

PNEUMATIC ACTUATOR EB-EW, SINGLE-ACTING



The series EB-EW contains single-acting pneumatic actuators in “spring opens” and “spring closes” versions.

TECHNICAL DATA

Torque:	35–1368 Nm (control air pressure 6 bar)
Final position:	adjustable to +/- 3°
Limit switch and solenoid valve mounting:	VDI / VDE 3845
Control pressure:	min. 3 bar, max. 10 bar
Control air:	clean and dry air at circuits $\geq 2/\text{min}$ please lubricate
Temperature range:	-20/+85 °C
Valve interface:	EN ISO 5211
Actuator cylinder:	Aluminium, hard anodized. Other coatings upon request.

THE ADVANTAGES

- High opening- and closing-torques caused by scotch-yoke construction principle
- Very good sliding characteristic by multiple piston guide.
- Operational safety and longservice life caused by the exact machining of actuator cylinder.

FEATURES

- Maintenance-free, continuous lubrication
- Suitability for valves with an angle of 90°
- Blow-proof shaft bearing
- Torques in agreement with EN ISO 5211
- Control pressure min. 2 bar, max. 10 bar
- Good visible elastic position indicator
- Function return by turning the supply plate:
Currentless - close
Currentless - open
- All elements of connection are made of stainless steel.

Possibilities of mounting and accesories are shown in chapter 4.3.

GENERAL APPLICATIONS

- Water and wastewater technology
- Shipbuilding
- Swimming pool technology
- Bulk handling
- Pneumatic conveying systems
- Chemical industry



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

Type	Spring moment Md F in Nm		3 bar		4 bar		5 bar		6 bar		7 bar	
	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°
EB 5	17	27	21	11	34	24	46	36	59	49	72	62
	22	35			29	16	41	28	54	41	67	54
	27	44					36	19	49	32	62	45
	30	49					33	14	46	27	59	40
	35	58							41	18	54	31
EB 6	44	71									45	18
	35	57	43	21	69	47	95	73	121	99	147	125
	45	74			59	30	85	56	111	82	137	108
	55	90					75	40	101	66	127	92
	63	102					67	28	93	54	119	80
EB 8	73	119							83	37	109	63
	90	148									92	34
	48	82	77	43	118	84	160	126	202	168	244	210
	65	111			101	55	143	97	185	139	227	181
	82	140					126	68	168	110	210	152
EB 10	90	152					118	56	160	98	202	140
	107	181							143	69	185	111
	131	223									161	69
	107	182	158	83	246	171	334	259	423	348	511	436
	145	231			208	122	296	210	385	299	473	387
EB 12	182	279					259	162	348	251	436	339
	198	322					243	119	332	208	420	296
	236	370							294	160	382	248
	290	462									328	156
	185	309	250	126	395	271	540	416	685	561	830	706
EB 265	241	392			339	188	484	333	629	478	774	623
	296	475					429	250	574	395	719	540
	333	546					392	179	537	324	682	469
	389	630							481	240	626	385
	482	784									533	231
EB 270	211	302	436	345	652	561	868	777	1084	993	1299	1208
	316	453			459	236	763	626	979	842	1194	1057
	422	603					538	263	836	639	1088	907
	459	656							709	373	1051	854
	527	754									838	445
EB 280	385	564	498	233	937	626	1267	1088	1598	1419	1928	1749
	461	676			733	376	1191	976	1522	1307	1852	1637
	541	790					964	517	1442	1193	1772	1523
	678	1003							1119	573	1635	1310
	772	1128									1331	705
EB 280	777	1138	1006	470	1890	1529	2557	2196	3224	2863	3891	3530
	931	1364			1480	759	2403	1970	3070	2637	3737	3304
	1087	1592					1952	1046	2914	2409	3581	3076
	1368	2025							2258	1156	3300	2643
	1558	2277									2686	1423

