



Pneumatic Actuator Type AP9001 – Series HP

- Single and Double Acting Versions
- ATEX and PED Certified
- CE Marked
- SIL2 Rated
- Mounting faces according to ISO 5211 and VDI / VDE 3845
- Drive shaft with square ISO 5211 and DIN 3337

Can be used with



Description

Type AP9001 pneumatic rotary actuators are designed for performance and reliability. Offered in both single or double acting pneumatic functions. Classed as a rack and pinion actuator, where linear movement of the unit is obtained from the pilot air, which causes a 90° rotation of the connected valve. Pilot air can be controlled via our Namur solenoid valves or by valve islands from our automation range. Actuator to valve coupling is made via a universal ISO 5211 mounting interface. The status of the valve can be monitored optically via a puck or by fitting feedback switches/inductive sensors. The actuator can also be used for modulating control by fitting one of our range of Side Control positioners.

The benefits of this actuator is that it fits with our modular program for the mounting of quarter turn valves such as ball valves and butterfly valves. Modular interfaces enable cost effective easy to build automation systems.



Description

The AP9001 is a powerful pneumatic actuator used on our modular program of mounting quarter turn ball and butterfly valves. In addition by using the many interfaces provided, it enables pilot solenoid valves and position feedback units to be fitted with ease. All models can be adjusted for both open and closed positions, $\pm 5^\circ$



Beschreibung

Der AP9001 ist ein leistungsstarker pneumatischer Antrieb, der in unserem modularen Programm zur Montage von Vierteldrehkugeln und Absperrklappen verwendet wird. Durch die Verwendung der zahlreichen mitgelieferten Schnittstellen können außerdem Pilotmagnetventile und Positionsrückmeldungseinheiten problemlos eingebaut werden. Alle Modelle können sowohl für offene als auch für geschlossene Positionen von $\pm 5^\circ$ eingestellt werden



Descripción

El AP9001 es un potente actuador neumático que se utiliza en nuestro programa modular de montaje de válvulas de bola y mariposa de cuarto de vuelta. Además, al utilizar las numerosas interfaces proporcionadas, permite instalar fácilmente válvulas solenoides piloto y unidades de retroalimentación de posición. Todos los modelos se pueden ajustar para posiciones abiertas y cerradas, $\pm 5^\circ$



