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DAVS GEMINI VALVES PVT.LTD.

(End to end solutions in Automation & Process Industries)



**DAVS
GEMINI
ACTUATOR**

Brief Introduction

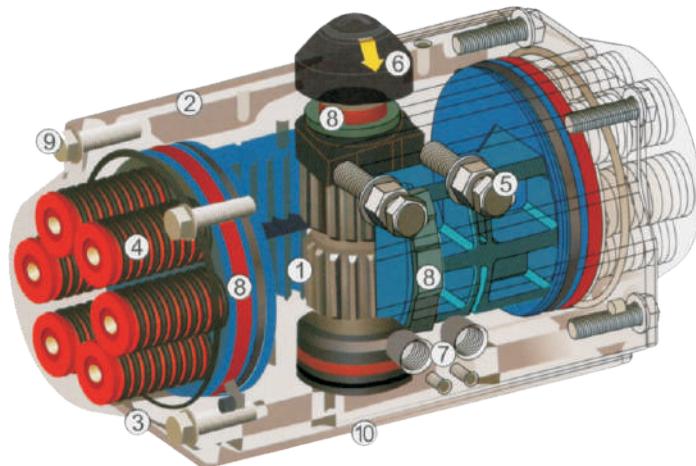
DAVS GEMINI is a high-tech company which professionally Design. Develops and produces ranges of automatic control valves and pneumatic actuators. For years, GEMINI has instituted to manage the quality control system to meet the requirements of ISO 9001:2008, which assure all our products and services provided will meet. At DAVS GEMINI , we believe in youthful power and creativity to establish our reliable quality and service our products are widely applied in various industrial fields, like paper making, chemicals, environmental production, light industry, pharmacy, building automation, oil & gas.

Content

1. DAVS GEMINI range pneumatic Actuator
2. Multifunction NAMUR interface
3. Operation Principle and Rotating Direction
4. Lectotype of Actuators & Mounting of spring
5. Parts and materials
6. Code of the Designation and data
7. Dimensions of the Metric systems and Technical Data
8. Single Acting output Torque of the metric system
9. Technical data and metric system Dimensions of 120[®] and 180[®] Rotation Actuators
10. Three-Position Pneumatic Actuators
11. ST Ranges plate Solenoid Valves
12. Instructions of At range
13. Inductive Limit Switch
14. YT-1000 Electricals position Indicator
15. Instruction of YT-1000 Electrical Position Indicator
16. Triple Units
17. APL Range limit Switch
18. Manual Operating Actuator

DAVS GEMINI RANGE OF Pneumatic Actuator

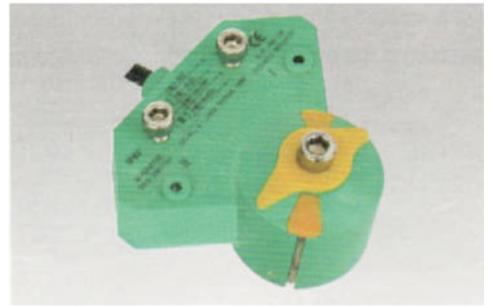
The new ATC pneumatic rack and pinion actuators have been innovated and optimally designed through CAD. Cinema, Mastercam three-dimensional model , incorporating the latest technology at home and abroad. The shape is beautiful and compact , and the style is modern , We adopt new practical materials , new processes to make the quality and the performance of the products more reliable : multi-standard selection is more affordable : the products fully meet latest international standard technical specifications and the current and future needs.



1. Dual piston rack and pinion design of symmetric Structure for fast and smooth action, high precision and high output power. Reverse rotation can be accomplished by simply changing the mounting position of the pistons .
2. Extruded high-quality aluminum alloy cylinder Block, precisely processed inner hole and hard Anodized outer surface (anodic oxidation under Special circumstances + Teflon coating) extend the lifecycle and lower friction coefficient.
3. Uniform design utilizes identical cylinder body And end cap for all double acting and single acting actuators. it allows changing acting way easily by adding or removing spring .
4. Modular preloaded safe spring cartridges can Install or remove spring easily and safely no matter In the process of mounting or in the field.
5. The tow independent adjusting screws on the external side can precisely adjust the on/off location of valve, which has been installed with Actuator.if full stroke adjustment is required , Additionally install longer adjusting screws on tow end covers.
6. Multi-positioner and visual indicator comply with standard VID/ VIE 3845 and NAMUR able to install and output all accessories .such as limit switch. Positioner and position sensor
7. Air port complies with NAMUR standard and can be directly mounted NAMUR standard solenoid valve.
8. The compound bearing bush and piston guide right at the Back of gear rack and bearing of outlet shaft prevent metal friction. In addition, the increased lubricants help to reduce function And extend the lifecycle.
9. All fasteners are made of stainless steel materials and long-term Corrosion resistance.
10. Fully conformance to the latest specifications of ISO52211,DN3337 (F03-F25), Namur and make the installation interchangeable and versatile.

Multi-functional NAMUR Interface

Multi-functional indicator in the 4th generation actuator is the standards product, which can be applied to following occasions since it is made of compound materials.



1. Location indication

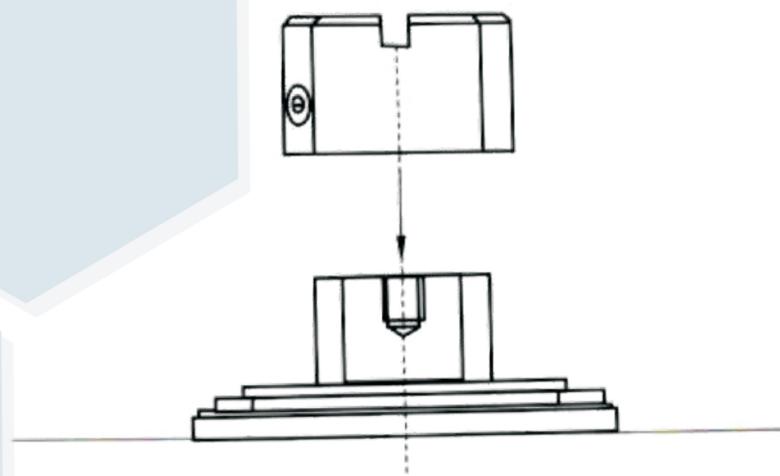
Indicating location of valve And actuator visually by a Color insert and NAMUR Standard trough, the indicator Is suitable for all output shafts and tow rotation directions of Actuator.

2. Output accessories of actuator

NAMUR standard trough of location indicator can directly engaging output limit switch and locator.

