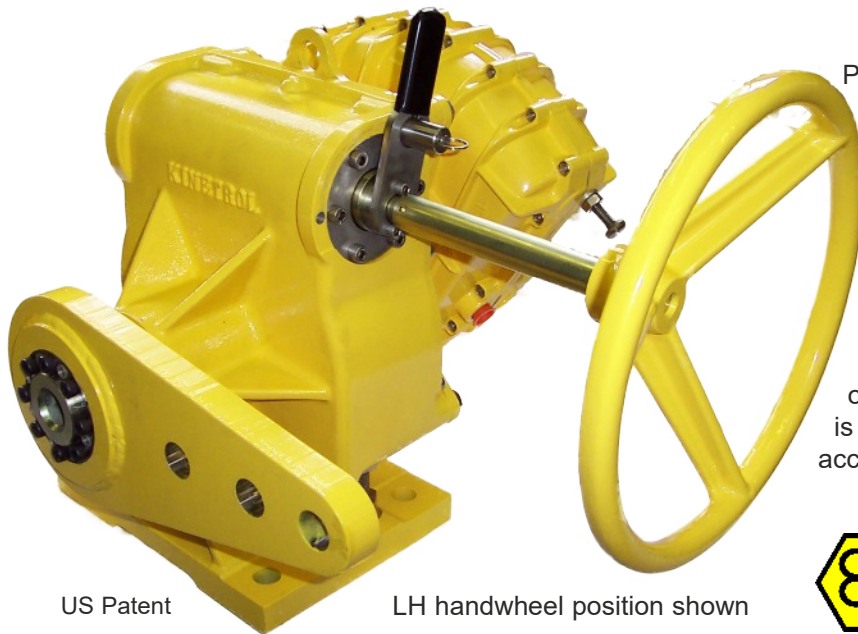


# Kinetrol G3 Damper Drives



US Patent

LH handwheel position shown



ATEX Category 2

Purpose designed, factory built and tested drives for air/gas flow control dampers on burner, heater, boiler and turbine systems in power plants, refineries and a wide range of industrial applications.

Combining the proven performance of Kinetrol's vane type actuator with an equally rugged integral manual override/mounting frame, the G3 drive is compact with unbeatable control, accuracy and cycle life.

## Features

- Integral manual override
- Suitable for new installations or replacement of existing electric or pneumatic drives
- Available with same mounting foot print to replace existing floor mount drives
- Can result in lower energy costs resulting from accurate flow control
- Reduced operating costs due to long maintenance-free life (2 million operation warranty)
- Compact space saving design
- Quick and easy installation and set up
- Robust construction with durable epoxy finish
- Manual override usable with actuator removed

## Options

- Double acting and spring fail-safe (open or closed)
- Modulating (3-15 psi and 4-20mA signal)
- Fail to low signal
- Lock in last position
- Limit switch remote position indication
- 4-20mA angle retransmission
- High visibility position indication
- Different sided/diameter handwheels and extensions
- Infinitely adjustable output levers to suit existing or new requirements
- High temperature option available



# Kinetrol G3 Damper Drives

## Torques

### Double Acting Torque Outputs - Metric Units Nm

Actuator Model	Pressure (bar)											
	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0
12-100	103	147	190	232	275	319	360	403	446	490	532	575
14-100	265	360	460	560	660	760	870	975	1080	1180	1280	1375
15-100	435	605	769	937	1109	1287	1457	1632	1808	1982	2153	2337
16-100	640	860	1090	1310	1530	1750	1980	2200	2420	2650	2870	3100
18-100	1250	1750	2250	2750	3250	3750	4300	4850	5400	5950	6400	6900
21-100	2624	3623	4544	5568	6516	7553	8521	9523	10553	11561	12543	13589

### Double Acting Torque Outputs - English Units lbf ins

Actuator Model	Pressure (psi)									
	20	30	40	50	60	70	80	90	100	
12-100	830	1350	1870	2400	2900	3440	3970	4480	5000	
14-100	2150	3350	4550	5800	7000	8300	9600	10800	12000	
15-100	3558	5602	7593	9700	11753	13895	15991	18125	20337	
16-100	5200	7900	10600	13400	16100	18800	21600	24300	27000	
18-100	10000	16100	22200	28300	34500	41300	48000	54500	60000	
21-100	22286	33234	44962	57078	68930	81223	93402	105784	118503	

