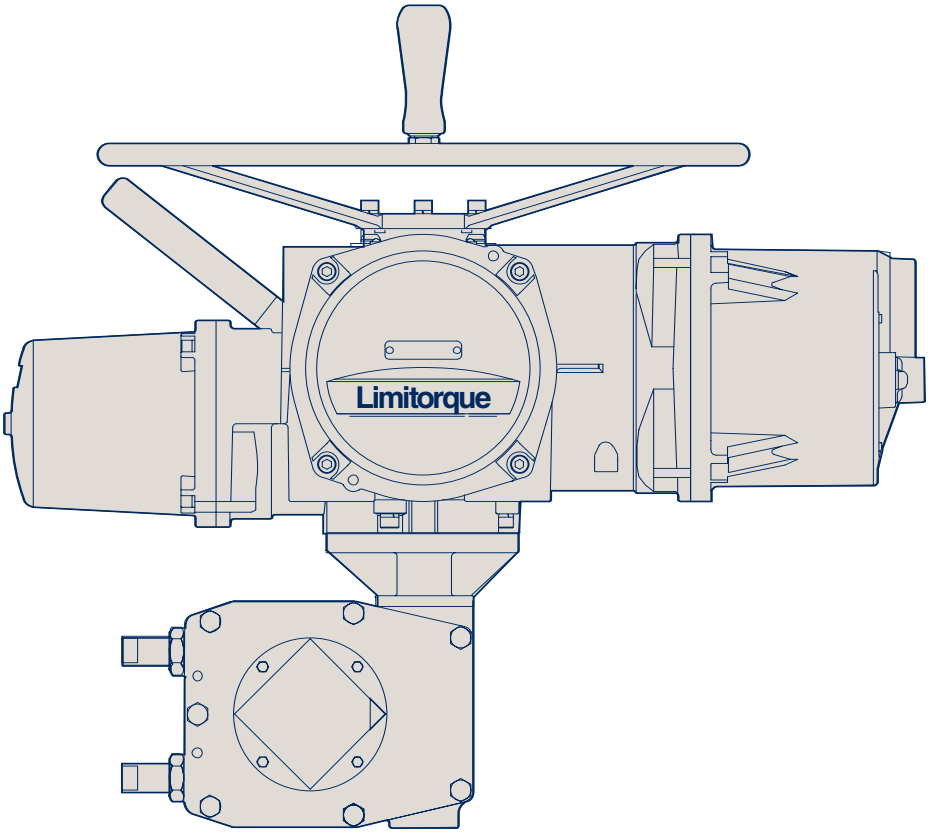
FLOWSERVE

Limitorque Actuation Systems

130-33001
Rev. E
July 2003

MX-series electric actuator and
WTR-series worm gear
operator combinations for
quarter-turn valves



Limitorque®

Accutronic MX/WTR
Performance and Dimensions

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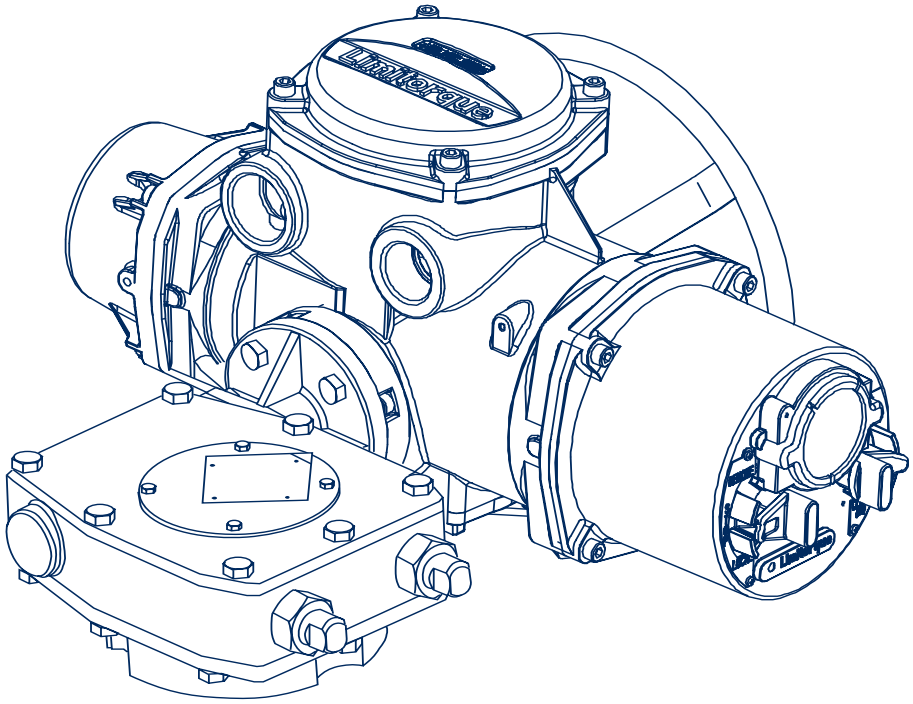
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Limitorque Accutronix MX™ Actuator with WTR Gear Operator for 90° Operation

Limitorque WTR gear operators are automated using the Accutronix MX series actuator. They are designed to operate quarter-turn valves, including butterfly, ball, plug, and dampers.

Two types are available: **MX/WTRC** for commercial on/off service and **MX/WTRA** for AWWA and modulating service.

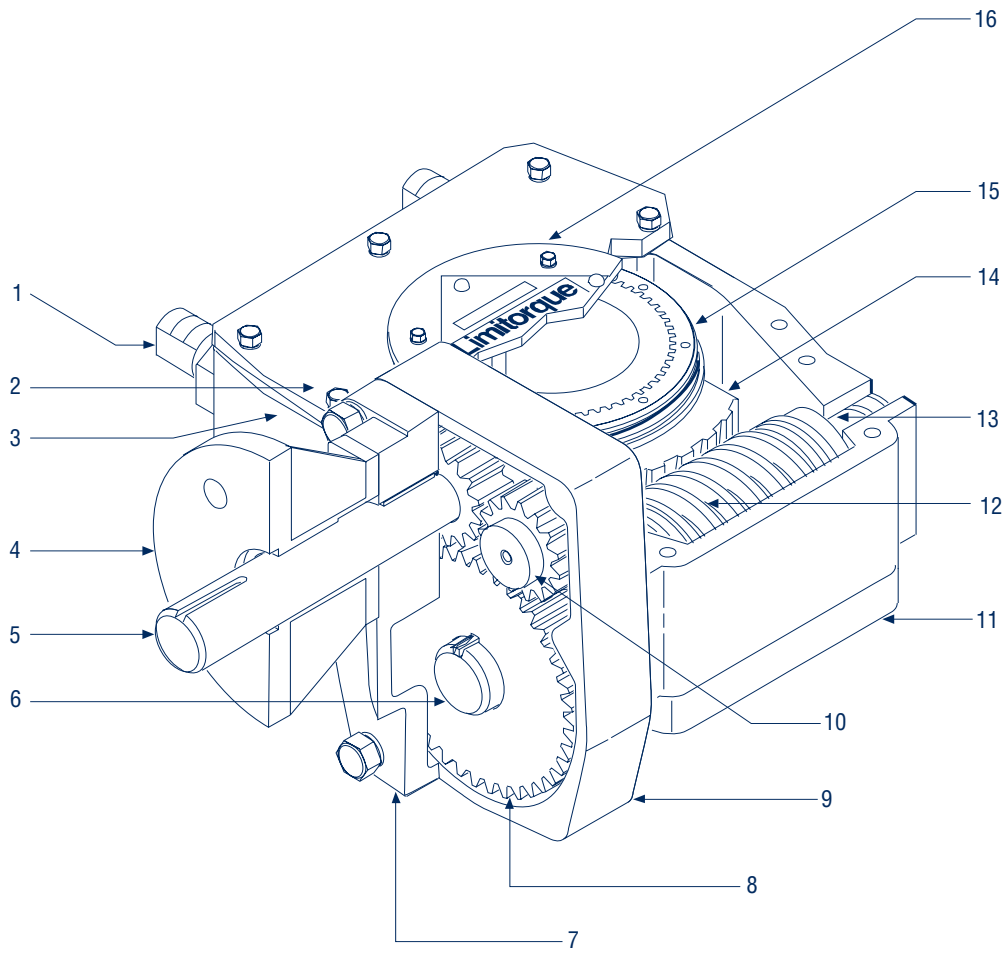


Typical Accutronix MX with WTR worm gear operator mounted for quarter-turn operation

WTR Units include the following features and benefits:

- Output torque to 70,000 ft-lb (94,920 N m)
- Self-locking ratios to prevent backdriving
- Spur gear option to reduce input torque or extend operating time
- Adjustable mechanical stops (±5°) to guarantee accurate valve seat position calibration
- Weatherproof sealing standard for typical commercial service
- WTRA series available for submersible and buried service
- Mounting base to MSS or ISO/DIN standards
- Position indicator
- Splined adapter to permit adjustable alignment of valve and actuator (standard through WTR-150)
- Hardened steel worms for durable performance
- Worm gears:
  - WTRC – Ductile iron for commercial service
  - WTRA – Alloy bronze for AWWA-specified applications and modulating applications
- Suitable for ambient temperatures of -20°F to +160°F (-30°C to +70°C) with an option available for maximum and minimum temperature extremes; consult factory for details.

Typical WTR Worm Gear Operator with Spur Gear Attachment



WTR Parts List

	Item	Material Description
1	Stop Screw	Steel
2	Cover	Steel
3	Housing	Cast Iron
4	Actuator Adapter Flange	Cast Iron
5	Input Shaft	Steel
6	Worm Shaft	Steel
7	Housing Cover	Cast Iron
8	Output Gear	Steel
9	Spur Gear Housing	Cast Iron
10	Idler Gear	Steel
11	Mounting Base	Cast Iron
12	Worm	Hardened Steel
13	Ball Thrust Bearing	Steel
14	Output Quadrant	(C) Ductile Iron; (A) Alloy Bronze
15	Splined Adapter	Steel
16	Pointer Cap	Steel

Sizing Procedure

1. Select **WTRC** or **WTRA**:
   - **WTRC** – Commercial on/off service
   - **WTRA** – AWWA (C504-87 and C540-93 standards)

2. Determine the **stem diameter** and **torque** of the valve to be motorized. Select the minimum size WTR that will accept this **stem diameter** and **torque**, using the appropriate **WTRC Rating Table** below.

3. Using the **MX/WTR Performance Ratings**, select the smallest MX/WTR combination that will provide the required **output torque** and **operating time** for the application.
   - **WTRC** – Pages 6 through 8
   - **WTRA** – Pages 9 through 12

4. Selections are valid for three-phase supplies with ±10% voltage variation.

WTRC Rating Table

	Two-Piece Drive Sleeve (Splined)				One-Piece Drive Sleeve						Max. Torque Output	
	Maximum Bore (Rectangular Key)		Maximum Bore (Square Key)		Maximum Bore (Rectangular Key)		Maximum Bore (Square Key)		Minimum Bore			
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	ft-lb	N m
WTRC-15	3.00	76	3.00	76	—	—	—	—	—	—	1,800	2,441
WTRC-60	4.00	102	4.00	102	—	—	—	—	—	—	6,000	8,136
WTRC-150	5.125	130	5.125	130	—	—	—	—	—	—	12,000	16,272
WTRC-430	4.50	114	4.250	108	5.50	140	5.13	130	4.50	114	15,000	20,340
WTRC-450	4.75	120	4.50	114	6.00	152	5.63	143	4.75	121	21,000	28,476
WTRC-500	6.00	152	5.50	140	7.00	178	6.75	171	6.00	152	30,000	40,680
WTRC-575	6.75	172	6.50	165	8.00	203	7.50	190	6.75	171	70,000	94,920

WTRA Rating Table

	Two-Piece Drive Sleeve (Splined)				One-Piece Drive Sleeve						Max. Torque Output	
	Maximum Bore (Rectangular Key)		Maximum Bore (Square Key)		Maximum Bore (Rectangular Key)		Maximum Bore (Square Key)		Minimum Bore			
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	ft-lb	N m
WTRA-12	2.25	57	2.25	57	—	—	—	—	—	—	1,200	1,627
WTRA-21	3.00	76	3.00	76	—	—	—	—	—	—	2,100	2,848
WTRA-48	3.75	95	3.75	95	—	—	—	—	—	—	4,800	6,509
WTRA-72	4.00	102	4.00	102	—	—	—	—	—	—	7,200	9,763
WTRA-130	5.125	130	5.125	130	—	—	—	—	—	—	13,000	17,628
WTRA-430	4.50	114	4.250	108	5.50	140	5.13	130	4.50	114	15,000	20,340
WTRA-450	4.75	120	4.50	114	6.00	152	5.63	143	4.75	121	21,000	28,476
WTRA-500	6.00	152	5.50	140	7.00	178	6.75	171	6.00	152	30,000	40,680
WTRA-575	6.75	172	6.50	165	8.00	203	7.50	190	6.75	171	70,000	94,920

MX/WTRC Performance Ratings

MX-10; WTRC-15
Ratio 72:1
Max bore 3.00 in. (75 mm)

Actuator (RPM)		Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	60 Hz	50 Hz	ft-lb	N m
18	15	60	72	990	1350
26	22	42	49	990	1350
40	33	27	33	990	1350
52	43	21	25	990	1350
77	65	14	17	864	1170
100	84	11	13	702	954
155	127	7	9	738	1003
200	165	5	7	612	828

MX-05; WTRC-15/1.69
Ratio 122:1
Max bore 3.00 in. (75 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
102	122	1543	2105
70	83	1543	2105
46	55	1543	2105
35	43	1543	2105
24	28	1347	1824
18	22	1094	1487
12	14	1150	1571
9	11	954	1291

MX-10; WTRC-15
Ratio 72:1
Max bore 3.00 in. (75 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
60	72	—	—
42	49	—	—
27	33	—	—
21	25	—	—
14	17	1800	2441
11	13	1602	2178
7	9	1602	2178
5	7	1314	1782

MX-05; WTRC-60/4.64
Ratio 325:1
Max bore 4.00 in. (110 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
271	325	4648	6338
188	222	4648	6338
122	148	4648	6338
94	113	4648	6338
63	75	4056	5493
49	58	3296	4479
31	38	3465	4732
24	30	2873	3887

MX-10; WTRC-60/4.64
Ratio 324.8:1
Max bore 4.00 in. (110 mm)

Actuator (RPM)		Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	60 Hz	50 Hz	ft-lb	N m
18	15	271	325	—	—
26	22	188	222	—	—
40	33	122	148	—	—
52	43	94	113	—	—
77	65	63	75	—	—
100	84	49	58	—	—
155	127	31	38	—	—
200	165	24	30	6000	8136

MX-20; WTRC-60
Ratio 70:1
Max bore 4.00 in. (110 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
58	70	4410	5978
40	48	4410	5978
26	32	4410	5978
20	24	4410	5978
14	16	3489	4724
11	13	2901	3940
7	8	2744	3724
5	6	2234	3035

MX-40; WTRC-60
Ratio 70:1
Max bore 4.00 in. (110 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
58	70	—	—
40	48	—	—
26	32	—	—
20	24	—	—
14	16	6000	8136
11	13	5606	7605
7	8	5096	6919
5	6	4116	5586

