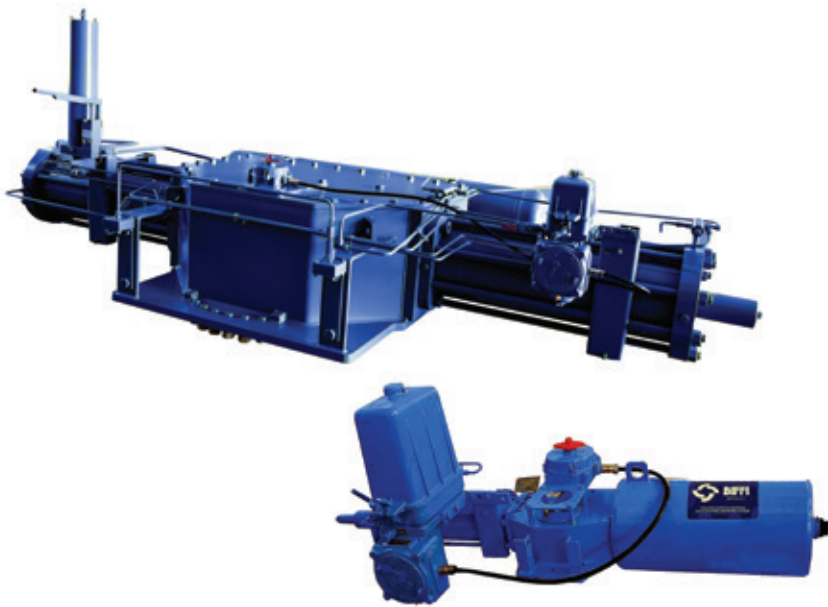




## GIG/GIGS GAS POWERED ACTUATORS

### SCOTCH YOKE DESIGN

Double acting and spring return gas actuators for remote and local operation of valves in on-off and modulating heavy-duty service. Available with output torques up to 750,000 Nm.



#### FEATURES

- Canted or symmetric scotch yoke design achieves high break torques for operating all kinds of quarter-turn valves.
- Control system components engineered specifically to suit remote gas pipeline applications.
- Control components are sealed within a dedicated enclosure, ensuring low maintenance.
- Electronic control groups available to enable full valve network communication.
- Electroless nickel plated and polished cylinder provides maximum corrosion resistance and reduces friction.
- Integral manual handpump enables valve cycling when sufficient line pressure is not available.
- Gas and hydraulic fluid contained in separate cylinders and cannot mix (GIG).
- Spring return pack fully encapsulated in a factory welded cartridge ensuring personnel safety and simplifying assembly (GIGS).
- Environmentally-friendly design ensures up to 50% less gas discharge than alternative systems.

#### GENERAL APPLICATION

GIG and GIGS 'direct' gas actuators offer the major benefit of using the gas flowing in the pipeline for their operation, with no need for any other power source.

#### APPROVALS

Safety integrity level:  
(IEC 61508-1÷7:2010) – Suitable for use in SIL3 applications  
Area classification:  
(ATEX) - II 2GD 135°C (T4)  
Enclosure standards:  
(IEC 60529) - IP66, IP66M, IP67M  
(ANSI/NEMA 250) - NEMA 4, 4X, 6  
Pressure equipment directive:  
PED 2014/68/CE  
Machinery directive:  
2006/42/EC

#### TECHNICAL DATA

Design pressure: 10 to 100 barg  
Supply medium: Sweet or sour high-pressure gas, nitrogen or instrument air

Output torque  
GIG: Double acting torque up to 750,000 Nm  
GIGS: Spring starting torque up to 335,000 Nm  
Spring ending torque up to 235,000 Nm

Ambient temperature  
Standard range: -30°C to +100°C  
[-20°F to +210°F]  
Extended range: -60°C to +135°C  
[-70°F to +275°F]



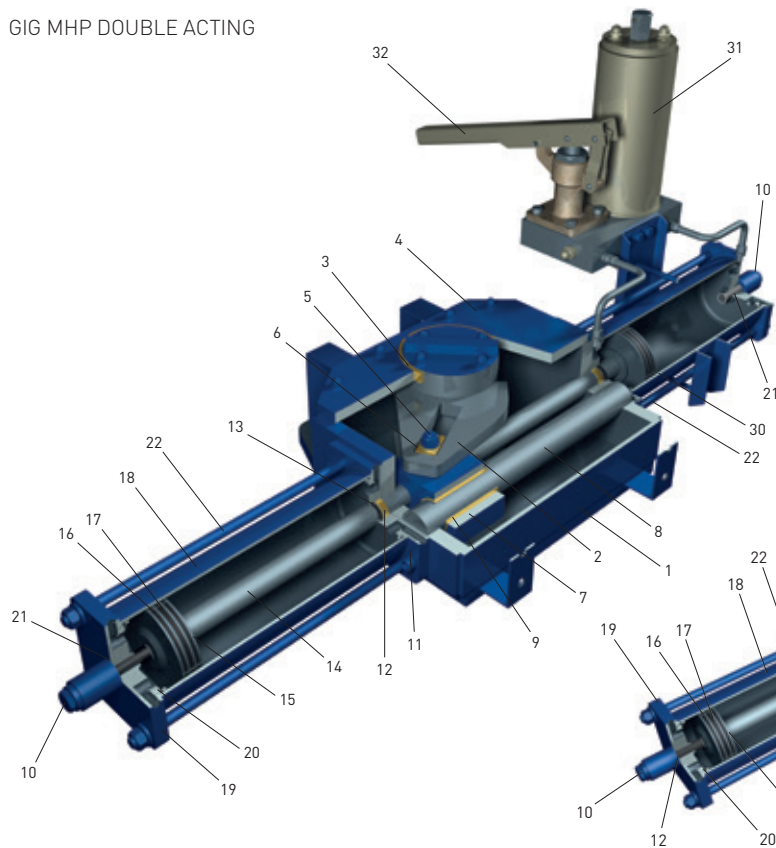
[www.globalsupplyline.com.au](http://www.globalsupplyline.com.au)

Global Supply Line are a major Australian stockist of Emerson Biffi Scotch Yoke Pneumatic Spring Return Actuators up to 25,000NM. Contact us at [sales@globalsupplyline.com.au](mailto:sales@globalsupplyline.com.au)

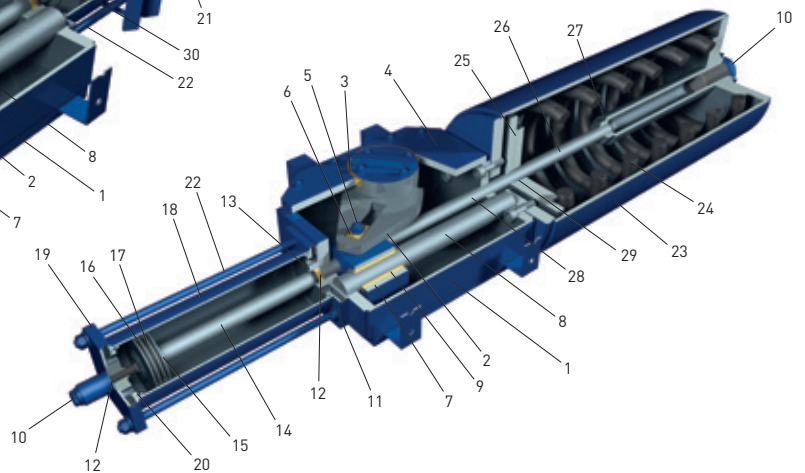
# GIG/GIGS GAS POWERED ACTUATORS

## SCOTCH YOKE DESIGN

### GIG MHP DOUBLE ACTING



### GIGS SPRING RETURN



### MATERIALS

Part	Material
1 Housing	Carbon steel
2 Yoke	Carbon steel
3 Yoke bushing	Bronze
4 Cover	Carbon steel
5 Guide block pin	Alloy steel
6 Sliding block	Bronze
7 Guide block	Carbon steel
8 Guide bar	Alloy steel (hard chrome plated)
9 Guide block bushing	Steel + bronze + PTFE
10 Travel stop screw	Carbon steel
11 Cylinder head flange	Carbon steel
12 Piston rod bushing	Steel + bronze + PTFE
13 Piston rod seal	NBR rubber
14 Piston rod	Alloy steel (hard chrome plated)
15 Piston	Carbon steel
16 Piston guide sliding ring	PTFE + graphite
17 Piston seal O-ring	PTFE+NBR rubber
18 Cylinder tube	Carbon steel (ENP)
19 Cylinder end flange	Carbon steel
20 Cylinder seal O-ring	NBR rubber
21 Sealing washer	PVC
22 Tie rod	Alloy steel
23 Spring container	Carbon steel
24 Spring	Carbon steel
25 Spring thrust flange	Carbon steel
26 Guide rod	Alloy steel (hard chrome plated)
27 Guide rod bushing	Steel + bronze + PTFE
28 Container rod	Alloy steel (hard chrome plated)
29 Container rod bushing	Steel + bronze + PTFE
30 Hydraulic cylinder tube	Carbon steel
31 Hydraulic Manual Override MHP Tank	Carbon steel
32 Hydraulic Manual Override MHP Lever	Carbon steel

# GIG DOUBLE ACTING GAS POWERED ACTUATOR

## OUTPUT TORQUES (Nm) - CANTED YOKE DESIGN, MODELS 0.3C-45 TO 14C-350

Model	MOP* (bar g)	Position	Operating supply pressure (bar g)											
			15		20		25		30		35		40	
			OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL
0.3C-45	100	0°	339	298	458	404	576	510	695	615	814	721	933	827
		45°	132	105	179	142	225	179	271	217	318	254	364	291
		90°	191	145	258	197	325	249	392	300	459	352	525	403
0.3C-75	46	0°	959	943	1289	1268	1619	1593	1948	1918	2278	2244	2608	2569
		45°	375	332	504	447	632	561	761	676	890	791	1019	905
		90°	540	460	726	619	912	778	1098	936	1284	1095	1470	1254
0.3C-100	25	0°	1717	1730	2304	2322	2890	2914						
		45°	671	610	900	818	1129	1027						
		90°	968	844	1298	1134	1629	1423						
0.9C-100	66	0°	1986	2001	2664	2685	3342	3370	4019	4055	4697	4739	5375	5424
		45°	776	705	1041	946	1306	1187	1571	1429	1836	1670	2101	1911
		90°	1119	977	1501	1311	1883	1645	2265	1979	2647	2314	3029	2648
0.9C-135	36	0°	3644	3683	4880	4934	6115	6185	7351	7435	8586	8686		
		45°	1424	1298	1907	1739	2390	2180	2873	2620	3356	3061		
		90°	2054	1798	2750	2409	3446	3019	4143	3630	4839	4241		
1.5C-135	47	0°	4608	4658	6171	6239	7733	7821	9295	9402	10857	10984	12420	12566
		45°	1801	1641	2412	2199	3022	2756	3633	3314	4244	3871	4854	4429
		90°	2597	2274	3478	3046	4358	3818	5239	4590	6119	5363	7000	6135
1.5C-175	28	0°	7770	7910	10396	10586	13021	13261						
		45°	3037	2788	4063	3731	5089	4674						
		90°	4379	3862	5859	5168	7339	6474						
3C-135	57	0°	7628	7710	10214	10327	12800	12945	15385	15563	17971	18181	20557	20799
		45°	2981	2717	3992	3640	5003	4562	6014	5485	7025	6408	8035	7331
		90°	4299	3764	5757	5042	7214	6320	8672	7598	10129	8876	11587	10155
3C-175	34	0°	12861	13093	17207	17521	21552	21950	25897	26379				
		45°	5027	4614	6726	6175	8424	7736	10123	9297				
		90°	7249	6392	9698	8554	12147	10717	14596	12879				
6C-175	58	0°	15036	15307	20116	20484	25196	25662	30277	30839	35357	36017	40437	41194
		45°	5877	5395	7863	7220	9849	9045	11834	10870	13820	12694	15806	14519
		90°	8475	7473	11338	10001	14201	12529	17065	15057	19928	17585	22791	20113
6C-200	44	0°	19693	19867	26328	26568	32963	33268	39598	39969	46233	46670	52868	53371
		45°	7697	7002	10291	9364	12885	11726	15478	14088	18072	16449	20665	18811
		90°	11099	9699	14839	12971	18579	16243	22319	19514	26059	22786	29798	26058
14C-200	82	0°	21523	21713	28775	29037	36027	36361	43279	43685	50531	51009	57783	58333
		45°	8413	7653	11248	10234	14082	12816	16917	15397	19752	17979	22587	20560
		90°	12131	10601	16219	14177	20306	17753	24394	21329	28481	24904	32568	28480
14C-235	57	0°	29776	30872	39788	41259	49800	51646	59813	62034	69825	72421	79837	82808
		45°	11639	10881	15552	14542	19466	18203	23380	21865	27294	25526	31207	29187
		90°	16783	15073	22426	20144	28069	25216	33712	30287	39356	35359	44999	40430
14C-280	40	0°	42271	43955	56485	58743	70699	73532	84913	88320	99127	103109	113341	117897
		45°	16523	15492	22079	20705	27635	25917	33191	31130	38747	36342	44303	41555
		90°	23826	21460	31837	28681	39848	35901	47860	43121	55871	50342	63883	57562
14C-300	35	0°	48526	50896	64843	68019	81160	85141	97477	102264	113794	119386		
		45°	18968	17939	25346	23974	31724	30009	38102	36044	44481	42079		
		90°	27351	24849	36548	33209	45744	41569	54941	49929	64138	58289		
14C-350	25	0°	66049	70344	88259	94005	110468	117667						
		45°	25818	24794	34499	33134	43180	41473						
		90°	37228	34344	49746	45897	62263	57450						

\* MOP = Maximum Operating Pressure (bar g)

**GIG** DOUBLE ACTING GAS POWERED ACTUATOR  
 OUTPUT TORQUES (Nm) - CANTED YOKE DESIGN, MODELS 0.3C-45 TO 14C-350

Model	MOP* (bar g)	Position	Operating supply pressure (bar g)											
			45		50		55		60		65		70	
			OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL
0.3C-45	100	0°	1051	933	1170	1038	1289	1144	1408	1250	1526	1356	1645	1461
		45°	411	328	457	366	503	403	550	440	596	477	643	515
		90°	592	455	659	507	726	558	793	610	860	662	927	713
0.3C-75	46	0°	2938	2894										
		45°	1148	1020										
		90°	1656	1413										
0.3C-100	25	0°												
		45°												
		90°												
0.9C-100	66	0°	6053	6108	6731	6793	7409	7478	8087	8162	8765	8847		
		45°	2366	2153	2631	2394	2896	2635	3161	2877	3426	3118		
		90°	3412	2982	3794	3316	4176	3651	4558	3985	4940	4319		
0.9C-135	36	0°												
		45°												
		90°												
1.5C-135	47	0°	13982	14147										
		45°	5465	4986										
		90°	7881	6907										
1.5C-175	28	0°												
		45°												
		90°												
3C-135	57	0°	23143	23417	25729	26034	28315	28652						
		45°	9046	8253	10057	9176	11068	10099						
		90°	13044	11433	14502	12711	15959	13989						
3C-175	34	0°												
		45°												
		90°												
6C-175	58	0°	45517	46372	50597	51550	55677	56727						
		45°	17792	16344	19777	18169	21763	19994						
		90°	25655	22640	28518	25168	31381	27696						
6C-200	44	0°												
		45°												
		90°												
14C-200	82	0°	65035	65656	72287	72980	79539	80304	86791	87628	94043	94952	101295	102276
		45°	25421	23141	28256	25723	31091	28304	33925	30886	36760	33467	39595	36049
		90°	36656	32056	40743	35632	44831	39208	48918	42783	53006	46359	57093	49935
14C-235	57	0°	89849	93195	99862	103582	109874	113969						
		45°	35121	32848	39035	36509	42948	40170						
		90°	50642	45501	56285	50573	61929	55644						
14C-280	40	0°												
		45°												
		90°												
14C-300	35	0°												
		45°												
		90°												
14C-350	25	0°												
		45°												
		90°												

\* MOP = Maximum Operating Pressure (bar g)

**GIG** DOUBLE ACTING GAS POWERED ACTUATOR  
 OUTPUT TORQUES (Nm) - CANTED YOKE DESIGN, MODELS 0.3C-45 TO 14C-350

Model	MOP* (bar g)	Position	Operating supply pressure (bar g)											
			75		80		85		90		95		100	
			OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL
0.3C-45	100	0°	1764	1567	1882	1673	2001	1778	2120	1884	2239	1990	2357	2096
		45°	689	552	736	589	782	627	828	664	875	701	921	738
		90°	994	765	1061	816	1128	868	1195	920	1262	971	1328	1023
0.3C-75	46	0°												
		45°												
		90°												
0.3C-100	25	0°												
		45°												
		90°												
0.9C-100	66	0°												
		45°												
		90°												
0.9C-135	36	0°												
		45°												
		90°												
1.5C-135	47	0°												
		45°												
		90°												
1.5C-175	28	0°												
		45°												
		90°												
3C-135	57	0°												
		45°												
		90°												
3C-175	34	0°												
		45°												
		90°												
6C-175	58	0°												
		45°												
		90°												
6C-200	44	0°												
		45°												
		90°												
14C-200	82	0°	108547	109599	115799	116923								
		45°	42430	38630	45264	41211								
		90°	61181	53511	65268	57087								
14C-235	57	0°												
		45°												
		90°												
14C-280	40	0°												
		45°												
		90°												
14C-300	35	0°												
		45°												
		90°												
14C-350	25	0°												
		45°												
		90°												

\* MOP = Maximum Operating Pressure (bar g)

**GIG** DOUBLE ACTING GAS POWERED ACTUATOR  
 OUTPUT TORQUES (Nm) - CANTED YOKE DESIGN, MODELS 18C-235 TO 80C-350

Model	MOP* (bar g)	Position	Operating supply pressure (bar g)											
			15		20		25		30		35		40	
			OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL
18C-235	75	0°	34242	35503	45756	47448	57271	59393	68785	71339	80299	83284	91813	95229
		45°	13385	12513	17885	16724	22386	20934	26887	25144	31388	29355	35888	33565
		90°	19300	17334	25790	23166	32280	28998	38769	34830	45259	40662	51749	46495
18C-280	53	0°	48612	50548	64958	67555	81304	84562	97650	101569	113996	118575	130342	135582
		45°	19002	17816	25391	23811	31781	29805	38170	35799	44560	41794	50949	47788
		90°	27399	24679	36613	32983	45826	41286	55039	49590	64252	57893	73465	66197
18C-300	45	0°	55805	58531	74569	78221	93334	97912	112098	117603	130863	137294	149627	156985
		45°	21813	20630	29148	27570	36483	34511	43818	41451	51153	48391	58488	55332
		90°	31454	28577	42030	38191	52606	47805	63183	57418	73759	67032	84335	76646
18C-350	33	0°	75957	80895	101497	108106	127038	135317	152578	162528				
		45°	29691	28513	39674	38104	49658	47695	59641	57286				
		90°	42812	39496	57207	52782	71603	66067	85999	79353				
32C-235	100	0°	40198	41678	53714	55700	67231	69723	80747	83746	94264	97768	107780	111791
		45°	15713	14690	20996	19632	26280	24575	31563	29517	36846	34460	42130	39402
		90°	22657	20348	30275	27195	37893	34041	45512	40888	53130	47734	60749	54581
32C-280	75	0°	57067	59339	76255	79304	95444	99268	114633	119233	133821	139197	153010	159162
		45°	22307	20915	29807	27952	37308	34989	44809	42025	52309	49062	59810	56099
		90°	32165	28972	42980	38719	53796	48467	64611	58214	75426	67962	86242	77709
32C-300	65	0°	65510	68710	87538	91825	109566	114941	131594	138056	153622	161171	175649	184287
		45°	25607	24218	34218	32365	42828	40513	51438	48660	60049	56807	68659	64955
		90°	36924	33547	49339	44833	61755	56119	74171	67404	86587	78690	99002	89976
32C-350	50	0°	89167	94964	119149	126907	149132	158850	179114	190794	209096	222737	239079	254680
		45°	34854	33471	46574	44730	58294	55989	70014	67248	81733	78507	93453	89766
		90°	50258	46365	67157	61961	84056	77557	100955	93153	117854	108749	134753	124345
50C-235	100	0°	44664	46308	59682	61889	74701	77470	89719	93051	104738	108631	119756	124212
		45°	17458	16322	23329	21814	29200	27305	35070	32797	40941	38289	46811	43781
		90°	25174	22609	33639	30217	42104	37824	50569	45431	59034	53038	67499	60645
50C-280	100	0°	63407	65933	84728	88115	106049	110298	127370	132481	148691	154664	170011	176846
		45°	24785	23239	33119	31058	41453	38876	49787	46695	58121	54514	66455	62332
		90°	35739	32191	47756	43021	59773	53852	71790	64682	83807	75513	95824	86344
50C-300	84	0°	72789	76344	97265	102028	121740	127712	146215	153396	170691	179079	195166	204763
		45°	28452	26909	38020	35961	47587	45014	57154	54067	66721	63119	76288	72172
		90°	41026	37274	54822	49814	68617	62354	82412	74894	96207	87434	110003	99974
50C-350	63	0°	99074	105516	132388	141008	165702	176500	199016	211993	232329	247485	265643	282978
		45°	38727	37191	51749	49701	64771	62210	77793	74720	90815	87230	103837	99740
		90°	55842	51517	74619	68846	93395	86175	112172	103503	130949	120832	149726	138161
80C-300	100	0°	84921	87484	113475	116920	142030	146356	170585	175793	199139	205229	227694	234665
		45°	33194	30835	44356	41210	55518	51586	66680	61961	77841	72336	89003	82712
		90°	47864	42713	63959	57085	80053	71457	96148	85829	112242	100201	128336	114573
80C-350	91	0°	115587	121517	154453	162397	193319	203276	232185	244156	271051	285036	309917	325915
		45°	45182	42831	60374	57239	75566	71648	90759	86057	105951	100466	121143	114875
		90°	65149	59329	87055	79289	108961	99248	130868	119207	152774	139166	174680	159125

\* MOP = Maximum Operating Pressure (bar g)

**GIG** DOUBLE ACTING GAS POWERED ACTUATOR  
 OUTPUT TORQUES (Nm) - CANTED YOKE DESIGN, MODELS 18C-235 TO 80C-350

Model	MOP* (bar g)	Position	Operating supply pressure (bar g)											
			45		50		55		60		65		70	
			OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL
18C-235	75	0°	103327	107174	114841	119120	126355	131065	137869	143010	149383	154955	160897	166901
		45°	40389	37775	44890	41986	49391	46196	53891	50406	58392	54617	62893	58827
		90°	58239	52327	64728	58159	71218	63991	77708	69823	84198	75655	90687	81488
18C-280	53	0°	146688	152589	163034	169596								
		45°	57339	53782	63728	59777								
		90°	82678	74500	91892	82803								
18C-300	45	0°	168392	176676										
		45°	65822	62272										
		90°	94912	86260										
18C-350	33	0°												
		45°												
		90°												
32C-235	100	0°	121297	125814	134813	139836	148330	153859	161846	167882	175363	181904	188879	195927
		45°	47413	44345	52697	49288	57980	54230	63264	59173	68547	64115	73831	69058
		90°	68367	61427	75986	68274	83604	75120	91222	81967	98841	88813	106459	95659
32C-280	75	0°	172199	179126	191387	199091	210576	219055	229765	239020	248954	258984	268142	278949
		45°	67311	63136	74811	70173	82312	77210	89813	84247	97313	91283	104814	98320
		90°	97057	87457	107873	97204	118688	106952	129504	116699	140319	126447	151135	136194
32C-300	65	0°	197677	207402	219705	230517	241733	253633	263761	276748	285789	299863		
		45°	77270	73102	85880	81250	94491	89397	103101	97545	111712	105692		
		90°	111418	101262	123834	112548	136249	123834	148665	135120	161081	146406		
32C-350	50	0°	269061	286623	299043	318566								
		45°	105173	101025	116893	112284								
		90°	151652	139941	168552	155537								
50C-235	100	0°	134774	139793	149793	155374	164811	170954	179829	186535	194848	202116	209866	217697
		45°	52682	49272	58552	54764	64423	60256	70293	65747	76164	71239	82034	76731
		90°	75964	68252	84428	75860	92893	83467	101358	91074	109823	98681	118288	106288
50C-280	100	0°	191332	199029	212653	221212	233974	243395	255294	265578	276615	287760	297936	309943
		45°	74790	70151	83124	77970	91458	85789	99792	93607	108126	101426	116460	109245
		90°	107842	97174	119859	108005	131876	118835	143893	129666	155910	140496	167927	151327
50C-300	84	0°	219641	230447	244117	256131	268592	281814	293068	307498	317543	333182	342018	358865
		45°	85855	81225	95423	90278	104990	99330	114557	108383	124124	117436	133691	126488
		90°	123798	112513	137593	125053	151388	137593	165184	150133	178979	162673	192774	175213
50C-350	63	0°	298957	318470	332270	353963	365584	389455	398898	424947				
		45°	116859	112250	129881	124760	142903	137270	155925	149780				
		90°	168503	155490	187280	172819	206056	190148	224833	207477				
80C-300	100	0°	256248	264101	284803	293537	313358	322974	341912	352410	370467	381846	399021	411282
		45°	100165	93087	111326	103462	122488	113838	133650	124213	144812	134588	155973	144964
		90°	144431	128945	160525	143317	176620	157689	192714	172061	208809	186433	224903	200805
80C-350	91	0°	348783	366795	387649	407675	426515	448554	465381	489434	504247	530314	543113	571193
		45°	136336	129283	151528	143692	166720	158101	181913	172510	197105	186918	212297	201327
		90°	196587	179084	218493	199043	240399	219003	262306	238962	284212	258921	306118	278880

\* MOP = Maximum Operating Pressure (bar g)

**GIG** DOUBLE ACTING GAS POWERED ACTUATOR  
 OUTPUT TORQUES (Nm) - CANTED YOKE DESIGN, MODELS 18C-235 TO 80C-350

Model	MOP* (bar g)	Position	Operating supply pressure (bar g)											
			75		80		85		90		95		100	
			OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL
18C-235	75	0°	172411	178846										
		45°	67394	63037										
		90°	97177	87320										
18C-280	53	0°												
		45°												
		90°												
18C-300	45	0°												
		45°												
		90°												
18C-350	33	0°												
		45°												
		90°												
32C-235	100	0°	202396	209950	215912	223972	229429	237995	242945	252018	256462	266040	269979	280063
		45°	79114	74000	84398	78943	89681	83885	94965	88828	100248	93770	105532	98713
		90°	114078	102506	121696	109352	129314	116199	136933	123045	144551	129892	152170	136738
32C-280	75	0°	287331	298913	306520	318878								
		45°	112315	105357	119815	112394								
		90°	161950	145942	172766	155689								
32C-300	65	0°												
		45°												
		90°												
32C-350	50	0°												
		45°												
		90°												
50C-235	100	0°	224884	233277	239903	248858	254921	264439	269939	280020	284958	295600	299976	311181
		45°	87905	82223	93775	87714	99646	93206	105516	98698	111387	104189	117258	109681
		90°	126753	113895	135218	121503	143683	129110	152148	136717	160613	144324	169077	151931
50C-280	100	0°	319257	332126	340577	354309	361898	376491	383219	398674	404540	420857	425860	443040
		45°	124794	117063	133128	124882	141462	132701	149796	140520	158130	148338	166465	156157
		90°	179945	162157	191962	172988	203979	183818	215996	194649	228013	205480	240031	216310
50C-300	84	0°	366494	384549	390969	410233	415444	435917						
		45°	143259	135541	152826	144594	162393	153646						
		90°	206569	187753	220364	200292	234160	212832						
50C-350	63	0°												
		45°												
		90°												
80C-300	100	0°	427576	440718	456131	470155	484685	499591	513240	529027	541794	558463	570349	587899
		45°	167135	155339	178297	165714	189459	176090	200620	186465	211782	196840	222944	207215
		90°	240997	215177	257092	229549	273186	243921	289281	258293	305375	272665	321470	287036
80C-350	91	0°	581979	612073	620845	652953	659711	693833	698577	734712				
		45°	227490	215736	242682	230145	257874	244554	273067	258962				
		90°	328024	298839	349931	318798	371837	338758	393743	358717				

\* MOP = Maximum Operating Pressure (bar g)



