



**AIR TORQUE**

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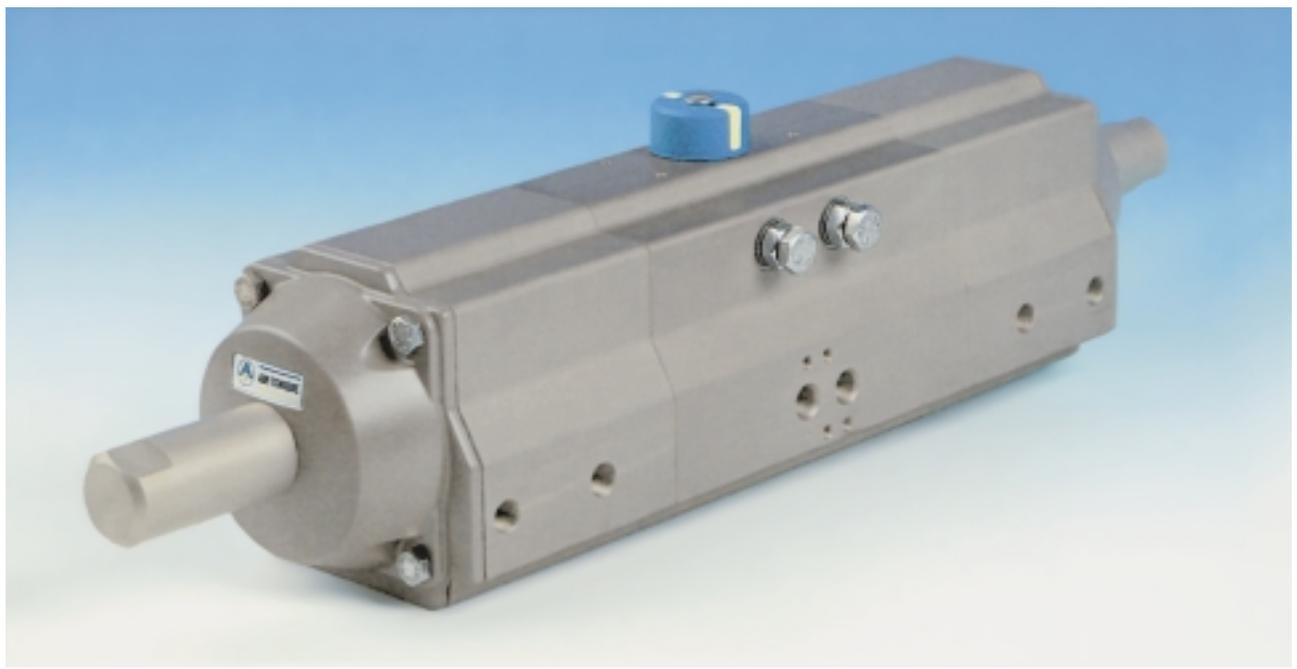


## 3-POSITION 4th GENERATION ACTUATORS (90° Rotation)

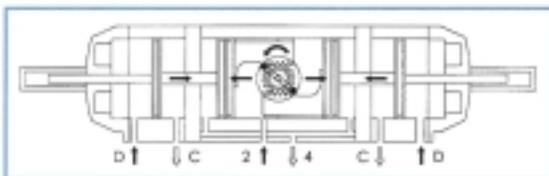
AIR TORQUE 3 position pneumatic actuators provide an operation of 0° - 45° - 90°. The intermediate position is achieved by an external mechanical stop of movement on the 2 auxiliary pistons (for spring return actuators it may be only one auxiliary piston). This intermediate stop position is adjustable from 0° to 90°, for example 5°, 20°, 30°, 50°, 75° etc. The intermediate position is easily achieved by adjusting the external nuts located outside the two end-caps.

Both type, double acting and spring return, are available.

Field of application: For dosing, for exact filling and for any kind of services where on 90° rotation an intermediate stop position is desired.