3. Install proximity sensors directly

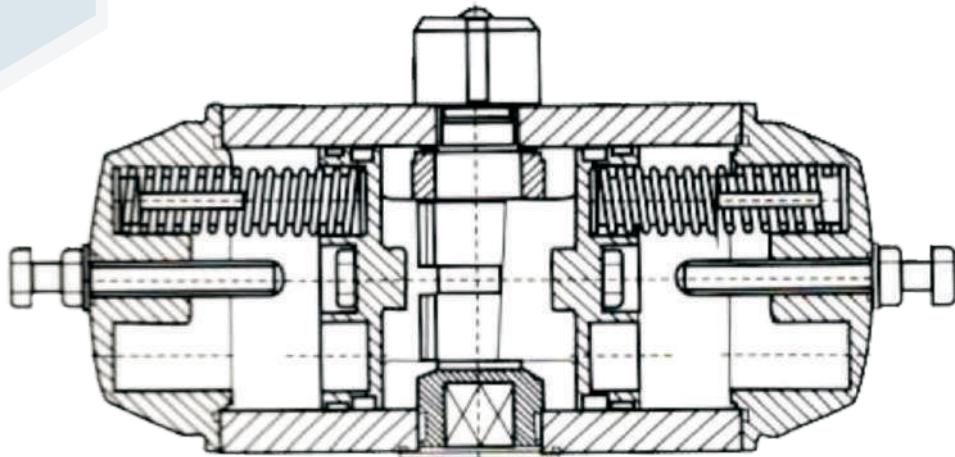
Indicator with metal insert can be mounted with numerous different proximity sensors conveniently and practically.



Attachment installed without multi-functional indicator

According to the requirement, replace standard indicator by Stainless steel cap with NAMUR standard trough 4th generation Actuator to carry out following functions:

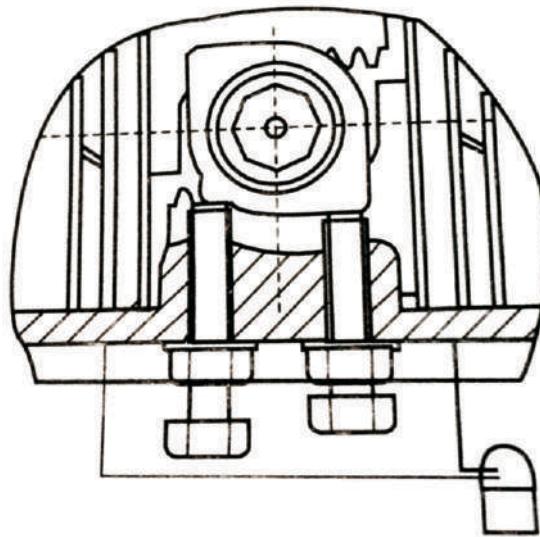
1. Attachment installation such as limit switch box and locator.
2. Indicating location of actuator by NUMAR standard though.
3. Operable under high temperature.
4. Operator the actuator manually under emergency.



Required

Full stroke adjustment on 4th generation actuator

The strokerange is 0° to 90° plus or minus 4°. When a stroke Less than 90° is required, such as 1° ,5°,10°,25°,50°,or 80° You can add two special bolts adjustable or limitable at 0° to 90° at tow end covers of actuator according to the requirement of customer. Full stroke adjustment is available in all 4th generation actuator.



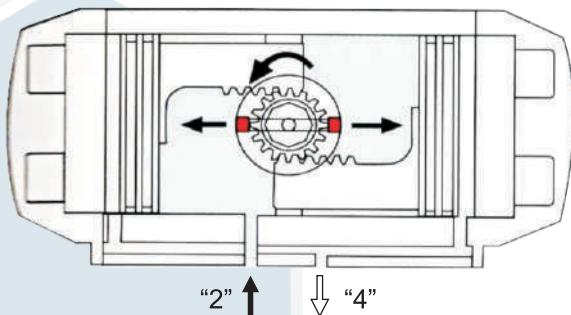
Lock function in complete "on" and "off "location

When it is required to lock at compete on (90°) or complete off (0°), the 4th generation actuator offers practical and affordable method .special bolt and locking device in the actuator can lock the actuator at each location forever. Using padlock, to avoid any uneccessary operation.

Operating principle and rotating direction

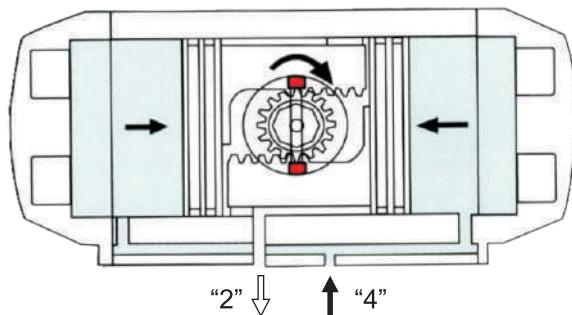
The standard rotating direction is clockwise, and can be anticlockwise when the air arrive the port2. The rotating direction of the actuators marked LF is anticlockwise, and can be clockwise when the air arrive the port 2

Operating principle of double acting



CCW

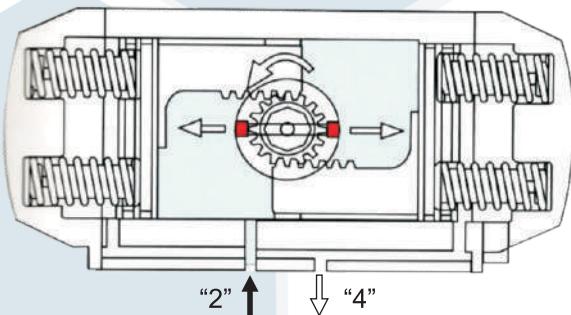
Air to port 2 forces the pistons outwards to the two ends, causing the pinion to turn counterclockwise. While the air is being exhausted from port 4.



CW

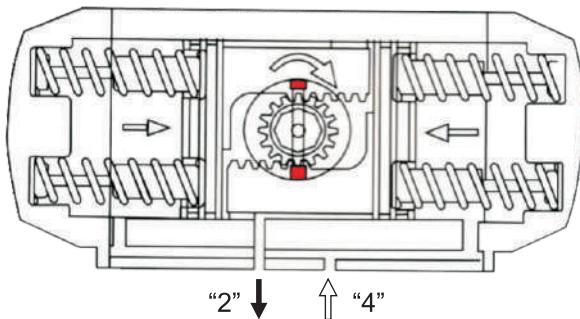
Air to port 4 forces the piston inwards to the middle. Causing the pinion to turn clockwise. While the air is being exhausted from port 2.

