

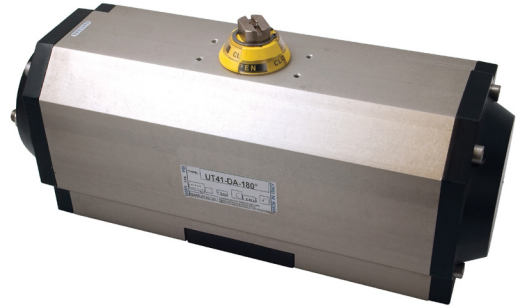


### RP-MA-Series Rack and Pinion Actuator

Aluminum rack and pinion actuators utilized with valves for 180° rotation in industrial, food, beverage, and pharmaceutical applications.

#### Feature

- NAMUR VDI/VDE 3845 and ISO 5211 dimensions on all sizes
- Standard angle of rotation is 180°. Available in 120°, 135°, and 150° angle of rotation
- 016 and larger sizes feature a travel stop with  $\pm 10^\circ$  adjustment in both open and closed directions
- Extruded aluminum body is internally machined and lapped to exact specifications. All internal and external surfaces are anodized for corrosion resistance
- For additional corrosion resistance, actuator can be epoxy coated
- Configurable beacon indicator is standard and available for all rotations
- All pinions are supplied with anti-blowout retention in both directions
- Air pressure operation from **40 to 120 PSI**. Water, nitrogen, and compatible hydraulic fluids may be used to power the actuator
- All units are permanently lubricated at the factory with non-silicone grease
- 100% of all units are factory pressure and leak tested



#### Specifications

- Twin rack and pinion design
- Female double square output shaft
- ISO 5211 bolt patterns
- Piston and pinion lubrication: non-silicone grease
- Range of rotation adjustment: 170° to 190°
- Operating media: dry or lubricated non-corrosive gas
- Operating pressure: **40 to 120 PSI**
- Maximum pressure rating: **150 PSI**
- Nitrile rubber (standard) temperature range: **-4°F to 176°F (-20°C to 80°C)**
- FVMQ (fluorosilicone) temperature range: **-67° to 250°F (-55° to 121°C)**
- FKM temperature range: **-10°F to 250°F (-23° to 121°C)**
- Available in:
  - Double acting
  - Double acting 3-position
  - Spring return
  - Center return
  - Low and high temperature seals
  - Polyamide epoxy coating

### RP-MA-Series Weight and Air Consumption Charts

Size	Double Acting		Spring Return		Center Return		3-Position	
	Weight (lbs)	Air Cons. (cu-in)	Weight (lbs)	Air Cons. (cu-in)	Weight (lbs)	Air Cons. (cu-in)	Weight (lbs)	Air Cons. (cu-in)
16	5.29	42.5	7.67	21.2	CF	42.5	CF	89.4
17	8.05	53.7	10.14	25.6	CF	53.7	CF	116.1
20 - 21	8.82	73.7	11.57	38.1	CF	73.7	CF	153.7
25 - 26	11.79	118.7	15.39	58.1	CF	118.7	CF	248.0
30 - 31	14.88	150.0	19.62	71.9	CF	150.0	CF	317.0
35 - 36	22.44	237.5	30.29	113.7	CF	237.5	CF	514.4
40 - 41	27.67	293.9	36.88	141.2	CF	293.7	CF	636.8
45 - 46	39.20	462.5	51.48	221.9	CF	462.5	CF	978.1
50 - 51	54.23	656.3	77.08	316.2	CF	656.3	CF	1421.4
55 - 56	65.81	906.3	88.76	435.6	CF	906.3	CF	1942.5

Size	Drive (mm)	Drive (in)	Standard ISO Pattern	Optional Pattern
16	14	0.551	F05/F07	F04/3.25
17	14	0.551	F05/F07	F04/3.25
20-21	17	0.670	F05/F07	F04/3.25
25-26	17	0.670	F05/F07	F04/3.25
30-31	17	0.670	F05/F07	F04/3.25
35-36	22	0.866	F07/F10	3.25/5.00
40-41	22	0.866	F07/F10	F07/F12 3.25/F12 3.25/5.00
45-46	22	0.866	F07/F10	F07/F12 3.25/F12 3.25/5.00
50-51	27	1.063	F10/F12	-
55-56	27	1.063	F10/F12	-

