

NUMATICS®

PG Series

Low Profile Grippers



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PG Series Parallel Gripper

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Gripper summary of Operation

PG-Series has true parallel motion that is generated by a pinion mechanism powered by a double acting piston.

A. Body

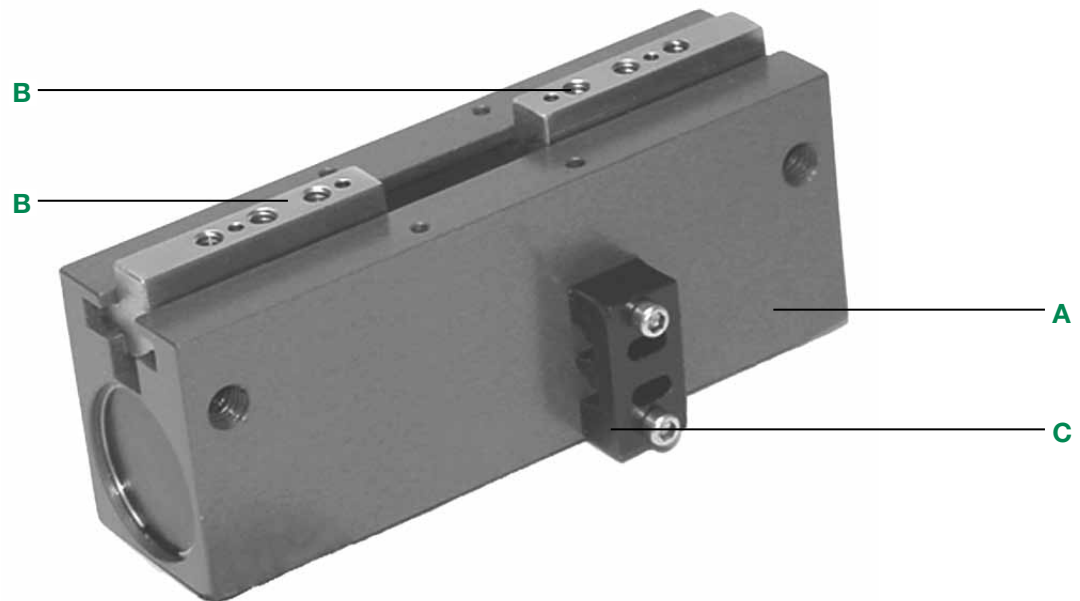
Hardcoat Anodized, PTFE impregnated inside and out.
Two different strokes with the same size low profile body.

B. Jaws

Jaws are aluminum bronze alloy and T-Slot style to prevent jaw breakage and offers superior load bearing capabilities.

C. Sensing

Reed & Hall effect sensing is available to sense open and closed position.



How to Order

PG S 35 1 1 C X

Gripper Stroke
S = Short Stroke
L = Long Stroke

Gripper Series
25
35

Seal Type
1 = Buna-N
2 = FKM

Special Options
X = Standard

Sensing Position
A = Single Position Open
B = Single Position Closed
C = Two Position Sensing
D = No Sensing

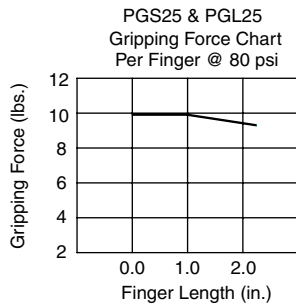
Sensing Type
Standard Cord Set
1 = Hall Switch - PNP (sourcing)
2 = Hall Switch - NPN (sinking)
6 = No Sensing
Quick Disconnect Cord Set
Z = Hall Switch - PNP (sourcing)
Y = Hall Switch - NPN (sinking)
See Sensor section.

