	164	132
100	108	88	127	9	22	16	26	65	63	177	164

Material: Acid-proof steel, BS 316 S 31, AISI 316. Plastic bushings, Acetal.

Max temperature 85°C (185°F) continuously. Temporary peaks of 150°C (300°F). Higher temperatures on request.

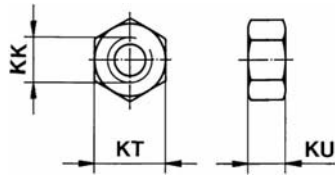
Round cylinders, Series ICS-D1 in acid-proof steel

Accessories - Metric

Rexroth
Bosch Group

▲ ★ Nut. (Can also be ordered separately)

20

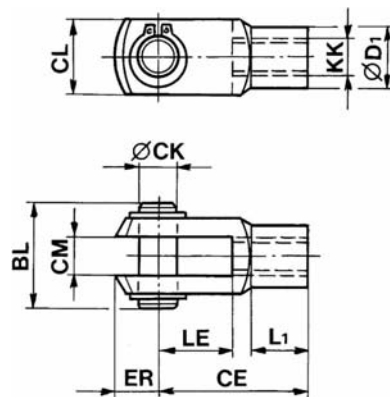


Thread KK	Part number	KT	KU	Weight [kg] (lbs)
M10x1,25	2990600303	17	5	0,01 (0.022)
M12x1,25	2990600304	19	6	0,02 (0.044)
M16x1,5	2990600305	24	8	0,03 (0.066)
M20x1,5	2990600308	30	10	0,05 (0.11)

Material: Acid-proof steel, BS 316 S 31, AISI 316.

▲ ★ Rod clevis. (Can also be ordered separately)

P 2



Thread KK	Part number	BL	CE	CK e 8	CL	CM B 12	D1	ER	L1	LE	Weight [kg] (lbs)
M10x1,25	2990600503	26	40	10	20	10	18	12	15	20	0,1 (0,22)
M12x1,25	2990600504	31	48	12	24	12	20	14	18	24	0,2 (0.22)
M16x1,5	2990600505	39	64	16	32	16	26	19	24	32	0,4 (0.88)
M20x1,5	2990600508	49	80	20	40	20	34	20	30	40	0,7 (1.54)

Material: Acid-proof steel, BS 316 S 31, AISI 316.

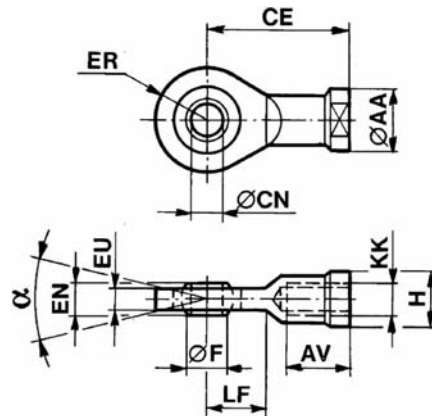
Round cylinders, Series ICS-D1 in acid-proof steel

Accessories - Metric

Rexroth
Bosch Group

▲ ★ **Ball eye rod end. (Can also be ordered separately)**

P 4



Thread KK	Part number	F	H	AA max.	AV	CE	CN H 7	EN 0/-0,1	EU	ER max.	LF min.	α°	Weight [kg] (lbs)
M10x1,25	2990690903	13,0	17	19	20	43	10	14	10,5	14	14	14	0,08 (0.176)
M12x1,25	2990690904	15,5	19	22	22	50	12	16	12	16	16	14	0,12 (0.265)
M16x1,5	2990690905	19,5	22	27	28	64	16	21	15	21	21	16	0,23 (0.507)
M20x1,5	2990690908	24,5	32	34	33	77	20	25	18	25	25	16	0,42 (0.926)

Material: Acid-proof steel, BS 316 S 31, AISI 316.

▲ ★ **Bearing blocks with plastic bushings. (Can also be ordered separately)**

Piston Ø	Part number	Weight [kg] (lbs)
32	2992112030	0,08 x 2 (0.176 x 2)
40	2992112040	0,08 x 2 (0.176 x 2)
50	2992112050	0,15 x 2 (0.33 x 2)
63	2992112060	0,20 x 2 (0.44 x 2)
80	2992112080	0,32 x 2 (0.705 x 2)
100	2992112100	0,55 x 2 (1.21 x 2)



Material: Acid-proof steel, BS 316 S 31, AISI 316. Plastic bushings, Acetal.
Max temperature 85°C (185°F) continuously. Temporary peaks of 150°C (300°F). Higher temperatures on request.

▲ ★ **Trunnion mountings. (Can also be ordered separately)**

Piston Ø	Part number	Weight [kg] (lbs)
32	2992113030	0,02 x 2 (0.044 x 2)
40	2992113040	0,02 x 2 (0.044 x 2)
50	2992113050	0,03 x 2 (0.066 x 2)
63	2992113060	0,04 x 2 (0.088 x 2)
80	2992113080	0,06 x 2 (0.132 x 2)
100	2992113100	0,08 x 2 (0.176 x 2)

Presupposes threaded holes MH1 or MH2, see Configurator



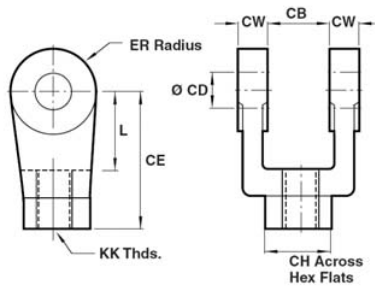
Material: Acid-proof steel, BS 316 S 31, AISI 316.

Round cylinders, Series ICS-D1 in acid-proof steel

Accessories - Inch

Rexroth
Bosch Group

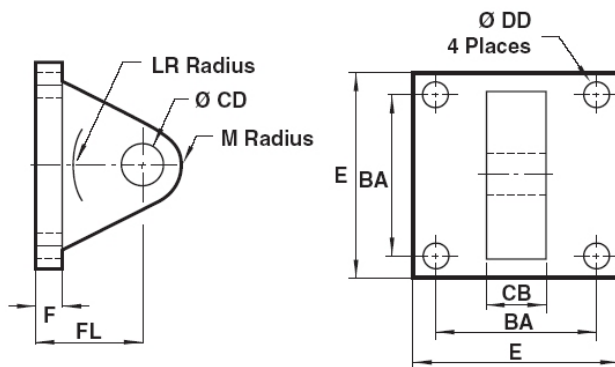
▲ ★ **Rod Clevis (can also be ordered separately)**



Thread KK	Part number	CB	CD	CW	CH	L	CE	ER	Weight [kg] (lbs)
3/8-24	R432002619	0.75	0.50	1.50	0.50	0.75	0.75	0.75	0,08 (0.18)
1/2-20	R432002620	0.75	0.50	1.50	0.50	0.75	0.75	0.75	0,15 (0.36)
5/8-18	R432002621	1.25	0.75	2.38	0.62	1.25	1.25	1.25	0,31 (0.68)
3/4-16	R432002622	1.25	0.75	2.38	0.62	1.25	1.25	1.25	0,45 (0.99)
1-12	R432002623	1.50	1.00	3.12	0.75	1.50	1.50	1.50	0,96 (2.12)

Material: 304 Stainless Steel

▲ ★ **Eye Bracket (can also be ordered separately)**



Part number	BA	CB	CD	DD	E	F	FL	LR	Weight [kg] (lbs)
R432003005	1.62	0.75	0.50	0.41	2.50	0.38	0.38	0.75	0,08 (0.18)
R432003006	2.56	1.25	0.75	0.53	3.50	0.62	0.62	1.25	0,15 (0.36)
R432003007	3.25	1.50	1.00	0.66	4.50	1.25	0.75	1.50	0,31 (0.68)

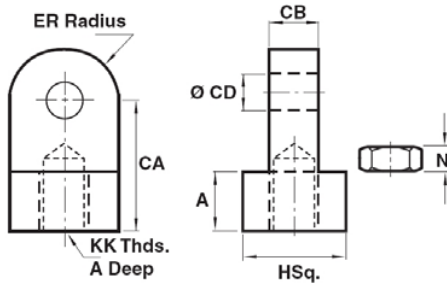
Material: 304 Stainless Steel

Round cylinders, Series ICS-D1 in acid-proof steel

Accessories - Inch

Rexroth
Bosch Group

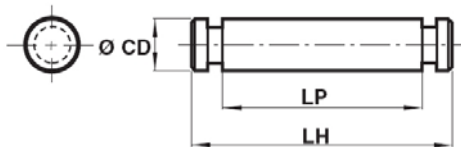
▲ ★ **Rod Eye with nut (can also be ordered separately)**



Thread KK	Part number	CB	CD	CA	A	H sq.	ER	N	Weight [kg] (lbs)
3/8-24	R432003002	0.375	0.38	0.88	0.50	0.75	0.38	0.22	0,08 (0.18)
1/2-20	R432003003	0.375	0.38	0.88	0.50	0.75	0.38	0.31	0,15 (0.36)

Material: 304 Stainless Steel

▲ ★ **Pivot Pin (can also be ordered separately)**



Part number	CD	LP	LH	Weight [kg] (lbs)
R432002616	0.50	1.88	2.22	0,08 (0.18)
R432002617	0.75	2.75	3.12	0,15 (0.36)
R432002618	1.00	3.25	3.75	0,31 (0.68)

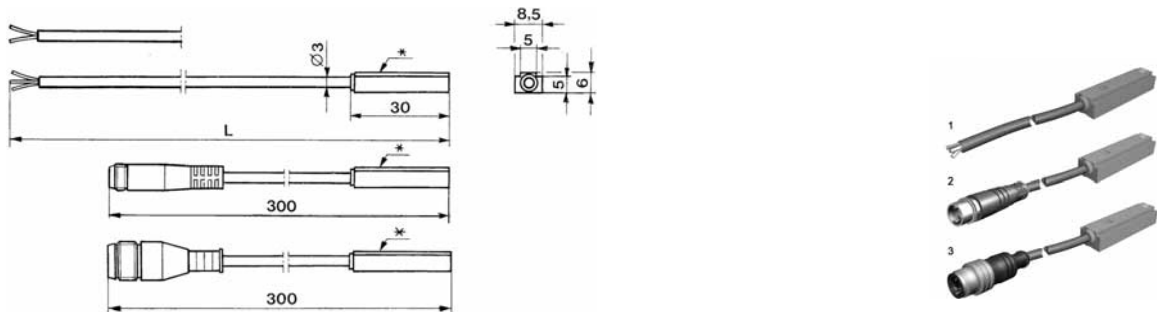
Material: 304 Stainless Steel. Includes retaining clips.

Round cylinders, Series ICS-D1 in acid-proof steel

Sensors and clamping rings

Rexroth
Bosch Group

▲ ★ Sensors with encapsulated cable and LED, inductive. (Must be ordered separately)



* LED

★ Technical Data

Outlet	PNP with cable	PNP with connector
Voltage and type of current	10–30 V DC	10–30 V DC
Max. continuous current	<150 mA	<150 mA
Voltage drop	<2 V	<2 V
Leakage current	10 µA	10 µA
Internal consumption	10 mA	10 mA
Ambient temperature range	-25 °C to +75 °C (-13 °F to +167 °F)	-25 °C to +75 °C (-13 °F to +167 °F)
Protection	IP 67 as per IEC 529	IP 67 as per IEC 529
Indication	LED	LED
De-energization delay	>20 ms	>20 ms
Material	Housing: Polyamide Cable: PVC (3x0,14 mm ²)	Housing: Polyamide Cable: PUR (3x0,14 mm ²)

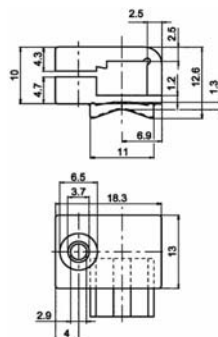
★ Part number

Symbol	Type	Fig.	Part no.	Cable length L [m]
	PNP	1	2750131110	2,5
		1	2750151110	10
		2	2750111120	0,3 m + M8 connector
	NPN	2	2750123120	0,3 m + M8 connector ¹⁾
		3	2750121120	0,3 m + M12 connector
		2	2750111220	0,3 m + M8 connector

¹⁾ As per EN 50082-2.