### Spring Return Torque Outputs - Metric Units Nm

Actuator Model	Position of air OR spring return stroke	Pressure (bar)											
		1.7	2.0	2.4	2.8	3.1	3.5	3.8	4.1	4.5	4.8	5.2	5.5
12-120	Start						145.0	160.0	176.0	191.0	206.0	221.0	238.0
	Finish						111.0	127.0	142.0	158.0	174.0	189.0	204.0
14-120-4900	Start	192.0	220.0	249.0	288.0	322.0	356.0	390.0	424.0	469.0	497.0	529.0	529.0
	Finish	119.0	158.0	186.0	220.0	254.0	288.0	322.0	356.0	390.0	418.0	447.0	447.0
14-120	Start						374.0	408.0	442.0	479.0	517.0	554.0	588.0
	Finish						249.0	290.0	330.0	367.0	406.0	443.0	478.0
14-120-5000	Start	172.0	208.0	237.0									
	Finish	140.0	174.0	198.0	198.0	198.0	198.0	198.0	198.0	198.0	198.0	198.0	198.0
15-120	Start						614.0	680.0	752.0	801.0	848.0	914.0	962.0
	Finish						392.0	392.0	522.0	590.0	656.0	723.0	790.0
16-120-6100	Start	359.0	428.0	497.0									
	Finish	245.0	333.0	421.0	421.0	421.0	421.0	421.0	421.0	421.0	421.0	421.0	421.0
16-120-6000	Start			514.0	583.0	652.0	722.0						
	Finish			404.0	492.0	580.0	668.0	668.0	668.0	668.0	668.0	668.0	668.0
16-120	Start						864.0	939.0	1004.0	1097.0	1165.0	1256.0	1321.0
	Finish						576.0	660.0	742.0	832.0	906.0	1002.0	1081.0
18-120-7000	Start	807.0	970.0	1182.0	1260.0								
	Finish	484.0	736.0	967.0	1040.0	1040.0	1040.0	1040.0	1040.0	1040.0	1040.0	1040.0	1040.0
18-120	Start				1457.0	1637.0	1875.0	2053.0	2206.0	2426.0	2585.0	2800.0	2954.0
	Finish				874.0	1036.0	1250.0	1441.0	1630.0	1840.0	2011.0	2234.0	2417.0
21-120-8000	Start	1621.0	1940.0	2325.0	2692.0								
	Finish	1025.0	1362.0	1763.0	2203.0	2203.0	2203.0	2203.0	2203.0	2203.0	2203.0	2203.0	2203.0
21-120-7300	Start				2788.0	3072.0	3471.0	3739.0	4023.0				
	Finish				1958.0	2271.0	2632.0	2983.0	3291.0	3291.0	3291.0	3291.0	3291.0
21-120	Start								4121.0	4514.0	4798.0	5181.0	5456.0
	Finish								3046.0	3423.0	3732.0	4133.0	4464.0

### Spring Return Torque Outputs - English Units lbf ins

Actuator Model	Position of air OR spring return stroke	Pressure (psi)											
		25	30	35	40	45	50	55	60	65	70	75	80
12-120	Start						1280	1415	1555	1690	1825	1960	2110
	Finish						985	1125	1260	1400	1540	1670	1810
14-120-4900	Start	1700	1950	2200	2550	2850	3150	3450	3750	4150	4400	4680	4680
	Finish	1050	1400	1650	1950	2250	2550	2850	3150	3450	3700	3960	3960
14-120	Start						3310	3610	3915	4240	4580	4900	5200
	Finish						2205	2570	2920	3250	3595	3920	4230
14-120-5000	Start	1520	1840	2100									
	Finish	1240	1540	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
15-120	Start						5434	6018	6656	7089	7505	8090	8514
	Finish						3469	4098	4620	5222	5806	6399	6992
16-120-6100	Start	3178	3790	4401									
	Finish	2172	2950	3729	3729	3729	3729	3729	3729	3729	3729	3729	3729
16-120-6000	Start			4551	5163	5774	6386						
	Finish			3579	4357	5136	5914	5914	5914	5914	5914	5914	5914
16-120	Start						7646	8310	8885	9708	10310	11116	11691
	Finish						5098	5841	6567	7363	8018	8868	9567
18-120-7000	Start	7142	8585	10461	11151								
	Finish	4283	6514	8558	9204	9204	9204	9204	9204	9204	9204	9204	9204
18-120	Start				12894	14487	16594	18169	19523	21470	22877	24780	26143
	Finish				7735	9169	11063	12753	14426	16284	17797	19771	21390
21-120-8000	Start	14346	17169	20576	23824								
	Finish	9071	12054	15603	19497	19497	19497	19497	19497	19497	19497	19497	19497
21-120-7300	Start				24674	27187	30718	33090	35604				
	Finish				17328	20098	23293	26400	29125	29125	29125	29125	29125
21-120	Start								36471	39949	42462	45852	48286
	Finish								26957	30294	33028	36577	39506