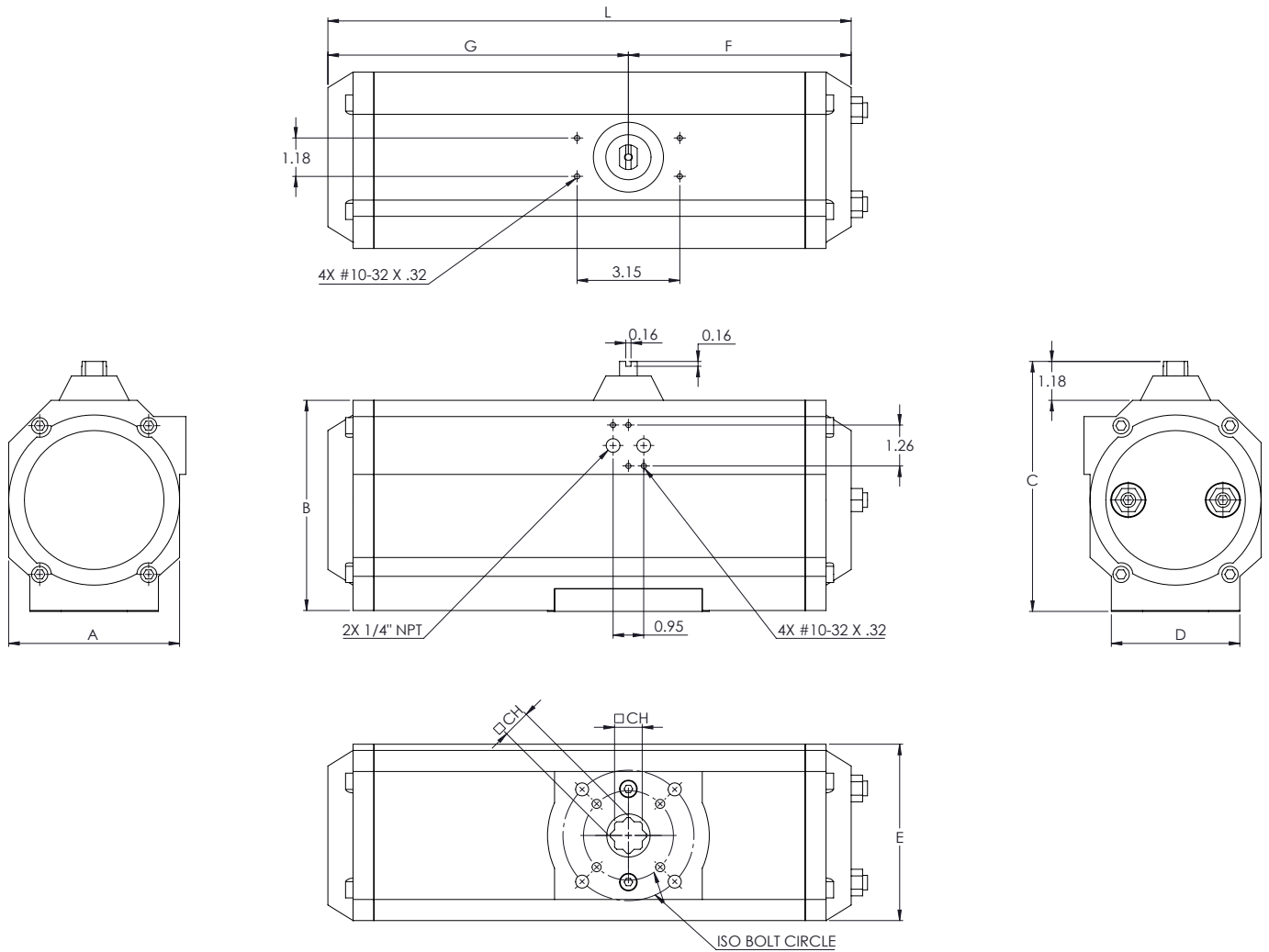
### RP-MA-Series Torque Ratings - Double Acting

Part #	40 PSI	60 PSI	80 PSI	100 PSI	120 PSI
RP-MA-016-DA	137	206	275	344	412
RP-MA-017-DA	180	270	360	450	540
RP-MA-021-DA	250	375	500	625	750
RP-MA-026-DA	375	562	750	937	1125
RP-MA-031-DA	500	750	1000	1250	1500
RP-MA-036-DA	800	1200	1600	2000	2400
RP-MA-041-DA	1000	1500	2000	2500	3000
RP-MA-046-DA	1562	2344	3125	3906	4687
RP-MA-051-DA	2250	3375	4500	5625	6750
RP-MA-056-DA	3000	4500	6000	7500	9000