1= brown 2= blue 3= black 4= Load

▲ ★ Clamp for sensors in combination with "Clamping rings". (Must be ordered separately)



Part number	Weight [kg] (lbs)
5226603532	0,01 (0.022)

Material: polyamide / Stainless steel, BS 304 S 15, AISI 304

Round cylinders, Series ICS-D1 in acid-proof steel

Sensors and clamping rings

Rexroth
Bosch Group

▲ ★ Clamping rings. (Must be ordered separately)




Piston Ø	Dia.	Part number	Weight [kg] (lbs)
32	28–39	8935118622	0,02 (0.044)
40	38–49	8935118632	0,02 (0.044)
50	48–59	8935118642	0,02 (0.044)
63	58–69	8935118652	0,02 (0.044)
80	78–89	8935118662	0,03 (0.066)
100	98–109	8935118672	0,03 (0.066)

Material: Stainless steel, BS 304 S 15, AISI 304

Series ICS-D2 (304 Stainless Steel) Metric and Inch 

	Page
Double-acting with magnetic piston, adj. cushioning	20
Double-acting, through piston rod, mag. piston, adj. cushioning	22
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Series ICS-D1 (316 Stainless Steel) Metric and Inch.....  **1**

Series ICL (Anodized Aluminum) Metric and Inch  **33**

Round cylinders, Series ICS-D2 in stainless steel



Double-acting with magnetic piston and adjustable cushioning,
32–100 mm dia.

Rexroth
Bosch Group



Technical Data

Standard	Complies with ISO 6431, appropriate parts	
Working pressure, max	10 bar (145 psi)	
Ambient temperature range	-25 °C to +70 °C (-13 °F to +158 °F)	
Medium	Compressed air	ISO 8573-1:2001, class 6-4-3 or lower*
Materials	Piston rod	Stainless steel BS 304 S 15, AISI 304 hard chromium plated/unplated
	Piston rod bearing	Steel with PVDF+PTFE plain bearing
	Cylinder barrel	Stainless steel BS 304 S 15, AISI 304
	End covers	Stainless steel BS 304 S 15, AISI 304
	Cushioning screws	Stainless steel BS 304 S 15, AISI 304
	Nut	Stainless steel BS 304 S 15, AISI 304
	Wiper	Polyester (PEE)/Polyethylene HD/Teflon (PTFE)
	Piston	Polyamide (Ø 32–63 mm) Aluminium (Ø 80–100 mm)
	Piston rod seal	Nitrile rubber (NBR)
	Other seals	Nitrile rubber (NBR)/Polyurethane and Teflon (PTFE)



Application Areas

Specifically designed for industries with very high demands on hygiene and corrosion resistance, like food and pharmaceuticals.
Also suitable for pulp and paper, chemical and petrochemical industries.

* Particle size ≤ 5 µm, dew point ≤ 3 °C, oil content ≤ 1 mg/m³

Technical information

Piston Ø	[mm]	32	40	50	63	80	100	
Theoretical piston force	push stroke	[N]	483	754	1178	1870	3016	4712
		(lbf)	(109)	(170)	(265)	(420)	(678)	(1060)
at 6 bar (87 psi)	pull stroke	[N]	415	633	990	1682	2721	4418
		(lbf)	(93.3)	(142)	(223)	(378)	(612)	(993)
Cushioning length	[mm]	11,5	14	17	16	19	22	
Cushioning energy	[Nm]	4,8	9	15	27	54	88	
	(in.lbs)	(42.48)	(79.66)	(132.76)	(238.97)	(477.94)	(788.86)	
Cylinder weight	0 mm stroke	[kg]	0,6	1,2	1,7	3,0	4,0	7,7
		(lbs)	(1.32)	(2.65)	(3.75)	(6.61)	(8.82)	(17)
	add. per 100 mm	[kg]	0,25	0,36	0,5	0,65	1,0	1,35
	add. per 4"	(lbs)	(0.55)	(0.79)	(1.1)	(1.43)	(2.65)	(2.87)

Part no.

Piston Ø	Stroke	32 - 100
	Rec. max. stroke: 15x Ø. Longer strokes available on request.	For ordering, see our Internet configurator or contact the nearest Bosch Rexroth office.

Accessories (to be ordered separately)

Symbol	Type	32	40	50	63
	Piston Ø				
	Basic seal kit*	R404052668	R404052669	R404052670	R404052671
	Piston rod seal kit**	R404052674	R404052675	R404052676	R404052677
	Piston Ø				
Basic seal kit*	R404052672	R404052673			
Piston rod seal kit**	R404052678	R404052679			

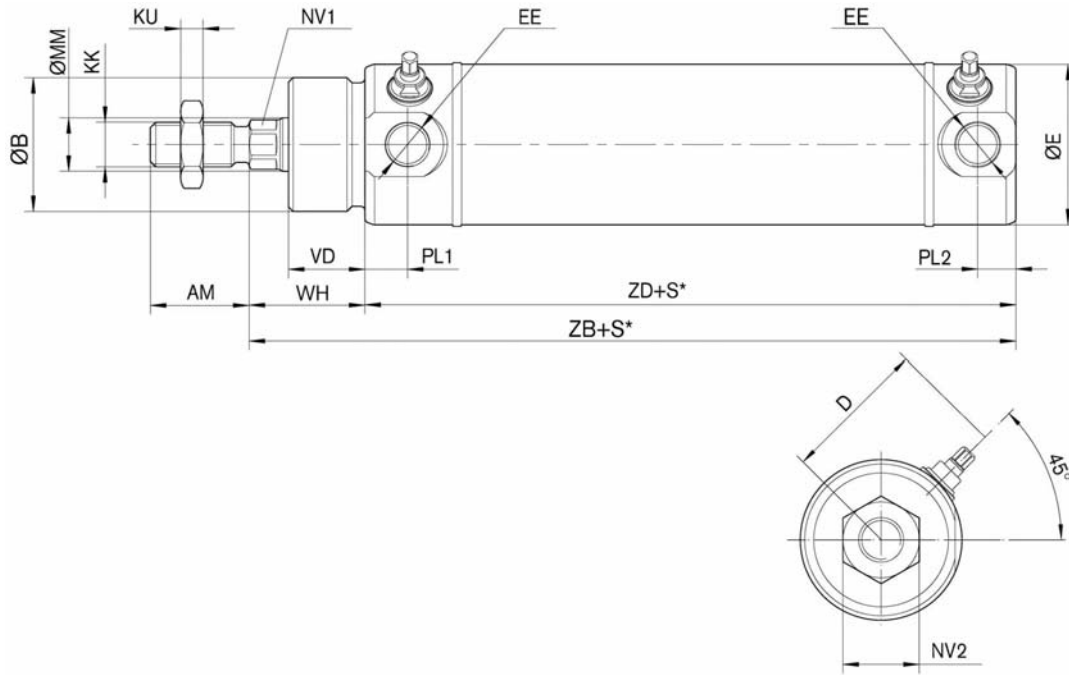
* Basic seal kit consists of seals for one cylinder including PEE and Polyethylene wipers. Piston rod seals in nitrile.

** Piston rod seal kit includes both PEE and Polyethylene wipers. Piston rod seals in both nitrile and viton are included.

Round cylinders, Series ICS-D2 in stainless steel

Double-acting with magnetic piston and adjustable cushioning,
32–100 mm dia.

Rexroth
Bosch Group



00120500

S* = Stroke, tolerance 32–50 mm dia. = +2/-0, 63–100 mm dia. = +2,5/-0.
The cylinder is supplied with a nut in accordance with ISO 4035; DIN 439.

Piston Ø	AM	B e 11	D	E	EE (metric)	EE (inch)	KK (metric)	KK (inch)	KU	MM g 8	NV1
32	22	30	34	36	G 1/8	1/8" NPTF	M 10 x 1,25	3/8-24	5	12	10
40	24	35	38	44	G 1/4	1/4" NPTF	M 12 x 1,25	1/2-20	6	16	13
50	32	40	50	54	G 1/4	1/4" NPTF	M 16 x 1,5	5/8-18	8	20	17
63	32	45	57	68	G 3/8	3/8" NPTF	M 16 x 1,5	5/8-18	8	20	17
80	40	55	70,5	86	G 3/8	3/8" NPTF	M 20 x 1,5	3/4-16	10	25	22
100	40	65	80,5	106	G 1/2	1/2" NPTF	M 20 x 1,5	3/4-16	10	25	22

Piston Ø	NV2	PL1	PL2	VD	WH	ZB	ZD
32	17	9,5	8,5	17	26	121	95
40	18	11	11	25	35	143	108
50	24	12	12	25	35	150	115
63	24	14	13,5	30	40	165	125
80	30	14	14	30	42	184	142
100	30	20	19	30	42	198	156

Round cylinders, Series ICS-D2 in stainless steel



Double-acting with through piston rod, magnetic piston and adjustable cushioning, 32–100 mm dia.

Rexroth
Bosch Group



Technical Data

Standard	Complies with ISO 6431, appropriate parts	
Working pressure, max	10 bar (145 psi)	
Ambient temperature range	-25 °C to +70 °C (-13 °F to +158 °F)	
Medium	Compressed air	ISO 8573-1:2001, class 6-4-3 or lower*
Materials	Piston rod	Stainless steel, BS 304 S15, AISI 304 hard chromium plated/unplated
	Piston rod bearing	Steel with PVDF+PTFE plain bearing
	Cylinder barrel	Stainless steel BS 304 S 15, AISI 304
	End covers	Stainless steel BS 304 S 15, AISI 304
	Cushioning screws	Stainless steel BS 304 S 15, AISI 304
	Nut	Stainless steel BS 304 S 15, AISI 304
	Piston	Polyamide (Ø 32–63 mm) Aluminum (Ø 80–100 mm)
	Wiper	Polyester (PEE)/Polyethylene HD/Teflon (PTFE)
	Piston rod seal	Nitrile rubber (NBR)
	Other seals	Nitrile rubber (NBR)/Polyurethane and Teflon (PTFE)



Application Areas

Specifically designed for industries with very high demands on hygiene and corrosion resistance, like food and pharmaceuticals.
Also suitable for pulp and paper, chemical and petrochemical industries.

* Particle size ≤ 5 µm, dew point ≤ 3 °C, oil content ≤ 1 mg/m³

Technical information

Piston Ø	[mm]	32	40	50	63	80	100
Theoretical piston force at 6 bar (87 psi)	[N]	415	633	990	1682	2721	4418
	(lbf)	(93.3)	(142)	(223)	(378)	(612)	(993)
Cushioning length	[mm]	11,5	14	17	16	19	22
Cushioning energy	[Nm]	4,8	9	15	27	54	88
	(in.lbs)	(42.48)	(79.66)	(132.76)	(238.97)	(477.94)	(788.86)
Cylinder weight	0 mm stroke	[kg]	0,7	1,4	2	3,5	4,7
		(lbs)	(1.54)	(3.09)	(4.41)	(7.72)	(10.4)
	add. per 100 mm	[kg]	0,38	0,6	0,75	1	1,4
	add. per 4"	(lbs)	(0.84)	(1.32)	(1.65)	(2.2)	(3.09)

Part no.

Piston Ø	Stroke	32 - 100
	Rec. max. stroke: 15x Ø. Longer strokes available on request.	For ordering, see our Internet configurator or contact the nearest Bosch Rexroth office.

Accessories (to be ordered separately)

Symbol	Type	32	40	50	63
	Piston Ø				
	Basic seal kit*	R404052668	R404052669	R404052670	R404052671
	Piston rod seal kit**	R404052674	R404052675	R404052676	R404052677
	Piston Ø	80	100		
Basic seal kit*	R404052672	R404052673			
Piston rod seal kit**	R404052678	R404052679			

To get all seals for one cylinder, order one basic seal kit and one piston rod seal kit.

