

# Prisma

## HEAVY DUTY PNEUMATIC ACTUATORS



**PRISMA**

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**HEAVY DUTY PNEUMATIC ACTUATORS**

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The brand name of **PRISMA** Actuators has become well-known all around the world and is now a point of reference in this industry because of the robustness and reliability of its products. This success relies on continuously improving the quality and enhancing the development of our products and also to tailoring our service to meet the individual requirements of every one of our customers.

Since it was founded in 1980, PRISMA has grown remarkably. In recent times our mechanical know-how as well as our extensive technical knowledge has evolved to offer complete solutions in the automation of valves to control the process of fluid conduction.

**MECÁNICA PRISMA** develops four Pneumatic Actuator ranges, according to different environments of application: Aluminium, Stainless Steel, Polyamide and for High Temperatures. All manufactured according to international norms such as: ISO, DIN, NAMUR, VDE, VDI, ATEX, CE, DNV, PCT, SIL2.

MECÁNICA PRISMA is accredited by quality norm ISO 9001-2000, ISO-TS-29001, API Q1 and 65% of its production is exported to more than 45 countries worldwide.



**ISO-9001 / TS 29001 / API Q1**

**PRISMA** offers a wide range of products for valve automation including pneumatic actuators, electric actuators and control and regulation elements: solenoid valves, limit switch boxes, positioners, travel stops, declutchable gearboxes, handwheels, etc. All actuators can be mounted onto any kind of valve, due to the wide range of mounting kits that PRISMA develops and produces.

PRISMA pneumatic actuators are available in double acting and spring return, covering a torque range from 17Nm to 65.000Nm at 6 Bar. Industrial applications: Chemical, Nuclear, Electronics, Automotive, Food and Beverage, Pharmaceutical; and other sectors such as Iron and Steel, Power Plants, Water Treatment, Oil & Gas, Off-Shore plants, etc.

## CERTIFICATIONS



**ISO-9001 / TS 29001 / API Q1**

**IEC-61508-SIL-2**

**PED-PA70-DV**



**TAC-DNV**

**TAC-DNV-PA**

**PH-94007802-LGAI**



**ATEX-LOM**



**ATEX-LOM-PA**



**GOST CERTIFICATE**

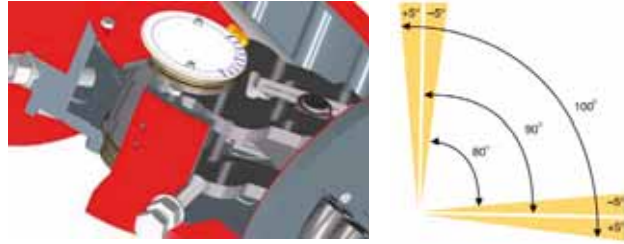


# HEAVY DUTY PNEUMATIC ACTUATORS

## TECHNICAL FEATURES

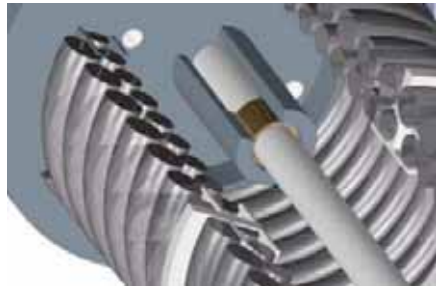
- HIGH TORQUE actuators to mount on to ball, butterfly and plug valves.
- Wide range of DOUBLE ACTING and SPRING RETURN actuators up to 65000Nm at 6 bar.
- Working temperature: -20°C to +80°C.

- POSITION INDICATOR and STROKE ADJUSTMENTS allowing the regulation of valve opening and closing, with  $\pm 5^\circ$  range on both double acting and spring return.