MX-05; WTRC-150/8.25
Ratio 492:1
Max bore 5.125 in. (130 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
410	492	6494	8856
284	335	6494	8856
185	224	6494	8856
142	172	6494	8856
96	114	5668	7675
74	88	4605	6258
48	58	4841	6612
37	45	4015	5432

MX-10; WTRC-150/8.25
Ratio 492:1
Max bore 5.125 in. (130 mm)

Actuator (RPM)		Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	60 Hz	50 Hz	ft-lb	N m
18	15	410	492	—	—
26	22	284	335	—	—
40	33	185	224	—	—
52	43	142	172	—	—
77	65	96	114	—	—
100	84	74	88	10509	14288
155	127	48	58	10509	14288
200	165	37	45	8620	11690

MX/WTRC Performance Ratings

MX-20; WTRC-150
Ratio 60:1
Max bore 5.125 in. (130 mm)

Actuator (RPM)		Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	60 Hz	50 Hz	ft-lb	N m
18	15	50	60	3780	5124
26	22	35	41	3780	5124
40	33	23	27	3780	5124
52	43	17	21	3780	5124
77	65	12	14	2990	4049
100/131[1]	84/111[1]	9	11	2486	3377
155/170[1]	127/143[1]	6	7	2352	3192
200	165	5	5	1915	2604

MX-40; WTRC-150
Ratio 60:1
Max bore 5.125 in. (130 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft lb	N m
50	60	7392	10030
35	41	7392	10030
23	27	7392	10030
17	21	7392	10030
12	14	5796	7862
9	11	4805	6518
6	7	4368	5930
5	5	3528	4788

MX-85; WTRC-150
Ratio 60:1
Max bore 5.125 in. (130 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
N/A	N/A	N/A	N/A
35	42	—	—
24	28		
17	21	—	—
12	14	10171	13569
7[1]	8[1]	7967	10628
5[1]	6[1]	5975	7971
N/A	N/A	N/A	N/A

MX-10; WTRC-430/6.3
Ratio 410:1
Max bore 5.50 in. (140 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
342	410	13325	18122
237	280	13325	18122
154	186	13325	18122
118	143	13325	18122
80	95	11406	15457
62	73	9487	12899
40	48	9487	12899
31	37	7782	10553

MX-10; WTRC-430/10.8
Ratio 702:1
Max bore 5.50 in. (140 mm)

Actuator (RPM)		Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	60 Hz	50 Hz	ft-lb	N m
18	15	585	702		—
26	22	405	479	—	—
40	33	263	319	—	—
52	43	203	245	—	—
77	65	137	162	—	—
100	84	105	125	15000	20340
155	127	68	83	15000	20340
200	165	53	64	12812	17375

MX-20; WTRC-430
Ratio 65:1
Max bore 5.50 in. (140 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
54	65	4388	5948
38	44	4388	5948
24	30	4388	5948
19	23	4388	5948
13	15	3471	4700
10	12	2886	3920
6	8	2730	3705
5	6	2223	3023

MX-20; WTRC-430/6.3
Ratio 410:1
Max bore 5.50 in. (140 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
342	410	—	—
237	280	—	—
154	186	—	—
118	143	—	
80	95		—
62	73	15000	20340
40	48	14924	20251
31	37	12152	16523

MX-40; WTRC-430
Ratio 65:1
Max bore 5.50 in. (140 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
54	65	8580	11642
38	44	8580	11642
24	30	8580	11642
19	23	8580	11642
13	15	6728	9126
10	12	5577	7566
6	8	5070	6884
5	6	4095	5558

MX-10; WTRC-450/4.3
Ratio 292:1
Max bore 6.00 in. (152 mm)

Actuator (RPM)		Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	60 Hz	50 Hz	ft-lb	N m
18	15	243	292	10220	13899
26	22	168	199	10220	13899
40	33	110	133	10220	13899
52	43	84	102	10220	13899
77	65	57	67	8784	11855
100/131[1]	84/111[1]	44	52	7277	9893
155/170[1]	127/143[1]	28	34	7277	9893
200	165	22	27	5968	8094

MX-10; WTRC-450/10.3
Ratio 700:1
Max bore 6.00 in. (152 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
583	700	21000	28476
404	477	21000	28476
263	318	21000	28476
202	241	21000	28476
136	162	19471	26390
105	125	16198	22022
68	83	16198	22022
53	64	13286	18018

MX-20; WTRC-450
Ratio 68:1
Max bore 6.00 in. (152 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
57	68	4590	6222
39	46	4590	6222
26	31	4590	6222
20	24	4590	6222
13	16	3631	4916
10	12	3019	4100
7	8	2856	3876
5	6	2326	3162

MX-85; WTRC-430
Ratio 65:1
Max bore 5.50 in. (140 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
N/A	N/A	N/A	N/A
38	45	12227	16311
26	31	15000	20010
19	23	15000	20010
13	15	11019	14699
7[1]	9[1]	8631	11514
6[1]	7[1]	6473	8635
N/A	N/A	N/A	N/A

MX-140; WTRC-430
Ratio 65:1
Max bore 5.50 in. (140 mm)

Actuator (RPM)		Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	60 Hz	50 Hz	ft-lb	N m
18	15	N/A	N/A	N/A	N/A
26	22	38	45	N/A	N/A
40	33	26	31	N/A	N/A
52	43	19	23	N/A	N/A
77	65	13	15	N/A	N/A
100/131[1]	84/111[1]	7[1]	9[1]	N/A	N/A
155/170[1]	127/143[1]	6[1]	7[1]	N/A	N/A
200	165	N/A	N/A	N/A	N/A

MX-85; WTRC-450
Ratio 68:1
Max bore 6.00 in. (152 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft lb	N m
N/A	N/A	N/A	N/A
39	47	12792	17061
27	32	18435	24593
20	24	17307	23087
13	16	11528	15378
8[1]	9[1]	9030	12045
6[1]	7[1]	6772	9034
N/A	N/A	N/A	N/A

MX-20; WTRC-450/4.3
Ratio 292:1
Max bore 6.00 in. (152 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft lb	N m
243	292	18396	24937
168	199	18396	24937
110	133	18396	24937
84	102	18396	24937
57	67	14553	19704
44	52	12100	16434
28	34	11446	15534
22	27	9321	12673

MX-20; WTRC-450/10.3
Ratio 700:1
Max bore 6.00 in. (152 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft lb	N m
583	700	—	—
404	477	—	—
263	318	—	—
202	224	—	—
136	162	—	
105	125	21000	28476
68	83	21000	28476
53	64	20748	28210

Note 1: RPM for MX-85/140

MX/WTRC Performance Ratings

MX-40; WTRC-450
Ratio 68:1
Max bore 6.00 in. (152 mm)

Actuator (RPM)		Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	60 Hz	50 Hz	ft-lb	N m
18	15	57	68	8976	12178
26	22	39	46	8976	12178
40	33	26	31	8976	12178
52	43	20	24	8976	12178
77	65	13	16	7038	9547
100	84	10	12	5834	7915
155	127	7	8	5304	7201
200	165	5	6	4284	5814

MX-40; WTRC-450/4.3
Ratio 292:1
Max bore 6.00 in. (152 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
243	292		—
168	199		—
110	133	—	—
84	102	—	—
57	67	21000	28476
44	52	21000	28476
28	34	21000	28476
22	27	17170	23302

MX-10; WTRC-500/4.3
Ratio 297:1
Max bore 7.00 in. (178 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
248	297	11138	15147
171	203	11138	15147
111	135	11138	15147
86	104	11138	15147
58	69	9534	12920
45	53	7930	10781
29	35	7930	10781
22	27	6504	8821

MX-10; WTRC-500/10.3
Ratio 710.7:1
Max bore 1.00 in. (178 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
593	711	25774	35052
410	485	25774	35052
267	323	25774	35052
205	248	25774	35052
139	164	22062	30005
107	127	18351	24957
69	84	18351	24957
53	65	15052	20471

MX-20; WTRC-500/4.3
Ratio 297:1
Max bore 7.00 in. (178 mm)

Actuator (RPM)		Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	60 Hz	50 Hz	ft-lb	N m
18	15	248	297	20048	27176
26	22	171	203	20048	27176
40	33	111	135	20048	27176
52	43	86	104	20048	27176
77	65	58	69	15860	21973
100	84	45	53	13187	17909
155	127	29	35	12474	16929
200	165	22	27	10157	13811

MX-20; WTRC-500/10.3
Ratio 711:1
Max bore 7.00 in. (178 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
593	711		—
410	485	—	—
267	323	—	—
205	248	—	—
139	164	30000	40680
107	127	30000	40680
69	84	28867	39176
53	65	23506	31959

MX-40; WTRC-500/4.3
Ratio 297:1
Max bore 7.00 in. (178 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
248	297	—	
171	203	30000	40680
111	135		—
86	104	30000	40680
58	69	30000	40680
45	53	25483	34571
29	35	23166	31452
22	27	18711	25394

MX-40; WTRC-500/10.3
Ratio 711:1
Max bore 7.00 in. (178 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
593	711	—	
410	485		
267	323		—
205	248	—	—
139	164	—	—
107	127	—	—
69	84	—	—
53	65	30000	40680

MX-85; WTRC-500/4.3
Ratio 297:1
Max bore 7.00 in. (178 mm)

Actuator (RPM)		Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	60 Hz	50 Hz	ft-lb	N m
18	15	N/A	N/A	N/A	N/A
26	22	171	206	—	—
40	33	117	141	—	—
52	43	86	103	—	—
77	65	58	69	—	—
100/131[1]	84/111[1]	34[1]	41[1]	—	—
155/170[1]	127/143[1]	N/A	N/A	N/A	N/A
200	165	N/A	N/A	N/A	N/A

MX-40; WTRC-575/5.2
Ratio 309:1
Max bore 8.00 in. (203 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
258	309	40788	55342
178	211	40788	55342
116	140	40788	55342
89	108	40788	55342
60	71	31982	43384
46	55	26512	35968
30	36	24102	32723
23	28	19467	26420

MX-40; WTRC-575/7.8
Ratio 468:1
Max bore 8.00 in. (203 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
390	468	61776	83819
270	319	61776	83819
176	213	61776	83819
135	163	61776	83819
91	108	48438	65707
70	84	40154	54475
45	55	36504	49561
35	43	29484	40014

MX-20; WTRC-575/5.2
Ratio 309:1
Max bore 8.00 in. (203 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
258	309	20858	28273
178	211	20858	28273
116	140	20858	28273
89	108	20858	28273
60	71	16501	22341
46	55	13720	18633
30	36	12978	17613
23	28	10568	14339

MX-20; WTRC-575/7.8
Ratio 468:1
Max bore 8.00 in. (203 mm)

Actuator (RPM)		Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	60 Hz	50 Hz	ft-lb	N m
18	15	390	468	31590	42822
26	22	270	319	31590	42822
40	33	176	213	31590	42822
52	43	135	163	31590	42822
77	65	91	108	24991	33836
100/131[1]	84/111[1]	70	84	20779	28220
155/170[1]	127/143[1]	45	55	19656	26676
200	165	35	43	16006	21762

MX-85; WTRC-575/5.2
Ratio 309:1
Max bore 8.00 in. (203 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
N/A	N/A	N/A	N/A
178	211	53822	71798
122	146	70000	93380
89	107	70000	93380
60	72	48503	64703
35[1]	47[1]	37992	50681
27[1]	33[1]	28494	38011
N/A	N/A	N/A	N/A

MX-85; WTRC-575/7.8
Ratio 468:1
Max bore 8.00 in. (203 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
N/A	N/A	N/A	N/A
270	324	—	—
185	222	—	—
135	162	—	—
91	109	69024	92078
54[1]	64[1]	54066	72123
41[1]	50[1]	41530	55401
N/A	N/A	N/A	N/A

Note 1: RPM for MX-85/140

MX/WTRA Performance Ratings

MX-05; WTRA-12
Ratio 55:1
Max bore 2.25 in. (58 mm)

Actuator (RPM)		Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	60 Hz	50 Hz	ft-lb	N m
18	15	46	55	938	1279
26	22	32	38	938	1279
40	33	21	25	938	1279
52	43	16	19	938	1279
77	65	11	13	818	1108
100	84	8	10	665	904
155	127	5	6	699	955
200	165	4	5	580	784

MX-10; WTRA-12
Ratio 55:1
Max bore 2.25 in. (58 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
46	55		—
32	38	—	—
21	25	—	—
16	19	—	—
11	13	—	
8	10	—	—
5	6	—	—
4	5	1200	1627

MX-05; WTRA-21
Ratio 55:1
Max bore 3.00 in. (75 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
46	55	938	1279
32	38	938	1279
21	25	938	1279
16	19	938	1279
11	13	818	1108
8	10	665	904
5	6	699	955
4	5	580	784

MX-05; WTRA-21/1.69
Ratio 93:1
Max bore 3.00 in. (75 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
78	93	1483	2023
54	63	1483	2023
35	42	1483	2023
27	32	1483	2023
18	21	1295	1753
14	17	1052	1429
9	11	1106	1510
7	8	917	1241

MX-10; WTRA-21
Ratio 55:1
Max bore 3.00 in. (75 mm)

Actuator (RPM)		Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	60 Hz	50 Hz	ft-lb	N m
18	15	46	55	2100	2848
26	22	32	38	2100	2848
40	33	21	25	—	—
52	43	16	19	—	—
77	65	11	13	1824	2472
100	84	8	10	1517	2063
155	127	5	6	1517	2063
200	165	4	5	1245	1688

MX-10; WTRA-21/1.69
Ratio 93:1
Max bore 3.00 in. (75 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
78	93		
54	63	—	—
35	42	—	—
27	32	—	—
18	21	—	
14	17		—
9	11	—	—
7	8	1969	2670

MX-20; WTRA-21
Ratio 55:1
Max bore 3.00 in. (75 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
46	55	—	—
32	38	—	—
21	25	—	
16	19		—
11	13	—	—
8	10	—	—
5	6	2100	2848
4	5	1944	2643

MX-05; WTRA-48/3.71
Ratio 204:1
Max bore 3.75 in. (96 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
170	204	3254	4437
118	139	3254	4437
77	93	3254	4437
59	71	3254	4437
40	47	2840	3845
31	36	2307	3135
20	24	2426	3313
15	19	2011	2721

MX-10; WTRA-48
Ratio 55:1
Max bore 3.75 in. (96 mm)

Actuator (RPM)		Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	60 Hz	50 Hz	ft-lb	N m
18	15	46	55	2200	2992
26	22	32	38	2200	2992
40	33	21	25	2200	2992
52	43	16	19	2200	2992
77	65	11	13	1883	2552
100	84	8	10	1566	2130
155	127	5	6	1566	2130
200	165	4	5	1285	1742

MX-10; WTRA-48/3.71
Ratio 204:1
Max bore 3.75 in. (96 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
170	204	—	—
118	139	—	—
77	93	—	
59	71		—
40	47	—	—
31	36	4800	6509
20	24	4800	6509
15	19	4319	5857

MX-20; WTRA-48
Ratio 55:1
Max bore 3.75 in. (96 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
46	55	3960	5368
32	38	3960	5368
21	25	3960	5368
16	19	3960	5368
11	13	3133	4242
8	10	2605	3538
5	6	2464	3344
4	5	2006	2728

MX-10; WTRA-36
Ratio 53:1
Max bore 3.25 in. (82 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
44	53	2054	2793
31	36	2054	2793
20	24	2054	2793
15	18	2054	2793
10	12	1758	2382
8	9	1462	1988
5	6	1462	1988
4	5	1199	1627