**RP-MA-Series Torque Ratings - Spring Return**

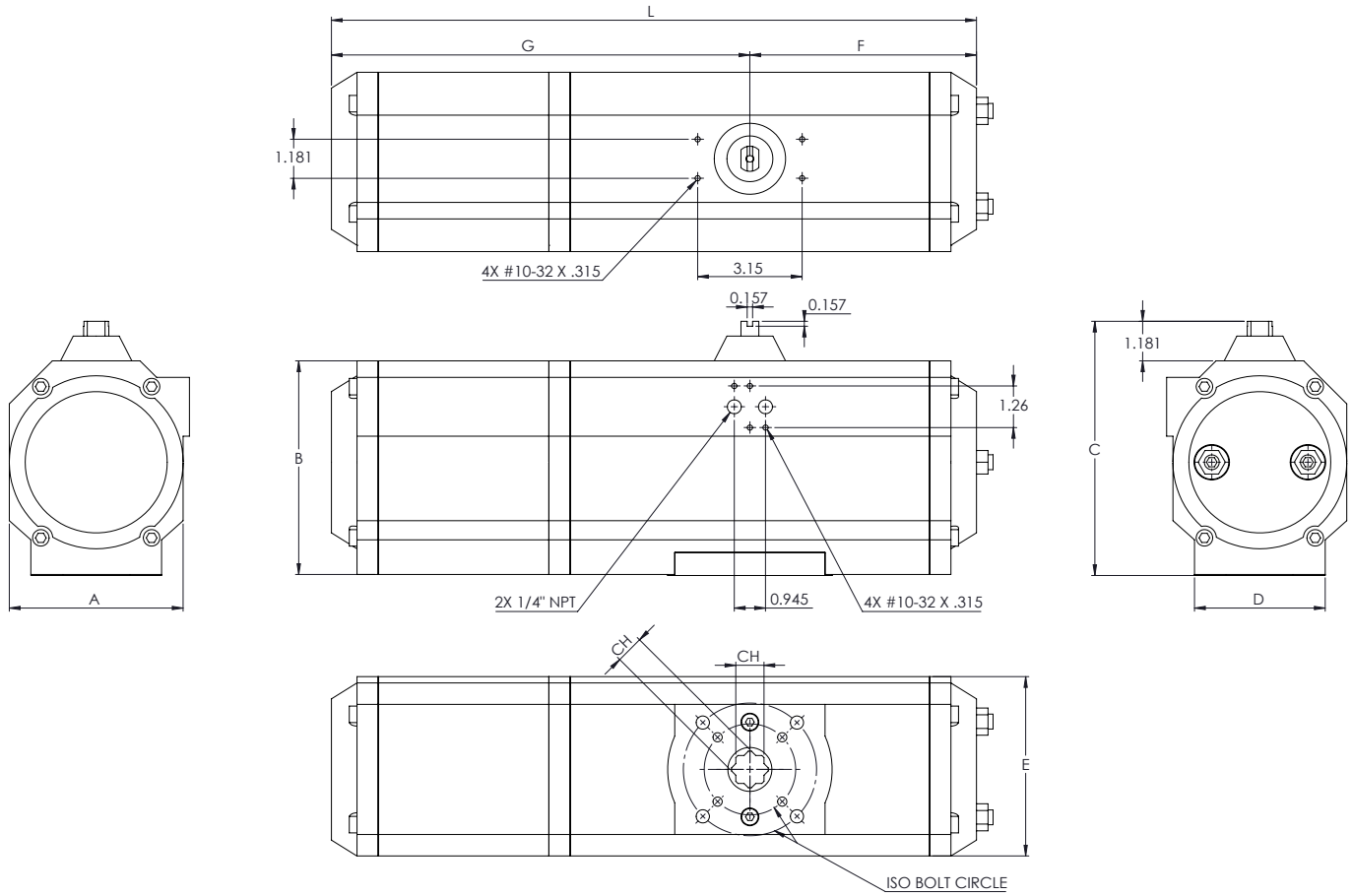
Part #	Spring Set	Spring Torque		40 PSI		60 PSI		80 PSI		100 PSI		120 PSI	
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
RP-MA-015-SR	2+2	75	53	84	62	153	131	222	200	291	269	359	337
	3+3	112	81	56	25	125	94	194	163	263	232	331	300
	4+4	150	107			99	56	168	125	237	194	305	262
	5+5	187	134			72	19	141	88	210	157	278	225
	7+5	224	160					115	51	184	120	252	188
RP-MA-017-SR	2+2	93	64	116	87	206	177	296	267	386	357	476	447
	3+3	139	96	84	41	174	131	264	221	354	311	444	401
	4+4	185	128			142	85	232	175	322	265	412	355
	5+5	232	160			110	38	200	128	290	218	380	308
	7+5	278	192					168	82	258	172	348	262
RP-MA-020-SR	2+2	122	92	158	128	283	253	408	378	533	503	658	628
	3+3	184	138	112	66	237	191	362	316	487	441	612	566
	4+4	245	184	66	5	191	130	316	255	441	380	566	505
	5+5	307	230			145	68	270	193	395	318	520	443
	7+5	369	278			97	6	222	131	347	256	472	381
RP-MA-025-SR	2+2	196	124	251	179	438	366	626	554	813	741	1001	929
	3+3	294	185	190	81	377	268	565	456	752	643	940	831
	4+4	392	247			315	170	503	358	690	545	878	733
	5+5	490	309			253	72	441	260	628	447	816	635
	7+5	588	372					378	162	565	349	753	537
RP-MA-030-SR	2+2	251	187	313	249	563	499	813	749	1063	999	1313	1249
	3+3	376	280	220	123	470	374	720	624	970	874	1220	1124
	4+4	502	374			376	248	626	498	876	748	1126	998
	5+5	627	467			283	123	533	373	783	623	1033	873
	7+5	753	560					440	247	690	497	940	747