# GIG DOUBLE ACTING GAS POWERED ACTUATOR

## OUTPUT TORQUES (Nm) - SYMMETRIC YOKE DESIGN, MODELS 0.3S-45 TO 14S-350

Model	MOP* (bar g)	Position	Operating supply pressure (bar g)											
			15		20		25		30		35		40	
			OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL
0.3S-45	100	0°	213	189	287	256	362	323	436	390	511	457	585	524
		45°	135	107	182	145	229	183	276	221	324	259	371	297
		90°	243	175	328	237	414	300	499	362	584	424	669	486
0.3S-75	73	0°	602	597	809	803	1016	1010	1223	1216	1430	1422	1637	1628
		45°	381	338	513	455	644	572	775	689	906	805	1038	922
		90°	688	554	925	746	1162	937	1399	1128	1635	1320	1872	1511
0.3S-100	40	0°	1078	1097	1446	1472	1814	1847	2182	2222	2550	2598		
		45°	683	621	917	834	1150	1046	1383	1259	1617	1472		
		90°	1233	1018	1653	1366	2074	1714	2495	2062	2916	2411		
0.9S-100	100	0°	1246	1268	1672	1702	2097	2136	2523	2570	2948	3004	3374	3438
		45°	790	718	1060	964	1330	1210	1599	1456	1869	1702	2139	1948
		90°	1425	1177	1912	1579	2399	1982	2885	2385	3372	2788	3858	3190
0.9S-135	57	0°	2287	2335	3063	3127	3838	3920	4613	4713	5389	5506	6164	6299
		45°	1450	1322	1942	1772	2434	2221	2925	2670	3417	3119	3909	3568
		90°	2616	2166	3503	2902	4390	3638	5276	4374	6163	5109	7050	5845
1.5S-135	69	0°	3138	3203	4201	4290	5265	5378	6329	6466	7393	7553	8457	8641
		45°	1835	1667	2458	2234	3080	2800	3702	3366	4325	3932	4947	4499
		90°	3027	2507	4054	3359	5080	4210	6106	5061	7133	5913	8159	6764
1.5S-175	40	0°	5291	5439	7078	7279	8866	9119	10653	10959	12441	12799	14229	14639
		45°	3095	2832	4141	3790	5186	4748	6232	5706	7278	6664	8324	7622
		90°	5104	4258	6829	5698	8554	7139	10278	8579	12003	10019	13728	11460
3S-135	84	0°	5126	5232	6864	7009	8602	8786	10339	10562	12077	12339	13815	14116
		45°	3039	2763	4070	3702	5100	4640	6131	5578	7161	6517	8192	7455
		90°	5088	4214	6813	5645	8538	7076	10263	8507	11988	9938	13713	11369
3S-175	50	0°	8643	8886	11563	11892	14483	14897	17404	17903	20324	20909	23244	23915
		45°	5125	4693	6857	6280	8588	7868	10320	9455	12052	11043	13783	12630
		90°	8580	7157	11478	9578	14377	11999	17276	14420	20174	16841	23073	19262
6S-175	85	0°	10087	10370	13495	13878	16902	17385	20310	20893	23718	24401	27126	27909
		45°	5992	5487	8017	7343	10041	9200	12066	11056	14090	12912	16115	14768
		90°	10051	8384	13447	11220	16843	14057	20239	16893	23634	19729	27030	22565
6S-200	66	0°	13210	13459	17661	17999	22112	22539	26563	27079	31015	31618	35466	36158
		45°	7848	7122	10492	9524	13136	11927	15781	14329	18425	16731	21069	19133
		90°	13164	10882	17599	14553	22034	18223	26470	21894	30905	25564	35340	29235
14S-200	100	0°	14655	14931	19593	19968	24531	25004	29469	30040	34407	35077	39345	40113
		45°	8573	7774	11462	10396	14351	13018	17239	15641	20128	18263	23017	20885
		90°	14139	11689	18903	15631	23668	19574	28432	23517	33196	27459	37960	31402
14S-235	84	0°	20274	21229	27092	28372	33909	35515	40727	42658	47544	49801	54362	56944
		45°	11860	11053	15849	14772	19837	18491	23825	22210	27813	25929	31802	29648
		90°	19561	16619	26138	22211	32716	27803	39293	33394	45871	38986	52448	44578
14S-280	59	0°	28783	30226	38461	40396	48139	50565	57818	60735	67496	70904	77174	81074
		45°	16838	15737	22500	21032	28162	26327	33823	31622	39485	36916	45147	42211
		90°	27770	23662	37107	31623	46445	39584	55783	47545	65120	55506	74458	63468
14S-300	51	0°	33042	34999	44152	46774	55262	58548	66373	70323	77483	82097	88593	93872
		45°	19329	18222	25829	24353	32328	30483	38828	36614	45328	42744	51827	48875
		90°	31878	27399	42598	36616	53317	45834	64036	55051	74755	64269	85475	73486
14S-350	37	0°	44973	48373	60096	64644	75218	80915	90341	97186	105463	113457		
		45°	26309	25185	35156	33657	44003	42129	52849	50600	61696	59072		
		90°	43390	37868	57980	50606	72570	63343	87160	76081	101751	88819		

\* MOP = Maximum Operating Pressure (bar g)

**GIG** DOUBLE ACTING GAS POWERED ACTUATOR  
 OUTPUT TORQUES (Nm) - SYMMETRIC YOKE DESIGN, MODELS 0.3S-45 TO 14S-350

Model	MOP* (bar g)	Position	Operating supply pressure (bar g)											
			45		50		55		60		65		70	
			OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL
0.3S-45	100	0°	660	591	734	658	809	725	883	792	958	859	1032	926
		45°	418	335	465	373	513	411	560	449	607	486	654	524
		90°	755	548	840	611	925	673	1010	735	1095	797	1181	859
0.3S-75	73	0°	1844	1835	2051	2041	2258	2247	2465	2453				
		45°	1169	1039	1300	1156	1431	1273	1563	1390				
		90°	2109	1702	2345	1894	2582	2085	2819	2277				
0.3S-100	40	0°												
		45°												
		90°												
0.9S-100	100	0°	3799	3872	4225	4306	4650	4740	5076	5174	5501	5608	5926	6042
		45°	2409	2193	2679	2439	2949	2685	3218	2931	3488	3177	3758	3423
		90°	4345	3593	4832	3996	5318	4398	5805	4801	6292	5204	6778	5607
0.9S-135	57	0°	6940	7091	7715	7884								
		45°	4400	4017	4892	4467								
		90°	7937	6581	8824	7317								
1.5S-135	69	0°	9520	9728	10584	10816	11648	11904	12712	12991	13775	14079		
		45°	5569	5065	6192	5631	6814	6197	7436	6764	8059	7330		
		90°	9185	7616	10212	8467	11238	9319	12264	10170	13291	11021		
1.5S-175	40	0°												
		45°												
		90°												
3S-135	84	0°	15553	15893	17291	17669	19028	19446	20766	21223	22504	23000	24242	24776
		45°	9222	8393	10253	9332	11283	10270	12314	11209	13344	12147	14375	13085
		90°	15438	12800	17163	14231	18888	15663	20613	17094	22338	18525	24063	19956
3S-175	50	0°	26164	26920	29084	29926								
		45°	15515	14218	17247	15805								
		90°	25972	21682	28870	24103								
6S-175	85	0°	30534	31416	33942	34924	37350	38432	40757	41940	44165	45447	47573	48955
		45°	18139	16624	20164	18480	22189	20337	24213	22193	26238	24049	28262	25905
		90°	30426	25401	33822	28237	37218	31073	40613	33910	44009	36746	47405	39582
6S-200	66	0°	39917	40698	44368	45238	48819	49778	53270	54317	57721	58857		
		45°	23714	21536	26358	23938	29002	26340	31647	28743	34291	31145		
		90°	39776	32906	44211	36576	48646	40247	53082	43917	57517	47588		
14S-200	100	0°	44283	45149	49221	50186	54159	55222	59096	60258	64034	65295	68972	70331
		45°	25905	23507	28794	26129	31683	28752	34571	31374	37460	33996	40349	36618
		90°	42724	35345	47488	39287	52252	43230	57016	47173	61780	51115	66544	55058
14S-235	84	0°	61179	64087	67996	71230	74814	78373	81631	85515	88449	92658	95266	99801
		45°	35790	33367	39778	37086	43766	40805	47754	44524	51743	48243	55731	51962
		90°	59025	50170	65603	55761	72180	61353	78758	66945	85335	72536	91913	78128
14S-280	59	0°	86853	91243	96531	101413	106209	111582						
		45°	50809	47506	56471	52801	62133	58096						
		90°	83795	71429	93133	79390	102471	87351						
14S-300	51	0°	99703	105646	110814	117421								
		45°	58327	55005	64826	61136								
		90°	96194	82704	106913	91922								
14S-350	37	0°												
		45°												
		90°												

\* MOP = Maximum Operating Pressure (bar g)

**GIG** DOUBLE ACTING GAS POWERED ACTUATOR  
 OUTPUT TORQUES (Nm) - SYMMETRIC YOKE DESIGN, MODELS 0.3S-45 TO 14S-350

Model	MOP* (bar g)	Position	Operating supply pressure (bar g)											
			75		80		85		90		95		100	
			OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL
0.3S-45	100	0°	1107	993	1181	1060	1256	1127	1330	1194	1405	1261	1479	1328
		45°	702	562	749	600	796	638	843	676	891	714	938	752
		90°	1266	922	1351	984	1436	1046	1522	1108	1607	1170	1692	1233
0.3S-75	73	0°												
		45°												
		90°												
0.3S-100	40	0°												
		45°												
		90°												
0.9S-100	100	0°	6352	6476	6777	6910	7203	7344	7628	7777				
		45°	4028	3669	4298	3914	4567	4160	4837	4406				
		90°	7265	6009	7752	6412	8238	6815	8725	7218				
0.9S-135	57	0°												
		45°												
		90°												
1.5S-135	69	0°												
		45°												
		90°												
1.5S-175	40	0°												
		45°												
		90°												
3S-135	84	0°	25979	26553	27717	28330								
		45°	15405	14024	16436	14962								
		90°	25788	21387	27513	22818								
3S-175	50	0°												
		45°												
		90°												
6S-175	85	0°	50981	52463	54389	55970	57797	59478						
		45°	30287	27761	32311	29617	34336	31474						
		90°	50801	42418	54197	45254	57593	48090						
6S-200	66	0°												
		45°												
		90°												
14S-200	100	0°	73910	75367	78848	80404	83786	85440	88724	90476	93662	95513	98600	100549
		45°	43238	39240	46126	41863	49015	44485	51904	47107	54792	49729	57681	52351
		90°	71309	59000	76073	62943	80837	66886	85601	70828	90365	74771	95129	78714
14S-235	84	0°	102083	106944	108901	114087								
		45°	59719	55681	63707	59400								
		90°	98490	83720	105067	89312								
14S-280	59	0°												
		45°												
		90°												
14S-300	51	0°												
		45°												
		90°												
14S-350	37	0°												
		45°												
		90°												

\* MOP = Maximum Operating Pressure (bar g)

# GIG DOUBLE ACTING GAS POWERED ACTUATOR

## OUTPUT TORQUES (Nm) - SYMMETRIC YOKE DESIGN, MODELS 18S-235 TO 80S-350

Model	MOP* (bar g)	Position	Operating supply pressure (bar g)											
			15		20		25		30		35		40	
			OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL
18S-235	100	0°	23309	24407	31147	32619	38985	40831	46823	49043	54660	57255	62498	65467
		45°	13640	12711	18226	16988	22813	21265	27399	25542	31986	29819	36572	34096
		90°	22503	19119	30069	25551	37636	31984	45202	38416	52769	44849	60335	51282
18S-280	77	0°	33091	34750	44218	46442	55345	58133	66472	69825	77599	81517	88725	93208
		45°	19364	18098	25875	24188	32386	30277	38898	36366	45409	42455	51920	48545
		90°	31946	27221	42688	36379	53430	45537	64172	54696	74913	63854	85655	73012
18S-300	66	0°	37987	40238	50760	53775	63534	67312	76307	80848	89080	94385	101853	107922
		45°	22229	20956	29704	28007	37178	35057	44653	42107	52128	49157	59602	56208
		90°	36673	31519	49004	42123	61335	52727	73666	63330	85998	73934	98329	84538
18S-350	48	0°	51705	55613	69091	74319	86476	93026	103862	111733	121248	130439	138634	149146
		45°	30256	28964	40430	38707	50604	48450	60778	58192	70952	67935	81125	77678
		90°	49916	43563	66700	58216	83484	72869	100268	87523	117052	102176	133837	116829
32S-235	100	0°	27014	28286	36097	37804	45181	47321	54265	56838	63348	66355	72432	75872
		45°	16019	14939	21405	19966	26792	24992	32178	30018	37565	35045	42951	40071
		90°	26815	22783	35832	30448	44849	38114	53866	45779	62882	53445	71899	61110
32S-280	100	0°	38350	40273	51246	53823	64141	67373	77037	80923	89932	94473	102827	108023
		45°	22741	21270	30388	28426	38035	35583	45682	42739	53329	49895	60976	57052
		90°	38069	32438	50869	43351	63670	54265	76470	65178	89271	76092	102072	87005
32S-300	100	0°	44025	46633	58828	62322	73632	78010	88435	93698	103238	109387	118042	125075
		45°	26106	24629	34885	32915	43663	41200	52441	49486	61220	57772	69998	66058
		90°	43701	37560	58396	50196	73090	62832	87785	75468	102479	88104	117174	100740
32S-350	73	0°	59923	64452	80072	86132	100221	107811	120370	129491	140519	151171	160668	172851
		45°	35534	34040	47482	45490	59430	56940	71379	68390	83327	79840	95275	91290
		90°	59482	51912	79483	69373	99484	86835	119485	104297	139486	121759	159487	139220
50S-235	100	0°	30016	31429	40108	42004	50201	52579	60294	63153	70387	73728	80480	84303
		45°	17799	16599	23784	22184	29769	27769	35754	33354	41739	38939	47724	44524
		90°	29795	25314	39813	33831	49832	42349	59851	50866	69869	59383	79888	67900
50S-280	100	0°	42612	44748	56940	59804	71268	74859	85596	89915	99925	104970	114253	120025
		45°	25268	23633	33765	31585	42261	39536	50758	47488	59255	55439	67751	63391
		90°	42298	36042	56521	48168	70744	60294	84967	72420	99190	84547	113413	96673
50S-300	100	0°	48917	51815	65365	69246	81813	86678	98261	104109	114709	121541	131158	138972
		45°	29007	27366	38761	36572	48514	45778	58268	54985	68022	64191	77776	73398
		90°	48557	41733	64884	55773	81212	69813	97539	83853	113866	97893	130193	111933
50S-350	93	0°	66581	71613	88969	95702	111357	119791	133745	143879	156132	167968	178520	192057
		45°	39482	37822	52758	50544	66034	63267	79310	75989	92586	88711	105861	101434
		90°	66092	57680	88315	77082	110538	96484	132761	115886	154985	135287	177208	154689
80S-300	100	0°	57069	59375	76259	79354	95449	99332	114638	119310	133828	139289	153017	159267
		45°	33842	31359	45221	41910	56600	52462	67980	63013	79359	73564	90738	84116
		90°	56650	47823	75698	63914	94747	80005	113795	96097	132844	112188	151892	128279
80S-350	100	0°	77678	82473	103797	110218	129916	137963	156035	165708	182155	193453	208274	221198
		45°	46062	43558	61551	58211	77039	72865	92528	87518	108017	102171	123505	116825
		90°	77107	66427	103034	88774	128961	111121	154888	133468	180816	155814	206743	178161

\* MOP = Maximum Operating Pressure (bar g)

**GIG** DOUBLE ACTING GAS POWERED ACTUATOR  
 OUTPUT TORQUES (Nm) - SYMMETRIC YOKE DESIGN, MODELS 18S-235 TO 80S-350

Model	MOP* (bar g)	Position	Operating supply pressure (bar g)											
			45		50		55		60		65		70	
			OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL
18S-235	100	0°	70336	73679	78174	81891	86012	90103	93849	98315	101687	106527	109525	114739
		45°	41159	38373	45745	42650	50332	46927	54918	51204	59505	55481	64091	59758
		90°	67902	57714	75469	64147	83035	70580	90602	77012	98168	83445	105735	89878
18S-280	77	0°	99852	104900	110979	116592	122106	128283	133233	139975	144360	151667	155487	163358
		45°	58431	54634	64943	60723	71454	66812	77965	72902	84476	78991	90987	85080
		90°	96397	82171	107139	91329	117881	100487	128623	109646	139365	118804	150107	127962
18S-300	66	0°	114627	121459	127400	134996	140173	148533	152946	162069	165720	175606		
		45°	67077	63258	74551	70308	82026	77359	89501	84409	96975	91459		
		90°	110660	95142	122991	105745	135323	116349	147654	126953	159985	137557		
18S-350	48	0°	156020	167852										
		45°	91299	87421										
		90°	150621	131483										
32S-235	100	0°	81515	85389	90599	94907	99682	104424	108766	113941	117849	123458	126933	132975
		45°	48338	45098	53724	50124	59111	55151	64497	60177	69884	65204	75270	70230
		90°	80916	68776	89933	76441	98949	84107	107966	91772	116983	99438	126000	107103
32S-280	100	0°	115723	121573	128618	135123	141514	148672	154409	162222	167304	175772	180200	189322
		45°	68623	64208	76270	71364	83917	78521	91564	85677	99211	92833	106857	99990
		90°	114872	97919	127673	108833	140473	119746	153274	130660	166075	141573	178875	152487
32S-300	100	0°	132845	140763	147649	156452	162452	172140	177255	187829	192059	203517	206862	219205
		45°	78776	74343	87555	82629	96333	90915	105111	99201	113890	107486	122668	115772
		90°	131869	113376	146563	126012	161258	138648	175952	151284	190647	163920	205342	176556
32S-350	73	0°	180817	194531	200966	216211	221115	237890	241264	259570	261414	281250	281563	302930
		45°	107224	102740	119172	114191	131120	125641	143068	137091	155017	148541	166965	159991
		90°	179488	156682	199489	174144	219490	191606	239491	209067	259492	226529	279493	243991
50S-235	100	0°	90572	94877	100665	105452	110758	116026	120851	126601	130944	137176	141036	147750
		45°	53709	50109	59694	55694	65679	61279	71664	66864	77649	72449	83634	78034
		90°	89907	76418	99925	84935	109944	93452	119962	101969	129981	110486	140000	119004
50S-280	100	0°	128581	135081	142909	150136	157237	165192	171566	180247	185894	195303	200222	210358
		45°	76248	71342	84744	79294	93241	87245	101737	95197	110234	103148	118731	111100
		90°	127636	108799	141859	120925	156082	133051	170304	145178	184527	157304	198750	169430
50S-300	100	0°	147606	156404	164054	173835	180502	191267	196950	208698	213399	226130	229847	243562
		45°	87529	82604	97283	91810	107037	101017	116790	110223	126544	119429	136298	128636
		90°	146521	125973	162848	140013	179175	154053	195503	168093	211830	182133	228157	196173
50S-350	93	0°	200908	216145	223296	240234	245684	264323	268072	288411	290460	312500	312847	336589
		45°	119137	114156	132413	126878	145689	139601	158965	152323	172241	165046	185517	177768
		90°	199431	174091	221654	193493	243878	212895	266101	232297	288324	251699	310548	271101
80S-300	100	0°	172207	179245	191396	199223	210586	219202	229776	239180	248965	259158	268155	279137
		45°	102118	94667	113497	105219	124876	115770	136256	126322	147635	136873	159014	147425
		90°	170941	144371	189989	160462	209038	176553	228087	192644	247135	208736	266184	224827
80S-350	100	0°	234393	248943	260512	276688	286631	304433	312750	332178	338870	359923	364989	387668
		45°	138994	131478	154482	146132	169971	160785	185459	175439	200948	190092	216436	204745
		90°	232670	200508	258597	222855	284524	245202	310451	267549	336378	289896	362306	312242

\* MOP = Maximum Operating Pressure (bar g)

# GIG DOUBLE ACTING GAS POWERED ACTUATOR

## OUTPUT TORQUES (Nm) - SYMMETRIC YOKE DESIGN, MODELS 18S-235 TO 80S-350

Model	MOP* (bar g)	Position	Operating supply pressure (bar g)											
			75		80		85		90		95		100	
			OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL
18S-235	100	0°	117363	122951	125201	131163	133038	139375	140876	147587	148714	155799	156552	164011
		45°	68678	64035	73265	68312	77851	72589	82438	76866	87024	81143	91611	85420
		90°	113302	96310	120868	102743	128435	109176	136001	115608	143568	122041	151135	128474
18S-280	77	0°	166614	175050										
		45°	97499	91169										
		90°	160849	137121										
18S-300	66	0°												
		45°												
		90°												
18S-350	48	0°												
		45°												
		90°												
32S-235	100	0°	136016	142493	145100	152010	154183	161527	163267	171044	172350	180561	181434	190078
		45°	80657	75257	86043	80283	91430	85310	96816	90336	102203	95363	107589	100389
		90°	135016	114769	144033	122434	153050	130100	162067	137765	171083	145431	180100	153096
32S-280	100	0°	193095	202872	205991	216422	218886	229972	231781	243522	244677	257072	257572	270621
		45°	114504	107146	122151	114302	129798	121459	137445	128615	145092	135771	152739	142927
		90°	191676	163400	204476	174314	217277	185228	230078	196141	242878	207055	255679	217968
32S-300	100	0°	221666	234894	236469	250582	251272	266270	266076	281959	280879	297647	295683	313336
		45°	131446	124058	140225	132344	149003	140630	157781	148915	166560	157201	175338	165487
		90°	220036	189192	234731	201828	249425	214464	264120	227100	278814	239736	293509	252372
32S-350	73	0°												
		45°												
		90°												
50S-235	100	0°	151129	158325	161222	168900	171315	179474	181408	190049	191500	200624	201593	211198
		45°	89619	83619	95604	89204	101589	94789	107574	100373	113559	105958	119544	111543
		90°	150018	127521	160037	136038	170055	144555	180074	153072	190093	161590	200111	170107
50S-280	100	0°	214550	225413	228879	240469	243207	255524	257535	270580	271863	285635	286192	300691
		45°	127227	119051	135724	127002	144220	134954	152717	142905	161213	150857	169710	158808
		90°	212973	181556	227196	193682	241419	205809	255642	217935	269865	230061	284088	242187
50S-300	100	0°	246295	260993	262743	278425	279192	295856	295640	313288	312088	330719	328536	348151
		45°	146052	137842	155805	147049	165559	156255	175313	165461	185066	174668	194820	183874
		90°	244485	210213	260812	224253	277139	238293	293467	252333	309794	266373	326121	280413
50S-350	93	0°	335235	360677	357623	384766	380011	408855	402399	432943				
		45°	198793	190490	212069	203213	225344	215935	238620	228657				
		90°	332771	290503	354994	309905	377217	329307	399441	348709				
80S-300	100	0°	287344	299115	306534	319093	325724	339072	344913	359050	364103	379028	383292	399007
		45°	170394	157976	181773	168528	193152	179079	204532	189631	215911	200182	227290	210734
		90°	285232	240918	304281	257009	323329	273101	342378	289192	361426	305283	380475	321375
80S-350	100	0°	391108	415413	417227	443158	443346	470903	469465	498648	495585	526393	521704	554138
		45°	231925	219399	247413	234052	262902	248706	278390	263359	293879	278013	309368	292666
		90°	388233	334589	414160	356936	440087	379283	466014	401630	491941	423977	517869	446323

\* MOP = Maximum Operating Pressure (bar g)

# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - CANTED YOKE DESIGN, SPRING TO CLOSE, MODELS 0.3C-008A-45-CL TO 6C-3800-200-CL

Model	MOP (bar g)	BTC	RTC	ETC	Operating supply pressure (bar g)														
					15			20			25			30			35		
					BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
0.3C-008A-45-CL	100	203	115	193				246	25	25	365	87	92	484	136	159	602	183	226
0.3C-008A-75-CL	49	196	110	179	748	240	308	1077	370	494	1407	499	680	1737	628	865	2067	757	1051
0.3C-008B-45-CL	100	309	157	192										485	49	49	604	116	116
0.3C-008B-75-CL	49	302	151	177	749	184	198	1079	318	384	1409	448	570	1738	578	756	2068	707	941
0.3C-008C-45-CL	100	372	192	245													551	48	48
0.3C-008C-75-CL	49	365	186	231	696	130	130	1026	277	316	1355	409	501	1685	539	687	2015	669	873
0.3C-0100-45-CL	100	598	328	502															
0.3C-0100-75-CL	53	590	322	487				770	67	67	1100	248	253	1430	385	439	1760	517	625
0.3C-0100-100-CL	30	584	318	475	1199	290	308	1785	527	639	2371	759	969	2957	990	1300			
0.3C-0150-45-CL	100	752	443	818															
0.3C-0150-75-CL	58	745	438	804							785	75	75	1115	254	261	1444	391	447
0.3C-0150-100-CL	33	739	434	791	883	131	131	1470	401	461	2056	635	792	2642	866	1122			
0.9C-0200-100-CL	74	987	576	1039	898	7	7	1576	372	389	2254	648	771	2932	917	1153	3610	1184	1535
0.9C-0200-135-CL	41	979	571	1023	2557	768	941	3792	1256	1638	5028	1740	2334	6263	2224	3030	7499	2708	3727
0.9C-0250-100-CL	77	1181	720	1435				1181	166	166	1859	489	548	2537	761	930	3215	1029	1312
0.9C-0250-135-CL	42	1173	714	1420	2162	611	719	3397	1100	1415	4633	1585	2111	5868	2070	2808	7104	2553	3504
0.9C-0350-100-CL	81	1875	1103	2023										1952	177	177	2630	559	559
0.9C-0350-135-CL	45	1867	1097	2007				2812	644	662	4047	1151	1358	5283	1642	2055	6518	2129	2751
0.9C-0400-100-CL	87	2210	1352	2711													1944	173	173
0.9C-0400-135-CL	47	2203	1346	2695				2127	276	276	3362	874	972	4598	1370	1668	5833	1859	2365
0.9C-0700-100-CL	93	3124	1874	3599															
0.9C-0700-135-CL	51	3116	1869	3583										3713	670	670	4949	1252	1367
1.5C-1100-135-CL	65	5773	3245	5306															
1.5C-1100-175-CL	39	5758	3234	5276							7649	1001	1001	10275	2392	2480	12900	3478	3960
1.5C-1200-135-CL	71	6685	3937	7235															
1.5C-1200-175-CL	42	6670	3926	7205										8354	1429	1429	10979	2708	2908
3C-2000-135-CL	80	9844	5938	11537															
3C-2000-175-CL	48	9819	5920	11488							9918	1210	1210	14263	3449	3659	18609	5222	6108
6C-2500-175-CL	76	14038	8583	17194										12928	1416	1416	18008	4150	4279
6C-2500-200-CL	58	14033	8579	17183							15614	2930	2930	22249	5914	6670	28885	8574	10410
6C-3800-175-CL	84	18963	11945	25641															
6C-3800-200-CL	64	18958	11941	25631										13836	1095	1095	20471	4699	4834

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open

# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - CANTED YOKE DESIGN, SPRING TO CLOSE, MODELS 0.3C-008A-45-CL TO 6C-3800-200-CL

Model	MOP			Operating supply pressure (bar g)															
	(bar g)	BTC	RTC	ETC	40			45			50			55			60		
					BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
0.3C-008A-45-CL	100	203	115	193	721	230	293	840	277	360	958	323	427	1077	370	494	1196	416	561
0.3C-008A-75-CL	49	196	110	179	2396	886	1237	2726	1015	1423									
0.3C-008B-45-CL	100	309	157	192	723	173	183	841	222	250	960	270	317	1079	318	384	1198	365	451
0.3C-008B-75-CL	49	302	151	177	2398	836	1127	2728	966	1313									
0.3C-008C-45-CL	100	372	192	245	669	115	115	788	178	182	907	228	249	1026	277	316	1144	324	382
0.3C-008C-75-CL	49	365	186	231	2345	798	1059	2675	927	1245									
0.3C-0100-45-CL	100	598	328	502										770	67	67	889	134	134
0.3C-0100-75-CL	53	590	322	487	2089	648	810	2419	778	996	2749	908	1182						
0.3C-0100-100-CL	30	584	318	475															
0.3C-0150-45-CL	100	752	443	818															
0.3C-0150-75-CL	58	745	438	804	1774	523	633	2104	654	819	2434	784	1005	2764	914	1190			
0.3C-0150-100-CL	33	739	434	791															
0.9C-0200-100-CL	74	987	576	1039	4288	1450	1917	4966	1716	2299	5644	1982	2681	6322	2247	3063	6999	2513	3445
0.9C-0200-135-CL	41	979	571	1023	8734	3191	4423												
0.9C-0250-100-CL	77	1181	720	1435	3893	1295	1694	4571	1561	2076	5249	1827	2458	5926	2092	2841	6604	2358	3223
0.9C-0250-135-CL	42	1173	714	1420	8339	3037	4200												
0.9C-0350-100-CL	81	1875	1103	2023	3307	852	941	3985	1126	1323	4663	1396	1705	5341	1665	2088	6019	1932	2470
0.9C-0350-135-CL	45	1867	1097	2007	7754	2614	3447	8989	3098	4144									
0.9C-0400-100-CL	87	2210	1352	2711	2622	555	555	3300	849	937	3978	1123	1319	4656	1393	1701	5334	1662	2083
0.9C-0400-135-CL	47	2203	1346	2695	7069	2345	3061	8304	2830	3758									
0.9C-0700-100-CL	93	3124	1874	3599							3094	321	321	3772	703	703	4450	1043	1085
0.9C-0700-135-CL	51	3116	1869	3583	6184	1752	2063	7420	2244	2760	8655	2733	3456						
1.5C-1100-135-CL	65	5773	3245	5306	7048	662	662	8611	1543	1543	10173	2348	2423	11735	3003	3304	13298	3639	4184
1.5C-1100-175-CL	39	5758	3234	5276															
1.5C-1200-135-CL	71	6685	3937	7235				6690	491	491	8252	1371	1371	9814	2211	2252	11377	2873	3133
1.5C-1200-175-CL	42	6670	3926	7205	13604	3778	4388												
3C-2000-135-CL	80	9844	5938	11537	8923	649	649	11509	2107	2107	14095	3378	3564	16681	4445	5022	19267	5486	6479
3C-2000-175-CL	48	9819	5920	11488	22954	6953	8557	27299	8671	11006									
6C-2500-175-CL	76	14038	8583	17194	23088	6254	7143	28168	8288	10006	33248	10302	12869	38328	12306	15733	43408	14305	18596
6C-2500-200-CL	58	14033	8579	17183	35520	11200	14150	42155	13813	17890	48790	16419	21629	55425	19022	25369			
6C-3800-175-CL	84	18963	11945	25641	14674	1567	1567	19754	4382	4431	24835	6520	7294	29915	8567	10157	34995	10588	13020
6C-3800-200-CL	64	18958	11941	25631	27106	7441	8574	33741	10091	12314	40377	12716	16054	47012	15330	19794	53647	17937	23534

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open



# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - CANTED YOKE DESIGN, SPRING TO CLOSE, MODELS 0.3C-008A-45-CL TO 6C-3800-200-CL

