

PNEUMATIC ACTUATOR EB-SYS, SINGLE-ACTING



EB-SYS single-acting pneumatic actuators are available in either "spring opens" and "spring closes" versions.

TECHNICAL DATA

Torque:	35 - 1470 Nm (based on supply pressure of 6 bar)
Limit of travel:	exactly adjustable between $\pm 3^\circ$.
Limit switches and solenoid valve mounting:	VDI / VDE 3845
Supply pressure:	min. 2,5 bar, max. 10 bar
Supply quality:	Filtered compressed air dry or lubricated. The pressure condensation point in accordance with (ISO 8573-1:2010, Class3) has to be $\geq -20^\circ\text{C}$ or 10°C under ambient temperature. The maximum particle size in accordance with (ISO 8573-1:2010, Class 7) should not exceed $40\ \mu\text{m}$. For cycles ≥ 4 /min please lubricate.
Temperature range:	-20°C to $+80^\circ\text{C}$ (standard) -40°C to $+80^\circ\text{C}$ (low temperature) -15°C to $+120^\circ\text{C}$ (high temperature)
Valve interface:	EN ISO 5211
Actuator cylinder:	high quality marine grade Aluminium alloy, hard anodized. Other coatings upon request.

FEATURES

- Maintenance-free
- Suitable for all $\frac{1}{4}$ turn valves
- Blow-out proof shaft
- Torques in agreement with EN ISO 5211
- Optical position indicator with integrated operator for limit switches and initiators
- All fasteners made of stainless steel

KEY BENEFITS

- High opening- and closing- torques produced by scotch-yoke mechanism
- Ideal sliding properties provided by low friction multiple piston guides
- Operational safety and long service life assured by precise machining of parts
- Spring cartridges ensure safe and easy maintenance without special tools



EB-SYS fitted to a valve for fail safe operations in gas applications.

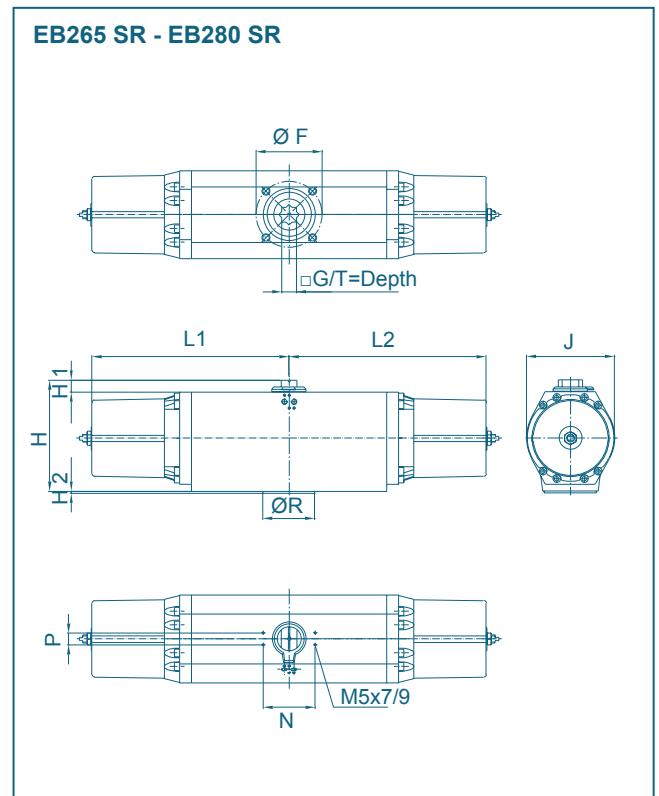
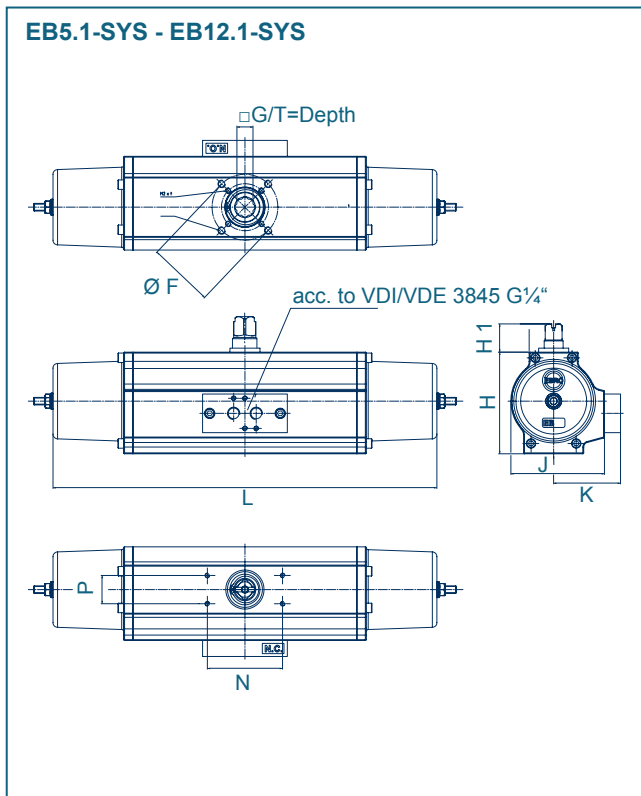
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ACTUATOR TORQUE (SINGLE-ACTING) EFF. AIR TORQUE IN NM AT CONTROL PRESSURE