# Kinetrol G3 Damper Drives

## Ordering Codes

**HANDWHEEL SIDE**  
(SEE SKETCH)  
L=LEFT  
R=RIGHT

**HANDWHEEL DIAMETER (F)**

	AVAILABLE ON MODELS:				
	12	14	16	18	21
3=300mm 12"	S	S	E		
4=400mm 16"	E	E	S		
5=600mm 24"			E	E	S
6=762mm 30"				S	

**OUTPUT LEVER THICKNESS (t)**

1=3/8"  
2=1/2"  
3=5/8"  
4=3/4"  
5=7/8"  
6=1"  
7=1 1/8"  
8=1 1/4"  
9=1 1/2"

**OPTIONAL LIMIT SWITCH BOX (TO INDICATE IF HANDWHEEL IS ENGAGED OR DISENGAGED)**

OPTIONS:

0 = NO LIMIT SWITCH  
1 = 2 x I/S PROX. SENSORS  
2 = 2 x PNEUMATIC LS  
4 = 2 x V3 MECH LS  
5 = 2 x 20-260V ac PROX.\*  
6 = 2 x 5-60V dc PROX.\*  
7 = 4 x V3 MECH LS

**WHERE APPLICABLE:**

S = STANDARD  
Y = NO COST OPTION  
E = EXTRA COST OPTION  
= NOT AVAILABLE

**INCLUDING D/A ACTUATOR:**

124 }  
144 } = ISO D/A ACT (FOR USE WITH OR WITHOUT POSITIONER)  
164 }  
184 }  
214 }  
127 }  
147 } = ANSI D/A ACT (FOR USE WITH OR WITHOUT POSITIONER)  
167 }  
187 }  
217 }

**HOLE DIAMETER (d)**

2=12.7mm 1/2"  
3=15.9mm 5/8"  
A=11/16"  
4=19.1mm 3/4"  
5=22.2mm 7/8"  
6=25.4mm 1"  
7=28.6mm 1 1/8"  
8=31.8mm 1 1/4"  
9=38.1mm 1 1/2"

