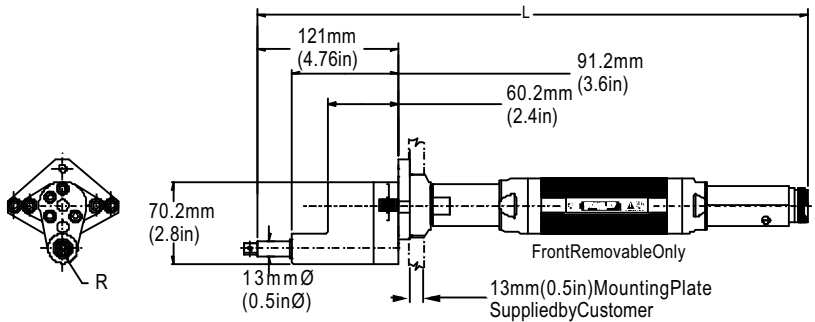
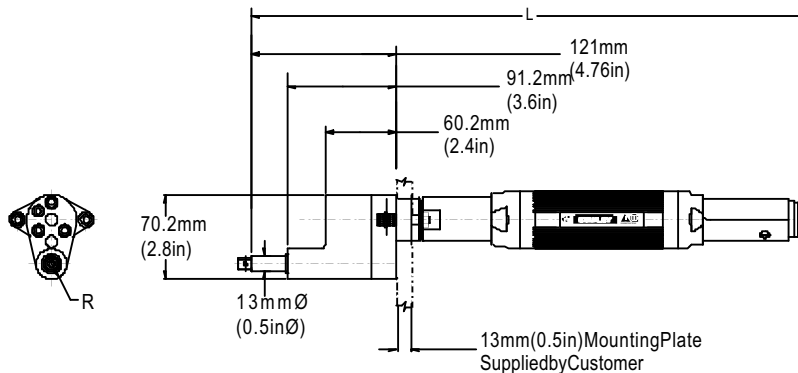


Offset Retractable Motors (2 to 225 Nm)

Tool Configuration
Select model and options.
See p.34 for Cables/Controllers.



MODEL	Rated Speed		Rated Torque		"R" Side to Center		Length		Weight		Standard Output	
	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction	SD	
E23MDF1-7	2245	2 - 7	105 - 5	13	0.5	457	18	2.4	5.2	19mm (3/4")	3/8"	
E23MDF1-19	785	6 - 19	4 - 14	13	0.5	473	18.6	2.5	5.6			
E23MDF1-27	540	8 - 27	6 - 20	13	0.5	473	18.6	2.5	5.6			
E33MDF1-29	1125	9 - 29	6.5 - 21	13	0.5	498	19.6	2.7	5.9			
E33MDF1-36	890	11 - 36	8 - 27	13	0.5	498	19.6	2.7	5.9			
E23MDF2-7	2245	2 - 7	105 - 5	13	0.5	547	21.5	2.5	5.5	50mm (2")	3/8"	
E23MDF2-19	785	6 - 19	4 - 14	13	0.5	562	22.1	2.6	5.9			
E23MDF2-27	540	8 - 27	6 - 20	13	0.5	562	22.1	2.6	5.9			
E33MDF2-29	1125	9 - 29	6.5 - 21	13	0.5	574	22.6	2.8	6.2			
E33MDF2-36	890	11 - 36	8 - 27	13	0.5	574	22.6	2.8	6.2			



MODEL	Rated Speed		Rated Torque		"R" Side to Center		Length		Weight		Standard Output	
	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction	SD	
E23MDF1-7F	2245	2 - 7	1.5 - 5	13	0.5	457	18	2.4	5.2	19mm (3/4")	3/8"	
E23MDF1-19F	785	6 - 19	4 - 14	13	0.5	473	18.6	2.5	5.6			
E23MDF1-27F	540	8 - 27	6 - 20	13	0.5	473	18.6	2.5	5.6			
E33MDF1-29F	1125	9 - 29	6.5 - 21	13	0.5	498	19.6	2.7	5.9			
E33MDF1-36F	890	11 - 36	8 - 27	13	0.5	498	19.6	2.7	5.9			
E23MDF2-7F	2245	2 - 7	1.5 - 5	13	0.5	547	21.5	2.4	5.3	50mm (2")	3/8"	
E23MDF2-19F	785	6 - 19	4 - 14	13	0.5	562	22.1	2.5	5.6			
E23MDF2-27F	540	8 - 27	6 - 20	13	0.5	562	22.1	2.5	5.7			
E33MDF2-29F	1125	9 - 29	6.5 - 21	13	0.5	574	22.6	2.7	6.0			
E33MDF2-36F	890	11 - 36	8 - 27	13	0.5	574	22.6	2.7	6.0			