Model	MOP (bar g)	BTC	RTC	ETC	Operating supply pressure (bar g)											
					65			70			75			80		
					BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
0.3C-008A-45-CL	100	203	115	193	1315	463	627	1433	509	694	1552	556	761	1671	602	828
0.3C-008A-75-CL	49	196	110	179												
0.3C-008B-45-CL	100	309	157	192	1316	412	518	1435	458	584	1554	505	651	1672	552	718
0.3C-008B-75-CL	49	302	151	177												
0.3C-008C-45-CL	100	372	192	245	1263	372	449	1382	419	516	1500	466	583	1619	513	650
0.3C-008C-75-CL	49	365	186	231												
0.3C-0100-45-CL	100	598	328	502	1007	201	201	1126	259	268	1245	310	335	1364	358	401
0.3C-0100-75-CL	53	590	322	487												
0.3C-0100-100-CL	30	584	318	475												
0.3C-0150-45-CL	100	752	443	818	692	23	23	811	90	90	930	157	157	1049	224	224
0.3C-0150-75-CL	58	745	438	804												
0.3C-0150-100-CL	33	739	434	791												
0.9C-0200-100-CL	74	987	576	1039	7677	2778	3827	8355	3043	4210						
0.9C-0200-135-CL	41	979	571	1023												
0.9C-0250-100-CL	77	1181	720	1435	7282	2623	3605	7960	2889	3987	8638	3154	4369			
0.9C-0250-135-CL	42	1173	714	1420												
0.9C-0350-100-CL	81	1875	1103	2023	6697	2199	2852	7375	2465	3234	8053	2731	3616	8731	2997	3998
0.9C-0350-135-CL	45	1867	1097	2007												
0.9C-0400-100-CL	87	2210	1352	2711	6012	1929	2466	6690	2196	2848	7368	2462	3230	8045	2728	3612
0.9C-0400-135-CL	47	2203	1346	2695												
0.9C-0700-100-CL	93	3124	1874	3599	5127	1325	1468	5805	1600	1850	6483	1872	2232	7161	2142	2614
0.9C-0700-135-CL	51	3116	1869	3583												
1.5C-1100-135-CL	65	5773	3245	5306	14860	4265	5065									
1.5C-1100-175-CL	39	5758	3234	5276												
1.5C-1200-135-CL	71	6685	3937	7235	12939	3510	4013	14501	4138	4894						
1.5C-1200-175-CL	42	6670	3926	7205												
3C-2000-135-CL	80	9844	5938	11537	21853	6517	7937	24439	7541	9394	27024	8562	10852	29610	9581	12309
3C-2000-175-CL	48	9819	5920	11488												
6C-2500-175-CL	76	14038	8583	17194	48488	16301	21459	53568	18294	24322	58648	20285	27186			
6C-2500-200-CL	58	14033	8579	17183												
6C-3800-175-CL	84	18963	11945	25641	40075	12597	15884	45155	14599	18747	50235	16597	21610	55315	18593	24474
6C-3800-200-CL	64	18958	11941	25631												

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open

# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - CANTED YOKE DESIGN, SPRING TO CLOSE, MODELS 0.3C-008A-45-CL TO 6C-3800-200-CL

Model	MOP (bar g)	BTC	RTC	ETC	Operating supply pressure (bar g)											
					85			90			95			100		
					BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
0.3C-008A-45-CL	100	203	115	193	1790	649	895	1908	695	962	2027	742	1029	2146	788	1096
0.3C-008A-75-CL	49	196	110	179												
0.3C-008B-45-CL	100	309	157	192	1791	598	785	1910	645	852	2029	692	919	2147	738	986
0.3C-008B-75-CL	49	302	151	177												
0.3C-008C-45-CL	100	372	192	245	1738	560	717	1857	606	784	1975	653	851	2094	700	918
0.3C-008C-75-CL	49	365	186	231												
0.3C-0100-45-CL	100	598	328	502	1482	406	468	1601	454	535	1720	502	602	1839	549	669
0.3C-0100-75-CL	53	590	322	487												
0.3C-0100-100-CL	30	584	318	475												
0.3C-0150-45-CL	100	752	443	818	1167	277	291	1286	327	358	1405	375	425	1523	423	491
0.3C-0150-75-CL	58	745	438	804												
0.3C-0150-100-CL	33	739	434	791												
0.9C-0200-100-CL	74	987	576	1039												
0.9C-0200-135-CL	41	979	571	1023												
0.9C-0250-100-CL	77	1181	720	1435												
0.9C-0250-135-CL	42	1173	714	1420												
0.9C-0350-100-CL	81	1875	1103	2023												
0.9C-0350-135-CL	45	1867	1097	2007												
0.9C-0400-100-CL	87	2210	1352	2711	8723	2994	3994									
0.9C-0400-135-CL	47	2203	1346	2695												
0.9C-0700-100-CL	93	3124	1874	3599	7839	2410	2996	8517	2678	3378						
0.9C-0700-135-CL	51	3116	1869	3583												
1.5C-1100-135-CL	65	5773	3245	5306												
1.5C-1100-175-CL	39	5758	3234	5276												
1.5C-1200-135-CL	71	6685	3937	7235												
1.5C-1200-175-CL	42	6670	3926	7205												
3C-2000-135-CL	80	9844	5938	11537												
3C-2000-175-CL	48	9819	5920	11488												
6C-2500-175-CL	76	14038	8583	17194												
6C-2500-200-CL	58	14033	8579	17183												
6C-3800-175-CL	84	18963	11945	25641												
6C-3800-200-CL	64	18958	11941	25631												

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open

**GIGS** SPRING RETURN GAS POWERED ACTUATOR  
 OUTPUT TORQUES (Nm) - CANTED YOKE DESIGN, SPRING TO CLOSE, MODELS 14C-5100-200-CL TO 50C-15600-350-CL

Model	MOP (bar g)	BTC	RTC	ETC	Operating supply pressure (bar g)											
					15			20			25			30		
					BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
14C-5100-200-CL	100	22753	14367	31007												
14C-5100-235-CL	75	22738	14356	30976							18662	2598	2598	28675	7431	8241
14C-5100-280-CL	53	22679	14312	30855				25347	6049	6366	39561	11802	14377	53775	17416	22388
14C-5100-300-CL	46	22649	14291	30794	17388	1879	1879	33705	9466	11076	50022	15938	20273	66339	22354	29470
14C-5100-350-CL	34	22566	14230	30624	34911	9949	11756	57121	18732	24274	79330	27448	36792	101539	36146	49310
14C-5400-200-CL	100	29467	18157	37046												
14C-5400-235-CL	78	29452	18146	37015										22660	934	934
14C-5400-280-CL	55	29393	18103	36894							33547	7070	7070	47760	13097	15082
14C-5400-300-CL	48	29363	18081	36833				27690	3769	3769	44007	11577	12966	60324	18114	22163
14C-5400-350-CL	35	29280	18020	36663	28897	4449	4449	51106	14441	16967	73315	23251	29485	95524	31986	42003
14C-8300-200-CL	100	37876	23442	48323												
14C-8300-235-CL	84	37860	23431	48292												
14C-8300-280-CL	59	37801	23387	48170										36530	5732	5732
14C-8300-300-CL	51	37772	23366	48110							32777	3617	3617	49093	11999	12814
14C-8300-350-CL	38	37689	23305	47940				39875	7618	7618	62084	17299	20136	84294	26132	32654
18C-9600-235-CL	100	61231	35851	64951												
18C-9600-280-CL	75	61163	35800	64811												
18C-9600-300-CL	65	61129	35775	64742												
18C-9600-350-CL	48	61033	35704	64546							62020	4250	4250	87560	18645	18645
18C-9800-235-CL	100	77544	45086	80301												
18C-9800-280-CL	79	77476	45036	80162												
18C-9800-300-CL	69	77442	45010	80092												
18C-9800-350-CL	51	77346	44939	79897										72272	855	855
18C-10500-280-CL	81	86785	49985	86961												
18C-10500-300-CL	71	86751	49959	86891												
18C-10500-350-CL	52	86655	49888	86695												
18C-11000-280-CL	88	97091	57663	108069												
18C-11000-300-CL	76	97057	57637	107999												
18C-11000-350-CL	56	96961	57567	107804												
32C-12000-300-CL	92	111946	63520	106395												
32C-12000-350-CL	67	111834	63436	106166												
32C-15000-300-CL	98	129982	75362	133282												
32C-15000-350-CL	72	129870	75278	133052												
50C-15400-300-CL	100	141211	78586	125096												
50C-15400-350-CL	78	141087	78492	124841												
50C-15600-300-CL	100	147506	83332	137990												
50C-15600-350-CL	80	147382	83239	137735												

Model 80C available on request

**NOTES**

- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - CANTED YOKE DESIGN, SPRING TO CLOSE, MODELS 14C-5100-200-CL TO 50C-15600-350-CL

Model	MOP (bar g)	BTC	RTC	ETC	Operating supply pressure (bar g)											
					35			40			45			50		
					BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
14C-5100-200-CL	100	22753	14367	31007	19393	3010	3010	26645	6594	7097	33897	9543	11185	41149	12431	15272
14C-5100-235-CL	75	22738	14356	30976	38687	11454	13884	48699	15417	19528	58711	19357	25171	68724	23290	30814
14C-5100-280-CL	53	22679	14312	30855	67989	23001	30400	82203	28574	38411	96416	34141	46423	110630	39706	54434
14C-5100-300-CL	46	22649	14291	30794	82656	28752	38667	98972	35142	47863	115289	41530	57060			
14C-5100-350-CL	34	22566	14230	30624												
14C-5400-200-CL	100	29467	18157	37046							27883	3878	3878	35135	7851	7965
14C-5400-235-CL	78	29452	18146	37015	32672	6577	6577	42685	11036	12221	52697	15077	17864	62709	19059	23507
14C-5400-280-CL	55	29393	18103	36894	61974	18768	23093	76188	24382	31104	90402	29974	39116	104616	35555	47127
14C-5400-300-CL	48	29363	18081	36833	76641	24561	31360	92958	30978	40557	109275	37381	49753			
14C-5400-350-CL	35	29280	18020	36663	117733	40698	54521									
14C-8300-200-CL	100	37876	23442	48323												
14C-8300-235-CL	84	37860	23431	48292				31454	2871	2871	41466	8515	8515	51478	12991	14158
14C-8300-280-CL	59	37801	23387	48170	50744	12686	13744	64957	18451	21755	79171	24106	29767	93385	29721	37778
14C-8300-300-CL	51	37772	23366	48110	65410	18632	22010	81727	25119	31207	98044	31556	40404	114361	37973	49601
14C-8300-350-CL	38	37689	23305	47940	106503	34886	45172									
18C-9600-235-CL	100	61231	35851	64951												
18C-9600-280-CL	75	61163	35800	64811				65324	6112	6112	81669	15325	15325	98015	23347	24538
18C-9600-300-CL	65	61129	35775	64742	65844	6406	6406	84609	16982	16982	103373	25596	27558	122138	33266	38135
18C-9600-350-CL	48	61033	35704	64546	113101	29600	33041	138641	39889	47437	164182	50041	61832			
18C-9800-235-CL	100	77544	45086	80301												
18C-9800-280-CL	79	77476	45036	80162										82727	6748	6748
18C-9800-300-CL	69	77442	45010	80092							88085	9768	9768	106850	20345	20345
18C-9800-350-CL	51	77346	44939	79897	97812	15251	15251	123353	28636	29646	148893	39260	44042	174434	49557	58438
18C-10500-280-CL	81	86785	49985	86961												
18C-10500-300-CL	71	86751	49959	86891										100079	10298	10298
18C-10500-350-CL	52	86655	49888	86695	91041	5204	5204	116582	19599	19599	142122	32892	33995	167663	43560	48391
18C-11000-280-CL	88	97091	57663	108069												
18C-11000-300-CL	76	97057	57637	107999												
18C-11000-350-CL	56	96961	57567	107804				95560	7751	7751	121100	22146	22146	146641	34827	36542
32C-12000-300-CL	92	111946	63520	106395										113108	1339	1339
32C-12000-350-CL	67	111834	63436	106166				132482	12259	12259	162464	29158	29158	192446	44555	46057
32C-15000-300-CL	98	129982	75362	133282												
32C-15000-350-CL	72	129870	75278	133052							135687	8959	8959	165669	25858	25858
50C-15400-300-CL	100	141211	78586	125096												
50C-15400-350-CL	78	141087	78492	124841							173664	14526	14526	206978	33303	33303
50C-15600-300-CL	100	147506	83332	137990												
50C-15600-350-CL	80	147382	83239	137735							160823	7289	7289	194136	26066	26066

Model 80C available on request

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open

# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - CANTED YOKE DESIGN, SPRING TO CLOSE, MODELS 14C-5100-200-CL TO 50C-15600-350-CL

Model	MOP (bar g)	BTC	RTC	ETC	Operating supply pressure (bar g)											
					55			60			65			70		
					BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
14C-5100-200-CL	100	22753	14367	31007	48401	15299	19359	55653	18155	23447	62905	21005	27534	70157	23852	31622
14C-5100-235-CL	75	22738	14356	30976	78736	27215	36457	88748	31139	42101	98760	35059	47744	108772	38978	53387
14C-5100-280-CL	53	22679	14312	30855												
14C-5100-300-CL	46	22649	14291	30794												
14C-5100-350-CL	34	22566	14230	30624												
14C-5400-200-CL	100	29467	18157	37046	42386	10914	12053	49638	13852	16140	56890	16749	20228	64142	19627	24315
14C-5400-235-CL	78	29452	18146	37015	72721	23017	29150	82734	26960	34794	92746	30895	40437	102758	34826	46080
14C-5400-280-CL	55	29393	18103	36894	118830	41128	55139									
14C-5400-300-CL	48	29363	18081	36833												
14C-5400-350-CL	35	29280	18020	36663												
14C-8300-200-CL	100	37876	23442	48323	31156	2703	2703	38408	6791	6791	45660	10540	10878	52912	13581	14966
14C-8300-235-CL	84	37860	23431	48292	61490	17060	19801	71503	21062	25444	81515	25035	31088	91527	28989	36731
14C-8300-280-CL	59	37801	23387	48170	107599	35317	45789									
14C-8300-300-CL	51	37772	23366	48110												
14C-8300-350-CL	38	37689	23305	47940												
18C-9600-235-CL	100	61231	35851	64951	61337	3865	3865	72851	10355	10355	84365	16844	16844	95879	22435	23334
18C-9600-280-CL	75	61163	35800	64811	114361	30114	33752	130707	36714	42965	147053	43242	52178	163399	49730	61391
18C-9600-300-CL	65	61129	35775	64742	140902	40793	48711	159667	48251	59287	178431	55675	69864			
18C-9600-350-CL	48	61033	35704	64546												
18C-9800-235-CL	100	77544	45086	80301										80591	5544	5544
18C-9800-280-CL	79	77476	45036	80162	99073	15961	15961	115419	25110	25175	131765	32203	34388	148111	38942	43601
18C-9800-300-CL	69	77442	45010	80092	125614	29606	30921	144378	37417	41497	163143	45027	52074			
18C-9800-350-CL	51	77346	44939	79897												
18C-10500-280-CL	81	86785	49985	86961	92302	5914	5914	108648	15128	15128	124994	24341	24341	141340	32553	33554
18C-10500-300-CL	71	86751	49959	86891	118843	20874	20874	137607	30917	31450	156372	38910	42027	175136	46605	52603
18C-10500-350-CL	52	86655	49888	86695												
18C-11000-280-CL	88	97091	57663	108069				87626	3279	3279	103972	12492	12492	120318	21705	21705
18C-11000-300-CL	76	97057	57637	107999	97821	9025	9025	116585	19601	19601	135350	29905	30178	154114	37971	40754
18C-11000-350-CL	56	96961	57567	107804	172181	45405	50937									
32C-12000-300-CL	92	111946	63520	106395	135136	13755	13755	157164	26170	26170	179192	38586	38586	201220	48299	51002
32C-12000-350-CL	67	111834	63436	106166	222429	57114	62956	252411	69295	79855	282393	81316	96754	312376	93255	113654
32C-15000-300-CL	98	129982	75362	133282				130387	5972	5972	152415	18387	18387	174442	30803	30803
32C-15000-350-CL	72	129870	75278	133052	195652	42624	42757	225634	55587	59657	255616	67905	76556	285599	80004	93455
50C-15400-300-CL	100	141211	78586	125096				167775	11207	11207	192250	25002	25002	216725	38798	38798
50C-15400-350-CL	78	141087	78492	124841	240291	52035	52080	273605	66555	70857	306919	80310	89634	340232	93806	108411
50C-15600-300-CL	100	147506	83332	137990				154934	3969	3969	179409	17765	17765	203884	31560	31560
50C-15600-350-CL	80	147382	83239	137735	227450	44842	44842	260764	61114	63619	294077	75049	82396	327391	88622	101173

Model 80C available on request

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open

# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - CANTED YOKE DESIGN, SPRING TO CLOSE, MODELS 14C-5100-200-CL TO 50C-15600-350-CL

Model	MOP (bar g)	BTC	RTC	ETC	Operating supply pressure (bar g)								
					75			80			85		
					BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
14C-5100-200-CL	100	22753	14367	31007	77409	26695	35709	84661	29538	39797	91913	32378	43884
14C-5100-235-CL	75	22738	14356	30976	118785	42898	59030						
14C-5100-280-CL	53	22679	14312	30855									
14C-5100-300-CL	46	22649	14291	30794									
14C-5100-350-CL	34	22566	14230	30624									
14C-5400-200-CL	100	29467	18157	37046	71394	22493	28403	78646	25351	32490	85898	28205	36577
14C-5400-235-CL	78	29452	18146	37015	112770	38752	51723						
14C-5400-280-CL	55	29393	18103	36894									
14C-5400-300-CL	48	29363	18081	36833									
14C-5400-350-CL	35	29280	18020	36663									
14C-8300-200-CL	100	37876	23442	48323	60164	16527	19053	67415	19434	23141	74667	22321	27228
14C-8300-235-CL	84	37860	23431	48292	101539	32933	42374	111552	36869	48017			
14C-8300-280-CL	59	37801	23387	48170									
14C-8300-300-CL	51	37772	23366	48110									
14C-8300-350-CL	38	37689	23305	47940									
18C-9600-235-CL	100	61231	35851	64951	107393	27260	29824	118907	31961	36314	130421	36599	42803
18C-9600-280-CL	75	61163	35800	64811	179745	56194	70604						
18C-9600-300-CL	65	61129	35775	64742									
18C-9600-350-CL	48	61033	35704	64546									
18C-9800-235-CL	100	77544	45086	80301	92105	12034	12034	103619	18524	18524	115133	24975	25013
18C-9800-280-CL	79	77476	45036	80162	164457	45555	52814						
18C-9800-300-CL	69	77442	45010	80092									
18C-9800-350-CL	51	77346	44939	79897									
18C-10500-280-CL	81	86785	49985	86961	157686	39455	42767	174032	46156	51980			
18C-10500-300-CL	71	86751	49959	86891									
18C-10500-350-CL	52	86655	49888	86695									
18C-11000-280-CL	88	97091	57663	108069	136663	30496	30918	153009	37510	40131	169355	44252	49345
18C-11000-300-CL	76	97057	57637	107999	172879	45688	51330						
18C-11000-350-CL	56	96961	57567	107804									
32C-12000-300-CL	92	111946	63520	106395	223248	57451	63418	245275	66413	75833	267303	75280	88249
32C-12000-350-CL	67	111834	63436	106166									
32C-15000-300-CL	98	129982	75362	133282	196470	43004	43219	218498	52594	55635	240526	61746	68050
32C-15000-350-CL	72	129870	75278	133052	315581	91991	110354						
50C-15400-300-CL	100	141211	78586	125096	241201	52463	52593	265676	63208	66388	290152	73433	80183
50C-15400-350-CL	78	141087	78492	124841	373546	107160	127187	406860	120436	145964	440173	133655	164741
50C-15600-300-CL	100	147506	83332	137990	228360	45355	45355	252835	57684	59150	277310	68103	72946
50C-15600-350-CL	80	147382	83239	137735	360705	102027	119950	394018	115326	138727	427332	128565	157503

Model 80C available on request

**NOTES**

- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - CANTED YOKE DESIGN, SPRING TO CLOSE, MODELS 14C-5100-200-CL TO 50C-15600-350-CL

Model	MOP (bar g)	BTC	RTC	ETC	Operating supply pressure (bar g)								
					90			95			100		
					BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
14C-5100-200-CL	100	22753	14367	31007	99165	35217	47972	106417	38056	52059	113669	40895	56147
14C-5100-235-CL	75	22738	14356	30976									
14C-5100-280-CL	53	22679	14312	30855									
14C-5100-300-CL	46	22649	14291	30794									
14C-5100-350-CL	34	22566	14230	30624									
14C-5400-200-CL	100	29467	18157	37046	93150	31054	40665	100402	33903	44752	107654	36746	48840
14C-5400-235-CL	78	29452	18146	37015									
14C-5400-280-CL	55	29393	18103	36894									
14C-5400-300-CL	48	29363	18081	36833									
14C-5400-350-CL	35	29280	18020	36663									
14C-8300-200-CL	100	37876	23442	48323	81919	25194	31316	89171	28059	35403	96423	30918	39491
14C-8300-235-CL	84	37860	23431	48292									
14C-8300-280-CL	59	37801	23387	48170									
14C-8300-300-CL	51	37772	23366	48110									
14C-8300-350-CL	38	37689	23305	47940									
18C-9600-235-CL	100	61231	35851	64951	141935	41205	49293	153449	45786	55783	164963	50350	62273
18C-9600-280-CL	75	61163	35800	64811									
18C-9600-300-CL	65	61129	35775	64742									
18C-9600-350-CL	48	61033	35704	64546									
18C-9800-235-CL	100	77544	45086	80301	126647	30045	31503	138161	34863	37993	149675	39578	44483
18C-9800-280-CL	79	77476	45036	80162									
18C-9800-300-CL	69	77442	45010	80092									
18C-9800-350-CL	51	77346	44939	79897									
18C-10500-280-CL	81	86785	49985	86961									
18C-10500-300-CL	71	86751	49959	86891									
18C-10500-350-CL	52	86655	49888	86695									
18C-11000-280-CL	88	97091	57663	108069									
18C-11000-300-CL	76	97057	57637	107999									
18C-11000-350-CL	56	96961	57567	107804									
32C-12000-300-CL	92	111946	63520	106395	289331	84086	100665	311359	92852	113080			
32C-12000-350-CL	67	111834	63436	106166									
32C-15000-300-CL	98	129982	75362	133282	262554	70721	80466	284582	79596	92882	306609	88413	105297
32C-15000-350-CL	72	129870	75278	133052									
50C-15400-300-CL	100	141211	78586	125096	314627	83447	93979	339102	93352	107774	363578	103175	121569
50C-15400-350-CL	78	141087	78492	124841									
50C-15600-300-CL	100	147506	83332	137990	301786	78211	86741	326261	88166	100536	350736	98026	114331
50C-15600-350-CL	80	147382	83239	137735									

Model 80C available on request

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open

# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - CANTED YOKE DESIGN, SPRING TO OPEN, MODELS 0.3C-008A-45-OP TO 6C-3800-200-OP

Model	MOP (bar g)	BTO	RTO	ETO	Operating supply pressure (bar g)														
					15			20			25			30			35		
					BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
0.3C-008A-45-OP	100	377	92	99				121	24	24	185	101	156	249	149	288	314	197	420
0.3C-008A-75-OP	48	364	87	92	392	254	581	571	383	947	750	513	1313	928	642	1679	1107	771	2045
0.3C-008B-45-OP	100	574	99	99										238	46	46	302	152	178
0.3C-008B-75-OP	48	561	92	92	381	212	339	559	345	705	738	475	1071	917	605	1437	1095	734	1803
0.3C-008C-45-OP	100	691	127	127													269	35	35
0.3C-008C-75-OP	48	678	119	119	348	173	196	526	309	562	705	440	928	884	570	1294	1062	700	1660
0.3C-0100-45-OP	100	1111	253	259															
0.3C-0100-75-OP	60	1097	247	251				376	47	47	554	295	413	733	429	779	912	561	1145
0.3C-0100-100-OP	34	1086	242	245	608	335	523	925	571	1173	1243	803	1824	1561	1033	2475			
0.3C-0150-45-OP	100	1396	371	419															
0.3C-0150-75-OP	65	1383	366	412							384	64	64	562	301	430	741	435	796
0.3C-0150-100-OP	36	1371	361	406	437	173	173	755	445	824	1072	679	1474	1390	910	2125	1708	1140	2776
0.9C-0200-100-OP	74	1764	450	495				838	465	733	1205	738	1485	1573	1006	2238	1940	1273	2990
0.9C-0200-135-OP	41	1750	444	487	1369	858	1821	2039	1345	3192	2708	1829	4564	3378	2314	5935	4047	2798	7306
0.9C-0250-100-OP	77	2122	595	696				624	295	295	991	579	1047	1359	850	1799	1726	1118	2552
0.9C-0250-135-OP	42	2108	589	688	1155	701	1383	1825	1189	2754	2494	1674	4125	3163	2159	5496	3833	2643	6867
0.9C-0350-100-OP	87	3354	871	967										1028	288	288	1395	742	1041
0.9C-0350-135-OP	48	3339	865	959				1494	817	1243	2163	1317	2614	2833	1806	3985	3502	2292	5356
0.9C-0400-100-OP	92	3974	1121	1317													1024	280	280
0.9C-0400-135-OP	51	3959	1116	1309				1122	483	483	1792	1041	1854	2461	1535	3225	3131	2023	4596
0.9C-0700-100-OP	100	5602	1518	1735															
0.9C-0700-135-OP	58	5588	1513	1727										1966	1001	1227	2636	1511	2598
1.5C-1100-135-OP	79	10196	2358	2436															
1.5C-1100-175-OP	47	10169	2346	2421							4084	1848	1848	5507	3045	4761	6929	4109	7675
1.5C-1200-135-OP	79	11884	3081	3418															
1.5C-1200-175-OP	51	11857	3070	3403										4466	2256	2691	5889	3342	5604
3C-2000-135-OP	90	17508	4779	5488															
3C-2000-175-OP	53	17463	4761	5463							5326	2284	2284	7680	4325	7107	10035	6079	11929
6C-2500-175-OP	80	24935	6997	8184										6993	2766	2766	9746	5384	8403
6C-2500-200-OP	61	24926	6994	8179							8449	4393	5747	12044	7106	13111	15639	9755	20474
6C-3800-175-OP	90	33892	10151	12399															
6C-3800-200-OP	69	33883	10147	12394										7481	2124	2124	11076	6109	9487

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open



# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - CANTED YOKE DESIGN, SPRING TO OPEN, MODELS 0.3C-008A-45-OP TO 6C-3800-200-OP

Model	MOP (bar g)				Operating supply pressure (bar g)														
	BTO	RTO	ETO		40			45			50			55			60		
					BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
0.3C-008A-45-OP	100	377	92	99	378	244	551	442	290	683	507	337	815	571	383	947	635	430	1078
0.3C-008A-75-OP	48	364	87	92	1286	900	2411	1464	1029	2777									
0.3C-008B-45-OP	100	574	99	99	366	201	310	431	249	441	495	297	573	559	345	705	624	392	837
0.3C-008B-75-OP	48	561	92	92	1274	864	2169	1453	993	2535	1632	1122	2901						
0.3C-008C-45-OP	100	691	127	127	333	161	167	398	212	299	462	260	430	526	309	562	591	356	694
0.3C-008C-75-OP	48	678	119	119	1241	830	2026	1420	959	2392	1599	1088	2758						
0.3C-0100-45-OP	100	1111	253	259										376	47	47	440	179	179
0.3C-0100-75-OP	60	1097	247	251	1090	692	1511	1269	822	1877	1448	952	2243	1626	1081	2609	1805	1210	2975
0.3C-0100-100-OP	34	1086	242	245															
0.3C-0150-45-OP	100	1396	371	419															
0.3C-0150-75-OP	65	1383	366	412	920	567	1162	1098	698	1528	1277	828	1894	1456	957	2260	1634	1087	2625
0.3C-0150-100-OP	36	1371	361	406															
0.9C-0200-100-OP	74	1764	450	495	2307	1539	3742	2675	1805	4495	3042	2071	5247	3409	2336	5999	3777	2602	6752
0.9C-0200-135-OP	41	1750	444	487	4716	3281	8677												
0.9C-0250-100-OP	77	2122	595	696	2093	1384	3304	2460	1650	4056	2828	1916	4809	3195	2182	5561	3562	2447	6313
0.9C-0250-135-OP	42	2108	589	688	4502	3126	8238												
0.9C-0350-100-OP	87	3354	871	967	1762	1019	1793	2130	1292	2545	2497	1561	3298	2864	1829	4050	3231	2096	4802
0.9C-0350-135-OP	48	3339	865	959	4171	2778	6728	4841	3263	8099									
0.9C-0400-100-OP	92	3974	1121	1317	1391	739	1033	1758	1016	1785	2126	1289	2537	2493	1558	3290	2860	1826	4042
0.9C-0400-135-OP	51	3959	1116	1309	3800	2509	5967	4470	2994	7338	5139	3478	8709						
0.9C-0700-100-OP	100	5602	1518	1735							1631	540	540	1998	1026	1292	2365	1307	2044
0.9C-0700-135-OP	58	5588	1513	1727	3305	2008	3969	3975	2499	5341	4644	2986	6712	5313	3472	8083			
1.5C-1100-135-OP	79	10196	2358	2436	3759	1181	1181	4605	2353	2914	5452	3003	4648	6298	3639	6382	7145	4269	8116
1.5C-1100-175-OP	47	10169	2346	2421	8352	5159	10588	9774	6198	13502									
1.5C-1200-135-OP	79	11884	3081	3418				3565	844	844	4411	2213	2578	5258	2866	4312	6104	3504	6045
1.5C-1200-175-OP	51	11857	3070	3403	7311	4402	8518	8734	5447	11431	10156	6484	14345						
3C-2000-135-OP	90	17508	4779	5488	4787	1180	1180	6188	3188	4050	7589	4257	6920	8990	5305	9790	10391	6343	12659
3C-2000-175-OP	53	17463	4761	5463	12389	7804	16751	14744	9518	21574	17098	11227	26396						
6C-2500-175-OP	80	24935	6997	8184	12499	7443	14041	15251	9471	19679	18004	11478	25317	20756	13480	30955	23509	15477	36592
6C-2500-200-OP	61	24926	6994	8179	19235	12374	27838	22830	14984	35201	26425	17591	42565	30020	20194	49929	33616	22796	57292
6C-3800-175-OP	90	33892	10151	12399	7935	3054	3054	10688	5814	8692	13441	7881	14330	16193	9921	19968	18946	11932	25606
6C-3800-200-OP	69	33883	10147	12394	14672	8795	16851	18267	11437	24215	21862	14055	31578	25457	16666	38942	29053	19274	46306

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open

# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - CANTED YOKE DESIGN, SPRING TO OPEN, MODELS 0.3C-008A-45-OP TO 6C-3800-200-OP