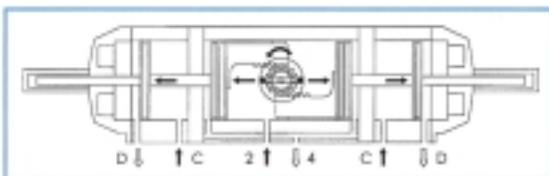


In order to control the operation of AIR TORQUE 3-position pneumatic actuators a system of solenoid valves controlling a sequence of air supplies to the actuator is required as described below:



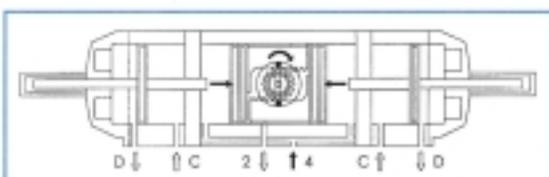
### Position 1 (Intermediate Position):

This position is achieved when air is supplied simultaneously to ports 2 and D with exhaust air at ports 4 and C. In fact the air supplied at ports D forces the auxiliary pistons to the center and the rods serve as mechanical stops for the internal pistons stopping in the desired intermediate position.



### Position 2 (Fully Open Position):

This position is achieved when air supplied to port 2 and port C (Air to port C may also be avoided) with exhaust air at port 4. In this condition air to port 2 permits air to the internal pistons to continue the opening stroke.



### Position 3 (Fully closed Position):

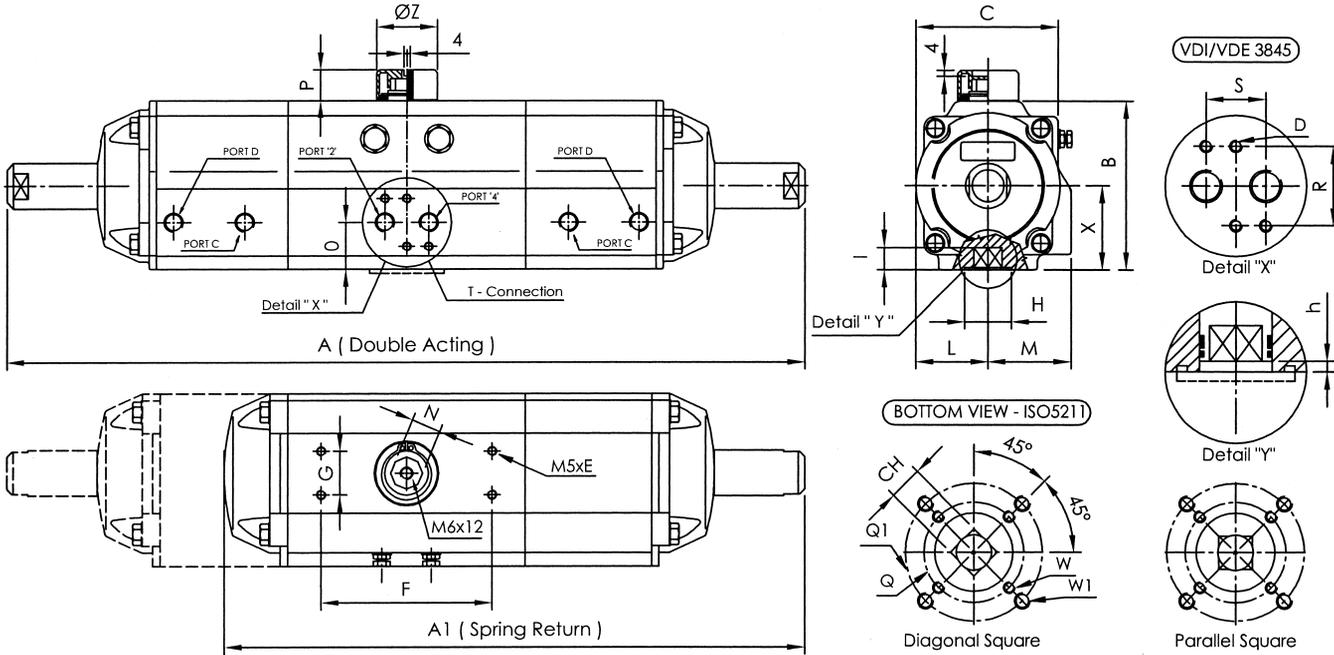
This position is achieved when air is supplied to port 4 with exhaust air at port 2.

When ordering 3-Position pneumatic actuators, add "3P" ( Ex. **3P** AT 300 D A F07 17 ) to the normal actuator code and specify the desired stop position including the intermediate e.g. 0° - 45° - 90°.