MX-10; WTRA-36/3.0
Ratio 159:1
Max bore 3.25 in. (82 mm)

Actuator (RPM)		Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	60 Hz	50 Hz	ft-lb	N m
18	15	133	159	—	—
26	22	92	108	—	
40	33	60	72		—
52	43	46	55	—	—
77	65	31	37	—	—
100	84	24	28	3600	4882
155	127	15	19	3600	4882
200	165	12	14	3366	4565

MX-40; WTRA-48
Ratio 55:1
Max bore 3.75 in. (96 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
46	55	—	—
32	38		—
21	25	—	—
16	19		—
11	13	—	—
8	10	4800	6509
5	6	4576	6213
4	5	3696	5016

MX-05; WTRA-72/4.64
Ratio 255:1
Max bore 4.00 in. (110 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
213	255	4067	5546
147	174	4067	5546
96	116	4067	5546
74	89	4067	5546
50	59	3550	4807
38	46	2884	3919
25	30	3032	4141
19	23	2514	3402

MX-10; WTRA-72/4.64
Ratio 255:1
Max bore 4.00 in. (110 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
213	255	—	—
147	174		—
96	116	—	—
74	89		—
50	59	7200	9763
38	46	6582	8948
25	30	6582	8948
19	23	5398	7321

MX/WTRA Performance Ratings

MX-40; WTRA-72
Ratio 55:1
Max bore 4.00 in. (110 mm)

Actuator (RPM)		Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	60 Hz	50 Hz	ft-lb	N m
18	15	46	55	3960	5368
26	22	32	38	3960	5368
40	33	21	25	3960	5368
52	43	16	19	3960	5368
77	65	11	13	3133	4242
100	84	8	10	2605	3538
155	127	5	6	2464	3344
200	165	4	5	2006	2728

MX-40; WTRA-72
Ratio 55:1
Max bore 4.00 in. (110 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
46	55	—	—
32	38	7200	9763
21	25	—	
16	19	7200	9763
11	13	6072	8237
8	10	5034	6829
5	6	4576	6213
4	5	3696	5016

MX-05; WTRA-130/8.25
Ratio 495:1
Max bore 5.125 in. (130 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
413	495	7623	10395
286	338	7623	10395
186	225	7623	10395
143	173	7623	10395
96	114	6653	9009
74	88	5405	7346
48	58	5683	7762
37	45	4712	6376

MX-10; WTRA-130/8.25
Ratio 495:1
Max bore 5.125 in. (130 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
413	495	—	—
286	338	—	—
186	225	—	
143	173	—	
96	114	13000	17628
74	88	12335	16771
48	58	12335	16771
37	45	10118	13721

MX-20; WTRA-130
Ratio 60:1
Max bore 5.125 in. (130 mm)

Actuator (RPM)		Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	60 Hz	50 Hz	ft-lb	N m
18	15	50	60	4320	5856
26	22	35	41	4320	5856
40	33	23	27	4320	5856
52	43	17	21	4320	5856
77	65	12	14	3418	4627
100/131[1]	84/111[1]	9	11	2842	3859
155/170[1]	127/143[1]	6	7	2688	3648
200	165	5	5	2189	2976

MX-40; WTRA-130
Ratio 60:1
Max bore 5.125 in. (130 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
50	60	8448	11462
35	41	8448	11462
23	27	8448	11462
17	21	8448	11462
12	14	6621	8986
9	11	5491	7450
6	7	4992	6778
5	5	4032	5472

MX-85; WTRA-130
Ratio 60:1
Max bore 5.125 in. (130 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
N/A	N/A	N/A	N/A
35	42		
24	28		—
17	21	—	—
12	14	—	—
7[1]	8[1]	9366	12494
5[1]	6[1]	7024	9371
N/A	N/A	N/A	N/A

MX-10; WTRA-430/6.3
Ratio 410:1
Max bore 5.50 in. (140 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
342	410	13325	18122
237	280	13325	18122
154	186	13325	18122
118	143	13325	18122
80	95	11406	15457
62	73	9487	12899
40	48	9487	12899
31	37	7782	10553

MX-10; WTRA-430/10.8
Ratio 702:1
Max bore 5.50 in. (140 mm)

Actuator (RPM)		Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	60 Hz	50 Hz	ft-lb	N m
18	15	585	702	15000	20340
26	22	405	479	15000	20340
40	33	263	319	15000	20340
52	43	203	245	15000	20340
77	65	137	162	15000	20340
100	84	105	125	15000	20340
155	127	68	83	15000	20340
200	165	53	64	12812	17375

MX-20; WTRA-430
Ratio 65:1
Max bore 5.50 in. (140 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
54	65	4388	5948
38	44	4388	5948
24	30	4388	5948
19	23	4388	5948
13	15	3471	4700
10	12	2886	3920
6	8	2730	3705
5	6	2223	3023

MX-20; WTRA-430/6.3
Ratio 410:1
Max bore 5.50 in. (140 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
342	410	15000	20340
237	280	15000	20340
154	186	15000	20340
118	143	15000	20340
80	95	15000	20340
62	73	15000	20340
40	48	14924	20251
31	37	12152	16523

MX-20; WTRA-430/10.8
Ratio 702:1
Max bore 5.50 in. (140 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
585	702	—	—
405	479	—	—
263	319	—	—
203	245	—	
137	162	—	
105	125	15000	20340
68	83	15000	20340
53	64	15000	20340

MX-85; WTRA-430
Ratio 65:1
Max bore 5.50 in. (140 mm)

Actuator (RPM)		Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	60 Hz	50 Hz	ft-lb	N m
18	15	N/A	N/A	N/A	N/A
26	22	38	45	8724	11637
40	33	26	31	15000	20010
52	43	19	23	14950	19943
77	65	13	15	9958	13284
100/131[1]	84/111[1]	7[1]	9[1]	7800	10405
155/170[1]	127/143[1]	6[1]	7[1]	5850	7804
200	165	N/A	N/A	N/A	N/A

MX-40; WTRA-430
Ratio 65:1
Max bore 5.50 in. (140 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
54	65	8580	11642
38	44	8580	11642
24	30	8580	11642
19	23	8580	11642
13	15	6728	9126
10	12	5577	7566
6	8	5070	6884
5	6	4095	5558

MX-40; WTRA-430/6.3
Ratio 409.5:1
Max bore 5.50 in. (140 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
342	410	—	—
237	280	—	
154	186		
118	143		—
80	95	—	—
62	73	15000	20340
40	48	15000	20340
31	37	15000	20340

MX-10; WTRA-450/4.3
Ratio 292:1
Max bore 6.00 in. (152 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
243	292	10220	13899
168	199	10220	13899
110	133	10220	13899
84	102	10220	13899
57	67	8748	11855
44	52	7277	9893
28	34	7277	9893
22	27	5968	8094

Note 1: RPM for MX-85/140

MX/WTRA Performance Ratings

MX-10; WTRA-450/10.3
Ratio 700:1
Max bore 6.00 in. (152 mm)

Actuator (RPM)		Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	60 Hz	50 Hz	ft-lb	N m
18	15	583	700	21000	28476
26	22	404	477	21000	28476
40	33	263	318	21000	28476
52	43	202	244	21000	28476
77	65	136	162	19474	26390
100/131[1]	84/111[1]	105	125	16198	22022
155/170[1]	127/143[1]	68	83	16198	22022
200	165	53	64	13286	18018

MX-20; WTRA-450
Ratio 68:1
Max bore 6.00 in. (152 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
57	68	4590	6222
39	46	4590	6222
26	31	4590	6222
20	24	4590	6222
13	16	3631	4916
10	12	3019	4100
7	8	2856	3876
5	6	2326	3162

MX-85; WTRA-450
Ratio 68:1
Max bore 6.00 in. (152 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
N/A	N/A	N/A	N/A
39	47	9126	12175
27	32	16660	22224
20	24	15640	20864
13	16	10418	13897
8[1]	9[1]	8160	10885
6[1]	7[1]	6120	8164
N/A	N/A	N/A	N/A

MX-20; WTRA-450/4.3
Ratio 292:1
Max bore 6.00 in. (152 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
243	292	18396	24937
168	199	18396	24937
110	133	18396	24937
84	102	18396	24937
57	67	14553	19701
44	52	12100	16434
28	34	11446	15534
22	27	9321	12673

MX-20; WTRA-450/10.3
Ratio 700:1
Max bore 6.00 in. (152 mm)

Actuator (RPM)		Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	60 Hz	50 Hz	ft-lb	N m
18	15	583	700	—	—
26	22	404	477	—	—
40	33	263	318	—	—
52	43	202	244	—	
77	65	136	162		—
100	84	105	125	21000	28476
155	127	68	83	21000	28476
200	165	53	64	20748	28210

MX-40; WTRA-450
Ratio 68:1
Max bore 6.00 in. (152 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
57	68	8976	12178
39	46	8976	12178
26	31	8976	12178
20	24	8976	12178
13	16	7038	9547
10	12	5834	7915
7	8	5304	7201
5	6	4284	5814

MX-40; WTRA-450/4.3
Ratio 292:1
Max bore 6.00 in. (152 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
243	292	—	
168	199		—
110	133	—	—
84	102	—	—
57	67	21000	28476
44	52	21000	28476
28	34	21000	28476
22	27	17170	23302

MX-40; WTRA-450/10.3
Ratio 700:1
Max bore 6.00 in. (152 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
583	700	—	—
404	477	—	—
263	318	—	—
202	244	—	
136	162		—
105	125	21000	28476
68	83	21000	28476
53	64	20748	28210

MX-10; WTRA-500/4.3
Ratio 297:1
Max bore 7.00 in. (178 mm)

Actuator (RPM)		Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	60 Hz	50 Hz	ft-lb	N m
18	15	248	297	11138	15147
26	22	171	203	11138	15147
40	33	111	135	11138	15147
52	43	86	104	11138	15147
77	65	58	69	9534	12920
100	84	45	53	7930	10781
155	127	29	35	7930	10781
200	165	22	27	6504	8821

MX-10; WTRA-500/10.3
Ratio 710.7:1
Max bore 7.00 in. (178 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
593	711	25774	35052
410	485	25774	35052
267	323	25774	35052
205	248	25774	35052
139	164	22062	30005
107	127	18351	24957
69	84	18351	24957
53	65	15052	20471

MX-20; WTRA-500/4.3
Ratio 297:1
Max bore 7.00 in. (178 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
248	297	20048	27176
171	203	20048	27176
111	135	20048	27176
86	104	20048	27176
58	69	15860	21473
45	53	13187	17909
29	35	12474	16929
22	27	10157	13811

MX-20; WTRA-500/10.3
Ratio 711:1
Max bore 7.00 in. (178 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
593	711	—	—
410	485	—	
267	323		—
205	248	—	—
139	164	30000	40680
107	127	30000	40680
69	84	28867	39176
53	65	23506	31959

MX-40; WTRA-500/4.3
Ratio 297:1
Max bore 7.00 in. (178 mm)

Actuator (RPM)		Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	60 Hz	50 Hz	ft-lb	N m
18	15	248	297		—
26	22	171	203	30000	40680
40	33	111	135	—	—
52	43	86	104	30000	40680
77	65	58	69	30000	40680
100	84	45	53	25483	34571
155	127	29	35	23166	31452
200	165	22	27	18711	25394

MX-40; WTRA-500/10.3
Ratio 711:1
Max bore 7.00 in. (178 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
593	711	—	—
410	485	—	—
267	323	—	—
205	248	—	—
139	164		
107	127		—
69	84	—	—
53	65	30000	40680

MX-20; WTRA-575/5.2
Ratio 309:1
Max bore 8.00 in. (203 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
258	309	20858	28273
178	211	20858	28273
116	140	20858	28273
89	108	20858	28273
60	71	16501	22341
46	55	13720	18633
30	36	12978	17613
23	28	10568	14639

MX-40; WTRA-575/5.2
Ratio 309:1
Max bore 8.00 in. (203 mm)

Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	ft-lb	N m
258	309	40788	55342
178	211	40788	55342
116	140	40788	55342
89	108	40788	55342
60	71	31982	43384
46	55	26512	35968
30	36	24102	32723
23	28	19467	26420

Note 1: RPM for MX-85/140

MX/WTRA Performance Ratings

Actuator (RPM)		MX-85; WTRA-575/5.2 Ratio 309:1 Max bore 8.00 in. (203 mm)				MX-20; WTRA-575/7.8 Ratio 309:1 Max bore 8.00 in. (203 mm)				MX-40; WTRA-575/7.8 Ratio 468:1 Max bore 8.00 in. (203 mm)				MX-85; WTRA-575/7.8 Ratio 468:1 Max bore 8.00 in. (203 mm)			
		Operating Time (Seconds)		Torque Output		Operating Time (Seconds)		Torque Output		Operating Time (Seconds)		Torque Output		Operating Time (Seconds)		Torque Output	
60 Hz	50 Hz	60 Hz	50 Hz	ft-lb	N m	60 Hz	50 Hz	ft-lb	N m	60 Hz	50 Hz	ft-lb	N m	60 Hz	50 Hz	ft-lb	N m
18	15	N/A	N/A	N/A	N/A	390	468	31590	42822	390	468	61776	83819	N/A	N/A	N/A	N/A
26	22	178	214	40890	54548	270	319	31590	42822	270	319	61776	83819	270	324	61931	82616
40	33	122	146	70000	93380	176	213	31590	42822	176	213	61776	83819	185	222	70000	93380
52	43	89	107	70000	93380	135	163	31590	42822	135	163	61776	83819	135	162	70000	93380
77	65	60	72	46676	62266	91	108	24991	33836	91	108	48438	65707	91	109	70000	93380
100/131[1]	84/111[1]	35[1]	42[1]	36561	48772	70	84	20779	28220	70	84	40254	54475	54[1]	64[1]	55374	73869
155/170[1]	127/143[1]	27[1]	33[1]	27421	36579	45	55	19656	26676	45	55	36504	49561	41[1]	50[1]	41530	53401
200	165	N/A	N/A	N/A	N/A	35	43	16006	21762	35	43	29484	40014	N/A	N/A	N/A	N/A

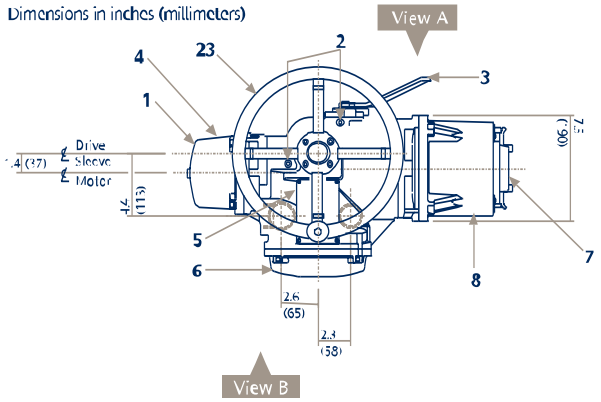
Note 1: RPM for MX-85/140

Dimensions for MX-05 with WTRC-15 and WTRA-12/21

MX/WTR Commercial (C) and AWWA (A) Combinations with Spur Gear Attachments (S)				
WTR/SGA	C15/A21 1.7	C40/A48 3.7	C60/A72 4.6	C150/A130 8.3
MX-05	WTRC/WTRA	WTRC/WTRA	WTRC/WTRA	WTRC/WTRA