Model	MOP (bar g)	BTO	RTO	ETO	Operating supply pressure (bar g)											
					65			70			75			80		
					BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
0.3C-008A-45-OP	100	377	92	99	700	477	1210	764	523	1342	828	570	1474	892	616	1605
0.3C-008A-75-OP	48	364	87	92												
0.3C-008B-45-OP	100	574	99	99	688	439	968	752	485	1100	817	532	1232	881	579	1364
0.3C-008B-75-OP	48	561	92	92												
0.3C-008C-45-OP	100	691	127	127	655	404	826	719	451	957	784	498	1089	848	544	1221
0.3C-008C-75-OP	48	678	119	119												
0.3C-0100-45-OP	100	1111	253	259	504	256	311	569	306	442	633	354	574	697	403	706
0.3C-0100-75-OP	60	1097	247	251												
0.3C-0100-100-OP	34	1086	242	245												
0.3C-0150-45-OP	100	1396	371	419				398	93	93	462	222	225	526	273	356
0.3C-0150-75-OP	65	1383	366	412	1813	1216	2991									
0.3C-0150-100-OP	36	1371	361	406												
0.9C-0200-100-OP	74	1764	450	495	4144	2868	7504	4511	3133	8256						
0.9C-0200-135-OP	41	1750	444	487												
0.9C-0250-100-OP	77	2122	595	696	3930	2713	7066	4297	2978	7818	4664	3243	8570			
0.9C-0250-135-OP	42	2108	589	688												
0.9C-0350-100-OP	87	3354	871	967	3599	2363	5555	3966	2629	6307	4333	2895	7059	4701	3161	7812
0.9C-0350-135-OP	48	3339	865	959												
0.9C-0400-100-OP	92	3974	1121	1317	3228	2093	4794	3595	2360	5547	3962	2626	6299	4330	2892	7051
0.9C-0400-135-OP	51	3959	1116	1309												
0.9C-0700-100-OP	100	5602	1518	1735	2732	1583	2797	3100	1856	3549	3467	2128	4301	3834	2396	5054
0.9C-0700-135-OP	58	5588	1513	1727												
1.5C-1100-135-OP	79	10196	2358	2436	7991	4895	9850	8838	5514	11584	9684	6132	13317			
1.5C-1100-175-OP	47	10169	2346	2421												
1.5C-1200-135-OP	79	11884	3081	3418	6951	4135	7779	7797	4761	9513	8644	5381	11247	9490	5999	12981
1.5C-1200-175-OP	51	11857	3070	3403												
3C-2000-135-OP	90	17508	4779	5488	11792	7368	15529	13194	8390	18399	14595	9409	21269	15996	10427	24138
3C-2000-175-OP	53	17463	4761	5463												
6C-2500-175-OP	80	24935	6997	8184	26262	17472	42230	29014	19466	47868	31767	21459	53506	34519	23450	59143
6C-2500-200-OP	61	24926	6994	8179												
6C-3800-175-OP	90	33892	10151	12399	21698	13936	31243	24451	15936	36881	27204	17934	42519	29956	19929	48157
6C-3800-200-OP	69	33883	10147	12394	32648	21878	53669									

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open

# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - CANTED YOKE DESIGN, SPRING TO OPEN, MODELS 0.3C-008A-45-OP TO 6C-3800-200-OP

Model	MOP (bar g)	Operating supply pressure (bar g)														
		BTO	RTO	ETO	85			90			95			100		
					BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
0.3C-008A-45-OP	100	377	92	99	957	663	1737	1021	709	1869	1085	755	2001	1150	802	2132
0.3C-008A-75-OP	48	364	87	92												
0.3C-008B-45-OP	100	574	99	99	945	625	1495	1010	672	1627	1074	719	1759	1138	765	1891
0.3C-008B-75-OP	48	561	92	92												
0.3C-008C-45-OP	100	691	127	127	912	591	1353	977	638	1484	1041	685	1616	1105	731	1748
0.3C-008C-75-OP	48	678	119	119												
0.3C-0100-45-OP	100	1111	253	259	762	450	838	826	498	969	890	546	1101	954	593	1233
0.3C-0100-75-OP	60	1097	247	251												
0.3C-0100-100-OP	34	1086	242	245												
0.3C-0150-45-OP	100	1396	371	419	591	322	488	655	371	620	719	419	752	784	467	883
0.3C-0150-75-OP	65	1383	366	412												
0.3C-0150-100-OP	36	1371	361	406												
0.9C-0200-100-OP	74	1764	450	495												
0.9C-0200-135-OP	41	1750	444	487												
0.9C-0250-100-OP	77	2122	595	696												
0.9C-0250-135-OP	42	2108	589	688												
0.9C-0350-100-OP	87	3354	871	967	5068	3427	8564									
0.9C-0350-135-OP	48	3339	865	959												
0.9C-0400-100-OP	92	3974	1121	1317	4697	3158	7804	5064	3424	8556						
0.9C-0400-135-OP	51	3959	1116	1309												
0.9C-0700-100-OP	100	5602	1518	1735	4202	2664	5806	4569	2932	6558	4936	3199	7311	5304	3465	8063
0.9C-0700-135-OP	58	5588	1513	1727												
1.5C-1100-135-OP	79	10196	2358	2436												
1.5C-1100-175-OP	47	10169	2346	2421												
1.5C-1200-135-OP	79	11884	3081	3418	10337	6615	14714									
1.5C-1200-175-OP	51	11857	3070	3403												
3C-2000-135-OP	90	17508	4779	5488	17397	11444	27008	18798	12460	29878						
3C-2000-175-OP	53	17463	4761	5463												
6C-2500-175-OP	80	24935	6997	8184												
6C-2500-200-OP	61	24926	6994	8179												
6C-3800-175-OP	90	33892	10151	12399	32709	21922	53794	35461	23915	59432						
6C-3800-200-OP	69	33883	10147	12394												

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open

# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - CANTED YOKE DESIGN, SPRING TO OPEN, MODELS 14C-5100-200-OP TO 50C-15600-350-OP

Model	MOP (bar g)	BTO	RTO	ETO	Operating supply pressure (bar g)											
					15			20			25			30		
					BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
14C-5100-200-OP	100	40669	12241	15001												
14C-5100-235-OP	76	40641	12230	14985							10104	4906	5098	15529	9050	16210
14C-5100-280-OP	54	40531	12187	14924				13726	7699	12517	21428	13399	28292	29129	19003	44066
14C-5100-300-OP	47	40477	12165	14893	9413	3684	3684	18254	11073	21792	27096	17527	39901	35937	23939	58009
14C-5100-350-OP	34	40323	12104	14807	18908	11556	23131	30942	20318	47779	42976	29036	72427	55010	37738	97074
14C-5400-200-OP	100	52473	14988	17738												
14C-5400-235-OP	83	52444	14976	17722										12225	1731	1731
14C-5400-280-OP	58	52335	14933	17660							18124	9694	13813	25826	15471	29588
14C-5400-300-OP	51	52280	14911	17629				14951	7212	7314	23792	13960	25422	32633	20470	43531
14C-5400-350-OP	37	52127	14850	17543	15605	7736	8653	27638	16813	33300	39672	25596	57948	51706	34328	82595
14C-8300-200-OP	100	67333	19401	23094												
14C-8300-235-OP	91	67305	19390	23078												
14C-8300-280-OP	64	67196	19346	23017										19829	9903	11360
14C-8300-300-OP	56	67141	19324	22986							17795	7194	7194	26636	15111	25303
14C-8300-350-OP	41	66988	19263	22900				21641	11318	15072	33675	20353	39720	45709	29155	64367
18C-9600-235-OP	100	106927	27068	29561												
18C-9600-280-OP	86	106801	27016	29490												
18C-9600-300-OP	74	106738	26990	29455												
18C-9600-350-OP	55	106562	26918	29356							34139	9462	9462	47978	25885	37806
18C-9800-235-OP	100	135427	33729	36452												
18C-9800-280-OP	95	135302	33677	36381												
18C-9800-300-OP	83	135239	33651	36346												
18C-9800-350-OP	61	135063	33578	36246										39728	2847	2847
18C-10500-280-OP	100	157915	39550	42897												
18C-10500-300-OP	89	157852	39524	42861												
18C-10500-350-OP	66	157676	39451	42762												
18C-11000-280-OP	100	176935	47336	53617												
18C-11000-300-OP	95	176872	47310	53582												
18C-11000-350-OP	70	176696	47239	53482												
32C-12000-300-OP	100	201070	48236	50917												
32C-12000-350-OP	82	200863	48149	50801												
32C-15000-300-OP	100	233909	59022	64321												
32C-15000-350-OP	88	233702	58937	64204												
50C-15400-300-OP	100	253231	57858	59373												
50C-15400-350-OP	96	253001	57757	59244												
50C-15600-300-OP	100	264849	62857	65922												
50C-15600-350-OP	98	264619	62759	65792												

Model 80C available on request

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open

# GIGS SPRING RETURN GAS POWERED ACTUATOR

## OUTPUT TORQUES (Nm) - CANTED YOKE DESIGN, SPRING TO OPEN, MODELS 14C-5100-200-OP TO 50C-15600-350-OP

Model	MOP (bar g)	BTO	RTO	ETO	Operating supply pressure (bar g)											
					35			40			45			50		
					BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
14C-5100-200-OP	100	40669	12241	15001	10500	5223	5909	14429	8227	13958	18358	11150	22006	22288	14027	30054
14C-5100-235-OP	76	40641	12230	14985	20954	13054	27321	26379	17006	38433	31804	20944	49544	37229	24875	60656
14C-5100-280-OP	54	40531	12187	14924	36831	24587	59841	44533	30163	75615	52234	35731	91389	59936	41299	107164
14C-5100-300-OP	47	40477	12165	14893	44778	30340	76118	53619	36732	94226	62461	43125	112334			
14C-5100-350-OP	34	40323	12104	14807												
14C-5400-200-OP	100	52473	14988	17738							15055	7297	7527	18984	10350	15575
14C-5400-235-OP	83	52444	14976	17722	17650	9332	12843	23075	13426	23954	28500	17449	35066	33926	21413	46177
14C-5400-280-OP	58	52335	14933	17660	33527	21123	45362	41229	26728	61136	48931	32316	76911	56633	37895	92685
14C-5400-300-OP	51	52280	14911	17629	41475	26906	61639	50316	33321	79747	59157	39723	97856	67998	46122	115964
14C-5400-350-OP	37	52127	14850	17543	63740	43042	107243									
14C-8300-200-OP	100	67333	19401	23094												
14C-8300-235-OP	91	67305	19390	23078				17078	5726	5726	22503	11981	16838	27928	16080	27949
14C-8300-280-OP	64	67196	19346	23017	27530	15781	27134	35232	21503	42908	42934	27134	58683	50635	32739	74457
14C-8300-300-OP	56	67141	19324	22986	35477	21684	43411	44319	28144	61519	53160	34572	79628	62001	40987	97736
14C-8300-350-OP	41	66988	19263	22900	57743	37898	89015	69777	46619	113663						
18C-9600-235-OP	100	106927	27068	29561												
18C-9600-280-OP	86	106801	27016	29490				35929	13128	13128	44786	23436	31269	53643	30174	49409
18C-9600-300-OP	74	106738	26990	29455	36211	13706	13706	46379	24662	34531	56546	32352	55356	66713	39925	76180
18C-9600-350-OP	55	106562	26918	29356	61817	36287	66151	75656	46527	94496	89495	56635	122840	103334	66705	151185
18C-9800-235-OP	100	135427	33729	36452												
18C-9800-280-OP	95	135302	33677	36381										45393	14451	14451
18C-9800-300-OP	83	135239	33651	36346							48296	20397	20397	58464	30668	41221
18C-9800-350-OP	61	135063	33578	36246	53567	26853	31192	67406	37482	59537	81245	47844	87881	95084	58099	116226
18C-10500-280-OP	100	157915	39550	42897												
18C-10500-300-OP	89	157852	39524	42861										50911	13484	13484
18C-10500-350-OP	66	157676	39451	42762	46014	3454	3454	59853	29394	31799	73692	40123	60144	87531	50544	88488
18C-11000-280-OP	100	176935	47336	53617												
18C-11000-300-OP	95	176872	47310	53582												
18C-11000-350-OP	70	176696	47239	53482				48462	8469	8469	62301	31336	36813	76140	41981	65158
32C-12000-300-OP	100	201070	48236	50917												
32C-12000-350-OP	82	200863	48149	50801				68784	17993	17993	85030	42966	51267	101276	55470	84541
32C-15000-300-OP	100	233909	59022	64321												
32C-15000-350-OP	88	233702	58937	64204							70272	10986	10986	86518	42139	44260
50C-15400-300-OP	100	253231	57858	59373												
50C-15400-350-OP	96	253001	57757	59244							90087	20386	20386	108138	53088	57357
50C-15600-300-OP	100	264849	62857	65922												
50C-15600-350-OP	98	264619	62759	65792							83129	6135	6135	101180	43106	43106

Model 80C available on request

### NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open

**GIGS** SPRING RETURN GAS POWERED ACTUATOR  
 OUTPUT TORQUES (Nm) - CANTED YOKE DESIGN, SPRING TO OPEN, MODELS 14C-5100-200-OP TO 50C-15600-350-OP

Model	MOP (bar g)	BTO	RTO	ETO	Operating supply pressure (bar g)											
					55			60			65			70		
					BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
14C-5100-200-OP	100	40669	12241	15001	26217	16888	38102	30147	19741	46150	34076	22592	54198	38006	25437	62247
14C-5100-235-OP	76	40641	12230	14985	42654	28803	71767	48079	32727	82879	53504	36649	93990	58929	40572	105102
14C-5100-280-OP	54	40531	12187	14924												
14C-5100-300-OP	47	40477	12165	14893												
14C-5100-350-OP	34	40323	12104	14807												
14C-5400-200-OP	100	52473	14988	17738	22914	13306	23623	26843	16225	31672	30773	19113	39720	34702	21980	47768
14C-5400-235-OP	83	52444	14976	17722	39351	25362	57289	44776	29301	68400	50201	33238	79512	55626	37166	90623
14C-5400-280-OP	58	52335	14933	17660	64334	43472	108460									
14C-5400-300-OP	51	52280	14911	17629												
14C-5400-350-OP	37	52127	14850	17543												
14C-8300-200-OP	100	67333	19401	23094	16917	5396	5396	20846	10701	13444	24776	13710	21492	28705	16660	29540
14C-8300-235-OP	91	67305	19390	23078	33354	20114	39061	38779	24102	50172	44204	28060	61284	49629	32006	72395
14C-8300-280-OP	64	67196	19346	23017	58337	38329	90232	66039	43912	106006						
14C-8300-300-OP	56	67141	19324	22986	70843	47391	115845									
14C-8300-350-OP	41	66988	19263	22900												
18C-9600-235-OP	100	106927	27068	29561	33769	8704	8704	40007	19694	21482	46246	24561	34260	52485	29301	47038
18C-9600-280-OP	86	106801	27016	29490	62500	36796	67550	71357	43365	85691	80214	49863	103831	89071	56326	121972
18C-9600-300-OP	74	106738	26990	29455	76881	47424	97005	87048	54850	117830	97216	62254	138654	107383	69648	159479
18C-9600-350-OP	55	106562	26918	29356	117173	76752	179529									
18C-9800-235-OP	100	135427	33729	36452										44235	12079	12079
18C-9800-280-OP	95	135302	33677	36381	54250	27390	32591	63107	34225	50732	71964	40912	68872	80821	47528	87013
18C-9800-300-OP	83	135239	33651	36346	68631	38406	62046	78798	46021	82871	88966	53574	103695	99133	61068	124520
18C-9800-350-OP	61	135063	33578	36246	108923	68222	144571	122762	78309	172915						
18C-10500-280-OP	100	157915	39550	42897	46697	4853	4853	55554	22994	22994	64411	32989	41135	73268	39801	59275
18C-10500-300-OP	89	157852	39524	42861	61078	30369	34308	71245	38259	55133	81413	45959	75958	91580	53562	96782
18C-10500-350-OP	66	157676	39451	42762	101370	60835	116833	115209	71039	145178	129048	81148	173522			
18C-11000-280-OP	100	176935	47336	53617							53020	17804	17804	61877	31003	35945
18C-11000-300-OP	95	176872	47310	53582	49687	10978	10978	59855	29396	31803	70022	37323	52627	80189	45037	73452
18C-11000-350-OP	70	176696	47239	53482	89979	52369	93503	103818	62651	121847	117657	72832	150192	131496	82935	178536
32C-12000-300-OP	100	201070	48236	50917	70223	20938	20938	82158	40698	45385	94094	49995	69831	106030	59066	94277
32C-12000-350-OP	82	200863	48149	50801	117522	67698	117815	133768	79792	151089	150013	91814	184363	166259	103699	217638
32C-15000-300-OP	100	233909	59022	64321				67400	5104	5104	79336	29550	29550	91272	45920	53996
32C-15000-350-OP	88	233702	58937	64204	102764	54828	77534	119009	67144	110808	135255	79291	144082	151501	91354	177356
50C-15400-300-OP	100	253231	57858	59373				86896	13850	13850	100158	41013	41013	113420	57272	68175
50C-15400-350-OP	96	253001	57757	59244	126189	67169	94328	144240	80870	131300	162291	94395	168271	180342	107817	205242
50C-15600-300-OP	100	264849	62857	65922							93200	26762	26762	106462	51743	53924
50C-15600-350-OP	98	264619	62759	65792	119231	61808	80077	137282	75618	117049	155333	89196	154020	173384	102658	190991

Model 80C available on request

**NOTES**

- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - CANTED YOKE DESIGN, SPRING TO OPEN, MODELS 14C-5100-200-OP TO 50C-15600-350-OP

Model	MOP (bar g)	BTO	RTO	ETO	Operating supply pressure (bar g)								
					75			80			85		
					BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
14C-5100-200-OP	100	40669	12241	15001	41935	28283	70295	45865	31126	78343	49794	33967	86391
14C-5100-235-OP	76	40641	12230	14985	64355	44494	116213						
14C-5100-280-OP	54	40531	12187	14924									
14C-5100-300-OP	47	40477	12165	14893									
14C-5100-350-OP	34	40323	12104	14807									
14C-5400-200-OP	100	52473	14988	17738	38632	24839	55816	42561	27694	63864	46491	30546	71913
14C-5400-235-OP	83	52444	14976	17722	61051	41094	101735	66476	45022	112846			
14C-5400-280-OP	58	52335	14933	17660									
14C-5400-300-OP	51	52280	14911	17629									
14C-5400-350-OP	37	52127	14850	17543									
14C-8300-200-OP	100	67333	19401	23094	32635	19581	37588	36564	22481	45636	40493	25353	53685
14C-8300-235-OP	91	67305	19390	23078	55054	35946	83507	60479	39883	94618	65904	43815	105730
14C-8300-280-OP	64	67196	19346	23017									
14C-8300-300-OP	56	67141	19324	22986									
14C-8300-350-OP	41	66988	19263	22900									
18C-9600-235-OP	100	106927	27068	29561	58724	33983	59816	64963	38627	72595	71202	43250	85373
18C-9600-280-OP	86	106801	27016	29490	97928	62772	140112	106785	69214	158253	115642	75641	176393
18C-9600-300-OP	74	106738	26990	29455									
18C-9600-350-OP	55	106562	26918	29356									
18C-9800-235-OP	100	135427	33729	36452	50474	24384	24858	56713	29314	37636	62952	34107	50414
18C-9800-280-OP	95	135302	33677	36381	89678	54102	105153	98535	60630	123294	107392	67105	141435
18C-9800-300-OP	83	135239	33651	36346	109301	68498	145345	119468	75913	166169			
18C-9800-350-OP	61	135063	33578	36246									
18C-10500-280-OP	100	157915	39550	42897	82125	46493	77416	90982	53116	95556	99839	59700	113697
18C-10500-300-OP	89	157852	39524	42861	101748	61116	117607	111915	68627	138431	122083	76066	159256
18C-10500-350-OP	66	157676	39451	42762									
18C-11000-280-OP	100	176935	47336	53617	70734	37867	54085	79591	44585	72226	88448	51228	90366
18C-11000-300-OP	95	176872	47310	53582	90357	52651	94277	100524	60208	115101	110692	67731	135926
18C-11000-350-OP	70	176696	47239	53482									
32C-12000-300-OP	100	201070	48236	50917	117965	68030	118724	129901	76925	143170	141837	85775	167616
32C-12000-350-OP	82	200863	48149	50801	182505	115554	250912	198751	127375	284186	214997	139193	317460
32C-15000-300-OP	100	233909	59022	64321	103207	55167	78443	115143	64229	102889	127079	73193	127335
32C-15000-350-OP	88	233702	58937	64204	167747	103325	210631	183993	115197	243905	200239	127049	277179
50C-15400-300-OP	100	253231	57858	59373	126682	67546	95338	139944	77631	122500	153205	87603	149663
50C-15400-350-OP	96	253001	57757	59244	198392	121178	242213	216443	134405	279185	234494	147577	316156
50C-15600-300-OP	100	264849	62857	65922	119724	62191	81087	132986	72356	108249	146247	82383	135412
50C-15600-350-OP	98	264619	62759	65792	191434	116041	227962	209485	129312	264934	227536	142500	301905

Model 80C available on request

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open

# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - CANTED YOKE DESIGN, SPRING TO OPEN, MODELS 14C-5100-200-OP TO 50C-15600-350-OP

Model	MOP (bar g)	BTO	RTO	ETO	Operating supply pressure (bar g)								
					90			95			100		
					BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
14C-5100-200-OP	100	40669	12241	15001	53724	36808	94439	57653	39649	102487	61582	42490	110536
14C-5100-235-OP	76	40641	12230	14985									
14C-5100-280-OP	54	40531	12187	14924									
14C-5100-300-OP	47	40477	12165	14893									
14C-5100-350-OP	34	40323	12104	14807									
14C-5400-200-OP	100	52473	14988	17738	50420	33396	79961	54349	36242	88009	58279	39087	96057
14C-5400-235-OP	83	52444	14976	17722									
14C-5400-280-OP	58	52335	14933	17660									
14C-5400-300-OP	51	52280	14911	17629									
14C-5400-350-OP	37	52127	14850	17543									
14C-8300-200-OP	100	67333	19401	23094	44423	28219	61733	48352	31078	69781	52282	33935	77829
14C-8300-235-OP	91	67305	19390	23078	71329	47743	116841						
14C-8300-280-OP	64	67196	19346	23017									
14C-8300-300-OP	56	67141	19324	22986									
14C-8300-350-OP	41	66988	19263	22900									
18C-9600-235-OP	100	106927	27068	29561	77441	47834	98151	83679	52392	110929	89918	56944	123708
18C-9600-280-OP	86	106801	27016	29490									
18C-9600-300-OP	74	106738	26990	29455									
18C-9600-350-OP	55	106562	26918	29356									
18C-9800-235-OP	100	135427	33729	36452	69191	38828	63192	75430	43509	75971	81668	48160	88749
18C-9800-280-OP	95	135302	33677	36381	116249	73568	159575	125106	80014	177716			
18C-9800-300-OP	83	135239	33651	36346									
18C-9800-350-OP	61	135063	33578	36246									
18C-10500-280-OP	100	157915	39550	42897	108696	66258	131837	117553	72756	149978	126410	79223	168119
18C-10500-300-OP	89	157852	39524	42861									
18C-10500-350-OP	66	157676	39451	42762									
18C-11000-280-OP	100	176935	47336	53617	97305	57821	108507	106162	64387	126648	115019	70900	144788
18C-11000-300-OP	95	176872	47310	53582	120859	75173	156750	131027	82592	177575			
18C-11000-350-OP	70	176696	47239	53482									
32C-12000-300-OP	100	201070	48236	50917	153773	94567	192063	165708	103297	216509	177644	112006	240955
32C-12000-350-OP	82	200863	48149	50801									
32C-15000-300-OP	100	233909	59022	64321	139014	82092	151781	150950	90946	176228	162886	99765	200674
32C-15000-350-OP	88	233702	58937	64204	216484	138867	310453						
50C-15400-300-OP	100	253231	57858	59373	166467	97507	176826	179729	107363	203988	192991	117191	231151
50C-15400-350-OP	96	253001	57757	59244	252545	160734	353127	270596	173865	390099	288647	186996	427070
50C-15600-300-OP	100	264849	62857	65922	159509	92322	162575	172771	102204	189737	186033	112038	216900
50C-15600-350-OP	98	264619	62759	65792	245587	155672	338876	263638	168803	375847	281689	181934	412819

Model 80C available on request

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open



# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - SYMMETRIC YOKE DESIGN, SPRING TO CLOSE, MODELS 0.3S-008A-45-CL TO 6S-3800-200-CL

Model	MOP				Operating supply pressure (bar g)														
	(bar g)	BTC	RTC	ETC	15			20			25			30			35		
					BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
0.3S-008A-45-CL	100	252	112	136				141	23	23	215	94	108	290	144	193	364	192	278
0.3S-008A-75-CL	70	244	106	127	455	250	383	662	382	619	869	513	856	1076	645	1093	1283	776	1330
0.3S-008B-45-CL	100	387	148	149										277	44	44	351	129	129
0.3S-008B-75-CL	73	378	140	140	442	198	233	649	334	470	856	467	706	1063	599	943	1270	731	1180
0.3S-008S-45-CL	100	464	181	187													314	39	39
0.3S-008S-75-CL	75	456	175	178	405	144	144	612	295	380	819	429	617	1026	561	854	1233	693	1091
0.3S-0100-45-CL	100	745	316	365															
0.3S-0100-75-CL	81	737	311	356				437	53	53	644	270	289	851	409	526	1058	543	763
0.3S-0100-100-CL	46	729	306	348	706	312	360	1074	553	781	1442	789	1202	1810	1024	1623	2178	1258	2044
0.3S-0150-45-CL	100	931	435	565															
0.3S-0150-75-CL	86	923	429	556							446	63	63	653	276	300	860	415	537
0.3S-0150-100-CL	48	915	425	548	508	134	134	876	425	555	1244	663	976	1612	898	1397	1980	1133	1817
0.9S-0200-100-CL	100	1220	562	718				930	404	455	1355	685	942	1781	958	1428	2206	1230	1915
0.9S-0200-135-CL	59	1211	556	708	1545	807	1159	2321	1303	2046	3096	1797	2933	3872	2289	3819	4647	2782	4706
0.9S-0250-100-CL	100	1454	708	970				682	171	171	1107	523	658	1533	799	1145	1958	1072	1631
0.9S-0250-135-CL	60	1444	702	960	1297	647	875	2073	1145	1762	2848	1639	2649	3624	2132	3536	4399	2624	4423
0.9S-0350-100-CL	100	2316	1077	1394										1114	150	150	1540	623	637
0.9S-0350-135-CL	66	2307	1071	1384				1654	703	768	2430	1217	1655	3205	1716	2541	3980	2212	3428
0.9S-0400-100-CL	100	2721	1330	1830													1110	145	145
0.9S-0400-135-CL	69	2712	1324	1820				1224	276	276	1999	936	1163	2775	1440	2050	3550	1938	2936
0.9S-0700-100-CL	100	3854	1838	2455															
0.9S-0700-135-CL	74	3844	1832	2444										2159	737	737	2935	1345	1624
1.5S-1100-135-CL	88	6284	3076	3739															
1.5S-1100-175-CL	52	6267	3065	3718							5120	1248	1248	6907	2671	2973	8695	3767	4697
1.5S-1200-135-CL	94	7291	3781	5065															
1.5S-1200-175-CL	56	7274	3770	5044							3812	21	21	5599	1745	1745	7387	2985	3470
3S-2000-135-CL	100	10967	5751	8016															
3S-2000-175-CL	65	10940	5733	7983							6482	1475	1475	9402	3811	4373	12322	5609	7272
6S-2500-175-CL	100	15694	8347	11920										8404	1715	1715	11812	4627	5110
6S-2500-200-CL	80	15689	8344	11913							10207	3510	3510	14658	6406	7946	19109	9113	12381
6S-3800-175-CL	100	21216	11714	17685															
6S-3800-200-CL	87	21210	11711	17679										8972	1335	1335	13423	5241	5770

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open

# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - SYMMETRIC YOKE DESIGN, SPRING TO CLOSE, MODELS 0.3S-008A-45-CL TO 6S-3800-200-CL

Model	MOP (bar g)	BTC	RTC	ETC	Operating supply pressure (bar g)														
					40			45			50			55			60		
					BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
0.3S-008A-45-CL	100	252	112	136	439	239	364	513	287	449	588	335	534	662	382	619	737	429	705
0.3S-008A-75-CL	70	244	106	127	1490	908	1566	1697	1039	1803	1904	1170	2040	2111	1301	2277	2318	1433	2513
0.3S-008B-45-CL	100	387	148	149	426	187	214	500	237	299	575	286	384	649	334	470	724	382	555
0.3S-008B-75-CL	73	378	140	140	1477	862	1417	1684	994	1653	1891	1125	1890	2098	1256	2127	2305	1388	2364
0.3S-008S-45-CL	100	464	181	187	388	125	125	463	195	210	537	245	295	612	295	380	686	343	466
0.3S-008S-75-CL	75	456	175	178	1440	825	1327	1647	957	1564	1854	1088	1801	2061	1220	2038	2268	1351	2274
0.3S-0100-45-CL	100	745	316	365										437	53	53	511	138	138
0.3S-0100-75-CL	81	737	311	356	1265	676	1000	1472	809	1236	1679	941	1473	1886	1073	1710	2093	1204	1946
0.3S-0100-100-CL	46	729	306	348	2546	1492	2464	2914	1726	2885									
0.3S-0150-45-CL	100	931	435	565															
0.3S-0150-75-CL	86	923	429	556	1067	549	773	1274	682	1010	1481	815	1247	1688	947	1484	1895	1079	1720
0.3S-0150-100-CL	48	915	425	548	2348	1367	2238	2716	1600	2659									
0.9S-0200-100-CL	100	1220	562	718	2632	1502	2401	3057	1772	2888	3483	2042	3375	3908	2313	3861	4334	2583	4348
0.9S-0200-135-CL	59	1211	556	708	5423	3274	5593	6198	3766	6480	6973	4258	7367	7749	4750	8254			
0.9S-0250-100-CL	100	1454	708	970	2384	1344	2118	2809	1614	2604	3235	1885	3091	3660	2155	3578	4086	2425	4064
0.9S-0250-135-CL	60	1444	702	960	5175	3117	5310	5950	3609	6196	6725	4101	7083	7501	4592	7970	8276	5084	8857
0.9S-0350-100-CL	100	2316	1077	1394	1965	913	1123	2391	1192	1610	2816	1467	2097	3242	1740	2583	3667	2012	3070
0.9S-0350-135-CL	66	2307	1071	1384	4756	2707	4315	5531	3200	5202	6307	3692	6089	7082	4185	6976	7858	4677	7863
0.9S-0400-100-CL	100	2721	1330	1830	1535	620	632	1961	910	1118	2386	1189	1605	2812	1464	2092	3237	1737	2578
0.9S-0400-135-CL	69	2712	1324	1820	4326	2433	3823	5101	2926	4710	5877	3419	5597	6652	3912	6484	7428	4404	7371
0.9S-0700-100-CL	100	3854	1838	2455							1771	292	292	2196	779	779	2622	1134	1266
0.9S-0700-135-CL	74	3844	1832	2444	3710	1854	2511	4486	2354	3398	5261	2852	4285	6037	3347	5171	6812	3842	6058
1.5S-1100-135-CL	88	6284	3076	3739	4710	853	853	5774	1880	1880	6838	2628	2906	7902	3286	3932	8965	3930	4959
1.5S-1100-175-CL	52	6267	3065	3718	10482	4838	6422	12270	5899	8147	14057	6956	9871						
1.5S-1200-135-CL	94	7291	3781	5065				4466	652	652	5530	1679	1679	6594	2489	2705	7658	3151	3731
1.5S-1200-175-CL	56	7274	3770	5044	9174	4069	5195	10962	5136	6919	12750	6196	8644	14537	7251	10369			
3S-2000-135-CL	100	10967	5751	8016	5813	811	811	7551	2536	2536	9289	3739	4261	11026	4818	5986	12764	5877	7711
3S-2000-175-CL	65	10940	5733	7983	15242	7372	10171	18162	9123	13069	21082	10868	15968	24002	12609	18867	26923	14347	21765
6S-2500-175-CL	100	15694	8347	11920	15220	6751	8506	18628	8823	11902	22036	10876	15298	25444	12920	18694	28852	14958	22089
6S-2500-200-CL	80	15689	8344	11913	23560	11791	16816	28011	14456	21252	32462	17114	25687	36913	19769	30122	41364	22421	34558
6S-3800-175-CL	100	21216	11714	17685	9534	1895	1895	12942	4930	5291	16350	7076	8687	19758	9159	12083	23166	11218	15478
6S-3800-200-CL	87	21210	11711	17679	17874	8011	10205	22325	10711	14641	26776	13388	19076	31227	16054	23511	35678	18714	27947