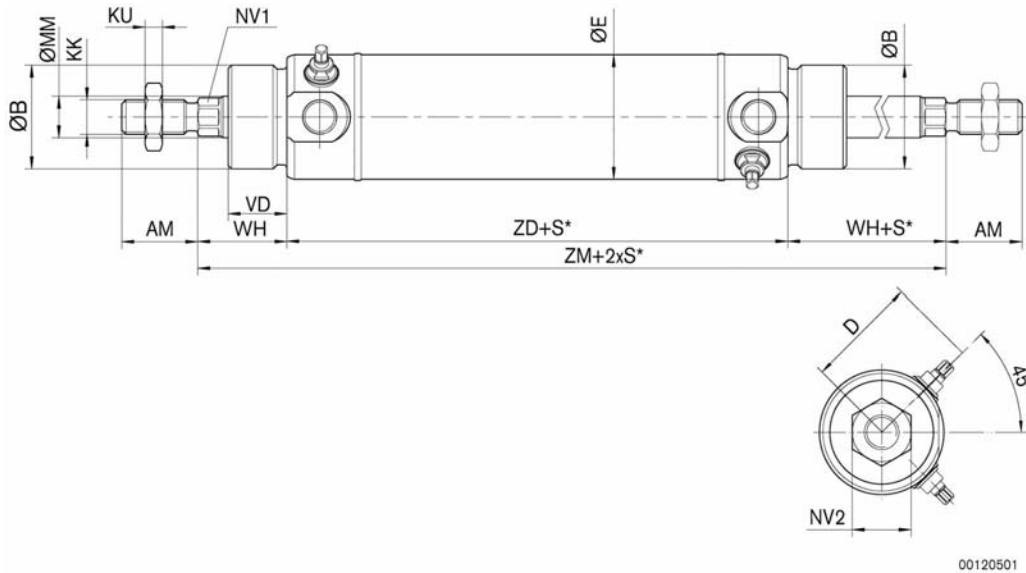
* Basic seal kit consists of seals for one cylinder including PEE and Polyethylene wipers. Piston rod seals in nitrile.

** Piston rod seal kit includes both PEE and Polyethylene wipers, piston rod seals in both nitrile and viton, (for one end cover).

Round cylinders, Series ICS-D2 in stainless steel

Double-acting with through piston rod, magnetic piston and adjustable cushioning,
32–100 mm dia.

Rexroth
Bosch Group



00120501

S* = Stroke, tolerance 32–50 mm dia. = +2/-0, 63–100 mm dia. = +2,5/-0.
The cylinder is supplied with a nut in accordance with ISO 4035; DIN 439.
For other dimensions, see basic version.

Piston Ø	AM	B e 11	D	E	KK (metric)	KK (inch)	KU	MM g 8	NV1	NV2	VD	WH	ZD	ZM
32	22	30	34	36	M 10 x 1,25	3/8-24	5	12	10	17	17	26	95	148
40	24	35	38	44	M 12 x 1,25	1/2-20	6	16	13	18	25	35	108	179
50	32	40	50	54	M 16 x 1,5	5/8-18	8	20	17	24	25	35	115	186
63	32	45	57	68	M 16 x 1,5	5/8-18	8	20	17	24	30	40	125	206
80	40	55	70,5	86	M 20 x 1,5	3/4-16	10	25	22	30	30	42	142	227
100	40	65	80,5	106	M 20 x 1,5	3/4-16	10	25	22	30	30	42	156	241

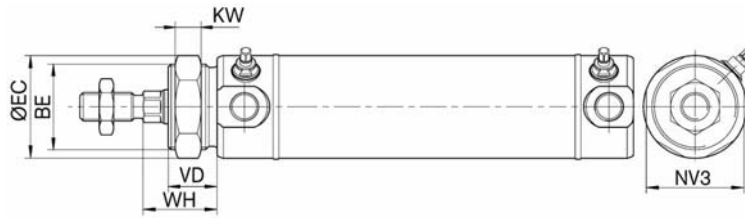
Round cylinders, Series ICS-D2 in stainless steel

Mountings and accessories

Rexroth
Bosch Group

▲ ★ Threaded neck with nut

MR 3



00120496

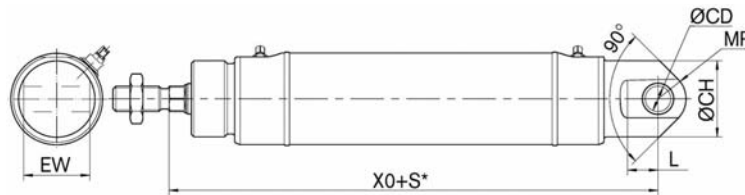


Piston Ø	EC	BE	VD	KW	NV3	WH
32	36	M 30 x 1,5	17	10	34	26
40	45	M 35 x 1,5	25	10	42	35
50	52	M40x1,5	25	10	48	35
63	58	M 45 x 1,5	30	12	54	40
80	80	M 55 x 1,5	30	13	72	42
100	90	M65x1,5	30	15	85	42

Material: Stainless steel, BS 304 S 15, AISI 304

▲ ★ Rear end cover bushing (ISO 6431)

MP 4



00120498



S* = Stroke

Piston Ø	CD H 10	EW	L min.	MR	XO	CH
32	10	26	12	11	142 ±1,3	30
40	12	28	15	13	160 ±1,3	33
50	12	32	15	13	170 ±1,3	36
63	16	40	20	17	190 ±1,6	45
80	16	50	20	17	210 ±1,6	54
100	20	60	25	21	230 ±1,6	66

Material: Stainless steel, BS 304 S 15, AISI 304. Bushing in reinforced thermoplastic.

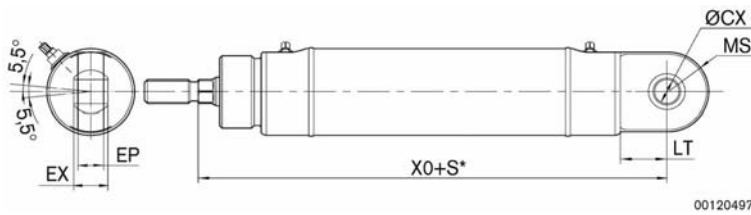
Round cylinders, Series ICS-D2 in stainless steel

Mountings and accessories

Rexroth
Bosch Group

★ Rear eye with spherical bearing

MP 5



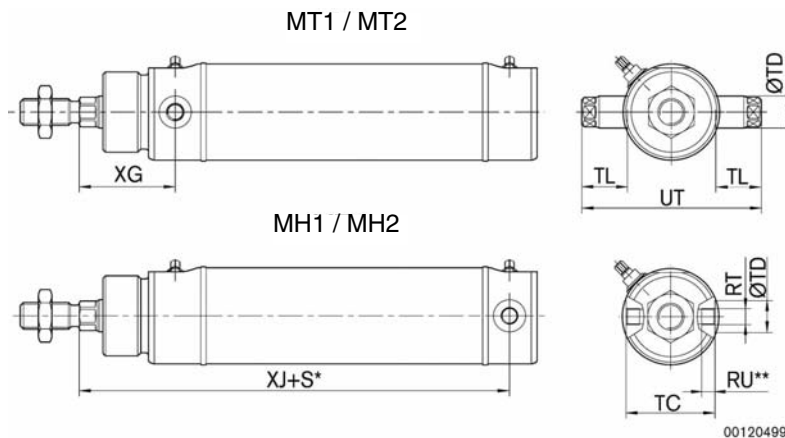
S* = Stroke

Piston Ø	CX H7	EP	EX	LT	MS	XO
32	10	10,5	14	19	16,5	142 ±1,3
40	12	12	16	17	21	160 ±1,3
50	12	12	16	19,5	24,5	170 ±1,3
63	16	15	21	24	30	190 ±1,6
80	16	15	21	28	30	210 ±1,6
100	20	18	25	30	35	230 ±1,6

Material: Stainless steel, BS 304 S 15, AISI 304

★ Trunnion mounting or threaded holes in front or rear end covers

MT1, MT2, MH1, MH2



S* = Stroke

Piston Ø	TC	TD h 9	TL	UT	XG	XJ	RU	RU min.
32	33	12	17	67	36	110,5	M6x0,5	5
40	40	12	17	74	47,5	129	M6x0,5	6
50	49	16	20	89	49,5	134,5	M8x0,75	7,5
63	61	16	24	109	55,5	149,5	M10x1	12,5
80	78	16	27	132	62	164	M12x1	16
100	100	20	32	164	63	177	M16x1,5	16

Material: Stainless steel, BS 304 S 15, AISI 304

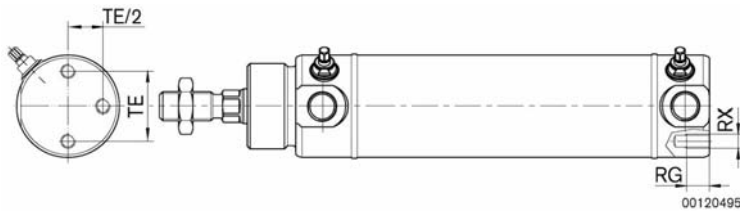
Round cylinders, Series ICS-D2 in stainless steel

Mountings and accessories

Rexroth
Bosch Group

★ Rear end cover with threaded holes

MX 6

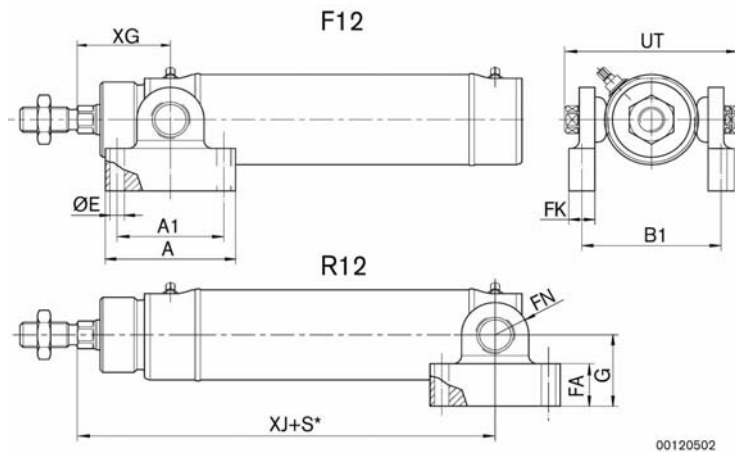


Piston Ø	RG	RX	TE
32	8	M5	24,5
40	10	M6	30
50	13	M6	39
63	12	M8	49
80	12	M8	65
100	16	M 10	85

Material: Stainless steel, BS 304 S 15, AISI 304

★ Bearing blocks for trunnion mountings in front or rear end covers

F 12, R 12



S* = Stroke

Piston Ø	A	A1	B1	E	FA	FK	FN	G	XG	XJ	UT
32	50	41	53,5	5,5	17	10	13	28,5	36	110,5	67
40	55	46	58,5	5,5	17	10	15,5	38	47,5	129	74
50	64	53	71,5	6,5	18,5	12	17,5	38	49,5	134,5	89
63	66	56	89,5	6,5	18,5	12	19	46,5	55,5	149,5	109
80	82	72	106,5	6,5	18,5	12	26	50,5	62	164	132
100	108	88	127	9	22	16	26	65	63	177	164

Material: Stainless steel, BS 304 S 15, AISI 304. Plastic bushings, Acetal.

Max temperature 85°C (185°F) continuously. Temporary peaks of 150°C (300°F). Higher temperatures on request.

