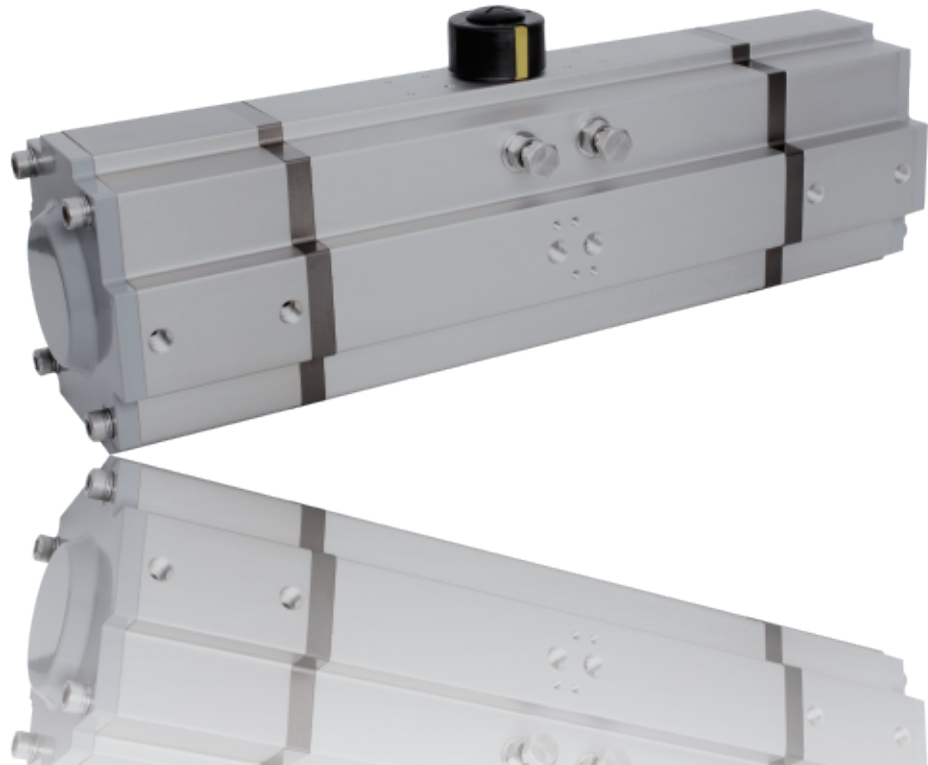


V-TORK®



## VT-3P Series Pneumatic Actuator



- High performance and high reliability
- Fully compliant with the latest international standards and regulations
- More applicable to a wide range of specifications and higher cost performance
- Compact design is better suited for a variety of industrial applications



ATEX2014/34/EU

## Design

VT-3P series pneumatic actuator apply innovative rack and pinion drive mechanism, integrating up-to-date pneumatic actuator technology and materials. VT-series pneumatic actuators are designed as per extensive field mounting and application experience with following product strengths:

- ☆ High performance and high reliability
- ☆ Fully compliant with the latest international standards and regulations
- ☆ More applicable to a wide range of specifications and higher cost performance
- ☆ Compact design is better suited for a variety of industrial applications

## Structure

1. Integrate and compact design utilize the same body and end caps for double-acting and spring-return actuator models. It also benefits less spare parts inventory and is greatly convenient for customers' field application by adding or removing spring cartridges.

2. Fully compliant with the latest international standards including ISO5211, DIN3337 and VDI/VDE3845, etc. Fully compliant with NUMAR standard and convenient to replace or mount accessories including solenoid valves, limit switches.

3. Apply rack and pinion with double pistons in advantages of compact structure, high cycle-life, and swift operation. It is convenient to switch rotation direction only by inverting the pistons for symmetrical mounting position design.

4. Dual independent travel stoppers can conveniently and precisely implement  $\pm 4^\circ$  adjustments externally in two directions, allowing actuators in alignment with valve on both the opening and closing phases of the stroke.

5. Composite bearing and guide on pinion and piston ensure precise operation, low friction and high life cycle, preventing output shaft from fractures.

6. Integrated design of bearing and guide improves security with high resistance to fractures and long cycle-life for Nickel plating process.

7. Rack and pinion tooth in high precision realize less clearance, accurate drive and high output power.

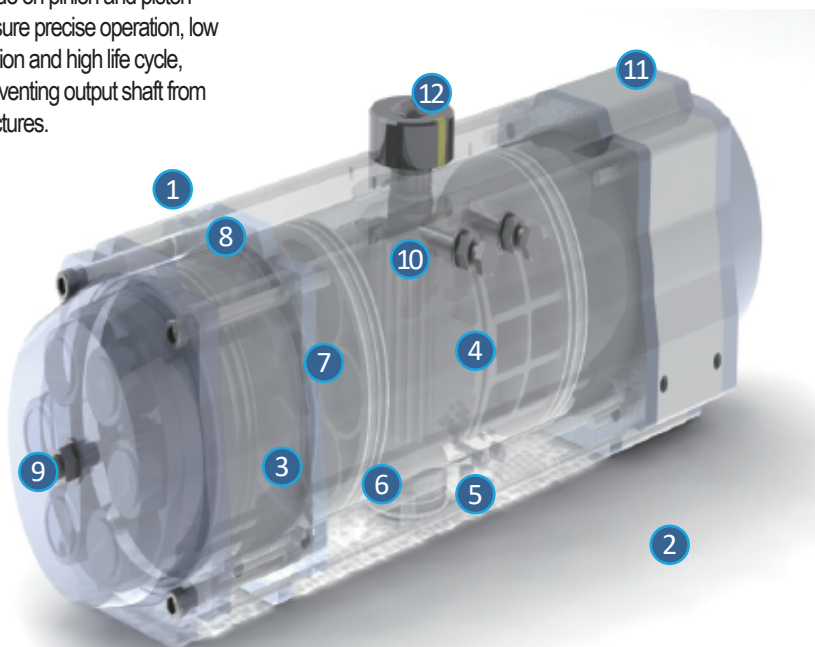
8. Extruded aluminum body is processed with corrosion resistance internally and externally. Fine ground cylinder surface lead to low friction coefficient and high cycle life.

