



MANUAL OVERRIDE PNEUMATIC ACTUATOR



VAHN-TECH International Inc., headquartered in Toronto, Canada is a unique company within the Flow Control Industry.

- ✳ 'vt' brand = high quality certified products (API, NSF, CSA, WRAS etc.)
- ✳ Valves, Actuators and Accessories – all 'vt' branded
- ✳ Width and Depth of Product Offerings
- ✳ Flexibility to customize products to customer needs
- ✳ Specialized user-friendly products including large sizes
- ✳ Quick Response
- ✳ Reduced Delivery times
- ✳ Efficient after sales service
- ✳ Competitive Pricing

VAHN-TECH International Inc. is a customer focused organization based on “Value-add” and “Quality Service” principles. Achieving long term partnership with our customers and being their supplier of choice is our prime mission.

We develop, manufacture and market VAHN-TECH (vt) branded Valves, Actuators, Automatic Control Valves and Accessories for variety of Industrial Applications. Our product range includes:



Oil and Gas



Water and Sewage,
Desalination



Chemicals



Paper and Pulp



Irrigation



Power Plants



Various
Industrial Applications

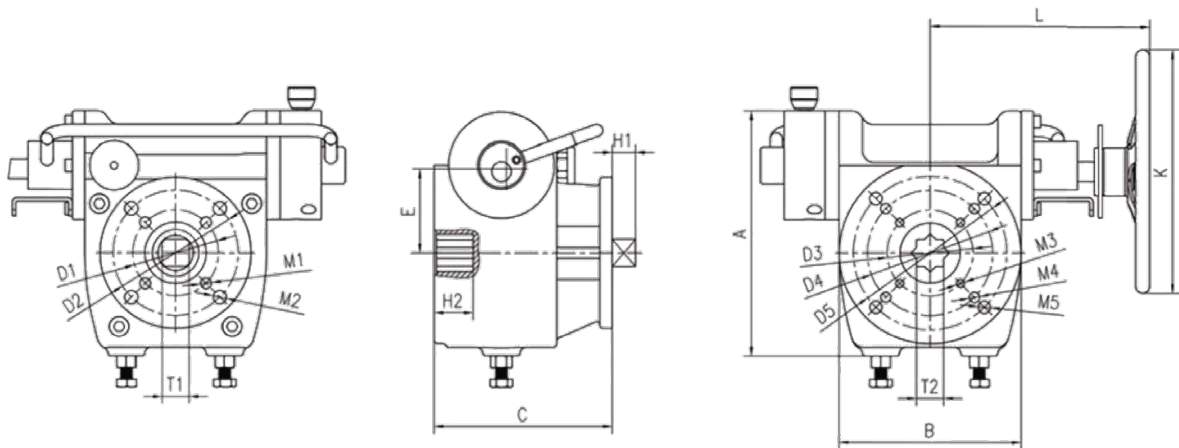
We can supply all types of valves with following materials of construction like:

Ductile Iron, Cast Iron, Carbon Steel, Stainless Steel – SS304, SS304L, SS316, SS316L, Duplex Stainless Steel, Super Duplex, Alloy, Monel and Inconel with variety of seating and stem configurations.