Operating principle of single acting



CCW

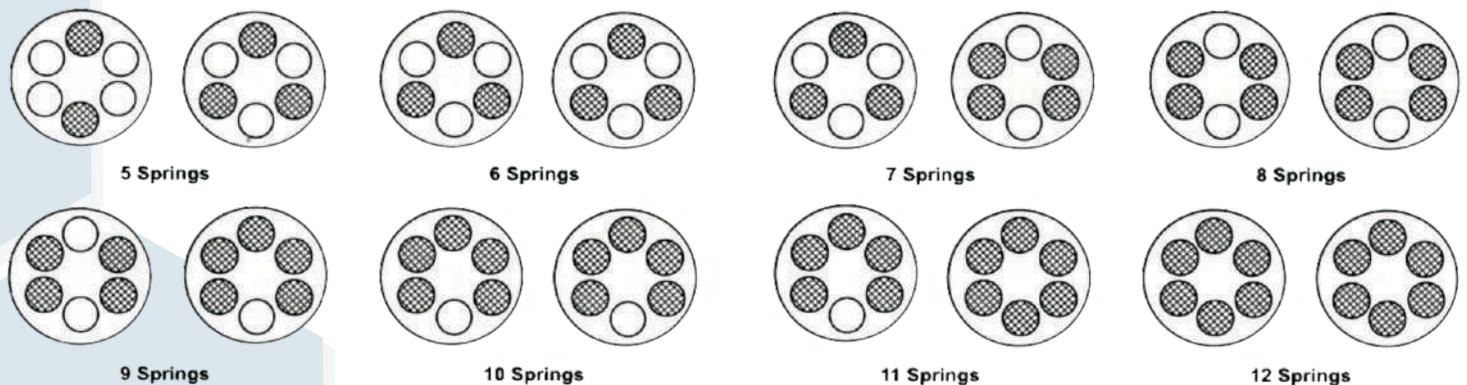
Air to port 2 forces the pistons outwards to the two ends, causing the springs to compress. The pinion turns counterclockwise while air is being exhausted from port 4. From port 2.



CW

Loss of air pressure to the middle, the stored energy in the springs forces the pistons inwards to the middle the pinion turns clockwise while air is being exhausted

Spring mounting from for spring return actuators



How to select the actuator

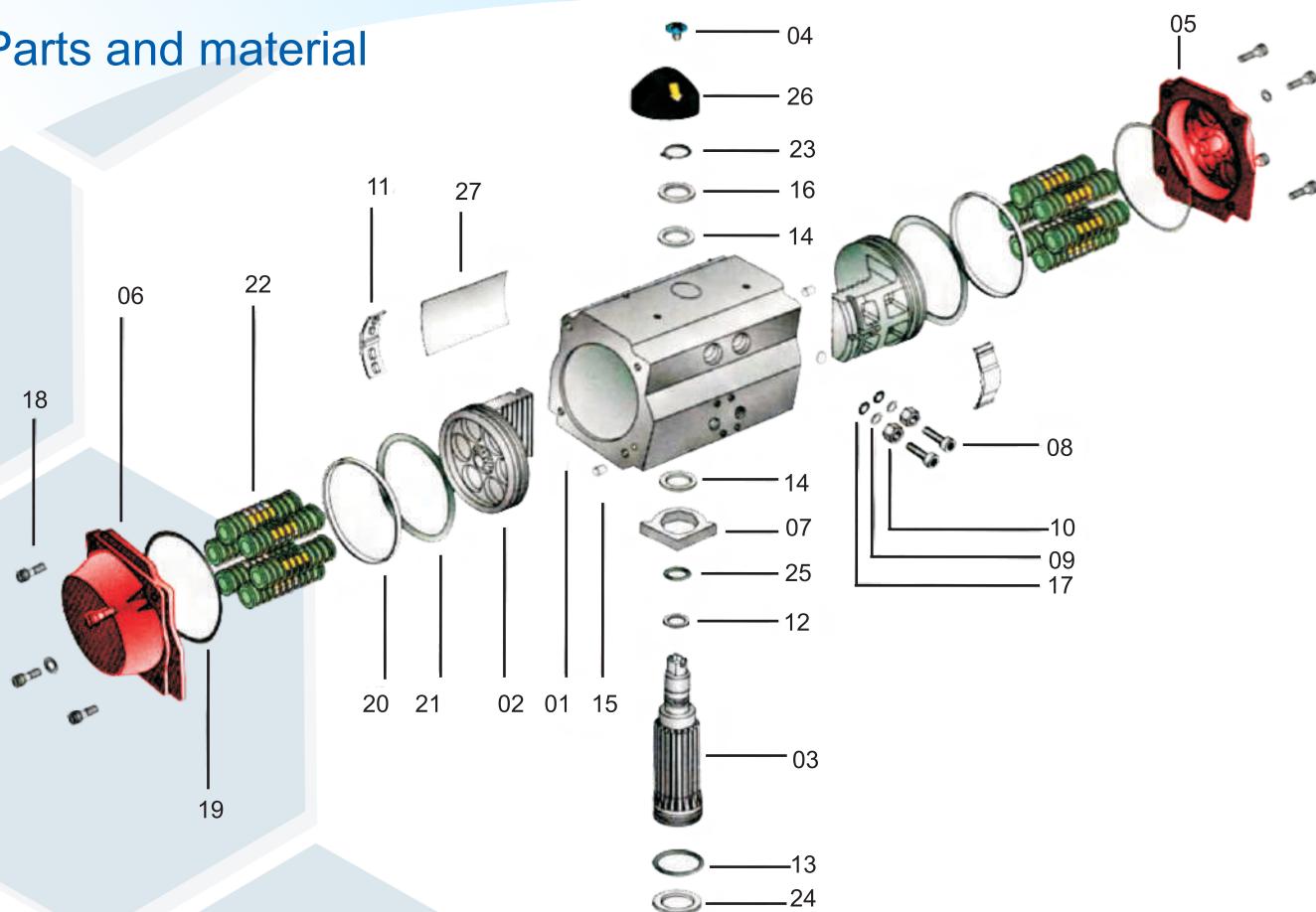
The purpose of this reference data is helping how to select DAVS GEMINI pneumatic actuator rightly.
Before install the actuator to valve, the following factors into consideration:

1. Valve's running torque plus safety coefficient that recommended by manufacture /under operating condition.
2. Actuator's air pressure
3. Type of actuator: D (double acting) or S (spring return) and the output torque under certain air pressure
4. Rotation of actuator and its failure mode (failure on or failure off)