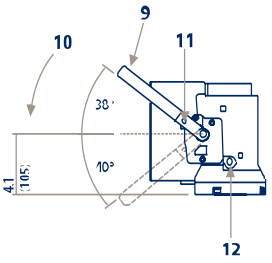
Top View

Dimensions in inches (millimeters)



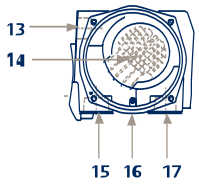
View A

Detail of declutch lever



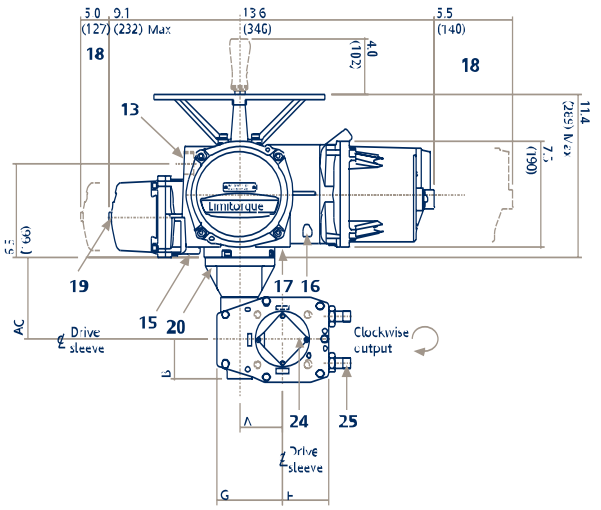
View B

Conduit entries with covers removed

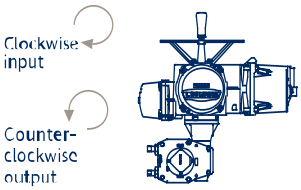


Side View

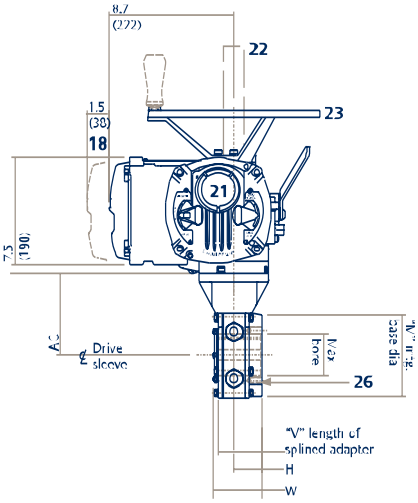
Position B: Clockwise input = Clockwise output



Position A: Clockwise input = Counter-clockwise output



Front View



Dimension Key

1. Preferred mounting is with motor horizontal
2. Lubricant fill
3. Declutch lever is padlockable in motor operation
4. Motor
5. Serial text plate
6. Terminal compartment
7. Control panel
8. Controls compartment
9. Lever returns automatically to this position when released
10. To engage manual override
11. Hole 0.28" (7) diameter for padlock
12. Lubricant drain
13. Conduit entry - Tapped 1.25" NPT Options- M32, M25, M20, and PG21
14. Customer terminals
15. Conduit entry - Tapped 1.5" NPT Options M40, M32, M25, M20, PG21, and PG29
16. Ground/earthing lug
17. Conduit entry Tapped 1.25" NPT Options - M32, M25, M20, and PG21
18. Allowance for cover removal
19. Hole 0.22" (5.5) diameter x 0.43" (11) deep for self-tapping screw
20. Mounting face for attaching to valve flange or extended base
21. Control panel display window
22. Stem cover (when required - Length to suit valve travel. MX-10/20 threaded 2.00" NPT or fitted with pipe plug.
23. Standard top-mounted handwheel: MX-10 = 18" (450) dia. MX-20/40 = 24" (610) dia. Side mounted handwheels: MX-10/20/40 = 12" (305) dia.
24. Position indicator
25. Adjustable mechanical stops
26. Mounting holes "C" straddle centerline

Dimensions for WTRC-15 and WTRA-12/21

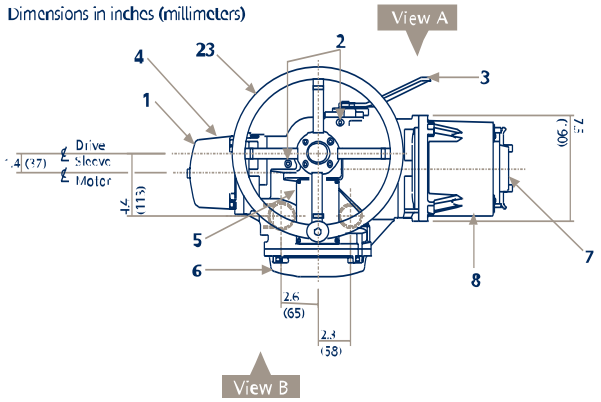
Gearbox	WTRA-12		WTRC-15 WTRA-21	
Dimension	inches	mm	inches	mm
Ratio	WTRA-12 = 55:1	WTRA-12 = 55:1	WTRC-15 = 72:1 WTRA-21 = 55:1	WTRC-15 = 72:1 WTRA-21 = 55:1
SGA	—	—		—
A	3.0	76	3.7	94
B	2.8	72	3.7	94
C	(4) 1/2-13 x .750 deep 4.950 B.C.	(4) M12 x 1.75 - 18 deep 125.00 B.C.	(4) 5/8-11 x .9 deep 5.500 B.C.	(4) M16 x 2 - 25 deep 140.00 B.C.
F	3.7	93	4.1	104
G	4.6	118	5.6	144
H	2.0	50	2.7	68
M	6.0	152	7.0	178
V	3.1	78	3.9	100
W	3.5	88	4.4	111
AC	4.3	109	5.7	154
Sq. Key (Max.)	0.375	—	0.625	—
Rect. Key (Max.)	.625 x .4375	16 x 10	.875 x .625	20 x 12
Electric Actuator Mtg. Flange	FA12	F10	FA14	F14
Weight	33 lb.	15 kg	66 lb.	30 kg

Dimensions for MX-05 with WTRC-15/150 and WTRA-21/130; SGA

MX/WTR Commercial (C) and AWWA (A) Combinations with Spur Gear Attachments (S)				
WTR/SGA	C15/A21 1.7	C40/A48 3.7	C60/A72 4.6	C150/A130 8.3
MX-05	WTRC/WTRA	WTRC/WTRA	WTRC/WTRA	WTRC/WTRA

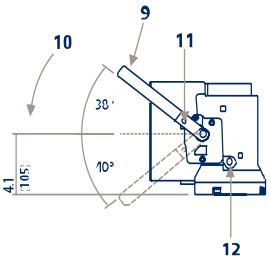
Top View

Dimensions in inches (millimeters)



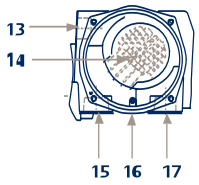
View A

Detail of declutch lever



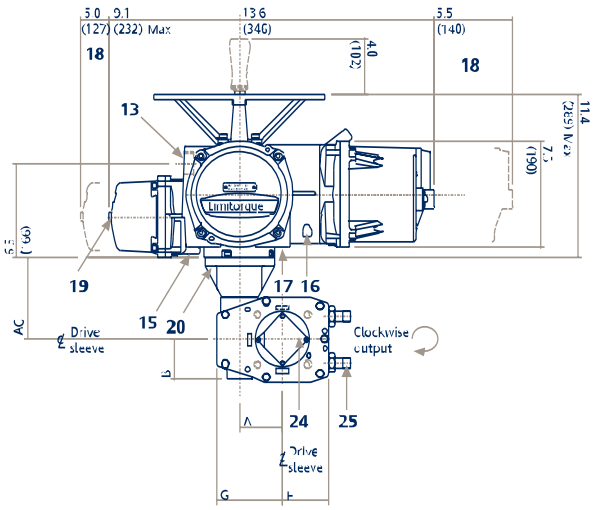
View B

Conduit entries with covers removed

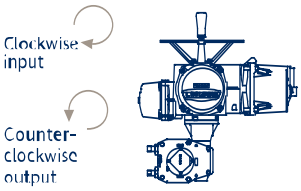


Side View

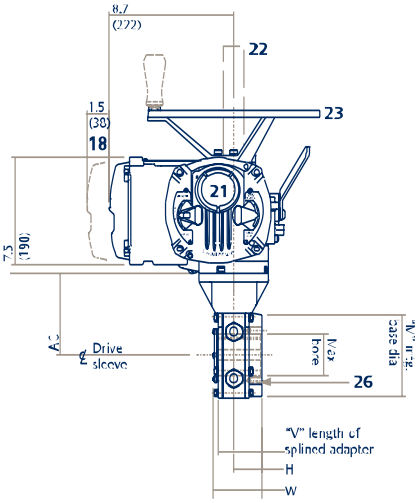
Position B: Clockwise input = Clockwise output



Position A: Clockwise input = Counter-clockwise output



Front View



Dimension Key

1 Preferred mounting is with motor horizontal
2 Lubricant fill
3 Declutch lever is padlockable in motor operation
4 Motor
5 Serial text plate
6 Terminal compartment
7 Control panel
8 Controls compartment
9 Lever returns automatically to this position when released
10 To engage manual override
11 Hole 0.28" (7) diameter for padlock
12 Lubricant drain
13 Conduit entry - Tapped 1.25" NPT Options- M32, M25, M20, and PG21
14 Customer terminals
15 Conduit entry - Tapped 1.5" NPT Options M40, M32, M25, M20, PG21, and PG29
16 Ground/earthing lug
17 Conduit entry Tapped 1.25" NPT Options - M32, M25, M20, and PG21
18 Allowance for cover removal
19 Hole 0.22" (5.5) diameter x 0.43" (11) deep for self-tapping screw
20 Mounting face for attaching to valve flange or extended base
21 Control panel display window
22 Stem cover (when required - Length to suit valve travel. MX-10/20 threaded 2.00" NPT or fitted with pipe plug.
23 Standard top-mounted handwheel: MX-10 = 18" (450) dia. MX-20/40 = 24" (610) dia. Side mounted handwheels: MX-10/20/40 = 12" (305) dia.
24 Position indicator
25 Adjustable mechanical stops
26 Mounting holes "C" straddle centerline

Dimensions for WTRC-15/150 and WTRA-21/130; SGA

Gearbox	WTRC-15/1.7 WTRA-21/1.7		WTRC-40/3.7 WTRA-48/3.7	
Dimension	inches	mm	inches	mm
Ratio	WTRC-15 = 72:1 WTRA-21 = 55:1	WTRC-15 = 72:1 WTRA-21 = 55:1	WTRC-40 = 70:1 WTRA-48 = 55:1	WTRC-40 = 70:1 WTRA-48 = 55:1
SGA	1.69:1	1.69:1	3.71:1	3.71:1
A (Standard position B)	3.7	94	4.28	108.8
A (Optional position A)	3.7	94	5.72	145.2
B	3.7	94	4.4	112
C	(4) 5/8-11 x .9 deep 5.500 B.C.	(4) M16 x 2 - 25 deep 140.00 B.C.	(8) 5/8-11 x 1 deep 7.500 B.C.	(4) M20 x 2 - 24 deep 165.00 B.C.
F	4.1	104	5.2	132
G	5.6	144	7.4	188
H	5.0	127	6.9	175
M	7.0	178	8.8	223
V	3.9	100	5.1	130
W	4.4	111	5.7	144
AC	10.1	257	10.9	277
Max. Bore	3.00	75	3.75	96
Sq. Key (Max.)	0.625	—	0.750	—
Rect. Key (Max.)	.875 x .625	20 x 12	1.00 x .750	28 x 16
Electric Actuator Mtg. Flange	FA10	F10	FA10	F10
Weight	93 lb.	42 kg	170 lb.	77 kg

Gearbox	WTRC-60/4.6 WTRA-72/4.6		WTRC-150/8.3 WTRA-130/8.3	
Dimension	inches	mm	inches	mm
Ratio	WTRC-60 = 70:1 WTRA-72 = 55:1	WTRC-60 = 70:1 WTRA-72 = 55:1	WTRC-150 = 60.1 WTRA-130 = 60.1	WTRC-150 = 60:1 WTRA-130 = 60:1
SGA	4.64:1	4.64:1	8.25: 1	8.25:1
A (Standard position B)	5.0	128	7.4	187
A (Optional position A)	6.5	164	7.4	187
B	6.0	153	8.0	202
C	(8) 5/8-11 x 1.0 deep 10.00 B.C.	(8) M16 x 1.75 - 24 deep 254.00 B.C.	(8) 3/4-10 x 1.1 deep 11.750 B.C.	(8) M20 - 2.5 x 32 deep 298.00 B.C.
F	5.9	149	8.0	202
G	8.5	216	10.7	271
H	8.2	209	4.0	101
M	11.4	289	13.5	343
V	6.1	154	6.3	161
W	6.6	168	6.8	174
AC	11.7	296	15.2	385
Max. Bore	4.00	110	5.125	130
Sq. Key (Max.)	0.875	—	1.00	—
Rect. Key (Max.)	1.00 x .750	28 x 16	1.250 x .875	32 x 18
Electric Actuator Mtg. Flange	FA10	F10	FA10 or FA14[1]	F10 or F14[1]
Weight	260 lb.	118 kg	419 lb.	190 kg

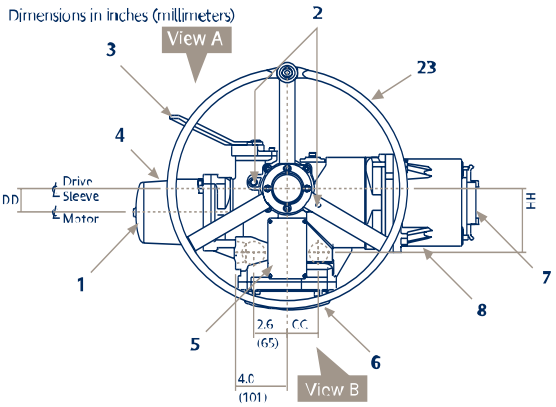
Note 1: No mounting adapter is required with direct electric to WTR.