Type	Spring -package	Spring		2,5 bar		3 bar		4 bar		5 bar		5,5 bar		6 bar		7 bar		8 bar	
		Md in Nm		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°
EB 5.1 SYS25	VI	12	20	20	12	26	18	39	31	51	43	58	50	64	56	77	69	89	81
EB 5.1 SYS30	V	17	27			21	11	34	24	46	36	53	43	59	49	72	62	84	74
EB 5.1 SYS40	IV	22	35					29	16	41	28	48	35	54	41	67	54	79	66
EB 5.1 SYS50	III	27	44							36	19	43	26	49	32	62	45	74	57
EB 5.1 SYS55	II	30	49									40	21	46	27	59	40	71	52
EB 5.1 SYS60	I	35	58											41	18	54	31	66	43
EB 6.1 SYS25	VI	27	45	38	20	51	33	77	59	103	85	116	98	129	111	155	137	181	163
EB 6.1 SYS30	V	35	57			43	21	69	47	95	73	108	86	121	99	147	125	173	151
EB 6.1 SYS40	IV	45	74					59	30	85	56	98	69	111	82	137	108	163	134
EB 6.1 SYS50	III	55	90							75	40	88	53	101	66	127	92	153	118
EB 6.1 SYS55	II	63	102									80	41	93	54	119	80	145	106
EB 6.1 SYS60	I	73	119											83	37	109	63	135	89
EB 8.1 SYS25	VI	40	67	64	37	85	58	127	100	168	141	189	162	210	183	252	225	293	266
EB 8.1 SYS30	V	48	82			77	43	119	85	160	126	181	147	202	168	244	210	285	251
EB 8.1 SYS40	IV	65	111					102	56	143	97	164	118	185	139	227	181	268	222
EB 8.1 SYS50	III	82	140							126	68	147	89	168	110	210	152	251	193
EB 8.1 SYS55	II	90	152									139	77	160	98	202	140	243	181
EB 8.1 SYS60	I	107	181											143	69	188	111	226	152
EB 9.1 SYS25	VI	67	102	90	55	122	87	185	150	248	213	279	244	311	276	374	339	437	402
EB 9.1 SYS30	V	84	131			105	58	168	121	231	184	262	215	294	247	257	310	419	373
EB 9.1 SYS40	IV	103	159					149	93	212	156	243	187	275	219	338	282	401	345
EB 9.1 SYS50	III	118	182							197	133	228	164	260	196	232	259	386	322
EB 9.1 SYS55	II	136	211									210	136	242	166	305	231	368	293
EB 9.1 SYS60	I	170	261											209	116	272	179	335	242
EB 10.1 SYS25	VI	89	151	132	70	176	114	264	202	353	291	397	335	441	379	529	467	618	556
EB 10.1 SYS30	V	107	182			158	83	246	171	335	260	379	304	423	348	511	436	600	525
EB 10.1 SYS40	IV	145	231					208	122	297	211	341	255	385	299	473	387	562	476
EB 10.1 SYS50	III	182	279							260	163	304	207	348	251	436	339	525	428
EB 10.1 SYS55	II	198	322									258	164	332	208	420	296	509	385
EB 10.1 SYS60	I	236	370											294	160	382	248	471	337
EB 12.1 SYS25	VI	155	224	226	139	302	233	455	386	607	538	684	615	760	691	912	843	1065	978
EB 12.1 SYS30	V	185	309			272	148	425	301	577	453	654	530	730	606	882	758	1035	911
EB 12.1 SYS40	IV	241	392					369	218	521	370	598	447	674	523	826	675	979	828
EB 12.1 SYS50	III	296	475							466	287	543	364	619	440	771	592	924	745
EB 12.1 SYS55	II	333	546									506	293	582	369	734	521	887	674
EB 12.1 SYS60	I	389	630											526	285	678	437	831	590
EB 265	40	203	280	233	149	311	239	467	419	623	599	-	-	-	-	-	-	-	-
	50	254	350	194	74	363	134	571	282	779	429	883	503	-	-	-	-	-	-
	60	305	420			233	89	389	269	545	449	623	539	701	629	-	-	-	-
	70	356	490					455	162	655	305	755	376	855	447	1055	590	-	-
	80	407	560					386	98	576	235	671	303	766	371	956	508	1147	645
	87	440	610							540	194	635	262	730	330	920	466	1110	603
	100	525	695											727	234	935	425	1143	576
EB 270	40	287	420	394	186	526	298	789	522	1053	746	-	-	-	-	-	-	-	-
	50	358	525	328	92	460	205	724	429	988	654	1252	879	-	-	-	-	-	-
	60	430	630			394	111	657	335	921	560	1053	672	1185	784	-	-	-	-
	70	501	735					613	260	882	489	1016	603	1151	718	1420	947	-	-
	80	573	840					544	164	813	393	947	507	1081	621	1350	850	1619	1079
	87	620	910							762	323	896	436	1030	550	1298	777	1566	1005
	100	720	1060											940	413	1210	640	1480	867
EB 280	40	580	847	794	372	1059	597	1590	1046	2121	1495	-	-	-	-	-	-	-	-
	50	725	1058	661	184	926	409	1458	857	1989	1306	2255	1530	-	-	-	-	-	-
	60	870	1270			793	221	1324	670	1855	1119	2120	1343	2386	1568	-	-	-	-
	70	1015	1481					1234	520	1776	978	2047	1206	2319	1435	2861	1893	-	-
	80	1160	1693					1096	328	1637	785	1907	1013	2177	1241	2718	1698	3259	2155
	87	1260	1840							1539	651	1810	881	2080	1110	2621	1569	3162	2028
	100	1470	2150											1888	833	2430	1290	2972	1747