Selection of actuator

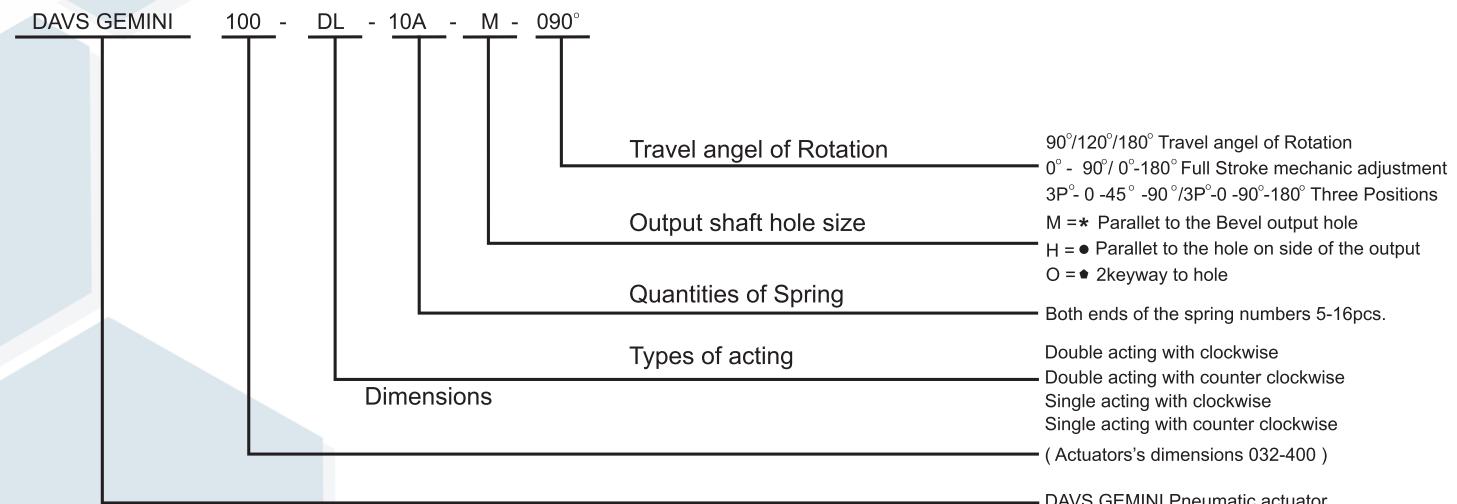
1. Increase safety coefficient to the torque of chosen valve
When selecting pneumatic actuator.
2. Increase 25% safety coefficient to vapor or non-Lubricating Liquids.
3. Increase 25% safety coefficient to non-lubricating Slurry liquids.
4. Increase 40% safety coefficient to non-lubricating Dry gas.
5. Increase 60% safety coefficient to non-lubricating Powdered and particles transported by air
6. Increase 20% safety coefficient to clean and low-friction Lubricant (above recommended theoretically by us for Reference only)

Parts and material



NO	QTY	NAME	STANDARD MATERIAL	CORROSION PREVENTION GRADE	OPTIONAL MATERIAL
01	1	Cylinder body	Cast aluminum alloy	Anode hardening	.....
02	2	Piston	Cast aluminum alloy	Anodization	.....
03		Output axis	Alloy steel / Enp	Nickel plated	Stainless steel
04		Cap screw	Stainless steel	.....	.....
05		Right end cap	Cast aluminum alloy	Alkyd coating	.....
06	1	Left end cap	Cast aluminum alloy	Alkyd coating	.....
07	1	Octi-cam(Break gear)	Stainless steel	.....	.....
08	2	Stopper bolt	Stainless steel / SS304	.....	.....
09	2	Thrust washer	Stainless steel /SS304	.....	.....
10	2	Screw cap nut	Stainless steel	.....	.....
11	2	Bering (Piston pad)	Composite materials/Stanyl	.....	.....
12	1	Bearing (Gear's top)	Nylon46/Stanyl	.....	.....
13	1	Bearing (Gears Bottom)	Nylon46/Stanyl	.....	.....
14	2	Thrust bearing (Gear)	Composite materials	.....	.....
15	2	Plug	NBR	.....	Viton/Silicone
16	1	Thrust Washer	Stainless steel /SS304	.....	.....
17	2	O-ring (Stopper bolt)	NBR	.....	Viton/Silicone
18	8(C)	Cap screw (Allen)	Stainless steel	.....	.....
19		O-ring (End cap)	NBR	.....	Viton/Silicone
20	2	Bearing (Piston head)	Composite materials	.....	.....
21		O-ring (Piston)	NBR	.....	Viton/Silicone
22	5-12	Spring	Alloy spring steel	Epoxy resin coating	.....
23		Circlip (Gear)	Alloy spring steel	Nickel plated	Stainless steel
24		O-ring (Gear's Bottom)	NBR	.....	Viton/Silicone
25	1	O-ring (Gear's top)	NBR	.....	Viton/Silicone
26	1	Position indicator	Composite materials/Plastic	.....	.....
27		Label of the actuator	Polyester aluminum	.....	.....

How the style number made

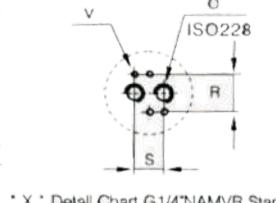
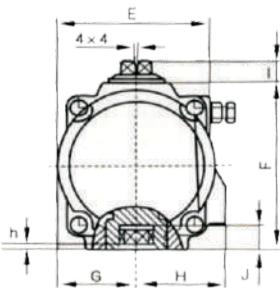
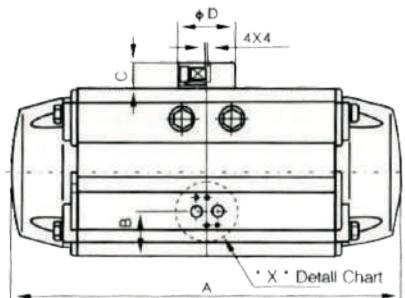
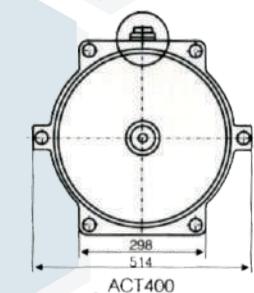


