

V-TORK®



High performance and reliability

Fully compliant with the latest international standards and regulations

More applicable to a wide range of specifications and torque requirements

Compact design is better suited for a variety of industrial applications



# VTN Series Pneumatic Actuator

## Overview

- Rack and pinion structure with double pistons design;
- Precision rack machining ensures transmission efficiency and reduces transmission impact;
- Extruded aluminum body with corrosion resistance internally;
- Fully compliant with ISO9001;
- Fully compliant with ISO5211、DIN3337 and VDI/VDE3845, etc.;
- Fully compliant with NUMAR standard;
- 304 or 316 stainless steel output shafts are available;
- Accessories Options: Bracket, Connector, Solenoid Valve, Limit Switch Box, Proximity Sensor, Gear box(Manual Gear Override), Positioner;



Sizing Specifications				
Model	Type	Spring Qty	Flange	Square
VT032	Double acting or Spring return	—	F03	9X9
VT050		4~12 (Dedicated to spring return)	F03/F05	11X11
VT065			F05/F07	14X14
VT075			F05/F07	14X14
VT085			F05/F07	17X17
VT095			F05/F07	17X17
VT110			F07/F10	17X17
VT125			F07/F10	22X22
VT140			F10/F12	27X27
VT160			F10/F12	27X27
VT190			F10/F14	36X36
VT210			F14	36X36
VT240			F16	46X46
VT270			F16	46X46
VT300			F16	46X46
VT350			F16/F25	46X46
VT400			F25	55X55

Note: If other parameters are needed, please contact us for the sizing catalog.

# VTY Series Pneumatic Actuator

## Overview

- Small size and high torque;
- Single spring design to improve reliability;
- Compressed air usage is reduced by 35%;
- Fully compliant with NUMAR standard;
- The core parts are all made by high strength alloy steel;
- +/- 5° adjustment in two directions;
- Scotch Yoke structure with double pistons design;
- Fully compliant with ISO9001;
- Accessories Options: Bracket, Connector, Solenoid Valve, Limit Switch Box, Proximity Sensor, Gear box(Manual Gear Override), Positioner;
- Full bearing transmission reduces friction resistance;
- High starting torque, fit for valve torque characteristics;
- Fully compliant with ISO5211、DIN3337 and VDI/VDE3845, etc.;
- The scotch yoke and shaft are splined for easy installation and high strength;
- The dedicated sealing ring fitted between body and cylinder avoids the suction of runnber plug;



Sizing Specifications			
Model	Spring	Flange	Square
VTY100	Double acting or Spring return	F05/F07	14X14
VTY150		F05/F07	14X14
VTY250		F07/F10	17X17
VTY350		F07/F10	22X22
VTY450		F10/F12	22X22
VTY800		F10/F12	27X27
VTY1000		F10/F14	36X36
VTY1500		F14	36X36
VTY2000		F14	36X36

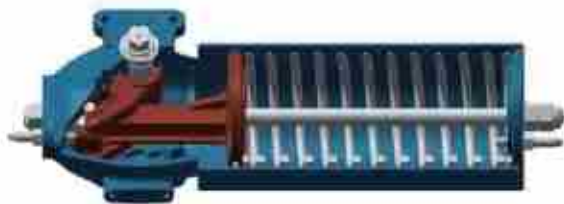
Note: If other parameters are needed, please contact us for the sizing catalog.

# VTS Series Scotch Yoke Actuator

## Overview

- Compact design for small torque VTS01-04 (F07-F14, 80-2000NM) ;
- Modular design for high torque VTS1-8 (F14-F60, 250000NM for double acting, 120000NM for single acting) ;
- Temperature range:  
Standard : -20°C ~ 80°C; High: -10°C ~ 150°C;  
Low: -40°C ~ 80°C; Ultra low: -0°C ~ 80°C;
- Modular design, various combinations, convenient for on-site maintenance and fault location switch;
- Connect dimension standards: ISO5211, NAMUR;
- The design of internal tie rods provides the function of supporting and guiding the piston to prevent the eccentric wear of the cylinder;
- Pneumatic Operating Press: 3 ~ 8 Bar;