MDF1 Output Options

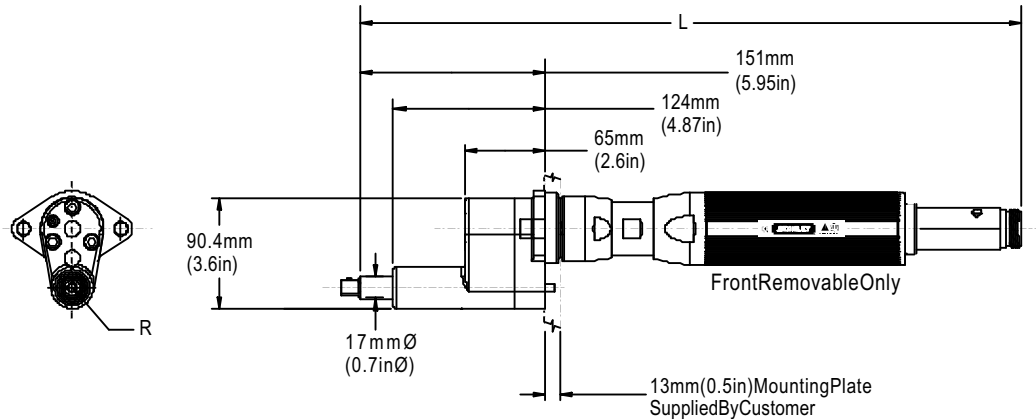
S3362	3/8" SD X 1 5/32" Ext	M3239	3/8" SD X 3" Ext	S3626	3/8" SD X 7 3/8" Ext
M3243	3/8" SD X 1.478" Ext	M3223	3/8" SD X 4" Ext	M3216	3/8" SD X 8" Ext
S3363	3/8" SD X 2 3/8" Ext	S3486	3/8" SD X 4-1/16" Ext	M3118	3/8"-24 Threaded
M3090	3/8" SD X 2" Ext	M3224	3/8" SD X 6" Ext	M3227	3/8"-24 X 3/4" Ext Threaded
M3184	19mm Heavy Duty Retraction Spring			20S104600	3/8" SD X 8" Ext Assy

MDF2 Output Options

20D209805	3/8" SD X 1" Ext	M3283	3/8" SD X 6" Ext
M3306	50mm Heavy Duty Retraction Spring	20D209801	3/8" SD X 3" Ext

Offset Retractable Motors (2 to 225 Nm)

Tool Configuration
Select model and options.
See p34 for Cables/Controllers.



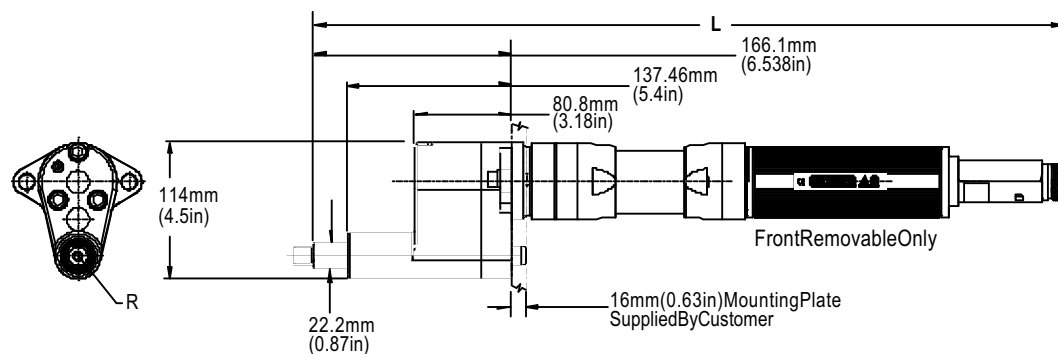
MODEL	Rated Speed	Rated Torque		"R" Side to Center		Length		Weight		Standard Output	
	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction	SD
E34MD1F1-54	605	16 - 54	12 - 40	17	0.67	531	20.9	4.4	9.7	25mm (1")	1/2"
E34MD1F1-67	490	20 - 67	15 - 49	17	0.67	531	20.9	4.4	9.7		
E34MD1F1-90	365	27 - 90	20 - 66	17	0.67	531	20.9	4.4	9.7		
E44MD1F1-59	885	17.5 - 59	13 - 44	17	0.67	540	21.3	4.7	10.4		
E44MD1F1-90	590	27 - 90	20 - 66	17	0.67	540	21.3	4.7	10.4	50mm (2")	1/2"
E34MD1F2-54	605	16 - 54	12 - 40	17	0.67	616	24.3	4.4	9.7		
E34MD1F2-67	490	20 - 67	15 - 49	17	0.67	616	24.3	4.4	9.7		
E34MD1F2-90	365	27 - 90	20 - 66	17	0.67	616	24.3	4.4	9.7		
E44MD1F2-59	885	17.5 - 59	13 - 44	17	0.67	628	24.7	4.7	10.4	50mm (2")	1/2"
E44MD1F2-90	590	27 - 90	20 - 66	17	0.67	628	24.7	4.7	10.4		