RP-MA-035-SR	2+2	412	306	494	388	894	788	1294	1188	1694	1588	2094	1988
	3+3	617	461	339	183	739	583	1139	983	1539	1383	1939	1783
	4+4	824	614			586	376	986	776	1386	1176	1786	1576
	5+5	1029	767			433	171	833	571	1233	971	1633	1371
	7+5	1236	921					679	364	1079	764	1479	1164
RP-MA-040-SR	2+2	505	371	629	495	1129	995	1629	1495	2129	1995	2629	2495
	3+3	757	556	444	243	944	743	1444	1243	1944	1743	2444	2243
	4+4	1011	741			759	489	1259	989	1759	1489	2259	1989
	5+5	1263	929			572	237	1072	737	1572	1237	2072	1737
	7+5	1516	113					887	484	1387	984	1887	1484
RP-MA-045-SR	2+2	890	560	1002	672	1784	1454	2565	2235	3346	3016	4127	3797
	3+3	1334	840	722	228	1504	1010	2285	1791	3066	2572	3847	3353
	4+4	1779	1120			1224	565	2005	1346	2786	2127	3567	2908
	5+5	224	1399			945	120	1726	901	2507	1682	3288	2463
	7+5	2669	1679					1446	456	2227	1237	3008	2018
RP-MA-050-SR	2+2	1101	869	1381	1149	2506	2274	3631	339	4756	4524	5881	5649
	3+3	1652	1304	946	598	2071	1723	3196	2848	4321	3973	5446	5098
	4+4	2203	1738	512	47	1637	1172	2762	2297	3887	3422	5012	4547
	5+5	2754	2173			1202	621	2327	1746	3452	2871	4577	3996
	7+5	3303	2607			768	72	1893	1197	3080	2322	4143	3447
RP-MA-055-SR	2+2	1487	1055	1945	1513	3445	3013	4945	4513	6445	6013	7945	7513
	3+3	2231	1583	1417	769	2917	2269	4417	3769	5917	5269	7417	6769
	4+4	2974	211	889	26	2389	1526	3889	3026	5389	4526	6889	6026
	5+5	3718	2638			1862	782	3362	2282	4862	3782	6362	5282
	7+5	4462	3166			1334	38	2834	1538	4334	3038	5834	4538