9. Modularized preload spring cartridges with special coating is applicable to a wide range of scenarios with high security and anti-corrosion.

10. High quality bearings are of reliable sealing, low friction, high cycle-life, wide application temperature range.

11. All internal and external fasteners are in corrosion-resistant stainless steel for long term.

12. Multifunctional position indicator with slot in compliance with NAMUR standard offers simplicity and clarity for visual indication. Connection to a variety of standard and common sensors can be easily realized.



## Product Selection Range, Accessories and Quality Management

### Selection Range :

- A. Actuators in all specifications are supplied with 304 or 316 stainless steel output shaft as requested.
- B. For applications under extremely high and low temperature, all models are supplied with corresponding FPM or silicone rubber O-ring with special lubricant.
- C. The female pinion drive is standard with double square and diagonal square output drive at the bottom, and optional with keyed drive, flat head drive. Customized design as per customers' specific requirements are also available.

### Quality Management :

- VT-3P series pneumatic actuators production process is fully compliant to ISO9001.
- 100% of all units are factory pressure and leak tested and externally marked with dedicated serial number for traceability.
- 100% of all units are individually boxed with suitable cardboard carton for protection and appropriately labeled in detail for identification.

### Accessories Options:

- Bracket
- Connector
- Solenoid Valves
- Limit Switch Box
- Proximity Sensor
- Dec clutchable Manual Gear Override
- Positioner
- Complete set of square output shaft in reduced sizes

# Working Condition and Principle

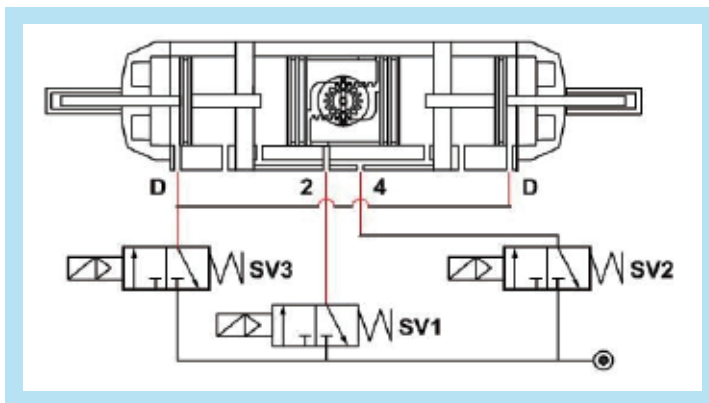
## Working Condition

VT - 3P series pneumatic actuator is a kind of actuator with special specification, providing three positions operation modes of  $0^\circ$ ,  $X^\circ$ ,  $90^\circ$ . The mid position is realized by mechanical limit generated by movement of two auxiliary pistons. The mid position is adjustable that  $90^\circ$  stroke actuator provides the mid positions like  $20^\circ$ ,  $30^\circ$ ,  $50^\circ$ ,  $70^\circ$  for instance.

## Working Principle

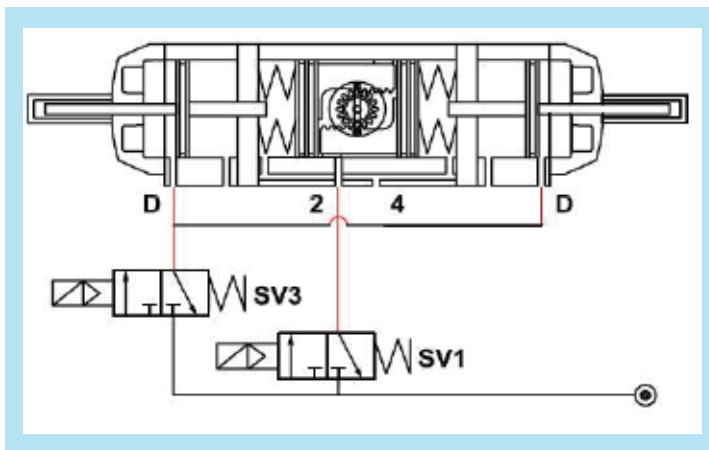
The operation of VT-3P series actuator need to be completed by a set of solenoid valve control circuit system in working principle as below :

### Double Acting Working Principle



Angle	Energized Solenoid valve	Air Inlet
$0^\circ - 90^\circ$	SV1	2
$90^\circ - 0^\circ$	SV2	4
$0^\circ - X^\circ$	SV3 prior to SV1	D、2
$X^\circ - 90^\circ$	SV1	2
$90^\circ - X^\circ$	SV3	D
$X^\circ - 0^\circ$	SV2	4

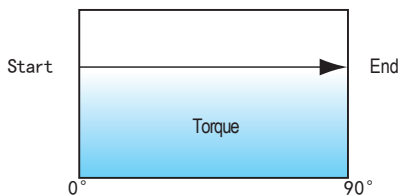
### 单作用工作原理



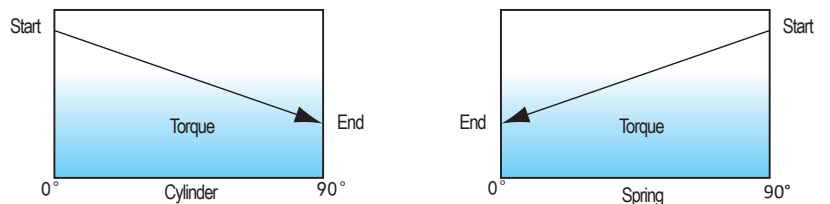
Angle	Energized Solenoid valve	Air Inlet
$0^\circ - 90^\circ$	SV1	2
$90^\circ - 0^\circ$	Spring return , gas loss at port 2	
$0^\circ - X^\circ$	SV3 prior to SV1	D、2
$X^\circ - 90^\circ$	SV1	2
$90^\circ - X^\circ$	SV1 prior to SV3	D、2
$X^\circ - 0^\circ$	Spring return , gas loss at port 2	