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open

# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - SYMMETRIC YOKE DESIGN, SPRING TO CLOSE, MODELS 0.3S-008A-45-CL TO 6S-3800-200-CL

Model	MOP (bar g)	BTC	RTC	ETC	Operating supply pressure (bar g)											
					65			70			75			80		
					BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
0.3S-008A-45-CL	100	252	112	136	811	477	790	886	524	875	960	571	960	1035	619	1045
0.3S-008A-75-CL	70	244	106	127	2525	1564	2750	2732	1695	2987						
0.3S-008B-45-CL	100	387	148	149	798	430	640	873	477	725	947	525	811	1022	572	896
0.3S-008B-75-CL	73	378	140	140	2512	1519	2600	2719	1650	2837						
0.3S-008S-45-CL	100	464	181	187	761	391	551	835	439	636	910	487	721	985	535	806
0.3S-008S-75-CL	75	456	175	178	2475	1483	2511	2682	1614	2748	2889	1745	2984			
0.3S-0100-45-CL	100	745	316	365	586	223	223	660	281	308	735	332	393	809	381	479
0.3S-0100-75-CL	81	737	311	356	2300	1336	2183	2507	1467	2420	2714	1599	2657	2921	1730	2893
0.3S-0100-100-CL	46	729	306	348												
0.3S-0150-45-CL	100	931	435	565				463	82	82	537	167	167	612	247	252
0.3S-0150-75-CL	86	923	429	556	2102	1210	1957	2309	1342	2194	2516	1473	2430	2723	1605	2667
0.3S-0150-100-CL	48	915	425	548												
0.9S-0200-100-CL	100	1220	562	718	4759	2853	4835	5185	3123	5321	5610	3393	5808	6036	3663	6294
0.9S-0200-135-CL	59	1211	556	708												
0.9S-0250-100-CL	100	1454	708	970	4511	2695	4551	4937	2966	5038	5362	3236	5524	5788	3506	6011
0.9S-0250-135-CL	60	1444	702	960												
0.9S-0350-100-CL	100	2316	1077	1394	4093	2284	3557	4518	2555	4043	4944	2826	4530	5369	3097	5017
0.9S-0350-135-CL	66	2307	1071	1384	8633	5170	8750									
0.9S-0400-100-CL	100	2721	1330	1830	3663	2009	3065	4088	2281	3551	4514	2552	4038	4939	2823	4525
0.9S-0400-135-CL	69	2712	1324	1820	8203	4897	8258									
0.9S-0700-100-CL	100	3854	1838	2455	3047	1419	1752	3473	1699	2239	3898	1975	2725	4324	2250	3212
0.9S-0700-135-CL	74	3844	1832	2444	7588	4336	6945	8363	4829	7832						
1.5S-1100-135-CL	88	6284	3076	3739	10029	4568	5985	11093	5201	7011	12157	5832	8038	13221	6462	9064
1.5S-1100-175-CL	52	6267	3065	3718												
1.5S-1200-135-CL	94	7291	3781	5065	8721	3797	4758	9785	4435	5784	10849	5069	6810	11913	5700	7837
1.5S-1200-175-CL	56	7274	3770	5044												
3S-2000-135-CL	100	10967	5751	8016	14502	6927	9436	16240	7971	11161	17978	9013	12886	19715	10052	14611
3S-2000-175-CL	65	10940	5733	7983	29843	16085	24664									
6S-2500-175-CL	100	15694	8347	11920	32259	16993	25485	35667	19026	28881	39075	21058	32277	42483	23087	35673
6S-2500-200-CL	80	15689	8344	11913	45815	25071	38993	50266	27722	43428	54717	30369	47864	59168	33017	52299
6S-3800-175-CL	100	21216	11714	17685	26574	13267	18874	29982	15309	22270	33389	17346	25666	36797	19381	29062
6S-3800-200-CL	87	21210	11711	17679	40129	21368	32382	44581	24022	36817	49032	26673	41253	53483	29323	45688

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open

# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - SYMMETRIC YOKE DESIGN, SPRING TO CLOSE, MODELS 0.3S-008A-45-CL TO 6S-3800-200-CL

Model	MOP (bar g)	BTC	RTC	ETC	Operating supply pressure (bar g)											
					85			90			95			100		
					BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
0.3S-008A-45-CL	100	252	112	136	1109	666	1131	1184	713	1216	1258	760	1301	1333	808	1386
0.3S-008A-75-CL	70	244	106	127												
0.3S-008B-45-CL	100	387	148	149	1096	620	981	1171	667	1066	1245	715	1151	1320	762	1237
0.3S-008B-75-CL	73	378	140	140												
0.3S-008S-45-CL	100	464	181	187	1059	582	892	1134	630	977	1208	678	1062	1283	725	1147
0.3S-008S-75-CL	75	456	175	178												
0.3S-0100-45-CL	100	745	316	365	884	430	564	958	479	649	1033	527	734	1107	575	820
0.3S-0100-75-CL	81	737	311	356												
0.3S-0100-100-CL	46	729	306	348												
0.3S-0150-45-CL	100	931	435	565	686	299	338	761	349	423	835	398	508	910	447	593
0.3S-0150-75-CL	86	923	429	556	2930	1736	2904									
0.3S-0150-100-CL	48	915	425	548												
0.9S-0200-100-CL	100	1220	562	718	6461	3933	6781	6887	4203	7268	7312	4473	7754	7738	4743	8241
0.9S-0200-135-CL	59	1211	556	708												
0.9S-0250-100-CL	100	1454	708	970	6213	3776	6497	6639	4046	6984	7064	4315	7471	7490	4585	7957
0.9S-0250-135-CL	60	1444	702	960												
0.9S-0350-100-CL	100	2316	1077	1394	5795	3367	5503	6220	3637	5990	6645	3908	6476	7071	4178	6963
0.9S-0350-135-CL	66	2307	1071	1384												
0.9S-0400-100-CL	100	2721	1330	1830	5364	3094	5011	5790	3364	5498	6215	3634	5985	6641	3905	6471
0.9S-0400-135-CL	69	2712	1324	1820												
0.9S-0700-100-CL	100	3854	1838	2455	4749	2523	3699	5174	2796	4185	5600	3068	4672	6025	3340	5159
0.9S-0700-135-CL	74	3844	1832	2444												
1.5S-1100-135-CL	88	6284	3076	3739	14284	7090	10090									
1.5S-1100-175-CL	52	6267	3065	3718												
1.5S-1200-135-CL	94	7291	3781	5065	12977	6330	8863	14040	6958	9889						
1.5S-1200-175-CL	56	7274	3770	5044												
3S-2000-135-CL	100	10967	5751	8016	21453	11089	16336	23191	12125	18061	24929	13160	19786	26667	14195	21511
3S-2000-175-CL	65	10940	5733	7983												
6S-2500-175-CL	100	15694	8347	11920	45891	25116	39068	49299	27145	42464	52706	29174	45860	56114	31200	49256
6S-2500-200-CL	80	15689	8344	11913												
6S-3800-175-CL	100	21216	11714	17685	40205	21414	32457	43613	23446	35853	47021	25476	39249	50429	27505	42645
6S-3800-200-CL	87	21210	11711	17679	57934	31974	50123									

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open

# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - SYMMETRIC YOKE DESIGN, SPRING TO CLOSE, MODELS 14S-5100-200-CL TO 50S-15600-350-CL

Model	MOP (bar g)	BTC	RTC	ETC	Operating supply pressure (bar g)											
					15			20			25			30		
					BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
14S-5100-200-CL	100	24894	14052	21540												
14S-5100-235-CL	100	24877	14040	21518							12493	3221	3221	19310	8108	9799
14S-5100-280-CL	73	24812	13997	21435				17045	6715	7613	26723	12553	16951	36401	18275	26288
14S-5100-300-CL	63	24779	13975	21393	11625	2384	2384	22736	10175	13103	33846	16768	23823	44956	23307	34542
14S-5100-350-CL	46	24687	13913	21276	23557	10667	13896	38680	19616	28486	53802	28500	43076	68924	37368	57666
14S-5400-200-CL	100	32200	17637	25799												
14S-5400-235-CL	100	32183	17626	25778										15110	1379	1379
14S-5400-280-CL	75	32118	17582	25694							22522	8160	8530	32201	14139	17868
14S-5400-300-CL	65	32085	17560	25653				18535	4683	4683	29645	12595	15402	40756	19246	26122
14S-5400-350-CL	48	31994	17498	25536	19356	5476	5476	34479	15506	20066	49601	24480	34656	64724	33385	49246
14S-8300-200-CL	100	41398	22799	33637												
14S-8300-235-CL	100	41381	22788	33616												
14S-8300-280-CL	79	41316	22744	33532										24471	7044	7044
14S-8300-300-CL	69	41283	22722	33491							21916	4578	4578	33026	13251	15298
14S-8300-350-CL	50	41191	22660	33374				26749	9222	9242	41872	18621	23832	56994	27618	38422
18S-9600-235-CL	100	66994	34519	45762												
18S-9600-280-CL	100	66919	34467	45666												
18S-9600-300-CL	88	66881	34442	45618												
18S-9600-350-CL	64	66776	34370	45484							41122	5450	5450	58508	21240	22234
18S-9800-235-CL	100	84610	43189	56372												
18S-9800-280-CL	100	84535	43137	56276												
18S-9800-300-CL	92	84497	43112	56228												
18S-9800-350-CL	67	84392	43039	56094										48045	1901	1901
18S-10500-280-CL	100	93530	46981	59691												
18S-10500-300-CL	93	93492	46955	59643												
18S-10500-350-CL	68	93387	46883	59509												
18S-11000-280-CL	100	104897	54769	74203												
18S-11000-300-CL	99	104859	54743	74155												
18S-11000-350-CL	73	104754	54671	74020												
32S-12000-300-CL	100	124445	60472	74716												
32S-12000-350-CL	92	124319	60386	74560												
32S-15000-300-CL	100	144619	72222	93236												
32S-15000-350-CL	97	144494	72136	93080												
50S-15400-300-CL	100	157192	74572	88599												
50S-15400-350-CL	100	157053	74476	88426												
50S-15600-300-CL	100	164240	79422	97350												
50S-15600-350-CL	100	164101	79327	97177												

Model 80S available on request

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open

# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - SYMMETRIC YOKE DESIGN, SPRING TO CLOSE, MODELS 14S-5100-200-CL TO 50S-15600-350-CL

Model	MOP (bar g)	Operating supply pressure (bar g)														
		35			40			45			50					
		BTC	RTC	ETC	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
14S-5100-200-CL	100	24894	14052	21540	12991	3701	3701	17929	7263	8466	22866	10253	13230	27804	13195	17994
14S-5100-235-CL	100	24877	14040	21518	26128	12199	16376	32945	16236	22954	39763	20253	29531	46580	24261	36109
14S-5100-280-CL	73	24812	13997	21435	46080	23967	35626	55758	29648	44964	65436	35323	54301	75115	40993	63639
14S-5100-300-CL	63	24779	13975	21393	56067	29828	45261	67177	36344	55980	78287	42851	66700	89397	49359	77419
14S-5100-350-CL	46	24687	13913	21276	84047	46225	72256	99169	55082	86846	114291	63933	101436			
14S-5400-200-CL	100	32200	17637	25799				13728	45	45	18666	4809	4809	23604	8859	9574
14S-5400-235-CL	100	32183	17626	25778	21927	7766	7956	28745	12048	14533	35562	16154	21111	42379	20209	27688
14S-5400-280-CL	75	32118	17582	25694	41879	19913	27206	51557	25635	36543	61236	31335	45881	70914	37021	55219
14S-5400-300-CL	65	32085	17560	25653	51866	25817	36841	62976	32358	47560	74086	38885	58279	85197	45403	68999
14S-5400-350-CL	48	31994	17498	25536	79846	42265	63836	94968	51133	78426	110091	59995	93016			
14S-8300-200-CL	100	41398	22799	33637												
14S-8300-235-CL	100	41381	22788	33616				21015	3709	3709	27832	9956	10287	34650	14250	16864
14S-8300-280-CL	79	41316	22744	33532	34150	13943	16382	43828	19794	25719	53506	25552	35057	63185	31274	44395
14S-8300-300-CL	69	41283	22722	33491	44136	19978	26017	55247	26583	36736	66357	33147	47455	77467	39688	58175
14S-8300-350-CL	50	41191	22660	33374	72116	36538	53012	87239	45429	67602	102361	54306	82192	117484	63174	96782
18S-9600-235-CL	100	66994	34519	45762												
18S-9600-280-CL	100	66919	34467	45666				43371	7621	7621	54498	18363	18363	65625	25769	29105
18S-9600-300-CL	88	66881	34442	45618	43726	7963	7963	56499	19907	20295	69273	28031	32626	82046	35804	44957
18S-9600-350-CL	64	66776	34370	45484	75894	32082	39018	93280	42541	55802	110666	52882	72587	128051	63166	89371
18S-9800-235-CL	100	84610	43189	56372												
18S-9800-280-CL	100	84535	43137	56276										55162	8772	8772
18S-9800-300-CL	92	84497	43112	56228							58809	12293	12293	71582	24624	24624
18S-9800-350-CL	67	84392	43039	56094	65431	18685	18685	82816	31955	35469	100202	42658	52254	117588	53126	69038
18S-10500-280-CL	100	93530	46981	59691												
18S-10500-300-CL	93	93492	46955	59643							55441	2092	2092	68214	14423	14423
18S-10500-350-CL	68	93387	46883	59509	62063	8484	8484	79449	25269	25269	96834	37626	42053	114220	48330	58837
18S-11000-280-CL	100	104897	54769	74203												
18S-11000-300-CL	99	104859	54743	74155										53904	608	608
18S-11000-350-CL	73	104754	54671	74020				65138	11454	11454	82524	28238	28238	99910	39546	45022
32S-12000-300-CL	100	124445	60472	74716										73541	2334	2334
32S-12000-350-CL	92	124319	60386	74560				86560	15258	15258	106710	35259	35259	126859	49798	55259
32S-15000-300-CL	100	144619	72222	93236												
32S-15000-350-CL	97	144494	72136	93080							88446	11348	11348	108595	31349	31349
50S-15400-300-CL	100	157192	74572	88599												
50S-15400-350-CL	100	157053	74476	88426							113062	17851	17851	135450	40074	40074
50S-15600-300-CL	100	164240	79422	97350												
50S-15600-350-CL	100	164101	79327	97177							104433	9285	9285	126821	31508	31508

Model 80S available on request

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open

# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - SYMMETRIC YOKE DESIGN, SPRING TO CLOSE, MODELS 14S-5100-200-CL TO 50S-15600-350-CL

Model	MOP (bar g)	Operating supply pressure (bar g)														
		55			60			65			70					
		BTC	RTC	ETC	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
14S-5100-200-CL	100	24894	14052	21540	32742	16116	22758	37680	19027	27522	42618	21933	32286	47556	24834	37050
14S-5100-235-CL	100	24877	14040	21518	53398	28263	42686	60215	32261	49263	67032	36259	55841	73850	40252	62418
14S-5100-280-CL	73	24812	13997	21435	84793	46662	72976	94471	52330	82314	104150	57998	91652	113828	63662	100989
14S-5100-300-CL	63	24779	13975	21393	100508	55866	88138	111618	62369	98857						
14S-5100-350-CL	46	24687	13913	21276												
14S-5400-200-CL	100	32200	17637	25799	28542	11924	14338	33480	14907	19102	38417	17857	23866	43355	20787	28630
14S-5400-235-CL	100	32183	17626	25778	49197	24241	34266	56014	28261	40843	62832	32273	47421	69649	36278	53998
14S-5400-280-CL	75	32118	17582	25694	80592	42703	64556	90271	48378	73894	99949	54054	83231	109627	59723	92569
14S-5400-300-CL	65	32085	17560	25653	96307	51918	79718	107417	58429	90437	118528	64936	101156			
14S-5400-350-CL	48	31994	17498	25536												
14S-8300-200-CL	100	41398	22799	33637	20812	3514	3514	25750	8278	8278	30688	11793	13042	35626	14846	17806
14S-8300-235-CL	100	41381	22788	33616	41467	18379	23442	48285	22452	30019	55102	26497	36597	61920	30527	43174
14S-8300-280-CL	79	41316	22744	33532	72863	36977	53732	82541	42669	63070	92220	48355	72407	101898	54034	81745
14S-8300-300-CL	69	41283	22722	33491	88578	46215	68894	99688	52738	79613	110798	59254	90332			
14S-8300-350-CL	50	41191	22660	33374												
18S-9600-235-CL	100	66994	34519	45762	40658	5001	5001	48495	12568	12568	56333	19795	20134	64171	24859	27701
18S-9600-280-CL	100	66919	34467	45666	76752	32602	39847	87879	39310	50589	99006	48957	61330	110133	52567	72072
18S-9600-300-CL	88	66881	34442	45618	94819	43460	57288	107592	51062	69620	120366	58627	81951	133139	66171	94282
18S-9600-350-CL	64	66776	34370	45484	145437	73419	106155	162823	83655	122939						
18S-9800-235-CL	100	84610	43189	56372										53708	7368	7368
18S-9800-280-CL	100	84535	43137	56276	66289	19514	19514	77416	28515	30256	88543	35525	40998	99670	42335	51739
18S-9800-300-CL	92	84497	43112	56228	84356	32922	36955	97129	40791	49287	109902	48516	61618	122675	56163	73949
18S-9800-350-CL	67	84392	43039	56094	134974	63487	85822	152360	73796	102606	169745	84068	119390			
18S-10500-280-CL	100	93530	46981	59691	62921	9313	9313	74048	20055	20055	85175	30119	30797	96302	37291	41539
18S-10500-300-CL	93	93492	46955	59643	80988	26755	26755	93761	35689	39086	106534	43636	51417	119307	51414	63748
18S-10500-350-CL	68	93387	46883	59509	131606	58815	75621	148992	69202	92405	166378	79528	109190			
18S-11000-280-CL	100	104897	54769	74203				59738	6240	6240	70865	16982	16982	81991	27724	27724
18S-11000-300-CL	99	104859	54743	74155	66678	12940	12940	79451	25271	25271	92224	34712	37602	104997	42693	49933
18S-11000-350-CL	73	104754	54671	74020	117296	50195	61806	134682	60660	78590	152067	71031	95375	169453	81350	112159
32S-12000-300-CL	100	124445	60472	74716	88344	17028	17028	103148	31723	31723	117951	44028	46417	132754	53537	61112
32S-12000-350-CL	92	124319	60386	74560	147008	62431	75260	167157	74797	95261	187306	87036	115262	207455	99196	135263
32S-15000-300-CL	100	144619	72222	93236				84884	7812	7812	99688	22507	22507	114491	37202	37202
32S-15000-350-CL	97	144494	72136	93080	128744	48383	51350	148893	61231	71351	169042	73703	91352	189192	86007	111353
50S-15400-300-CL	100	157192	74572	88599				109105	13923	13923	125553	30250	30250	142001	46577	46577
50S-15400-350-CL	100	157053	74476	88426	157838	59004	62298	180226	73344	84521	202614	87254	106744	225002	100965	128968
50S-15600-300-CL	100	164240	79422	97350				100475	5356	5356	116923	21684	21684	133372	38011	38011
50S-15600-350-CL	100	164101	79327	97177	149208	53199	53731	171596	67889	75955	193984	81923	98178	216372	95700	120401

Model 80S available on request

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open

# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - SYMMETRIC YOKE DESIGN, SPRING TO CLOSE, MODELS 14S-5100-200-CL TO 50S-15600-350-CL

Model	MOP (bar g)	BTC	RTC	ETC	Operating supply pressure (bar g)								
					75			80			85		
					BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
14S-5100-200-CL	100	24894	14052	21540	52494	27733	41814	57432	30629	46578	62370	33525	51342
14S-5100-235-CL	100	24877	14040	21518	80667	44245	68996	87485	48238	75573	94302	52231	82151
14S-5100-280-CL	73	24812	13997	21435									
14S-5100-300-CL	63	24779	13975	21393									
14S-5100-350-CL	46	24687	13913	21276									
14S-5400-200-CL	100	32200	17637	25799	48293	23708	33394	53231	26622	38158	58169	29529	42922
14S-5400-235-CL	100	32183	17626	25778	76466	40283	60575	83284	44281	67153	90101	48279	73730
14S-5400-280-CL	75	32118	17582	25694	119306	65392	101907						
14S-5400-300-CL	65	32085	17560	25653									
14S-5400-350-CL	48	31994	17498	25536									
14S-8300-200-CL	100	41398	22799	33637	40564	17836	22570	45502	20793	27334	50440	23733	32098
14S-8300-235-CL	100	41381	22788	33616	68737	34548	49752	75554	38562	56329	82372	42570	62906
14S-8300-280-CL	79	41316	22744	33532	111576	59710	91083						
14S-8300-300-CL	69	41283	22722	33491									
14S-8300-350-CL	50	41191	22660	33374									
18S-9600-235-CL	100	66994	34519	45762	72009	29712	35267	79847	34478	42834	87684	39193	50400
18S-9600-280-CL	100	66919	34467	45666	121260	59155	82814	132387	65726	93556	143514	72286	104298
18S-9600-300-CL	88	66881	34442	45618	145912	73698	106613	158685	81221	118945	171458	88730	131276
18S-9600-350-CL	64	66776	34370	45484									
18S-9800-235-CL	100	84610	43189	56372	61545	14934	14934	69383	22501	22501	77221	28389	30068
18S-9800-280-CL	100	84535	43137	56276	110797	49053	62481	121923	55714	73223	133050	62343	83965
18S-9800-300-CL	92	84497	43112	56228	135449	63769	86280	148222	71344	98612	160995	78901	110943
18S-9800-350-CL	67	84392	43039	56094									
18S-10500-280-CL	100	93530	46981	59691	107429	44185	52280	118555	50959	63022	129682	57662	73764
18S-10500-300-CL	93	93492	46955	59643	132081	59100	76080	144854	66737	88411	157627	74336	100742
18S-10500-350-CL	68	93387	46883	59509									
18S-11000-280-CL	100	104897	54769	74203	93118	35281	38465	104245	42231	49207	115372	49029	59949
18S-11000-300-CL	99	104859	54743	74155	117771	50483	62265	130544	58178	74596	143317	65819	86927
18S-11000-350-CL	73	104754	54671	74020									
32S-12000-300-CL	100	124445	60472	74716	147558	62771	75807	162361	71871	90501	177165	80887	105196
32S-12000-350-CL	92	124319	60386	74560	227604	111310	155264	247753	123395	175265	267902	135444	195266
32S-15000-300-CL	100	144619	72222	93236	129295	48743	51896	144098	58221	66591	158901	67457	81285
32S-15000-350-CL	97	144494	72136	93080	209341	98212	131354	229490	110359	151355	249639	122464	171356
50S-15400-300-CL	100	157192	74572	88599	158449	59407	62905	174898	69986	79232	191346	80284	95559
50S-15400-350-CL	100	157053	74476	88426	247390	114568	151191	269777	128093	173414	292165	141570	195637
50S-15600-300-CL	100	164240	79422	97350	149820	53621	54338	166268	64484	70666	182716	74904	86993
50S-15600-350-CL	100	164101	79327	97177	238760	109332	142625	261148	122883	164848	283536	136375	187071

Model 80S available on request

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open



# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - SYMMETRIC YOKE DESIGN, SPRING TO CLOSE, MODELS 14S-5100-200-CL TO 50S-15600-350-CL

Model	MOP (bar g)	BTC	RTC	ETC	Operating supply pressure (bar g)								
					90			95			100		
					BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
14S-5100-200-CL	100	24894	14052	21540	67308	36421	56107	72246	39313	60871	77184	42205	65635
14S-5100-235-CL	100	24877	14040	21518	101119	56224	88728	107937	60214	95305	114754	64204	101883
14S-5100-280-CL	73	24812	13997	21435									
14S-5100-300-CL	63	24779	13975	21393									
14S-5100-350-CL	46	24687	13913	21276									
14S-5400-200-CL	100	32200	17637	25799	63107	32435	47686	68045	35336	52450	72983	38237	57215
14S-5400-235-CL	100	32183	17626	25778	96919	52277	80308	103736	56273	86885	110553	60266	93463
14S-5400-280-CL	75	32118	17582	25694									
14S-5400-300-CL	65	32085	17560	25653									
14S-5400-350-CL	48	31994	17498	25536									
14S-8300-200-CL	100	41398	22799	33637	55378	26660	36862	60315	29580	41626	65253	32495	46391
14S-8300-235-CL	100	41381	22788	33616	89189	46575	69484	96007	50579	76061	102824	54577	82639
14S-8300-280-CL	79	41316	22744	33532									
14S-8300-300-CL	69	41283	22722	33491									
14S-8300-350-CL	50	41191	22660	33374									
18S-9600-235-CL	100	66994	34519	45762	95522	43880	57967	103360	48546	65534	111198	53198	73100
18S-9600-280-CL	100	66919	34467	45666	154641	78839	115040	165768	85385	125782	176894	91924	136524
18S-9600-300-CL	88	66881	34442	45618									
18S-9600-350-CL	64	66776	34370	45484									
18S-9800-235-CL	100	84610	43189	56372	85059	33361	37634	92897	38205	45201	100734	42981	52767
18S-9800-280-CL	100	84535	43137	56276	144177	68948	94707	155304	75540	105449	166431	82111	116191
18S-9800-300-CL	92	84497	43112	56228	173768	86444	123274						
18S-9800-350-CL	67	84392	43039	56094									
18S-10500-280-CL	100	93530	46981	59691	140809	64322	84506	151936	70953	95248	163063	77564	105990
18S-10500-300-CL	93	93492	46955	59643	170400	81911	113073						
18S-10500-350-CL	68	93387	46883	59509									
18S-11000-280-CL	100	104897	54769	74203	126499	55751	70691	137626	62421	81433	148753	69060	92175
18S-11000-300-CL	99	104859	54743	74155	156090	73423	99258	168863	81000	111590			
18S-11000-350-CL	73	104754	54671	74020									
32S-12000-300-CL	100	124445	60472	74716	191968	89854	119890	206771	98785	134585	221575	107693	149279
32S-12000-350-CL	92	124319	60386	74560	288051	147487	215267	308200	159506	235268			
32S-15000-300-CL	100	144619	72222	93236	173705	76563	95980	188508	85592	110674	203311	94569	125369
32S-15000-350-CL	97	144494	72136	93080	269788	134546	191357	289937	146595	211358	310086	158640	231359
50S-15400-300-CL	100	157192	74572	88599	207794	90439	111886	224242	100502	128214	240691	110504	144541
50S-15400-350-CL	100	157053	74476	88426	314553	155004	217861	336941	168420	240084	359329	181808	262307
50S-15600-300-CL	100	164240	79422	97350	199164	85125	103320	215613	95235	119647	232061	105265	135975
50S-15600-350-CL	100	164101	79327	97177	305923	149827	209294	328311	163256	231518	350699	176648	253741

Model 80S available on request

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open

# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - SYMMETRIC YOKE DESIGN, SPRING TO OPEN, MODELS 0.3S-008A-45-OP TO 6S-3800-200-OP