### RP-MA-Series Dimensions - Spring Return



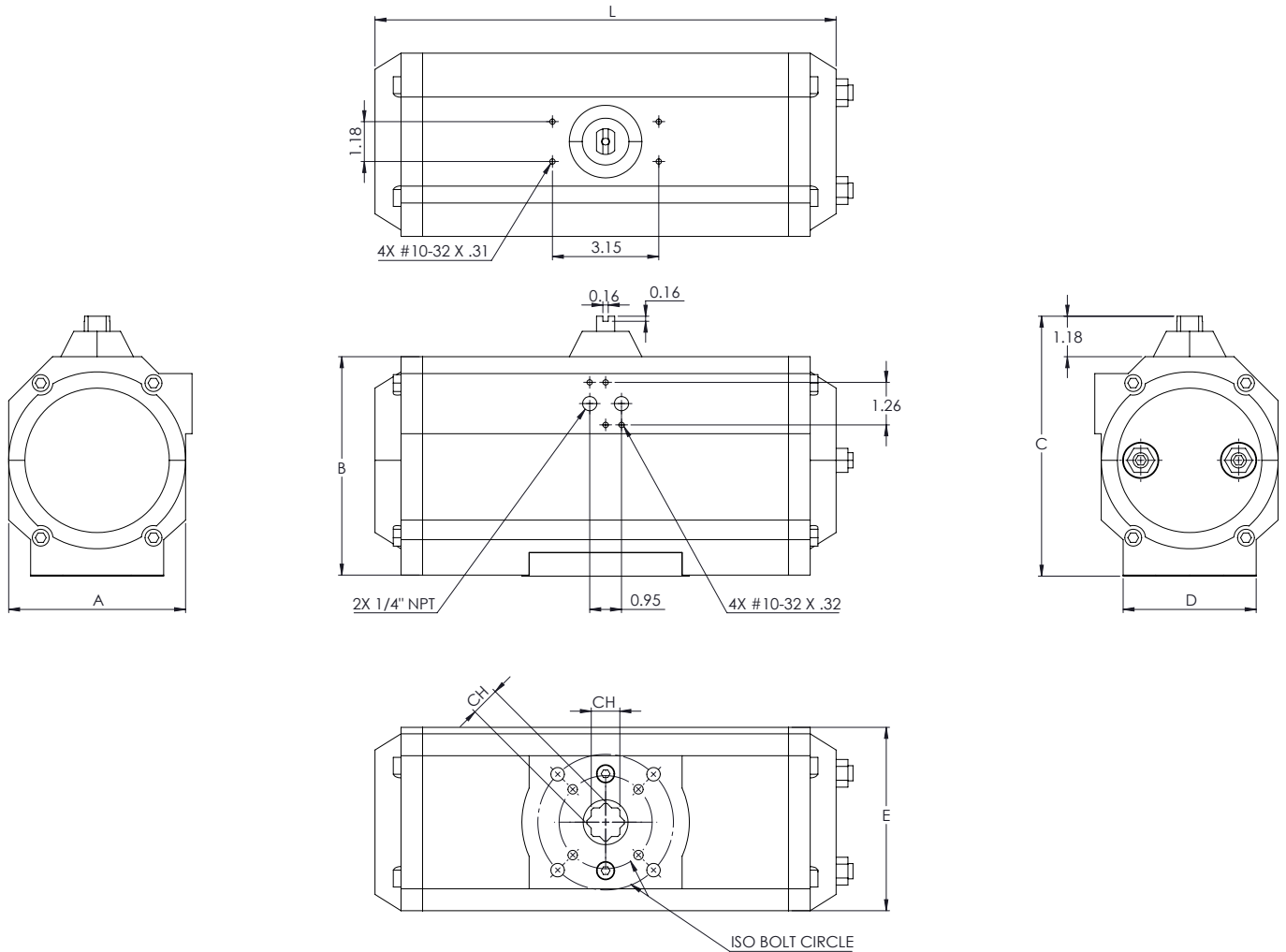
Size	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	G (in)	L (in)	Standard ISO	Optional ISO	CH (mm)
16	2.76	3.54	4.76	2.52	3.35	5.39	7.42	12.82	F05/F07	F04/3.25	14
17	2.76	3.54	4.76	2.52	3.35	5.39	7.42	12.82	F05/F07	F04/3.25	14
20	3.386	4.409	5.63	2.756	3.78	4.96	6.73	11.69	F05/F07	F04/3.25	17
25	3.386	4.409	5.63	2.756	3.78	6.50	9.04	15.53	F05/F07	F04/3.25	17
30	4.10	5.16	6.38	2.76	4.45	6.52	8.68	15.197	F05/F07	F04/3.25	17
35	5.16	6.50	7.72	3.40	5.43	6.83	9.21	16.04	F07/F10	3.25/5.00	22
40	5.16	6.50	7.72	3.40	5.43	7.89	10.91	18.80	F07/F10	F07/F12/3.25/5	22
45	5.78	6.97	8.19	3.40	5.95	10.00	13.15	23.15	F07/F10	F07/F12/3.25/5	22
50	7.17	8.54	9.76	4.72	7.28	9.82	13.58	23.15	F10/F12	-	27
55	7.17	8.54	9.76	4.72	7.28	11.95	15.75	27.70	F10/F12	-	27