## 扭距—公制力矩输出

Double Acting Actuator Torque Output Diagram



Spring Return Actuator Torque Output Diagram



# Torque-Metric Torque Output



Torque(Nm)-Double Acting Actuator										
Model	Air Pressure (Unit: Bar)									
	2.5	3	3.5	4	4.5	5	5.5	6	7	8
VT032	2.9	3.4	4.0	4.6	5.3	5.9	6.5	7.1	8.3	9.5
VT0503P	8.6	10.4	12.3	14.2	16.0	17.9	19.8	21.6	25.4	29.1
VT0653P	17.4	21.2	25.0	28.7	32.5	36.3	40.1	43.9	51.4	59.0
VT0753P	27.0	32.9	38.8	44.7	50.5	56.4	62.3	68.2	79.9	91.7
VT0853P	39.7	48.3	56.9	65.6	74.2	82.8	91.4	100.1	117.3	134.6
VT0953P	55.7	67.9	80.0	92.1	104.2	116.4	128.5	140.6	164.8	189.1
VT1103P	72.0	89.3	105.0	120.6	136.3	152.0	167.6	183.3	214.6	245.9
VT1253P	128.7	159.5	187.5	215.4	243.4	271.4	299.4	327.4	383.3	439.3
VT1403P	196.4	237.4	278.3	319.2	360.2	401.1	442.0	482.9	564.8	646.6
VT1603P	263.5	326.6	383.9	441.2	498.5	555.8	613.1	670.4	785.0	899.7
VT1903P	428.5	518.0	607.3	696.6	785.9	875.3	964.6	1053.9	1232.5	1411.1
VT2103P	598.2	723.2	847.9	972.6	1097.3	1222.0	1346.6	1471.3	1720.7	1970.1
VT2403P	928.3	1121.7	1315.1	1508.5	1701.9	1895.3	2088.7	2282.1	2668.9	3055.7
VT2703P	1305.4	1577.4	1849.4	2121.3	2393.3	2665.2	2937.2	3209.2	3753.1	4297.0
VT3003P	1678.6	2029.4	2379.3	2729.2	3079.1	3429.0	3778.9	4128.8	4828.5	5528.3
VT3503P	2492.5	3011.8	3531.1	4050.4	4569.6	5088.9	5608.2	6127.5	7166.0	8204.6
VT4003P	3798.1	4589.4	5380.7	6172.0	6963.3	7754.5	8545.8	9337.1	10919.7	12502.2

