

Technical data sheet

Pneumatic part-turn actuator EB-SYD
double-acting



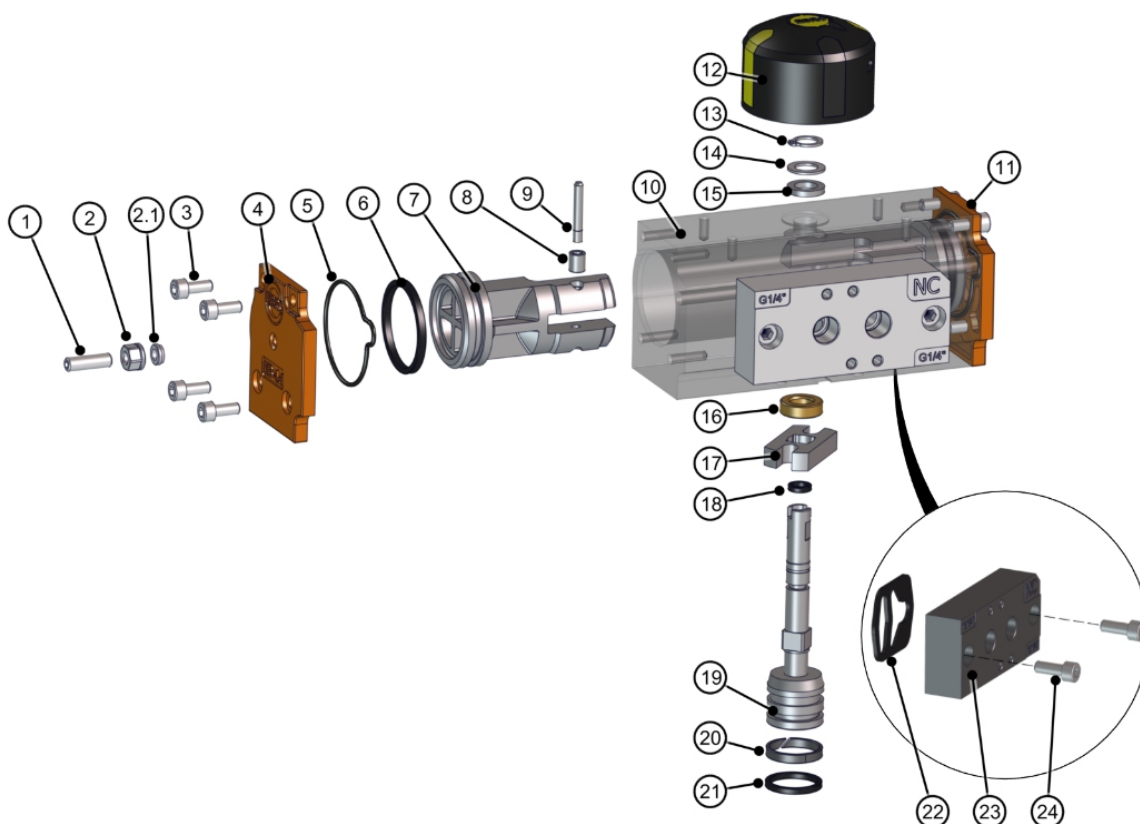
TECHNICAL DATA SHEET

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Type	Main dimensions [mm]						Max. weight [kg]	
	ØF	G		H	J	K		L
		Standard	Special					
EB 26.1	F16/F25*	55		350	336	168	896	130.2
* F25: max. 4,000 Nm can be transferred (up to 8,000 Nm with assembly flange) T (depth) = Minimum G+2 mm Other interfaces on request.								