Model	MOP (bar g)	BTO	RTO	ETO	Operating supply pressure (bar g)														
					15			20			25			30			35		
					BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
0.3S-008A-45-OP	100	222	99	116				156	33	33	234	100	116	311	149	200	389	197	283
0.3S-008A-75-OP	71	214	94	107	483	255	386	699	387	618	914	519	850	1129	651	1082	1345	782	1314
0.3S-008B-45-OP	100	334	109	109										306	62	62	383	145	146
0.3S-008B-75-OP	73	325	99	99	478	208	248	694	343	480	909	476	712	1124	608	944	1339	740	1176
0.3S-008S-45-OP	100	402	140	140													347	61	61
0.3S-008S-75-OP	74	394	131	131	442	163	163	657	305	395	872	439	627	1088	572	859	1303	704	1091
0.3S-0100-45-OP	100	655	278	302															
0.3S-0100-75-OP	78	647	272	293				482	82	82	698	285	314	913	423	546	1128	558	778
0.3S-0100-100-OP	44	640	267	284	762	327	383	1145	568	795	1528	804	1208	1910	1039	1620	2293	1274	2033
0.3S-0150-45-OP	100	834	398	507															
0.3S-0150-75-OP	83	826	392	497							492	92	92	707	292	324	923	429	556
0.3S-0150-100-OP	46	819	387	489	556	161	161	939	440	574	1322	677	986	1705	913	1399	2087	1148	1811
0.9S-0200-100-OP	100	1054	487	596	604	54	54	1046	451	531	1489	730	1008	1931	1003	1485	2374	1275	1962
0.9S-0200-135-OP	59	1045	481	586	1686	852	1221	2493	1349	2090	3299	1843	2959	4106	2336	3828	4913	2829	4697
0.9S-0250-100-OP	100	1278	635	853				788	253	253	1231	569	730	1673	844	1207	2116	1117	1684
0.9S-0250-135-OP	61	1269	629	843	1428	692	943	2235	1190	1812	3042	1685	2681	3848	2178	3550	4655	2671	4419
0.9S-0350-100-OP	100	2005	939	1169										1307	307	307	1749	714	783
0.9S-0350-135-OP	64	1996	933	1158	1062	43	43	1868	792	912	2675	1301	1781	3481	1801	2650	4288	2297	3519
0.9S-0400-100-OP	100	2394	1194	1614													1302	301	301
0.9S-0400-135-OP	66	2385	1188	1603				1421	430	430	2228	1021	1299	3034	1524	2168	3841	2022	3037
0.9S-0700-100-OP	100	3361	1626	2112															
0.9S-0700-135-OP	70	3352	1620	2101							1669	100	100	2475	951	969	3282	1479	1838
1.5S-1100-135-OP	98	6862	2643	2929															
1.5S-1100-175-OP	58	6844	2631	2912							4429	1370	1370	5998	2876	3373	7566	3958	5377
1.5S-1200-135-OP	100	8011	3367	4073															
1.5S-1200-175-OP	62	7993	3356	4055										4852	1950	1950	6420	3183	3953
3S-2000-135-OP	100	11599	5169	6555															
3S-2000-175-OP	68	11570	5151	6525							5924	1756	1756	8560	4125	5029	11197	5904	8302
6S-2500-175-OP	100	16485	7523	9766										7814	2174	2174	10903	5115	5993
6S-2500-200-OP	80	16479	7520	9760							9447	4085	4193	13481	6869	9182	17515	9555	14171
6S-3800-175-OP	100	22456	10790	14771															
6S-3800-200-OP	88	22450	10786	14765										8360	1786	1786	12394	5802	6774

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open

# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - SYMMETRIC YOKE DESIGN, SPRING TO OPEN, MODELS 0.3S-008A-45-OP TO 6S-3800-200-OP

Model	MOP (bar g)	BTO	RTO	ETO	Operating supply pressure (bar g)														
					40			45			50			55			60		
					BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
0.3S-008A-45-OP	100	222	99	116	466	245	367	544	292	451	621	340	534	699	387	618	776	435	701
0.3S-008A-75-OP	71	214	94	107	1560	914	1546	1775	1045	1778	1990	1177	2010	2206	1308	2242	2421	1440	2474
0.3S-008B-45-OP	100	334	109	109	461	197	229	538	246	313	616	295	396	693	343	480	771	391	563
0.3S-008B-75-OP	73	325	99	99	1555	872	1408	1770	1004	1640	1985	1135	1872	2201	1267	2104	2416	1399	2336
0.3S-008S-45-OP	100	402	140	140	424	144	144	502	206	228	579	256	311	657	305	395	734	354	478
0.3S-008S-75-OP	74	394	131	131	1518	836	1323	1733	968	1555	1949	1100	1787	2164	1231	2019	2379	1363	2251
0.3S-0100-45-OP	100	655	278	302										482	82	82	560	165	165
0.3S-0100-75-OP	78	647	272	293	1344	691	1010	1559	823	1242	1774	956	1474	1989	1088	1706	2205	1219	1938
0.3S-0100-100-OP	44	640	267	284	2676	1508	2445												
0.3S-0150-45-OP	100	834	398	507															
0.3S-0150-75-OP	83	826	392	497	1138	564	788	1353	697	1020	1568	829	1252	1784	961	1484	1999	1093	1716
0.3S-0150-100-OP	46	819	387	489	2470	1382	2224	2853	1616	2636									
0.9S-0200-100-OP	100	1054	487	596	2816	1547	2439	3259	1818	2915	3702	2089	3392	4144	2359	3869	4587	2630	4346
0.9S-0200-135-OP	59	1045	481	586	5719	3322	5566	6526	3814	6435	7332	4307	7305	8139	4800	8174			
0.9S-0250-100-OP	100	1278	635	853	2559	1389	2161	3001	1660	2637	3444	1931	3114	3886	2202	3591	4329	2472	4068
0.9S-0250-135-OP	61	1269	629	843	5461	3164	5288	6268	3657	6157	7074	4150	7027	7881	4642	7896	8687	5135	8765
0.9S-0350-100-OP	100	2005	939	1169	2192	999	1260	2634	1276	1737	3077	1551	2214	3520	1824	2691	3962	2097	3168
0.9S-0350-135-OP	64	1996	933	1158	5095	2791	4388	5901	3286	5257	6708	3779	6126	7514	4272	6996	8321	4765	7865
0.9S-0400-100-OP	100	2394	1194	1614	1745	711	778	2187	996	1255	2630	1273	1732	3072	1548	2209	3515	1821	2686
0.9S-0400-135-OP	66	2385	1188	1603	4647	2517	3906	5454	3012	4775	6260	3505	5644	7067	3999	6514	7874	4492	7383
0.9S-0700-100-OP	100	3361	1626	2112				1628	57	57	2071	534	534	2514	978	1010	2956	1270	1487
0.9S-0700-135-OP	70	3352	1620	2101	4089	1985	2708	4895	2485	3577	5702	2982	4446	6508	3478	5315	7315	3973	6184
1.5S-1100-135-OP	98	6862	2643	2929	4070	911	911	5003	2103	2103	5937	2833	3296	6870	3482	4488	7804	4119	5680
1.5S-1100-175-OP	58	6844	2631	2912	9134	5019	7380	10703	6073	9384	12271	7122	11387	13840	8168	13391			
1.5S-1200-135-OP	100	8011	3367	4073				3858	680	680	4791	1872	1872	5724	2695	3064	6658	3347	4257
1.5S-1200-175-OP	62	7993	3356	4055	7988	4256	5957	9557	5314	7960	11125	6366	9964	12694	7414	11967	14262	8460	13971
3S-2000-135-OP	100	11599	5169	6555	5321	1007	1007	6890	2945	2954	8458	4055	4902	10027	5121	6850	11596	6171	8797
3S-2000-175-OP	68	11570	5151	6525	13833	7656	11575	16469	9396	14848	19105	11131	18120	21741	12863	21393	24377	14595	24666
6S-2500-175-OP	100	16485	7523	9766	13991	7210	9813	17079	9266	13632	20167	11306	17452	23255	13338	21271	26344	15366	25091
6S-2500-200-OP	80	16479	7520	9760	21548	12216	19160	25582	14866	24149	29615	17511	29137	33649	20155	34126	37683	22800	39115
6S-3800-175-OP	100	22456	10790	14771	8870	2416	2416	11958	5499	6236	15047	7609	10055	18135	9673	13875	21223	11719	17694
6S-3800-200-OP	88	22450	10786	14765	16428	8536	11763	20461	11215	16752	24495	13876	21741	28528	16527	26729	32562	19172	31718

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open

# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - SYMMETRIC YOKE DESIGN, SPRING TO OPEN, MODELS 0.3S-008A-45-OP TO 6S-3800-200-OP

Model	MOP (bar g)	Operating supply pressure (bar g)														
		BTO	RTO	ETO	65			70			75			80		
					BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
0.3S-008A-45-OP	100	222	99	116	854	482	785	931	530	868	1009	577	952	1086	624	1035
0.3S-008A-75-OP	71	214	94	107	2636	1571	2706	2852	1702	2938						
0.3S-008B-45-OP	100	334	109	109	848	439	647	926	487	730	1003	534	814	1081	582	897
0.3S-008B-75-OP	73	325	99	99	2631	1530	2568	2846	1662	2800						
0.3S-008S-45-OP	100	402	140	140	812	402	562	889	450	645	967	498	729	1044	545	812
0.3S-008S-75-OP	74	394	131	131	2595	1495	2483	2810	1626	2715						
0.3S-0100-45-OP	100	655	278	302	637	244	249	715	297	332	792	347	416	870	396	499
0.3S-0100-75-OP	78	647	272	293	2420	1351	2170	2635	1483	2402	2851	1615	2634			
0.3S-0100-100-OP	44	640	267	284												
0.3S-0150-45-OP	100	834	398	507	432	27	27	509	111	111	587	194	194	664	263	278
0.3S-0150-75-OP	83	826	392	497	2214	1225	1948	2430	1357	2180	2645	1489	2412	2860	1621	2644
0.3S-0150-100-OP	46	819	387	489												
0.9S-0200-100-OP	100	1054	487	596	5029	2900	4823	5472	3171	5300	5914	3441	5777	6357	3711	6254
0.9S-0200-135-OP	59	1045	481	586												
0.9S-0250-100-OP	100	1278	635	853	4771	2743	4545	5214	3013	5022	5656	3283	5499	6099	3554	5976
0.9S-0250-135-OP	61	1269	629	843												
0.9S-0350-100-OP	100	2005	939	1169	4405	2368	3645	4847	2640	4122	5290	2911	4599	5732	3182	5075
0.9S-0350-135-OP	64	1996	933	1158												
0.9S-0400-100-OP	100	2394	1194	1614	3957	2094	3163	4400	2365	3640	4843	2637	4117	5285	2908	4593
0.9S-0400-135-OP	66	2385	1188	1603	8680	4985	8252									
0.9S-0700-100-OP	100	3361	1626	2112	3399	1552	1964	3841	1830	2441	4284	2106	2918	4726	2381	3395
0.9S-0700-135-OP	70	3352	1620	2101	8121	4467	7053	8928	4961	7922						
1.5S-1100-135-OP	98	6862	2643	2929	8737	4752	6873	9670	5380	8065	10604	6007	9257	11537	6631	10450
1.5S-1100-175-OP	58	6844	2631	2912												
1.5S-1200-135-OP	100	8011	3367	4073	7591	3986	5449	8524	4619	6641	9458	5248	7833	10391	5874	9026
1.5S-1200-175-OP	62	7993	3356	4055												
3S-2000-135-OP	100	11599	5169	6555	13165	7213	10745	14733	8251	12693	16302	9286	14641	17871	10319	16588
3S-2000-175-OP	68	11570	5151	6525	27013	16326	27939									
6S-2500-175-OP	100	16485	7523	9766	29432	17390	28910	32520	19415	32730	35608	21440	36549	38697	23464	40369
6S-2500-200-OP	80	16479	7520	9760	41716	25444	44104	45750	28089	49092	49784	30733	54081	53817	33378	59070
6S-3800-175-OP	100	22456	10790	14771	24311	13755	21514	27400	15785	25333	30488	17812	29153	33576	19837	32972
6S-3800-200-OP	88	22450	10786	14765	36596	21816	36707	40629	24461	41696	44663	27105	46685	48696	29750	51673

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open

# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - SYMMETRIC YOKE DESIGN, SPRING TO OPEN, MODELS 0.3S-008A-45-OP TO 6S-3800-200-OP

Model	MOP (bar g)	BTO	RTO	ETO	Operating supply pressure (bar g)											
					85			90			95			100		
					BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
0.3S-008A-45-OP	100	222	99	116	1164	672	1119	1241	719	1202	1319	766	1286	1396	814	1369
0.3S-008A-75-OP	71	214	94	107												
0.3S-008B-45-OP	100	334	109	109	1158	630	981	1236	677	1064	1314	724	1148	1391	772	1231
0.3S-008B-75-OP	73	325	99	99												
0.3S-008S-45-OP	100	402	140	140	1122	593	896	1200	641	979	1277	688	1063	1355	736	1146
0.3S-008S-75-OP	74	394	131	131												
0.3S-0100-45-OP	100	655	278	302	947	445	583	1025	493	666	1102	541	750	1180	590	833
0.3S-0100-75-OP	78	647	272	293												
0.3S-0100-100-OP	44	640	267	284												
0.3S-0150-45-OP	100	834	398	507	742	314	361	819	364	445	897	413	528	974	462	612
0.3S-0150-75-OP	83	826	392	497												
0.3S-0150-100-OP	46	819	387	489												
0.9S-0200-100-OP	100	1054	487	596	6799	3982	6730	7242	4252	7207	7685	4522	7684	8127	4793	8161
0.9S-0200-135-OP	59	1045	481	586												
0.9S-0250-100-OP	100	1278	635	853	6542	3824	6453	6984	4095	6929	7427	4365	7406	7869	4635	7883
0.9S-0250-135-OP	61	1269	629	843												
0.9S-0350-100-OP	100	2005	939	1169	6175	3453	5552	6617	3724	6029	7060	3994	6506	7503	4265	6983
0.9S-0350-135-OP	64	1996	933	1158												
0.9S-0400-100-OP	100	2394	1194	1614	5728	3179	5070	6170	3450	5547	6613	3721	6024	7055	3992	6501
0.9S-0400-135-OP	66	2385	1188	1603												
0.9S-0700-100-OP	100	3361	1626	2112	5169	2654	3872	5611	2927	4349	6054	3199	4825	6497	3471	5302
0.9S-0700-135-OP	70	3352	1620	2101												
1.5S-1100-135-OP	98	6862	2643	2929	12470	7255	11642	13404	7878	12834	14337	8500	14026			
1.5S-1100-175-OP	58	6844	2631	2912												
1.5S-1200-135-OP	100	8011	3367	4073	11325	6499	10218	12258	7123	11410	13191	7746	12603	14125	8368	13795
1.5S-1200-175-OP	62	7993	3356	4055												
3S-2000-135-OP	100	11599	5169	6555	19440	11351	18536	21008	12381	20484	22577	13412	22431	24146	14443	24379
3S-2000-175-OP	68	11570	5151	6525												
6S-2500-175-OP	100	16485	7523	9766	41785	25489	44188	44873	27514	48008	47961	29538	51828	51050	31563	55647
6S-2500-200-OP	80	16479	7520	9760												
6S-3800-175-OP	100	22456	10790	14771	36664	21861	36792	39752	23886	40611	42841	25911	44431	45929	27935	48250
6S-3800-200-OP	88	22450	10786	14765	52730	32394	56662									

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open

# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - SYMMETRIC YOKE DESIGN, SPRING TO OPEN, MODELS 14S-5100-200-OP TO 50S-15600-350-OP

Model	MOP (bar g)	BTO	RTO	ETO	Operating supply pressure (bar g)											
					15			20			25			30		
					BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
14S-5100-200-OP	100	27498	13013	17698												
14S-5100-235-OP	100	27479	13002	17679												
14S-5100-280-OP	71	27404	12958	17608												
14S-5100-300-OP	62	27367	12936	17572	10203	2773	2773	19951	10724	15226	29699	17267	27678	39448	23770	40131
14S-5100-350-OP	46	27263	12874	17471	20672	11212	16147	33940	20096	33096	47209	28948	50045	60477	37793	66994
14S-5400-200-OP	100	35440	16081	20993												
14S-5400-235-OP	100	35421	16070	20974										13216	1549	1549
14S-5400-280-OP	75	35346	16025	20903							19720	9056	9857	28212	14940	20704
14S-5400-300-OP	66	35309	16003	20867				16221	5387	5387	25969	13412	17840	35718	20003	30292
14S-5400-350-OP	48	35205	15941	20766	16942	6308	6308	30210	16294	23257	43479	25200	40207	56747	34052	57156
14S-8300-200-OP	100	45484	20783	27317												
14S-8300-235-OP	100	45465	20771	27298												
14S-8300-280-OP	81	45390	20727	27227										21533	8262	8262
14S-8300-300-OP	71	45353	20705	27191							19291	5398	5398	29039	14388	17850
14S-8300-350-OP	52	45249	20642	27090				23532	10476	10815	36800	19695	27764	50069	28618	44713
18S-9600-235-OP	100	71792	29579	35058												
18S-9600-280-OP	100	71707	29527	34976												
18S-9600-300-OP	94	71664	29500	34935												
18S-9600-350-OP	69	71544	29427	34819							37207	7736	7736	52471	24420	27222
18S-9800-235-OP	100	91146	37130	43510												
18S-9800-280-OP	100	91060	37078	43428												
18S-9800-300-OP	100	91017	37051	43387												
18S-9800-350-OP	74	90897	36978	43271										42996	3248	3248
18S-10500-280-OP	100	106286	43484	51177												
18S-10500-300-OP	100	106243	43457	51136												
18S-10500-350-OP	77	106123	43384	51020												
18S-11000-280-OP	100	119233	51369	63676												
18S-11000-300-OP	100	119190	51343	63635												
18S-11000-350-OP	81	119070	51271	63519												
32S-12000-300-OP	100	156381	68205	84565												
32S-12000-350-OP	100	156242	68119	84427												
32S-15000-300-OP	100	134323	52005	56887												
32S-15000-350-OP	100	134184	51916	56749												
50S-15400-300-OP	100	169415	66500	73789												
50S-15400-350-OP	100	169260	66401	73636												
50S-15600-300-OP	100	177222	71451	81539												
50S-15600-350-OP	100	177068	71354	81386												

Model 80S available on request

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open

# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - SYMMETRIC YOKE DESIGN, SPRING TO OPEN, MODELS 14S-5100-200-OP TO 50S-15600-350-OP

Model	MOP (bar g)	Operating supply pressure (bar g)														
		BTO	RTO	ETO	35			40			45			50		
		BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
14S-5100-200-OP	100	27498	13013	17698	11401	4304	4304	15733	7845	9838	20066	10802	15372	24398	13719	20907
14S-5100-235-OP	100	27479	13002	17679	22927	12732	19028	28909	16739	26669	34891	20730	34310	40872	24721	41951
14S-5100-280-OP	71	27404	12958	17608	40433	24428	41390	48925	30093	52237	57417	35754	63085	65909	41411	73932
14S-5100-300-OP	62	27367	12936	17572	49196	30273	52583	58944	36771	65036	68693	43265	77488	78441	49757	89941
14S-5100-350-OP	46	27263	12874	17471	73746	46632	83943	87014	55463	100893	100283	64294	117842			
14S-5400-200-OP	100	35440	16081	20993							16336	5534	5534	20669	9734	11069
14S-5400-235-OP	100	35421	16070	20974	19198	8677	9190	25179	12871	16830	31161	16937	24471	37142	20959	32112
14S-5400-280-OP	75	35346	16025	20903	36704	20665	31552	45195	26345	42399	53687	32010	53247	62179	37676	64094
14S-5400-300-OP	66	35309	16003	20867	45466	26526	42745	55214	33029	55197	64963	39532	67650	74711	46036	80102
14S-5400-350-OP	48	35205	15941	20766	70016	42904	74105	83284	51752	91054	96553	60591	108003			
14S-8300-200-OP	100	45484	20783	27317												
14S-8300-235-OP	100	45465	20771	27298				18500	4388	4388	24482	11172	12029	30464	15372	19670
14S-8300-280-OP	81	45390	20727	27227	30025	15070	19109	38517	20856	29957	47008	26568	40804	55500	32250	51652
14S-8300-300-OP	71	45353	20705	27191	38787	21039	30303	48535	27592	42755	58284	34106	55207	68032	40610	67660
14S-8300-350-OP	52	45249	20642	27090	63337	37478	61663	76606	46329	78612	89874	55181	95561	103143	64030	112510
18S-9600-235-OP	100	71792	29579	35058												
18S-9600-280-OP	100	71707	29527	34976				39182	10257	10257	48951	21869	22728	58719	28817	35199
18S-9600-300-OP	94	71664	29500	34935	39493	10654	10654	50707	23151	24970	61922	31035	39287	73136	38703	53603
18S-9600-350-OP	69	71544	29427	34819	67735	35025	46708	82999	45373	66194	98263	55629	85680	113527	65838	105166
18S-9800-235-OP	100	91146	37130	43510												
18S-9800-280-OP	100	91060	37078	43428										49245	11225	11225
18S-9800-300-OP	100	91017	37051	43387				41233	996	996	52447	15313	15313	63661	28467	29629
18S-9800-350-OP	74	90897	36978	43271	58260	22734	22734	73524	35516	42220	88788	46047	61706	104052	56405	81192
18S-10500-280-OP	100	106286	43484	51177												
18S-10500-300-OP	100	106243	43457	51136										55207	10768	10768
18S-10500-350-OP	77	106123	43384	51020	49806	3873	3873	65070	23359	23359	80334	37767	42845	95598	48404	62331
18S-11000-280-OP	100	119233	51369	63676												
18S-11000-300-OP	100	119190	51343	63635												
18S-11000-350-OP	81	119070	51271	63519				52506	7320	7320	67770	26806	26806	83034	39677	46293
32S-12000-300-OP	100	156381	68205	84565												
32S-12000-350-OP	100	156242	68119	84427							71082	8462	8462	89271	31046	31046
32S-15000-300-OP	100	134323	52005	56887												
32S-15000-350-OP	100	134184	51916	56749				80159	13205	13205	98349	35789	35789	116538	52870	58372
50S-15400-300-OP	100	169415	66500	73789												
50S-15400-350-OP	100	169260	66401	73636							97738	14783	14783	117948	39875	39875
50S-15600-300-OP	100	177222	71451	81539												
50S-15600-350-OP	100	177068	71354	81386							89947	5110	5110	110158	30203	30203

Model 80S available on request

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open

# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - SYMMETRIC YOKE DESIGN, SPRING TO OPEN, MODELS 14S-5100-200-OP TO 50S-15600-350-OP

Model	MOP (bar g)	Operating supply pressure (bar g)														
		BTO	RTO	ETO	55			60			65			70		
		BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
14S-5100-200-OP	100	27498	13013	17698	28731	16620	26441	33064	19511	31976	37396	22401	37510	41729	25292	43045
14S-5100-235-OP	100	27479	13002	17679	46854	28711	49592	52836	32701	57233	58817	36687	64874	64799	40672	72515
14S-5100-280-OP	71	27404	12958	17608	74401	47068	84780	82893	52720	95627	91385	58372	106475	99876	64023	117322
14S-5100-300-OP	62	27367	12936	17572	88189	56245	102393	97937	62733	114846						
14S-5100-350-OP	46	27263	12874	17471												
14S-5400-200-OP	100	35440	16081	20993	25001	12749	16603	29334	15701	22137	33666	18625	27672	37999	21534	33206
14S-5400-235-OP	100	35421	16070	20974	43124	24963	39753	49106	28954	47394	55087	32945	55035	61069	36935	62676
14S-5400-280-OP	75	35346	16025	20903	70671	43341	74942	79163	49006	85789	87655	54663	96637	96146	60320	107484
14S-5400-300-OP	66	35309	16003	20867	84459	52535	92555	94207	59029	105007	103956	65523	117460			
14S-5400-350-OP	48	35205	15941	20766												
14S-8300-200-OP	100	45484	20783	27317	18322	4161	4161	22655	9695	9695	26987	12956	15229	31320	15961	20764
14S-8300-235-OP	100	45465	20771	27298	36445	19455	27311	42427	23492	34952	48409	27507	42593	54390	31509	50234
14S-8300-280-OP	81	45390	20727	27227	63992	37915	62499	72484	43580	73347	80976	49245	84194	89468	54910	95042
14S-8300-300-OP	71	45353	20705	27191	77780	47113	80112	87529	53616	92565	97277	60119	105017	107025	66616	117470
14S-8300-350-OP	52	45249	20642	27090												
18S-9600-235-OP	100	71792	29579	35058	36799	7215	7215	43680	16000	16000	50561	23046	24784	57443	27928	33569
18S-9600-280-OP	100	71707	29527	34976	68488	35540	47670	78257	42172	60141	88026	48759	72612	97795	55315	85083
18S-9600-300-OP	94	71664	29500	34935	84350	46283	67919	95564	53819	82236	106779	61326	96552	117993	68817	110868
18S-9600-350-OP	69	71544	29427	34819	128791	76018	124652	144054	86197	144138	159318	96376	163624			
18S-9800-235-OP	100	91146	37130	43510							41087	810	810	47968	9595	9595
18S-9800-280-OP	100	91060	37078	43428	59014	23696	23696	68783	32168	36167	78551	39016	48638	88320	45728	61109
18S-9800-300-OP	100	91017	37051	43387	74875	36462	43945	86090	44204	58261	97304	51841	72578	108518	59416	86894
18S-9800-350-OP	74	90897	36978	43271	119316	66678	100678	134580	76906	120164	149844	87109	139650	165108	97288	159136
18S-10500-280-OP	100	106286	43484	51177	50560	4835	4835	60328	17306	17306	70097	29777	29777	79866	37434	42248
18S-10500-300-OP	100	106243	43457	51136	66421	25084	25084	77636	35840	39401	88850	43742	53717	100064	51469	68033
18S-10500-350-OP	77	106123	43384	51020	110862	58823	81817	126126	69139	101304	141390	79398	120790	156653	89622	140276
18S-11000-280-OP	100	119233	51369	63676				47765	1267	1267	57534	13738	13738	67303	26209	26209
18S-11000-300-OP	100	119190	51343	63635	53858	9046	9046	65072	23362	23362	76286	34868	37678	87501	42803	51994
18S-11000-350-OP	81	119070	51271	63519	98298	50259	65779	113562	60655	85265	128826	70957	104751	144090	81210	124237
32S-12000-300-OP	100	156381	68205	84565				67866	4470	4470	81230	21062	21062	94593	37654	37654
32S-12000-350-OP	100	156242	68119	84427	107460	48684	53629	125649	61295	76212	143839	73615	98795	162028	85797	121378
32S-15000-300-OP	100	134323	52005	56887	81770	15205	15205	95133	31796	31796	108497	47089	48388	121860	56608	64980
32S-15000-350-OP	100	134184	51916	56749	134727	65488	80955	152917	77827	103538	171106	90024	126121	189295	102144	148704
50S-15400-300-OP	100	169415	66500	73789				94165	10347	10347	109013	28782	28782	123862	47217	47217
50S-15400-350-OP	100	169260	66401	73636	138158	61194	64967	158369	75385	90060	178579	89187	115152	198789	102806	140245
50S-15600-300-OP	100	177222	71451	81539				86375	675	675	101223	19110	19110	116072	37545	37545
50S-15600-350-OP	100	177068	71354	81386	130368	55295	55295	150578	69979	80388	170789	83896	105480	190999	97575	130572

Model 80S available on request

### NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open



# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - SYMMETRIC YOKE DESIGN, SPRING TO OPEN, MODELS 14S-5100-200-OP TO 50S-15600-350-OP

Model	MOP (bar g)	BTO	RTO	ETO	Operating supply pressure (bar g)								
					75			80			85		
					BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
14S-5100-200-OP	100	27498	13013	17698	46061	28182	48579	50394	31072	54113	54726	33962	59648
14S-5100-235-OP	100	27479	13002	17679	70781	44656	80156	76762	48640	87797	82744	52621	95438
14S-5100-280-OP	71	27404	12958	17608									
14S-5100-300-OP	62	27367	12936	17572									
14S-5100-350-OP	46	27263	12874	17471									
14S-5400-200-OP	100	35440	16081	20993	42331	24433	38741	46664	27325	44275	50997	30215	49810
14S-5400-235-OP	100	35421	16070	20974	67051	40926	70317	73032	44916	77958	79014	48906	85599
14S-5400-280-OP	75	35346	16025	20903	104638	65977	118332						
14S-5400-300-OP	66	35309	16003	20867									
14S-5400-350-OP	48	35205	15941	20766									
14S-8300-200-OP	100	45484	20783	27317	35653	18917	26298	39985	21847	31833	44318	24763	37367
14S-8300-235-OP	100	45465	20771	27298	60372	35500	57875	66354	39490	65516	72335	43480	73157
14S-8300-280-OP	81	45390	20727	27227	97960	60575	105889	106451	66234	116737			
14S-8300-300-OP	71	45353	20705	27191									
14S-8300-350-OP	52	45249	20642	27090									
18S-9600-235-OP	100	71792	29579	35058	64324	32689	42353	71205	37391	51138	78086	42056	59923
18S-9600-280-OP	100	71707	29527	34976	107564	61851	97554	117333	68376	110025	127102	74891	122496
18S-9600-300-OP	94	71664	29500	34935	129207	76295	125184	140422	83774	139501	151636	91253	153817
18S-9600-350-OP	69	71544	29427	34819									
18S-9800-235-OP	100	91146	37130	43510	54849	18379	18379	61730	27030	27164	68612	32047	35949
18S-9800-280-OP	100	91060	37078	43428	98089	52372	73580	107858	58972	86051	117627	65545	98522
18S-9800-300-OP	100	91017	37051	43387	119733	66958	101210	130947	74477	115527	142161	81976	129843
18S-9800-350-OP	74	90897	36978	43271									
18S-10500-280-OP	100	106286	43484	51177	89635	44288	54719	99404	51018	67190	109173	57676	79662
18S-10500-300-OP	100	106243	43457	51136	111279	59106	82350	122493	66692	96666	133707	74244	110982
18S-10500-350-OP	77	106123	43384	51020	171917	99826	159762						
18S-11000-280-OP	100	119233	51369	63676	77071	35435	38680	86840	42344	51152	96609	49099	63623
18S-11000-300-OP	100	119190	51343	63635	98715	50545	66311	109929	58189	80627	121144	65782	94943
18S-11000-350-OP	81	119070	51271	63519	159354	91428	143723	174618	101627	163209			
32S-12000-300-OP	100	156381	68205	84565	107957	49037	54245	121320	58330	70837	134684	67440	87429
32S-12000-350-OP	100	156242	68119	84427	180217	97901	143961	198407	109956	166544	216596	121970	189128
32S-15000-300-OP	100	134323	52005	56887	135224	65828	81571	148588	74905	98163	161951	83898	114755
32S-15000-350-OP	100	134184	51916	56749	207484	114210	171287	225674	126241	193871	243863	138254	216454
50S-15400-300-OP	100	169415	66500	73789	138710	61590	65653	153559	72055	84088	168407	82269	102523
50S-15400-350-OP	100	169260	66401	73636	219000	116325	165337	239210	129771	190429	259420	143165	215522
50S-15600-300-OP	100	177222	71451	81539	130920	55894	55980	145768	66607	74416	160617	76931	92851
50S-15600-350-OP	100	177068	71354	81386	211209	111119	155665	231420	124588	180757	251630	138003	205850

