

## Model V-Series Actuators

Valution is mainly producing pneumatic actuators.  
The linear motion method includes a spring-diaphragm and a cylinder type actuators.

The rotating motion method consists of a cylinder type of spring diaphragm, rack-and-pinion, and scotch yoke structure.

The actuator's spring is made of alloy steel with more than a million durations and excellent precision, and diaphragm, a combination of synthetic rubber and a fabric with moderate tensile strength and elasticity, enables the sensitivity, precision and long life of the actuator.

The seals of the cylinder type actuator consist of a guide seal that stably supports straight and rotational motion, and a seal that prevents leakage, enabling reliability and long life of the actuator.

It is also possible for the customer to selectively apply the electric motor actuator as specified.

The thrust or torque required determines the size of the valve actuator and is equipped with a reliable, high-quality valve actuator.

Depending on the purpose of use, functionality can be modulated using traditional E/P, Smart and HART positioners, and on/off functions can be performed using SOV, Lim. S/W and Relays.



### 1. Numbering System



Actuator Type	Action	Stroke(Travel)	Option
V10. Linear motion, Spring-Diaphragm, Single acting V20. Linear motion, Spring-Cylinder, Single acting V30. Linear motion, Springless-Cylinder, Double acting V40. Rotary motion, Spring-Diaphragm, Single acting V50. Rotary motion, Spring-Cylinder, Single acting Rack & Pinion V60. Rotary motion, Springless-Cylinder, Double acting, Rack & Pinion V70. Rotary motion, Spring-Cylinder, Single acting Scotch yoke V80. Rotary motion, Springless-Cylinder, Double acting, Scotch yoke V90. Electric Motor V01. Other Type	1. ATO Air to Open Spring Close 2. ATC Air to Close Spring Open 3. Double Acting with Spring 4. Double Acting Springless 0. Other	*. Linear(mm) L020, L030, L040, L050, L060, L070, L080, L100, L120, L150, L200, L250, L300, L400 L000 : Other *. Rotary(degree) R060 : 60° R090 : 90° R000 : Other	1. N/A 2. Top H/W 3. Top-Side H/W 4. Side H/W 5. Side-Declutch H/W 6. Hydraulic Manual Jack 7. Lim. Stopper 0. Other

#### \*. Note

- Please note that valve model numbering, when sold in assembly with the actuator and valve body, usually only Actuator Type Letterhead(eg: V10) is indicated in data sheet and name plate.

## 2. Model V10, Linear Motion – Spring Diaphragm Type(1/2)



### ■ V10, Linear Spring Diaphragm Actuators

The V10 Series, Spring-Diaphragm Actuator of the Valution is one of the main candidates for pneumatic actuators.

With a relatively simple configuration, it is a spring-return single actuating actuator that minimizes friction and leakage by minimizing the seals.

The Rolling diaphragm was used to minimize the change in the effective cross section area due to displacement, and stable long stroke was implemented.

Multi springs of cold coiling were adopted, not single springs by hot coiling, to improve elastomeric precision.

Long-term motion also has stable precision and durability, and modulating functions with traditional E/P, smart, and HART positioners depending on the purpose of use. On-Off functions with SOV, Lim. S/W and Relays can be performed.

### ■ V10, General Specifications

Descriptions		Specifications
Applicable Temperature Range		Ambient $-55^{\circ}\text{C} \sim 85^{\circ}\text{C}$
Air Supply Connection		NPT 1/4" Female, Optional : NPT 3/8", 1/2" and others
Hysteresis		without Positioner : $\pm 3.5\%$ with E/P Positioner : $\pm 1.0\%$ with Smart Positioner : $\pm 0.5\%$
Linearity		without Positioner : $\pm 3.5\%$ with E/P Positioner : $\pm 1.0\%$ with Smart Positioner : $\pm 0.5\%$
Sensitivity		without Positioner : $\pm 2.0\%$ with E/P Positioner : $\pm 0.2\%$ with Smart Positioner : $\pm 0.2\%$
Major Parts Materials	Diaphragm	EPDM Rubber (Ethylene Propylene Diene Monomer Rubber) with Reinforced Nylon, NBR, Silicone
	Diaphragm Case	Carbon Steel Plate, JIS G3101, SS400
	Actuator Stem	304 St. Steel, A276 TY304
	Spring	Alloy Spring Steel, JIS G3560, SWOSC-B
	Yoke	Carbon Cast Steel, A216 Gr. WCB
Maximum Allowable Pressure		4.2 barg
Source		Instrument Air, Gas
Actuator Action		DA : Direct Action, Air to Close(ATC), Air to Extend Stem
		RA : Reverse Action, Air to Open(ATO), Air to Retract Stem

### ■ V10, Sizes

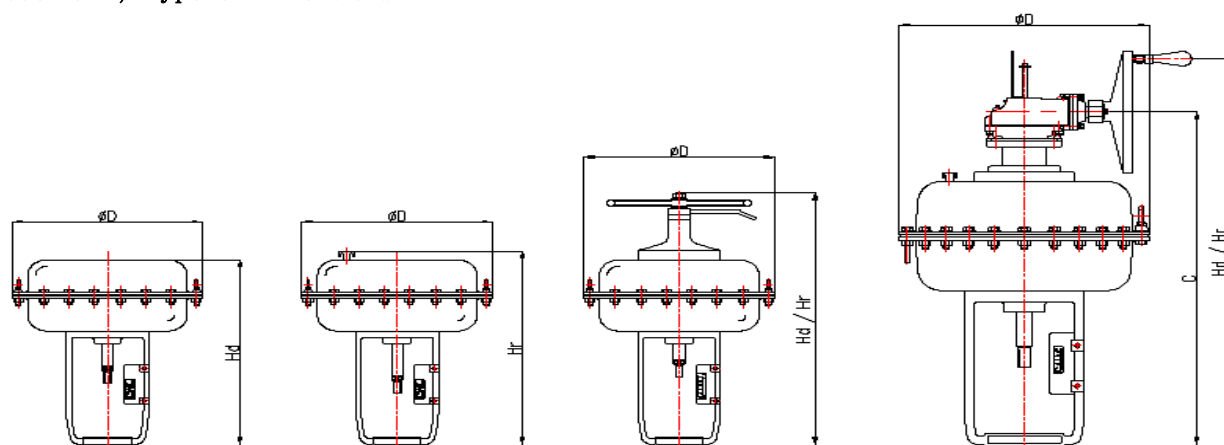
Model	V10 Spring Diaphragm Actuators						
V10 Size	V10 - #1	V10-#2	V10 - #3	V10 - #4	V10 - #5	V10 - #6	V10 - #6H