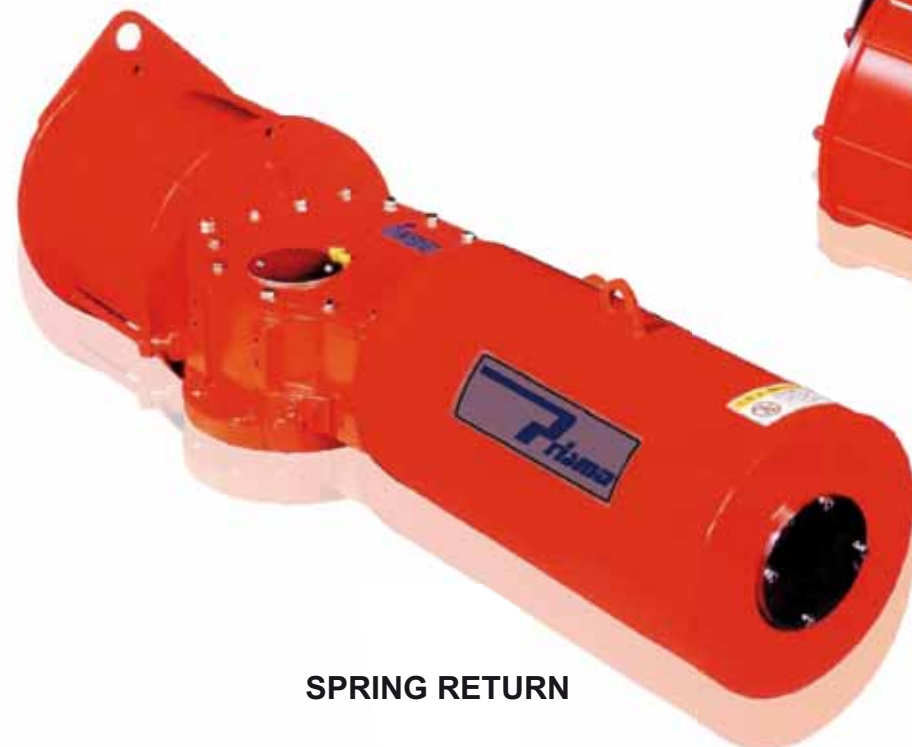


- Can be equipped with limit switches, solenoid valve and manual override.

- SPRING SECURITY SYSTEM as standard. All components are protected against corrosion.



- PD pneumatic actuator range can pilot and regulate 90° rotation valves with torques up to 65.000 Nm in double acting and spring return function.