Model 80S available on request

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

BTO: Break to Open

RTO: Run to Open

ETO: End to Open

# GIGS SPRING RETURN GAS POWERED ACTUATOR

OUTPUT TORQUES (Nm) - SYMMETRIC YOKE DESIGN, SPRING TO OPEN, MODELS 14S-5100-200-OP TO 50S-15600-350-OP

Model	MOP (bar g)	BTO	RTO	ETO	Operating supply pressure (bar g)								
					90			95			100		
					BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
14S-5100-200-OP	100	27498	13013	17698	59059	36848	65182	63392	39734	70717	67724	42620	76251
14S-5100-235-OP	100	27479	13002	17679	88726	56602	103079	94707	60583	110719	100689	64564	118360
14S-5100-280-OP	71	27404	12958	17608									
14S-5100-300-OP	62	27367	12936	17572									
14S-5100-350-OP	46	27263	12874	17471									
14S-5400-200-OP	100	35440	16081	20993	55329	33106	55344	59662	35996	60878	63994	38886	66413
14S-5400-235-OP	100	35421	16070	20974	84996	52892	93240	90977	56877	100881	96959	60862	108522
14S-5400-280-OP	75	35346	16025	20903									
14S-5400-300-OP	66	35309	16003	20867									
14S-5400-350-OP	48	35205	15941	20766									
14S-8300-200-OP	100	45484	20783	27317	48650	27669	42902	52983	30567	48436	57315	33460	53971
14S-8300-235-OP	100	45465	20771	27298	78317	47471	80798	84299	51461	88439	90280	55452	96080
14S-8300-280-OP	81	45390	20727	27227									
14S-8300-300-OP	71	45353	20705	27191									
14S-8300-350-OP	52	45249	20642	27090									
18S-9600-235-OP	100	71792	29579	35058	84967	46699	68707	91849	51326	77492	98730	55943	86277
18S-9600-280-OP	100	71707	29527	34976	136871	81406	134967	146640	87921	147439	156408	94436	159910
18S-9600-300-OP	94	71664	29500	34935	162850	98732	168133						
18S-9600-350-OP	69	71544	29427	34819									
18S-9800-235-OP	100	91146	37130	43510	75493	36891	44733	82374	41653	53518	89255	46366	62302
18S-9800-280-OP	100	91060	37078	43428	127396	72099	110993	137165	78635	123464	146934	85168	135936
18S-9800-300-OP	100	91017	37051	43387	153376	89464	144159	164590	96943	158475	175804	104421	172792
18S-9800-350-OP	74	90897	36978	43271									
18S-10500-280-OP	100	106286	43484	51177	118942	64293	92133	128711	70880	104604	138480	77446	117075
18S-10500-300-OP	100	106243	43457	51136	144921	81768	125298	156136	89276	139615	167350	96776	153931
18S-10500-350-OP	77	106123	43384	51020									
18S-11000-280-OP	100	119233	51369	63676	106378	55777	76094	116147	62403	88565	125916	68998	101036
18S-11000-300-OP	100	119190	51343	63635	132358	73336	109260	143572	80863	123576	154786	88374	137892
18S-11000-350-OP	81	119070	51271	63519									
32S-12000-300-OP	100	156381	68205	84565	148047	76441	104020	161411	85384	120612	174775	94283	137204
32S-12000-350-OP	100	156242	68119	84427	234785	133966	211711	252974	145944	234294	271164	157909	256877
32S-15000-300-OP	100	134323	52005	56887	175315	92836	131347	188678	101734	147938	202042	110603	164530
32S-15000-350-OP	100	134184	51916	56749	262052	150233	239037	280242	162212	261620	298431	174167	284203
50S-15400-300-OP	100	169415	66500	73789	183255	92350	120958	198104	102345	139394	212952	112284	157829
50S-15400-350-OP	100	169260	66401	73636	279631	156528	240614	299841	169876	265707	320051	183187	290799
50S-15600-300-OP	100	177222	71451	81539	175465	87073	111286	190314	97114	129721	205162	107078	148157
50S-15600-350-OP	100	177068	71354	81386	271840	151382	230942	292051	164731	256034	312261	178057	281127

Model 80S available on request

## NOTES

MOP: Maximum Operating Pressure

BTC: Break to Close

RTC: Run to Close

ETC: End to Close

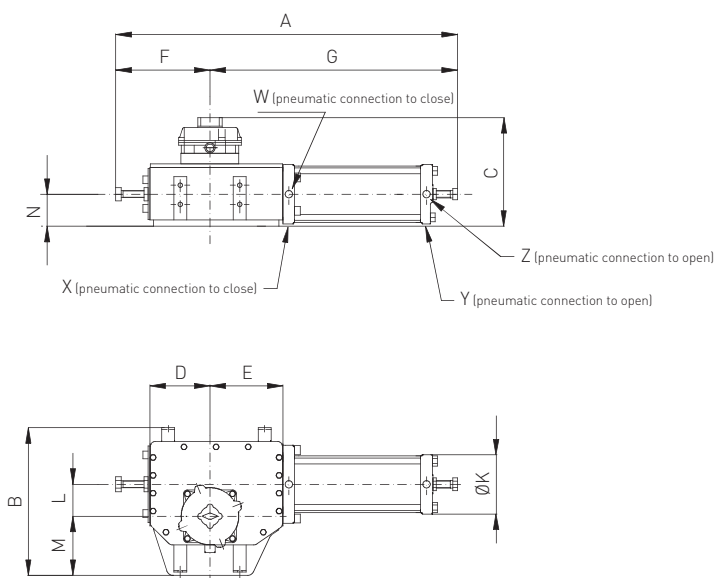
BTO: Break to Open

RTO: Run to Open

ETO: End to Open

# GIG DOUBLE ACTING GAS POWERED ACTUATOR

## OVERALL DIMENSIONS



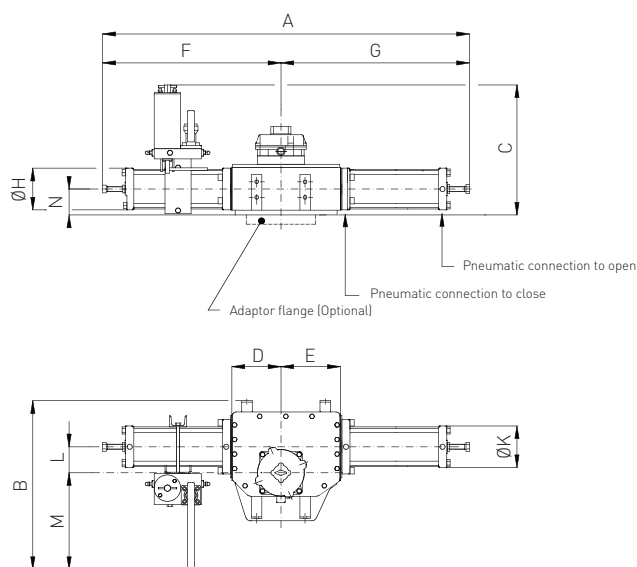
### DIMENSIONS (mm)

Model	A	B	C	D	E	F	G	ØK	L	M	N	Connection to close (in)* [X-Y]	Connection to open (in)* [W-Z]	Weight (kg)	Gas consumption (liters)
0.3-45	723	319	132	135	150	136	587	75	70	119	70	1/2	1/2	38	0.4
0.3-75	756	319	279	136	151	222	534	116	70	119	70	1/2	1/2	44	0.8
0.3-100	803	319	279	136	151	222	625	125	70	119	70	1/2	1/2	48	1.4
0.9-100	870	413	303	160	190	245	625	160	80	170	83	1/2	1/2	60	1.6
0.9-135	921	413	303	160	190	245	676	160	80	170	83	1/2	1/2	79	2.8
1.5-135	1011	469	343	187	227	293	718	160	100	185	100	1/2	1/2	116	3.5
1.5-175	1056	469	343	187	227	293	763	196	100	185	100	1/2	1/2	135	5.6
3-135	1451	586	351	285	330	391	1060	160	160	215	106	1/2	1/2	190	9.5
3-175	1532	586	351	285	330	391	1141	196	160	215	106	1/2	1/2	220	11.0
6-175	1625	740	414	327	379	430	1195	196	185	260	140	1/2	1/2	360	9.5
6-200	1705	740	414	327	379	430	1275	230	185	260	140	3/4	3/4	398	14.0
14-200	1826	873	527	376	435	496	1330	230	200	330	193	3/4	3/4	600	15.0
14-235	1806	873	527	376	435	496	1310	340	200	330	193	3/4	3/4	650	21.0
14-280	1842	873	527	376	435	496	1346	350	200	330	193	3/4	3/4	700	30.0
14-300	1800	873	384	376	435	376	1424	392	200	330	193	3/4	3/4	750	35.0
14-350	1870	873	460	376	435	376	1495	480	200	330	193	3/4	3/4	780	48.0
18-235	1972	880	511	424	492	548	1424	340	230	330	196	3/4	3/4	800	25.0
18-280	1953	880	511	424	492	548	1405	350	230	330	196	3/4	3/4	850	35.0
18-300	1906	955	387	421	492	425	1481	392	230	355	193	3/4	3/4	845	40.0
18-350	1979	955	460	421	492	425	1553	480	230	355	193	3/4	3/4	875	55.0
32-235	2263	1055	584	505	585	643	1620	340	270	395	232	3/4	3/4	1350	29.0
32-280	2263	1055	584	505	585	643	1620	350	270	395	232	3/4	3/4	1380	41.0
32-300	2186	1055	457	505	585	505	1681	392	270	395	232	3/4	3/4	1187	65.0
32-350	2241	1055	462	505	585	505	1736	480	270	395	232	3/4	3/4	1545	65.0
50-235	2460	1092	584	548	633	700	1760	340	300	387	232	3/4	3/4	1500	32.0
50-280	2460	1092	584	548	633	700	1760	350	300	387	232	3/4	3/4	1540	45.0
50-300	2500	1092	584	548	633	700	1800	392	300	387	232	3/4	3/4	1580	52.0
50-350	2481	1092	463	548	633	548	1933	480	300	387	232	3/4	3/4	1610	72.0
80-300	2790	1350	591	663	761	663	2127	392	350	450	302	3/4	3/4	2890	61.0
80-350	2854	1350	591	663	761	663	2191	480	350	450	302	3/4	3/4	2910	83.0

\* Pneumatic connection NPT (in)

# GIG DOUBLE ACTING GAS POWERED ACTUATOR

## OVERALL DIMENSIONS - MHP HYDRAULIC MANUAL OVERRIDE 0.3-45-MHP45 TO 14-350-MHP350

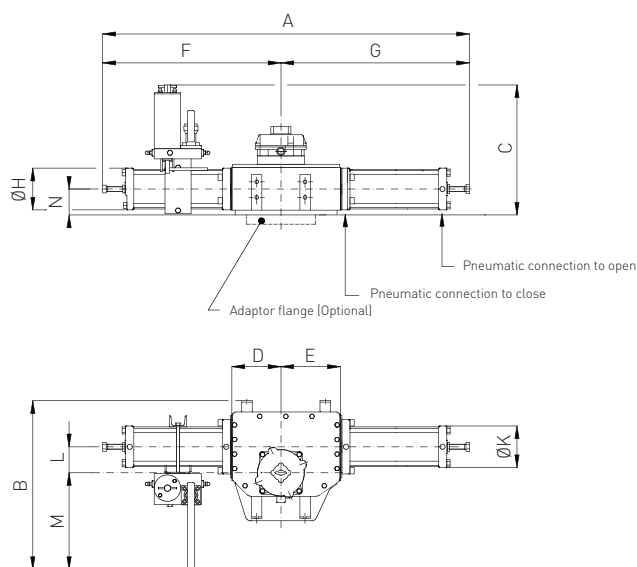


### DIMENSIONS (mm)

Model	A	B	C	D	E	F	G	ØH	ØK	L	M	N	Pneumatic connection NPT (in)	Weight (kg)	Gas consumption (liters)	Handpump operation per stroke	Oil displacement (liters)
0.3-45-MHP45	1159	630	534	135	150	572	587	75	64	62	438	70	¼	100	0.3	9	0.2
0.3-75-MHP75	1127	630	639	135	150	556	571	100	100	70	438	70	½	66	0.8	25	0.6
0.3-100-MHP75	1195	653	621	135	150	590	605	125	125	85	438	76	½	74	1.4	25	0.6
0.3-100-MHP100	1195	653	633	135	150	590	605	125	125	70	453	70	½	86	1.4	45	1.1
0.9-100-MHP100	1220	617	484	160	190	595	625	125	125	80	374	82	½	87	1.6	51	1.3
0.9-135-MHP100	1318	686	634	160	190	614	704	125	125	85	438	82	½	106	2.9	51	1.3
0.9-135-MHP135	1377	704	634	160	190	674	704	160	160	103	438	82	½	125	2.9	93	2.4
1.5-135-MHP135	1441	725	651	187	227	701	741	160	160	103	438	100	½	166	3.6	117	3.0
1.5-175-MHP135	1527	725	651	187	227	701	827	160	160	103	438	100	½	185	6.1	117	3.0
1.5-175-MHP175	1613	749	674	187	227	787	827	196	196	127	438	100	½	204	6.1	196	5.0
3-135-MHP135	2056	541	669	330	285	1006	1051	160	160	80	438	106	½	249	5.8	187	4.8
3-175-MHP135	2087	683	507	285	330	987	1100	160	196	160	312	106	½	278	9.7	187	4.8
3-175-MHP175	2284	811	843	285	330	1120	1165	196	196	128	478	106	½	307	9.7	314	8.0
6-175-MHP175	2375	900	877	327	379	1162	1214	96	196	128	478	140	½	462	11.2	363	9.3
6-200-MHP175	2467	900	877	327	415	1162	1306	196	230	128	478	140	¾	500	14.6	363	9.3
6-200-MHP200	2559	913	890	327	379	1254	1306	230	230	140	478	140	¾	540	14.6	474	12.1
14-200-MHP200	2664	961	943	376	435	1303	1362	230	230	140	478	193	¾	750	15.8	513	13.1
14-235-MHP200	2663	961	943	376	435	1303	1361	230	338	140	478	193	¾	765	21.9	513	13.1
14-235-MHP235	2662	998	980	376	435	1302	1361	339	339	177	478	193	¾	785	21.9	708	18.1
14-280-MHP200	2715	961	943	376	435	1303	1412	230	360	140	478	193	¾	790	31.0	513	13.1
14-280-MHP235	2714	998	980	376	435	1302	1412	340	360	177	478	193	¾	805	31.0	708	18.1
14-280-MHP280	2765	1024	1010	376	435	1353	1412	360	360	203	478	193	¾	820	31.0	1005	25.7
14-300-MHP200	2719	960	879	376	435	1296	1423	230	392	200	417	193	¾	1039	35.6	513	13.1
14-300-MHP235	2722	993	982	376	435	1299	1423	230	392	200	450	193	¾	987	35.6	708	18.1
14-300-MHP280	2776	1013	1010	376	435	1353	1423	360	392	200	470	193	¾	1242	35.6	1005	25.7
14-300-MHP300	2791	1028	1016	376	435	1366	1425	392	392	207	478	193	¾	1037	35.6	1154	29.5
14-350-MHP235	2657	993	982	376	435	1299	1358	340	340	200	450	193	¾	1282	48.5	708	18.1
14-350-MHP280	2814	1024	1010	376	435	1353	1461	360	480	203	478	193	¾	1115	48.5	1005	25.7
14-350-MHP300	2960	1084	1016	374	435	1364	1595	392	480	203	540	193	¾	1332	48.5	1154	29.5
14-350-MHP350	2863	1070	1010	376	435	1402	1461	480	480	250	478	193	¾	1410	48.5	1571	40.2

# GIG DOUBLE ACTING GAS POWERED ACTUATOR

## OVERALL DIMENSIONS - MHP HYDRAULIC MANUAL OVERRIDE 18-235-MHP235 TO 80-350-MHP350

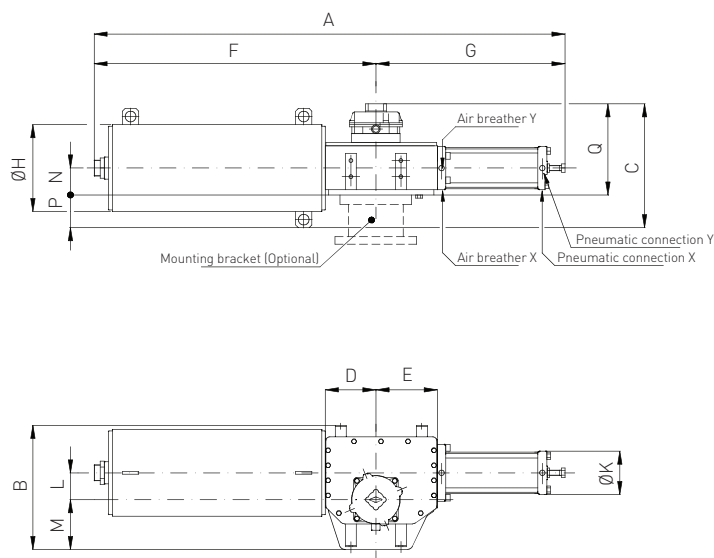


### DIMENSIONS (mm)

Model	A	B	C	D	E	F	G	ØH	ØK	L	M	N	Pneumatic connection NPT (in)	Weight (kg)	Gas consumption (liters)	Handpump operation per stroke	Oil displacement (liters)
18-235-MHP235	2898	1025	980	425	493	1415	1483	339	339	177	478	193	¾	880	25.1	814	20.8
18-280-MHP235	2885	1025	980	425	493	1415	1470	339	339	177	478	193	¾	895	35.7	814	20.8
18-280-MHP280	2872	1051	1010	425	493	1402	1470	360	360	203	478	193	¾	910	35.7	1156	29.6
18-300-MHP235	2890	1020	982	425	493	1409	1481	340	392	230	420	193	¾	1253	41.0	814	20.8
18-300-MHP280	2883	1059	1010	425	493	1402	1481	360	392	210	460	193	¾	1395	41.0	1156	29.6
18-300-MHP300	2894	1055	1017	425	493	1413	1481	392	392	203	478	193	¾	1500	41.0	1327	34.0
18-350-MHP235	2901	993	982	425	493	1348	1553	340	480	230	420	193	¾	1548	55.8	814	20.8
18-350-MHP280	2921	1051	1010	425	493	1402	1519	360	480	425	493	193	¾	1585	55.8	1156	29.6
18-350-MHP300	3066	1110	1016	425	493	1413	1656	392	480	230	511	193	¾	1690	55.8	1327	34.0
18-350-MHP350	2970	1097	1010	425	493	1451	1519	480	480	250	478	193	¾	1880	55.8	1807	46.2
32-235-MHP235	3222	1045	1019	505	585	1571	1651	340	340	177	478	232	¾	1540	29.5	956	24.5
32-280-MHP235	3226	1045	1019	505	585	1571	1655	340	360	507	587	232	¾	1570	41.9	956	24.5
32-280-MHP280	3230	1071	1049	505	585	1575	1655	360	360	204	478	232	¾	1620	41.9	1357	34.7
32-300-MHP235	3170	1040	1022	505	585	1489	1681	340	392	270	380	232	¾	1675	48.1	956	24.5
32-300-MHP280	3263	1056	1049	505	585	1582	1681	360	392	270	340	232	¾	1785	48.1	1357	34.7
32-300-MHP300	3282	1130	1056	505	585	1601	1681	392	392	270	470	232	¾	1785	48.1	1558	39.9
32-350-MHP235	3307	1090	1029	505	585	1571	1736	340	480	270	380	239	¾	1957	65.5	956	24.5
32-350-MHP280	3318	1066	977	505	585	1582	1736	360	480	270	356	239	¾	2005	65.5	1357	34.7
32-350-MHP300	3337	1140	1063	505	585	1601	1736	392	480	270	430	239	¾	2095	65.5	1558	39.9
32-350-MHP350	3393	1153	1095	505	585	1657	1737	480	480	235	478	236	¾	2315	65.5	2121	54.3
50-235-MHP235	3435	1040	851	548	633	1675	1760	340	340	300	335	233	¾	1700	32.8	1062	27.2
50-280-MHP235	3435	1040	851	548	633	1675	1760	340	350	300	335	233	¾	1740	46.6	1062	27.2
50-280-MHP280	3500	1082	1295	551	636	1708	1793	360	360	300	378	233	¾	1780	46.6	1508	38.6
50-300-MHP235	3475	1040	851	548	633	1675	1800	340	392	300	355	233	1	1780	53.4	1062	27.2
50-300-MHP280	3475	1062	876	548	633	1675	1800	350	392	300	357	233	1	1820	53.4	1508	38.6
50-300-MHP300	3509	1090	1054	551	636	1712	1797	392	392	207	478	233	¾	1890	53.4	1731	44.3
50-350-MHP235	3655	1055	1011	551	636	1722	1933	340	480	300	350	233	¾	2110	72.7	1062	27.2
50-350-MHP280	3641	1031	1022	551	636	1708	1933	360	480	300	326	233	¾	2170	72.7	1508	38.6
50-350-MHP300	3643	1105	1056	551	636	1710	1933	392	480	300	400	233	¾	2260	72.7	1731	44.3
50-350-MHP350	3782	1181	1338	551	636	1848	1933	480	480	300	478	233	¾	2480	72.7	2356	60.3
80-300-MHP300	4156	1294	1407	663	761	2029	2127	392	392	350	394	302	¾	3180	62.3	2020	51.7
80-350-MHP300	4220	1250	1127	663	761	2029	2191	392	480	350	350	302	¾	3460	84.9	2020	51.7
80-350-MHP350	4294	1263	1401	663	761	2098	2196	480	480	236	478	302	¾	3740	84.9	2749	70.4

# GIGS SPRING RETURN GAS POWERED ACTUATOR

## OVERALL DIMENSIONS - SPRING TO CLOSE, MODELS 0.3-008A-45-CL TO 6-3800-200-CL

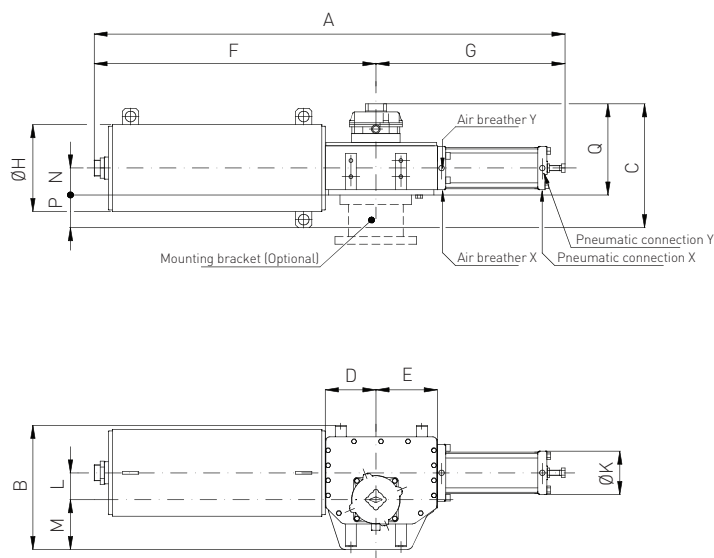


### DIMENSIONS (mm)

Model	A	B	C	D	E	F	G	ØH	ØK	L	M	N	P	Q	Pneumatic connection NPT (in)		Weight (kg)	Gas consumption (liters)
															x	y		
0.3-008A-45-CL	1301	262	192	136	151	714	587	147	75	70	119	70	4	188	½	-	62	0.35
0.3-008A-75-CL	1286	319	200	136	151	714	571	147	116	70	119	70	4	188	½	-	62	0.80
0.3-008B-45-CL	1301	262	192	136	151	714	587	147	75	70	119	70	4	188	½	-	62	0.35
0.3-008B-75-CL	1286	319	200	136	151	714	571	147	116	70	119	70	4	188	½	-	62	0.80
0.3-008C-45-CL	1301	262	192	136	151	714	587	147	75	70	119	70	4	188	½	-	62	0.35
0.3-008C-75-CL	1286	319	200	136	151	714	571	147	116	70	119	70	4	188	½	-	62	0.80
0.3-0100-45-CL	1402	300	293	136	151	815	587	223	75	70	119	70	42	251	½	-	75	0.35
0.3-0100-75-CL	1386	319	293	136	151	815	571	223	116	70	119	70	42	251	½	-	80	0.80
0.3-0100-100-CL	1419	319	293	136	151	815	605	233	125	70	119	70	42	251	½	-	84	1.40
0.3-0150-45-CL	1350	300	283	136	151	763	587	223	75	70	119	70	42	241	½	-	75	0.35
0.3-0150-75-CL	1334	319	283	136	151	763	571	223	100	70	119	70	42	151	½	-	80	0.80
0.3-0150-100-CL	1368	319	283	136	151	763	605	223	125	70	119	70	42	151	½	-	84	1.40
0.9-0200-100-CL	1501	413	300	160	190	857	644	240	125	80	170	82	37	175	½	-	147	1.60
0.9-0200-135-CL	1561	413	300	160	190	857	704	240	160	80	170	82	37	175	½	-	166	2.80
0.9-0250-100-CL	1430	413	300	160	190	786	644	240	125	80	170	82	37	262	½	-	147	1.60
0.9-0250-135-CL	1489	413	300	160	190	786	703	240	160	80	170	82	37	262	½	-	166	2.80
0.9-0350-100-CL	1554	413	370	160	190	910	644	310	125	80	170	82	73	175	½	-	181	1.60
0.9-0350-135-CL	1614	413	370	160	190	910	704	310	160	80	170	82	73	175	½	-	200	2.80
0.9-0400-100-CL	1488	413	370	160	190	844	644	310	125	80	170	82	73	175	½	-	176	1.60
0.9-0400-135-CL	1548	413	370	160	190	844	704	310	160	80	170	82	73	175	½	-	195	2.80
0.9-0700-100-CL	1515	413	370	160	190	871	644	310	125	80	170	82	73	175	½	-	198	1.60
0.9-0700-135-CL	1575	413	370	160	190	871	704	310	160	80	170	82	73	175	½	-	217	2.80
1.5-1100-135-CL	1749	470	458	187	227	1008	741	370	160	100	185	100	85	215	½	-	349	3.50
1.5-1100-175-CL	1835	470	440	187	227	1008	827	370	196	100	185	100	85	215	½	-	368	5.60
1.5-1200-135-CL	1818	469	384	187	227	1077	741	324	160	100	185	100	62	215	½	-	322	3.50
1.5-1200-175-CL	1904	469	384	187	227	1077	827	324	196	100	185	100	62	215	½	-	341	5.60
3-2000-135-CL	2444	586	466	285	330	1393	1051	415	160	160	215	106	98	222	½	-	617	3.60
3-2000-175-CL	2558	586	466	285	330	1393	1165	415	196	160	215	106	98	222	½	-	646	9.50
6-2500-175-CL	3120	740	443	327	379	1906	1214	383	196	185	260	140	52	285	½	-	831	11.00
6-2500-200-CL	3212	740	443	327	379	1906	1306	383	230	185	260	140	52	285	¾	-	884	14.00
6-3800-175-CL	3350	740	600	327	379	2136	1214	530	196	185	260	140	125	285	½	-	1344	11.00
6-3800-200-CL	3442	740	600	327	379	2136	1306	530	230	185	260	140	125	285	-	¾	1397	14.00

# GIGS SPRING RETURN GAS POWERED ACTUATOR

## OVERALL DIMENSIONS - SPRING TO CLOSE, MODELS 14-5100-200-CL TO 50-15600-350-CL

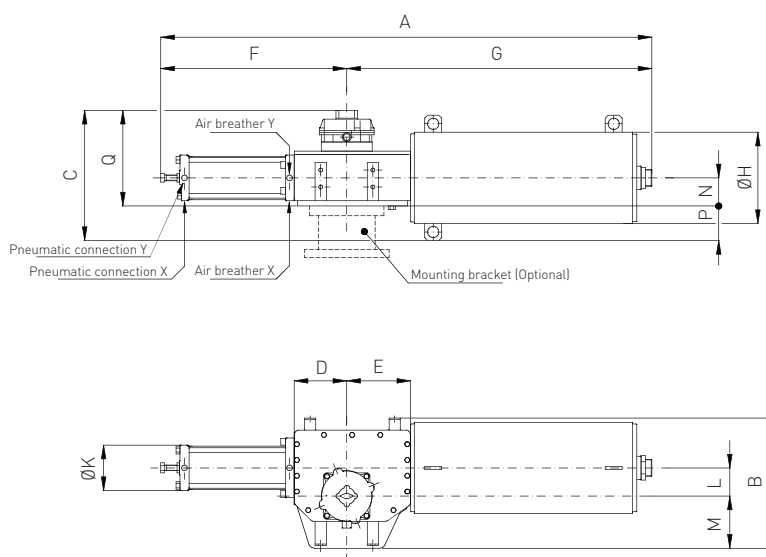


### DIMENSIONS (mm)

Model	A	B	C	D	E	F	G	ØH	ØK	L	M	N	P	Q	Pneumatic connection NPT (in)		Weight (kg)	Gas consumption (liters)
															x	y		
14-5100-200-CL	3453	838	600	376	435	2092	1361	530	230	200	295	193	72	528	-	3/4	1952	15
14-5100-235-CL	3452	838	600	376	435	2092	1360	530	339	200	295	193	72	528	-	3/4	2012	21
14-5100-280-CL	3504	838	600	376	435	2092	1412	530	360	200	295	193	72	528	-	3/4	2062	30
14-5100-300-CL	3515	795	600	376	435	2092	1423	530	392	200	330	193	72	528	-	3/4	2100	35
14-5100-350-CL	3739	795	600	376	435	2144	1595	530	480	200	330	193	72	528	-	3/4	2062	48
14-5400-200-CL	3402	838	600	376	435	2040	1362	530	230	200	295	193	72	398	-	3/4	2000	15
14-5400-235-CL	3401	838	600	376	435	2040	1361	530	340	200	295	193	72	398	-	3/4	2060	21
14-5400-280-CL	3452	838	600	376	435	2040	1412	530	360	200	295	193	72	398	-	3/4	2110	30
14-5400-300-CL	3463	795	600	376	435	2040	1423	530	392	200	330	193	72	528	-	3/4	2158	35
14-5400-350-CL	3635	795	600	376	435	2040	1595	530	480	200	330	193	72	528	-	3/4	2405	48
14-8300-200-CL	3465	838	600	376	435	2103	1362	530	230	200	295	193	72	398	-	3/4	2050	15
14-8300-235-CL	3464	838	600	376	435	2103	1361	530	340	200	295	193	72	398	-	3/4	2110	21
14-8300-280-CL	3515	838	600	376	435	2103	1412	530	360	200	295	193	72	398	-	3/4	2160	30
14-8300-300-CL	3526	795	600	376	435	2103	1423	530	392	200	330	193	72	528	-	3/4	2112	35
14-8300-350-CL	3698	795	600	376	435	2013	1595	530	480	200	330	193	72	528	-	3/4	2455	48
18-9600-235-CL	4178	940	739	425	493	2695	1483	559	340	230	340	193	176	404	-	3/4	2610	25
18-9600-280-CL	4165	940	739	425	493	2695	1470	559	360	230	340	193	176	404	-	3/4	2650	35
18-9600-300-CL	4176	1878	648	425	493	2695	1481	559	392	230	340	193	86	562	-	3/4	2690	40
18-9600-350-CL	4338	864	648	425	493	2685	1653	559	480	230	340	193	86	562	-	3/4	2945	55
18-9800-235-CL	4168	940	738	425	493	2685	1483	559	340	230	340	193	176	404	-	3/4	2960	25
18-9800-280-CL	4155	940	738	425	493	2685	1470	559	360	230	340	193	176	404	-	3/4	3000	35
18-9800-300-CL	4166	864	648	425	493	2685	1481	559	392	230	355	193	86	562	-	3/4	3040	40
18-9800-350-CL	4338	864	648	425	493	2685	1653	558	480	230	355	193	86	562	-	3/4	3295	55
18-10500-280-CL	4239	940	760	425	493	2769	1470	670	360	230	340	193	142	618	-	3/4	3281	35
18-10500-300-CL	4250	940	760	425	493	2769	1481	670	392	230	340	193	142	618	-	3/4	3321	40
18-10500-350-CL	4422	940	760	425	493	2769	1653	670	480	230	340	193	142	618	-	3/4	3351	55
18-11000-280-CL	4123	920	760	425	493	2653	1470	670	360	230	340	193	142	404	-	3/4	3251	35
18-11000-300-CL	4134	920	760	425	493	2653	1481	670	392	230	355	193	142	618	-	3/4	3281	40
18-11000-350-CL	4306	920	760	425	493	2653	1653	670	480	230	355	193	142	618	-	3/4	3321	55
32-12000-300-CL	4590	1130	890	505	585	2909	1681	800	392	270	420	236	164	726	3/4	3/4	4700	48
32-12000-350-CL	4795	1130	890	505	585	2909	1886	800	480	270	420	236	164	726	3/4	3/4	4900	65
32-15000-300-CL	4590	1130	890	505	585	2909	1681	800	392	270	420	236	164	890	3/4	3/4	4840	48
32-15000-350-CL	4795	1130	890	505	585	2909	1886	800	480	270	420	236	164	726	3/4	3/4	5140	65
50-15400-300-CL	4828	1092	890	551	633	3027	1802	800	460	300	387	233	167	723	3/4	3/4	5420	52
50-15400-350-CL	4960	1092	890	551	633	3027	1933	800	460	300	387	233	167	723	3/4	3/4	6210	72
50-15600-300-CL	4828	1130	890	551	633	3027	1802	800	460	300	387	233	167	723	3/4	3/4	5358	52
50-15600-350-CL	4960	1092	890	551	633	3027	1933	800	460	300	387	233	167	723	3/4	3/4	6148	72