## 2. Model V10, Linear Motion – Spring Diaphragm Type(2/2)

### ■ Model V10, Detail Specifications

Model	V10 Spring Diaphragm Actuators						
V10 Size	V10 – #1	V10 – #2	V10 – #3	V10 – #4	V10 – #5	V10 – #6	V10 – #6H
Outside Diameter(mm)	200	254	294	375	485	565	565
Effective Area(cm <sup>2</sup> )	100	272	393	642	1,134	1,524	1,524
Actuator Volume(cm <sup>3</sup> )	365	898	1,796	3,494	10,196	18,157	18,157
Spring	0.6~2.6	0.6~2.6	0.6~2.6	0.6~2.6	0.6~2.6	0.6~2.6	0.6~2.6
Range(kg/cm <sup>2</sup> g)	1.4~3.2	1.4~3.2	1.4~3.2	1.4~3.2	1.4~3.2	1.4~3.2	1.4~3.2
Rated Travel(mm)	15	20	30	40	70	80	100
Available Travel(mm)	8, 10, 15	15, 20, 25	25, 30, 40	30, 40, 50	50, 60, 70	60, 70, 80	100, 120
Handle Option	Top	Top	Top	Top	Top-Side	Top-Side	Top-Side
Maximum Allowable Pressure	4.2 barg						
Actuator Action	DA : Direct Action, Air to Close(ATC), Air to Extend Stem						
	RA : Reverse Action, Air to Open(ATO), Air to Retract Stem						

### ■ Model V10, Type & Dimensions



Direct Action

Reverse Action

Top Handwheel

Top-side Handwheel

(unit : mm)

Actuator Size	ØD	Without Handwheel		With Handwheel				
		DA	RA	Handwheel Type	DA	RA	C	L
		Hd	Hr		Hd	Hr		
#1	200	230	270	Top	330	370	—	—
#2	254	347	372	Top	454	488	—	—
#3	294	407	432	Top	514	548	—	—
#4	375	454	488	Top	619	648	—	—
#5	485	655	679	Top side	1,040	1,040	890	350
#6	565	702	728	Top side	1,087	1,187	937	350
#6H	565	728	778	Top side	1,087	1,187	937	350

#### \*. Note

- All data shown in this product specification are currently standard specifications of Valution and can be customized by order specification.
- All data shown above are subject to change without notice.

### 3. Model V20, Linear Motion – Cylinder Type Single Acting



#### ■ V20, Linear Cylinder Actuators

The V20 Series, Cylinder Actuator of the Valution is one of the main candidates for pneumatic actuators.

To obtain larger thrust and longer stroke than diaphragm actuator, this is a heavy duty type pneumatic actuators.

Wear rings and DU bushes were applied to piston and guide areas to maintain stable linearity, and two seals were applied to maintain confidentiality. A centerless finish applied steel pipe was used for the inside of the cylinder.

The V20 model is built-in spring, and consists of a single-acting type using only spring and a double-acting type with spring built-in.

Long-term motion also has stable precision and durability, and modulating functions with traditional E/P, smart, and HART positioners depending on the purpose of use. On-Off functions with SOV, Lim. S/W and Relays can be performed.

#### ■ Model V20, General Specifications

Descriptions		Specifications
Applicable Temperature Range		Ambient $-55^{\circ}\text{C} \sim 85^{\circ}\text{C}$
Air Supply Connection		NPT 3/8" Female, Optional : NPT 1/4", 1/2", 3/4" and others
Hysteresis		without Positioner : $\pm 4.0\%$ with E/P Positioner : $\pm 1.0\%$ with Smart Positioner : $\pm 0.5\%$
Linearity		without Positioner : $\pm 4.0\%$ with E/P Positioner : $\pm 2.0\%$ with Smart Positioner : $\pm 0.5\%$
Sensitivity		without Positioner : $\pm 4.0\%$ with E/P Positioner : $\pm 0.5\%$ with Smart Positioner : $\pm 0.2\%$
Major Parts Materials	Piston	Carbon Steel Plate, JIS G3101, SS400 + HCr.
	Cylinder	Carbon Steel Pipe, JIS STPG + HCr.
	Actuator Stem	304 St. Steel, A276 TY304
	Seals	NITRILE(NBR) and RTFE
	Yoke	Carbon Cast Steel, A216 Gr. WCB
Maximum Allowable Pressure		10 barg
Source		Instrument Air, Gas
Actuator Action		DA : Direct Action, Air to Close(ATC), Air to Extend Stem
		RA : Reverse Action, Air to Open(ATO), Air to Retract Stem

#### ■ V20, Sizes

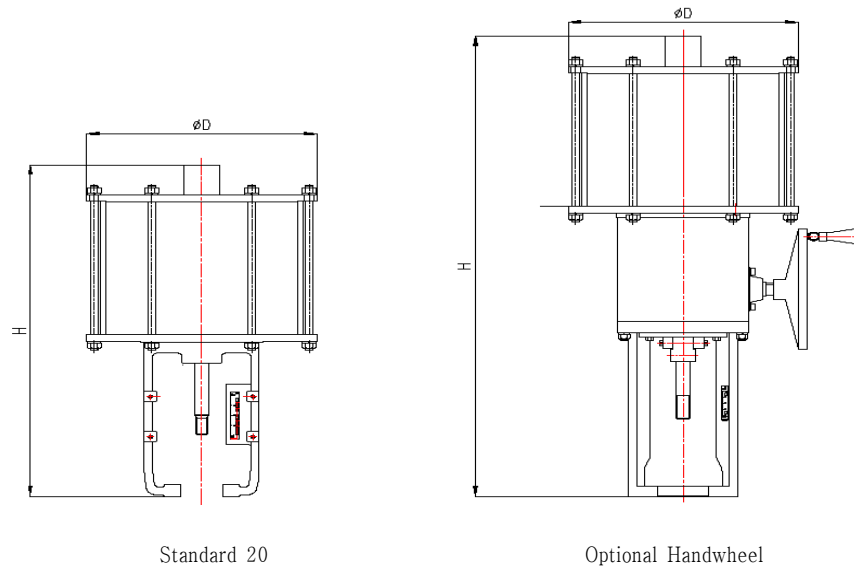
Model	V20 Cylinder Actuators								
V20 Size	#01	#02	#03	#04	#05	#06	#07	#08	#09

### 3-1. Model V20, Linear Motion – Cylinder Type, Built-in Spring

#### ■ Model V20, Cylinder Actuators, Detail Specifications

Model	V20 Cylinder Actuators								
V20 Size	#01	#02	#03	#04	#05	#06	#07	#08	#09
Out Diameter(mm)	205	265	315	375	460	580	675	790	890
Effective Area(cm <sup>2</sup> )	176	314	490	615	1,163	1,808	2,640	3,629	4,775
Standard Travel(mm)	50	60	80	80	100	100	150	150	200
Available Travel(mm)	30~100	50~100	50~120	50~120	50~150	50~150	80~200	80~200	80~250
Handle Option	De-clutch, Side H/W								
Maximum Allowable Pressure	10 barg								
Actuator Action	Single Acting, Performing Air to Close(ATC), Air to Open(ATO) by the Spring								

#### ■ Model V20 Cylinder Actuators, Type and Dimensions



(unit : mm)

Model		V20 Cylinder Actuators								
V20 Size		#01	#02	#03	#04	#05	#06	#07	#08	#09
Standard Travel(mm)		50	60	80	80	100	100	150	150	200
Standard V20	ØD	205	265	315	375	460	580	675	790	890
	H	605	615	635	655	875	915	1,050	1,050	1,220
Optional H/Wheel	ØD	205	265	315	375	460	580	675	790	890
	H	865	875	895	860	1,142	1,280	1,380	1,380	1,550

#### \*. Note

1. The above data are values for standard travel.
2. All data shown in this product specification are currently standard specifications of Valution and can be customized by order specification.