Torque(Nm)-Spring Return Actuator																							
Model	Air Pressure (Unit: Bar)																		Spring Return (Nm)				
	2.5		3		3.5		4		4.5		5		5.5		6		7		8		90°	0°	
	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°					
VT0503PS05	5.1	3.4	6.9	5.3	8.8	7.2	10.7	9.0	12.5	10.9	14.4	12.8								5.2	3.5		
VT0503PS06	4.4	2.4	6.2	4.3	8.1	6.1	10.0	8.0	11.8	9.9	13.7	11.7	15.6	13.6						6.2	4.2		
VT0503PS07			5.5	3.2	7.4	5.1	9.3	7.0	11.1	8.8	13.0	10.7	14.9	12.6	16.7	14.4				7.2	4.9		
VT0503PS08					6.7	4.1	8.6	5.9	10.4	7.8	12.3	9.7	14.2	11.5	16.0	13.4	19.8	17.1		8.2	5.6		
VT0503PS09							7.9	4.9	9.7	6.8	11.6	8.6	13.5	10.5	15.3	12.4	19.1	16.1	22.8	19.8	9.3	6.3	
VT0503PS10									9.0	5.7	10.9	7.6	12.8	9.5	14.6	11.3	18.4	15.1	22.1	18.8	10.3	7.0	
VT0503PS11											10.2	6.6	12.1	8.4	13.9	10.3	17.7	14.0	21.4	17.8	11.3	7.7	
VT0503PS12														11.4	7.4	13.2	9.3	17.0	13.0	20.7	16.7	12.4	8.4
VT0653PS05	8.7	4.3	12.5	8.1	16.3	11.9	20.0	15.6	23.8	19.4	27.6	23.2								13.1	8.7		
VT0653PS06	7.0	1.7	10.7	5.5	14.5	9.2	18.3	13.0	22.1	16.8	25.9	20.6	29.7	24.4						15.7	10.4		
VT0653PS07			9.0	2.8	12.8	6.6	16.6	10.4	20.4	14.2	24.1	18.0	27.9	21.8	31.7	25.5				18.3	12.2		
VT0653PS08					11.0	4.0	14.8	7.8	18.6	11.6	22.4	15.4	26.2	19.1	30.0	22.9	37.5	30.5		21.0	13.9		
VT0653PS09							13.1	5.2	16.9	9.0	20.7	12.7	24.4	16.5	28.2	20.3	35.8	27.9	43.4	35.4	23.6	15.7	
VT0653PS10									15.1	6.3	18.9	10.1	22.7	13.9	26.5	17.7	34.0	25.2	41.6	32.8	26.2	17.4	
VT0653PS11											17.2	7.5	21.0	11.3	24.7	15.1	32.3	22.6	39.9	30.2	28.8	19.1	
VT0653PS12														19.2	8.7	23.0	12.4	30.6	20.0	38.1	27.6	31.4	20.9
VT0753PS05	16.3	10.2	22.2	16.1	28.1	21.9	34.0	27.8	39.8	33.7	45.7	39.6								16.9	10.7		
VT0753PS06	14.2	6.8	20.1	12.7	25.9	18.6	31.8	24.4	37.7	30.3	43.6	36.2	49.4	42.1						20.2	12.8		
VT0753PS07			17.9	9.3	23.8	15.2	29.7	21.1	35.6	26.9	41.4	32.8	47.3	38.7	53.2	44.6				23.6	15.0		
VT0753PS08					21.7	11.8	27.5	17.7	33.4	23.6	39.3	29.4	45.2	35.3	51.0	41.2	62.8	53.0		27.0	17.1		
VT0753PS09							25.4	14.3	31.3	20.2	37.1	26.1	43.0	32.0	48.9	37.8	60.7	49.6	72.4	61.3	30.3	19.3	
VT0753PS10									29.1	16.8	35.0	22.7	40.9	28.6	46.8	34.5	58.5	46.2	70.3	58.0	33.7	21.4	
VT0753PS11											32.9	19.3	38.7	25.2	44.6	31.1	56.4	42.8	68.1	54.6	37.1	23.5	
VT0753PS12														36.6	21.8	42.5	27.7	54.2	39.5	66.0	51.2	40.4	25.7
VT0853PS05	23.2	13.7	31.8	22.3	40.4	30.9	49.0	39.5	57.6	48.1	66.3	56.8								26.1	16.6		
VT0853PS06	19.8	8.4	28.4	17.0	37.1	25.7	45.7	34.3	54.3	42.9	62.9	51.5	71.6	60.2						31.3	19.9		
VT0853PS07			25.1	11.8	33.8	20.5	42.4	29.1	51.0	37.7	59.6	46.3	68.3	55.0	76.9	63.6				36.5	23.2		
VT0853PS08					30.4	15.2	39.1	23.9	47.7	32.5	56.3	41.1	64.9	49.7	73.6	58.4	90.8	75.6		41.7	26.5		
VT0853PS09							35.8	18.7	44.4	27.3	53.0	35.9	61.6	44.5	70.3	53.2	87.5	70.4	104.8	87.7	46.9	29.8	
VT0853PS10									41.1	22.1	49.7	30.7	58.3	39.3	67.0	48.0	84.2	65.2	101.5	82.5	52.1	33.1	
VT0853PS11											46.4	25.5	55.0	34.1	63.6	42.7	80.9	60.0	98.1	77.2	57.3	36.4	
VT0853PS12														51.7	28.9	60.3	37.5	77.6	54.8	94.8	72.0	62.5	39.7
VT0953PS05	33.6	20.9	45.8	33.0	57.9	45.1	70.0	57.3	82.1	69.4	94.3	81.5								34.9	22.1		
VT0953PS06	29.2	13.9	41.4	26.1	53.5	38.2	65.6	50.3	77.7	62.4	89.8	74.5	102.0	86.7						41.8	26.5		
VT0953PS07			36.9	19.1	49.1	31.2	61.2	43.3	73.3	55.4	85.4	67.6	97.5	79.7	109.7	91.8				48.8	30.9		
VT0953PS08					44.6	24.2	56.8	36.4	68.9	48.5	81.0	60.6	93.1	72.7	105.2	84.8	129.5	109.1		55.8	35.4		
VT0953PS09							52.3	29.4	64.5	41.5	76.6	53.6	88.7	65.8	100.8	77.9	125.1	102.1	149.3	126.4	62.7	39.8	
VT0953PS10									60.0	34.5	72.2	46.7	84.3	58.8	96.4	70.9	120.6	95.1	144.9	119.4	69.7	44.2	
VT0953PS11											67.7	39.7	79.9	51.8	92.0	63.9	116.2	88.2	140.5	112.4	76.7	48.6	
VT0953PS12														75.4	44.8	87.6	57.0	111.8	81.2	136.0	105.4	83.6	53.0
VT1103PS05	43.4	26.2	60.7	43.4	76.4	59.1	92.0	74.8	107.7	90.4	123.4	106.1								45.9	28.6		
VT1103PS06	37.7	17.0	55.0	34.3	70.6	49.9	86.3	65.6	102.0	81.3	117.6	96.9	133.3	112.6						55.0	34.3		
VT1103PS07			49.3	25.1	64.9	40.8	80.6	56.4	96.2	72.1	111.9	87.8	127.6	103.4	143.2	119.1				64.2	40.0		
VT1103PS08					59.2	31.6	74.9	47.3	90.5	62.9	106.2	78.6	121.9	94.3	137.5	109.9	168.9	141.3		73.4	45.8		
VT1103PS09							69.1	38.1	84.8	53.8	100.5	69.4	116.1	85.1	131.8	100.8	163.1	132.1	194.5	163.4	82.5	51.5	
VT1103PS10									79.1	44.6	94.8	60.3	110.4	75.9	126.1	91.6	157.4	122.9	188.7	154.2	91.7	57.2	
VT1103PS11											89.0	51.1	104.7	66.7	120.4	82.4	151.7	113.7	183.0	145.1	100.9	62.9	
VT1103PS12														99.0	57.6	114.6	73.2	146.0	104.6	177.3	135.9	110.0	68.6