**POSITION MONITOR ON LS BOX:**

C=YES  
0=NO

**LEVER HOLE PATTERN**

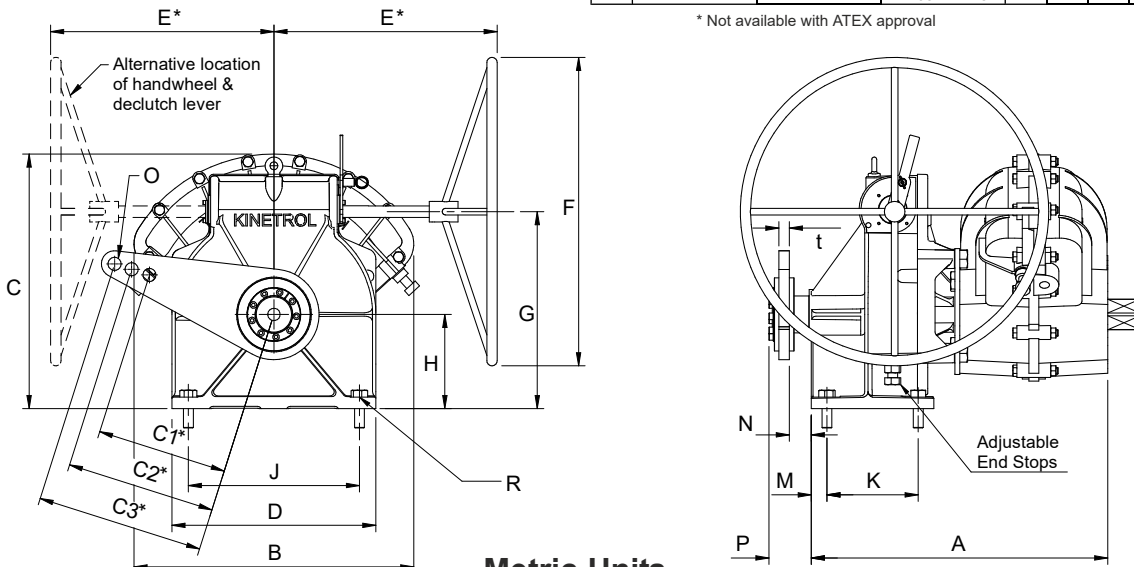
No.	DISTANCE FROM CENTRE			AVAILABLE ON MODELS:				
	C1	C2	C3	12	14	16	18	21
01	101.6mm 4"	152.4mm 6"	203.2mm 8"	Y	Y			
02	127mm 5"	152.4mm 6"	177.8mm 7"	Y	Y	Y		
03	127mm 5"	198.1mm 7.8"	254mm 10"	Y	Y	Y		
04	152.4mm 6"	254mm 10"	304.8mm 12"	Y	Y	Y	Y	Y
05	165.1mm 6.5"	190.5mm 7.5"	215.9mm 8.5"	Y	Y	Y	Y	Y
06	190.5mm 7.5"	215.9mm 8.5"	241.3mm 9.5"	Y	Y	Y	Y	Y
07	266.7mm 10.5"	292.1mm 11.5"	317.5mm 12.5"	Y	Y	Y	Y	Y
08	228.6mm 9"	342.9mm 13.5"	457.2mm 18"	Y	Y	Y	Y	Y
09	254mm 10"	304.8mm 12"	381mm 15"	Y	Y	Y	Y	Y
10	254mm 10"	381mm 15"	508mm 20"	Y	Y	Y	Y	Y
11	254mm 10"	317.5mm 12.5"	406.4mm 16"	Y	Y	Y	Y	Y
12	254mm 10"	330.2mm 13"	406.4mm 16"	Y	Y	Y	Y	Y
13	304.8mm 12"	406.4mm 16"	444.5mm 17.5"	Y	Y	Y	Y	Y
14	317.5mm 12.5"	363.2mm 14.3"	406.4mm 16"	Y	Y	Y	Y	Y
15	147.3mm 5.8"	279.4mm 11"	304.8mm 12"	Y	Y	Y	Y	
16	152.4mm 6"	190.5mm 7.5"	228.6mm 9"	Y	Y	Y		
17	101.6mm 4"		304.8mm 12"	Y	Y			
18			127mm 5"	Y	Y	Y		
19			203.2mm 8"	Y	Y	Y	Y	

**HANDWHEEL OFFSET (E)**

	AVAILABLE ON MODELS:				
	12	14	16	18	21
1=300mm 12"	S	S			
2=330mm 13"			S		
3=430mm 17"	E	E	E	S	
4=508mm 20"	E	E	E	E	S
5=600mm 24"	E	E	E	E	E

IF NECESSARY, FIT OPTIONAL EXTENSION TO ENSURE THAT HANDWHEEL IS AT A SAFE DISTANCE FROM MOVING OUTPUT LEVER.

## Dimensions



\* Not available with ATEX approval

### Metric Units

Model	A mm	B mm	C mm	D mm	E* mm	F* mm	G mm	H mm	J mm	K mm	ØR mm	M mm	P mm	Weight† kgs
124	366	294	336	275	205	300	300	165	216	152	21	25	70	46
144	410	380	390	275	300	300	300	165	216	152	21	25	70	46
164	495	530	470	275	330	400	300	165	216	152	21	25	70	51
184	721	680	620	496	430	760	479	229	416	222	27	38	94	141
214	771	842	620	496	508	600	479	229	416	222	27	38	94	158

### English Units

Model	A inch	B inch	C inch	D inch	E* inch	F* inch	G inch	H inch	J inch	K inch	ØR inch	M inch	P inch	Weight† lbs
127	14.4	11.6	13.2	10.8	11.0	12.0	12.0	6.5	8.50	6.00	0.83	1	2.8	102
147	16.2	15.0	15.4	10.8	12.0	12.0	12.0	6.5	8.50	6.00	0.83	1	2.8	102
167	19.5	20.9	18.5	10.8	13.0	16.0	12.0	6.5	8.50	6.00	0.83	1	2.8	112
187	28.4	26.8	24.4	19.5	17.0	30.0	18.9	9.0	16.38	8.74	1.05	1.6	3.7	310
217	30.4	33.2	24.4	19.5	20.0	24.0	18.9	9.0	16.38	8.74	1.05	1.6	3.7	350

\* Default dimensions may change according to ordering code options

† Listed weights exclude actuator