Subject to change without notice

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Type	ØF	G***	Dimensions [mm]											Weight [kg]	
			H	H1	H2	J	K	L	L1	L2	N	P	ØR		T
EB 5.1	F04/05*	10/11/12/14	77	30	-	72	57	280	-	-	80	30	-	13/16	2,4
EB 6.1	F04/05/07*	11/12/14/16/17	91	30	-	88	65	351	-	-	80	30	-	19	4,3
EB 8.1	F05/07	12/14/16/17	108	30	-	99	71	408	-	-	80	30	-	19	6,3
EB 9.1	F07/10	17/22	120	30	-	110	78	476	-	-	80	30	-	24	10,2
EB 10.1	F07/10	14/16/17/22	128	30	-	122	82	557	-	-	80	30	-	24	12,5
EB 12.1	F10/12	17/22/24/27	156	30	-	145	93	661	-	-	80	30	-	29	21,1
EB 265	F12/16**	32/36	232	30	3	152	-	-	317	317	80	30	85	60	26,0
EB 270	F12/16/25**	32/36/46	278	30	4	220	-	-	145	510	130	30	100	60	45,0
EB 280	F12/16/25	32/36/46	278	30	5	220	-	-	510	510	130	30	130	60	68,0

* F04/F05 no combined flange available

** Topflange F16/ F25 via adaption

*** Options (Standard = **BOLD**)

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CLOSING TIME* AND AIR CONSUMPTION

Type	EB 5.1	EB 6.1	EB 8.1	EB 9.1	EB 10.1	EB 12.1	EB 265	EB 270	EB 280
Closing time EB-SYS in sec.*	0,15	0,20	0,45	0,48	0,50	0,70	<2,0	<5,0	<5,0
Filling volume NL/Hub at 1 atm:**	0,27	0,56	0,89	1,40	1,95	3,37	6,00	9,00	11,20

* closing times with unthrottled air exhaust and air supply, 6 bar control pressure and 75% load