MD1F1 Output Options

20D101603	1/2" SD X 3" Ext	20D101606	1/2" SD X 6" Ext
20D101608	1/2" SD X 4" Ext	20D101605	1/2" SD X 7 5/16" Ext
20D101604	1/2" SD X 5" Ext	20D101609	1/2" SD X 8" Ext
20R201401	25mm (1") Heavy Duty Retraction Spring	20D101607	1/2" SD X 11" Ext

MD1F2 Output Options

M6011	1/2" SD X 3" Ext	M4888	1/2" SD X 5" Ext
20R201402	50mm (2") Heavy Duty Retraction Spring		



MODEL	Rated Speed	Rated Torque		"R" Side to Center		Length		Weight		Standard Output	
	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction	SD
E45MD2F1-144	345	43 - 144	32 - 106	19	0.75	605	23.8	8	17.5	25mm (1")	5/8"
E55MD2F1-114	715	34 - 114	25 - 84	19	0.75	633	24.9	8.3	18.2		
E55MD2F1-180	475	54 - 180	40 - 133	19	0.75	633	24.9	8.3	18.2		
E45MD2F2-144	345	43 - 144	32 - 106	19	0.75	694	27.2	8.2	18	50mm (2")	5/8"
E55MD2F2-114	715	34 - 114	25 - 84	19	0.75	712	28	8.5	18.7		
E55MD2F2-180	475	54 - 180	40 - 133	19	0.75	712	28	8.5	18.7		

MB2F1 Output Options

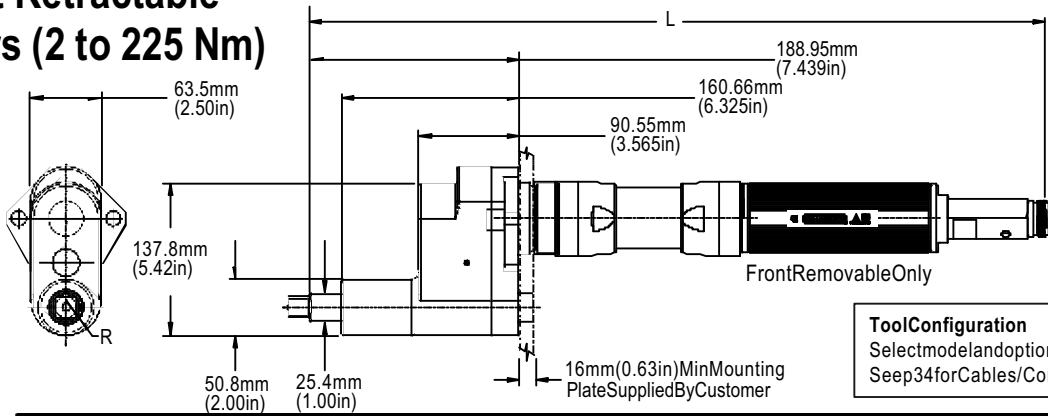
20R201408	25mm Heavy Duty Retraction Spring
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MB2F2 Output Options

20R201410	50mm Heavy Duty Retraction Spring
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Offset Retractable Motors (2 to 225 Nm)

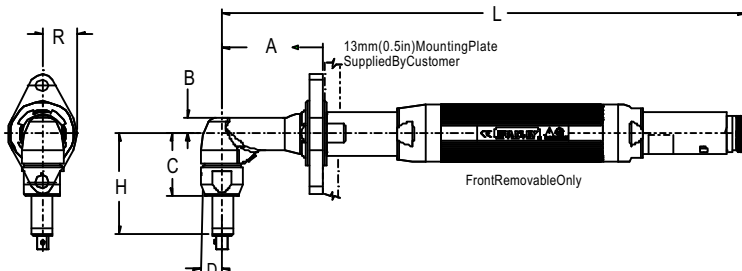


Tool Configuration
Select model and options.
See p34 for Cables/Controllers.