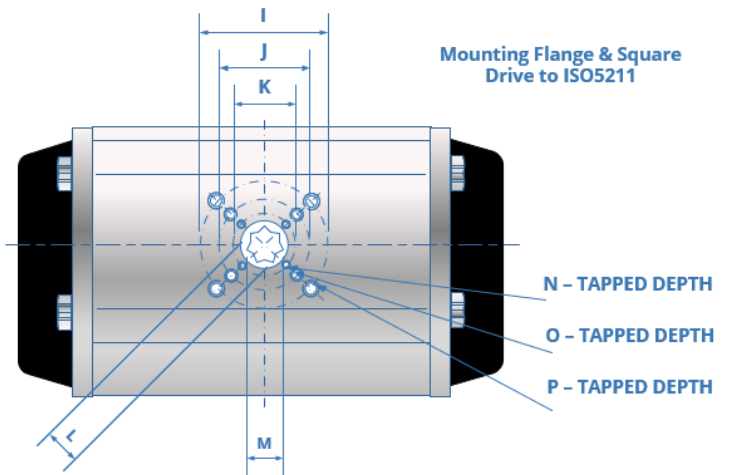
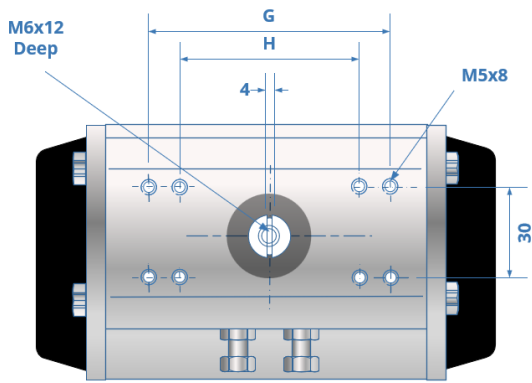
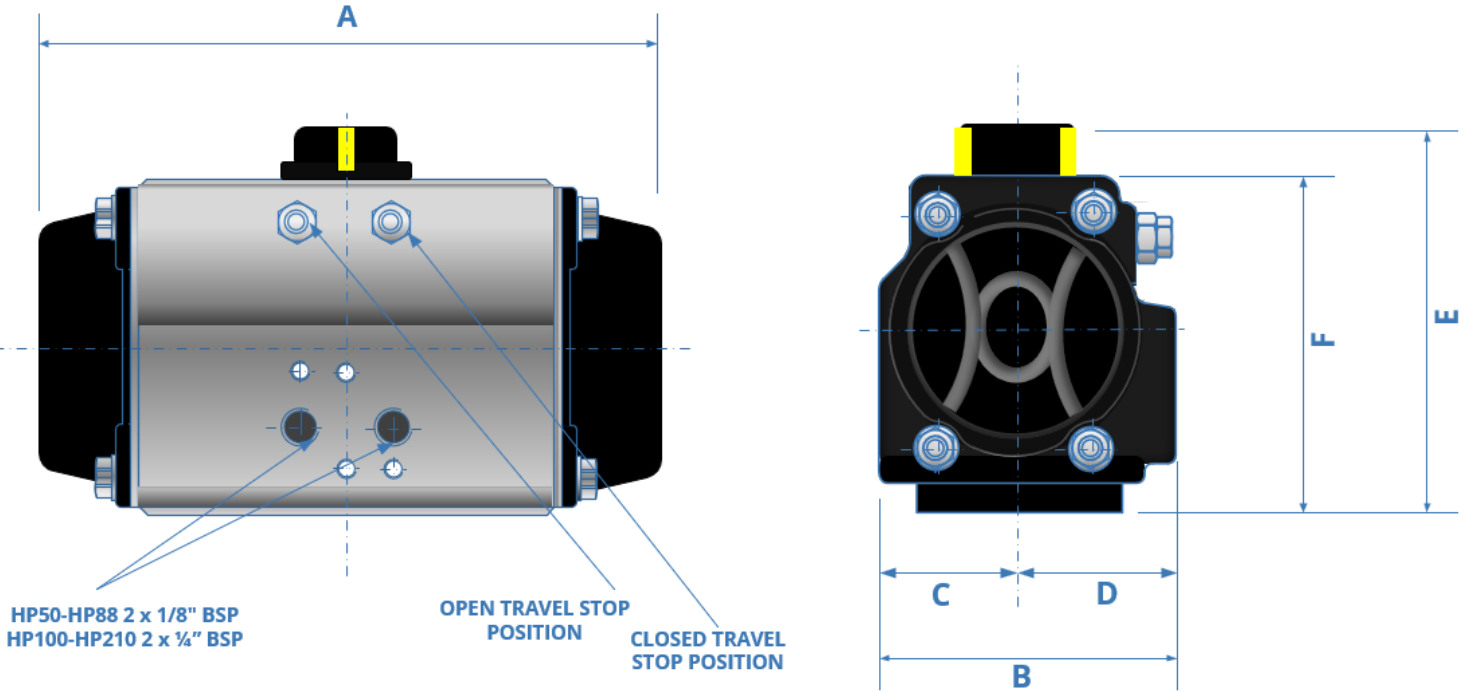
Description

L'AP9001 est un actionneur pneumatique puissant utilisé dans notre programme modulaire de montage de vannes quart de tour à bille et papillon. De plus, en utilisant les nombreuses interfaces fournies, il permet de monter facilement des électrovannes pilotes et des unités de retour de position. Tous les modèles peuvent être ajustés pour les positions ouverte et fermée, $\pm 5^\circ$



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AP9001



HPS - SPRING RETURN
HPD - DOUBLE ACTING

DIMENSIONS AT A GLANCE

MODEL	Mounting	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
HP - 50	F03/F05	144	72	42	30	93	73		80	50	36		14.2	11		M5/8	M6/9
HP - 63	F03/F05	163	85	47	38	107	87		80	70	50		18.2	14		M6/9	M8/12
HP - 66	F05/F07	202	85	47	38	107	87		80	70	50		18.2	14		M6/9	M8/12
HP - 75	F05/F07	210	96	53.5	42.5	124	104		80	70	50		22.2	17		M6/9	M8/12
HP - 88	F05/F07/F10	247	108	58.5	49.5	136	116		80	102	70	50	22.2	17	M6/9	M8/12	M10/15
HP - 100	F07/F10	268	123	67	56	148	128		80	102	70	50	22.2	17	M6/9	M8/12	M10/15
HP - 115	F07/F10	316	141	77	64	166	146		80	102	70		28.2	22		M8/12	M10/15
HP - 125	F07/F10/F12	347	151	82	69	179	159		80	125	102	70	28.2	22	M8/12	M10/15	M12/18
HP - 145	F10/F12	414	172	92	80	209	179	130	80	125	102		36.2	27		M10/15	M12/18
HP - 160	F10/F12	467	190	101	89	226	196	130	80	125	102		36.2	27		M10/15	M12/18
HP - 180	F10/F12	497	206	107	99	251	221	130	80	125	102		48.2	36		M10/15	M12/18
HP - 200	F14	555	227	116	111	277	247	130	80	140			48.2	36			M16/24
HP - 210	F14	628	236	120	116	286	256	130	80	140			48.2	36			M16/24

