









Gas over oil actuators are mostly utilized in gas transmission pipelines. Using the das over on actuators are mostly outzed in gas it and means pipernes. Osing the medium of the pipeline with no need to any extra power supply makes them the

Gas over oil actuators

Technical Specifications

Vorking temperature. -20 C up to +80 C Supply medium: sweet gas, nitrogen, (others on request) Certificates: ATEX for electrical components

Designing Standards: ASME Section VIII, Div1 for pressure vessels

Monitoring valve status from control room using Limit Switch device

Vionicoring valve status from control room using Limit Switch device Torque limiting devices for restricting the output torque to prevent damage to the valve.

Working temperature: -20°C up to +80°C

Canted or symmetric scotch-yoke mechanism

Testing Standard: IGS-M-PL-007

Remote operation capability Hand pump for manual override

Features

Working pressure: 7 Bar up to 2006 to 2007 Bar (extended range on request)

Output torques: up to 300,000 N.m (higher values on request)



best choices for transmission pipelines.



Forque umiting devices for restricting the output torque to prevent damage to the valve. Control box with operating procedures including Line Break detecting system, Emergency Shut down valve, ...

Gas over oil - Output torques

	MOP (bar g)		Operation supply pressure(bar g)													
Model		Position	20		30		40		50		60		70		80	
			OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL
GPA-70S-100	35	0	1450	1490	2195	2232										
		45	925	820	1395	1266										
		90	1662	1370	2500	2070										
GPA-805-135	50	0	3072	3130	4622	4718	6215	6310	7700	7905						
		45	1935	1769	2902	2680	3920	3518	5010	4480						
		90	3510	2915	5280	4400	7060	5869	8856	7342						
GPA-100S-175	40	0	7088	7315	10753	11000	14250	14650								
		45	4151	3795	6282	5743	8335	7720								
		90	6859	5730	10420	8610	13830	11560								
	50	0	11680	12100	17800	18200	23340	24100	29130	30101						
GPA-160S-175		45	6950	6310	10460	9480	13790	12800	18300	15905						
		90	11530	9590	17544	15560	23154	19500	28900	24515						
GPA-185S-200	65	0	17880	18100	26645	27110	35577	36254	44954	45849	53240	54200				
		45	10649	9551	15801	14490	21112	19333	26747	24944	31745	28900				
		90	17610	14940	26572	21930	35430	29352	44456	36780	53654	44100				
	80	0	27100	28480	40830	42680	54389	54968	68101	71250	81719	85616	95306	99903	109003	115091
GPA-200S-235		45	15950	14780	23910	22251	31900	29740	39804	37100	47880	44603	55766	51984	63810	59480

90 26150 22241 39301 33402 52510 44590 65643 55791 78809 66970 91926 78209 105094 89416

Operating diagram of Line Break Detecting Systems diagram, a pressure drop in the pipeline would

The ubiquity of natural gas in almost every city, town, and even village in Iran has not been possible without a remarkably extensive pipeline network that makes the issue of safety very serious. Any failure could be resulted into catastrophic consequences. So safety measures have always been a major concern. Among these failures, the pipeline breakage would be most probable one and actuator manufactures have designed some features for their products to respond to this need. In MOBIN gas over oil actuators a fully pneumatic solution is used for this concept. As it is shown in the operating

cause a higher pressure of the reference tank passes through an orifice resulting into a differential pressure which could be sensed in an adjustable diaphragm valve. If the value of differential pressure in the diaphragm exceeds the preset value, the actuator will operate and close the valve. For re-opening the valve after being closed by Line Break system, the manual reset should be reset manually.



1	
	Assembly Name
	indext
	scotch yoke mechanism-Double acting
	Hydraulic cylinder
	Limit switch
	Reference tank for line break device
	Gas storage tank
	Gas hydraulic tank
	Unidirectional flow regulator
	Hand operated directional control valve
	Hand pump
PC	3/2N.C solenoid valve ,manual pverride(to close)
PO	3/2N.C solenoid valve ,manual pverride(to open)
DC	3/2N.C pneumatic pilot/spring return valve(to close)
DO	3/2N.C pneumatic pilot/spring return valve(to open)
	3/2N.O pneumatic pilot/Hand return valve
Α	Check valve with orifice
В	Stop valve
	Dust excluder
Α	Check valve
В	Low pressure vent valve
С	Stop valve for pressure gage
D	Pressure gage
E	2/2 Hand operated valve
F	Higher pressure shuttle valve
	2/2N.C diaphragm pilot valve(adjustable)
	Enclosure with vent valve
	stop valve
	Relief valve
	Manual Drain valve
	Higher pressure shuttle valve
	Torque limite switch
	Gas dehydrating filter
	Gas dehydrating filter for LB device
	Mechanical filter
	Hydraulic filter
	Terminal
	PC PO DO DO DO A B G C D C C D C C C C C C C C C C C C C C

Gas over oil-dimension







Dimensions in mm														
Actuator model	А	В	С	а	b	С	d	е	f	g	h	i	l	
GPA-70S-100	970	631	890	526	274	450	231	323	255	561	70	375	632	
GPA-80S-135	1140	700	852	581	315	493	264	356	289	671	80	401	750	
GPA-100S-175	1240	769	1190	595	324	480	295	379	301	777	100	426	750	
GPA-160s-175	1646	930	1316	585	319	485	393	463	403	1114	160	501	510	
GPA-185S-200	1895	1180	1146	619	378	532	503	298	443	1285	185	689	568	