Dimensions for MX-10/40 with WTRC-10/150 and WTRA-12/130

MX/WTR Commercial (C) and AWWA (A) Combinations					
WTR	A12	C15/A21	A48	C60/A72	C150/A130
MX-10	WTRC/WTRA	WTRC/WTRA	WTRC/WTRA	—	—
MX-20	—	WTRA	WTRC/WTRA	WTRC/WTRA	WTRC/WTRA
MX-40	—	—	WTRC/WTRA	WTRC/WTRA	WTRC/WTRA

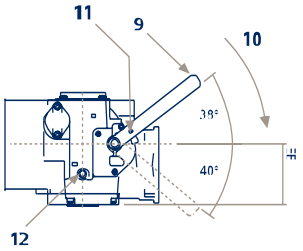
Top View with Top-mounted Handwheel

Dimensions in inches (millimeters)



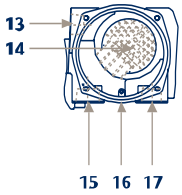
View A

Detail of declutch lever



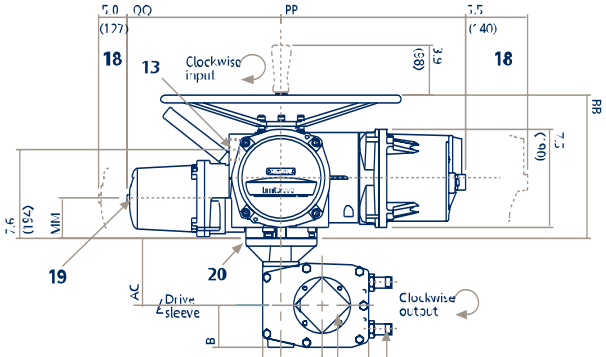
View B

Conduit entries with covers removed

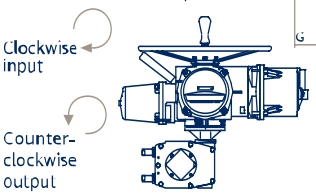


Side View

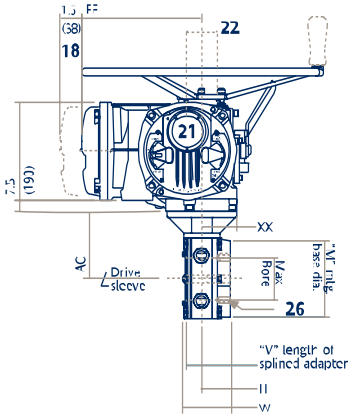
Position B: Clockwise input = Clockwise output



Position A: Clockwise input = Counter-clockwise output



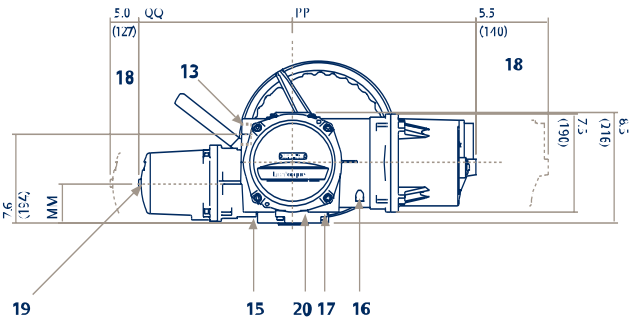
Front View



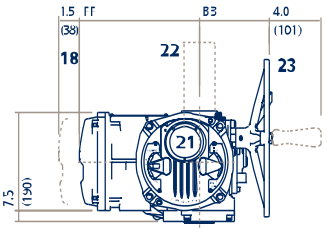
Dimension Key

1 Preferred mounting is with motor horizontal
2 Lubricant fill
3 Declutch lever is padlockable in motor operation
4 Motor
5 Serial text plate
6 Terminal compartment
7 Control panel
8 Controls compartment
9 Lever returns automatically to this position when released
10 To engage manual override
11 Hole 0.28" (7) diameter for padlock
12 Lubricant drain
13 Conduit entry - Tapped 1.25" NPT Options - M32, M25, M20, and PG21
14 Customer terminals
15 Conduit entry - Tapped 1.5" NPT Options - M40, M32, M25, M20, PG21, and PG29
16 Ground/earthing lug
17 Conduit entry - Tapped 1.25" NPT Options - M32, M25, M20, and PG21
18 Allowance for cover removal
19 Hole 0.22" (5.5) diameter x 0.43" (11) deep for self-tapping screw
20 Mounting face for attaching to valve flange or extended base
21 Control panel display window
22 Stem cover (when required) - Length to suit valve travel. MX-10/20 threaded 2.00" NPT or fitted with pipe plug.
23 Standard top-mounted handwheel: MX-10 = 18" (450) dia. MX-20/40 = 24" (610) dia. Side-mounted handwheels: MX-10/20/40 = 12" (305) dia.
24 Position indicator
25 Adjustable mechanical stops
26 Mounting holes "C" straddle centerline

Side View with Side-mounted Handwheel Option



Front View



Dimensions for WTRC-10/150 and WTRA-12/130

Gearbox	WTRA-12		WTRC-15 WTRA-21	
Dimension	inches	mm	inches	mm
Ratio	WTRA-12 = 55:1	WTRA-12 = 55:1	WTRC-15 = 72:1 WTRA-21 = 55:1	WTRC-15 = 72:1 WTRA-21 = 55:1
SGA	—		—	—
A	3.0	76	3.7	94
B	2.8	72	3.7	94
C	(4) 1/2-13 x .750 deep 4.950 B.C.	(4) M12 x 1.75 - 18 deep 125.00 B.C.	(4) 5/8-11 x .9 deep 5.500 B.C.	(4) M16 x 2 - 25 deep 140.00 B.C.
F	3.7	93	4.1	104
G	4.6	118	5.6	144
H	2.0	50	2.7	68
M	6.0	152	7.0	178
V	3.1	78	3.9	100
W	3.5	88	4.4	111
AC	5.8	148	6.1	154
Sq. Key (Max.)	0.375	—	0.625	—
Rect. Key (Max.)	.625 x .4375	16 x 10	.875 x .625	20 x 12
Electric Actuator Mtg. Flange	FA12	F12	FA14	F14
Weight	33 lb.	15 kg	66 lb.	30 kg

Gearbox	WTRA-48		WTRC-60 WTRA-72		WTRC-150 WTRA-130	
Dimension	inches	mm	inches	mm	inches	mm
Ratio	WTRA-48 = 55:1	WTRA-48 = 55:1	WTRC-60 = 70:1 WTRA-72 = 55:1	WTRC-60 = 70:1 WTRA-72 = 55:1	WTRC-150 = 60:1 WTRA-130 = 60:1	WTRC-150 = 60:1 WTRA-130 = 60:1
SGA	—	—	—	—	—	—
A	5.00	127	5.0	128	7.4	188
B	4.4	112	6.0	153	8.0	203
C	(8) 5/8-11 x 1 deep 7.500 B.C.	(4) M20 x 2.5 - 24 deep 165.00 B.C.	(8) 5/8-11 x 1.0 deep 10.00 B.C.	(8) M16 x 1.75 - 24 deep 254.00 B.C.	(8) 3/4-10 x 1.1 deep 11.750 B.C.	(8) M20 - 2.5 x 32 deep 298.00 B.C.
F	5.2	132	5.9	149	8.0	203
G	7.4	188	8.5	216	10.7	272
H	3.3	84	4.0	102	3.9	100
M	8.8	223	11.4	289	13.5	343
V	5.1	130	6.1	154	6.3	160
W	5.7	144	6.6	168	6.8	173
AC	8.6	218	9.5	241	11.1	282
Sq. Key (Max.)	0.750	—	0.875	—	1.00	—
Rect. Key (Max.)	1.00 x .750	28 x 16	1.00 x .750	28 x 16	1.250 x .875	32 x 18
Electric Actuator Mtg. Flange	FA19	F19	FA25	F25	FA30	F30
Weight	128 lb.	58 kg	205 lb.	93 kg	331 lb.	150 kg

Dimensions for MX-10/40

MX Top-mounted Handwheel Dimensions

Unit Dimensions	BB		CC		DD		EE		FF		HH		MM		PP		QQ		XX	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
MX-10	10.9	277	2.4	60	1.8	46	4.6	117	9.2	233	4.9	125	3.1	78	14	356	11.7	297	2.7	69
MX-20	14.4	366	2.1	54	2.2	57	5.6	141	10.7	272	6.4	163	3.9	100	14.7	373	13.5	344	3.5	90
MX-40	15.0	381	2.1	54	2.7	68	5.9	150	11.1	283	6.9	174	4.1	105	15	381	13.8	350	3.8	90

MX Side-mounted Handwheel Dimensions

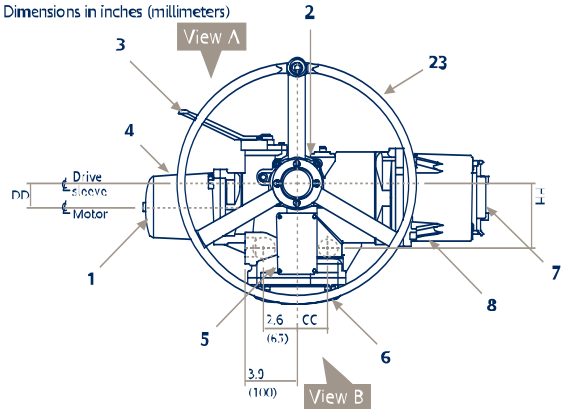
Unit Dimensions	BB		CC		DD		EE		FF		HH		MM		PP		QQ		XX	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
MX-10	5.3	135	2.4	60	1.8	46	4.6	117	9.2	233	4.9	125	3.1	78	14	356	11.7	297	2.7	69
MX-20	6.8	168	2.1	54	2.2	57	5.6	141	10.7	272	6.4	163	3.9	100	14.7	373	13.5	344	3.5	90
MX-40	8.8	224	2.1	54	2.7	68	5.6	150	11.1	283	6.9	174	4.1	105	15	381	13.8	350	3.5	90

Dimensions for MX-10/40 with WTRC-15/150 and WTRA-21/130; SGA

MX/WTR Commercial (C) and AWWA (A) Combinations with Spur Gear Attachments (S)				
WTR	C15/A21 1.7	A48 3.7	C60/A72 4.6	C150/A130 8.3
MX-10	WTRC/WTRA	WTRC/WTRA	WTRC/WTRA	WTRC/WTRA
MX-20	—	—	—	—
MX-40	—	—	—	—

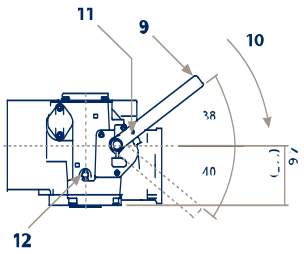
Top View with Top-mounted Handwheel

Dimensions in inches (millimeters)



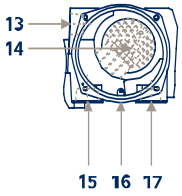
View A

Detail of declutch lever



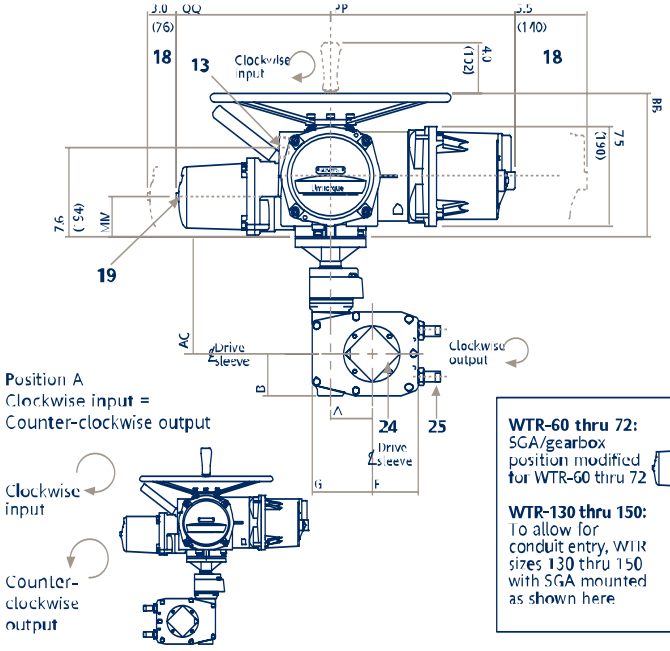
View B

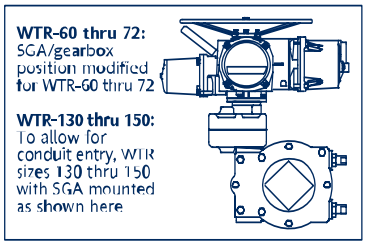
Conduit entries with covers removed



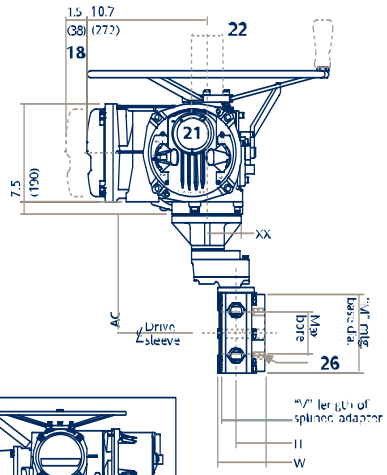
Side View

Position B: Clockwise input = Clockwise output





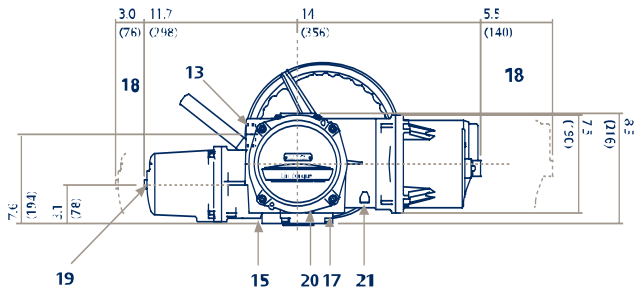
Front View



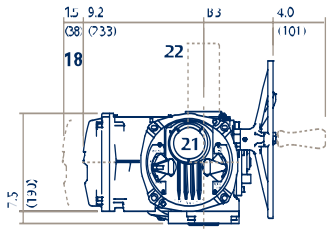
Dimension Key

1 Preferred mounting is with motor horizontal
2 Lubricant fill
3 Declutch lever is padlockable in motor operation
4 Motor
5 Serial text plate
6 Terminal compartment
7 Control panel
8 Controls compartment
9 Lever returns automatically to this position when released
10 To engage manual override
11 Hole 0.28" (7) diameter for padlock
12 Lubricant drain
13 Conduit entry - Tapped 1.25" NPT Options M32, M25, M20, and PG21
14 Customer terminals
15 Conduit entry Tapped 1.5" NPT Options - M40, M32, M25, M20, PG21, and PG29
16 Ground/earthing lug
17 Conduit entry - Tapped 1.25" NPT Options - M32, M25, M20, and PG21
18 Allowance for cover removal
19 Hole 0.22" (5.5) diameter x 0.43" (11) deep for self-tapping screw
20 Mounting face for attaching to valve flange or extended base
21 Control panel display window
22 Stem cover (when required) - Length to suit valve travel. MX 10/20 threaded 2.00" NPT or fitted with pipe plug.
23 Standard top mounted handwheel: MX-10 = 18" (450) dia. MX-20/40 = 24" (610) dia. Side mounted handwheels: MX-10/20/40 = 12" (305) dia.
24 Position indicator
25 Adjustable mechanical stops
26 Mounting holes "C" straddle centerline

Side View with Side-mounted Handwheel Option



Front View



Dimensions for WTRC-15/150 and WTRA-21/130; SGA

Gearbox	WTRC-15/1.7 WTRA-21/1.7		WTRA-48/3.7	
Dimension	inches	mm	inches	mm
Ratio	WTRC-15 = 72:1 WTRA-21 = 55:1	WTRC-15 = 72:1 WTRA-21 = 55:1	WTRA-48 = 55:1	WTRA-48 = 55:1
SGA	1.69:1	1.69:1	3.71:1	3.71:1
A (Standard position B)	3.7	94	5.0	127
A (Optional position A)	3.7	94	5.0	127
B	3.7	94	4.4	112
C	(4) 5/8-11 x .9 deep 5.500 B.C.	(4) M16 x 2 - 25 deep 140.00 B.C.	(8) 5/8-11 x 1 deep .500 B.C.	(4) M20 x 2 - 24 deep 165.00 B.C.
F	4.1	104	5.2	132
G	5.6	144	7.4	188
H	5.0	127	6.9	175
M	7.0	178	8.8	223
V	3.9	100	5.1	130
W	4.4	111	5.7	144
AC	10.1	257	0.9	277
Max. Bore	3.00	75	3.75	96
Sq. Key (Max.)	0.625	—	0.750	—
Rect. Key (Max.)	.875 x .625	20 x 12	1.00 x .750	28 x 16
Electric Actuator Mtg. Flange	FA10	F10	A10	F10
Weight	93 lb.	42 kg	170 lb.	77 kg

Gearbox	WTRC-60/4.6 WTRA-72/4.6		WTRC-150/8.3 WTRA-130/8.3	
Dimension	inches	mm	inches	mm
Ratio	WTRC-60 = 70:1 WTRA-72 = 55:1	WTRC-60 = 70: WTRA-72 = 55:	WTRC-150 = 60:1 WTRA-130 = 60:1	WTRC-150 = 60:1 WTRA-130 = 60:1
SGA	4.64:1	4.64:1	8.25:1	8.25:1
A (Standard position B)	5.0	128	7.4	187
A (Optional position A)	6.5	164	7.4	187
B	6.0	153	8.0	202
C	(8) 5/8-11 x 1.0 deep 10.00 B.C.	(8) M16 x 1.75 - 24 deep 254.00 B.C.	(8) 3/4-10 x 1.1 deep 11.750 B.C.	(8) M20 - 2.5 x 32 deep 298.00 B.C.
F	5.9	149	8.0	202
G	8.5	216	10.7	271
H	8.2	209	4.0	101
M	11.4	289	13.5	343
V	6.1	154	6.3	161
W	6.6	168	6.8	174
AC	11.7	296	15.2	385
Max. Bore	4.00	110	5.125	130
Sq. Key (Max.)	0.875	—	1.00	—
Rect. Key (Max.)	1.00 x .750	28 x 16	1.250 x .875	32 x 18
Electric Actuator Mtg. Flange	FA10	F10	FA10 or FA14[1]	F10 or F14[1]
Weight	260 lb.	118 kg	419 lb.	190 kg

Note 1: No mounting adapter is required with direct electric to WTR.