## 4. Model V30, Linear Motion – Cylinder Type for Double Acting

### ■ V30, Linear Cylinder Actuators



The V30 Series, Cylinder Actuator of the Valution is one of the main candidates for pneumatic actuators.

To obtain larger thrust and longer stroke than diaphragm actuator, this is a heavy duty type pneumatic actuators.

Wear rings and DU bushes were applied to piston and guide areas to maintain stable linearity, and two seals were applied to maintain confidentiality. A centerless finish applied steel pipe was used for the inside of the cylinder.

The V30 model is springless, double acting, and it can set the fail position with any other relays. For each size, it has the advantage of being able to apply significantly longer stroking.

Long-term motion also has stable precision and durability, and modulating functions with traditional E/P, smart, and HART positioners depending on the purpose of use. On-Off functions with SOV, Lim. S/W and Relays can be performed.

### ■ Model V30, General Specifications

Descriptions		Specifications
Applicable Temperature Range		Ambient $-55^{\circ}\text{C} \sim 85^{\circ}\text{C}$
Air Supply Connection		NPT 3/8" Female, Optional : NPT 1/4", 1/2", 3/4" and others
Hysteresis		without Positioner : $\pm 4.0\%$ with E/P Positioner : $\pm 1.0\%$ with Smart Positioner : $\pm 0.5\%$
Linearity		without Positioner : $\pm 4.0\%$ with E/P Positioner : $\pm 2.0\%$ with Smart Positioner : $\pm 0.5\%$
Sensitivity		without Positioner : $\pm 4.0\%$ with E/P Positioner : $\pm 0.5\%$ with Smart Positioner : $\pm 0.2\%$
Major Parts Materials	Piston	Carbon Steel Plate, JIS G3101, SS400 + HCr.
	Cylinder	Carbon Steel Pipe, JIS STPG + HCr.
	Actuator Stem	304 St. Steel, A276 TY304
	Seals	NITRILE(NBR) and RTFE
	Yoke	Carbon Cast Steel, A216 Gr. WCB
Maximum Allowable Pressure		10 barg
Source		Instrument Air, Gas
Actuator Action		DA : Direct Action, Air to Close(ATC), Air to Extend Stem
		RA : Reverse Action, Air to Open(ATO), Air to Retract Stem

### ■ V30, Sizes

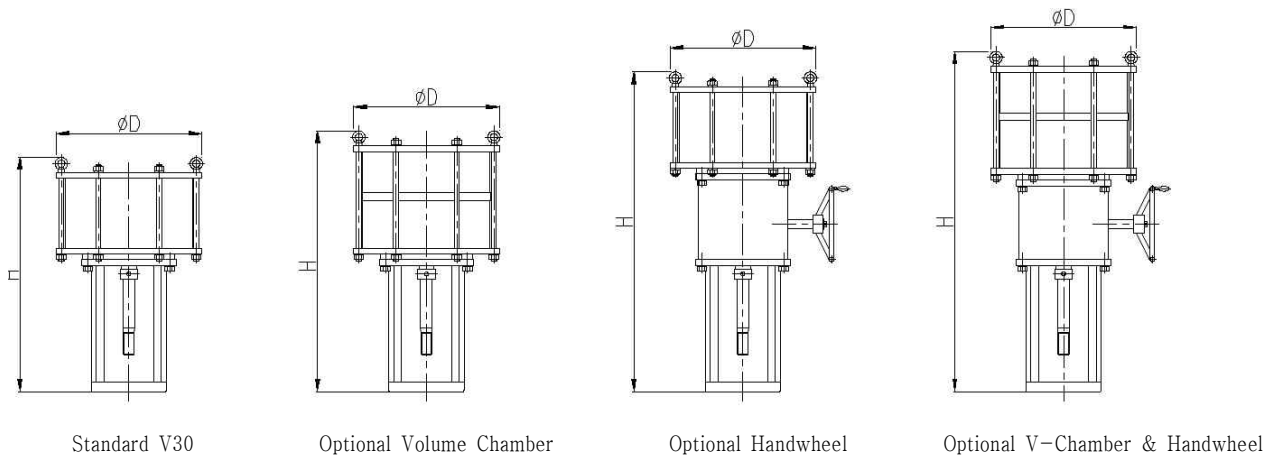
Model	V30 Cylinder Actuators								
V30 Size	#01	#02	#03	#04	#05	#06	#07	#08	#09

## 4-1. Model V30, Linear Motion – Cylinder Type, Double Acting

### ■ Model V30 Cylinder Actuators, Detail Specifications

Model	V30 Cylinder Actuators								
V30 Size	#01	#02	#03	#04	#05	#06	#07	#08	#09
Out Diameter(mm)	205	265	315	375	460	580	675	790	890
Effective Area(cm <sup>2</sup> )	176	314	490	615	1,163	1,808	2,640	3,629	4,775
Standard Travel(mm)	50	60	80	80	100	100	150	150	200
Available Travel(mm)	30~200	50~200	50~200	50~200	50~300	50~300	100~300	100~400	100~500
Handle Option	De-clutch, Top H/W, Side H/W								
Maximum Allowable Pressure	10 barg								
Actuator Action	Double Acting, Performing Air to Close(ATC), Air to Open(ATO) by the Volume Tank(or Integral Volume Chamber) with Transfer Valve								

### ■ Model V30 Cylinder Actuators, Type and Dimensions



(unit : mm)

Model		V30 Cylinder Actuators								
V30 Size		#01	#02	#03	#04	#05	#06	#07	#08	#09
Standard Travel(mm)		50	60	80	80	100	100	150	150	200
Standard V30	ØD	205	265	315	375	460	580	675	790	890
	H	555	565	585	595	645	665	850	850	920
Optional Vol. Chamber	ØD	205	265	315	375	460	580	675	790	890
	H	710	720	740	775	875	895	1,045	1,045	1,115
Optional H/Wheel	ØD	205	265	315	375	460	580	675	790	890
	H	820	830	850	890	1,025	1,045	1,180	1,180	1,250
Optional Vol. Chamber & H/Wheel	ØD	205	265	315	375	460	580	675	790	890
	H	965	985	1,005	1,035	1,255	1,265	1,380	1,380	1,450

#### \*. Note

1. The above data are values for standard travel.
2. All data shown in this product specification are currently standard specifications of Valution and can be customized by order specification.