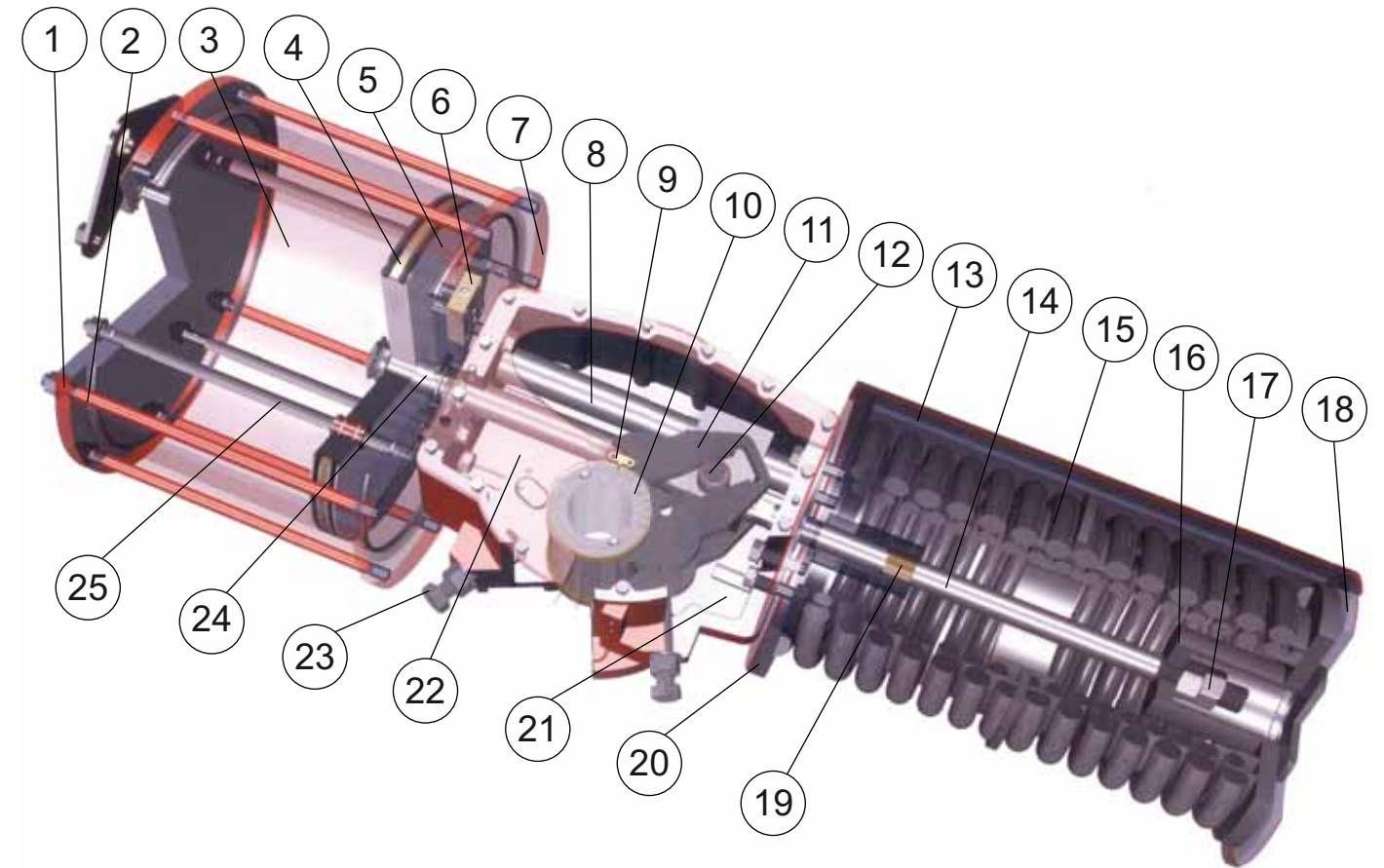


SPRING RETURN



DOUBLE ACTING

## DISASSEMBLY AND MATERIALS



N°	DESCRIPTION	MATERIAL	REMARKS
1	CYLINDER END COVER	ALLOY STEEL	MOLYKOTE
2	TIE BOLT	ALLOY STEEL	-
3	CYLINDER	ALLOY STEEL	HARD Cr - PLATED
4	BACK-UP-RING	P.T.F.E	-
5	PISTON	ALLOY STEEL	MOLYKOTE
6	PNEUMATIC CONNECTION PLATE	ALM	-
7	CYLINDER FRONT COVER	ALLOY STEEL	MOLYKOTE
8	GUIDE BAR	ALLOY STEEL	HARD Cr - PLATED
9	POSITION NEEDLE	ALLOY STEEL	-
10	POSITION INDICATOR	STAINLESS STEEL	-
11	SLIDE BEARING	ALLOY STEEL	MOLYKOTE
12	SLIDE PIN	ALLOY STEEL	-
13	SPRING CASE	ALLOY STEEL	-
14	SPRING ROD	ALLOY STEEL	-
15	SPRING	ALLOY STEEL	-
16	SPRING RETAINER	ALLOY STEEL	-
17	ROD ADJUST NUT	ALLOY STEEL	-
18	CAP BOLT	ALLOY STEEL	-
19	SPRING ROD GUIDE BUSHING	ENGINEERING PLASTIC	-
20	SPRING CASE FRONT COVER	ALLOY STEEL	-
21	HOUSING	DUCTIL IRON	-
22	HOUSING COVER	ALLOY STEEL	-
23	STROKE ADJUSTMENTS	ALLOY STEEL	HIGH - TENSION
24	PISTON ROD	ALLOY STEEL	-
25	PISTON GUIDE BAR	ALLOY STEEL	-



