

CATALOG  
grippers

**GR Series**  
*Adjustable Angular Gripper*



**numatics®**

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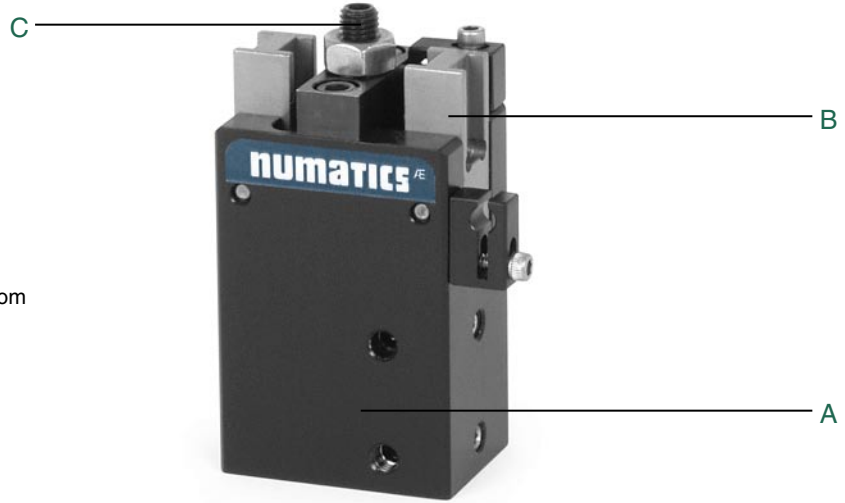
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### GR90-Series Angular Grippers

The GR90-Series has a double acting piston attached to a cross bar by a connecting rod. The linear movement of the piston is transformed into angular movement of the jaws through a double toggle link mechanism.

- A. Body:**  
Hardcoat anodized with Teflon®, reduced friction, reduced wear. Front and side ports standard.
- B. Jaws:**  
Hardened alloy steel.  
Keyway slot for tooling location.  
180° jaw motion.
- C. Locking Adjustment Screw:**  
Jaw rotations can be adjusted from 0-90° to be custom fit to each application.



### How to Order

**GR90 1 6 D X**

**Seal Type**

- 1 = Buna-N Seals
- 2 = Viton Seals

**Sensing Type**

Standard Cord Set

- 4 = Prox Switch - PNP (sourcing)
- 5 = Prox Switch - NPN (sinking)
- 6 = No Sensing

Quick Disconnect Cord Set

- W = Prox Switch - PNP (sourcing) Straight
- V = Prox Switch - NPN (sinking) Straight
- U = Prox Switch - PNP (sourcing) 90 Deg.
- T = Prox Switch - NPN (sinking) 90 Deg.

Prox switches are 4 mm diameter.

**Special Options**

- X = No Options

**Sensing Position**

- A = Single Position Open
- B = Single Position Close
- C = Two Position Sensing
- D = No Sensing