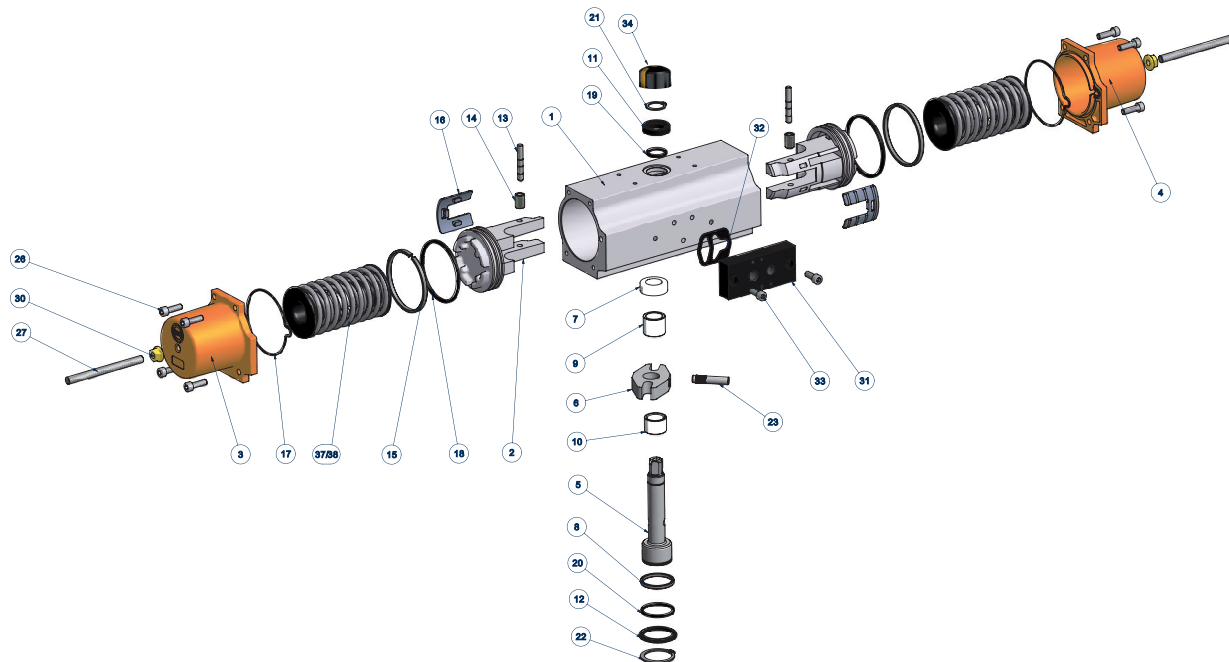
** air consumption = filling volume x control pressure

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Closing times can be adjusted up to 60 sec. by using the EBRO speed control block (depending on type of actuator).

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MATERIAL SPECIFICATION AND PARTS LIST



Only for EB-SYS (5.1 - 12.1)

COMPONENT PARTS

Pt.	Description	Qty.	Material	Pt.	Description	Qty.	Material
1	Actuator cylinder	1	EN AW 6063-T6	17D	End cover sealing	2	70 NBR
2	Piston	2	EN AC 46000	18D	Piston O-Ring	2	70 NBR
3	End cover L	1	EN AC 46000	19D	O-Ring, upper shaft	1	70 NBR
4	End cover R	1	EN AC 46000	20D	O-Ring, lower shaft	1	70 NBR
5	Drive shaft	1	16 Mn Cr 5	21D	Upper safety ring	1	CK 75
6	Yoke	1	16 Mn Cr 5	22D	Lower safety ring	1	CK 75
7	Upper shaft bearing	1	Polymer blend	23	Bolt	1	42 Cr Mo 4 V
8	Lower shaft bearing	1	Polymer blend	26	Hex. socket screw	8	A2-70
9	Upper piston bearing	1	Polymer blend	27	Stroke adjusting screw	2	A2-70
10	Lower piston bearing	1	Polymer blend	30	Seal nut	2	1.4301
11	Upper washer bearing	1	Polymer blend	31	Valve connection plate	1	EN AC 46000
12	Lower washer bearing	1	Polymer blend	32D	Shaped gasket	1	70 NBR
13	Piston bolt	2	16 Mn Cr S 5	33	Hex. socket screw	2	A2-70
14	Roller	2	100 Cr 6	34	Position indicator	1	Polymer blend
15	Guide band	2	Polymer blend	37	Spring package	1	Polymer blend
16	Slidepad	2	Polymer blend	38	Spring package	1	Polymer blend

The spare parts marked with D are integrated in the standard seal set.

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