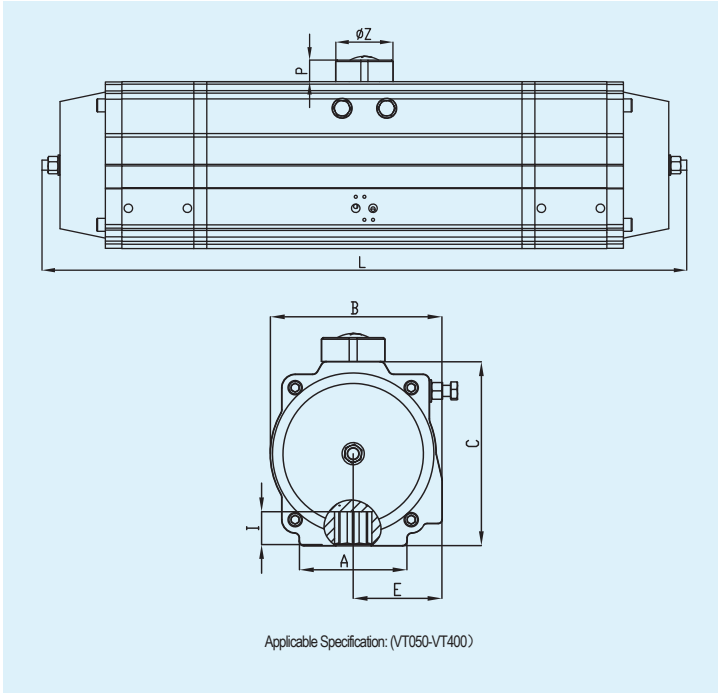
# Torque-Metric Torque Output



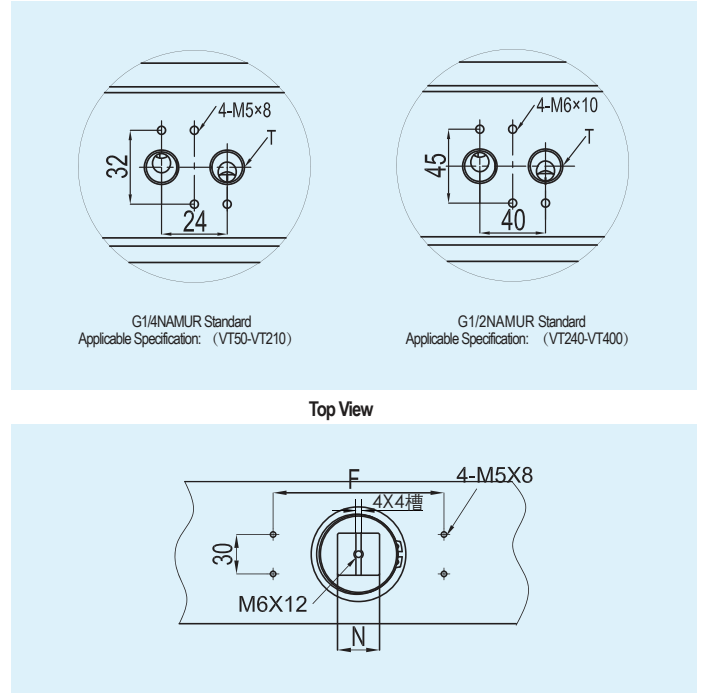
## Torque(Nm) - Spring Return Actuator

Model	Air Pressure (Unit: Bar)																				Spring Return (Nm)		
	2.5		3		3.5		4		4.5		5		5.5		6		7		8				
	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	90°	0°	
VT1253PS05	77.7	48.2	108.5	78.9	136.5	106.9	164.4	134.9	192.4	162.9	220.4	190.9									80.6	51.0	
VT1253PS06	67.5	32.0	98.3	62.8	126.3	90.8	154.2	118.8	182.2	146.8	210.2	174.7	238.2	202.7							96.7	61.2	
VT1253PS07			88.1	46.7	116.1	74.7	144.0	102.7	172.0	130.7	200.0	158.6	228.0	186.6	256.0	214.6					112.8	71.4	
VT1253PS08					105.9	58.6	133.8	86.6	161.8	114.5	189.8	142.5	217.8	170.5	245.8	198.5	301.7	254.4			128.9	81.6	
VT1253PS09							123.6	70.5	151.6	98.4	179.6	126.4	207.6	154.4	235.6	182.4	291.5	238.3	347.5	294.3	145.0	91.8	
VT1253PS10																							
VT1253PS11									141.4	82.3	169.4	110.3	197.4	138.3	225.4	166.3	281.3	222.2	337.3	278.2	161.1	102.0	
VT1253PS12																							
VT1403PS05	114.2	74.1	155.1	115.0	196.1	156.0	237.0	196.9	277.9	237.8	318.8	278.7									122.4	82.3	
VT1403PS06	97.7	49.6	138.7	90.6	179.6	131.5	220.5	172.4	261.5	213.3	302.4	254.3	343.3	295.2							146.8	98.7	
VT1403PS07			122.2	66.1	163.2	107.0	204.1	147.9	245.0	188.9	285.9	229.8	326.9	270.7	367.8	311.6					171.3	115.2	
VT1403PS08					146.7	82.5	187.6	123.5	228.6	164.4	269.5	205.3	310.4	246.2	351.3	287.2	433.2	369.0			195.8	131.6	
VT1403PS09							171.2	99.0	212.1	139.9	253.0	180.9	294.0	221.8	334.9	262.7	416.7	344.6	498.6	426.4	220.2	145.1	
VT1403PS10									195.7	115.5	236.6	156.4	277.5	197.3	318.4	238.2	400.3	320.1	482.1	401.9	244.7	164.5	
VT1403PS11											220.1	131.9		172.8	302.0	213.8	383.8	295.6	465.7	377.5	269.2	181.0	
VT1403PS12													244.6	148.4	285.5	189.3	367.4	271.1	449.2	353.0	293.6	197.4	
VT1603PS05	153.5	15.3	216.6	164.4	273.9	221.7	331.2	279.0	388.5	336.3	445.8	393.6									162.3	110.0	
VT1603PS06	131.5	68.8	1946	131.9	251.9	189.2	309.2	246.5	366.5	303.8	423.8	361.1	481.1	418.4							194.7	132.0	
VT1603PS07			172.6	99.5	229.9	156.8	287.2	214.1	344.5	271.4	401.8	328.7	459.1	386.0	516.4	443.3					227.2	154.0	
VT1603PS08					207.9	124.3	265.2	181.6	322.5	238.9	379.8	296.2	437.1	353.5	494.4	410.8	609.0	525.4			259.6	176.0	
VT1603PS09							243.2	149.2	300.5	206.5	357.8	263.8	415.1	321.1	472.4	378.4	587.0	493.0	701.7	607.6	292.1	198.0	
VT1603PS10									278.5	174.0	335.8	231.3	393.1	288.6	450.4	345.9	565.0	460.5	679.7	575.2	324.5	220.0	
VT1603PS11											313.8	198.9	371.1	256.2	428.4	313.5	543.0	428.1	657.7	542.7	357.0	242.0	
VT1603PS12													349.1	223.7	406.4	281.0	521.0	395.6	635.7	510.3	389.4	264.0	
VT1903PS05	246.8	167.4	336.3	256.9	425.6	346.2	514.9	435.5	604.2	524.8	693.5	614.1									261.2	181.8	
VT1903PS06	210.4	115.1	299.9	204.6	389.2	293.9	478.5	383.3	567.8	472.6	657.2	561.9	746.5	651.2							313.4	218.1	
VT1903PS07			263.6	152.4	352.9	241.7	442.2	331.0	531.5	420.3	620.8	509.6	710.1	599.0	799.4	688.3					365.6	254.5	
VT1903PS08					316.5	189.5	405.8	278.8	495.1	368.1	584.5	457.4	673.8	546.7	763.1	636.0	941.7	814.7			417.8	290.8	
VT1903PS09							369.5	226.6	458.8	315.9	548.1	405.2	637.4	494.5	726.7	583.8	905.3	762.4	1084.0	941.1	470.1	327.2	
VT1903PS10									422.4	263.6	511.8	353.0	601.1	442.3	690.4	531.6	869.0	710.2	1047.6	888.8	522.3	363.5	
VT1903PS11											475.4	300.7	564.7	390.0	654.0	479.3	832.6	658.0	1011.3	836.6	574.5	399.9	