### When ordering additional switches & Seal Kits:

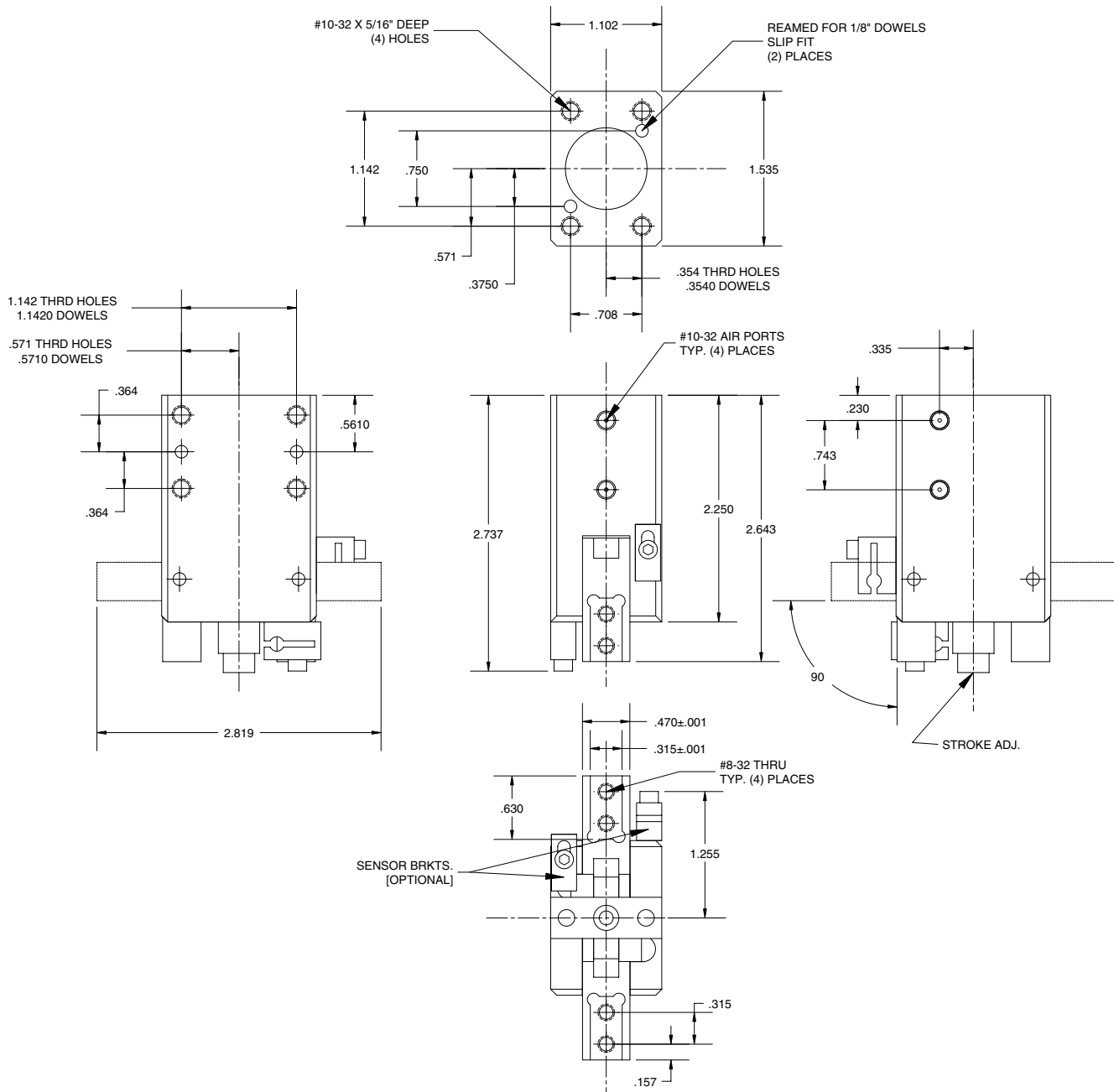
SENSING KITS STANDARD CORD SET		SENSING KITS QUICK DISCONNECT CORD SET	
Hall Effect-PNP (Sourcing)	PX04PS	Hall Effect-PNP (Sourcing)	PX04PQ
Hall Effect-NPN (Sinking)	PX04NS	Hall Effect-NPN (Sinking)	PX04NQ
		90° 5 meter cable	PXC90
		Straight 5 meter cable	PXCST
		( 5m Cables)	



# GR90 Series Angular Grippers

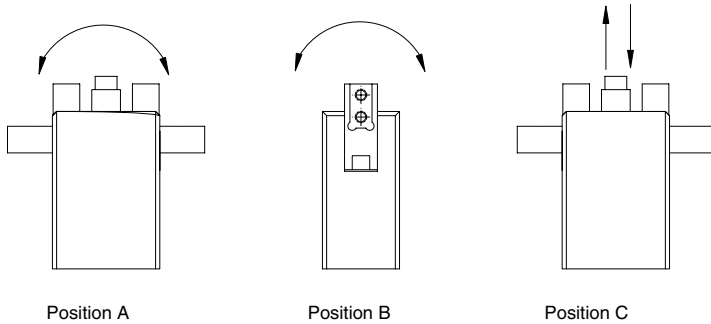
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## GR90 Dimensions





### GR90-Series Gripper Performance Data

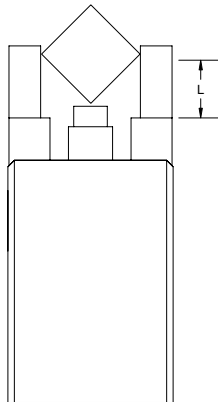


### Gripper Specifications

	GR90
Grip Force	
open @ 100 psi	55 lbs
close @ 100 psi	52 lbs.
Displacement	0.46 cu. in.
Max Operating Pressure	120 psi
Side Play	±0.001
Weight	7 oz.