MODEL	Rated Speed	Rated Torque		"R" Side to Center		Length		Weight		Standard Output	
	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction	SD
E45MD3F1-144	345	43 - 144	32 - 106	32	1.25	628	24.7	10.2	22.5	25mm (1")	3/4"
E45MD3F1-225	220	68 - 225	50 - 166	32	1.25	628	24.7	10.2	22.5		
E55MD3F1-114	715	34 - 114	25 - 84	32	1.25	656	25.8	10.5	23.2		
E55MD3F1-180	475	54 - 180	40 - 133	32	1.25	656	25.8	10.5	23.2		
E55MD3F1-225	380	68 - 225	50 - 166	32	1.25	656	25.8	10.5	23.2		
E45MD3F2-144	345	43 - 144	32 - 106	32	1.25	707	27.9	10.5	23.2	50mm (2")	3/4"
E45MD3F2-225	220	68 - 225	50 - 166	32	1.25	707	27.9	10.5	23.2		
E55MD3F2-114	715	34 - 114	25 - 84	32	1.25	735	29	10.8	23.8		
E55MD3F2-180	475	54 - 180	40 - 133	32	1.25	735	29	10.8	23.8		
E55MD3F2-225	380	68 - 225	50 - 166	32	1.25	735	29	10.8	23.8		

MB3F1 Output Options 20R201404 | 25mm Heavy Duty Retraction Spring **MB3F2 Output Options** 20R201406 | 50mm Heavy Duty Retraction Spring

Angle Retractable Motors (14 to 401 Nm)



Additional Head Dimensions

Head	Units	A	B	C	D
E33MA18	mm	83	13	51	18
	in	3.3	0.5	2	0.7
E33MA19	mm	86	16	103	19
	in	3.4	0.6	4	0.8
E34MA19	mm	74	16	103	19
E44MA19	in	2.9	0.6	4	0.8
E34MA22	mm	82	16	130	22
	in	3.2	0.6	5.1	0.9

MODEL	Rated Speed	Rated Torque		"R" Side to Center		"H" Head Height		Length		Weight		Standard Output	
	RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb	Retraction	SD
E33MA18F1-46	750	14 - 46	10 - 34	28	1.1	97	3.8	433	17	2.5	5.6	16mm (5/8")	3/8"
E33MA19F1-60	570	18 - 60	13 - 44	28	1.1	146.5	5.8	440	17.3	2.7	6	25mm (1")	1/2"
E34MA19F1-70	435	21 - 70	15 - 51.5	28	1.1	146.5	5.8	470	18.5	3.4	7.6		
E44MA19F1-70	635	21 - 70	15 - 51.5	28	1.1	146.5	5.8	479	18.9	3.8	8		
E34MA22F1-115	295	35 - 115	27 - 85	28	1.1	114	4.5	473	18.6	3.7	8.2		
E44MA22F1-120	475	35 - 120	26 - 89	28	1.1	114	4.5	482	19	4.1	9		
E33MA18F2-46	750	14 - 46	10 - 34	28	1.1	138	5.4	433	17	2.6	5.7	50mm (2")	3/8"
E33MA19F2-60	570	18 - 60	13 - 44	28	1.1	194	7.6	440	17.3	2.8	6.1		
E34MA19F2-70	435	21 - 70	15 - 51.5	28	1.1	194	7.6	470	18.5	3.5	7.7		
E44MA19F2-70	635	21 - 70	15 - 51.5	28	1.1	194	7.6	479	18.9	3.8	8.2		
E34MA22F2-115	295	35 - 115	27 - 85	28	1.1	146	5.8	473	18.6	3.8	8.2		
E44MA22F2-120	475	35 - 120	26 - 89	28	1.1	146	5.8	482	19	4.1	9		

MA18F1 Output Options 20D104604 | 1/2" SD Retractable 20D104603 | 3/8" SD Retract X 2" Ext 20D117700 | 1/2 X 2-5/8" Ext Retract Spindle
20D104605 | 1/2" SD X 2" Ext Retractable 20D104611 | 3/8" SD Retract 90° Flange M4306 | 1/2" SD X 2" Ext
M4886 | Heavy Duty Retraction Spring M4466 | 1/2" SD X 8" Ext
M4800 | 25mm Heavy Duty Spring

MA18F2 Output Options 20D111002 | 3/8" SD Retractable X 1/2" Ext 20D111004 | 3/8" SD Retract X 6" Ext
20D111003 | 3/8" SD Retractable X 1" Ext 20D111001 | 3/8" SD Retract X 7" Ext
20R201421 | Heavy Duty Retraction Spring

MA19F1 Output Options 20R201407 | Heavy Duty Retraction Spring **MA19F2 Output Options** 20R201421 | Heavy Duty Retraction Spring