VT1903PS12													528.4	337.8	617.7	427.1	796.3	605.7	974.9	784.4	626.8	436.2	
VT2103PS05	352.8	239.1	477.8	364.1	602.5	488.8	727.2	613.5	851.9	738.2	976.6	862.9									359.1	245.4	
VT2103PS06	303.7	167.3	428.7	292.3	553.4	417.0	678.1	541.7	802.8	666.4	927.5	791.0	1052.2	915.7							430.9	294.5	
VT2103PS07			379.6	220.5	504.3	345.2	629.0	469.8	753.7	594.5	878.4	719.2	1003.1	843.9	1127.8	968.6					502.7	343.6	
VT2103PS08					455.3	273.3	579.9	398.0	704.6	522.7	829.3	647.4	954.0	772.1	1078.7	896.8	1328.1	1146.2			574.6	392.6	
VT2103PS09							530.9	326.2	655.6	450.9	780.2	575.6	904.9	700.3	1029.6	825.0	1279.0	1074.3	1528.4	1323.7	646.4	441.7	
VT2103PS10									606.5	379.1	731.2	503.8	855.8	628.4	980.5	753.1	1229.9	1002.5	1479.3	1251.9	718.2	490.8	
VT2103PS11											682.1	431.9	806.8	556.6	931.5	681.3	1180.8	930.7	1430.2	1180.1	790.0	539.9	
VT2103PS12													757.7	484.8	882.4	609.5	1131.8	858.9	1381.1	1108.3	861.8	589.0	
VT2403PS05	517.8	374.3	711.2	567.7	904.6	761.1	1098.0	954.5	1291.4	1147.9	1484.8	1341.3									554.0	410.5	
VT2403PS06	435.7	263.5	629.1	456.9	822.5	650.3	1015.9	843.7	1209.3	1037.1	1402.7	1230.5	1596.1	1423.9							664.8	492.6	
VT2403PS07			547.0	346.1	740.4	539.5	933.8	732.9	1127.2	926.3	1320.6	1119.7	1514.0	1313.1	1707.4	1506.5					775.6	574.7	
VT2403PS08					658.3	428.7	851.7	622.1	1045.1	815.5	1238.5	1008.9	1431.9	1202.3	1625.3	1395.7	2012.1	1782.5			886.4	656.8	
VT2403PS09							769.6	511.3	963.0	704.7	1156.4	898.1	1349.8	1091.5	1543.2	1284.9	1930.0	1671.7	2316.8	2058.5	997.2	738.9	
VT2403PS10									880.9	593.9	1074.3	787.3	1267.7	980.7	1461.1	1174.1	1847.9	1560.9	2234.7	1947.7	1108.0	821.0	
VT2403PS11											992.2	676.5	1185.6	869.9	1379.0	1063.3	1765.8	1450.1	2152.6	1836.9	1218.8	903.1	
VT2403PS12													1103.5	759.1	1296.9	952.5	1683.7	1339.3	2070.5	1726.1	1329.6	985.2	
VT2703PS05	745.9	519.4	1017.9	791.4	1289.9	1063.4	1561.8	1335.3	1833.8	1607.3	2105.7	1879.2									786.0	559.5	
VT2703PS06	634.0	362.2	906.0	634.2	1178.0	906.2	1449.9	1178.1	1721.9	1450.1	1993.8	1722.0	2265.8	1994.0							943.2	671.4	
VT2703PS07			794.1	477.0	1066.1	749.0	1338.0	1020.9	1610.0	1292.9	1881.9	1564.8	2153.9	1836.8	2425.9	2108.8					1100.4	783.3	
VT2703PS08					954.2	591.8	1226.1	863.7	1498.1	1135.7	1770.0	1407.6	2042.0	1679.6	2314.0	1951.6	2857.9	2495.5			1257.6	895.2	
VT2703PS09							1114.2	706.5	1386.2	978.5	1658.1	1250.4	1930.1	1522.4	2202.1	1794.4	2746.0	2338.3	3289.9	2882.2	1414.8	1007.1	
VT2703PS10									1274.3	821.3	1546.2	1093.2	1818.2	1365.2	2090.2	1637.2	2634.1	2181.1	3178.0	2725.0	1572.0	1119.0	
VT2703PS11											1434.3	936.0	1706.3	1208.0	1978.3	1480.0	2522.2	2023.9	3066.1	2567.8	1729.2	1230.9	
VT2703PS12													1594.4	1050.8	1866.4	1322.8	2410.3	1866.7	2954.2	2410.6	1886.4	1342.8	
VT3003PS05	987.5	646.7	1338.3	997.5	1688.2	1347.4	2038.1	1697.3	2388.0	2047.2	2737.9	2397.1									1031.9	691.1	
VT3003PS06	849.3	440.3	1200.1	791.1	1550.0	1141.0	1899.9	1490.9	2249.8	1840.8	2599.6	2190.7	2949.5	2540.6							1238.3	829.3	
VT3003PS07			1061.9	584.7	1411.7	934.6	1761.6	1284.5	2111.5	1634.4	2461.4	1984.3	2811.3	2334.2	3161.2	2684.1					1444.7	967.5	
VT3003PS08					1273.5	728.2	1623.4	1078.1	1973.3	1428.0	2323.2	1777.9	2673.1	2127.8	3023.0	2477.7	4422.6	3177.5			1651.0	1105.8	
VT3003PS09							1485.2	871.8	1835.1	1221.7	2185.0	1571.5	2534.9	1921.4	2884.8	2271.3	4284.4	2971.1	4284.4	3670.9	1857.4	1244.0	
VT3003PS10									1696.9	1015													