Material specifications & bill of materials

EB-SYD 4.1



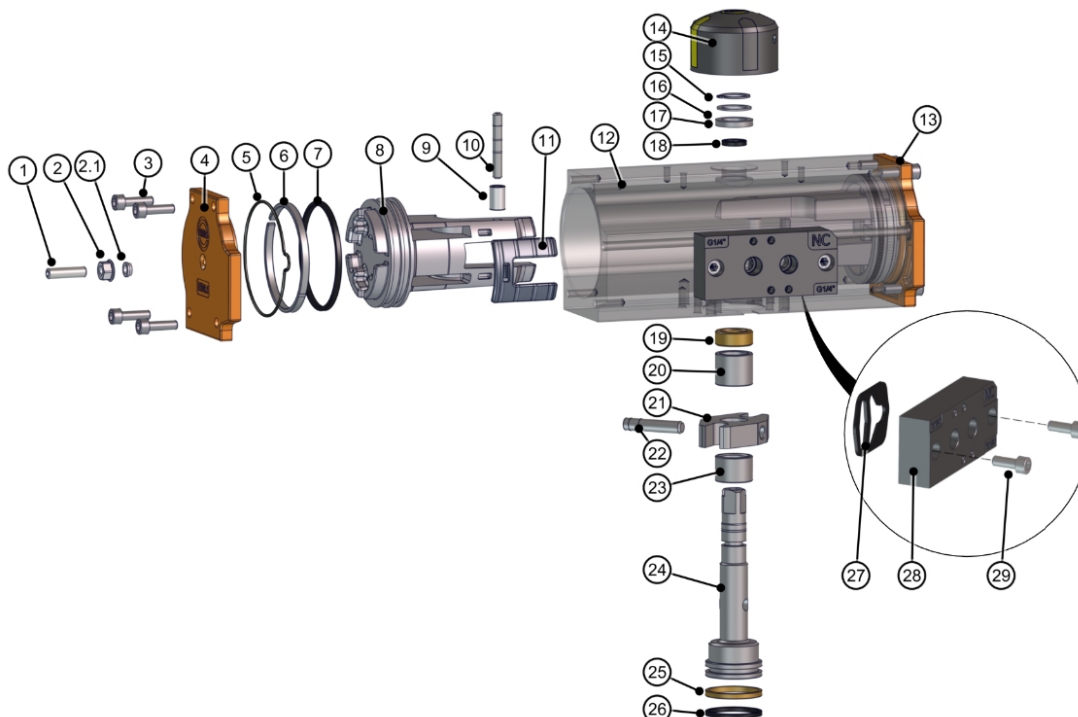
Item	Naming	Piece	Material	Item	Naming	Piece	Material
1	Stop screw	2	Stainless steel	13*	Retaining ring	1	Spring steel
2	Sealing nut	2	Stainless steel	14	Adjusting washer	1	Stainless steel
2.1	Seal	2	PTFE	15*	Thrust washer	1	Techn. plastic
3	Cylinder head screw	8	Stainless steel	16	Shaft bearing top	1	Sintered bronze
4	Cylinder cover L EB-SYD	1	Aluminum	17	Rocker arm	1	Sintered steel
5*	Gasket	2	NBR	18*	O-ring upper shaft	1	NBR
6*	Piston O-ring	2	NBR	19	Drive shaft	1	Steel
7	Cylinder piston	2	Techn. plastic	20	Shaft bearing guide strip	1	Techn. plastic
8	Roller	2	Steel	21*	O-ring lower shaft	1	NBR
9	Piston pin	2	Steel	22*	Gasket	1	NBR
10	Cylinder barrel	1	Aluminum	23	Connection plate	1	Aluminum
11	Cylinder cover R EB-SYD	1	Aluminum	24	Cylinder head screw	2	Stainless steel
13	Position indicator	1	Techn. polymer				