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**DIMENSIONS IN mm**

ACTUATOR MODEL	A (D)	A1 (S)	B	C	D	E	F	G	H	I min.	L	M	N	O	P	Q	Q1	R	S	W	W1	T - ISO 228	ISO Flange*	CH*	h min.	X	Z	Approx. Weight D/S (Kg)
3P AT050 D/S	392	275	85	72	M5x8	8	80	30	35	16	36	47	11	30	20	50	-	32	24	M6	-	1/8"	F05	14	0,5	42,5	40	2,88 / 2,35
3P AT100 D/S	480	346	102	84,5	M5x8	8	80	30	35	16	42,5	52	19	30,5	20	50	-	32	24	M6	-	1/8"	F05	14	1,5	51	40	5,1 / 4,31
3P AT200 D/S	617	443	127	111	M5x8	8	80	30	55	19	56	67	19	37,5	20	70	-	32	24	M8	-	1/4"	F07	17	1,5	63,5	40	10,4 / 9,0
3P AT300 D/S	800	573	157	136	M5x8	8	80	30	70	24	69,5	82	27	45	30	102	-	32	24	M10	-	1/4"	F10	22	1,5	78,5	56/65	20,2 / 17,6
3P AT400 D/S	991	714	196	169	M5x8	8	80	30	85	29	88	99	27	52	30	125	-	32	24	M12	-	1/4"	F12	27	1,5	98	65	40,4 / 34,3
3P AT600 D/S																												

\*Notes: Other connections available.

**METRIC TORQUE RATINGS**

Supply Pressure:		2,5 Bar		3 Bar		3,5 Bar		4 Bar		4,2 Bar		4,5 Bar		5 Bar		5,5 Bar		6 Bar		7 Bar		8 Bar		Spring stroke		
Actuator Model*	Spring Set	0° 90°		0° 90°		0° 90°		0° 90°		0° 90°		0° 90°		0° 90°		0° 90°		0° 90°		0° 90°		0° 90°		90° . 0°		
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	
3P AT050 D	S06																									
	S08																									
	S10																									
	S12																									
3P AT100 D	S06	8	4,5	10,9	7,5	13,9	10,4	16,8	13,3	18	14,5	19,7	16,3	22,7	19,2	25,6	22,1								10,1	6,7
	S08					11,6	7	14,6	10	15,7	11,1	17,5	12,9	20,4	15,8	23,4	18,7	26,3	21,7	32,2	27,5				13,5	8,9
	S10											15,3	9,5	18,2	12,4	21,1	15,4	24,1	18,3	29,9	24,2	35,8	30		16,9	11,1
	S12															18,9	12	21,9	14,9	27,7	20,8	33,6	26,7		20,2	13,3
3P AT200 D	S06	15,8	8,3	21,6	14,1	27,5	19,9	33,3	25,8	35,6	28,1	39,1	31,6	44,9	37,4	50,7	43,2								20,8	13,3
	S08					23	13	28,8	18,8	31,2	21,2	34,7	24,7	40,5	30,5	46,3	36,3	52,1	42,1	63,7	53,7				27,7	17,7
	S10											30,2	17,7	36,1	23,6	41,9	29,4	47,7	35,2	59,3	46,8	71	58,5		34,6	22,1
	S12															37,5	22,4	43,3	28,3	54,9	39,9	66,5	51,5		41,5	26,5
3P AT300 D	S06	36,1	19,2	49,4	32,5	62,7	45,8	76	59,1	81,3	64,4	89,3	72,4	103	85,7	116	99								47,3	30,4
	S08					52,5	30	65,8	43,3	71,1	48,7	79,1	56,6	92,4	69,9	106	83,2	119	96,5	146	123				63	40,5
	S10											69	40,9	82,3	54,2	95,6	67,5	109	80,8	135	107	162	134		78,8	50,7
	S12															85,4	51,7	98,7	65	125	92	152	118		94,5	60,8
3P AT400 D	S06	75,5	39,6	103,2	67,3	131	95	159	123	170	134	186	150	214	178	242	206								99	63
	S08					110	62	137,6	89,7	149	101	165	117	193	145	221	173	248	201	304	256				132	84
	S10											144	84,5	172	112	200	140	227	168	283	223	338	278		165	105
	S12															179	107	206	135	262	190	317	245		198	126
3P AT500 D	S06	149	84,3	206	141	262	198	319	255	342	277	376	311	433	368	489	425								199	135
	S08					218	131	274	188	297	211	331	245	388	302	444	358	501	415	615	528				266	180
	S10											286	178	343	235	400	292	456	349	570	462	683	575		332	224
	S12															355	225	411	282	525	396	638	509		399	269
3P AT600 D	S06																									
	S08																									
	S10																									
	S12																									
N° of Springs	The above value are the out-put torque that remain available to operate the valve when the port "Z" is pressurized.																									
															Out-put torque available when air supply fails											

\*Notes: Other models available.