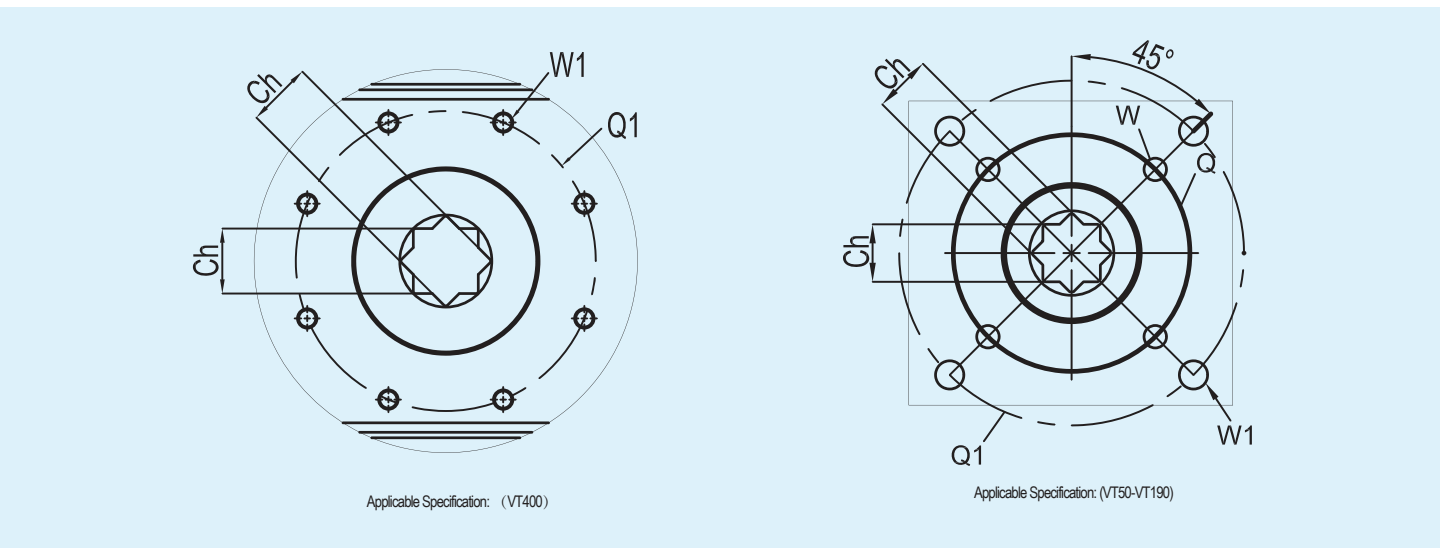
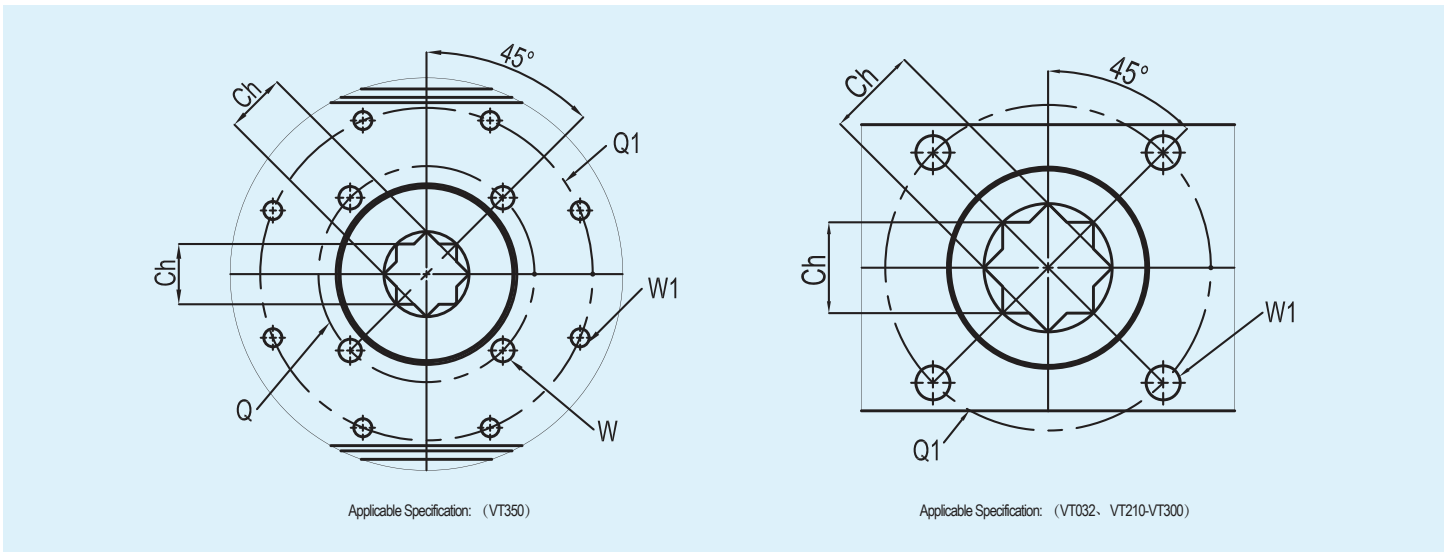
Brochure Reference Diagram