# HEAVY DUTY PNEUMATIC ACTUATORS

## PD RANGE

### SECURITY PISTON GUIDES

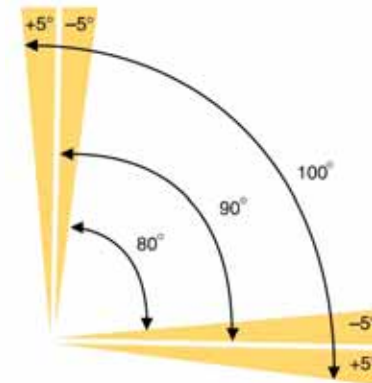
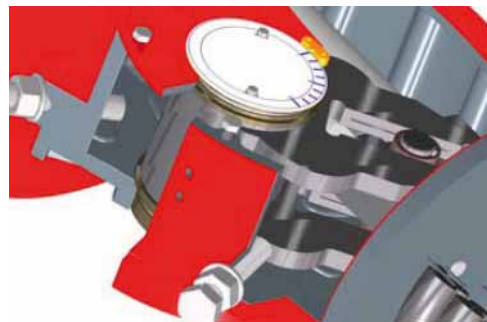
Actuators specially designed to guarantee the lowest friction between internal pieces.

### PISTON GUIDE RING

High quality ring preventing any leakage.

### POSITION INDICATOR

Clearly indicates position of the actuator.

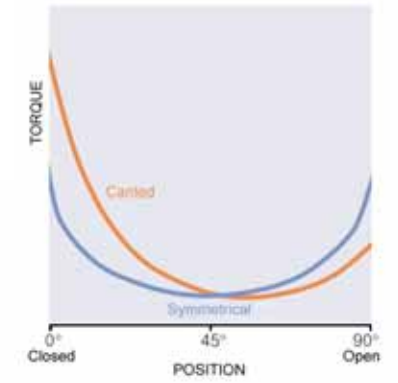


### SOLENOID CONNECTION FLANGE

1/2" or 3/4" Connection  
(depending on model).  
Dimensions according to VDI/VDE 3845 (NAMUR).



### SYMMETRICAL AND CANTED TYPES



### SPRING SECURITY SYSTEM

The spring security system ensures safe operation.

### TRAVEL STOPS

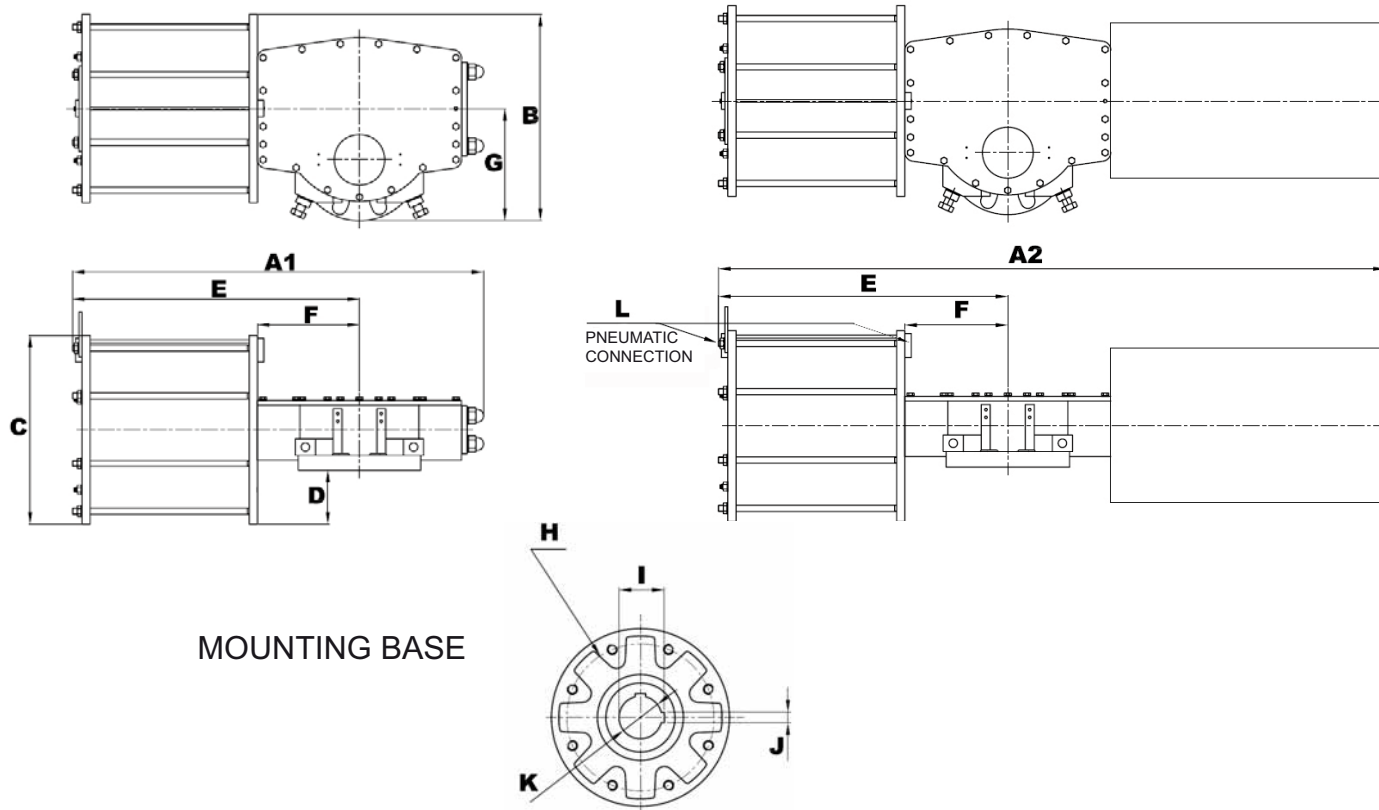
Actuator travel angle can be adjusted  $\pm 5^\circ$  at open and close position due to the travel stops.