### Recommended Maximum Load Ratings

	GR90	
Max Load Position A	30 in-lb	3.4 Nm
Max Load Position B	30 in-lb	3.4 Nm
Max Load Position C	40 lbs.	18Kgf



L (FINGER LENGTH)	GR90
1 Inch	30 lbs.
1.5 Inches	25 lbs.
2 Inches	15 lbs.

Force at 80 psi.

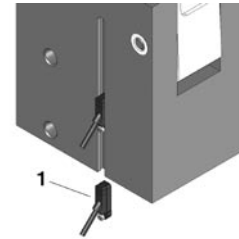


## GR90 Series Angular Grippers

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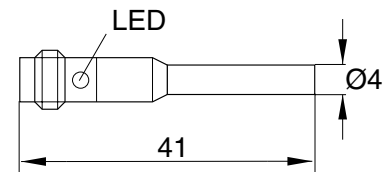
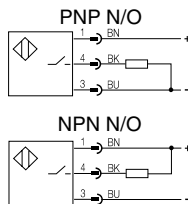
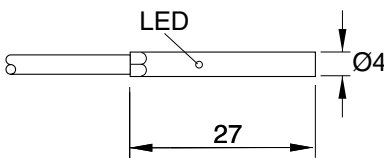
### GR Series Switch Information

	SWITCH OR BRACKET DESCRIPTION	STANDARD PART NO.	QUICK DISCONNECT PART NO.
1	Prox Switch PNP	PX04PS	PX04PQ
1	Prox Switch NPN	PX04NS	PX04NQ
2	Switch Bracket	CT-500	CT-500



Prox Switch (NPN NO) Flying Lead - PX04NS  
(PNP NO) Flying Lead - PX04PS

Prox Switch (NPN NO), 8 mm connector - PX04NQ  
(PNP NO), 8 mm connector - PX04PQ



#### Sensing Data

Repeat accuracy R		≤5%
Ambient temperature range $t_d$	(°C)	-25...+70°C
Operating frequency f	(Hz)	1800
Utilization categories	(DC)	13
Function indication		YES

#### Mechanical Data

Degree of protection per IEC 529	IP 67
Housing material	stainless steel
Material of sensing face	POM
Connection	cable
No. of wires x gauge	3 x 26 AWG

#### Electrical Data

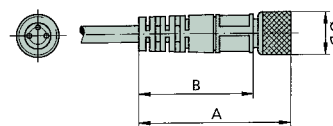
Rated operational voltage $U_e$	(V)	24 DC
Supply voltage $U_B$	(V)	10...30 DC
Voltage drop $U_d$ at $I_e$ Stat./dyn.	(V)	≤3.0
Rated insulation voltage $U_i$	(V)	75 VDC
Load current capacity	(mA)	100
Current consumption	(mA)	≤10 / ≤3
Off-State Current $I_r$	(uA)	≤80
Protected against polarity reversal		YES
Short circuit protected		YES
Load Capacitance	(uF)	≤1.00

### Female Connectors for Reed Switches and Hall Effect Sensors

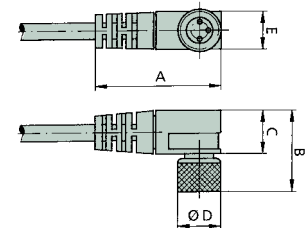
Dimensions (mm)

TYPE	ORDER CODE
Straight, 5 m Cable	PXCST
Elbow, 5 m Calbe	PXC90

#### Straight Type



#### Elbow Type



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