# GIGS SPRING RETURN GAS POWERED ACTUATOR

## OVERALL DIMENSIONS - SPRING TO OPEN, MODELS 0.3-008A-45-OP TO 6-3800-200-OP



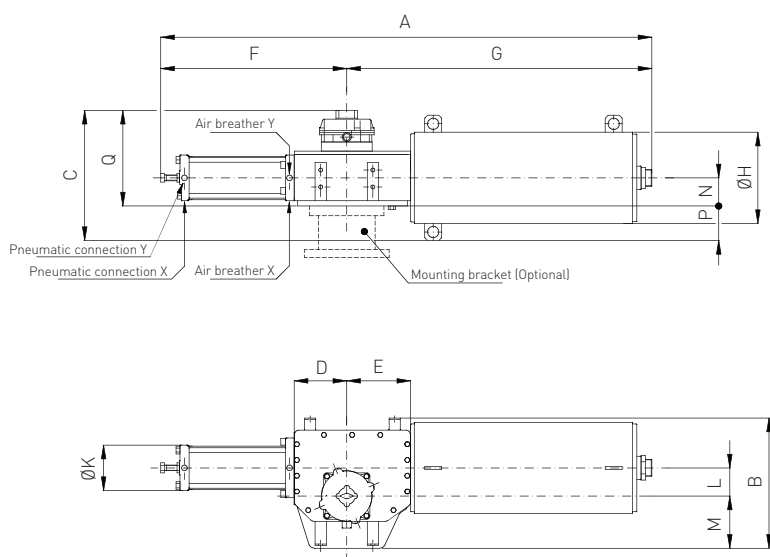
### DIMENSIONS (mm)

Model	A	B	C	D	E	F	G	ØH	ØK	L	M	N	P	Q	Pneumatic connection NPT (in)		Weight (kg)	Gas consumption (liters)
															x	y		
0.3-008A-45-OP	1301	262	192	136	151	572	729	147	75	70	119	70	4	188	½	-	62	0.35
0.3-008A-75-OP	1286	319	200	136	151	555	729	147	116	70	119	70	4	188	½	-	62	0.80
0.3-008B-45-OP	1301	262	192	136	151	572	729	147	75	70	119	70	4	188	½	-	62	0.35
0.3-008B-75-OP	1286	319	200	136	151	555	729	147	116	70	119	70	4	188	½	-	62	0.80
0.3-008C-45-OP	1301	262	192	136	151	572	729	147	75	70	119	70	4	188	½	-	62	0.35
0.3-008C-75-OP	1286	319	200	136	151	555	729	147	116	70	119	70	4	188	½	-	62	0.80
0.3-0100-45-OP	1402	300	293	136	151	572	830	223	75	70	119	70	42	251	½	-	75	0.35
0.3-0100-75-OP	1386	319	293	136	151	555	830	223	116	70	119	70	42	251	½	-	80	0.80
0.3-0100-100-OP	1419	319	293	136	151	589	830	233	125	70	119	70	42	251	½	-	84	1.40
0.3-0150-45-OP	1350	300	283	136	151	572	778	223	75	70	119	70	42	241	½	-	75	0.35
0.3-0150-75-OP	1334	319	283	136	151	556	778	223	100	70	119	70	42	151	½	-	80	0.80
0.3-0150-100-OP	1368	319	283	136	151	590	778	223	125	70	119	70	42	151	½	-	84	1.40
0.9-0200-100-OP	1501	413	300	160	190	614	887	240	125	80	170	82	37	175	½	-	147	1.60
0.9-0200-135-OP	1561	413	300	160	190	674	887	240	160	80	170	82	37	175	½	-	166	2.80
0.9-0250-100-OP	1430	413	300	160	190	614	816	240	125	80	170	82	37	262	½	-	147	1.60
0.9-0250-135-OP	1489	413	300	160	190	673	816	240	160	80	170	82	37	262	½	-	166	2.80
0.9-0350-100-OP	1554	413	370	160	190	614	940	310	125	80	170	82	73	175	½	-	181	1.60
0.9-0350-135-OP	1614	413	370	160	190	674	940	310	160	80	170	82	73	175	½	-	200	2.80
0.9-0400-100-OP	1488	413	370	160	190	614	874	310	125	80	170	82	73	175	½	-	176	1.60
0.9-0400-135-OP	1548	413	370	160	190	674	874	310	160	80	170	82	73	175	½	-	195	2.80
0.9-0700-100-OP	1515	413	370	160	190	614	901	310	125	80	170	82	73	175	½	-	198	1.60
0.9-0700-135-OP	1575	413	370	160	190	674	901	310	160	80	170	82	73	175	½	-	217	2.80
1.5-1100-135-OP	1749	470	458	187	227	701	1048	370	160	100	185	100	85	215	½	-	349	3.50
1.5-1100-175-OP	1835	470	440	187	227	787	1048	370	196	100	185	100	85	215	½	-	368	5.60
1.5-1200-135-OP	1818	469	384	187	227	701	1117	324	160	100	185	100	62	215	½	-	322	3.50
1.5-1200-175-OP	1904	469	384	187	227	787	1117	324	196	100	185	100	62	215	½	-	341	5.60
3-2000-135-OP	2444	586	466	285	330	1006	1438	415	160	160	215	106	98	222	½	-	617	3.60
3-2000-175-OP	2558	586	466	285	330	1120	1438	415	196	160	215	106	98	222	½	-	646	9.50
6-2500-175-OP	3120	740	443	327	379	1162	1958	383	196	185	260	140	52	285	½	-	831	11.00
6-2500-200-OP	3212	740	443	327	379	1254	1958	383	230	185	260	140	52	285	¾	-	884	14.00
6-3800-175-OP	3350	740	600	327	379	1162	2188	530	196	185	260	140	125	285	½	-	1344	11.00
6-3800-200-OP	3442	740	600	327	379	1254	2188	530	230	185	260	140	125	285	-	¾	1397	14.00



# GIGS SPRING RETURN GAS POWERED ACTUATOR

## OVERALL DIMENSIONS - SPRING TO OPEN, MODELS 14-5100-200-OP TO 50-15600-350-OP



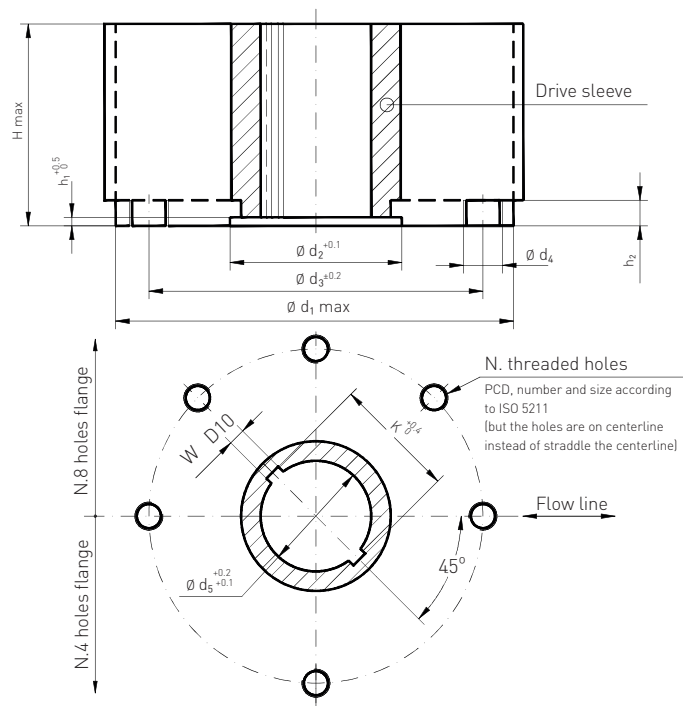
### DIMENSIONS (mm)

Model	A	B	C	D	E	F	G	ØH	ØK	L	M	N	P	Q	Pneumatic connection NPT (in)		Weight (kg)	Gas consumption (liters)
															x	y		
14-5100-200-OP	3453	838	600	376	435	1301	2151	530	230	200	295	193	72	528	-	¾	1952	15
14-5100-235-OP	3452	838	600	376	435	1301	2151	530	339	200	295	193	72	528	-	¾	2012	21
14-5100-280-OP	3504	838	600	376	435	1353	2151	530	360	200	295	193	72	528	-	¾	2062	30
14-5100-300-OP	3515	795	600	376	435	1364	2151	530	392	200	330	193	72	528	-	¾	2100	35
14-5100-350-OP	3687	795	600	376	435	1536	2151	530	480	200	330	193	72	528	-	¾	2062	48
14-5400-200-OP	3402	838	600	376	435	1303	2099	530	230	200	295	193	72	398	-	¾	2000	15
14-5400-235-OP	3401	838	600	376	435	1302	2099	530	340	200	295	193	72	398	-	¾	2060	21
14-5400-280-OP	3452	838	600	376	435	1353	2099	530	360	200	295	193	72	398	-	¾	2110	30
14-5400-300-OP	3463	795	600	376	435	1364	2099	530	392	200	330	193	72	528	-	¾	2158	35
14-5400-350-OP	3635	795	600	376	435	1536	2099	530	480	200	330	193	72	528	-	¾	2405	48
14-8300-200-OP	3465	838	600	376	435	1303	2162	530	230	200	295	193	72	398	-	¾	2050	15
14-8300-235-OP	3464	838	600	376	435	1302	2162	530	340	200	295	193	72	398	-	¾	2110	21
14-8300-280-OP	3515	838	600	376	435	1353	2162	530	360	200	295	193	72	398	-	¾	2160	30
14-8300-300-OP	3526	795	600	376	435	1364	2162	530	392	200	330	193	72	528	-	¾	2112	35
14-8300-350-OP	3698	795	600	376	435	1536	2162	530	480	200	330	193	72	528	-	¾	2455	48
18-9600-235-OP	4178	940	739	425	493	1415	2763	559	340	230	340	193	176	404	-	¾	2610	25
18-9600-280-OP	4165	940	739	425	493	1402	2763	559	360	230	340	193	176	404	-	¾	2650	35
18-9600-300-OP	4176	1878	648	425	493	1413	2763	559	392	230	340	193	86	562	-	¾	2690	40
18-9600-350-OP	4338	864	648	425	493	1585	2763	559	480	230	340	193	86	562	-	¾	2945	55
18-9800-235-OP	4168	940	738	425	493	1415	2753	559	340	230	340	193	176	404	-	¾	2960	25
18-9800-280-OP	4155	940	738	425	493	1402	2753	559	360	230	340	193	176	404	-	¾	3000	35
18-9800-300-OP	4166	864	648	425	493	1413	2753	559	392	230	355	193	86	562	-	¾	3040	40
18-9800-350-OP	4338	864	648	425	493	1585	2753	558	480	230	355	193	86	562	-	¾	3295	55
18-10500-280-OP	4239	940	760	425	493	1402	2873	670	360	230	340	193	142	618	-	¾	3281	35
18-10500-300-OP	4250	940	760	425	493	1413	2873	670	392	230	340	193	142	618	-	¾	3321	40
18-10500-350-OP	4422	940	760	425	493	1585	2873	670	480	230	340	193	142	618	-	¾	3351	55
18-11000-280-OP	4123	920	760	425	493	1402	2721	670	360	230	340	193	142	404	-	¾	3251	35
18-11000-300-OP	4134	920	760	425	493	1413	2721	670	392	230	355	193	142	618	-	¾	3281	40
18-11000-350-OP	4306	920	760	425	493	1585	2721	670	480	230	355	193	142	618	-	¾	3321	55
32-12000-300-OP	4590	1130	890	505	585	1601	2989	800	392	270	420	236	164	726	¾	¾	4700	48
32-12000-350-OP	4795	1130	890	505	585	1805	2989	800	480	270	420	236	164	726	¾	¾	4900	65
32-15000-300-OP	4590	1130	890	505	585	1601	2989	800	392	270	420	236	164	890	¾	¾	4840	48
32-15000-350-OP	4795	1130	890	505	585	1805	2989	800	480	270	420	236	164	726	¾	¾	5140	65
50-15400-300-OP	4828	1092	890	551	633	1822	3112	800	460	300	387	233	167	723	¾	¾	5420	52
50-15400-350-OP	4960	1092	890	551	633	1848	3112	800	460	300	387	233	167	723	¾	¾	6210	72
50-15600-300-OP	4828	1130	890	551	633	1822	3112	800	460	300	387	233	167	723	¾	¾	5358	52
50-15600-350-OP	4960	1092	890	551	633	1848	3112	800	460	300	387	233	167	723	¾	¾	6148	72

# GIG/GIGS GAS POWERED ACTUATORS

## MOUNTING DIMENSIONS - COUPLINGS MODELS 0.3 TO 6

### ACTUATOR MODELS 0.3 TO 6.0



Top view of the Scotch yoke mechanism  
(actuator shown in closed position)

### COUPLING DIMENSIONS (mm) MODELS 0.3 TO 0.6

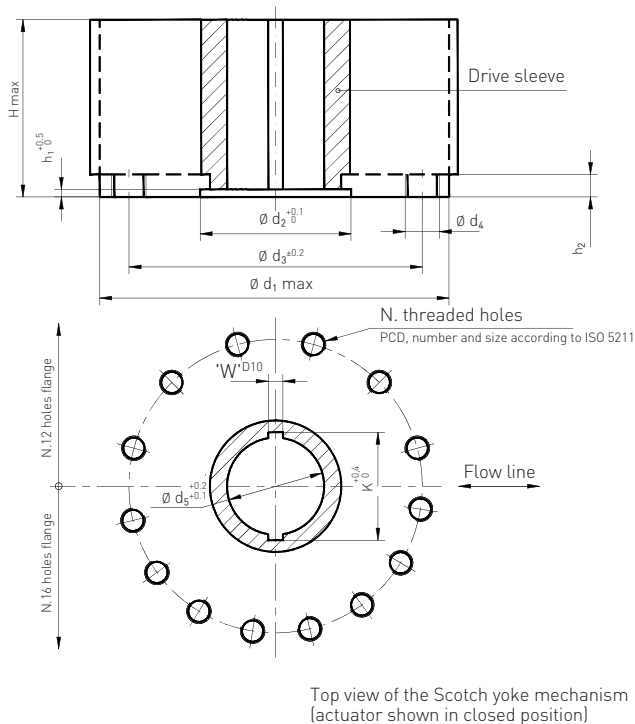
Actuator model	$\varnothing d_1$	$\varnothing d_2$	$\varnothing d_3$	$\varnothing d_4$	N	$h_1$	$h_2$	H max	$\varnothing d_5$	W	K
0.3	240	93	165	M20	4	5	17	127	70	12	75.6
0.9	310	112	254	M16	8	5	19	150	86	14	93.6
1.5	360	144	298	M20	8	6	19	190	112	18	119.0
3	430	195	356	M30	8	9	23	200	157	25	167.8
6	520	250	406	M36	8	14	29	260	200	28	212.8

$\varnothing d_1$  is maximum adapter flange diameter.

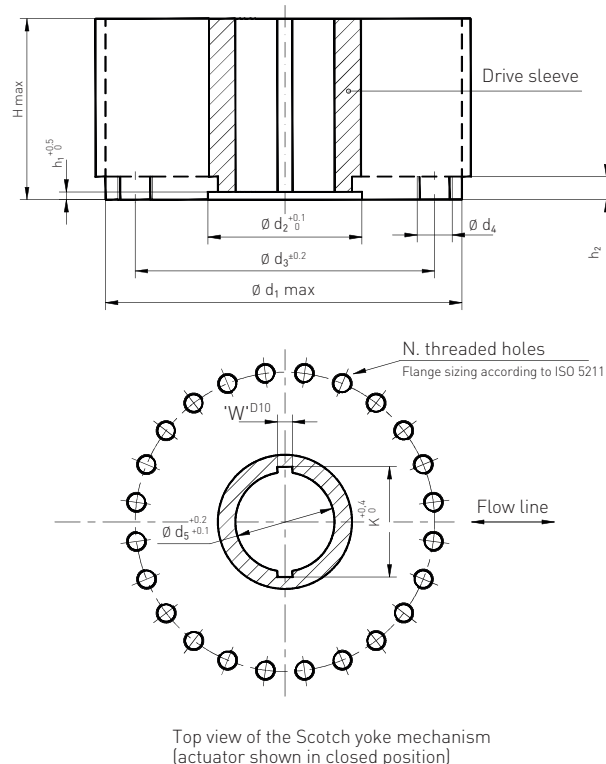
# GIG/GIGS GAS POWERED ACTUATORS

## MOUNTING DIMENSIONS - COUPLINGS MODELS 14 TO 80

### ACTUATOR MODELS 14 TO 32



### ACTUATOR MODELS 50 TO 80



### COUPLING DIMENSIONS (mm) MODELS 14 TO 32

Actuator model	$\varnothing d_1$	$\varnothing d_2$	$\varnothing d_3$	$\varnothing d_4$	N	$h_1$	$h_2$	H max	$\varnothing d_5$	W	K
14	580	250	483	M36	12	10	29	340	175	45	195.8
18	680	290	603	M36	16	12	32	350	200	45	220.8
32	780	290	603	M36	16	12	32	400	220	50	242.8

### COUPLING DIMENSIONS (mm) MODELS 50 & 80

Actuator model	$\varnothing d_1$	$\varnothing d_2$	$\varnothing d_3$	$\varnothing d_4$	N	$h_1$	$h_2$	H max	$\varnothing d_5$	W	K
50	800	315	698	M36	24	10	32	430	240	56	264.8
80	900	370	813	M42	24	9	37	540	280	46	327.0

$\varnothing d_1$  is maximum adapter flange diameter.

# GIG/GIGS GAS POWERED ACTUATORS

## MOUNTING DIMENSIONS - STEM ACCEPTANCE

### MOUNTING DIMENSIONS - STEM ACCEPTANCE

Square key



Rectangular key



Square stem



### STEM ACCEPTANCE DIMENSIONS FOR INSERT BUSHES (mm)

Housing size	Max. stem diameter with square key	Max. stem diameter with	Square stem		Maximum stem protrusion**
	(key dimension)	rectangular key	W	S*	
0.3	52(14)	55	46	64	120
0.9	66(16)	70	55	77	140
1.5	85(18)	90	73	103	180
3	120(32)	130	104	147	190
6	150(36)	170	133	188	250
14	175(38)	197	-	-	360
18	200(45)	220	-	-	360
32	200(45)	230	-	-	430
50	210(50)	240	-	-	440

### NOTES

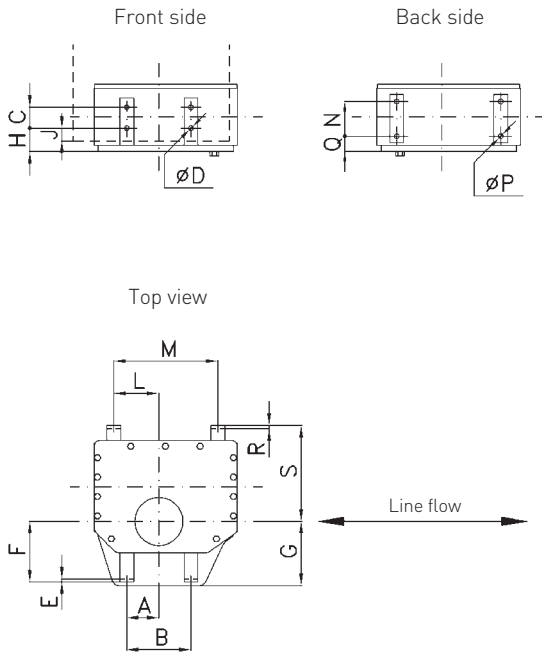
1. The listed maximum acceptance values are applicable for stems with keyway parallel or perpendicular to the flow line and for square stems with diagonal parallel with the flow line.
2. Key according to UNI6604 or DIN 6885 sh.1 or BS4325 part 1 or ISO 773 or equivalent.
3. \* S max: maximum external diameter in case of rounded edge.
4. \*\* Without adapter flange.

# GIG/GIGS GAS POWERED ACTUATORS

## ACCESSORIES MOUNTING DIMENSIONS

### ACCESSORIES MOUNTING DIMENSIONS

Actuator models 0.3 to 80



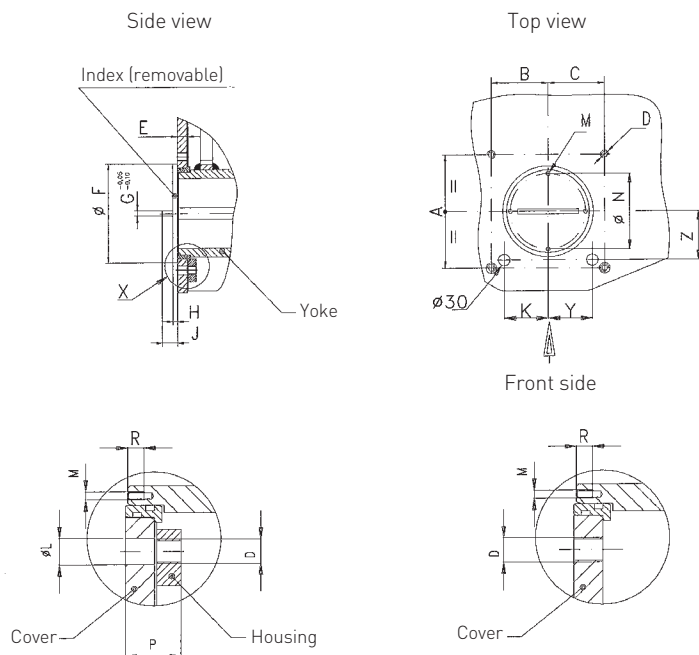
### ACCESSORIES MOUNTING DIMENSIONS (mm)

Actuator model	A	B	C	$\varnothing D$	E	F	G	H	J	L	M	N	$\varnothing P$	Q	R	S
0.3	77.5	155	60	14	5	113	119	37	12	92	200	60	14	36	5	200
0.9	92.5	185	60	14	5	155	170	61	35	85	200	60	14	48	5	243
1.5	92.5	185	60	14	5	175	185	62	35	130	300	100	14	45	5	284
3	117.5	235	85	23	8	203	215	57	25	230	500	100	14	54	5	371
6	137.0	455	115	23	8	248	260	59	22	224	500	100	14	87	8	480
14	315.0	630	200	27	10	227	330	97	55	220	500	170	27	99	8	543
18	315.0	630	200	27	10	235	340	72	32	306	680	215	27	80	10	600
32	315.0	630	200	27	10	385	395	72	32	414	890	215	27	149	10	660
50	387.5	860	250	30	12	372	387	77	35	473	1030	215	27	163	10	1072
80	500.0	1000	250	30	15	437.5	450	107	50	500	1100	215	27	270	15	900

# GIG/GIGS GAS POWERED ACTUATORS

## MOUNTING DIMENSIONS - ACCESSORIES ON ACTUATOR TOP

### ACCESSORIES MOUNTING HOLES ON ACTUATOR TOP (COVER AND YOKE)



X : for model  
0.9 - 1.5 - 6 - 18 - 32 - 50 - 80

X : for model  
0.3 - 3 - 14

The index is represented for actuator in end position (fully open or closed)

### ACCESSORIES MOUNTING HOLES DIMENSIONS (mm)

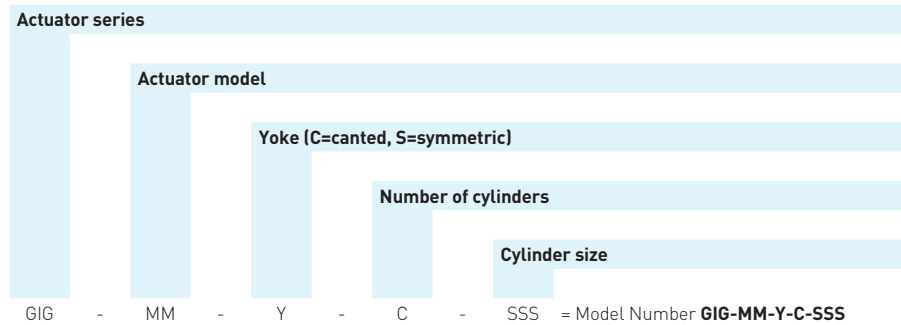
Actuator model	A	B	C	D	E	$\delta F$	G	H	J	$\delta L$	M	$\delta N$	P	R	K	Y	Z
0.3	140	70	70	4 x M10	10	115	6	7.0	19	-	4 x M4	76	-	7	-	-	-
0.9	140	70	70	4 x M10	12	140	6	7.0	19	11.0	4 x M4	93	22	7	-	-	-
1.5	140	70	70	4 x M10	12	165	6	7.0	18	11.0	4 x M5	122	22	7	-	-	-
3	160	127	136	4 x M16	12	220	6	8.0	20	-	4 x M6	171	-	10	107	115	76
6	160	127	136	4 x M16	12	270	6	8.0	20	16.5	4 x M6	216	30	10	-	-	-
14	160	127	136	4 x M16	15	270	6	7.5	19.5	-	4 x M6	216	-	10	-	-	-
18	314	109	109	4 x M16	18	310	6	8.6	14	16.5	4 x M6	240	35	10	-	-	-
32	314	109	109	4 x M16	16	320	6	7.6	17	16.5	4 x M6	250	33	10	-	-	-
50	280.6	138.5	138.5	4 x M20	18	350	6	9.0	16	20.5	4 x M6	278	46	10	-	-	-
80	410	180	180	4 x M24	20	400	6	6.6	16	24.5	4 x M6	334	53	10	-	-	-

# GIG/GIGS GAS POWERED ACTUATORS

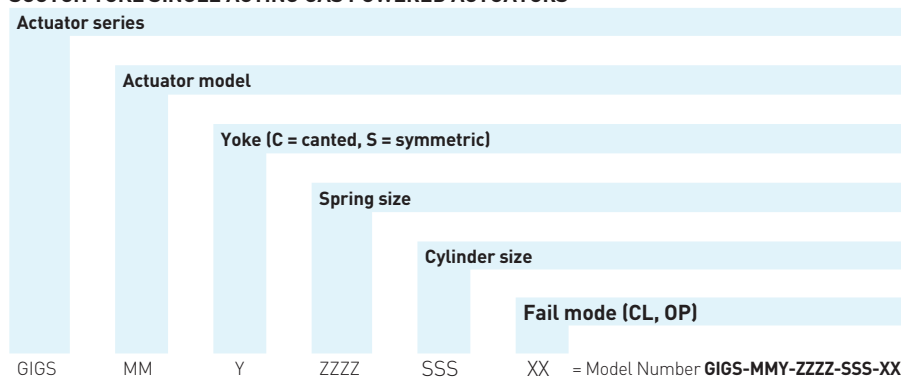
## MODEL DECODING

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### DOUBLE ACTING GAS POWERED ACTUATOR



### SCOTCH YOKE SINGLE ACTING GAS POWERED ACTUATORS





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Global Supply Line are a major Australian stockist of Emerson Biffi Scotch Yoke Pneumatic Spring Return Actuators up to 25,000NM. We can supply complete actuated ESDV (Emergency Shut Down Valve) floating and trunnion ball valves as well as high performance double offset and triple offset butterfly valves in metal seat and soft seat. The Australian Valve Centre is fully approved by all the manufacturers we represent to supply and fit the actuator and controls. We do full in-house testing and all engineering support. View our full stock list of valves and actuators at our website. We also supply and stock Emerson Bettis, and are fully approved by Emerson to supply and automate. Contact us at [sales@globalsupplyline.com.au](mailto:sales@globalsupplyline.com.au)



Biffi reserve the the right to change product designs and specifications without notice.

**Biffi Italia S.r.L.**

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