FEATURES

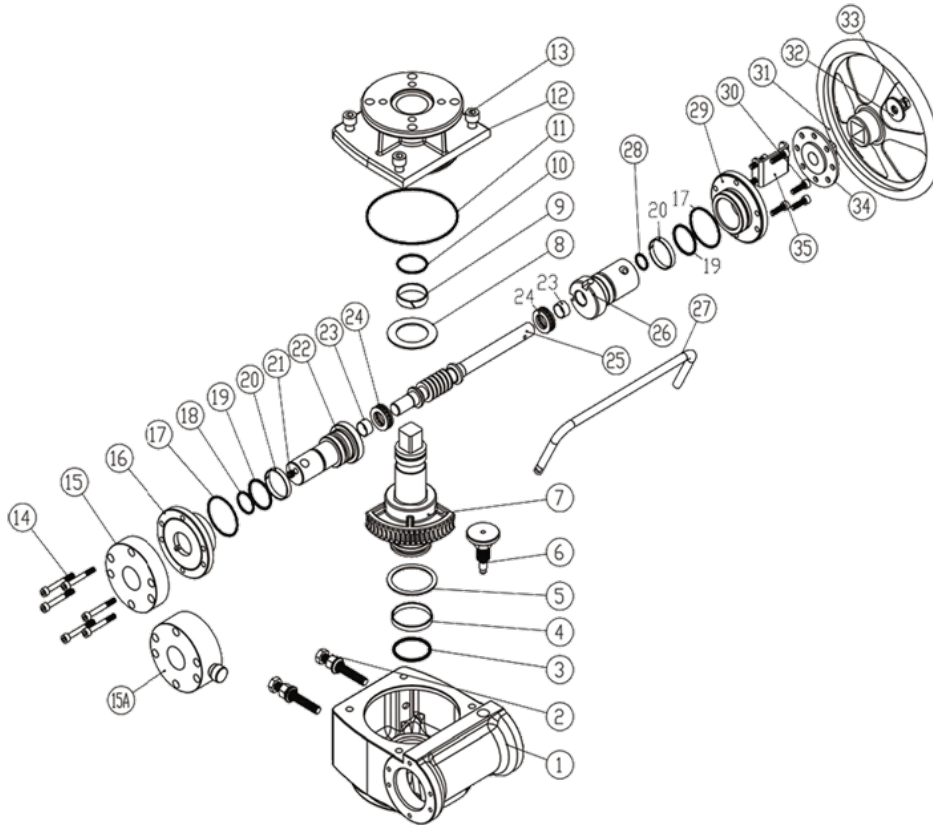
- ✦ High-strength, High-torque
- ✦ Built into one (1) piece body, IP67 weatherproof sealing
- ✦ ISO 5211 mounting base
- ✦ Patented auto – manual safe shift device
- ✦ Self lubricated bearing for worm & worm gear
- ✦ WCB body surface treated by corrosion resistance coating



Main Dimensions

Model	A	B	C	D1	D2	D3, D4, D5	E	L	M1	M2	T1	T2	H1	H2	K	J	Applicable Actuators	Input Torque	Output Torque
VT-DFM-015A	120	100	104	Ø50	Ø70	F05, F07	44.5	114	Ø7	4-Ø9	17	17	17	25	Ø160	1/4" NPT	VT-DFS032-085	17 N.m	150 N.m
VT-DFM-015B	120	100	104	Ø50	Ø70	F05, F07	44.5	120	Ø7	4-Ø9	17	17	17	25	Ø200	1/4" NPT	VT-DFS075-100	22 N.m	200 N.m
VT-DFM-060	192	148	145	Ø70	Ø102	F07, F10, F12	71	175	Ø9	4-Ø11	22	27	22	30	Ø200	1/4" NPT	VT-DFS100-145	42 N.m	600 N.m
VT-DFM-090A	192	148	145	Ø70	Ø102	F07, F10, F12	71	178	Ø9	4-Ø11	27	27	28	30	Ø250	1/4" NPT	VT-DFS145-160	70 N.m	900 N.m
VT-DFM-090B	192	148	145	Ø70	Ø102	F07, F10, F12	71	181	Ø9	4-Ø11	27	27	28	30	Ø300	1/4" NPT	VT-DFS145-180	96 N.m	1200 N.m
VT-DFM-160A	260	196	191.5	Ø102	Ø125	F10, F12	107.5	268	Ø11	4-Ø13	36	36	34	40	Ø350	1/4" NPT	VT-DFS160-200	80 N.m	1600 N.m
VT-DFM-160B	260	196	191.5	Ø102	Ø125	F10, F12	107.5	272	Ø11	4-Ø13	36	36	34	40	Ø400	1/4" NPT	VT-DFS200-240	100 N.m	2000 N.m
VT-DFM-350A	307	255	181	Ø165	-	F12, F16	123	272	Ø22	-	46	46	45	176	Ø600	1/4" NPT	VT-DFS240-265	190 N.m	3300 N.m
VT-DFM-350B	307	255	181	Ø165	-	F12, F16	123	275	Ø22	-	46	46	45	176	Ø700	1/4" NPT	VT-DFS265-300	230 N.m	4000 N.m
VT-DFM-700	389	297	249	Ø165	Ø254	F16, F25	156	418	Ø22	8-Ø18	46 / 55	46	45	19	Ø500	1/2" NPT	VT-DFS350-400	110 N.m	7000 N.m