VTS01-04



VTS1-8



## Sizing Specifications

Series	Box No	Cylinder dimension	Cylinder qty	Action mode	Spring No	Yoke type	Fault location	Manual	Temp	Addition
VTS	01	080/100	Blank-single D-double	Blank-double acting SR-Spring return	1A/1 /2A/2 /3/4	Blank-straight yoke C-inclined yoke	FC-CW spring return clockwise FO-CCW spring return anti-clockwise	MS-screw MG-Bevel gear MH-Hydraulic MW-Worm gear	Blank-standard LT-low LLT-ultra low HT-high	XC-close limit EXO-open limit HC-tape buffer
	02	100/125								
	03	125/160/180								
	04	180/200/220/260								
	1	200/250/300/350								
	2	250/300/350/400/450								
	3	300/350/400/450/500								
	4	400/450/500/600								
	5	500/600/700/800								
	6	600/700/800/900								
7	700/800/900									
8	800/900/1000									
<b>Example</b>										
VTS	7	700	D	SR	1	C	FC	MH	LT	
VTS	03	180						MS		
VTS	1	250		SR	3		FC	MW	HT	HC

# VTM Series Electric Actuator

## Overview

- 0°~90° quarter turn electric actuator with high strength, light weight and high torque;
- Shell: aluminum alloy, anodized and coated with polyester powder;
- Voltage: DC24V、AC110V、AC220V、AC380V、AC440V;
- Humidity resistance: Max relative humidity 90%(non condensing) ;
- ISO 5211 mounting base;
- Temperature resistance: -20°C ~ +50°C (Intelligent integration) 、 -20°C ~ +60°C (on/off) 、 -20°C ~ +55°C (modulating ) ;
- Seismic capacity: XYZ10g.0.2 ~ 34Hz, 30mins;
- Control mode: on/off, modulating and intelligent integration;
- Protection grade: IP 67;
- In addition to quarter turn, VTM fast switching, VTMR spring return and VTML straight travel are all available;



## Technical Parameters:



### VTM series parameters

Model	Torque	Running time	ISO base	Square mm	Weight	Manual
	Nm	Sec/90°			Kg	
VTM0S	20	10	F03-F05	11	1.2	Spanner
VTM1S	35	12	F03-F05	14	2.8	
VTM2S	100	8	F05-F07	17	8	
	200	8				
VTM3S	350	8	F07-F10	17/22	13	Push in hand wheel
	500	8				
VTM1H	50	10	F03-F05 -F07	14	3.2	
	70	15				
VTM2H	100	8	F05-F07	17	11	Clutchless hand wheel
	200	8				
VTM2	100	20	F05-F07	17	12	
	200	30			12	
VTM3	450	30	F07-F10	17/22	14	
	500	40			14	
VTM4	1000	48	F10-F12/ F10-F14	27/22	22	
	1500	35			22	
VTM5	2300	48	F12-F14 -F16	36	43	
	4000	81			43	
VTM5+G	5000	94	F12-F14 -F16	36	78	
	4000	15			78	
VTM6	6000	40	F14-F16	40/46	169	
	4000	15			169	



### VTMR series parameters

Model	Torque	Open time	Spring return time	ISO base	Square mm
	Nm	Sec/90°			
VTMR-1	20	12	5	F03	14
VTMR-2	38	8	3	F05-F07	14
VTMR-3	55	10	8	F07-F10	17
	70	10			
VTMR-4	140	8	7	F10	22
	210	8			
VTMR-5	300	33	13	F10-F12	27



### VTML series parameters

Model	Thrust	Running time	Thread	Output	Weight	Manual
	K.N	MM/sec			Kg	
VTM1SL	1.5	1	/	M8	2.8	Spanner
VTM2SL	4	0.75	M12	M12	8	
	6					
VTM3SL	10	1	M16	M12	8	
	15					
VTM1HL	1.5	1	/	M10	3.2	Push in hand wheel
VTM2HL	4	0.75	M12	M12	11	
	6					
VTM2L	4	0.5	M12	M12	12	Clutchless hand wheel
	6					
VTM3L	10	0.5	M16	M12	14	
	15					
VTM4L	25	0.65	M20	M16	22	
VTM5L	50	0.65	/	M16	50	