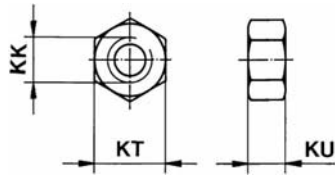
Round cylinders, Series ICS-D2 in stainless steel

Accessories - Metric

Rexroth
Bosch Group

▲ ★ Nut. (Can also be ordered separately)

20

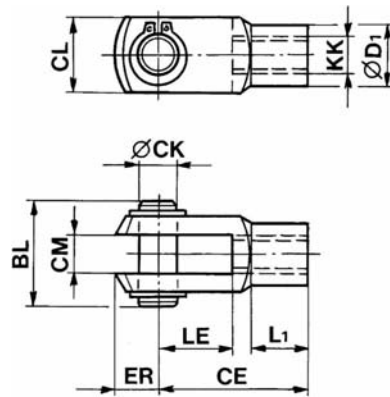


Thread KK	Part number	KT	KU	Weight [kg] (lbs)
M10x1,25	3590302000	17	5	0,01 (0.022)
M12x1,25	3590304000	19	6	0,02 (0.044)
M16x1,5	3590305000	24	8	0,03 (0.066)
M20x1,5	3590308000	30	10	0,05 (0.11)

Material: Stainless steel, BS 304 S 15, AISI 304

▲ ★ Rod clevis. (Can also be ordered separately)

P 2



Thread KK	Part number	BL	CE	CK e 8	CL	CM B 12	D1	ER	L1	LE	Weight [kg] (lbs)
M10x1,25	3590502000	26	40	10	20	10	18	12	15	20	0,1 (0.22)
M12x1,25	3590504000	31	48	12	24	12	20	14	18	24	0,2 (0.44)
M16x1,5	3590505000	39	64	16	32	16	26	19	24	32	0,4 (0.88)
M20x1,5	3590508000	49	80	20	40	20	34	20	30	40	0,7 (1.54)

Material: Stainless steel, BS 304 S 15, AISI 304

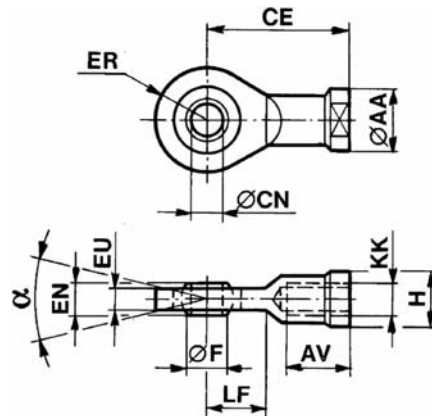
Round cylinders, Series ICS-D2 in stainless steel

Accessories - Metric

Rexroth
Bosch Group

▲ ★ **Ball eye rod end. (Can also be ordered separately)**

P 4



Thread KK	Part number	F	H	AA max.	AV	CE	CN H 7	EN 0/-0,1	EU	ER max.	LF min.	α°	Weight [kg] (lbs)
M10x1,25	2990690903	13,0	17	19	20	43	10	14	10,5	14	14	14	0,08 (0.176)
M12x1,25	2990690904	15,5	19	22	22	50	12	16	12	16	16	14	0,12 (0.265)
M16x1,5	2990690905	19,5	22	27	28	64	16	21	15	21	21	16	0,23 (0.507)
M20x1,5	2990690908	24,5	32	34	33	77	20	25	18	25	25	16	0,42 (0.926)

Material: Acid-proof steel, BS 316 S 31, AISI 316.

▲ ★ **Bearing blocks with plastic bushings. (Can also be ordered separately)**

Piston Ø	Part number	Weight [kg] (lbs)
32	2992112030	0,08 x 2 (0.176 x 2)
40	2992112040	0,08 x 2 (0.176 x 2)
50	2992112050	0,15 x 2 (0.33 x 2)
63	2992112060	0,20 x 2 (0.44 x 2)
80	2992112080	0,32 x 2 (0.705 x 2)
100	2992112100	0,55 x 2 (1.21 x 2)



Material: Acid-proof steel, BS 316 S 31, AISI 316. Plastic bushings, Acetal.
Max temperature 85°C (185°F) continuously. Temporary peaks of 150°C (300°F). Higher temperatures on request.

▲ ★ **Trunnion mountings. (Can also be ordered separately)**

Piston Ø	Part number	Weight [kg] (lbs)
32	2992113030	0,02 x 2 (0.044 x 2)
40	2992113040	0,02 x 2 (0.044 x 2)
50	2992113050	0,03 x 2 (0.066 x 2)
63	2992113060	0,04 x 2 (0.088 x 2)
80	2992113080	0,06 x 2 (0.132 x 2)
100	2992113100	0,08 x 2 (0.176 x 2)

Presupposes threaded holes MH1 or MH2, see Configurator



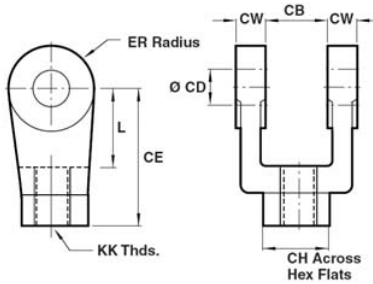
Material: Acid-proof steel, BS 316 S 31, AISI 316.

Round cylinders, Series ICS-D2 in acid-proof steel

Accessories - Inch

Rexroth
Bosch Group

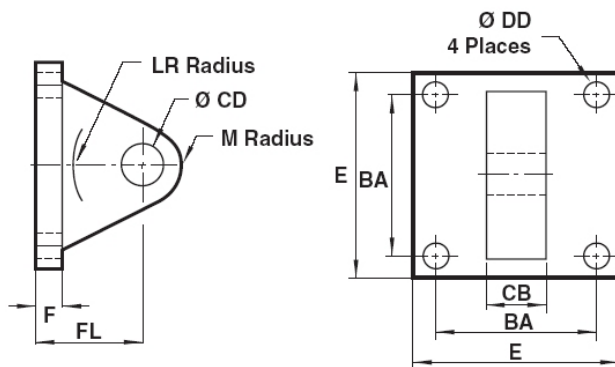
▲ ★ **Rod Clevis (can also be ordered separately)**



Thread KK	Part number	CB	CD	CW	CH	L	CE	ER	Weight [kg] (lbs)
3/8-24	R432002619	0.75	0.50	1.50	0.50	0.75	0.75	0.75	0,08 (0.18)
1/2-20	R432002620	0.75	0.50	1.50	0.50	0.75	0.75	0.75	0,15 (0.36)
5/8-18	R432002621	1.25	0.75	2.38	0.62	1.25	1.25	1.25	0,31 (0.68)
3/4-16	R432002622	1.25	0.75	2.38	0.62	1.25	1.25	1.25	0,45 (0.99)
1-12	R432002623	1.50	1.00	3.12	0.75	1.50	1.50	1.50	0,96 (2.12)

Material: 304 Stainless Steel

▲ ★ **Eye Bracket (can also be ordered separately)**



Part number	BA	CB	CD	DD	E	F	FL	LR	Weight [kg] (lbs)
R432003005	1.62	0.75	0.50	0.41	2.50	0.38	0.38	0.75	0,08 (0.18)
R432003006	2.56	1.25	0.75	0.53	3.50	0.62	0.62	1.25	0,15 (0.36)
R432003007	3.25	1.50	1.00	0.66	4.50	1.25	0.75	1.50	0,31 (0.68)

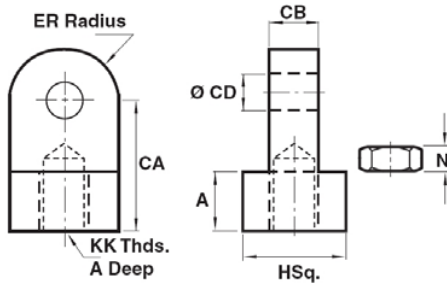
Material: 304 Stainless Steel

Round cylinders, Series ICS-D2 in acid-proof steel

Accessories - Inch

Rexroth
Bosch Group

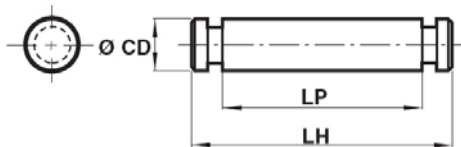
▲ ★ **Rod Eye with nut (can also be ordered separately)**



Thread KK	Part number	CB	CD	CA	A	H sq.	ER	N	Weight [kg] (lbs)
3/8-24	R432003002	0.375	0.38	0.88	0.50	0.75	0.38	0.22	0,08 (0.18)
1/2-20	R432003003	0.375	0.38	0.88	0.50	0.75	0.38	0.31	0,15 (0.36)

Material: 304 Stainless Steel

▲ ★ **Pivot Pin (can also be ordered separately)**



Part number	CD	LP	LH	Weight [kg] (lbs)
R432002616	0.50	1.88	2.22	0,08 (0.18)
R432002617	0.75	2.75	3.12	0,15 (0.36)
R432002618	1.00	3.25	3.75	0,31 (0.68)

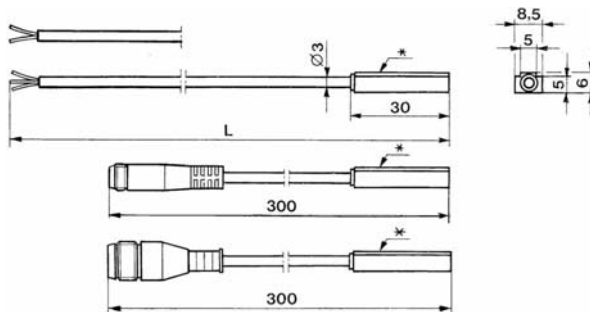
Material: 304 Stainless Steel. Includes retaining clips.

Round cylinders, Series ICS-D2 in stainless steel

Sensors and clamping rings

Rexroth
Bosch Group

▲ ★ Sensors with encapsulated cable and LED, inductive. (Must be ordered separately)



* LED

★ Technical Data

Outlet	PNP with cable	PNP with connector
Voltage and type of current	10–30 V DC	10–30 V DC
Max. continuous current	<150 mA	<150 mA
Voltage drop	<2 V	<2 V
Leakage current	10 µA	10 µA
Internal consumption	10 mA	10 mA
Ambient temperature range	-25 °C to +75 °C (-13 °F to +167 °F)	-25 °C to +75 °C (-13 °F to +167 °F)
Protection	IP 67 as per IEC 529	IP 67 as per IEC 529
Indication	LED	LED
De-energization delay	>20 ms	>20 ms
Material	Housing: Polyamide Cable: PVC (3x0,14 mm ²)	Housing: Polyamide Cable: PUR (3x0,14 mm ²)

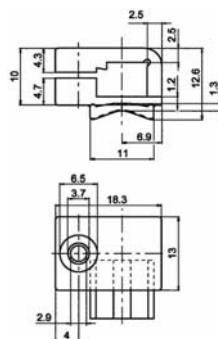
★ Part number

Symbol	Type	Fig.	Part no.	Cable length L [m]
	PNP	1	2750131110	2,5
		1	2750151110	10
		2	2750111120	0,3 m + M8 connector
	NPN	2	2750123120	0,3 m + M8 connector ¹⁾
		3	2750121120	0,3 m + M12 connector
		2	2750111220	0,3 m + M8 connector

¹⁾ As per EN 50082-2.

1 = brown 2 = blue 3 = black 4 = Load

▲ ★ Clamp for sensors in combination with "Clamping rings". (Must be ordered separately)



Part number	Weight [kg] (lbs)
5226603532	0,01 (0.022)

Material: polyamide / Stainless steel, BS 304 S 15, AISI 304

Round cylinders, Series ICS-D2 in stainless steel

Sensors and clamping rings

Rexroth
Bosch Group

▲ ★ Clamping rings. (Must be ordered separately)



Piston Ø	Diameter	Part number	Weight [kg] (lbs)
32	28–39	8935118622	0,02 (0.044)
40	38–49	8935118632	0,02 (0.044)
50	48–59	8935118642	0,02 (0.044)
63	58–69	8935118652	0,02 (0.044)
80	78–89	8935118662	0,03 (0.066)
100	98–109	8935118672	0,03 (0.066)

Material: Stainless steel, BS 304 S 15, AISI 304

Products

★ \varnothing 32–125 mm (1 1/4" - 3 1/4"), magnetic piston, adjustable cushioning

See page 34 (metric), page 35 (inch)



▲ Accessories

▲ ★ Front flange or rear flange (MF1/MF2)

See page 37



▲ ★ Angle brackets (MS1)

See page 37



▲ ★ Rear clevis (MP2)

See page 38



▲ ★ Rear eye with ball joint (M36)

See page 38



▲ ★ Accessories - Metric

See page 39



▲ ★ Accessories - Inch

See page 40

▲ ★ Cylinder switch Series ST6, Micro, electrically (Reed contact) and electronic (contactless)

See page 42



Profile cylinders, Series ICL

Ø 32–125 mm, magnetic piston,
adjustable cushioning - Metric version



AFNOR



Rexroth
Bosch Group



Technical Data

Standard	ISO 15552 (ISO 6431, VDMA 24562) NF E 49-003-1, UNI	
Working pressure, max.	10 bar (145 psi)	
Ambient temperature range	-20 °C to +70 °C (-4 °F to +158 °F)	
Medium	Compressed air	ISO 8573-1, class 6, 4, 3 or lower*
Materials	Piston rod	Stainless steel (BS 303 S 31)
	Piston rod bushing	Steel with a PVDF + PTFE bearing surface
	Cylinder barrel	Anodized aluminum
	End covers	Anodized aluminum
	End cover screws	Stainless steel (BS 303 S 31)
	Nut	Stainless steel (BS 303 S 31)
	Wiper	Polyester (PEE)
	Piston	Ø 32–63 mm polyamide, Ø 80–125 mm aluminum
	Cushioning screws	Stainless steel (BS 303 S 31)
	Seals	Nitrile rubber/Polyurethane



Application area

The cylinder series is suitable when a corrosion prevention is required. For example in the food industry where demand for good hygiene is met by means of the design of the cylinder.