* included in the default sealing kit

PNEUMATIC PART-TURN ACTUATOR EB-SYD
DOUBLE-ACTING PART-TURN ACTUATOR
 TECHNICAL DATA SHEET



EB-SYD 5.1-12.1



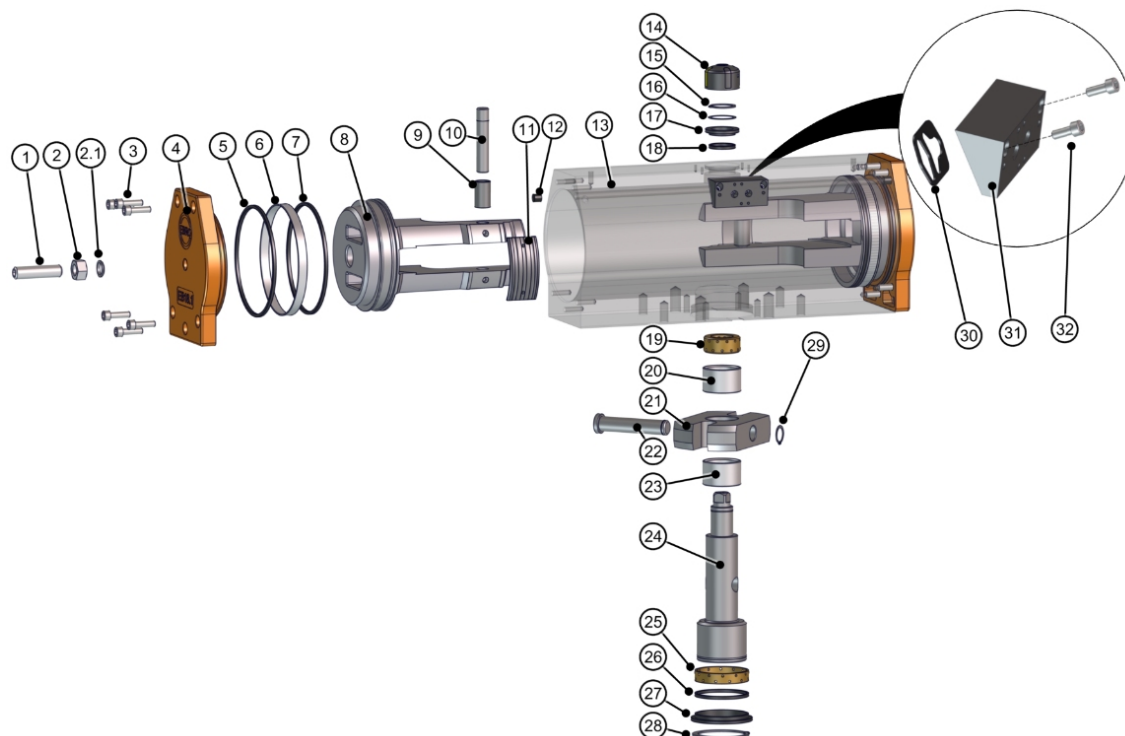
Item	Naming	Piece	Material	Item	Naming	Piece	Material
1	Stop screw	2	Stainless steel	15*	Retaining ring	1	Spring steel
2	Sealing nut	2	Stainless steel	16	Adjusting washer	1	Stainless steel
2.1	Seal	2	PTFE	17*	Thrust washer	1	Techn. polymer
3	Cylinder head screw	8	Stainless steel	18*	O-ring upper shaft	1	NBR
4	Cylinder cover L EB-SYD	1	Aluminum	19	Shaft bearing top	1	Sintered bronze
5*	Gasket	2	NBR	20	Piston bearing top	1	Techn. polymer
6	Piston guide band	2	Techn. polymer	21	Rocker arm	1	Sintered steel
7*	Piston O-ring	2	NBR	22	Rocker arm pin	1	Tempered steel
8	Cylinder piston	2	Die-cast	23	Piston bearing bottom	1	Techn. polymer
9	Roller	2	Steel	24	Drive shaft	1	Steel
10	Piston pin	2	Steel	25	Shaft bearing bottom	1	Sintered bronze
11	Sliding pad	2	Techn. polymer	26*	O-ring lower shaft	1	NBR
12	Cylinder barrel	1	Aluminum	27*	Gasket	1	NBR
13	Cylinder cover R EB-SYD	1	Aluminum	28	Connection plate	1	Aluminum
14	Position indicator	1	Techn. polymer	29	Cylinder head screw	2	Stainless steel