Dimensions for MX-10

MX Top-mounted Handwheel Dimensions

Unit Dimensions	BB		CC		DD		EE		HH		MM		PP		QQ		XX	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
MX-10	10.9	277	2.4	60	1.8	46	4.6	117	4.9	125	3.1	78	14.0	356	11.7	297	2.7	69

MX Side-mounted Handwheel Dimensions

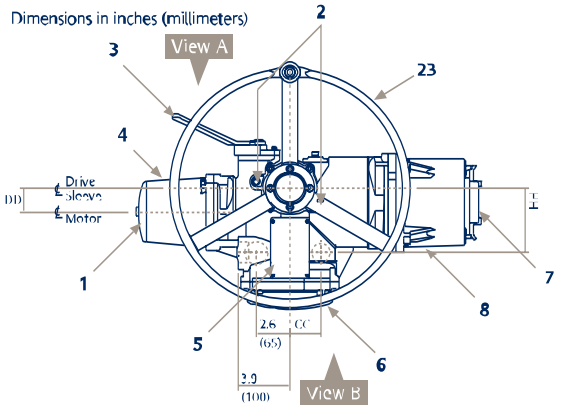
Unit Dimensions	BB		CC		DD		EE		HH		MM		PP		QQ		XX	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
MX-10	5.3	135	2.4	60	1.8	46	4.6	117	4.9	125	3.1	78	14.0	356	11.7	297	2.7	69

Dimensions for MX-20/40 with WTRC and WTRA-430/450

MX/WTR Commercial (C) and AWWA (A) Combinations		
WTR	430	450
MX-20	WTRC/WTRA	WTRC/WTRA
MX 40	WTRC/WTRA	WTRC/WTRA

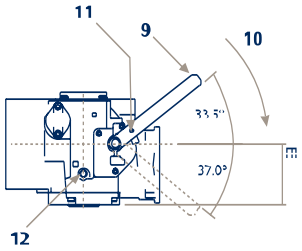
Top View with Top-mounted Handwheel

Dimensions in inches (millimeters)



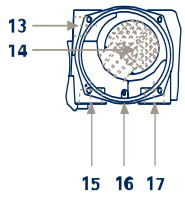
View A

Detail of declutch lever



View B

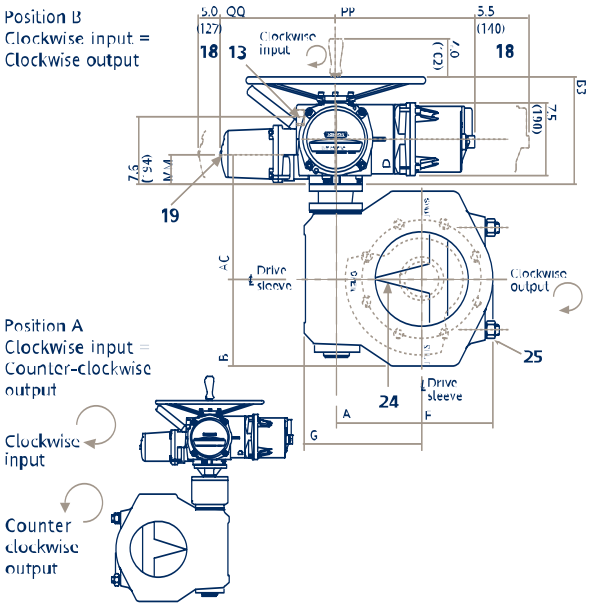
Conduit entries with covers removed



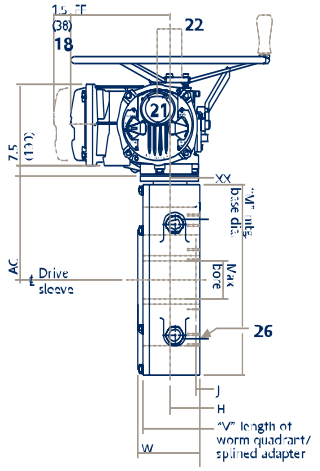
Side View

Position B
Clockwise input =
Clockwise output

Position A
Clockwise input =
Counter-clockwise output



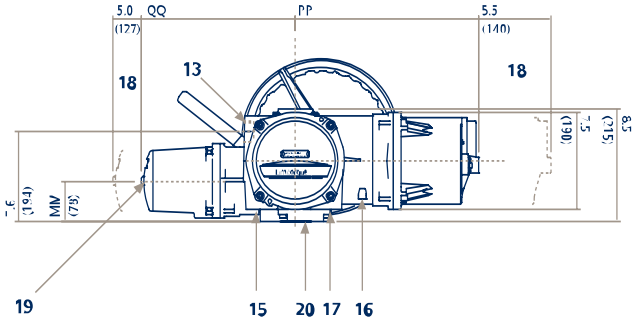
Front View



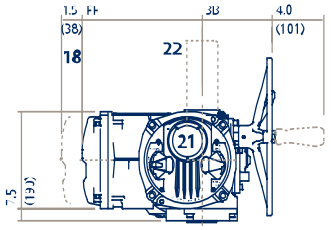
Dimension Key

1 Preferred mounting is with motor horizontal
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3 Declutch lever is padlockable in motor operation
4 Motor
5 Serial text plate
6 Terminal compartment
7 Control panel
8 Controls compartment
9 Lever returns automatically to this position when released
10 To engage manual override
11 Hole 0.28" (7) diameter for padlock
12 Lubricant drain
13 Conduit entry - Tapped 1.25" NPT Options- M32, M25, M20, and PG21
14 Customer terminals
15 Conduit entry - Tapped 1.5" NPT Options M40, M32, M25, M20, PG21, and PG29
16 Ground/earthing lug
17 Conduit entry - Tapped 1.25" NPT Options - M32, M25, M20, and PG21
18 Allowance for cover removal
19 Hole 0.22" (5.5) diameter x 0.43" (11) deep for self-tapping screw
20 Mounting face for attaching to valve flange or extended base
21 Control panel display window
22 Stem cover (when required) - Length to suit valve travel. MX-10/20 threaded 2.00" NPT or fitted with pipe plug.
23 Standard top-mounted handwheel: MX-10 = 18" (450) dia. MX 20/40 = 24" (610) dia. Side-mounted handwheels: MX-10/20/40 = 12" (305) dia.
24 Position indicator
25 Adjustable mechanical stops
26 Mounting holes "C" straddle centerline

Side View with Side-mounted Handwheel Option



Front View



Dimensions for WTRC and WTRA-430/450

		WTRC-430 WTRA-430			WTRC-450 WTRA-450	
Gearbox						
Dimension		inches	mm		inches	mm
Ratio		65:1	65:1		68:1	68:1
A		8.1	206		9.1	231
B		8.4	212		9.4	237
C		(8) 1-8x 1.3 deep 14.02 B.C.	(8) M30 - 3.5x 34 deep 356.00 B.C.		(8) 1-8x 1.8 deep 14.02 B.C.	(8) M30 - 3.5x 45 deep 356.00 B.C.
F		8.4	213		8.4	213
G		11.2	284		12.8	326
H		2.9	74		3.2	82
J		0.39	10		0.47	
M		16.3	415		16.3	415
V(1 Pc./2 Pc.)[1]		5.6 / 5.6	142 / 142		6.1 / 6.1	156 / 156
W		7.2	182		7.4	
Mtg. Flange		(FA14) 3.751 - 3.754 (FA16) 5.003 - 5.006	(F14) 100.05 - 100.12 (F16) 130.05 - 130.12		(FA14) 3.751 - 3.754 (FA16) 5.003 - 5.006 (FA30) 7.003 - 7.007[2]	(F14) 100.05 - 100.12 (F16) 130.05 - 130.12 (F30) N/A
Mtg. Flange		(FA14) 7.13 (FA16) 8.27	(F14) 175 (F16) 210		(FA14) 7.13 (FA16) 8.3 (FA30) 13.75	(F14) 175 (F16) 210 (F30) 350
AC		9.70	246		11.40	290
Max. Bore (Sq. Key)	(1 Pc. / 2 Pc.)	5.13 / 4.25	N/A	(1 Pc. / 2 Pc.)[1]	5.63 / 4.50	N/A
Sq.Key (Max.)		1.25 / 1.00	N/A		1.50 / 1.00	N/A
Max. Bore (Rect. Key)		5.50 / 4.438	140 / N/A		6.00 / 4.50	152 / N/A
Rect. Key (Max.)		1.25 x .875 / 1 x .75	36 x 20 / N/A		1.5 x 1 / 1.00x.750	40 x 22 / N/A
Electric Actuator Mtg. Flange		FA35	F35		FA40	F40
Weight		309 lb.	140 kg		412 lb.	187 kg

Note 1: 1-Pc. = 1 piece drive sleeve
2-Pc. = 2 piece drive sleeve
Note 2: Modified from FA (MSS) standard

Dimensions for MX-20/40

MX Top-mounted Handwheel Dimensions

Unit Dimensions	BB		CC		DD		EE		FF		HH		MM		PP		QQ		XX	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
MX-20	14.4	366	2.1	54	2.2	57	6.4	163	10.7	272	6.4	163	3.9	100	14.7	356	13.5	344	3.5	90
MX-40	15.0	381	2.1	54	2.2	68	6.9	174	11.1	283	6.9	174	4.1	105	15	373	13.8	350	3.5	90

MX Side-mounted Handwheel Dimensions

Unit Dimensions	BB		CC		DD		EE		FF		HH		MM		PP		QQ		XX	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
MX-20	6.8	168	2.1	54	2.2	57	5.6	141	10.7	272	6.4	163	3.9	100	14.7	373	13.5	344	3.5	90
MX-40	8.8	224	2.1	54	2.7	68	5.9	150	11.1	283	6.9	174	4.1	105	15	381	13.8	350	3.5	90

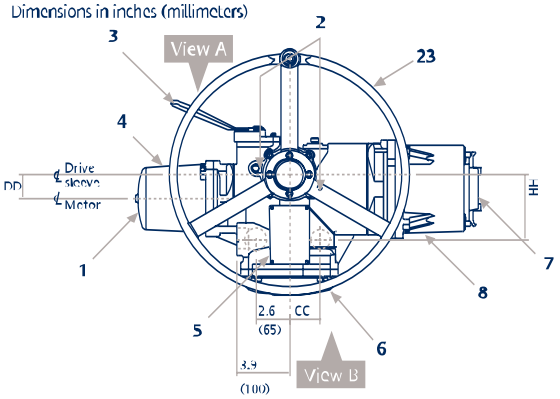
Dimensions for MX-10/40 with WTRC and WTRA-430/575; SGA

MX/WTR Commercial (C) and AWWA (A) Combinations with Spur Gear Attachments (S)				
WTR/SGA	430/6.3	430/10.8	450/4.3	450/10.3
MX-10	WTRC/WTRA	WTRC/WTRA	WTRC/WTRA	WTRC/WTRA
MX-20	WTRC/WTRA	WTRA	WTRC/WTRA	WTRC/WTRA
MX-40	WTRA	–	WTRC/WTRA	WTRC/WTRA

MX/WTR Commercial (C) and AWWA (A) Combinations with Spur Gear Attachments (S)				
WTR/SGA	500/4.3	500/10.3	575/5.2	575/7.8
MX-10	WTRC/WTRA	WTRC/WTRA	–	–
MX-20	WTRC/WTRA	WTRC/WTRA	WTRC/WTRA	WTRC/WTRA
MX-40	WTRC/WTRA	WTRC/WTRA	WTRC/WTRA	WTRC/WTRA

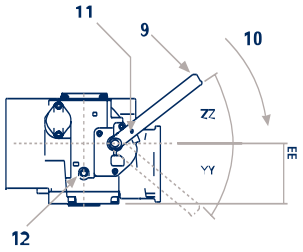
Top View with Top-mounted Handwheel

Dimensions in inches (millimeters)