## 5. V70 & V80 Rotary Motion, Scotch Yoke Heavy Duty Actuators

### ■ V70 & V80, Rotary Cylinder Actuators

The V70 & V80 series, Scotch yoke type cylinder actuator, is one of the main candidates for the pneumatic actuator of the Valuation.

This actuator is mainly used for on-off or modulating valves that rotate 90 degrees, such as large and high pressure ball valves and butterfly valves.

It is used to obtain larger torques and longer strokes than diaphragm actuators, which are heavy duty pneumatic actuators.

A wear ring and a DU bush were applied to the piston and guide area to realize rotational motion with stable linearity, and two seals were applied to maintain airtightness. A centerless finished steel pipe was used inside the cylinder.

The V70 model is spring-return single-acting, and the V80 is springless double acting, and it can set the fail position with any other relays.

For each size, it has the advantage of being able to apply significantly larger torque.

Long-term motion also has stable precision and durability, and modulating functions with traditional E/P, smart, and HART positioners depending on the purpose of use. On-Off functions with SOV, Lim. S/W and Relays can be performed.

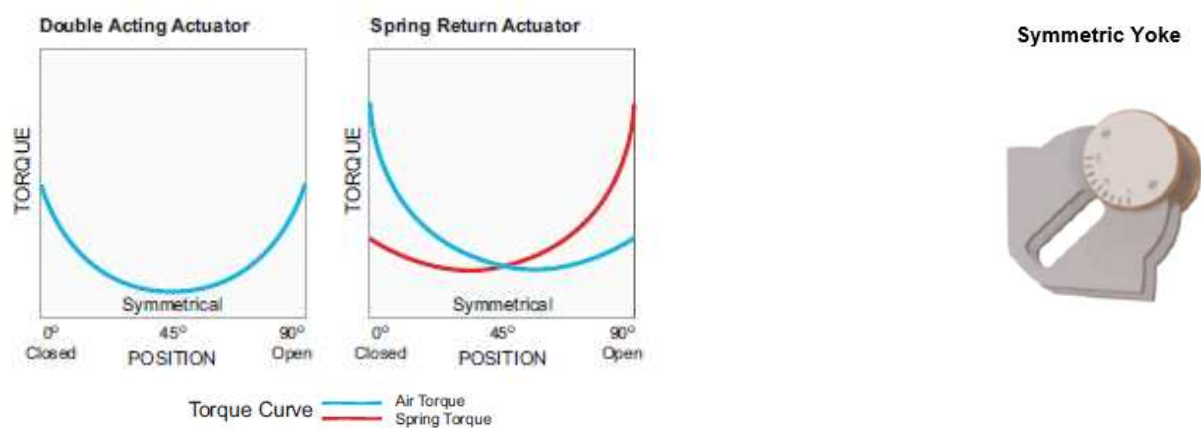


### ■ V70 & V80, General Specifications

Descriptions		Specifications
Applicable Temperature Range		Ambient $-20^{\circ}\text{C} \sim 80^{\circ}\text{C}$
Air Supply Connection		See page 13.
Hysteresis		without Positioner : $\pm 5.0\%$ with E/P Positioner : $\pm 1.0\%$ with Smart Positioner : $\pm 0.5\%$
Linearity		without Positioner : $\pm 5.0\%$ with E/P Positioner : $\pm 2.0\%$ with Smart Positioner : $\pm 0.5\%$
Sensitivity		without Positioner : $\pm 4.0\%$ with E/P Positioner : $\pm 0.5\%$ with Smart Positioner : $\pm 0.2\%$
Major Parts Materials	Piston	Carbon Steel Plate, JIS G3101, SS400 + HCR
	Cylinder	Carbon Steel Pipe, JIS STPG + HCr.
	Actuator Stem	304 St. Steel, A276 TY304 or 630 St. Steel + HCR
	Seals	NITRILE(NBR) and RTFE
	Yoke	Carbon Cast Steel, A216 Gr. WCB
Standard Operating Pressure		2.8 ~ 7.5 Bar
Optional		Other than standard specifications ; Materials, Temperature Range, Special Painting, NDE, etc.



## ■ V70 & V80, Performance Data for Symmetric Yoke



## ■ V80, Symmetric Yoke, Double Acting – Output Torque

(unit : Nm)

Model	4.0 BAR			5.0 BAR			6.0 BAR			8.0 BAR		
	Start	Run	End	Start	Run	End	Start	Run	End	Start	Run	End
V80-02-20	1,460	908	1,403	1,827	1,135	1,755	2,193	1,362	2,106	2,924	1,816	2,807
V80-02-25	2,284	1,419	2,226	2,855	1,773	2,783	3,426	2,128	3,339	4,568	2,837	4,452
V80-02-30	3,289	2,043	3,231	4,111	2,554	4,039	4,934	3,064	4,847	6,578	4,086	6,462
V80-02-35	4,477	2,781	4,419	5,596	3,476	5,524	6,715	4,171	6,628	8,954	5,561	8,838
V80-03-35	5,419	3,366	5,262	6,774	4,208	6,577	8,129	5,049	7,893	10,839	6,732	10,524
V80-03-38	6,388	3,968	6,231	7,985	4,960	7,788	9,582	5,952	9,346	12,777	7,936	12,461
V80-03-43	8,180	5,081	8,022	10,225	6,351	10,028	12,270	7,621	12,034	16,360	10,162	16,045
V80-04-43	10,492	6,517	10,217	13,115	8,146	12,772	15,738	9,775	15,326	20,984	13,033	20,435
V80-04-48	13,074	8,120	12,799	16,342	10,150	15,999	19,610	12,180	19,199	26,147	16,241	25,599
V80-04-53	15,939	9,900	15,665	19,924	12,375	19,581	23,909	14,850	23,497	31,878	19,800	31,330
V80-05-53	19,586	12,165	19,143	24,483	15,207	23,928	29,379	18,248	28,714	39,173	24,331	38,285
V80-05-58	23,456	14,569	23,013	29,320	18,211	28,766	35,184	21,584	34,519	46,912	29,138	46,025
V80-05-63	27,675	17,189	27,231	34,593	21,486	34,039	41,512	25,784	40,847	55,349	34,378	54,462
V80-06-63	34,546	21,457	33,682	43,182	26,821	42,102	51,818	32,185	50,523	69,091	42,914	67,364
V80-06-68	40,247	26,998	39,383	50,308	31,247	49,228	60,370	37,497	59,074	80,493	49,996	78,766
V80-06-73	46,383	28,809	45,519	57,978	36,011	56,899	69,574	43,124	68,278	92,765	57,618	91,038
V80-07-68	53,628	33,104	52,468	67,035	41,380	65,585	80,442	49,656	78,702	107,256	66,208	104,936
V80-07-73	61,804	38,151	60,645	77,255	47,688	75,806	92,706	57,226	90,967	123,608	76,302	121,290
V80-07-80	74,225	45,818	73,066	92,781	57,272	91,332	111,337	68,727	109,599	148,450	91,636	146,132
V80-08-80	98,968	61,092	97,097	123,710	76,365	121,371	148,452	91,638	145,645	197,936	122,184	194,194
V80-08-90	125,257	77,319	123,385	156,571	96,648	154,231	187,885	115,978	185,077	250,514	154,638	246,770
V80-08-100	154,638	95,456	152,767	193,297	119,320	190,958	231,957	143,184	229,150	309,276	190,912	305,534

### \*. Note

1. All data shown in this product specification are currently standard specifications of Valution and can be customized by order specification.
2. All data shown above are subject to change without notice.