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TECHNICAL DATA

Actuator	Air Volume/Stroke (litres)		Operatint Time at 6 Bar (Secs)			Weight (Kg)	
	Spring Return	Double Acting	Double Acting	Spring Return		Spring Return	Double Acting
				Opening	Closing		
HP-50	0.1	0.3	<1	<1	<1	1.1	1.4
HP-63	0.2	0.5	<1	<1	<1	1.8	2
HP-66	0.2	0.5	<1	1	<1	2.3	2.6
HP-75	0.3	0.8	<1	1	1	3	3.5
HP-88	0.5	1.3	<1	1	1	4.6	5.3
HP-100	0.7	1.8	<1	1	1	5.8	6.8
HP-115	1.2	3	1	1.5	1.5	8.9	10.3
HP-125	1.5	3.8	1	3	2	11.3	13.2
HP-145	2.4	6.2	2	3	2	16.7	20
HP-160	3.1	7.3	2	3	2	22	26.5
HP-180	4.3	11.2	2	3	2	28	35
HP-200	5.9	15.4	2	4	3	39	48
HP-211	5.1	19.1	4	5	3	46	65
HP-212	9.6	29.6	5	6	3	71	95

The HP Series Pneumatic Actuator body is manufactured from extruded aluminium alloy and is hard anodised to protect both internal and external surfaces against corrosion.

The end caps are diecast aluminium and are coated with polyester.

The pinion shaft is nickel plated alloy steel and the pistons are diecast aluminium.

Self lubricating (polypropylene + GF) piston guides provide travel stability& NBR seals are suitable for standard temperature range.

(Viton seals are available for higher or lower temperature ranges).

All actuators have travel stops for both open and closed position. Springs are pre-loaded to ensure safety when removing end caps.

Double acting actuators can easily be converted to spring return and visa versa.

All actuators are designed to the latest ISO/Namur standards and are ATEX approved.



Specification

Working Pressure	:	Double Acting 2.5 - 8 Bar
	:	Single Acting 2.5 - 8 Bar
Air Supply	:	Air or non corrosive gas (ie Nitrogen)
Working Temperature	:	From -20°C to +80°C (-35°C to +80°C & -20°C to +150°C options available)
	:	
Lubrication	:	Lubricated for normal working life
Rotation	:	Anti clockwise opening To reverse actuator rotation, invert pistons
	:	
Movement	:	Rotation 90 Adjustable 5 each end of stroke)
Certification Available	:	SIL2, ATEX, PED, CE, RINA (Marine)