### VTM fast switching

Model	Torque	Running time	ISO base	Square mm	Weight	Manual
	Nm	Sec/90°			Kg	
VTM1KS	10	1	F03-F05	14	2.8	Spanner
	15	2.5				
VTM2KS	35	1	F05-F07	17	8	
	65	2.5				
VTM3KS	70	1	F07-F10	17/22	13	
	200	3				

# VSM Series Electric Actuator

## Overview

- Multi-turn electric actuator with simple and reliable structure;
- Graphic dot-matrix LCD screen;
- Using the magneto electric absolute encoder, the absolute encoder will not be affected by power failure and interference, the valve position is always correct;
- Support multi communication agreement of field bus such as PROFIBUS, FF、MODBUS、HART, etc and multiple redundant control modes;
- The accuracy of valve positioning is up to grade one;
- Connection mode of plug type or sunflower disk type for easy and fast maintenance;
- Enclosure protection class IP68; Explosion-proof grade dIICT4;



## Technical Parameters

Model	380V / 50Hz								Weight
	18RPM				24RPM				
	Torque	Motor power	Rated current	Locked current	Torque	Motor power	Rated current	locked current	
VSM05	50	0.09KW	0.63A	1.5A	50	0.12KW	0.85A	2.1A	36kg
VSM10	100	0.18KW	1.0A	2.5A	100	0.25KW	1.4A	3.5A	36kg
VSM15	150	0.25KW	1.4A	3.5A	150	0.37KW	1.8A	4.5A	37kg
VSM20	200	0.37KW	1.8A	4.5A	200	0.4KW	1.9A	4.75A	60kg
VSM40	400	0.55KW	2.4A	6A	400	0.75KW	3A	7.5A	62kg
VSM60	600	1.1KW	4A	10A	600	1.5KW	5A	12.5A	75kg
VSM100	1000	1.5KW	5A	12.5A	1000	2.2KW	7A	17.5A	172kg
VSM150	1500	2.5KW	7.5A	18.7A	1500	3.0KW	9A	22.5A	172kg
VSM200	2000	4.0KW	10.5A	26.2A	2000	5.5KW	13.8A	34.5A	175kg
VSM300					3000	7.5KW	17.5A	43.7A	175kg

The torque shown in the table is the maximum allowable set torque in both rotation directions. The locked torque is 1.4 to 2 times for it depending on the rotation speed and voltage.

Other rotation speed can be customized :36、48、72、96、144、192 PRM.

## Structure



Vtork Technology is a professional manufacture of valve automation products, committed to provide superior solutions to fluid control industry, including rack and pinion actuators, scotch yoke actuators, intelligent quarter-turn/multi-turn electric actuators and related accessories, as well as various intelligent control products in high precision .



	Rack and pinion/Scotch Yoke	Rack and pinion/Scotch Yoke	Electric Actuator
<b>Torque Range</b>	Double acting:12000 NM Single acting :5500NM	Double acting :250000 NM Single acting :120000 NM	Quarter turn: 20NM~5000NM Multi-turn: 50NM~3000NM
<b>Model</b>	VT050~VT400 VTY100~VTY3000	VTS01~VTS04 VTS1~VTS8	Quarter turn: VTM1~VTM5 Multi-turn:VSM05~VSM300
<b>Production site</b>	WuXi , China	HangZhou, China	ChangZhou , China
<b>Production area</b>	14000 M <sup>2</sup>	8000 M <sup>2</sup>	4000 M <sup>2</sup>
<b>Capacity</b>	360000Pcs/year	12000Pcs/year	48000Pcs/year
<b>Established in</b>	May, 2012	Apr, 2017	Jan, 2019

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