## ■ V70 & V80, Performance Data for Symmetric Yoke



### ■ V70, Symmetric Yoke, Single Acting(Spring Return) – Output Torque

(unit : Nm)

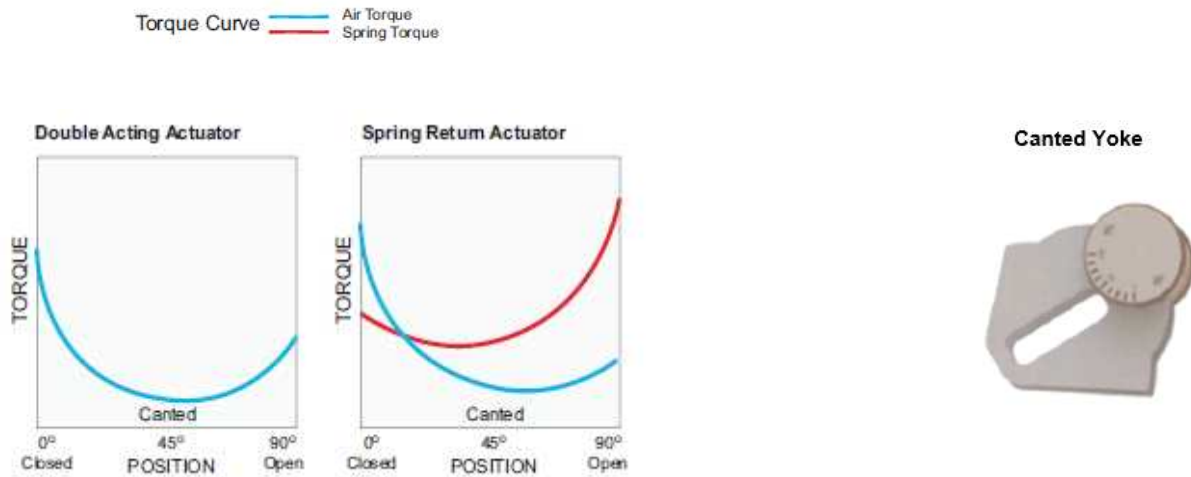
Model		Spring Torque			Torque : Air Supply Pressure											
					4.0 BAR			5.0 BAR			6.0 BAR			8.0 BAR		
		Start	Run	End	Start	Run	End	Start	Run	End	Start	Run	End	Start	Run	End
V70-02-20	A	602	495	975	858	413	428	1,225	640	780	1,591	867	1,131			
	B	790	650	1,280				1,037	485	475	1,403	712	826	2,134	1,166	1,527
V70-02-25	A	913	751	1,479	1,371	668	747	1,942	1,022	1,304	2,513	1,377	1,860			
	B	1,239	1,019	2,007				1,616	754	776	2,187	1,409	1,332	3,329	1,818	2,445
V70-02-30	A	1,301	1,090	2,141	1,988	963	1,090	2,810	1,474	1,898	3,633	1,984	2,706			
	B	1,787	1,469	2,894				2,324	1,085	1,145	3,147	1,595	1,953	4,791	2,617	3,568
V70-02-35	A	1,628	1,352	2,679	2,849	1,429	1,740	3,968	2,124	2,845	5,087	2,819	3,949			
	B	2,140	1,759	3,466				3,456	1,717	2,058	4,575	2,412	3,162	6,814	3,802	5,372
V70-03-35	A	1,803	1,539	3,098	3,616	1,827	2,164	4,971	2,669	3,479	6,326	3,510	4,795			
	B	2,566	2,120	4,189				4,208	2,088	2,388	5,563	2,929	3,704	8,273	4,612	6,335
V70-03-38	A	2,480	2,049	4,048	3,908	1,919	2,183	5,505	2,911	3,740	7,102	3,903	5,298			
	B	3,303	2,729	5,391				4,682	2,231	2,397	6,279	3,223	3,955	9,474	5,207	7,070
V70-03-43	A	3,049	2,519	4,977	5,131	2,562	3,045	7,176	3,832	5,051	9,221	5,102	7,057			
	B	4,097	3,554	7,223				6,128	2,797	2,805	8,173	4,067	4,811	12,263	6,608	8,822
V70-04-43	A	4,167	3,569	7,202	6,325	2,948	3,015	8,948	4,577	5,570	11,571	6,206	8,124			
	B	5,436	4,656	9,395				7,679	3,490	3,377	10,302	5,119	5,931	15,548	8,377	11,040
V70-04-48	A	5,125	4,390	8,857	7,949	3,730	3,942	11,217	5,760	7,142	14,485	7,790	10,342			
	B	6,406	5,582	11,372				9,936	4,568	6,427	13,204	6,598	7,827	19,741	10,659	14,227
V70-04-53	A	6,214	5,323	10,745	9,275	4,577	4,920	13,710	7,052	8,836	17,695	9,527	12,752			
	B	8,236	7,054	14,234				11,688	5,321	5,347	15,673	7,796	9,263	23,642	12,746	17,096
V70-05-53	A	7,651	6,505	13,070	11,935	5,660	6,073	16,832	8,702	10,858	21,728	11,743	15,644			
	B	10,204	8,675	17,431				14,279	6,532	6,497	19,175	9,573	11,283	28,969	15,656	20,854
V70-05-58	A	9,296	7,733	15,538	14,160	6,836	7,475	20,024	10,478	13,228	25,888	14,121	18,981			
	B	12,124	10,308	20,710				17,196	7,903	8,056	23,060	11,546	13,809	34,788	18,830	25,315
V70-05-63	A	10,971	9,328	18,742	16,704	7,861	8,489	23,622	12,158	15,297	30,541	16,456	22,105			
	B	14,127	12,010	24,132				20,466	9,476	9,907	27,385	13,774	16,715	41,222	22,368	30,330
V70-06-63	A	13,456	11,608	23,515	21,090	9,849	10,167	29,726	15,213	18,587	38,362	20,577	27,008			
	B	17,092	14,744	29,869				26,090	12,077	12,233	34,726	17,441	20,654	51,999	28,170	37,495
V70-06-68	A	15,243	13,149	26,637	25,004	11,849	12,746	35,065	18,098	22,591	45,127	24,348	32,437			
	B	20,474	17,662	35,779				29,834	13,585	13,449	39,896	19,835	23,295	60,019	32,334	42,987
V70-06-73	A	17,816	15,368	31,314	28,567	13,441	14,385	40,162	20,643	25,765	51,758	27,846	37,144			
	B	23,159	19,978	40,471				34,819	16,033	16,428	46,415	23,236	27,807	69,606	37,640	50,567
V70-07-68	A	20,914	17,545	36,467	32,714	15,559	16,001	46,121	23,835	29,118	59,528	32,111	42,235			
	B	26,143	21,931	45,583				40,892	19,449	20,002	54,299	27,725	33,119	81,113	44,277	59,353
V70-07-73	A	24,103	20,220	42,026	37,701	17,931	18,619	53,152	27,468	33,780	68,603	37,006	48,941			
	B	30,129	25,274	52,533				47,126	22,414	23,273	62,577	31,952	38,434	93,479	51,028	68,757
V70-07-80	A	28,947	24,283	50,473	45,278	21,535	22,593	63,834	32,989	40,859	82,390	44,444	59,126			
	B	36,184	30,354	63,091				56,597	26,918	28,241	75,153	38,373	46,508	112,266	61,282	83,041
V70-08-80	A	38,597	32,378	67,298	60,371	28,714	29,799	85,113	43,987	54,073	109,855	59,260	78,347			
	B	48,246	40,473	84,122				75,464	35,892	37,249	100,206	51,165	61,523	149,690	81,711	110,072
V70-08-90	A	48,850	40,979	85,174	76,407	36,340	38,211	107,721	55,669	69,057	139,035	74,999	99,903			
	B	61,062	51,223	106,468				95,509	45,425	47,763	126,823	64,755	78,609	189,452	103,415	140,302
V70-08-100	A	60,308	50,591	105,153	94,330	44,865	47,614	132,989	68,729	85,805	171,649	92,593	123,997			
	B	75,385	63,239	131,441				117,912	56,081	59,517	156,572	79,945	97,709	233,891	127,673	174,093