* Particle size ≤ 5 µm, dew point ≤ 3 °C, oil content ≤ 1 mg/m³

Technical information

Piston Ø	[mm]	32	40	50	63	80	100	125
Theoretical piston force at 6 bar (87 psi)	push stroke	[N] 483 (108.6)	754 (169.5)	1178 (264.8)	1870 (420.4)	3016 (678)	4712 (1059)	7363 (1655)
	pull stroke	[N] 415 (93.3)	633 (142.3)	990 (222.6)	1682 (378.1)	2721 (611.7)	4418 (993.2)	6881 (1547)
Cushioning length	[mm]	11,5	15,0	17,0	16,5	19,5	19,5	22,0
Cushioning energy	[Nm]	4,8	9,0	15,0	27,0	54,0	88,0	140,0
	(in.lbs)	(42.5)	(79.7)	(132.8)	(239.0)	(478.0)	(778.9)	(1239.1)
Weight	0 mm stroke	[kg] 0,45 (0.99)	0,76 (1.68)	1,10 (2.43)	1,17 (2.58)	2,50 (5.51)	3,70 (8.16)	6,90 (15.2)
	add. per 100 mm	[kg] 0,20 (0.44)	0,29 (0.64)	0,45 (0.99)	0,49 (1.08)	0,78 (1.72)	1,00 (2.2)	1,31 (2.89)
		(lbs)						

Part no.

Piston Ø	32	40	50	63	80
Piston rod thread	M 10 x 1,25	M 12 x 1,25	M 16 x 1,5	M 16 x 1,5	M 20 x 1,5
Threaded port	G 1/8	G 1/4	G 1/4	G 3/8	G 3/8
Stroke					
25	R480060005	R480060018	R480060026	R480060036	R480060060
50	R480058830	R480059528	R480060027	R480058890	R480060061
80	R480060006	R480060019	R480060028	R480060037	R480060063
100	R480059075	R480060020	R480060029	R480060038	R480060064
125	R480060007	R480060021	R480060030	R480060039	R480059699
160	R480060008	R480059526	R480060031	R480060040	R480060065
200	R480060009	R480060022	R480060032	R480060041	R480059532
250	R480060010	R480060023	R480060033	R480060043	R480060066
320	R480060011	R480060024	R480060034	R480060042	R480060067
400	R480060012	R480059529	R480058941	R480060044	R480060068
500	R480060013	R480060025	R480060035	R480060045	R480060069
Rec. max. stroke ²⁾	1600	1900	2300	2500	2800
Piston Ø	100	125			
Piston rod thread	M 20 x 1,5	M 27 x 2			
Threaded port	G 1/2	G 1/2			
Stroke					
25	R480060070	R480060080			
50	R480060071	R480060081			
80	R480060072	R480060082			
100	R480060073	R480060083			
125	R480060074	R480060084			
160	R480060075	R480060085			
200	R480060076	R480060086			
250	R480058909	R480060087			
320	R480060077	R480060088			
400	R480060078	R480060089			
500	R480060079	R480060091			
Rec. max. stroke ²⁾	2800	2750			

²⁾ Longer strokes on request.

Profile cylinders, Series ICL

Ø 32–125 mm, magnetic piston,
adjustable cushioning - Inch version



Rexroth
Bosch Group



Technical Data

Standard	ISO 15552 (ISO 6431, VDMA 24562) NF E 49-003-1, UNI	
Working pressure, max.	10 bar (145 psi)	
Ambient temperature range	-20 °C to +70 °C (-4 °F to +158 °F)	
Medium	Compressed air	ISO 8573-1, class 6, 4, 3 or lower*
Materials	Piston rod	Stainless steel (BS 303 S 31)
	Piston rod bushing	Steel with a PVDF + PTFE bearing surface
	Cylinder barrel	Anodized aluminum
	End covers	Anodized aluminum
	End cover screws	Stainless steel (BS 303 S 31)
	Nut	Stainless steel (BS 303 S 31)
	Wiper	Polyester (PEE)
	Piston	Ø 32–63 mm polyamide, Ø 80–125 mm aluminum
	Cushioning screws	Stainless steel (BS 303 S 31)
	Seals	Nitrile rubber/Polyurethane



Application area

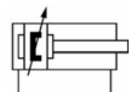
The cylinder series is suitable when a corrosion prevention is required. For example in the food industry where demand for good hygiene is met by means of the design of the cylinder.

* Particle size ≤ 5 µm, dew point ≤ 3 °C, oil content ≤ 1 mg/m³

Technical information

Piston Ø		[mm]	32	40	50	63	80	100	125
Theoretical piston	push stroke	[N]	483	754	1178	1870	3016	4712	7363
		(lbf)	(108.6)	(169.5)	(264.8)	(420.4)	(678)	(1059)	(1655)
force at 6 bar (87 psi)	pull stroke	[N]	415	633	990	1682	2721	4418	6881
		(lbf)	(93.3)	(142.3)	(222.6)	(378.1)	(611.7)	(993.2)	(1547)
Cushioning length		[mm]	11,5	15,0	17,0	16,5	19,5	19,5	22,0
Cushioning energy		[Nm]	4,8	9,0	15,0	27,0	54,0	88,0	140,0
		(in.lbs)	(42.5)	(79.7)	(132.8)	(239.0)	(478.0)	(778.9)	(1239.1)
Weight	0 mm stroke	[kg]	0,45	0,76	1,10	1,17	2,50	3,70	6,90
		(lbs)	(0.99)	(1.68)	(2.43)	(2.58)	(5.51)	(8.16)	(15.2)
	add. per 100 mm	[kg]	0,20	0,29	0,45	0,49	0,78	1,00	1,31
		(lbs)	(0.44)	(0.64)	(0.99)	(1.08)	(1.72)	(2.2)	(2.89)

Part no.






Piston Ø	1 1/4	1 1/2	2	2 1/2	3 1/4
Piston Rod Thread	3/8-24	1/2-20	5/8-18	5/8-18	3/4-16
Threaded Port	1/8 NPT	1/4 NPT	1/4 NPT	3/8 NPT	3/8 NPT
Stroke					
1"	R480075156	R480075161	R480075166	R480075170	R480075174
6"	R480075157	R480075162	R480070561	R480075171	R480075175
12"	R480075158	R480075163	R480075167	R480063306	R480075176
18"	R480075159	R480075164	R480075168	R480075172	R480075177
24"	R480075160	R480075165	R480075169	R480075173	R480075178
Rec. max. stroke	64"	76"	92"	100"	112"
Piston Ø	4	5			
Piston Rod Thread	3/4-16	1-12			
Threaded Port	1/2 NPT	1/2 NPT			
Stroke					
1"	R480075179	R480075183			
6"	R480070562	R480075184			
12"	R480075180	R480075185			
18"	R480075181	R480075186			
24"	R480075182	R480075187			
Rec. max. stroke	112"	110"			

2) Longer strokes on request.


Profile cylinders, Series ICL

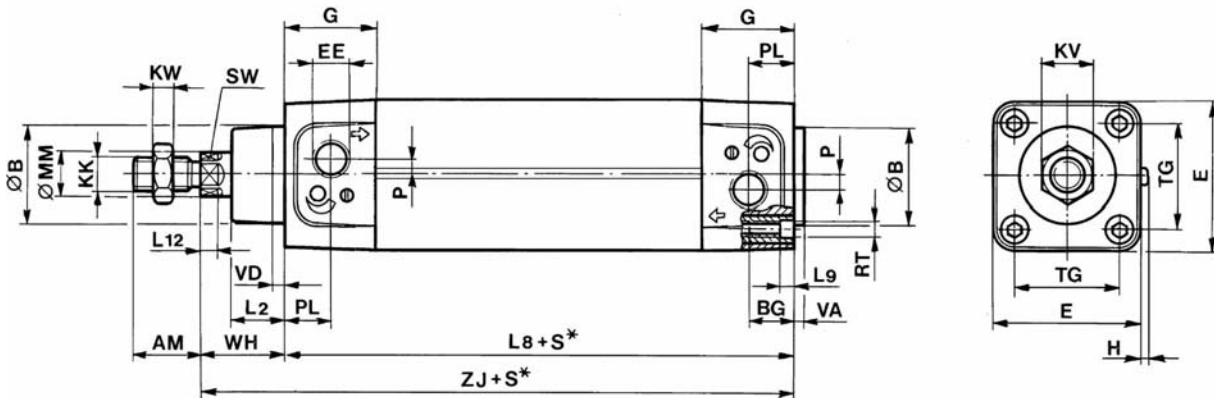
Ø 32–125 mm, magnetic piston,
adjustable cushioning

Rexroth
Bosch Group

▲ Accessories (to be ordered separately)					
Symbol	Type	32	40	50	63
	Piston Ø				
	Front or rear flange (MF1/MF2)	5230006012	5231006012	5232006012	5233006012
	Angle brackets (MS1)	523000502	523100502	523200502	523300502
	Rear clevis (MP2)	3682903590	3682904590	3682905590	3682906590
	Rear eye with ball joint (M36)	2798060320	2798060400	2798060500	2798060630
	Piston Ø	80	100	125	
Front or rear flange (MF1/MF2)	5234006012	5235006012	5236006012		
Angle brackets (MS1)	523400502	523500502	523600502		
Rear clevis (MP2)	3682908590	3682910590	–		
Rear eye with ball joint (M36)	2798060800	2798061000	–		
	Piston Ø	32–125			
	Cylinder switch, Series ST6 Micro; Reed, PNP or NPN				
 (metric)	Piston Ø	32	40	50	63
	Rod clevis in stainless steel (P2)	3590502000	3590504000	3590505000	3590505000
	Ball eye rod end in stainless steel (P6)	2798030100	2798030120	2798030160	2798030160
	Piston Ø	80	100		
	Rod clevis in stainless steel (P2)	3590508000	3590508000		
	Ball eye rod end in stainless steel (P6)	2798030200	2798030200		

For inch version accessories, see accessories section.