# HEAVY DUTY PNEUMATIC ACTUATORS

## PD DIMENSIONS

DOUBLE ACTING

SPRING RETURN



MOUNTING BASE

MODELS	DIMENSIONS (mm)																
	A1	A2 5,6 Bar	B	C	D	E	F	G	H			I	J	K		L	
									φ	N° holes	Thread/ Depth			φ	DEPTH		
PD 100 - 335	888	1465	455	410	105	623	215	150	254	F25	8	M16 / 24	80	20	75	171	1/2" NPT
PD 100 - 385	888	1465	481	461	131	623	215	150	254	F25	8	M16 / 24	80	20	75	171	1/2" NPT
PD 100 - 435	888	1468	506	512	156	623	215	150	254	F25	8	M16 / 24	80	20	75	171	1/2" NPT
PD 130 - 435	1098	1807	566	512	144	776	272	180	298	F30	8	M20 / 29	95.4	22	90	191	3/4" NPT
PD 130 - 485	1098	1807	591	562	169	776	272	180	298	F30	8	M20 / 29	95.4	22	90	191	3/4" NPT
PD 130 - 535	1098	1810	622	624	200	776	272	180	298	F30	8	M20 / 29	95.4	22	90	191	3/4" NPT
PD 160 - 535	1301	2174	682	624	172	920	321	210	356	F35	8	M30 / 43	117.4	32	110	235	3/4" NPT
PD 160 - 585	1301	2177	708	675	198	920	321	210	356	F35	8	M30 / 43	117.4	32	110	235	3/4" NPT
PD 160 - 635	1301	2177	734	728	224	920	321	210	356	F35	8	M30 / 43	117.4	32	110	235	3/4" NPT
PD 200 - 635	1582	2576	810	739	211	1114	400	240	406	F40	8	M36 / 50	137.4	32	130	265	3/4" NPT
PD 200 - 685	1582	2578	835	789	236	1114	400	240	406	F40	8	M36 / 50	137.4	32	130	265	3/4" NPT
PD 200 - 735	1582	2583	863	845	263	1114	400	240	406	F40	8	M36 / 50	137.4	32	130	265	3/4" NPT

## OPERATING TORQUE

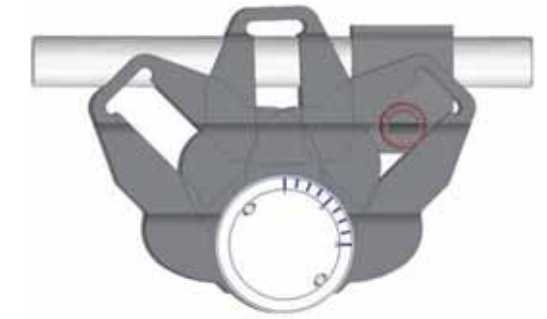
### DOUBLE ACTING (DA)

