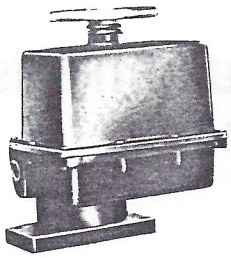
CRANE



Motor Actuators

for all Butterfly Valves

Electric Motor Actuators

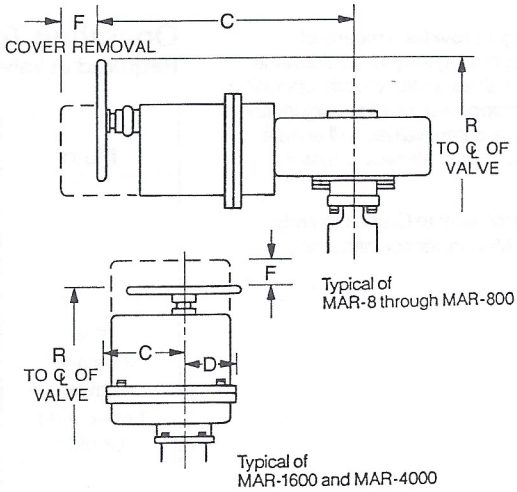
These rugged, economical electric motor-driven valve actuators are available factory-installed on all Crane butterfly valves or they may be ordered separately for installation on valves in the field. When ordered for field installation, adapters and necessary fasteners will be included.

Features

- Operate in any position. Require no lubrication. Adjustment controls easily accessible in event field adjustments are necessary. For ambient temperatures of −40 to +150F.
- For automatic and computer controlled systems.
- High-torque, integral, reversible 120 VAC, 60/50 Hz, 1-phase motor is standard.
- Optional voltages include 12, 24, or 125 VDC... 220 VAC-50/60 Hz, 1-phase... or (for Models MAR-100 and up only) 220/440 VAC, 3-phase.
- All models except MAR-8 have a disengageable manual override. Valves cannot be operated electrically while manual override is engaged.
- Gear train withstands stall torque.
- Unique adjustment plates permit fast, accurate setting of travel limit switches.
- Model MAR-100 has a 7-inch diameter handwheel. MAR-250 and larger have a 9-inch diameter handwheel. All others have a declutch knob.
- NEMA-4 Watertight or NEMA-7 explosion-proof enclosure. Meets NEMA standards for use in hazardous locations, Class I and II (Groups C-D-E-F-G).
- Optional features available; information on request.

Actuator Data

Model No.	Valve Torque Required (in./lbs.)	Approximate Operating Speed (seconds)	Approximate Weight Each (lbs.)
MAR-8-2	85	2	3.5
MAR-8-8	150	8	3.5
MAR-10-10	275	10	13.0
MAR-25-10	400	10	13.0
MAR-50-10	600	10	14.0
MAR-90-5	1000	5	14.0
MAR-100-16	1500	16	32.0
MAR-250-8	3000	8	34.0
MAR-250-30	5000	30	34.0
MAR-800-30	10000	26	34.0
MAR-1600-55	21000	55	93.0
MAR-4000-125	48000	25	120.0



Typical Clearance Dimensions (inches)*

Dimension	Valve Size	MAR-8 through MAR-90	MAR-100 through MAR-800	MAR-1600	MAR-4000
C	—	4.55	8.96	18.50	18.50
D	—	3.08	3.20	—	—
F	—	5.00	10.00	10.00	10.00
R* Center of Valve Port to Top of Operator	2	14.91	—	—	—
	2½	15.41	—	—	—
	3	15.66	—	—	—
	4	16.81	—	—	—
	5	17.50	23.50	—	—
	6	18.00	24.00	—	—
	8	—	25.25	—	—
	10	—	27.00	—	—
	12	—	28.50	—	—
	14	—	29.75	23.75	—
	16	—	31.25	25.25	—
	18	—	32.75	26.75	—
	20	—	—	28.50	28.50
	24	—	—	31.75	31.75
	30	—	—	—	33.75**
	36	—	—	—	37.38**

*Clearance dimensions apply to Monarch Butterfly valves only. For Gem, Quartermaster, Series 52 and Series 3000, consult your nearest Crane sales office.