TORQUE DETAILS

SPRING RETURN TORQUE (Nm) HP50S - 212S ACTUATORS

SPRING RETURN TORQUE (Nm) HP50S - 212S ACTUATORS

ACTUATOR	No. of Springs	Actuation by Springs		TORQUE FROM AIR STROKE (Nm)																
				3.5 Bar		4 Bar		4.5 Bar		5 Bar		5.5 Bar		6 Bar		7 Bar		8 Bar		
		End	Start	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	
HP 50S	S07	5	7																	
	S08	5	8	6	4	8	6	10	7	11	9	13	11	15	12	18	16			
	S09	6	9	6	3	7	5	9	6	11	8	12	10	14	11	17	15	21	18	
	S10	7	10			7	4		8	5	10	7	12	9	13	10	17	14	20	17
	S11	7	11						8	4	9	6	11	8	13	9	16	13	19	16
	S12	8	12										10	7	12	8	15	12	19	15
HP 63S	S07	8	12	13	9	16	12	19	15	22	18	25	21	28	24	34	30			
	S08	9	14	12	7	15	10	18	13	21	16	24	19	27	22	33	28			
	S09	10	15	11	6	14	9	17	12	20	15	23	18	26	21	32	27	37	32	
	S10	11	17			13	7		16	10	19	13	22	16	25	19	31	25	36	30
	S11	12	19						15	8	18	11	21	14	24	17	30	23	35	28
	S12	13	20										20	13	23	16	29	22	34	27
HP 66S	S07	11	17	19	13	23	17	27	21	31	25	36	29	40	34	48	42			
	S08	12	19	17	10	21	14	26	19	30	23	34	27	38	31	47	39			
	S09	14	22	16	8	20	12	24	16	28	20	32	25	37	29	45	37	54	45	
	S10	15	24			18	10		23	14	27	18	31	22	35	26	43	35	52	43
	S11	17	26						21	11	25	16	29	20	34	24	42	32	50	41
	S12	18	29										28	17	32	22	40	30	49	38
HP 75S	S07	16	24	25	16	30	22	36	28	42	33	48	39	53	45	65	56			
	S08	18	28	23	13	28	18	34	24	40	30	46	36	51	41	63	53			
	S09	20	31	20	9	26	15	32	21	38	26	43	32	49	38	61	49	72	61	
	S10	22	35			24	11		30	17	35	23	41	29	47	34	58	46	70	57
	S11	24	38						27	14	33	19	39	25	45	31	56	42	68	54
	S12	27	42										37	22	42	27	54	39	66	51
HP 88S	S07	26	40	39	24	48	33	57	43	67	52	76	61	85	70	103	89			
	S08	29	46	35	18	44	28	54	37	63	46	72	55	81	64	100	83			
	S09	33	52	32	13	41	22	50	31	59	40	68	49	78	59	96	77	114	95	
	S10	37	58			37	16		46	25	56	34	65	44	74	53	92	71	110	89
	S11	40	64						43	20	52	29	61	38	70	47	89	66	107	84
	S12	44	69										57	32	67	41	85	60	103	78
HP 100S	S07	36	55	60	40	74	54	87	68	101	81	115	95	128	109	156	136			
	S08	41	63	55	33	69	46	82	60	96	74	110	87	123	101	151	128			
	S09	46	71	50	25	64	38	77	52	91	66	105	79	118	93	146	120	168	143	
	S10	51	79			59	30		72	44	86	58	99	71	113	85	140	112	163	135
	S11	56	87						67	36	81	50	94	63	108	77	135	104	158	127
	S12	61	95										89	56	103	69	130	97	153	120
HP 115S	S07	57	92	93	59	115	80	136	102	158	123	179	145	201	166	244	209			
	S08	66	105	85	46	106	67	128	89	149	110	171	132	192	153	235	196			
	S09	74	118	77	33	98	54	120	76	141	97	163	119	184	140	227	183	270	226	
	S10	82	131			90	41		112	63	133	84	155	106	176	127	219	170	262	213
	S11	90	144						103	50	125	71	146	93	168	114	211	157	254	200
	S12	98	157										138	80	160	101	203	144	246	187
HP 125S	S07	74	115	121	79	148	107	176	134	204	162	231	190	259	218	314	273			
	S08	84	132	110	62	138	90	165	117	193	145	221	173	249	201	304	256			
	S09	95	148	100	46	127	74	155	101	183	129	210	157	238	185	293	240	349	295	
	S10	105	165			117	57		144	84	172	112	200	140	228	168	283	223	338	278
	S11	116	181						133	68	161	96	189	124	217	152	272	207	327	262
	S12	126	198										179	107	207	135	262	190	317	245
HP 145S	S07	115	180	190	125	233	168	277	212	320	255	364	299	407	342	494	429			
	S08	132	206	173	99	216	142	260	186	303	229	347	273	390	316	477	403			
	S09	148	232	157	73	200	116	244	160	287	203	331	247	374	290	461	377	548	464	
	S10	165	258			183	90		227	134	270	177	314	221	357	264	444	351	531	438
	S11	181	283						211	109	254	152	298	196	341	239	428	326	515	413
	S12	198	309										281	170	324	213	411	300	498	387
HP 160S	S07	157	233	240	164	297	221	354	278	410	334	467	391	524	448	637	561			
	S08	180	266	217	131	274	188	331	245	387	301	444	358	501	415	614	528			
	S09	202	299	195	98	252	155	309	212	365	268	422	325	479	382	592	495	706	609	
	S10	224	332			230	122		287	179	343	235	400	292	457	349	570	462	684	576
	S11	247	365						264	146	320	202	377	259	434	316	547	429	661	543
	S12	269	399										355	225	412	282	525	395	639	509
HP 180S	S07	221	332	315	204	392	281	468	357	545	434	621	510	698	587	851	740			
	S08	253	379	283	157	360	234	436	310	513	387	589	463	666	540	819	693			
	S09	285	426	251	110	328	187	404	263	481	340	557	416	634	493	787	646	940	799	
	S10	316	474			297	139		373	215	450	292	526	368	603	445	756	598	909	751
	S11	348	521						341	168	418	245	494	321	571	398	724	551	877	704
	S12	379	568										463	274	540	351	693	504	846	657
HP 200S	S07	298	441	446	303	553	410	659	516	765	622	872	729	978	835	1191	1048			
	S08	340	504	404	240	511	347	617	453	723	559	830	666	936	772	1149	985			
	S09	383	567	361	177	468	284	574	390	680	496	787	603	893	709	1106	922	1319	1135	
	S10	425	630			426	221		532	327	638	433	745	540	851	646	1064	859	1277	1072
	S11	468	693						489	264	595	370	702	477	808	583	1021	796	1234	1009
	S12	510	756										660	414	766	520	979	733	1192	946