MODELS	5.6 BAR		
	0°	R	90°
PD 100 - 335 D	6.767	4.193	6.628
PD 100 - 385 D	8.938	5.538	8.753
PD 100 - 435 D	11.410	7.070	11.175
PD 130 - 435 D	14.833	9.191	14.528
PD 130 - 485 D	18.439	11.425	18.059
PD 130 - 535 D	22.437	13.903	21.975
PD 160 - 535 D	27.614	17.111	27.045
PD 160 - 585 D	33.017	20.459	32.336
PD 160 - 635 D	38.902	24.105	38.100
PD 200 - 635 D	48.628	30.132	47.625
PD 200 - 685 D	56.587	35.064	55.421
PD 200 - 735 D	65.150	40.369	63.806

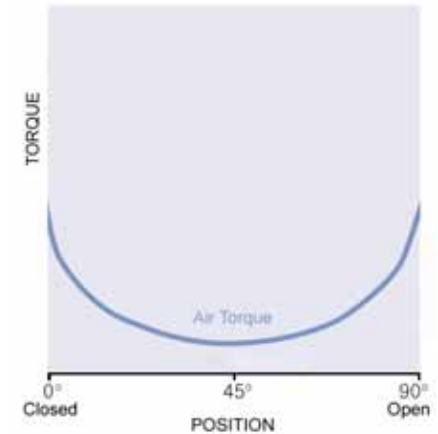
### SPRING RETURN (SR)

MODELS	Spring Torques (Nm)			Torque at Indicated Pressure		
				5.6 BAR		
	Initial	R	End	Initial	R	End
PD 100 - 335 S6	4.189	2.120	2.566	4.201	2.073	2.439
PD 100 - 385 S6	5.713	2.811	3.241	5.697	2.727	3.040
PD 100 - 435 S6	7.223	3.554	4.097	7.313	3.516	3.952
PD 130 - 435 S6	9.395	4.656	5.436	9.398	4.535	5.133
PD 130 - 485 S6	11.876	5.769	6.496	11.943	5.656	6.184
PD 130 - 535 S6	15.053	7.313	8.234	14.203	6.590	6.921
PD 160 - 535 S6	17.482	8.701	10.234	17.380	8.410	9.562
PD 160 - 585 S6	20.761	10.333	12.154	20.863	10.125	11.575
PD 160 - 635 S6	24.013	11.952	14.057	24.845	12.154	14.087
PD 200 - 635 S6	29.826	14.723	17.068	31.560	15.409	17.799
PD 200 - 685 S6	36.082	17.811	20.647	35.940	17.253	19.339
PD 200 - 735 S6	43.023	21.171	24.405	40.745	19.198	20.748

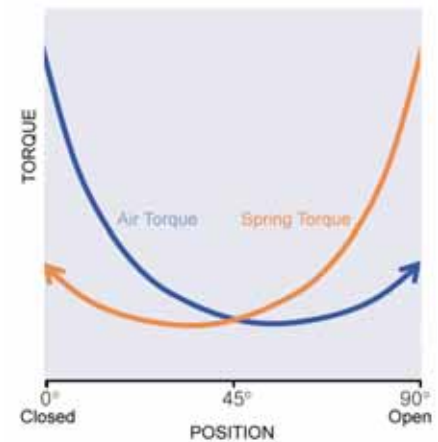
Units: Nm



SYMMETRIC



DOUBLE ACTING



SPRING RETURN



**MECÁNICA PRISMA, S.L.**  
C/Telègraf 1-7  
Polígon industrial Sota el Molí  
08160 - Montmeló (Barcelona)  
SPAIN

Tel.: (+34) 93 462 11 54  
Fax.: (+34) 93 462 12 74

[prisma@prisma.es](mailto:prisma@prisma.es)  
[www.prisma.es](http://www.prisma.es)

The logo for Prisma, featuring a stylized blue 'P' followed by the word 'risma' in a lowercase, italicized, sans-serif font. The background of the entire page is a faded, grayscale image of industrial machinery, including a prominent red motor or actuator in the upper left and lower right quadrants.

Technical specifications of our products are available on our website