Technic data

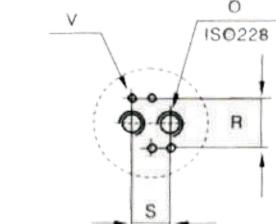
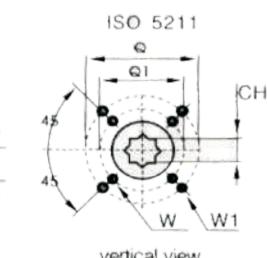
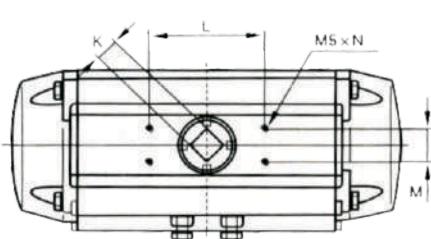
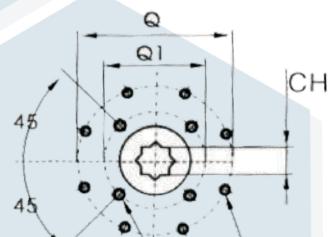
Model & type	DAVS GEMINI 050 D S	DAVS GEMINI 063 D S	DAVS GEMINI 075 D S	DAVS GEMINI 090 D S	DAVS GEMINI 100 D S	DAVS GEMINI 115 D S	DAVS GEMINI 125 D S	DAVS GEMINI 145 D S	DAVS GEMINI 160 D S	DAVS GEMINI 190 D S	DAVS GEMINI 210 D S	DAVS GEMINI 240 D S	DAVS GEMINI 270 D S	DAVS GEMINI 300 D S	DAVS GEMINI 350 D S	DAVS GEMINI 400 D S
GÖÖ NØØ	50	63	75	90	100	115	125	145	160	190	210	240	270	300	50	400
Rotation Required For 1 stroke adjustment	1/6	1/6	1/5	1/5	1/5	1/5	1/5	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
Opening cylinder Volume (L)	0.1	0.2	0.3	0.5	0.7	1.2	1.5	2.4	3.1	4.3	5.9	10.0	14.5	25.0	35.1	52.6
Closing cylinder volume (L)	0.2	0.3	0.5	0.8	1.1	1.8	2.3	3.8	4.9	6.9	9.5	15.2	21.4	40.0	46.3	66.2
Opening time (S)	0.2	0.3	0.3	0.4	0.5	0.7	0.9	1.2	1.5	2	2.7	3.5	4	6.0	10.1	14.1
	0.2	0.3	0.35	0.5	0.6	0.8	1.1	1.4	1.7	2.2	3.2	4	4.5	7.5	12.3	16.2
Closing time (S)	0.3	0.3	0.4	0.5	0.7	0.9	1.2	1.5	1.8	2.4	3.5	4.1	4.5	7.0	11.5	15.7
	0.3	0.4	0.5	0.6	0.9	1.1	1.4	1.8	2.1	2.8	4	4.6	5	8.5	13.8	17.3
Estimated Weight (Kg)	1.1	1.6	2.8	4.0	5.4	8.4	11	15.5	20.2	33	35.5	61.5	86	110	186	289
	1.2	1.8	3.3	4.7	6.5	9.8	13.4	19.1	24.4	39.6	45.1	72.5	104	130	234	360

Power consumption depends on air pressure, whichstroke, the volume and frequency of action. Calculation is as follows:
Liter/Minute=cylinder volume (opening volume +closing volume) x {supplied gas pressure (Kpa)*101.3}x times/minute.

Dimensions of the metric system and technical data



* X * Detail Chart G1/4" NAMVR Standard



* X * Detail Chart G1/2" NAMVR Standard

Model	DAVS GEMINI 050	DAVS GEMINI 063	DAVS GEMINI 075	DAVS GEMINI 090	DAVS GEMINI 100	DAVS GEMINI 115	DAVS GEMINI 125	DAVS GEMINI 145	DAVS GEMINI 160	DAVS GEMINI 190	DAVS GEMINI 210	DAVS GEMINI 240	DAVS GEMINI 270	DAVS GEMINI 300	DAVS GEMINI 350	DAVS GEMINI 400
A	154.5	168	219	249	274	351	354	417	452	539	600	671	723	857	935	1035
B	26.5	30	30.5	32.5	37.5	42.5	45	50	51.5	56	70	70	88	91	99	235
C	20	20	20	20	20	20	30	30	30	30	30	40	40	40	40	40
E	53	66	82	92.5	107	112	130	146.5	159	186	201	231	252.5	290	336	335
F	69	85	102.5	115	127.5	140	156.5	176	196	231	253.5	291	331.5	354	410	466
G	29	36.5	43	49	55.5	61.5	69.5	78.5	88	105	116	130.5	147	162	190	260
H	41	46.5	52.5	56.5	66.5	71	80.5	91	97	110	119.5	130.5	147	173	195	260
I	12	14	18	18	20	20	30	35	35	40	40	45	45	60	60	60
h	0.5	0.5	1	1	1	1	1.5	1.5	1.5	2	2	2	2	2.5	2.5	2.5
R	32	32	32	32	32	32	32	32	32	32	32	45	45	45	45	45
S	24	24	24	24	24	24	24	24	24	24	24	40	40	40	40	40
H	M5X8	M5X8	M5X8	M5X8	M5X8	M5X8	M5X8	M5X8	M5X8	M5X8	M5X8	M5X8	M5X10	M6X10	M6X10	M6X10
O ISO 228	G1/4"	G1/4'	G1/4'	G1/4'	G1/4'	G1/4'	G1/4'	G1/4'	G1/4'	G1/4'	G1/4'	G3/8'	G3/8'	G1/2'	G1/2'	G1/2'
M	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
N	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
L	80	80	80	80	80	130	130	130	130	130	130	130	130	130	130	130
K	11	11	14	14	14	21	21	27	27	27	27	36	36	36	36	36
ISO 251 1	F03/ F05	F03/ F05	F05/ F07	F05/ F07	F07/ F10	F07/ F10	F07/ F10	F10/ F12	F10/ F12	F14	F14	F16	F16	F16	F16/ F25	F16/ F25
CH	11	14	17	17	22	22	27	27	27	336	36	46	46	46	46	46
Q	36	36	50	50	70	70	70	102	102	104	140	165	165	165	165	254
Q1	50	50	70	70	102	102	102	125	125							
W	M5	M5	M6	M6	M8	M8	M8	M10	M10	M16	M16	M20	M20	M20	M20	M20
W1	M6	M6	M8	M8	M10	M10	M10	M12	M12					M16	M16	M16