EXPLODED VIEW



No.	Part Description	Qty.	Materials
1	Body	1	WCB
2	Adjusting Bolt	2	Stainless Steel / NBR
3	O-Ring	1	NBR
4	Bearing	1	POM
5	Bearing	1	POM
6	Stopping Pin	1	45#
7	Shaft	1	45#
8	Bearing	1	POM
9	Bearing	1	POM
10	O-Ring	1	NBR
11	O-Ring	1	NBR
12	Cap	1	WCB
13	Screw	4	Stainless Steel
14	Screw	6	Stainless Steel
15	Cap	1	45#
15A*	Air Shift Valve	1	Al Aby
16*	Cap	1	45#
17	O-Ring	2	NBR

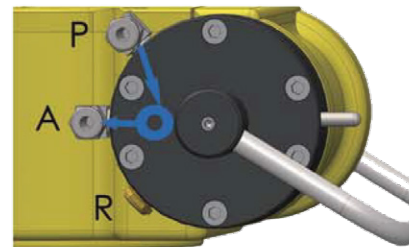
No.	Part Description	Qty.	Materials
18	O-Ring	1	NBR
19	O-Ring	2	NBR
20	Eccentric Axle Bearing	2	POM
21	O-Ring	1	Stainless Steel
22	Eccentric Half Bearing	1	45#
23	Bearing	2	Copper
24	Thust Ball Bearing	2	Steel
25	Worm Shaft	1	45#
26	Eccentric Half Bearing	1	45#
27	Shift Handle	1	Stainless Steel
28	O-Ring	1	NBR
29	Cap	1	45#
30	Screw	6	Stainless Steel
31	Handwheel	1	Ductile Iron / Carbon Steel
32	Washer	1	20
33	Bolt	1	Stainless Steel
34*	Lock Disc	1	20
35*	Lock Bracket	1	20

OPERATION & ASSEMBLY SCHEMATIC DIAGRAM

P – Compressed Air Port

A – Solenoid (-) Port

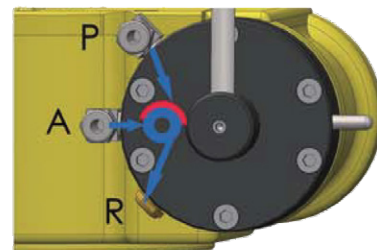
R – Released Air Port (can be connected to a muffler)



In auto mode, the actuator drives the valve by compressed air which comes from P-A route.

In manual mode, A-R route released the air within the actuator.

Shift handle is to occurred to cause from auto to manual mode.



In case of the air supply via Solenoid Valve are zin auto mode the following connection route is recommended.

Compressed Air:

- ① Filter regulator
- ② Safety shift gear operator (P-A)
- ③ Solenoid Valve
- ⑤ Pneumatic Actuator



OPERATION & ASSEMBLY SCHEMATIC DIAGRAM

In cases where air supply through solenoid valve is more sufficient to drive the actuator in auto mode, one may close large size solenoid valve as mentioned above.

Cost savings can be achieved if solenoid valve is combined with air filter regulated.

Following connection is recommended:

Compressed Air

- ① Filter regulator
- ② Safety shift gear operator (P-A)
- ③ Solenoid Valve (to guide the air into control valve)
- ④ Gas Control Valve
- ⑤ Pneumatic Actuator
(this ensures adequate air to pass through)



The safety shift device is built into the body of gear operator which follows IP67 protection standard.

NOTE:

To change the actuator from auto to manual mode, wait for air to exhaust through A-R route. Pull the unlock button laterally and move the handle upwards at the same time.

CONFIGURATION OPTIONS



DFM-060-S

Basic – Override Function, (Pressed Metal) Handwheel



DFM-090A-L-C

With Lock – based upon basic with locking mechanism, (Ductile Iron) handwheel



DFM-090A-SS-C

With Safety Shift – based upon basic, (Ductile Iron) Hand Wheel



DFM-090B-SS-L-C

All-in-One – Override, safety shift, lock function, (Ductile Iron) Hand Wheel

ACCESSORIES

SS – Safety Shift Unit



L – Lock Kits



C – Ductile Iron Hand Wheel



S – Pressed Metal hand Wheel



HOW TO ORDER

Gear Operator (Size)	Safety Shift Unit (Optional)	Lock Kits (Optional)	Handwheel
VT-DFM-015A	SS	L	C
VT-DFM-0158			S
VT-DFM-060			
VT-DFM-090A			
VT-DFM-090B			
VT-DFM-160A			
VT-DFM-160B			
VT-DFM-350A			
VT-DFM-350B			
VT-DFM-700			

Example: **VT - DFM - 090A - SS - L - C**



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