* included in the default sealing kit

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DOUBLE-ACTING PART-TURN ACTUATOR
 TECHNICAL DATA SHEET



EB-SYD 14.1-26.1



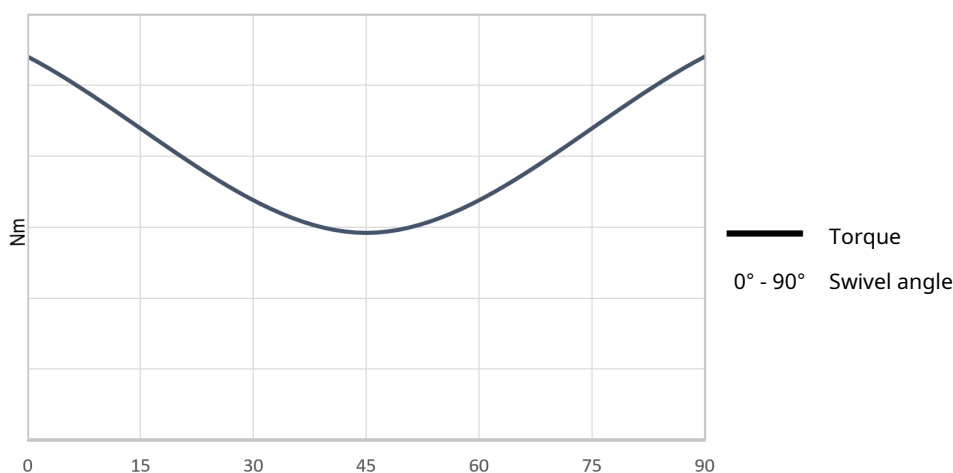
Item	Naming	Piece	Material group	Item	Naming	Piece	Material group
1	Stop screw	2	Stainless steel	17	Thrust washer top	1	Techn. polymer
2	Sealing nut	2	Stainless steel	18*	O-ring upper shaft	1	NBR
2.1	O ring	2	NBR	19	Shaft bearing top	1	Brass
3	Cylinder head screw	8-16	Stainless steel	20	Piston bearing top	1	Techn. polymer
4	Cylinder cover EB-SYD	2	Aluminum	21	Rocker arm	1	Case hardening steel
5*	Gasket	2	NBR	22	Rocker arm pin	1	Tempered steel
6	Piston guide band	2	Techn. polymer	23	Piston bearing bottom	1	Techn. polymer
7*	Piston O-ring	2	NBR	24	Drive shaft	1	Case hardening steel
8	Cylinder piston	2	Aluminum	25	Shaft bearing bottom	1	Brass
9	Roller	2	Cold-forming steel	26*	O-ring lower shaft	1	NBR
10	Piston pin	2	Case hardening steel	27	Thrust washer bottom	1	Techn. polymer
11	Sliding pad	2	Techn. polymer	28*	Retaining ring bottom	1	Spring steel
12	Sealing plug	2	NBR	29	Retaining ring	1	Spring steel
13	Cylinder barrel	1	Aluminum	30*	Gasket	1	NBR
14	Position indicator	1	Techn. polymer	31	Connection plate	1	Aluminum
15*	Retaining ring top	1	Spring steel	32	Cylinder head screw	1	Stainless steel
16	Adjusting washer	1	Stainless steel				
* included in the default sealing kit							

Torques

EB-SYD double-acting

Type	Maximal torque [Nm] at control pressure							
	2.5 bar	3 bar	4 bar	5 bar	5.5 bar	6 bar	7 bar	8 bar
EB 4.1	11	13	18	22	25	27	31	36
EB 5.1	32	38	51	63	70	76	89	101
EB 6.1	65	78	104	130	143	156	182	208
EB 8.1	104	125	166	208	229	250	292	333
EB 9.1	157	189	252	315	346	378	441	504
EB 10.1	220	265	353	441	485	530	618	706
EB 12.1	381	457	610	762	839	935	1067	1220
EB 14.1	557	668	891	1114	1226	1337	1560	1782
EB 16.1	846	1011	1348	1685	1854	2022	2359	2696
EB 18.1	1098	1317	1756	2195	2415	2634	3073	3512
EB 20.1	1541	1850	2466	3082	3391	3700	4316	4932
EB 22.1	2125	2550	3400	4250	4675	5100	5950	6800
EB 26.1	4070	4884	6512	8140	8954	9768	11396	13024

Torque curve EB-SYD



Operating times EB-SYD

	Type												
	EB 4.1	EB 5.1	EB 6.1	EB 8.1	EB 9.1	EB 10.1	EB 12.1	EB 14.1	EB 16.1	EB 18.1	EB 20.1	EB 22.1	EB 26.1
Actuating times EB-SYD in sec.*	0.25	0.25	0.35	0.45	0.55	0.70	1.00	<1.5	<1.5	<2.0	<2.0	<2.0	<2.0
* Actuating times with unthrottled air discharge and supply, 6 bar supply pressure when idle													