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TORQUE DETAILS

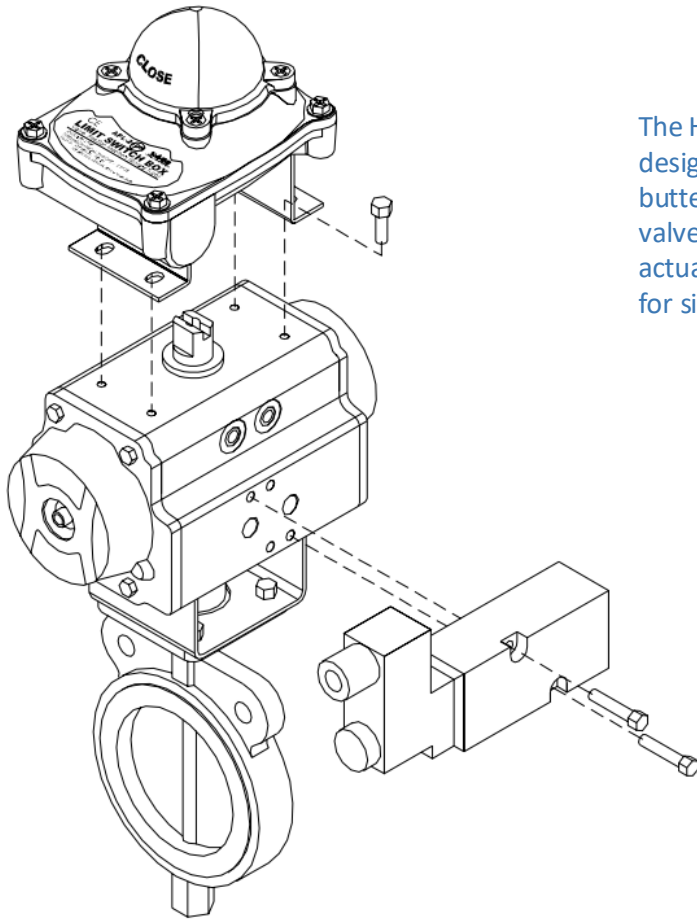
SPRING RETURN TORQUE (Nm) HP50S - 212S ACTUATORS

HP 211S	AIR TORQUE			SPRING TORQUE		
	Start	Run	End	Start	Run	End
4.2 Bar	1114	452	634	678	283	393
5.6 Bar	1385	537	724	1026	446	624
HP 212S	AIR TORQUE			SPRING TORQUE		
	Start	Run	End	Start	Run	End
4.2 Bar	2226	904	1266	1356	565	780
5.6 Bar	2769	1074	1446	2045	883	1243

HP DOUBLE ACTING TORQUE (Nm) - HPD ACTUATORS








ACTUATOR	2.5 Bar	3 Bar	3.5 Bar	4 Bar	4.5 Bar	5 Bar	5.5 Bar	6 Bar	7 Bar	8 Bar
HP 50D	8.3	10	12	13	15	17	18	20	23	27
HP 63D	15	18	21	24	27	30	33	36	42	47
HP 66D	21	25	30	34	38	42	46	50	59	67
HP 75D	29	35	40	46	52	57	63	69	80	92
HP 88D	46	55	65	74	83	92	101	111	129	147
HP 100D	68	82	96	109	123	137	150	164	191	214
HP 115D	108	129	151	172	194	215	237	258	301	344
HP 125D	139	166	194	222	249	277	305	332	388	443
HP 145D	218	261	305	348	392	435	479	522	609	696
HP 160D	284	341	397	454	511	567	624	681	794	908
HP 180D	383	459	536	612	689	766	842	919	1072	1225
HP 200D	532	638	744	851	957	1063	1170	1276	1489	1702

Modular System



The HP Series Pneumatic Actuator is a versatile and modular designed prime mover. When fitted to either ball or butterfly valves, the assembly is considered an actuated valve primarily used for automatic isolation. This pneumatic actuated valve can be fitted with a multitude of accessories for single valve or multi valve systems.

Modular accessories

Mechanical Switches	Combined Limit Switchbox and Pilot Solenoid Valve	Inductive Sensors	Pilot Solenoids	Manual Gearbox Override	Flow Restrictors & Silencers	Filter Regulators
						

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