Output torque of spring return actuators

Output torque of overcomes Spring force																			Spring's Rotation						
Air pressure		2.5Bar		3Bar		3.5Bar		4Bar		4.5Bar		5Bar		5.5Bar		6Bar		7Bar		8Bar					
Model	Spring Qty	0° start	90° End	0° start	90° End																				
ACT 050S	S05	4.9	3.4	6.6	5.1	8.3	6.8	9.9	8.4	11.6	10.1	13.2	11.7									4.9	3.4		
	S06	4.3	2.5	5.9	4.1	7.6	5.8	9.3	7.4	10.9	9.1	12.6	10.8	14.2	12.4								5.8	4	
	S07			5.3	3.1	6.9	4.8	8.6	6.5	10.2	8.1	11.9	9.8	13.6	11.5	15.2	13.1						6.8	4.7	
	S08					6.2	3.8	7.9	5.5	9.6	7.2	11.2	8.8	12.9	10.5	14.6	12.1	17.9	15.5				7.8	5.4	
	S09							7.2	4.5	8.9	6.2	10.6	7.8	12.2	9.5	13.9	11.2	17.2	14.5	20.5	17.8	20.5	17.8	8.8	6.1
	S10									8.2	5.2	9.9	6.9	11.5	8.5	13.2	10.5	16.5	13.5	19.8	16.8	19.8	16.8	9.7	6.7
	S11										9.2	5.9	10.9	7.6	12.5	9.2	15.9	12.5	19.2	14.9	19.2	14.9	10.7	7.4	
	S12											10.2	6.6	11.9	8.2	15.2	11.6	18.5	11.6	11.7	8.1				
ACT 063S	S05	9.1	6.2	12	9.2	15.0	12.1	17.9	15.0	20.8	17.9	23.8	20.9										8.4	5.5	
	S06	8	4.5	10.9	7.5	13.9	10.4	16.8	13.3	19.7	16.3	22.7	19.2	25.6	22.1								10.1	6.7	
	S07			9.8	5.8	12.8	8.7	15.7	11.6	18.6	14.6	21.5	17.5	24.5	20.4	27.4	23.4						11.8	7.8	
	S08					11.6	7	14.6	10	17.5	12.9	20.4	15.8	23.4	18.7	26.3	21.7	32.2	27.5				13.5	8.9	
	S09							13.5	8.3	16.4	11.2	19.3	14.1	22.3	17.1	25.2	20	31.3	25.9	36.9	31.7	36.9	31.7	15.2	10
	S10									15.3	9.5	18.2	12.4	21.1	15.4	24.1	18.3	29.9	24.2	35.8	30	35.8	30	16.9	11.1
	S11										17.1	10.8	20	13.7	23	16.6	28.8	22.5	34.7	28.3	34.7	28.3	18.6	12.2	
	S12											18.9	12	21.9	14.9	27.7	20.8	33.6	26.7	20.2	13.3				
ACT 075S	S05	18.0	11.8	23.8	17.6	29.7	23.4	35.5	29.2	41.3	35	47.1	40.9										17.3	11.1	
	S06	15.8	8.3	21.6	14.1	27.5	19.9	33.3	25.8	39.1	31.6	44.9	37.4	50.7	43.2								20.8	13.3	
	S07			19.4	10.7	25.2	16.5	31.1	22.3	36.9	28.1	42.7	33.9	48.5	39.8	54.3	45.6						24.2	15.5	
	S08					23	13	28.8	18.8	34.7	24.7	40.5	30.5	46.3	36.3	52.1	42.1	63.7	53.7				27.7	17.7	
	S09							26.6	15.4	32.5	21.2	38.3	27.0	44.1	32.8	49.9	38.6	61.5	50.3	73.2	61.9	73.2	61.9	31.2	19.9
	S10									30.2	17.7	36.1	23.6	41.9	29.4	47.7	35.2	59.3	46.8	71	58.5	71	58.5	34.6	22.1
	S11										33.8	20.1	39.7	25.9	45.5	31.7	57.1	43.4	68.7	55	68.7	55	38.1	24.3	
	S12											37.5	22.4	43.3	28.3	54.9	39.9	66.5	51.5	41.5	26.5				
ACT 090S	S05	27.4	16.9	36.6	26	45.7	35.2	54.9	44.3	64	53.5	73.2	62.6										28.9	18.3	
	S06	23.8	11.1	32.9	20.3	42.1	29.4	51.2	38.6	60.4	47.7	69.5	56.9	78.6	66								34.7	22	
	S07			29.2	14.5	38.4	23.6	47.5	32.8	56.7	41.9	65.8	51.1	75	60.2	84.2	69.4						40.4	25.7	
	S08					34.7	17.9	43.9	27	53	36.2	62.2	45.3	71.3	54.5	80.5	63.6	98.8	81.9				46.2	29.3	
	S09							40.2	21.2	49.4	30.4	58.5	39.5	67.7	48.7	76.8	57.8	95.1	76.1	113	94.5	113	94.5	52	33
	S10									45.7	24.6	54.8	33.8	64	42.9	73.1	52.1	91.5	70.4	110	88.7	110	88.7	57.8	36.7
	S11										51.2	28	60.3	37.1	96.5	46.3	87.8	64.6	106	82.9	106	82.9	63.5	40.3	
	S12											56.7	31.4	65.8	40.5	84.1	58.8	102	77.1	102	77.1	102	77.1	69.3	44
ACT 100S	S05	41.1	27.1	54.4	40.4	67.7	53.7	81	67	94.3	80.3	108	93.6									39.4	25.3		
	S06	36.1	19.2	49.4	32.5	62.7	45.8	76	59.1	89.3	72.4	103	85.7	116	99								47.3	30.4	
	S07			44.3	24.6	57.6	37.9	70.9	51.2	84.2	64.5	97.5	77.8	111	91.1	124	104						55.1	35.5	
	S08					52.5	30	65.8	43.3	79.1	56.6	92.4	69.9	106	83.2	119	69.5	146	123				63	40.5	
	S09							60.8	35.5	74	48.8	87.3	62.1	101	75.3	114	88.6	141	115	167	142	167	142	70.9	45.6
	S10									69	40.9	82.3	54.2	95.6	67.5	109	80.8	135	107	162	134	162	134	78.8	50.7
	S11										77.2	46.3	90.5	59.6	104	72.9	130	99	157	126	157	126	86.7	55.7	
	S12											85.4	51.7	98.7	65	125	92	152	118	152	118	152	118	94.5	60.8
ACT 115S	S05	63.5	41.9	87.9	63.4	109	84.9	131	106	152	128	174	149										65.5	41	
	S06	58.1	28.8	79.7	50.3	101	71.8	123	93.3	144	115	166	136	187	158								78.6	49.2	
	S07			71.5	37.2	93	58.7	115	80.2	136	102	158	123	179	145	200	166						91.7	57.4	
	S08					84.8	45.6	106	67.1	128	88.6	149	110	171	132	192	153	235	196				105	65.6	
	S09							98.1	54	120	75.5	141	97	163	118	184	140	227	183	270	226	270	226	118	73.8
	S10									111	62.4	133	83.9	154	105	176	127	219	170	262	213	262	213	131	82
	S11										125	70.8	146	92.3	168	114	211	157	254	200	144	200	144	90.2	
	S12											138	79.2	159	101	201	143	245	186	157	98.5	157	98.5		