WEIGHTS, CLOSING TIME* AND AIR CONSUMPTION

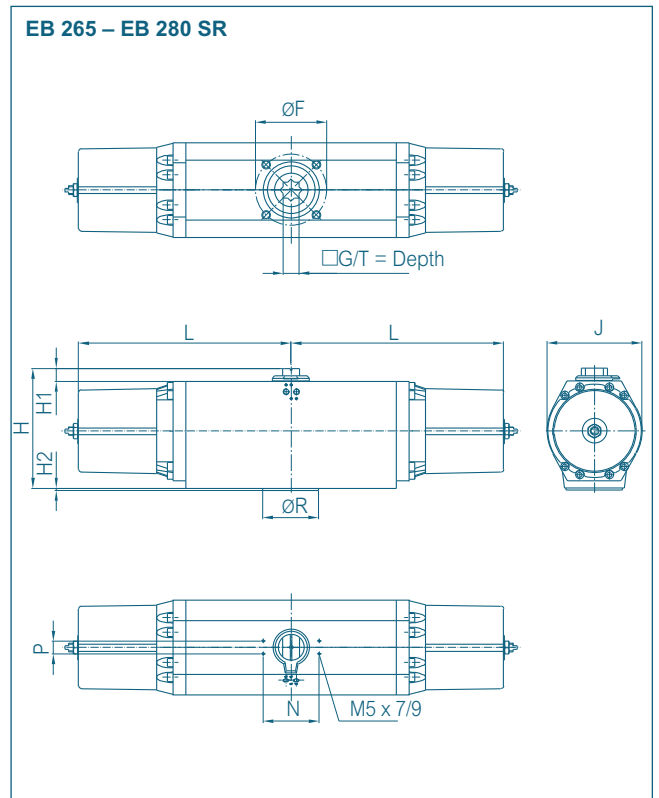
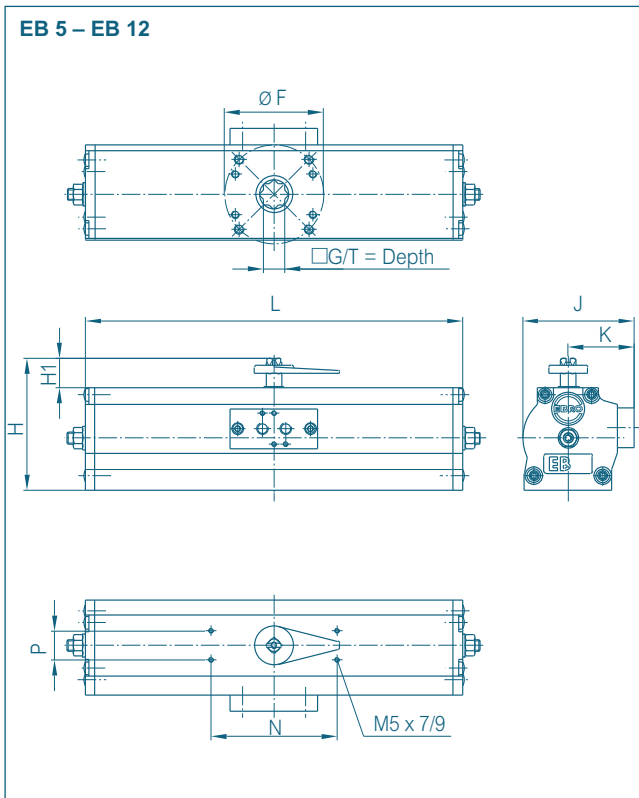
Type	EB 5	EB 6	EB 8	EB 10	EB 12	EB 265	EB 270	EB 280
Weight EW in kg	3,00	5,00	4,30	14,30	25,40	26,00	45,00	68,00
Closing time EW in sec.	0,15	0,20	0,45	0,50	0,70	<2,0	<5,0	<4,0
Filling volume NL/Hub at 1 atm:	0,26	0,58	1,13	1,70	2,79	2,70	9,00	11,20

* = closing times with unthrottled air exhaust and air supply, 6 bar control pressure and 75 % load
air consumption = filling volume x control pressure

Subject to change without notice.

Closing times can be adjusted from 30 sec. up to 300 sec. by using the EBRO speed control block (depending on type of actuator).

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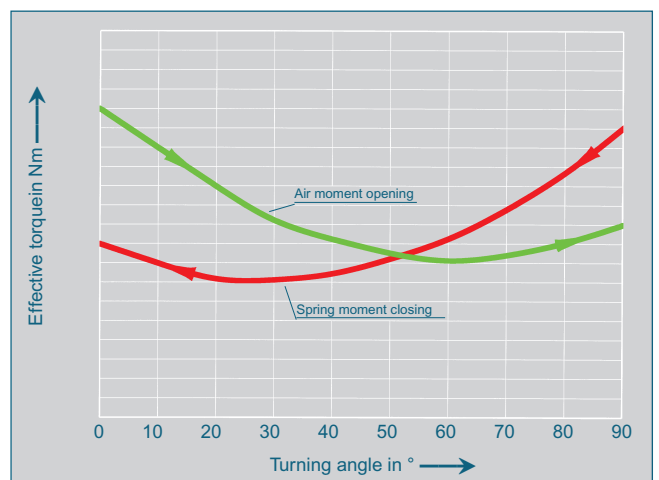
Type	Dimensions [mm]														Weight [kg]
	F	G	H	H1	H2	J	K	L	L1	L2	N	P	R	T	
EB 5	F04	11	108	30	-	88	55	273	-	-	80	30	-	16	3,0
EB 6	F05	14	123	30	-	103	62	326	-	-	130	30	-	18	5,0
EB 8	F07	17	136	30	-	115	68	389	-	-	130	30	-	22	7,7
EB 10	F07	17	155	30	-	135	79	526	-	-	130	30	-	22	14,3
EB 12	F10	22	182	30	-	159	94	656	-	-	130	30	-	27	25,4
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

* flange accommodation F25 with intermediate flange

Subject to change without notice.

The torques shown in the diagram are measured values. The required size of the actuator can be established by comparing the values of the actuator with the required torque of the valve.

Especially non-lubricant media (e.g. bulk goods and dry gases) may cause an increase of the actuators torque. This is why we recommend to consider a safety of 12%. Choosing an actuator in critical limits, please contact our engineers. We offer our service with the Know-How of 20 years of process engineering to you.



Typical torque curve of a scotch-yoke actuator.