RP-MA-Series Dimensions - Center Return



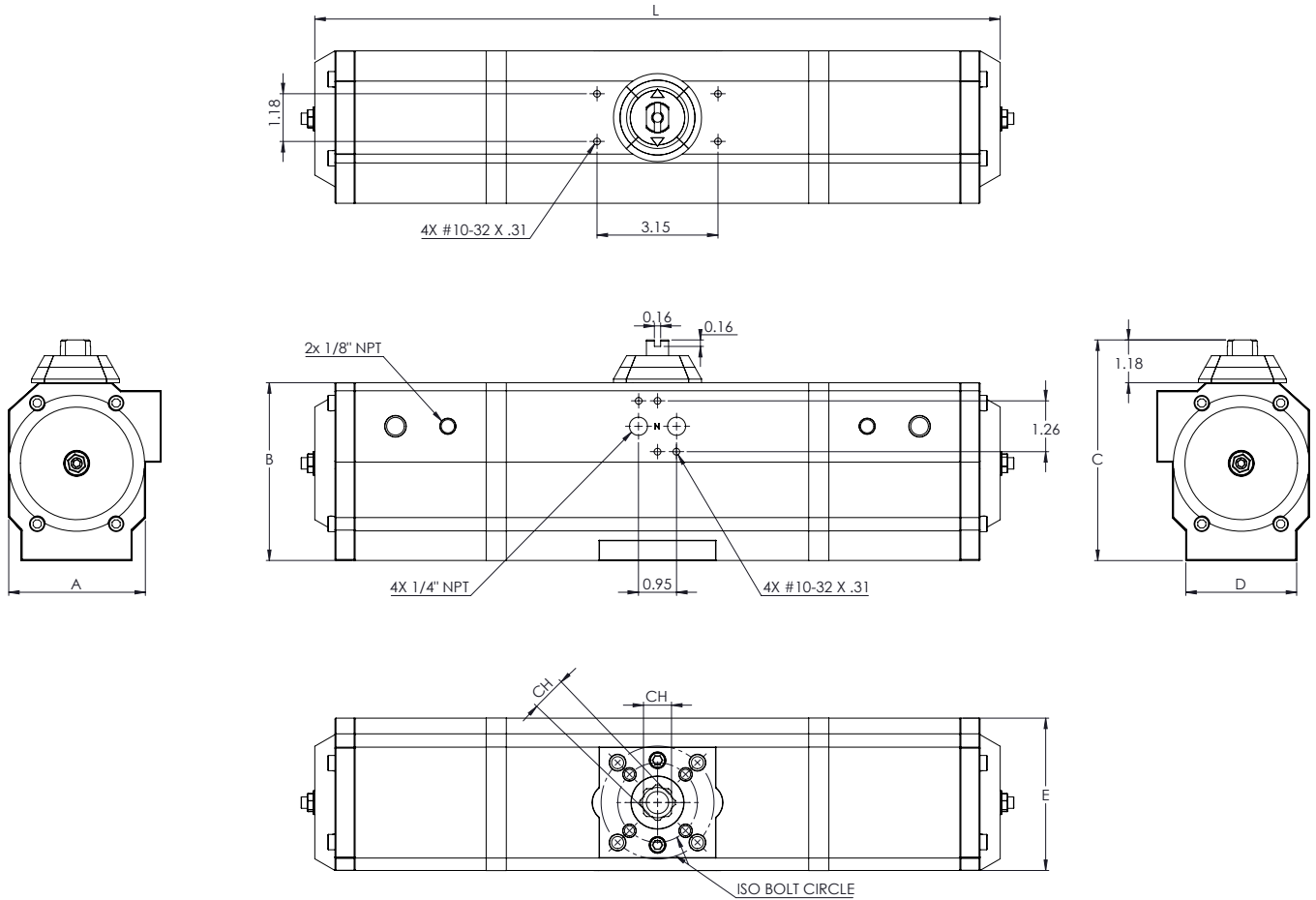
Size	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	G (in)	L (in)	Standard ISO	Optional ISO	CH (mm)
16	2.76	3.54	4.76	2.52	3.35	8.58	4.61	13.19	F05/F07	F04/3.25	14
17	3.39	4.41	5.63	2.76	3.78	9.21	4.96	14.73	F05/F07	F04/3.25	17
25	3.39	4.41	5.63	2.76	3.78	10.79	6.50	17.28	F05/F07	F04/3.25	17
30	4.10	5.16	6.38	2.76	4.45	11.30	6.54	17.84	F05/F07	F04/3.25	17
35	5.16	6.50	7.78	3.40	5.43	12.60	6.86	191.45	F07/F10	3.25/5.00	22
40	5.16	6.50	7.78	3.40	5.43	14.21	7.91	22.13	F07/F10	F07/F12/3.25/5	22
45	5.78	6.97	8.19	3.40	5.95	17.87	10.00	27.87	F07/F10	F07/F12/3.25/5	22
50	7.17	8.54	9.76	4.72	7.28	17.32	9.84	27.17	F10/F12	-	27
55	7.17	8.54	9.76	4.72	7.28	21.26	11.97	33.23	F10/F12	-	27