Output torque of spring return actuators

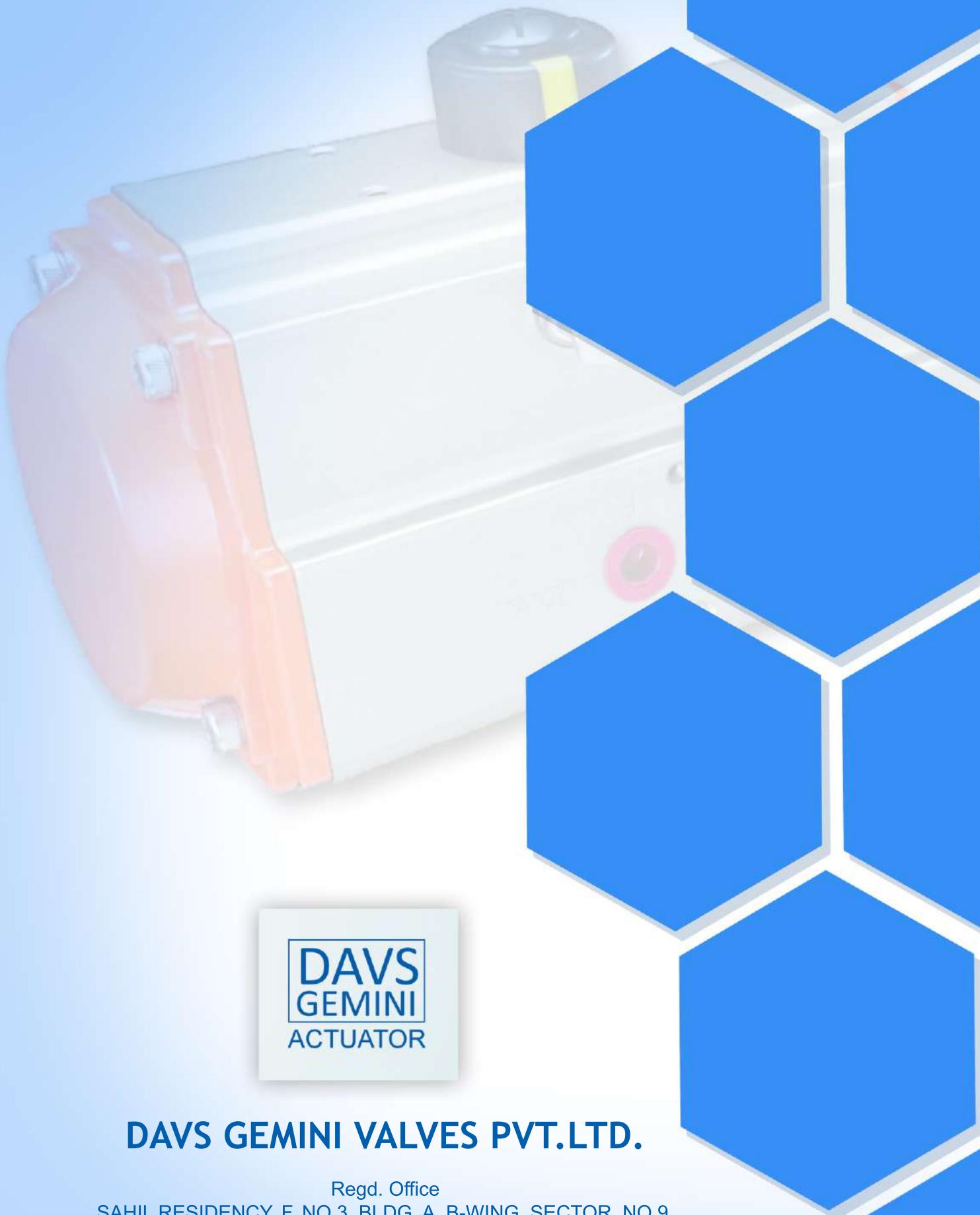
ACT 125S	S05	86	56.1	113.7	83.3	141	111	169	139	197	167	224	195					82	52.5	
	S06	75.5	39.6	103.2	67.3	131	95	159	123	186	150	214	178	242	206			99	62.9	
	S07			92.7	50.8	120.4	78.5	148	106	176	134	203	162	231	189	259	217		115	73.5
	S08					110	62	137.6	89.7	165	117	193	145	221	173	248	201	304	256	
	S09							127	73.3	155	101	182	129	210	156	238	184	293	239	
	S10									144	84.5	172	112	200	140	227	168	283	223	
	S11											161	95.7	189	123	217	151	273	206	
	S12												179	107	206	135	262	190		
	S05	135	88.6	179	132	222	176	265	219	309	262	352	306					129	82	
	S06	119	62.8	162	106	206	150	249	193	293	236	336	280	379	324			155	98.7	
	S07			146	80.5	189	124	233	167	276	211	320	254	363	298	406	341		180	115
ACT 145S	S08					173	98.2	216	142	260	185	303	229	347	272	390	316	477	403	
	S09							200	116	243	159	287	203	330	246	374	290	460	377	
	S10									227	134	270	177	314	221	357	264	444	351	
	S11											254	151	297	195	341	238	428	325	
	S12													281	169	324	213	411	299	
	S05	171	118	228	174	285	231	342	288	398	344	455	401					166	112	
ACT 160S	S06	149	84.3	206	141	262	198	318	255	376	311	433	368	489	425			199	135	
	S07			183	108	240	165	297	221	353	278	410	335	467	391	524	448		233	157
	S08					218	131	274	188	331	245	388	302	444	358	501	415	615	528	
	S09							252	155	309	212	365	368	422	325	479	382	592	495	
	S10									286	178	343	235	400	292	456	349	570	462	
	S11											320	202	377	259	434	315	547	429	
ACT 190S	S12													355	225	411	282	525	396	
	S05	327	212															293	190	
	S06	285	147	393	255	501	363											352	227	
	S07			351	190	459	298	566	405	675	514							410	265	
	S08			309	125	417	233	524	340	633	449	740	556	849	665			469	303	
	S09					482	275	591	384	698	491	807	600	913	706			527	341	
	S10					440	210	549	319	656	426	765	535	871	641	1087	857	1302	1072	
	S11									614	361	723	470	829	576	1045	792	1260	1007	
ACT 210S	S12									572	296	681	405	787	511	1003	727	1218	942	
	S05	369	258															360	260	
	S06	311	178	442	309	572	446											432	313	
	S07	253	99	384	230	514	367	647	493	778	631							503	365	
	S08			326	150	456	288	589	413	720	552	853	677	721	815			575	417	
	S09					531	333	662	473	795	597	663	736	1058	860			647	469	
ACT 240S	S10					473	253	604	394	737	517	605	657	1000	780	1263	1043	1526	1306	
	S11									679	437	547	578	942	700	1205	963	1468	1226	
	S12									621	357	489	499	884	620	1147	883	1410	1146	
	S05	533	372	712	551	890	730	1069	908	1248	1087	1426	1266					521	360	
	S06	461	268	640	447	818	625	997	804	1176	983	1354	1162	1533	1340			625	433	
	S07			568	343	746	521	925	700	1104	879	1282	1057	1461	1236	1640	1415		730	505
ACT 270S	S08					574	417	853	596	1032	774	1210	953	1389	1132	1568	1310	1925	1668	
	S09							781	491	959	670	1138	849	1317	1028	1495	1206	1853	1564	
	S10									887	566	1066	745	1245	923	1423	1102	1781	1459	
	S11											994	640	1173	819	1351	998	1709	1355	
	S12											1101	715	1279	894	1637	1251	1994	1608	
	S05	879	640															745	530	
ACT 270S	S06	761	475	1054	768	1353	1059											894	636	
	S07	644	309	937	602	1236	893	1525	1190	1823	1480							1043	742	
	S08			819	437	1119	727	1407	1025	1706	1314	1994	1612	2293	1901			1192	848	
	S09					1002	561	1289	859	1589	1148	1876	1446	2146	1735	2463	2033		1341	954
	S10							1171	694	1472	982	1758	1281	2059	1569	2345	1868	2932	2455	
	S11									1355	816	1640	1115	1942	1403	2227	1702	3814	2289	
ACT 270S	S12											1523	950	1825	1237	2110	1537	1697	2124	3884
																	2711	1788	1272	