▲ Seal kit								
Symbol	Piston Ø	32	40	50	63	80	100	125
	Part no.	0490394303	0490394400	0490394508	0490394605	0490394702	2715534000	2715634000



S* = Stroke
Tolerance Ø 32–50 mm = +2/-0, Ø 63–125 mm = +2,5/-0

Piston Ø	B e11	E	G	L2	L8	L9	L12	P	EE (metric)	EE (inch)	H	KK (metric)	KK (inch)	MM g
32	30	49,4	28	15	94 ± 0,4	5	6,0	4,0	G 1/8	1/8" NPT	3,1	M 10x1,25	3/8-24	12
40	35	54,5	33	19	105 ± 0,7	5	6,5	5,0	G 1/4	1/4" NPT	3,1	M 12x1,25	1/2-20	16
50	40	67,0	31	24	106 ± 0,7	6	8,0	7,5	G 1/4	1/4" NPT	3,1	M 16x1,5	5/8-18	20
63	45	78,0	38	24	121 ± 0,8	6	8,0	11,0	G 3/8	3/8" NPT	3,1	M 16x1,5	5/8-18	20
80	45	100,0	38	30	128 ± 0,8	-	10,0	11,0	G 3/8	3/8" NPT	3,1	M 20x1,5	3/4-16	25
100	55	120,0	42	35	138 ± 1,0	-	10,0	17,0	G 1/2	1/2" NPT	3,1	M 20x1,5	3/4-16	25
125	60	145,0	54	45	160 ± 1,1	-	13,0	27,5	G 1/2	1/2" NPT	3,1	M 27x2	1-12	32

Piston Ø	AM	BG min.	KV	KW	PL	RT	SW	TG	VA	VD	WH	ZJ
32	22	16	17	5,0	16	M6	10	32,5 ± 0,5	3,5	4	26	120
40	24	16	18	8,0	17	M6	13	38,0 ± 0,5	3,5	4	30	135
50	32	16	24	8,0	16	M8	17	46,5 ± 0,6	4,0	4	37	143
63	32	16	24	8,0	19	M8	17	56,5 ± 0,7	4,0	4	37	158
80	40	19	30	10,0	19	M 10	22	72,0 ± 0,7	4,0	4	46	174
100	40	19	30	10,0	19	M 10	22	89,0 ± 0,7	4,0	4	51	189
125	54	23	41	13,5	20	M12	27	110 ± 1,1	6,0	6	65	225

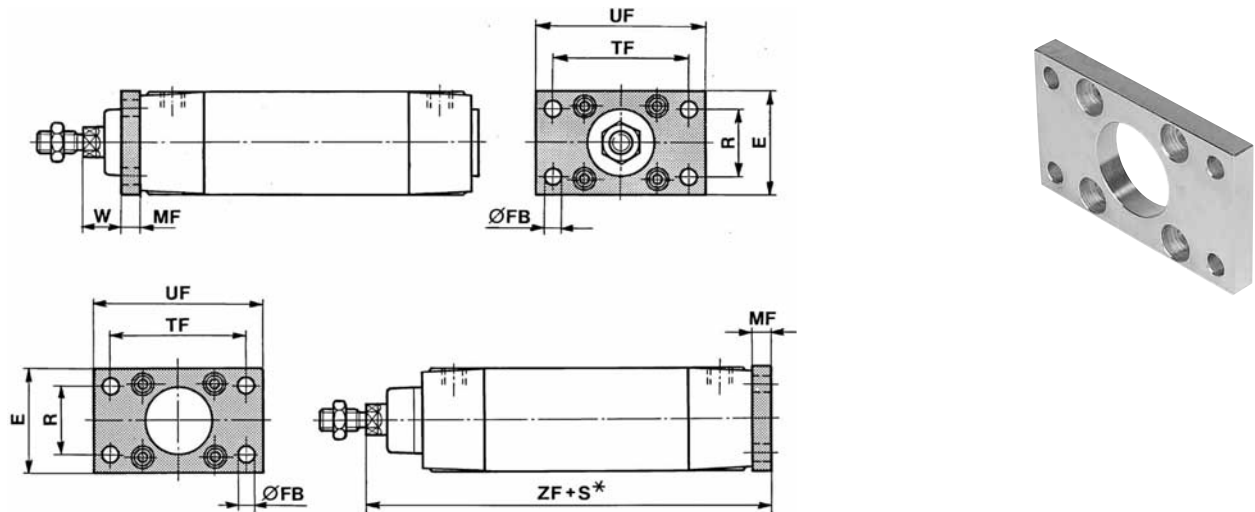
Profile cylinders, Series ICL

Mounting accessories

Rexroth
Bosch Group

★ **Front flange or rear flange (MF1/MF2)**

ISO, VDMA, NFE



S* = Stroke

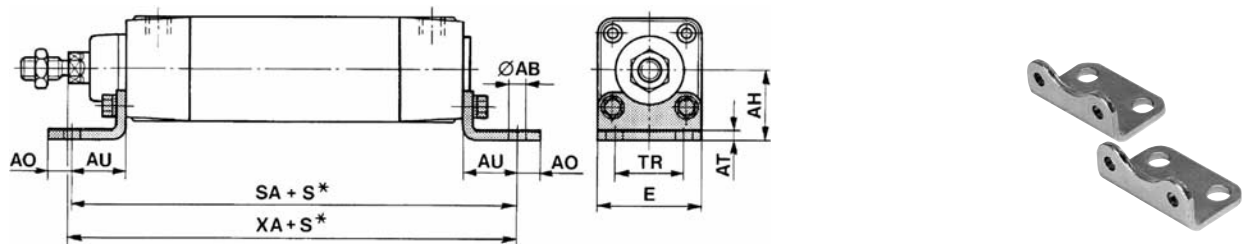
Piston dia. [mm]	Part no.	E	R JS 14	W	FB H 13	MF JS 14	TF JS 14	UF	ZF	Weight [kg] (lbs)
32	5230006012	50	32	16 ±1,6	7	10	64	80	130	0,3 (0.7)
40	5231006012	55	36	20 ±1,6	9	10	72	90	145	0,4 (0.9)
50	5232006012	65	45	25 ±1,6	9	12	90	110	155	0,5 (1.1)
63	5233006012	75	50	25 ±2	9	12	100	125	170	1,0 (2.2)
80	5234006012	100	63	30 ±2	12	16	126	154	190	1,7 (3.7)
100	5235006012	120	75	35 ±2	14	16	150	186	205	2,6 (5.7)
125	5236006012	150	90	45	16	20	180	220	245	4,1 (9.0)

Material: Zinc plated steel.

Supplied complete with mounting screws in zinc plated steel for attachment to the cylinder.

★ **Angle brackets (MS1)**

ISO, VDMA, NFE



S* = Stroke

Piston dia. [mm]	Part no.	E	AB H 14	AH JS 15	AO	AT	AU ±0,2	SA	TR JS 14	XA	Weight [kg] (lbs)
32	5230000502	48	7,0	32	11	5	24	142 ±1,25	32	144	0,2 (0.4)
40	5231000502	53	9,0	36	12	5	28	161 ±1,25	36	163	0,3 (0.7)
50	5232000502	63	9,0	45	13	5	32	170 ±1,25	45	175	0,4 (0.9)
63	5233000502	73	9,0	50	13	5	32	185 ±1,6	50	190	0,6 (1.3)
80	5234000502	98	12,0	63	19	6	41	210 ±1,6	63	215	1,2 (2.6)
100	5235000502	115	14,5	71	19	6	41	220 ±1,6	75	230	1,7 (3.7)
125	5236000502	140	16,5	90	25	8	45	250	90	270	2,6 (5.7)

Material: Zinc plated steel.

Supplied complete with mounting screws in zinc plated steel for attachment to the cylinder. The mountings are delivered in pairs.

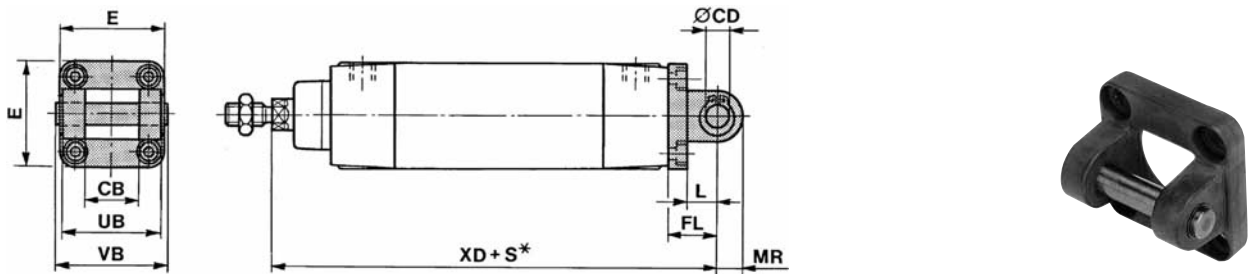
Profile cylinders, Series ICL

Mounting accessories

Rexroth
Bosch Group

▲ ★ Rear clevis (MP2)

ISO, VDMA, NFE



S* = Stroke

Piston dia. [mm]	Part no.	E	L	CB H 14	CD e 8	FL	MR	UB h 14	VB	XD	Weight [kg] (lbs)
32	3682903590	47	12	26	10	22	11	45	50	142	0,1 (0.22)
40	3682904590	54	15	28	12	25	13	52	57	160	0,2 (0.44)
50	3682905590	65	15	32	12	27	13	60	65	170	0,2 (0.44)
63	3682906590	75	20	40	16	32	17	70	76	190	0,4 (0.88)
80	3682908590	94	20	50	16	36	17	90	96	210	0,5 (1.1)
100	3682910590	112	25	60	20	41	21	110	117	230	0,9 (1.98)

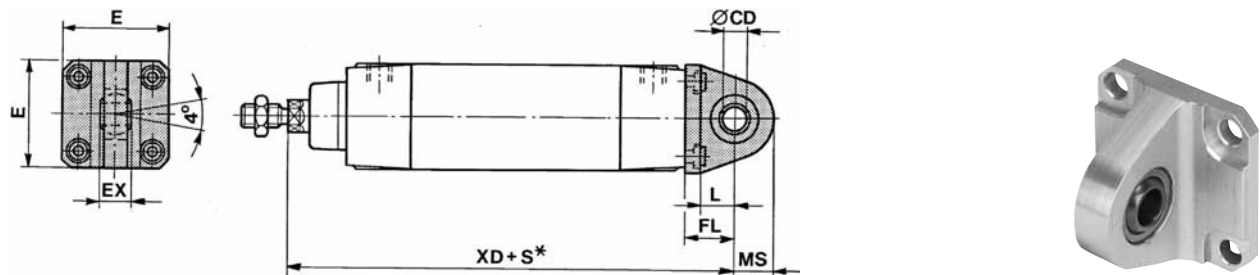
Material: Corrosion-resistant design in anodized aluminum, lubrication-free.

This mounting together with a rear eye form a complete pivot mounting.

The mounting is supplied complete with pivot pin, circlips and screw, all in stainless steel.

▲ ★ Rear eye with ball joint (M36)

from 80 mm dia. as per ISO VDMA



S* = Stroke

Piston dia. [mm]	Part no.	E	L	CD H 7	EX	FL	MS	XD	Weight [kg] (lbs)
32	2798060320	46	16	10	14	22	17	142	0,1 (0.2)
40	2798060400	55	17	12	16	25	20	160	0,2 (0.4)
50	2798060500	62	18	12	16	27	22	170	0,3 (0.7)
63	2798060630	80	21	16	21	32	25	190	0,4 (0.9)
80	2798060800	80	24	16	21	36	30	210	0,5 (1.1)
100	2798061000	114	26	20	25	41	32	230	0,9 (2.0)

Materials: Anodized aluminum with a steel ball joint, lubrication-free.

The mounting is supplied complete with mounting screws for attachment to the cylinder.

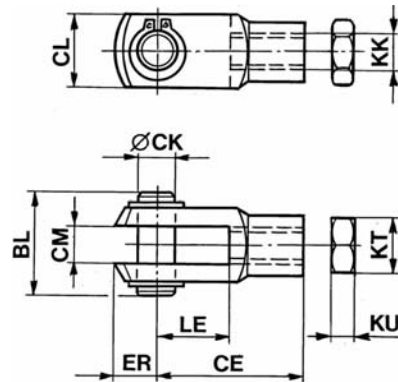
Profile cylinders, Series ICL

Accessories - Metric

Rexroth
Bosch Group

▲ ★ Rod clevis in stainless steel (P2)

ISO 8140

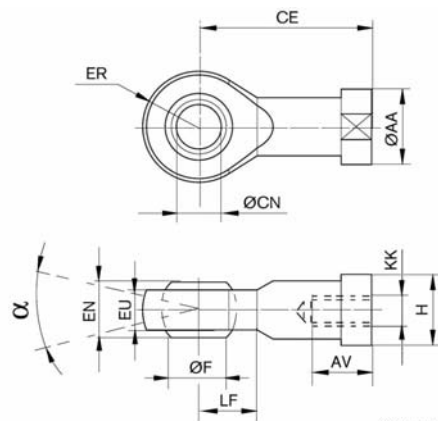


Thread KK	Part no. ¹⁾	BL	CE	CK e 8	CL	CM B 12	ER	LE	KT	KU	Weight [kg] (lbs)
M10x1,25	3590502000	25	40	10	20	10	12	20	17	5	0,1 (0.2)
M12x1,25	3590504000	30	48	12	24	12	14	24	19	8	0,2 (0.4)
M16x1,5	3590505000	38	64	16	32	16	19	32	24	8	0,4 (0.9)
M20x1,5	3590508000	47	80	20	40	20	25	40	30	10	0,7 (1.5)

Material: Stainless steel (BS 303 S 31).

¹⁾ The mounting has a lock nut to lock it in the set position.