Air Supply Interface Diagram



Bottom View



# Model Designation



**VT-3P Series Pneumatic Actuator Dimension Specification Unit(mm)**

Model	A	B	C	L	E	F	P	4Z	N	I	Flange Type	Q	Q1	W	W1	Ch	T
VT0503P	45	70.5	70	351	41.5	80	20	40	10	12	F03/05	36	50	M5X7.5	M6x9	11X11	G1/4"
VT0653P	62	89.5	89	397	51.5	80	20	40	10	16	F05/07	50	70	M6X9	M8X12	14X14	G1/4"
VT0753P	68	102.5	100	442	59	80	20	40	14	16	F05/07	50	70	M6X9	M8X12	14X14	G1/4"
VT0853P	68	112.5	113	475	63.5	80	20	40	14	19	F05/07	50	70	M6X9	M8X12	17X17	G1/4"
VT0953P	92	126	123	521	71	80	20	40	14	19	F05/07	50	70	M6X9	M8X12	17X17	G1/4"
VT1103P	93	138.5	136	543	76.5	80	20	40	14	19	F07/10	70	102	M8X12	M10X15	17X17	G1/4"
VT1253P	96	157	161	645	85	80	30	56	22	25	F07/10	70	102	M8X12	M10X15	22X22	G1/4"
VT1403P	110	178	178	703	97	80	30	56	22	31	F10/12	102	125	M10X15	M12X18	27X27	G1/4"
VT1603P	112	196	200	742	106	130	30	56	22	31	F10/12	102	125	M10X15	M12X18	27X27	G1/4"
VT1903P	136	216.5	232	910	112	130	30	56	22	41	F10/14	102	140	M10X15	M16X24	36X36	G1/4"
VT2103P	140	310	255	984	120	130	30	80	32	40	F14	—	140	—	M16X24	36X36	G1/4"
VT2403P	159	360	305	1114	131	130	30	80	32	50	F16	—	165	—	M20X28	46X46	G1/2"
VT2703P	159	403	330	1204	147.5	130	30	80	32	50	F16	—	165	—	M20X28	46X46	G1/2"
VT3003P	180	438	354	1384	173	130	30	80	32	50	F16	—	165	—	M20X28	46X46	G1/2"
VT3503P	270	470	410	1493	195	130	30	80	32	50	F16/F25	165	254	M20X28	M16X30	46X46	G1/2"
VT4003P	290	520	466	1624	260	130	30	80	32	60	F25	—	254	—	M16X30	55x55	G1/2"

Model	Type	Spring Qty.	Flange Type	Square	Option	Sealing Part	Angle
VT0503P	D=Double Acting S=Spring Return	Only for spring return	F03/05	11X11	Cap Color (RAL) ■ 7046 ■ 9004 ■ 5021 ■ 3020 ■ 6002 ■ 5015	Standard Nitrile Rubber -18 C-80 C	0° - X° - 90°
VT0653P			F05/07	14X14			
VT0753P			F05/07	14X14			
VT0853P			F05/07	17X17			
VT0953P			F05/07	17X17			
VT1103P		4	F07/10	17X17	Cylinder Type P Smooth Surface / hard Anodized S Sandblasted Surface / hard Anodized Color : Grey H Sandblasted Surface / hard Anodized Color : Dark Grey F Sandblasted Surface / hard Anodized/ PTFE Coated	HT Fluororubber (High Temperature) -18 C-150 C	
VT1253P		5	F07/10	22X22			
VT1403P		6	F10/12	27X27			
VT1603P		7	F10/12	27X27			
VT1903P		8	F10/14	36X36			
VT2103P		9	F14	36X36			
VT2403P		10	F16	46X46			
VT2703P	11	F16	46X46				
VT3003P	12	F16	46X46				
VT3503P		F16/25	46X46				
VT4003P		F25	56X56				



## Notes:

1. Double acting and spring return are standard with closing in clockwise direction.
2. Sealing part is standard with temperature -15°~ 80°. Corresponding sealing part is available to high or low temperature application condition.
3. Please refer to this brochure for parameter information of standard products. Vtork is capable to provide customization service on the basis of standard products. Details please consult with sales engineers.
4. Customized service including but not limited to:  
Color combination;  
Flange and square;  
Higher protection grade;
5. The final interpretation right of all products belongs to VTORK Technology (Wuxi) Co., Ltd.
6. If adjustable design is needed, please consult with sales engineers.

## Model Selection Example:

Example 1: VT0953PD F05 / F07 17 P7046 0°- 30°- 90°

## Model Description:

Actuator model VT095, 3positions actuator, double acting, ISO flange F07&F10, 17 mm bottom square with standard indicator and standard nitrile rubber sealing, P body, cap color grey (RAL7046), actuator stroke 0°~ 90°, mid position 30°.

Example 2: VT190PS12 F10 / F14 36 S5021HT FO 0°- 45°- 90°

## Model Description:

Actuator model VT190, 3positions actuator, single acting spring return, 12 springs, ISO flange F10&F14, 36 mm bottom square, S body, cap color green(RAL5021), fluororubber sealing for high temperature, FO, actuator stroke 0°~90°, mid position 45°.

## Notice

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