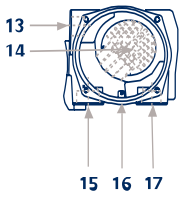
View A

Detail of declutch lever

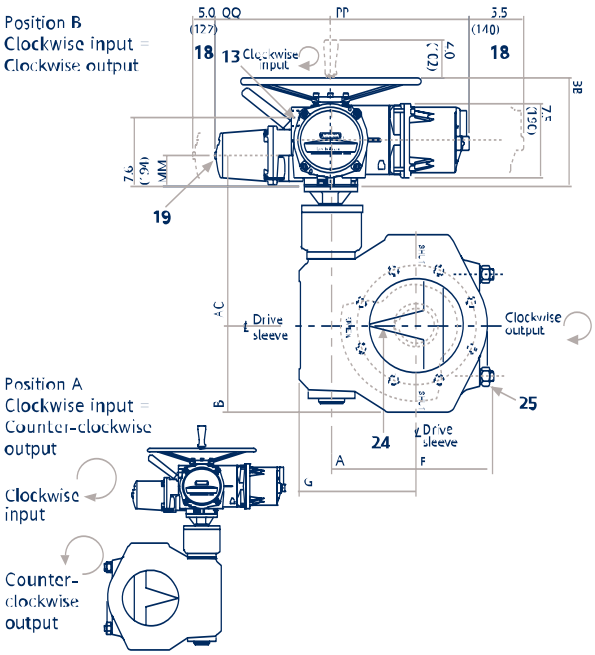


View B

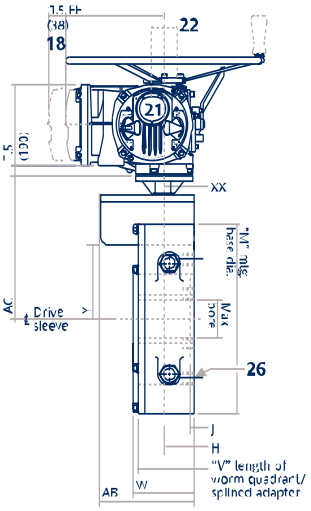
Conduit entries with covers removed



Side View



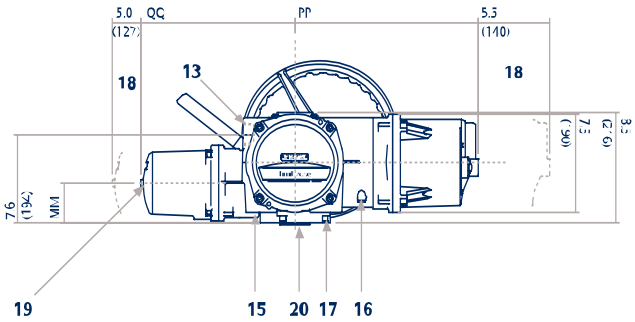
Front View



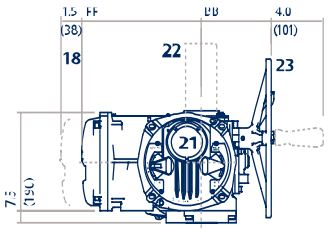
Dimension Key

1 Preferred mounting is with motor horizontal
2 Lubricant fill
3 Declutch lever is padlockable in motor operation
4 Motor
5 Serial text plate
6 Terminal compartment
7 Control panel
8 Controls compartment
9 Lever returns automatically to this position when released
10 To engage manual override
11 Hole 0.28" (7) diameter for padlock
12 Lubricant drain
13 Conduit entry - Tapped 1.25" NPT Options- M32, M25, M20, and PG21
14 Customer terminals
15 Conduit entry - Tapped 1.5" NPT Options - M40, M32, M25, M20, PG21, and PG29
16 Ground/earthing lug
17 Conduit entry Tapped 1.25" NPT Options - M32, M25, M20, and PG21
18 Allowance for cover removal
19 Hole 0.22" (5.5) diameter x 0.43" (11) deep for self tapping screw
20 Mounting face for attaching to valve flange or extended base
21 Control panel display window
22 Stem cover (when required) Length to suit valve travel. MX-10/20 threaded 2.00" NPT or fitted with pipe plug.
23 Standard top-mounted handwheel: MX 10 = 18" (450) dia. MX-20/40 = 24" (610) dia. Side-mounted handwheels: MX-10/20/40 = 12" (305) dia.
24 Position indicator
25 Adjustable mechanical stops
26 Mounting holes "C" straddle centerline

Side View with Side-mounted Handwheel Option



Front View



Dimensions for WTRC and WTRA-430/575; SGA

Gearbox	WTRC-430/6.3 & 10.8 WTRA-430/6.3 & 10.8		WTRC-450/4.3 & 10.3 WTRA-450/4.3 & 10.3	
Dimension	inches	mm	inches	mm
Ratio	65:1	65:1	68:1	68:1
SGA	6.3:1 or 10.8	6.3:1 or 10.8	4.3:1 or 10.3:1	4.3:1 or 10.3:1
A	8.1	206	9.1	231
B	8.4	212	9.4	237
C	(8) 1-8 x 1.3 deep 14.02 B.C.	(8) M30 - 3.5 x 34 deep 356.00 B.C.	(8) 1-8 x 1.8 deep 14.02 B.C.	(8) M30 - 3.5 x 45 deep 356.00 B.C.
F	8.4	213	8.4	213
G	11.2	284	12.8	326
H	2.9	74	3.2	82
J	0.39	10	0.5	12
M	16.3	415	16.3	415
V (1 Pc. / 2 Pc.)[1]	5.6 / 5.9	142 / 142	6.1 / 6.1	156 / 156
W	7.2	182	7.4	188
Y	7.6	193	8.4	213
AB	8.30	211	10.5	266
AC	15.3	388	17.4	442
Max. Bore (Sq. Key) (1 Pc. / 2 Pc.)	5.13 / 4.25	N/A	5.63 / 4.50 (1 Pc. / 2 Pc.)	N/A
Sq. Key (Max.)	1.25 / 1.00	N/A	1.50 / 1.00	N/A
Max. Bore (Rect. Key)	5.50 / 4.50	140 / N/A	6.00 / 4.75	152 / N/A
Rect. Key (Max.)	1.25 x .875 / 1 x .75	36 x 20 / N/A	1.5 x 1.0 / 1.00 x .75	40 x 22 / N/A
Electric Actuator Mtg. Flange	FA10/FA14	F10/F14	FA10/FA14	F10/F14
Weight	331 lb.	150 kg	432/452 lb.	196/205 kg

Note 1: 1 Pc. = 1-piece drive sleeve
2 Pc. = 2-piece drive sleeve

Gearbox	WTRC-500/4.3 & 10.3 WTRA-500/4.3 & 10.3		WTRC-575/5.2 & 7.8 WTRA-575/5.2 & 7.8	
Dimension	inches	mm	inches	mm
Ratio	69:1	69:1	60:1	60:1
SGA	4.3:1 or 10.3:1	4.3:1 or 10.3:1	5.2:1 or 7.8:1	5.2:1 or 7.8:1
A	11.5	292	14.0	356
B	11.8	300	14.2	360
C	(8) 1.25-7 x 1.97 deep 16.00 B.C.	(8) M36 - 3.5 x 50 deep 406.00 B.C.	(12) 1.25-7 x 2.05 deep 19.02 B.C.	(12) M36 - 4 x 52 deep 483.00 B.C.
F	9.6	243	11.3	287
G	15.8	402	19.5	495
H	3.7	95	4.0	102
J	0.47	12	0.59	15
M	18.7	475	22.0	559
V (1 Pc. / 2 Pc.)[1]	6.7 / 6.7	170 / 170	8.7 / 8.7	221 / 221
W	8.0	203	10.0	254
Y	9.8	249	12.8	325
AB	11.0	279	13.4	340
AC	18.8	477	24.8	630
Max Bore (Sq. Key) (1 Pc. / 2 Pc.)	6.75 / 5.50	N/A	7.50 / 6.50 (1 Pc. / 2 Pc.)	N/A
Sq. Key (Max)	1.75 / 1.25	N/A	1.750 / 1.500	N/A
Max Bore (Rect. Key)	7.00 / 6.00	178 / N/A	8.00 / 6.75	203 / N/A
Rect. Key (Max)	1.75 x 1.50 / 1.50 x 1.00	45 x 25 / N/A	2.00 x 1.50 / 1.5 x 1.00	50 x 28 / N/A
Electric Actuator Mtg. Flange	FA10/FA14	F10/F14	FA14/FA16	F14/F16
Weight	540/558 lb.	245/253 kg	1327/1393 lb.	602/632 kg

Dimensions for MX-10/40

MX Top-mounted Handwheel Dimensions

Unit Dimensions	BB		CC		DD		EE		FF		HH		MM		PP		QQ		XX		YY	ZZ
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		
MX-10	10.9	277	2.4	60	1.8	46	4.6	117	9.2	233	4.9	125	3.1	78	14	356	11.7	297	2.7	69	40.0°	40.0
MX-20	14.4	366	2.1	54	2.2	57	5.6	141	10.7	272	6.4	163	3.9	100	14.7	373	13.5	344	3.5	90	37.0°	33.5
MX-40	15.0	381	2.1	54	2.7	68	5.9	150	11.1	283	6.9	174	4.1	105	15	381	13.8	350	3.8	90	37.0°	33.5

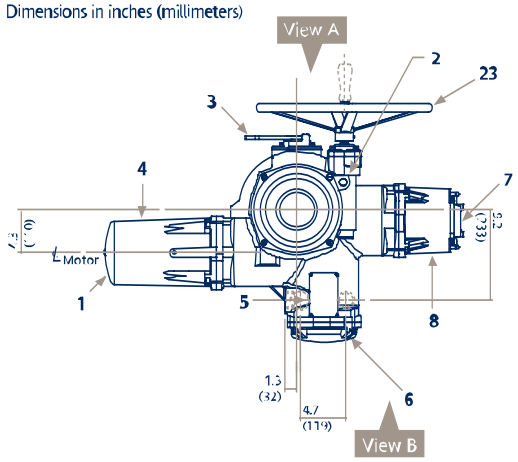
MX Side-mounted Handwheel Dimensions

Unit Dimensions	BB		CC		DD		EE		FF		HH		MM		PP		QQ		XX		YY	ZZ
	In.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		
MX-10	5.3	135	2.4	60	1.8	46	4.6	117	9.2	233	4.9	125	3.1	78	14	356	11.7	297	2.7	69	40.0°	40.0
MX-20	6.8	168	2.1	54	2.2	57	5.6	141	10.7	272	6.4	163	3.9	100	14.7	373	13.5	344	3.5	90	37.0°	33.5
MX-40	8.8	224	2.1	54	2.7	68	5.9	150	11.1	283	6.9	174	4.1	105	15	381	13.8	350	3.5	90	37.0°	33.5

Dimensions for MX-85 with WTRC-150 and WTRA-130

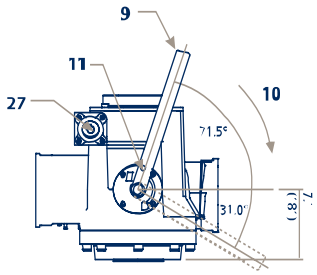
Top View

Dimensions in inches (millimeters)



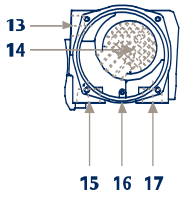
View A

Detail of declutch lever



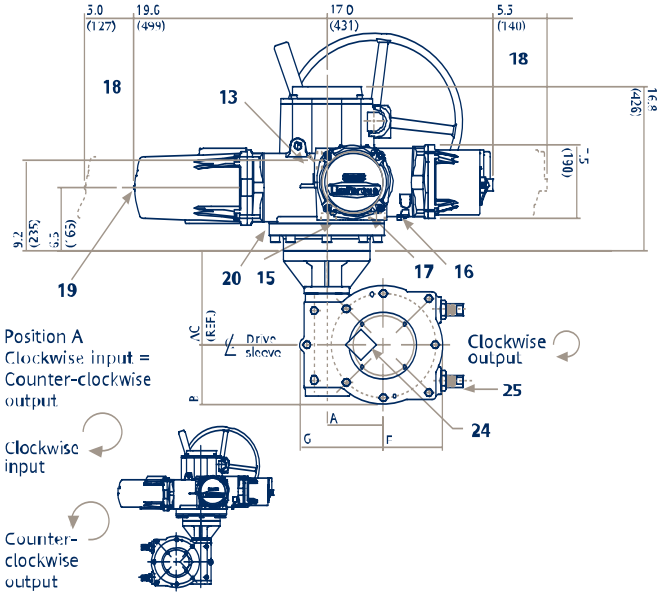
View B

Conduit entries with covers removed

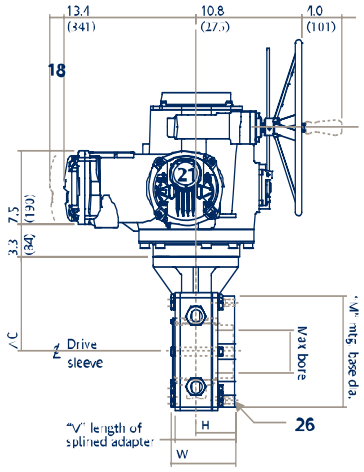


Side View

Position B: Clockwise input = Clockwise output



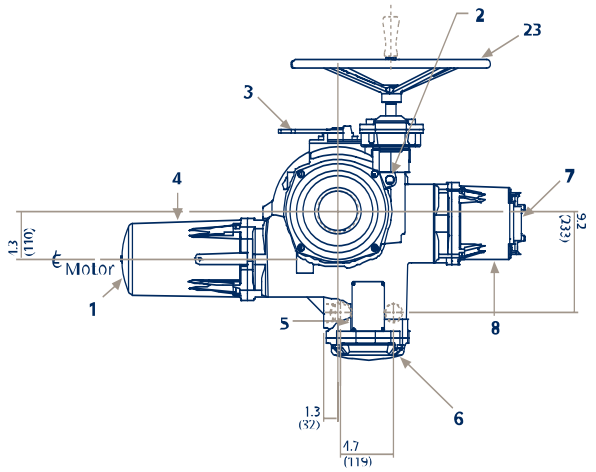
Front View



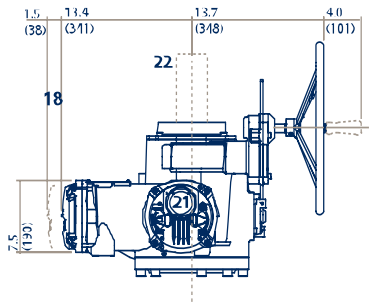
Dimension Key

1 Preferred mounting is with motor horizontal
2 Lubricant fill
3 Declutch lever is padlockable in motor operation
4 Motor
5 Serial text plate
6 Terminal compartment
7 Control panel
8 Controls compartment
9 Lever returns automatically to this position when released
10 To engage manual override
11 Hole 0.28" (7) diameter for padlock
12 Lubricant drain
13 Conduit entry - Tapped 1.25" NPT Options- M32, M25, M20, and PG21
14 Customer terminals
15 Conduit entry - Tapped 1.5" NPT Options - M40, M32, M25, M20, PG21, and PG29
16 Ground/earthing lug
17 Conduit entry - Tapped 1.25" NPT Options - M32, M25, M20, and PG21
18 Allowance for cover removal
19 Hole 0.22" (5.5) diameter x 0.43" (11) deep for self-tapping screw
20 Mounting face for attaching to valve flange or extended base
21 Control panel display window
22 Stem cover (when required) - Length to suit valve travel. Threaded 6.00" NPT or fitted with pipe plug.
23 Standard handwheel 18" (457) diameter
24 Position indicator
25 Adjustable mechanical stops
26 Mounting holes "C" straddle centerline
27 Handwheel removed for clarity

Top View with Handwheel Spur Gear Assembly Option



Front View



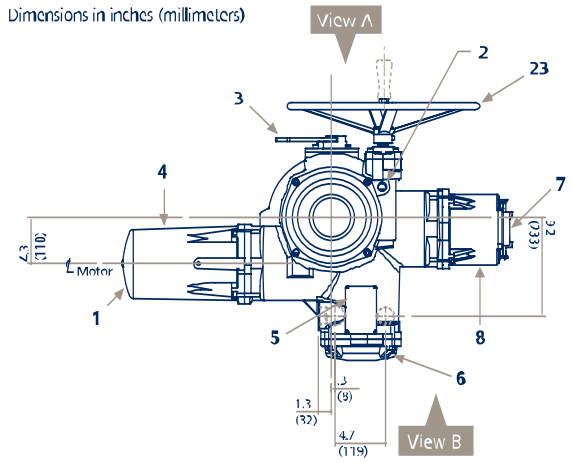
Dimensions for WTRC-150 and WTRA-130

Gearbox	WTRA-130		WTRC-150	
Dimension	inches	mm	inches	mm
Ratio				
SGA				
A	7.4	188	7.4	188
B	8.0	203	8.0	203
C	(8) 3/4-10 x 1.1 deep 11.750 B.C.	(8) M20 x 2.5 x 32 deep 298.00 B.C.	(8) 3/4-10 x 1.1 deep 11.750 B.C.	(8) M20 x 2.5 x 32 deep 298.00 B.C.
F	8.0	203	8.0	203
G	10.7	272	10.7	272
H	3.9	100	3.9	100
M	13.5	343	13.5	343
V	6.3	160	6.3	160
W	6.80	172.8	6.80	172.8
AC	11.2	284	11.2	284
Max. Bore	5.125	130	5.125	130
Max. Key (Max.)	1.00 sq.	32 x 18	1.00 sq.	32 x 18