#### \*. Note

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## ■ V70 & V80, Performance Data for Canted Yoke



## ■ V80, Canted Yoke, Double Acting – Output Torque

(unit : Nm)

Model	4.0 BAR			5.0 BAR			6.0 BAR			8.0 BAR		
	Start	Run	End	Start	Run	End	Start	Run	End	Start	Run	End
V80-02-20	1,836	908	1,279	2,295	1,135	1,599	2,754	1,362	1,919	3,672	1,816	2,559
V80-02-25	2,869	1,419	1,999	3,586	1,773	2,499	4,303	2,128	2,998	5,737	2,837	3,998
V80-02-30	4,131	2,043	2,879	5,164	2,554	3,598	6,196	3,064	4,318	8,262	4,086	5,757
V80-02-35	5,623	2,781	3,918	7,028	3,476	4,898	8,434	4,171	5,877	11,245	5,561	7,836
V80-03-35	6,806	3,366	4,743	8,508	4,208	5,929	10,209	5,049	7,114	13,613	6,732	9,486
V80-03-38	8,023	3,968	5,591	10,029	4,960	6,988	12,035	5,952	8,386	16,046	7,926	11,182
V80-03-43	10,273	5,081	7,159	12,842	6,351	8,949	15,410	7,621	10,738	20,547	10,162	14,318
V80-04-43	13,177	6,517	9,182	16,471	8,146	11,477	19,765	9,775	13,773	26,353	13,033	18,364
V80-04-48	16,419	8,120	11,441	20,524	10,150	14,302	24,629	12,180	17,162	32,838	16,241	22,883
V80-04-53	20,018	9,900	13,959	25,023	12,375	17,347	30,027	14,850	20,924	40,036	19,800	27,899
V80-05-53	24,598	12,165	17,141	30,748	15,207	21,426	36,898	18,248	25,712	49,197	24,331	34,282
V80-05-58	29,459	14,569	20,528	36,823	18,211	25,660	44,188	21,854	30,792	58,917	29,138	41,055
V80-05-63	34,757	17,189	25,220	43,446	21,486	30,274	52,135	25,784	36,329	69,513	31,378	54,462
V80-06-63	43,386	21,457	30,233	54,332	26,821	37,791	65,079	32,185	45,349	86,771	42,914	60,465
V80-06-68	50,546	24,998	35,222	63,182	31,247	44,027	75,818	37,497	52,833	101,091	49,996	70,444
V80-06-73	58,252	28,809	40,592	72,815	36,011	50,740	87,378	43,214	60,888	116,504	57,618	81,184
V80-07-68	67,035	33,104	46,696	83,793	41,380	58,370	100,552	49,656	70,044	134,070	66,208	93,392
V80-07-73	77,255	38,151	53,974	96,568	47,688	67,467	115,882	57,226	80,961	154,510	76,302	107,948
V80-07-80	92,781	45,818	65,028	115,976	57,272	81,285	139,171	68,727	97,542	185,562	91,636	130,056
V80-08-80	123,710	61,092	86,416	154,637	76,365	108,020	185,565	91,638	129,624	247,420	122,184	172,832
V80-08-90	156,571	77,319	109,812	195,713	96,648	137,265	234,856	115,978	164,718	313,142	154,638	219,624
V80-08-100	193,297	95,456	135,962	241,621	119,320	169,952	289,945	143,184	203,943	386,594	190,912	271,924

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# ■ V70 & V80, Performance Data for Canted Yoke



## ■ V70, Canted Yoke, Single Acting(Spring Return) – Output Torque

(unit : Nm)

