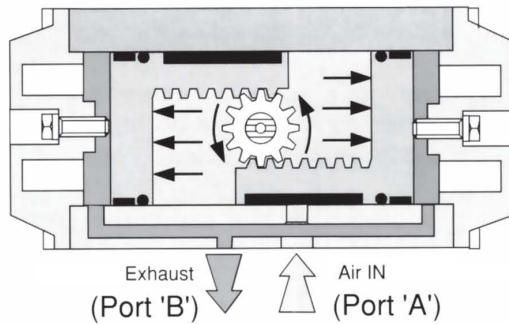
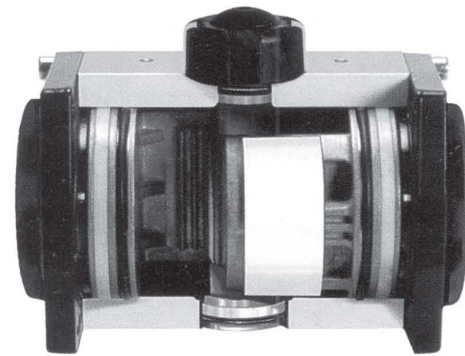


PNEUMATIC ROTARY ACTUATORS AP SERIES

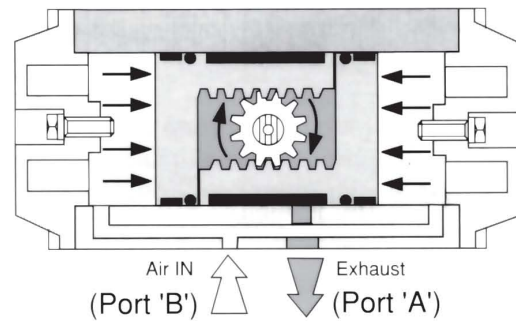
DOUBLE ACTING ACTUATOR (DA) ISO 5211

PRINCIPLE OF OPERATION

Counter clockwise output operation is achieved by inserting pressure into Port 'A', to force the pistons apart thus rotating the actuator pinion counter clockwise, During the operation, air from the outer chambers is exhausted through Port 'B', Clockwise output operation is achieved by reverse of the above and inserting pressure into Port 'B'.



COUNTER CLOCKWISE OUTPUT ROTATION



CLOCKWISE OUTPUT ROTATION

DATA REQUIRED FOR ACTUATOR SIZING

- 1) Valve torque (min, 25% safety recommended).
- 2) Double acting or spring return operation.
- 3) Minimum available operating pressure.

SELECTION OF DOUBLE ACTING ACTUATORS (DA)

Determine the required valve torque, this should include 25% safety margin, and the minimum operating pressure available, Refer to the pressure/torque table and select the minimum pressure column applicable, Follow this column down until a value not less than that required is found, Next read across to the left hand column and read the model number to be ordered.

EXAMPLE: Valve torque 80Nm plus 25% = 100 Nm Minimum operating pressure 5 bar, By reading down the 5 bar column a figure without below 119 Nm is 123 Nm The model number therefore shown in the left hand column is AP4DA.

Remark: the chosen torque valve, which fixes the type of actuator, has never to be lower than the requested torque value of the valve.

TORQUE OUTPUT DOUBLE ACTING ACTUATORS (DA)

		PRESSIONE DI ALIMENTAZIONE - OPERATING PRESSURE							
MODELLO	bar	2	3	4	5	6	7	8	
MODEL	p.s.i.	30	44	58	73	87	102	116	
AP1 DA	Nm	5.9	8.9	11.8	14.8	17.7	21.7	24.8	
	lbf.in	52.6	79.3	105.2	132	157.8	193.5	221.1	
AP2 DA	Nm	9.4	14.1	18.8	23.5	28.2	32.9	37.6	
	lbf.in	83.8	125.7	167.7	209.6	251.5	293.5	335.4	
AP3 DA	Nm	20	30	40	50	60	70	80	
	lbf.in	178.4	267.6	356.8	446	535.2	624.4	713.6	
AP3.5 DA	Nm	34	51	68	85	102	119	136	
	lbf.in	303.3	454.9	606.5	758.2	909	1061.5	1213.2	
AP4 DA	Nm	48	71	95	119	142	168	192	
	lbf.in	428.2	633.3	847.4	1061	1266.6	1498.5	1712.6	
AP4.5 DA	Nm	87.2	130.8	174.4	218	261.6	305.2	348.8	
	lbf.in	777.8	1166.7	1555.6	1944.5	2333.4	2722.3	3111.2	
AP5 DA	Nm	111	167	222	278	333	388.5	444	
	lbf.in	990.1	1489.6	1980.2	2479.7	2970.4	3465.4	3960.5	
AP5.5 DA	Nm	157.6	236.4	315.3	394.1	473	551.8	630.6	
	lbf.in	1405.7	2108.6	2812.4	3515.3	4219.1	4922	5624.9	
AP6 DA	Nm	227	340	454	567	680	794.5	908	
	lbf.in	2024.8	3032.8	4049.6	5057.6	6065.6	7087	8099.4	
AP8 DA	Nm	426	638	851	1064	1276	1491	1704	
	lbf.in	3800	5691	7591	9491	11382	13299	15200	
AP10 DA	Nm	1078	1617	2156	2695	3234	3773	4312	
	lbf.in	9615.8	14423.6	19231.5	24039.4	28847.3	33655.2	38463	

NOTE: The output torque of selected actuator should never be less the required valve torque