PNEUMATIC PART-TURN ACTUATOR EB-SYD
DOUBLE-ACTING PART-TURN ACTUATOR
 TECHNICAL DATA SHEET



Air consumption EB-SYD

	Type												
	EB 4.1	EB 5.1	EB 6.1	EB 8.1	EB 9.1	EB 10.1	EB 12.1	EB 14.1	EB 16.1	EB 18.1	EB 20.1	EB 22.1	EB 26.1
Filling volume NL/travel at 1 atm.* (1 travel = 1x opening and closing)	0.18	0.46	0.91	1.49	2.33	3.26	5.63	7.52	11.01	16.49	22.79	29.7	60.94
* Air demand = filling volume x supply pressure													

Technical features

Designation	Description												
Torque range	27 - 9768 Nm												
End position adjustment	End position “Open” or end position “Closed” can be set precisely to -8° / +3°												
Control pressure	<table><tr><td></td><td>Min.</td><td>Max.</td></tr><tr><td>bar</td><td>2.5</td><td>8</td></tr><tr><td>MPa</td><td>0.25</td><td>0.8</td></tr><tr><td>psi</td><td>36.3</td><td>116</td></tr></table>		Min.	Max.	bar	2.5	8	MPa	0.25	0.8	psi	36.3	116
	Min.	Max.											
bar	2.5	8											
MPa	0.25	0.8											
psi	36.3	116											
Control medium	Filtered compressed air or inert gases, dry or lubricated. The pressure dew point (in accordance with ISO 8573-1:2010-04, class 3) must be ≤ -20 °C or at least 10 °C below ambient temperature. The maximum particle size (in accordance with ISO 8573-1:2010-04, class 5) must not exceed 40 µm. For switching cycles ≥ 4/min: lubricate												
Temperature range	-20 °C to +80 °C (standard) -40 °C to +80 °C (low temperature) -15 °C to +120 °C (high temperature)												
Miscellaneous	Design: Scotch Yoke Rotating angle: 90° Coatings: CS3 / optional CS5M												

Standards

Designation	Description
Valve interface	DIN EN ISO 5211:2024-10
Limit switch and control valve assembly	VDI/VDE 3845 Blatt 1:2010-09 (NAMUR)
Part-turn actuators for industrial valves - basic requirements	DIN EN 15714-3:2022-12

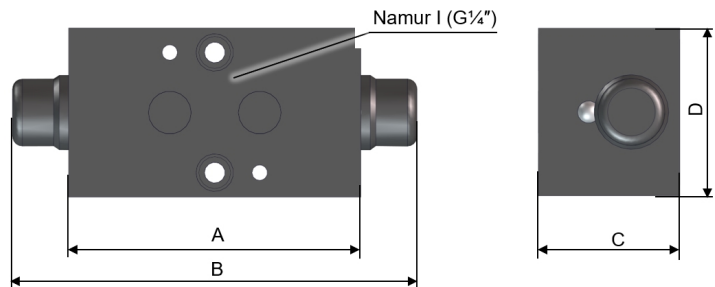
Certificates and approvals

Designation	Description
Explosion protection	ATEX (Directive 2014/34/EU)
SIL 2, SIL 3 (redundant)	IEC 61508

Option

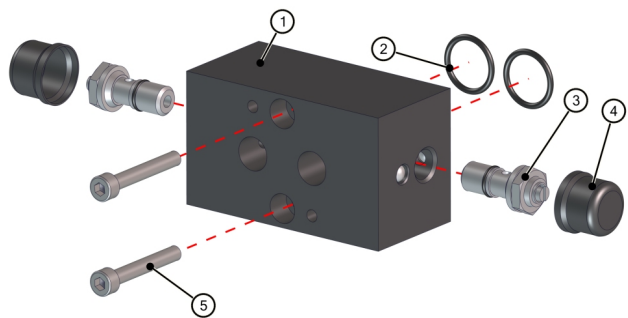
Throttle unit

Dimension sheet throttle unit



Type	Main dimensions [mm]				Weight [kg]
	A	B	C	D	
double-acting	78	108	45	45	0.39

Material specifications & bill of materials



Item	Naming	Piece	Material group	Item	Naming	Piece	Material group
1	Block	2	Aluminum	4	Protective cap	2	Plastic
2	O-ring	2	NBR	5	Cylinder head screw	2	Steel
3	Throttle	1	Brass				

Technical features

Designation	Description
Function	Double-acting throttle
Air connection	Input: NAMUR G1/4" Output: NAMUR G1/4"
Air passage	5 mm
Miscellaneous	Coating: Anodized Color: RAL 9005