▲ ★ Ball eye rod end in stainless steel (P6)



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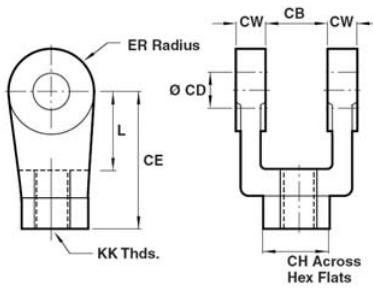
Piston Ø [mm]	Thread KK	Part no.	AA	AV	CE	CN H 7	EN 0/-0,1	EU	ER max.	F	H	LF	α°	Weight [kg] (lbs)
32	M 10x1,25	2798030100	19	22	43	10	14	10,5	14,0	12,85	17	15	26	0,08
40	M12x1,25	2798030120	22	25	50	12	16	12	15,5	16,8	19	17	26	0,11
50, 63	M16x1,5	2798030160	27	32	64	16	21	15	20,5	19,27	22	23	30	0,22
80, 100	M 20x1,5	2798030200	34	37	77	20	25	18	24,0	24,49	32	26	30	0,40

Profile cylinders, Series ICL

Accessories - Inch

Rexroth
Bosch Group

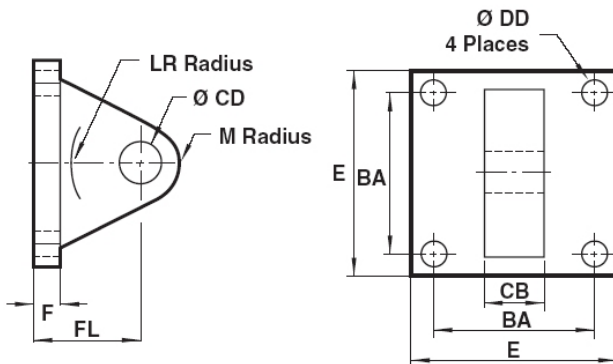
▲ ★ **Rod Clevis (can also be ordered separately)**



Thread KK	Part number	CB	CD	CW	CH	L	CE	ER	Weight [kg] (lbs)
3/8-24	R432002619	0.75	0.50	1.50	0.50	0.75	0.75	0.75	0,08 (0.18)
1/2-20	R432002620	0.75	0.50	1.50	0.50	0.75	0.75	0.75	0,15 (0.36)
5/8-18	R432002621	1.25	0.75	2.38	0.62	1.25	1.25	1.25	0,31 (0.68)
3/4-16	R432002622	1.25	0.75	2.38	0.62	1.25	1.25	1.25	0,45 (0.99)
1-12	R432002623	1.50	1.00	3.12	0.75	1.50	1.50	1.50	0,96 (2.12)

Material: 304 Stainless Steel

▲ ★ **Eye Bracket (can also be ordered separately)**



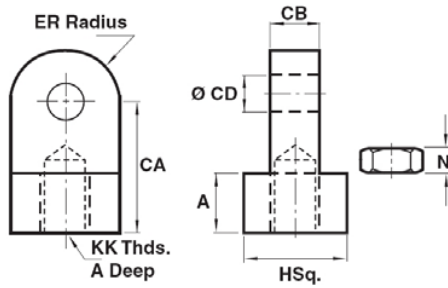
Part number	BA	CB	CD	DD	E	F	FL	LR	Weight [kg] (lbs)
R432003005	1.62	0.75	0.50	0.41	2.50	0.38	0.38	0.75	0,08 (0.18)
R432003006	2.56	1.25	0.75	0.53	3.50	0.62	0.62	1.25	0,15 (0.36)
R432003007	3.25	1.50	1.00	0.66	4.50	1.25	0.75	1.50	0,31 (0.68)

Material: 304 Stainless Steel

Profile cylinders, Series ICL

Accessories - Inch

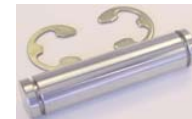
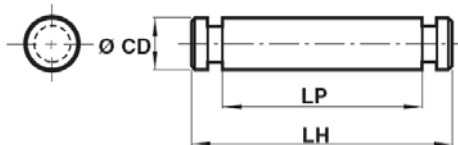
▲ ★ Rod Eye with nut can also be ordered separately)



Thread KK	Part number	CB	CD	CA	A	H sq.	ER	N	Weight [kg] (lbs)
3/8-24	R432003002	0.375	0.38	0.88	0.50	0.75	0.38	0.22	0,08 (0.18)
1/2-20	R432003003	0.375	0.38	0.88	0.50	0.75	0.38	0.31	0,15 (0.36)

Material: 304 Stainless Steel

▲ ★ Pivot Pin (can also be ordered separately)



Part number	CD	LP	LH	Weight [kg] (lbs)
R432002616	0.50	1.88	2.22	0,08 (0.18)
R432002617	0.75	2.75	3.12	0,15 (0.36)
R432002618	1.00	3.25	3.75	0,31 (0.68)

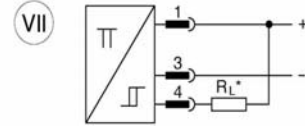
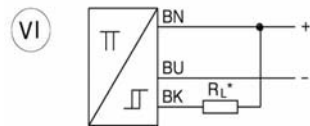
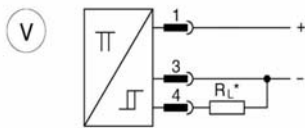
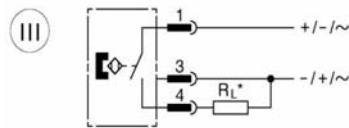
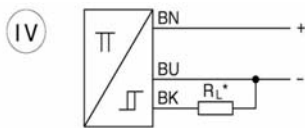
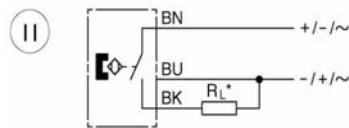
Material: 304 Stainless Steel. Includes retaining clips.

Profile cylinders, Series ICL

Accessories

Rexroth
Bosch Group

▲ ★ **Cylinder switch Series ST6, Micro, electrically (Reed contact) and electronic (contactless)**



0011961



BN = brown, BK = black, BU = blue

Fig.	Contact type	Symbol	Length of cable [m] Material	Con- nector	Ambient temperature range	Operating voltage	Switching current max. [A]	Part no.
B	Reed	II (3-wire)	3 PUR	-	-20 °C to +70 °C (-4 °F to +158 °F)	AC/DC 10 ... 30 V	AC/DC 0,13	0830100629
B	Reed	II (3-wire)	5 PUR	-	-20 °C to +70 °C (-4 °F to +158 °F)	AC/DC 10 ... 30 V	AC/DC 0,13	0830100630
A	Reed	III (3-wire)	0,3 PUR	M8x1	-20 °C to +70 °C (-4 °F to +158 °F)	AC/DC 10 ... 30 V	AC/DC 0,13	0830100488
C	Reed	III (3-wire)	0,3 PUR	M12x1	-20 °C to +70 °C (-4 °F to +158 °F)	AC/DC 10 ... 30 V	AC/DC 0,13	0830100432
D	Reed	III (3-wire)	0,3 PUR	M8x1	-20 °C to +70 °C (-4 °F to +158 °F)	AC/DC 10 ... 30 V	AC/DC 0,13	0830100434
D	Reed	III (3-wire)	0,5 PUR	M8x1	-20 °C to +70 °C (-4 °F to +158 °F)	AC/DC 10 ... 30 V	AC/DC 0,13	0830100436
B	contactless PNP	IV (3-wire)	3 PUR	-	-10 °C to +70 °C (+14 °F to +158 °F)	DC 10 ... 30 V	DC 0,1	0830100631
B	contactless PNP	IV (3-wire)	5 PUR	-	-10 °C to +70 °C (+14 °F to +158 °F)	DC 10 ... 30 V	DC 0,1	0830100632
A	contactless PNP	V (3-wire)	0,3 PUR	M8x1	-10 °C to +70 °C (+14 °F to +158 °F)	DC 10 ... 30 V	DC 0,1	0830100489
C	contactless PNP	V (3-wire)	0,3 PUR	M12x1	-10 °C to +70 °C (+14 °F to +158 °F)	DC 10 ... 30 V	DC 0,1	0830100433
D	contactless PNP	V (3-wire)	0,3 PUR	M8x1	-10 °C to +70 °C (+14 °F to +158 °F)	DC 10 ... 30 V	DC 0,1	0830100435
D	contactless PNP	V (3-wire)	0,5 PUR	M8x1	-10 °C to +70 °C (+14 °F to +158 °F)	DC 10 ... 30 V	DC 0,1	0830100437
B	contactless NPN	VII (3-wire)	3 PUR	-	-10 °C to +70 °C (+14 °F to +158 °F)	DC 10 ... 30 V	DC 0,1	0830100633
B	contactless NPN	VII (3-wire)	5 PUR	-	-10 °C to +70 °C (+14 °F to +158 °F)	DC 10 ... 30 V	DC 0,1	0830100634
A	contactless NPN	VII (3-wire)	0,3 PUR	M8x1	-10 °C to +70 °C (+14 °F to +158 °F)	DC 10 ... 30 V	DC 0,1	0830100430
C	contactless NPN	VII (3-wire)	0,3 PUR	M12x1	-10 °C to +70 °C (+14 °F to +158 °F)	DC 10 ... 30 V	DC 0,1	0830100431

A = Plug-in connection M8x1; B = Cable connection; C = Plug-in connection M12x1; D = Plug-in connection M8x1 with knurled screw

Profile cylinders, Series ICL

Accessories

Rexroth
Bosch Group

Part no.	Switching capacity max.	Rs [Ω]	Voltage drop U at I _{max} .	Operational current (without load) not switched	Operational current (without load) switched	Switching frequency max.	Short-circuit protection	Polarity safe
0830100629	3 W / 5 VA	15	≤ 3,6 V	–	–	< 300 Hz	no	yes
0830100630	3 W / 5 VA	15	≤ 3,6 V	–	–	< 300 Hz	no	yes
0830100488	3 W / 5 VA	15	≤ 3,6 V	–	–	< 300 Hz	no	yes
0830100432	3 W / 5 VA	15	≤ 3,6 V	–	–	< 300 Hz	no	yes
0830100434	3 W / 5 VA	15	≤ 3,6 V	–	–	< 300 Hz	no	yes
0830100436	3 W / 5 VA	15	≤ 3,6 V	–	–	< 300 Hz	no	yes
0830100631	–	–	≤ 2,5 V	< 20 mA	< 30 mA	< 1 kHz	yes	yes
0830100632	–	–	≤ 2,5 V	< 20 mA	< 30 mA	< 1 kHz	yes	yes
0830100489	–	–	≤ 2,5 V	< 20 mA	< 30 mA	< 1 kHz	yes	yes
0830100433	–	–	≤ 2,5 V	< 20 mA	< 30 mA	< 1 kHz	yes	yes
0830100435	–	–	≤ 2,5 V	< 20 mA	< 30 mA	< 1 kHz	yes	yes
0830100437	–	–	≤ 2,5 V	< 20 mA	< 30 mA	< 1 kHz	yes	yes
0830100633	–	–	≤ 2,5 V	< 20 mA	< 30 mA	< 1 kHz	yes	yes
0830100634	–	–	≤ 2,5 V	< 20 mA	< 30 mA	< 1 kHz	yes	yes
0830100430	–	–	≤ 2,5 V	< 20 mA	< 30 mA	< 1 kHz	yes	yes
0830100431	–	–	≤ 2,5 V	< 20 mA	< 30 mA	< 1 kHz	yes	yes

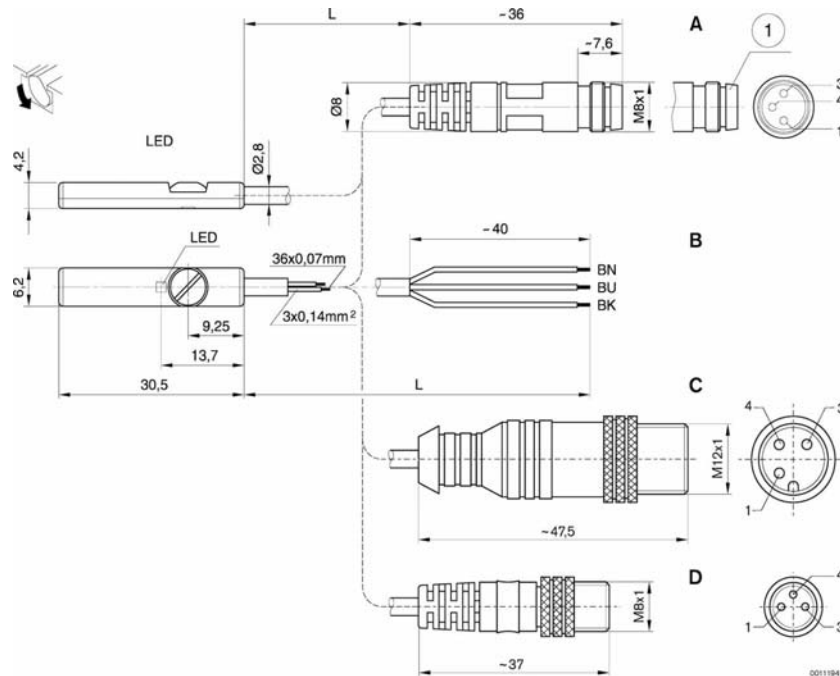
General characteristics:

- Degree of protection: IP 67 - IEC 60529 (DIN VDE 0470)
- Switching point accuracy (temperature = constant): ± 0,1 mm
- Indicator: LED (yellow = operating status: switched)
- Materials, body: polyamide

Reed:

- Rs = protective resistor for reed contact
- Shock resistance max.: 30 g / 11 msec (contact closes)
- Vibration resistance: 10–55 Hz, 1 mm
- Switching response times ON / OFF: ~ 0,5 msec / ~ 0,1 msec

Approximate figures for hysteresis, response travel and overrun speed, see last page in section "Cylinder switches".