Dimensions for MX-85 with WTRC and WTRA-430/500

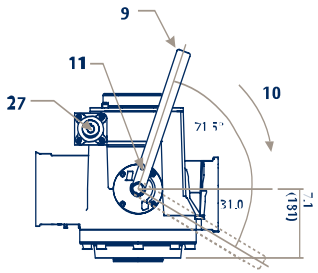
Top View

Dimensions in inches (millimeters)



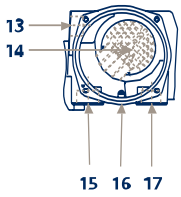
View A

Detail of declutch lever



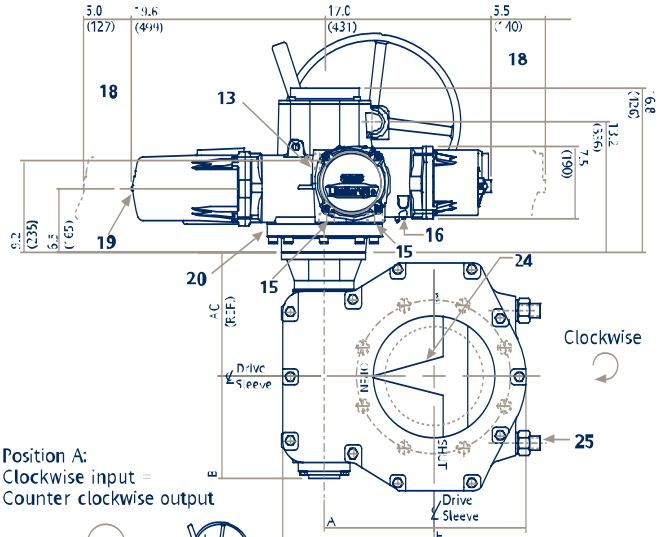
View B

Conduit entries with covers removed

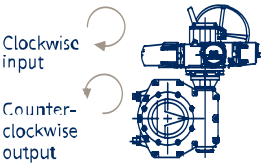


Side View

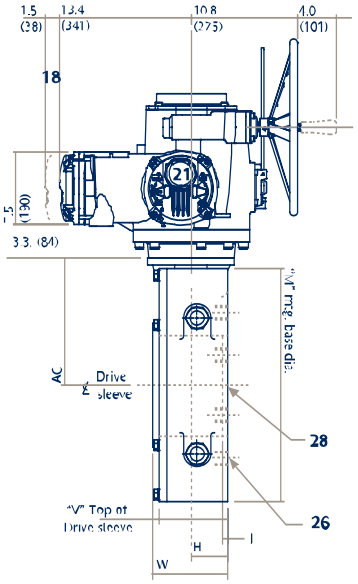
Position B: Clockwise input = Clockwise output



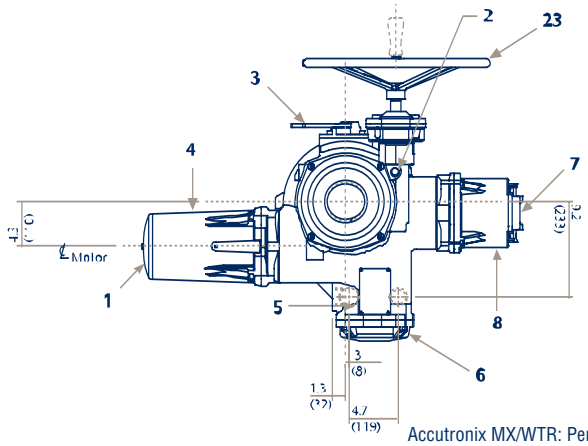
Position A:
Clockwise input = Counter clockwise output



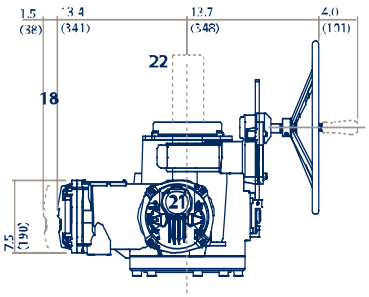
Front View



Top View with Spur Gear Assembly Option



Front View



Dimension Key

1. Preferred mounting is with motor horizontal
2. Lubricant fill
3. Declutch lever is padlockable in motor operation
4. Motor
5. Serial text plate
6. Terminal compartment
7. Control panel
8. Controls compartment
9. Lever returns automatically to this position when released
10. To engage manual override
11. Hole 0.28" (7) diameter for padlock
12. Lubricant drain
13. Conduit entry - Tapped 1.25" NPT Options- M32, M25, M20, and PG21
14. Customer terminals
15. Conduit entry - Tapped 1.5" NPT Options M40, M32, M25, M20, PG21, and PG29
16. Ground/earthing lug
17. Conduit entry - Tapped 1.25" NPT Options - M32, M25, M20, and PG21
18. Allowance for cover removal
19. Hole 0.22" (5.5) diameter x 0.43" (11) deep for self-tapping screw
20. Mounting face for attaching to valve flange or extended base
21. Control panel display window
22. Stem cover (when required) - Length to suit valve travel. MX-10/20 threaded 2.00" NPT or fitted with pipe plug.
23. Standard handwheel 18" (457) diameter
24. Position indicator
25. Adjustable mechanical stops
26. Mounting holes "C" straddle centerline
27. Handwheel removed for clarity
28. Max. bore & key info. # 04 570 0001 1 for bore & for Q11, Q13 drive sleeves see certification sheet & drawing keyway position.

Dimensions for WTRC and WTRA-430/500

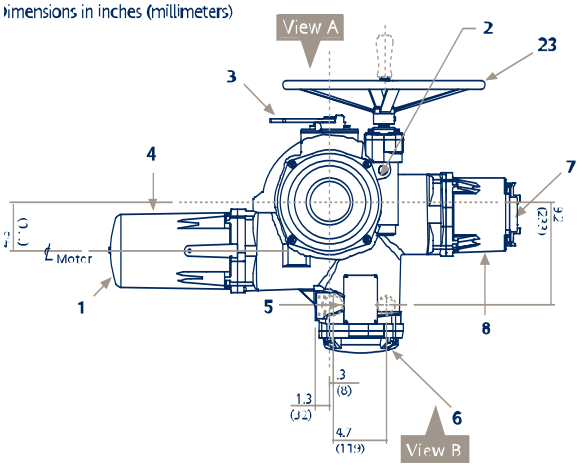
Gearbox	WTRC/WTRA		WTRC/WTRA	
Dimension	inches	mm	inches	mm
Ratio	65:1	65:1	68:1	68:1
SGA				
A	8.1	206	9.1	231
B	8.4	212	9.4	237
C	(8) 1-8 x 1.3 deep 14.02 B.C.	(8) M30-3.5 x 34 deep 356 B.C.	(8) 1-8 x 1.8 deep 14.02 B.C.	(8) M30-3.5 x 45 deep 356 B.C.
F	8.4	213	8.4	213
G	11.2	284	12.8	326
H	2.9	74	3.2	82
J	.39	10	.47	12
M	16.3	415	16.3	415
V	5.6	142	6.1	156
W	7.2	182	7.4	198
AC	10.5	267	13.0	332

Gearbox	WTRC/WTRA	
Dimension	inches	mm
Ratio	69:1	69:1
SGA		
A	11.5	292
B	11.8	300
C	(8) 1.25-7 x 1.97 deep 16.00 B.C.	(8) M36-3.5 x 50 deep 406 B.C.
F	9.6	243
G	15.8	402
H	3.7	95
J	0.5	12
M	18.7	475
V	6.7	170
W	8.0	203
AC	12.8	325

Dimensions for MX-85 with WTRC and WTRA-450/575; SGA

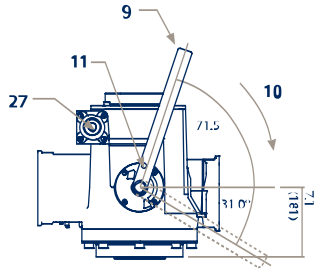
Top View

Dimensions in inches (millimeters)



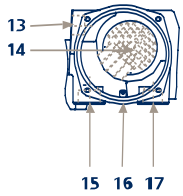
View A

Detail of declutch lever



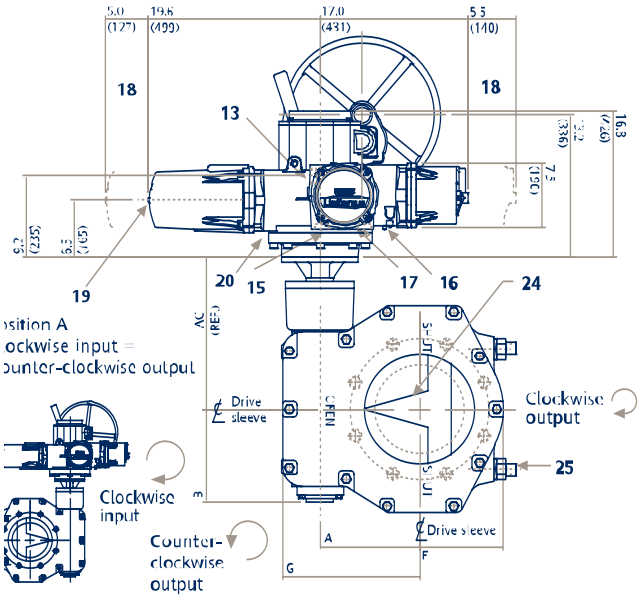
View B

Conduit entries with covers removed

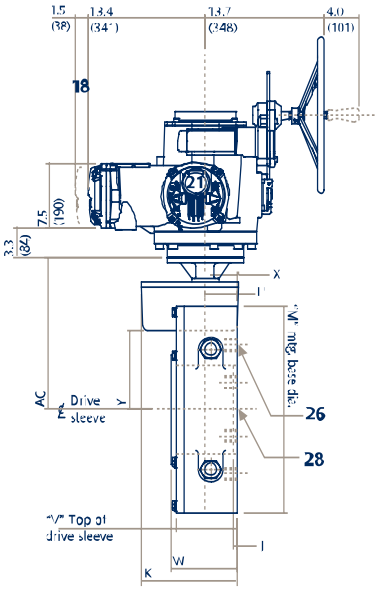


Side View with Spur Gear Assembly

Position B: Clockwise input = Clockwise output



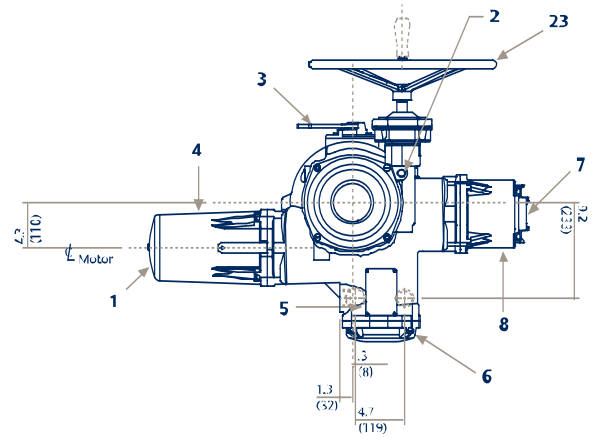
Front View with Spur Gear Assembly



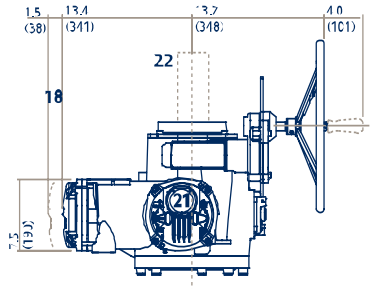
Dimension Key

1 Preferred mounting is with motor horizontal
2 Lubricant fill
3 Declutch lever is padlockable in motor operation
4 Motor
5 Serial text plate
6 Terminal compartment
7 Control panel
8 Controls compartment
9 Lever returns automatically to this position when released
10 To engage manual override
11 Hole 0.28" (7) diameter for padlock
12 Lubricant drain
13 Conduit entry - Tapped 1.25" NPT Options M32, M25, M20, and PG21
14 Customer terminals
15 Conduit entry - Tapped 1.5" NPT Options M40, M32, M25, M20, PG21, and PG29
16 Ground/earthing lug
17 Conduit entry Tapped 1.25" NPT Options - M32, M25, M20, and PG21
18 Allowance for cover removal
19 Hole 0.22" (5.5) diameter X 0.43" (11) deep for self-tapping screw
20 Mounting face for attaching to valve flange or extended base
21 Control panel display window
22 Stem cover (when required) - Length to suit valve travel. MX-10/20 threaded 2.00" NPT or fitted with pipe plug.
23 Standard handwheel 18" (457) diameter
24 Position indicator
25 Adjustable mechanical stops
26 Mounting holes "C" straddle centerline
27 Handwheel removed for clarity
28 Max. bore & key info. certification sheet and drawing for Q11, Q13 drive sleeves see no. 04 570 0001 1 for bore and keyway position.

Top View with Spur Gear Assembly Option



Front View



Dimensions for WTRC and WTRA-450/575; SGA

Gearbox	WTRC/WTRA		WTRC/WTRA	
Dimension	inches	mm	inches	mm
Ratio	10.3:1	10.3:1	10.3:1	10.3:1
SGA	4.3	4.3	4.3	4.3
A	9.1	9.1	11.5	11.5
B	9.2	9.2	10.6	10.6
C	(8) 1-8 x 1.7 deep 14.02 B.C.	(8) M30 x 45 deep 356 B.C.	(8) 11/4-7 x 2.0 deep 15.98 B.C.	(8) M30 x 45 deep 356 B.C.
F	8.4	8.4	9.6	9.6
G	12.8	12.8	15.8	15.8
H	3.2	3.2	3.7	3.7
J	.47	.47	.47	.47
K	10.5	10.5	11.0	11.0
M	16.3	16.3	18.7	18.7
V	6.1	6.1	6.7	6.7
W	7.0	7.0	7.9	7.9
X	.63	.63	.12	.12
Y	8.4	8.4	9.8	9.8
AC	17.4	17.4	18.8	18.8

Gearbox	WTRC/WTRA	
Dimension	inches	mm
Ratio	7.8:1	7.8:1
SGA	5.2	5.2
A	14.0	14.0
B	14.6	14.6
C	(12) 1 1/4-7 x 2.1 deep 19.02 B.C.	(12) M36 x 52 deep 483.0 B.C.
F	11.3	11.3
G	19.5	19.5
H	4.7	4.7
J	.58	.58
K	14.1	14.1
M	22.1	22.1
V	8.7	8.7
W	10.0	10.0
X	—	—
Y	12.8	12.8
AC	24.8	24.8

Notes

Notes

Notes

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