Model		Spring Torque			Torque : Air Supply Pressure											
					4.0 BAR			5.0 BAR			6.0 BAR			8.0 BAR		
		Start	Run	End	Start	Run	End	Start	Run	End	Start	Run	End	Start	Run	End
V70-02-20	A	670	452	808	1,166	456	471	1,625	683	791	2,084	910	1,111			
	B	876	591	1,056				1,419	544	543	1,878	771	863	2,796	1,225	1,503
V70-02-25	A	1,063	717	1,282	1,806	702	717	2,523	1,056	1,217	3,240	1,411	1,716			
	B	1,396	942	1,683				2,190	831	816	2,907	1,186	1,315	4,341	1,895	2,315
V70-02-30	A	1,496	1,020	1,834	2,635	1,023	1,045	2,668	1,534	1,764	4,700	2,044	2,484			
	B	2,059	1,404	2,524				3,105	1,150	1,704	4,173	1,660	1,794	6,203	2,682	3,233
V70-02-35	A	1,807	1,262	2,299	3,816	1,519	1,619	5,221	2,214	2,599	6,627	2,909	3,578			
	B	2,543	1,735	3,118				4,485	1,741	1,780	5,891	2,436	2,759	8,702	3,826	4,718
V70-03-35	A	2,047	1,464	2,700	4,759	1,902	2,043	6,461	2,744	3,229	8,162	3,585	4,414			
	B	3,093	2,098	3,759				5,415	2,110	2,170	7,116	2,951	3,355	10,520	4,634	5,727
V70-03-38	A	2,759	1,973	3,641	5,264	1,995	1,950	7,270	2,987	3,347	9,276	3,979	4,745			
	B	3,913	2,654	4,757				6,116	2,306	2,231	8,122	3,298	3,629	12,133	5,282	6,425
V70-03-43	A	3,637	2,467	4,421	6,636	2,614	2,738	9,205	3,884	4,528	11,773	5,154	6,317			
	B	5,017	3,403	6,099				7,825	2,948	2,850	10,393	4,218	4,639	15,530	6,759	8,219
V70-04-43	A	4,735	3,340	6,118	8,442	3,177	3,064	11,736	4,806	5,359	15,030	6,435	7,655			
	B	6,098	4,301	7,878				10,373	3,845	3,599	13,667	5,474	5,895	20,255	8,732	10,486
V70-04-48	A	5,887	4,152	7,605	10,532	3,968	3,836	14,637	5,998	6,697	18,742	8,028	9,557			
	B	7,754	5,469	10,017				12,770	4,681	4,285	16,875	6,711	7,145	25,084	10,772	12,866
V70-04-53	A	7,035	4,962	9,088	12,983	4,938	4,861	17,988	7,413	8,349	22,992	9,888	11,836			
	B	9,217	6,502	11,908				15,806	5,873	5,529	20,710	8,348	9,016	30,819	13,298	15,991
V70-05-53	A	8,854	6,189	11,286	15,744	5,976	5,855	21,894	9,018	10,140	28,044	12,059	14,426			
	B	11,770	8,235	15,018				18,978	6,972	6,408	25,128	10,013	10,694	37,427	16,098	19,264
V70-05-58	A	10,195	7,133	13,008	19,264	7,436	7,520	26,628	11,078	12,652	33,993	14,721	17,784			
	B	14,355	10,044	18,316				22,468	8,167	7,344	29,833	11,810	12,476	44,562	19,094	22,739
V70-05-63	A	12,292	8,601	15,684	22,465	8,588	8,536	31,154	12,885	14,590	39,843	17,183	20,645			
	B	16,158	11,306	20,617				27,288	10,180	9,657	35,977	14,478	15,712	53,355	23,072	27,822
V70-06-63	A	14,480	10,292	18,928	28,906	11,165	11,305	39,752	16,529	18,863	50,599	21,893	26,421			
	B	18,967	14,028	26,335				35,265	12,793	11,456	46,112	18,157	19,014	67,804	28,886	34,130
V70-06-68	A	17,715	12,591	23,156	32,831	12,407	12,066	46,467	18,656	20,871	58,103	24,906	29,677			
	B	22,115	16,357	30,708				41,067	14,890	13,319	53,703	21,140	22,125	78,976	33,639	39,736
V70-06-73	A	19,992	14,209	26,132	38,260	14,600	14,460	52,823	21,802	24,608	67,386	29,005	34,756			
	B	25,029	18,512	34,753				47,786	17,499	15,987	62,349	24,702	26,135	91,475	39,106	46,431
V70-07-68	A	23,423	16,141	32,090	43,612	16,963	14,606	60,370	25,239	26,280	77,129	33,515	37,954			
	B	29,280	20,176	40,113				54,513	21,204	18,257	71,272	29,480	29,931	104,790	46,032	53,279
V70-07-73	A	26,995	18,602	36,982	50,260	19,549	16,992	69,573	29,086	30,485	88,887	38,624	43,979			
	B	33,744	23,252	46,229				62,824	24,436	21,238	82,138	33,974	34,732	120,766	53,050	61,719
V70-07-80	A	32,420	22,340	44,416	60,361	23,478	20,612	83,556	34,932	36,869	106,751	46,387	53,126			
	B	40,526	27,925	55,520				75,450	29,347	25,765	98,645	40,802	42,022	145,036	63,711	74,536
V70-08-80	A	43,228	29,787	59,222	80,482	31,305	27,194	111,409	46,578	48,798	142,337	61,851	70,402			
	B	54,035	37,235	74,027				100,602	39,130	33,993	131,530	54,403	55,597	193,385	84,949	98,805
V70-08-90	A	54,712	37,700	74,953	101,859	39,619	34,859	141,001	58,948	62,312	180,144	78,278	89,765			
	B	68,389	47,125	93,691				127,324	49,523	43,574	166,467	68,853	71,027	244,753	107,513	125,933
V70-08-100	A	67,554	47,049	92,534	125,753	48,407	43,428	174,077	72,271	77,418	222,104	96,135	111,409			
	B	84,431	58,812	115,668				157,190	60,508	54,284	205,514	84,372	88,275	302,163	132,100	156,256

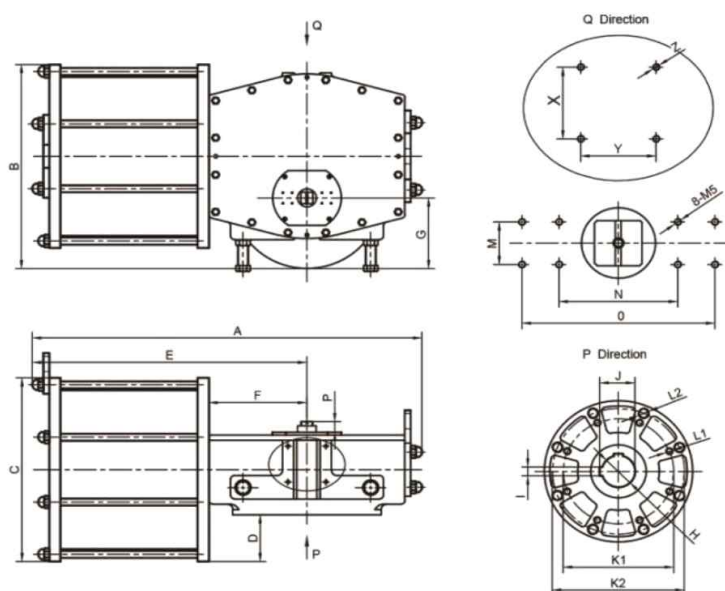
### \*. Note

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## ■ V70 & V80, Dimensions

### ■ V80, Double Acting Actuators



### ■ Dimensions for V70/V80 Actuators

(unit : Nm)