(1) Plug-in connection can be combined with socket coupling snap connection 6.5 mm dia.
BN = brown, BK = black, BU = blue

★ Sensor mounting

Part no.
R402000040

Material: anodized aluminum

Modular Plug-In Pneumatic Valve Family

Clean ISO Pneumatic Cylinder Family

Light
Wash-down
IP65/67



Series HF03-LG

- Flows to 0.7 Cv
- Integrated bus electronics
- Flexible, modular design
- Low power consumption 0.35 W



Series ICL

- Anodized aluminum
- Smooth surfaces
- Bore sizes 32mm to 125mm
- Stainless steel piston rod, screws, etc.

High Pressure
Wash-down
IP69K
(to 1450 psi)



Series CL03 CleanLine

- Flows to 0.85 Cv
- Unmatched wash-down rating
- Polymer and stainless steel
- Highest corrosion resistance
- Eliminates expensive cabinets
- Mounts closer to cylinders to speed up machinery



Series ICS-D2

- All 304 stainless steel
- Harsh wash-down applications
- Ultimate hygienic design
- Edible grease
- Male cushion screw, clean nose
- Bore sizes 32mm to 100mm



Series ICS-D1

- All 316 stainless steel
- Extreme wash-down applications
- Ultimate hygienic design
- Edible grease
- Male cushion screw, clean nose
- Bore sizes 32mm to 100mm

NOTICES TO PRODUCT USERS

1. WARNING: FLUID MEDIA

Bosch Rexroth pneumatic devices are designed and tested for use with filtered, clean, dry, chemical free air at pressures and temperatures within the specified limits of the device. For use with media other than air or for human life support systems, Bosch Rexroth must be consulted. Hydraulic cylinders are designed for operation with filtered, clean, petroleum based hydraulic fluid; operation using fire-resistant or other special types of fluids may require special packing and seals. Consult the factory.

2. WARNING: MATERIAL COMPATIBILITY

Damage to product seals or other parts caused by the use of non-compatible lubricants, oil additives or synthetic lubricants in the air system compressor or line lubrication devices voids Bosch Rexroth's warranty and can result in product failure or other malfunction. See lubrication recommendations below.

AIR LINE LUBRICANTS! In service higher than 18 cycles per minute or with continuous flow of air through the device, an air line lubricator is recommended. * (Do not use line lubrication with vacuum products.) However, the lubricator must be maintained since the oil will wash out the grease, and lack of lubrication will greatly shorten the life expectancy. The oils used in the lubricator must be compatible with the elastomers in the device. The elastomers are normally BUNA-N, NEOPRENE, VITON, SILICONE and HYTREL. Bosch Rexroth recommends the use of only petroleum-based oils without synthetic additives, and with an aniline point between 180° and 210° F.

COMPRESSOR LUBRICANTS! All compressors (with the exception of special "oil free" units) pass oil mist or vapor from the internal crankcase lubricating system through to the compressed air. Since even small amounts of non-compatible lubricants can cause severe seal deterioration (which could result in component and system failure) special care should be taken in selecting compatible compressor lubricants. It is recommended that users review the National Fluid Power Association "Recommended Guide Lines For Use Of Synthetic Lubricants In Pneumatic Fluid Power Systems" (NFPA T1-1978).

3. WARNING: INSTALLATION AND MOUNTING

The user of these devices must conform to all applicable electrical, mechanical, piping and other codes in the installation, operation or repair of these devices.

INSTALLATION! Do not attempt to install, operate or repair these devices without proper training in the technique of working on pneumatic or hydraulic systems and devices, unless under trained supervision. Compressed air and hydraulic systems contain high levels of stored energy. Do not attempt to connect, disconnect or repair these products when system is under pressure. Always exhaust or drain the pressure from system before performing any service work. Failure to do so can result in serious personal injury.

MOUNTING! Devices should be mounted and positioned in such manner that they cannot be accidentally operated.

4. WARNING: APPLICATION AND USE OF PRODUCTS

The possibility does exist for any device or accessory to fail to operate properly through misuse, wear or malfunction. The user must consider these possibilities and should provide appropriate safe guards in the application or system design to prevent personal injury or property damage in the event of malfunction.

5. WARNING: CONVERSION, MAINTENANCE AND REPAIR

When a device is disassembled for conversion to a different configuration, maintenance or repair, the device must be tested for leakage and proper operation after being reassembled and prior to installation.

MAINTENANCE AND REPAIR! Maintenance periods should be scheduled in accordance with frequency of use and working conditions. All Bosch Rexroth products should provide minimum of 1,000,000 cycles of maintenance free service when used and lubricated as recommended. However, these products should be visually inspected for defects and given an "in system" operating performance and leakage test once a year. Where devices require major repair as result of the one million cycles, one year, or routine inspection, the device must be disassembled, cleaned, inspected, parts replaced as required, rebuilt and tested for leakage and proper operation prior to installation. See individual catalogs for specific cycle life estimates.

6. PRODUCT CHANGES

Product changes including specifications, features, designs and availability are subject to change at any time without notice. For critical dimensions or specifications, contact factory.

*Many Bosch Rexroth pneumatic components can operate with or without air line lubrication; see individual sales catalogs for details.

--Refer to the appropriate service catalog for parts and service information.

LIMITATIONS OF WARRANTIES & REMEDIES

Bosch Rexroth warrants its products sold by it to be free from defects in material and workmanship to the following:

For twelve months after shipment Bosch Rexroth will repair or replace (F.O.B. our works), at its option, any equipment which under normal conditions of use and service proves to be defective in material or workmanship at no charge to the purchaser. No charge will be made for labor with respect to defects covered by this Warranty, provided that the work is done by Bosch Rexroth or any of its authorized service facilities. However, this Warranty does not cover expenses incurred in the removal and reinstallation of any product, nor any downtime incurred, whether or not proved defective.

All repairs and replacement parts provided under this Warranty policy will assume the identity, for warranty purposes, of the part replaced, and the warranty on such replacement parts will expire when the warranty on the original part would have expired. Claims must be submitted within thirty days of the failure or be subject to rejection.

This Warranty is not transferable beyond the first using purchaser. Specifically, excluded from this Warranty are failures caused by misuse, neglect, abuse, improper operation or filtration, extreme temperatures, or unauthorized service or parts. This Warranty also excludes the use of lubricants, fluids or air line additives that are not compatible with seals or diaphragms used in the products. This Warranty sets out the purchaser's exclusive remedies with respect to products covered by it, whether for negligence or otherwise. Neither, Bosch Rexroth nor any of its affiliates will be liable for consequential or incidental damages or other losses or expenses incurred by reason of the use or sale of such products. Our liability (except as to title) arising out of the sale, use or operation of any product or parts, whether on warranty, contract or negligence (including claims for consequential or incidental damage) shall not in any event exceed the cost of replacing the defective products and, upon expiration of the warranted period as herein provided, all such liability is terminated. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, WHETHER FOR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE. No attempt to alter, amend or extend this Warranty shall be effective unless authorized in writing by an officer of Bosch Rexroth Corporation.

Bosch Rexroth reserves the right to discontinue manufacture of any product, or change product materials, design or specifications without notice.

Bosch Rexroth Corporation
Pneumatics
1953 Mercer Road
Lexington, KY 40511-1021
Telephone (859) 254-8031
Facsimile (859) 254-4188
pneumatics@boschrexroth-us.com
www.boschrexroth-us.com

International offices:

Asia:

China	Russia
India	Singapore
Japan	South Korea
Malaysia	

Australia

Europe:

Austria	Netherlands
Belgium	Norway
Bulgaria	Poland
Czech Republic	Portugal
Denmark	Romania
Finland	Slovakia
France	Spain
Germany	Sweden
Greece	Switzerland
Hungary	Turkey
Italy	Ukraine
	United Kingdom

North America:

Canada	United States
Mexico	

South America:

Argentina	Venezuela
Brazil	

**Factory Automation
Regional sales offices:**

Central

Bosch Rexroth Corporation
5150 Prairie Stone Parkway
Hoffman Estates, IL 60192-3707
Telephone (847) 645-3600
Facsimile (847) 645-0804

Great Lakes

Bosch Rexroth Corporation
1701 Harmon Road
Auburn Hills, MI 48326-1549
Telephone (248) 393-3330
Facsimile (248) 393-2893

Northeast

Bosch Rexroth Corporation
99 Rainbow Road
East Grandby, CT 06026-0000
Telephone (860) 844-8377
Facsimile (860) 844-8595

Bosch Rexroth Corporation
2315 City Line Road
Bethlehem, PA 18017-2131
Telephone (610) 694-8300
Facsimile (610) 694-8467

Southeast

Bosch Rexroth Corporation
14001 South Lake Drive
Charlotte, NC 28273-5544
Telephone (704) 583-4338
Facsimile (704) 583-0523

West

Bosch Rexroth Corporation
11 Goddard
Irvine, CA 92618-4600
Telephone (949) 450-2777
Facsimile (949) 450-2790

North American offices:

Bosch Rexroth Corporation
Corporate Headquarters
5150 Prairie Stone Parkway
Hoffman Estates, IL 60192-3707
Telephone (847) 645-3600
Facsimile (847) 645-0804

Bosch Rexroth Corporation
Industrial Hydraulics
2315 City Line Road
Bethlehem, PA 18017-2131
Telephone (610) 694-8300
Facsimile (610) 694-8467

Bosch Rexroth Corporation
Electric Drives and Controls
5150 Prairie Stone Parkway
Hoffman Estates, IL 60192-3707
Telephone (847) 645-3600
Facsimile (847) 645-6201

Bosch Rexroth Corporation
Linear Motion and
Assembly Technologies
816 E. Third Street
Buchanan, MI 49107
Telephone (269) 695-0151
Facsimile (269) 695-5363

14001 South Lakes Drive
Charlotte, NC 28273
Telephone (800) 438-5983
Facsimile (704) 583-0523

Bosch Rexroth Corporation
Mobile Hydraulics
145 Southchase Boulevard
Fountain Inn, SC 29644-9018
Telephone (864) 967-2777
Facsimile (864) 962-5338

Bosch Rexroth Canada
3426 Mainway Drive
Burlington, Ontario L7M 1A8
Telephone (905) 335-5511
Facsimile (905) 335-4184
www.boschrexroth.ca

Bosch Rexroth, S.A. de C.V.
Calle Neptuno # 72
Unidad Industrial Vallejo
CP 07700 Mexico, D.F.
Telephone (555) 754-1711
Facsimile (555) 752-5943

Further contacts:
www.boschrexroth.com/addresses

The data specified herein only serves to describe the product. No statements concerning a certain condition or suitability for a certain application can be derived from our information. The given information does not release the user from obligation of own judgment and verification. It must be remembered that our products are subject to a natural process of wear and aging.

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Printed in the United States
SC-200.65
May 2007