Output torque of spring return actuators

Output torque (Nm)																		Spring's Rotation			
Air pressure		2.5Bar		3Bar		3.5Bar		4Bar		4.5Bar		5Bar		5.5Bar		6Bar		7Bar		8Bar	
Model	Spring Qty	0° start	90° End	0° start	90° End																
ACT 300S	S05	1097	729																1061 730		
	S06	935	494	1316	875	1697	1274												1273 876		
	S07	772	258	1153	639	1535	1038	1916	1402										1485 1022		
	S08			991	403	1373	802	1754	1166	2138	1546	2517	1929						1697 1168		
	S09					1592	930	1976	1310	2355	1693	3739	2456						1909 1314		
	S10					1430	695	1814	1074	2193	1458	2577	1837	2956	2221	3719	2984	4482	3747		
	S11							1652	838	2030	1222	2415	1601	2793	1985	3556	2784	4319	3511		
	S12							1868	986	2253	1365	2631	1749	3394	2514	4157	3275	2446	1752		
ACT 350S	S05	1553	964																1702 1173		
	S06	1292	586	1863	1157	2432	1738												2043 1408		
	S07	1031	208	1602	779	2171	1360	2745	1922										2383 1642		
	S08			1341	401	1910	980	2484	1544	3053	2117	3626	2686						2724 1877		
	S09					2224	1165	2792	1739	3366	2307	3934	2881	4508	3449				3064 2112		
	S10					1963	787	2531	1361	3105	1929	3673	2503	4247	3071	5390	4212	6532	5356		
	S11							2270	983	2844	1551	3412	2125	3986	2693	5129	3836	6271	4978		
	S12									2528	1172	3151	1747	3726	2314	4869	3457	6011	4599		
ACT 400S	S07	2028	869																2880 1837		
	S08	1736	411	2550	1125	3369	2841												3292 2100		
	S09			2259	768	3078	2484	3887	2396										3703 2362		
	S10			1967	311	2787	2127	3595	1939	4415	3755	5223	3567						4115 2624		
	S11					3303	1482	4124	3398	4931	3110	5752	5026	6559	4738				4526 2887		
	S12					3012	1025	3833	3041	4640	2653	5461	4669	6268	4281	7835	5908	9523	7536		
	S13									4348	2195	5170	4312	5976	3823	7603	5450	9231	7078		
	S14									4057	1738	4879	3955	5685	3366	7312	4993	8940	6621		
	S15									3765	1281	4588	3598	5393	2909	7020	4536	9648	6164		
	S16											4297	3241	5101	2452	6728	4079	8356	5707		
																		6584 4199			

Output torque of double acting actuators(Nm)

Model \ Air Pressure	2.5Bar	3Bar	3.5Bar	4Bar	4.5Bar	5Bar	5.5Bar	6Bar	7Bar	8Bar
DAVS GEMINI 032D	3.8	4.6	5.3	6.1	6.9	7.6	8.4	9.2	10.7	12.2
DAVS GEMINI 050D	8.3	10.0	11.6	13.3	15.0	16.6	18.3	19.9	23.3	26.6
DAVS GEMINI 063D	14.7	17.6	20.5	23.5	26.4	29.3	32.2	35.2	41.0	46.9
DAVS GEMINI 075D	29.1	34.9	40.7	46.5	52.4	58.2	64.0	69.8	81.4	93.1
DAVS GEMINI 090D	45.8	54.9	64.1	73.2	82.4	91.5	101	110	128	146
DAVS GEMINI 100D	66.5	79.8	93.1	106	120	133	146	160	186	213
DAVS GEMINI 115D	107	129	150	172	193	215	236	258	301	344
DAVS GEMINI 125D	138	166	194	222	249	277	305	332	388	443
DAVS GEMINI 145D	217	261	304	348	391	435	478	522	609	696
DAVS GEMINI 160D	284	340	397	454	511	567	624	681	794	908
DAVS GEMINI 190D	538	646	753	861	969	1077	1185	1292	1508	1723
DAVS GEMINI 210D	658	789	920	1052	1184	1316	1447	1579	1842	2105
DAVS GEMINI 240D	966	1160	1352	1546	1740	1933	2126	2320	2706	3093
DAVS GEMINI 270D	1468	1761	2055	2349	2642	2936	3229	3523	4110	4697
DAVS GEMINI 300D	1908	2289	2670	3052	3434	3815	4197	4578	5341	6104
DAVS GEMINI 350D	2856	3427	3998	4570	5141	5712	6283	6854	7997	9139
DAVS GEMINI 400D	4069	4883	5697	6511	7325	8139	8953	9767	11394	13022



**DAVS
GEMINI
ACTUATOR**

DAVS GEMINI VALVES PVT.LTD.

Regd. Office

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