**See Operating Torque Chart, p. 53

Actuators listed on this page comprise only a small portion of Crane's complete line. To assure selection of an operator providing maximum efficiency at lowest cost, contact your Crane sales representative.

CRANE

Operating Torque Requirements
Electric Motor or Cylinder Actuators

The table at the right provides a means of determining the operating torque requirements of Crane Butterfly valves under specific operating conditions. This information, used in conjunction with actuator torque output values, will enable the user to select the most efficient actuator for the conditions.

To select an actuator, refer to Crane Controls current Technical Manual for specific sizing instructions.

Operating Torque (in./lbs.)
Required at valve stem at pressure differentials indicated.

Fluid	Valve Size	25 psi	50 psi	75 psi	100 psi	125 psi	150 psi	175 psi	200 psi
For Oils and similar Lubricating Liquids	2	35	36	37	39	40	41	42	43
	2½	49	50	52	54	56	58	60	62
	3	65	71	77	83	89	95	101	108
	4	120	132	145	157	170	182	195	207
	5	190	215	233	260	285	305	330	350
	6	285	325	370	410	455	495	540	580
	8	510	595	680	765	850	935	1020	1105
	10	805	970	1135	1300	1465	1630	1795	1960
	12	1200	1460	1730	1890	2250	2510	2770	3040
	14	1300	1670	2030	2400	2770	3130	—	—
	16	1820	2370	2920	3470	4120	4570	—	—
	18	2320	3130	3940	4750	5560	6380	—	—
	20	3010	4120	5240	6350	7460	8580	—	—
	24	4630	6580	8530	10500	12400	14400	—	—
	30	9000	11000	13400	15400	17600	21500	—	—
	36	13200	16500	19800	22000	26000	29000	—	—
For Water and other Non-Lubricating Liquids	2	70	71	72	73	74	75	76	77
	2½	100	102	104	106	108	110	112	114
	3	153	159	164	170	175	181	186	192
	4	273	285	298	310	323	335	348	360
	5	425	445	470	490	515	540	560	585
	6	630	670	715	755	800	840	885	925
	8	1120	1200	1290	1370	1460	1540	1620	1710
	10	1760	1920	2090	2250	2410	2580	2740	2900
	12	2590	2850	3110	3370	3630	3890	4150	4410
	14	2700	3070	3430	3800	4170	4530	—	—
	16	3680	4230	4780	5330	5880	6430	—	—
	18	4800	5600	6400	7200	8000	8800	—	—
	20	6030	7130	8230	9330	10400	11500	—	—
	24	9100	11000	13000	14900	16800	18700	—	—
	30	17600	18700	20500	22000	24000	27700	—	—
	36	26000	27500	30000	32500	35750	37000	—	—
For Gases including Non-Lubricating or Dry Gases	2	150	151	152	153	154	155	156	157
	2½	235	237	239	240	242	244	246	248
	3	336	342	348	354	360	366	372	378
	4	570	585	595	610	620	635	645	660
	5	770	805	840	875	910	945	982	1018
	6	1300	1340	1390	1430	1470	1520	1560	1600
	8	2350	2440	2520	2600	2690	2770	2860	2940
	10	3760	3920	4090	4250	4410	4580	4740	4900
	12	5330	5590	5840	6100	6360	6620	6880	7140
	14	5830	6200	6570	6940	7300	7670	—	—
	16	7750	8300	8850	9400	9950	10500	—	—
	18	9700	10500	11300	12100	12900	13700	—	—
	20	12700	13800	14900	16000	17100	18200	—	—
	24	18600	20500	22400	24300	26300	28200	—	—
	30	31000	32500	34000	36000	37800	41000	—	—
	36	49500	50500	52000	53500	55000	57200	—	—

Interpolate for values at intermediate pressures.