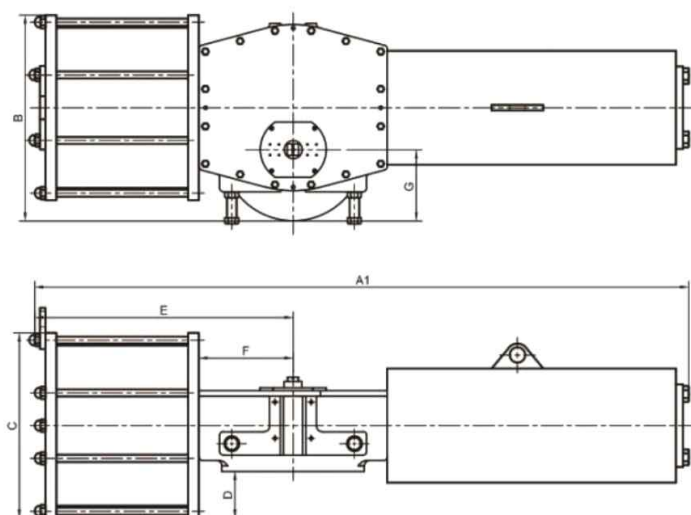
Model	A	A1		B	C	D	E	F	G	H	I	J
		4.2Bar	5.5Bar									
V70/80-02-20	735	1,250	1,264	290	ø228	21	517	180	100	ø50	14	53.8
V70/80-02-25	740	1,269	1,299	316	ø280	47	522	180	100	ø50	14	53.8
V70/80-02-30	753	1,342	1,353	341	ø330	72	535	180	100	ø50	14	53.8
V70/80-02-35	743	1,374	1,385	386	ø420	117	525	180	100	ø50	14	53.8
V70/80-03-35	844	1,545	1,548	480	ø420	100	590	208	175	ø80	20	84.9
V70/80-03-38	844	1,560	1,618	495	ø450	115	590	208	175	ø80	20	84.9
V70/80-03-43	844	1,603	1,665	520	ø500	140	590	208	175	ø80	20	84.9
V70/80-04-43	1,054	1,905	1,927	581	ø510	127	743	265	208	ø90	25	95.4
V70/80-04-48	1,054	1,937	2,077	606	ø560	152	743	265	208	ø90	25	95.4
V70/80-04-53	1,054	2,094	2,007	631	ø610	177	743	265	208	ø90	25	95.4
V70/80-05-53	1,242	2,230	2,264	688	ø610	148	890	312	238	ø120	32	127.4
V70/80-05-58	1,246	2,268	2,329	718	ø670	178	894	312	238	ø120	32	127.4
V70/80-05-63	1,246	2,348	2,473	743	ø720	203	894	312	238	ø120	32	127.4
V70/80-06-63	1,586	2,868	2,952	780	ø720	160	1,127	415	238	ø150	36	158.4
V70/80-06-68	1,586	3,010	3,142	815	ø790	195	1,127	415	238	ø150	36	158.4
V70/80-06-73	1,586	3,105	3,295	840	ø840	220	1,127	415	238	ø150	36	158.4
V70/80-07-68	1,915	3,490	3,510	910	ø790	145	1,335	520	280	ø190	45	200.4
V70/80-07-73	1,915	3,520	3,560	935	ø840	170	1,335	520	280	ø190	45	200.4
V70/80-07-80	1,915	3,565	3,595	975	ø920	210	1,335	520	280	ø190	45	200.4
V70/80-08-80	2,400	4,250	4,300	1,115	ø920	140	1,680	650	343	ø250	56	262.4
V70/80-08-90	2,400	4,380	4,420	1,170	ø1030	195	1,680	650	343	ø250	56	262.4
V70/80-08-100	2,400	4,480	4,550	1,220	ø1130	245	1,680	650	343	ø250	56	262.4

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## ■ V70 & V80, Dimensions

### ■ V70, Single Acting(Spring Return) Actuators



### ■ Dimensions for V70/V80 Actuators

(unit : Nm)

K1	K2	L1	L2	M	M	O	P	X	Y	Z	Air Connection
ø165		4-M20		30	80	130	30	80	80	4-M8	RC 3/8"
ø165		4-M20		30	80	130	30	80	80	4-M8	RC 3/8"
ø165		4-M20		30	80	130	30	80	80	4-M8	RC 3/8"
ø165	ø298	4-M20		30	80	130	30	80	80	4-M8	RC 1/2"
ø254	ø298	8-M16	8-M20	30	80	130	30	80	80	4-M8	RC 3/4"
ø254	ø298	8-M16	8-M20	30	80	130	30	80	80	4-M8	RC 3/4"
ø254	ø356	8-M16	8-M20	30	80	130	30	80	80	4-M8	RC 3/4"
ø298	ø356	8-M20	8-M30	30	80	130	30	100	100	4-M10	RC 1"
ø298	ø356	8-M20	8-M30	30	80	130	30	100	100	4-M10	RC 1"
ø298	ø406	8-M20	8-M30	30	80	130	30	100	100	4-M10	RC 1"
ø356	ø406	8-M30	8-M36	30	80	130	30	100	100	4-M12	RC 1"
ø356	ø406	8-M30	8-M36	30	80	130	30	100	100	4-M12	RC 1"
ø356	ø406	8-M30	8-M36	30	80	130	30	100	100	4-M12	RC 1"
ø356	ø406	8-M30	8-M36	30	80	130	30	160	160	4-M12	RC 1"
ø356	ø406	8-M30	8-M36	30	80	130	30	160	160	4-M12	RC 1"
ø356	ø406	8-M30	8-M36	30	80	130	30	160	160	4-M12	RC 1"
ø406	ø483	8-M36	12-M36	30	80	130	30	180	180	4-M16	RC 1"
ø406	ø483	8-M36	12-M36	30	80	130	30	180	180	4-M16	RC 1"
ø406	ø483	8-M36	12-M36	30	80	130	30	180	180	4-M16	RC 1-1/2"
ø483	ø603	12-M36	20-M36	30	80	130	30	200	200	4-M16	RC 1-1/2"
ø483	ø603	12-M36	20-M36	30	80	130	30	200	200	4-M16	RC 1-1/2"
ø483	ø603	12-M36	20-M36	30	80	130	30	200	200	4-M16	RC 1-1/2"

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## ■ Applicable Instruments

### – Positioners

: Smart, E/P, P/P Positioners for Single/Double Acting

### – Instruments

: Transfer(Trip) Valves, Volume Booster Relay, Lock-up Valves, Check Valves  
Air Regulators(Air Set), Speed Control Valves, Volume Tanks

### – limit Switches & Stoppers

### – Solenoid Valves

\*, Note

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2. All data shown above are subject to change without notice.
3. The standard warranty period for all Valution products is one year after shipment, and we are not responsible for defects caused by arbitrary modification or customer error.

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## ■ Valution Inc.

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