### RP-MA-Series Dimensions - Double Acting



Size	A (in)	B (in)	C (in)	D (in)	E (in)	L (in)	Standard ISO	Optional ISO	CH (mm)
16	2.76	3.54	4.76	2.52	3.35	9.21	F05/F07	F04/3.25	14
17	2.76	3.54	4.76	2.52	3.35	10.79	F05/F07	F04/3.25	14
21	3.39	4.41	5.63	2.76	3.78	9.92	F05/F07	F04/3.25	17
26	3.39	4.41	5.63	2.76	3.78	12.99	F05/F07	F04/3.25	17
31	4.10	5.16	6.38	2.76	4.45	13.03	F05/F07	F04/3.25	17
36	5.16	6.50	7.72	3.40	5.43	13.66	F07/F10	3.25/5.00	22
41	5.16	6.50	7.72	3.40	5.43	15.79	F07/F10	F07/F12/3.25/5	22
46	5.78	6.97	8.19	3.40	5.95	20.00	F07/F10	F07/F12/3.25/5	22
51	7.17	8.54	9.76	4.72	7.28	19.65	F10/F12	-	27
56	7.17	8.54	9.76	4.72	7.28	23.90	F10/F12	-	27

**RP-MA-Series Dimensions - Double Acting 3-Position**



Size	A (in)	B (in)	C (in)	D (in)	E (in)	L (in)	Standard ISO	Optional ISO	CH (mm)
16	2.76	3.54	4.76	2.52	3.35	15.24	F05/F07	F04/3.25	14
17	2.76	3.54	4.76	2.52	3.35	17.24	F05/F07	F04/3.25	14
21	3.39	4.41	5.63	2.76	3.78	16.26	F05/F07	F04/3.25	17
26	3.39	4.41	5.63	2.76	3.78	20.24	F05/F07	F04/3.25	17
31	4.10	5.16	6.38	2.76	4.45	21.06	F05/F07	F04/3.25	17
36	5.16	6.50	7.72	3.40	5.43	22.13	F07/F10	3.25/5.00	22
41	5.16	6.50	7.72	3.40	5.473	24.92	F07/F10	F07/F12/3.25/5	22
46	5.78	6.97	8.19	3.40	5.95	31.54	F07/F10	F07/F12/3.25/5	22
51	7.17	8.54	9.76	4.72	7.28	32.4	F10/F12	-	27
56	7.17	8.54	9.76	4.72	7.28	37.99	F10/F12	-	27

NOTE: Repair kits unavailable, not field serviceable.



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**"WARNING:** This product contains lead, a chemical known to the State of California to cause cancer and birth defects or other reproductive harm."

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