When ordering additional switches:

Switch Description	Standard Part No.	Quick Disconnect Part No.
Hall Effect - PNP (Sourcing)	CS-20TP	CS-18P-QD
Hall Effect - NPN (Sinking)	CS-20TN	CS-20TN-QD

Specifications

	PGS25	PGL25
Grip Force @ 100 psi	27 lbs	27 lbs
Stroke	0.25	0.50
Repeatability	+/- .001	+/- .001
Bore Dia.	0.625	0.625
Operating Temperature		
Buna-N	-30° to 180°F	-30° to 180°F
FKM	-20° to 300°F	-20° to 300°F
Max. Actuation Speed	0.12 sec	0.12 sec
Displacement	0.3 cu in	0.3 cu in
Maximum Pressure	120 psi	120 psi
Unit Weight	2 oz	2 oz



Grip Force vs. Finger Length

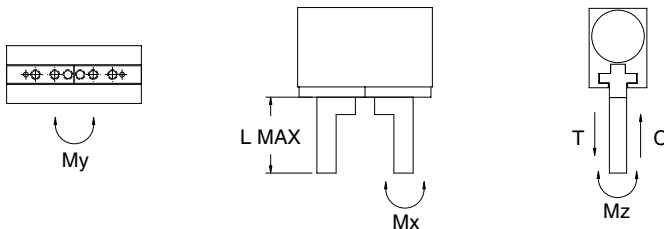
L-Finger Length	PGS25	PGL25
1	25 lbs.	25 lbs.
2	20 lbs.	20 lbs.
3	15 lbs.	15 lbs.
4	N/A	N/A
5	N/A	N/A

Static Condition

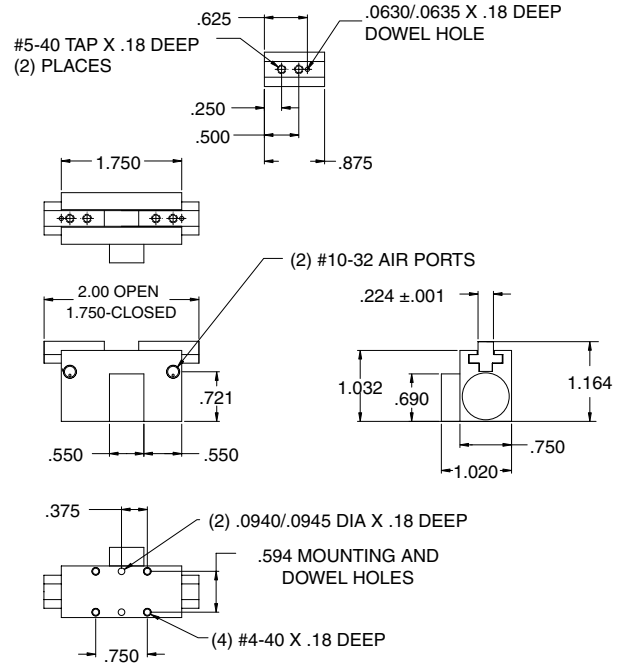
Load Capacity	PGS25	PGL25
C-compression	65 lbs.	65 lbs.
T-tension	65 lbs.	65 lbs.
Mx	45 lbs.	45 lbs.
My	60	60
Mz	40	40

Dynamic Condition

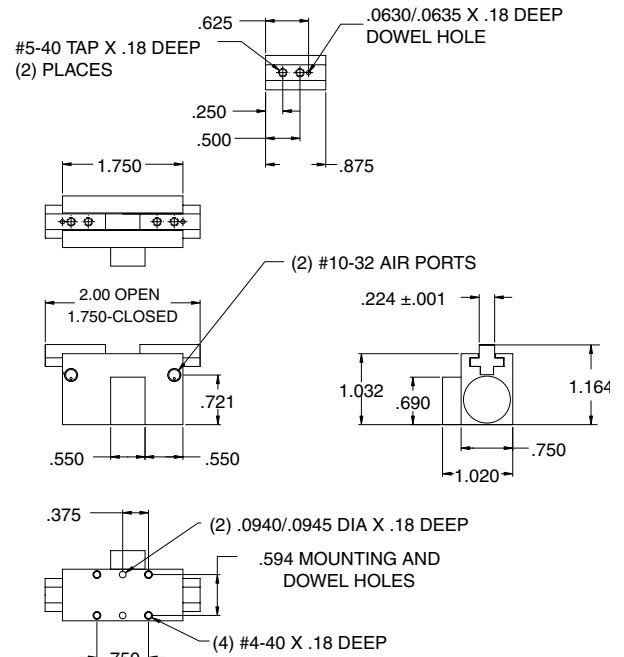
Load Capacity	PGS25	PGL25
C-compression	25 lbs.	25 lbs.
T-tension	25 lbs.	25 lbs.
Mx	20 in.-lbs.	20 in.-lbs.
My	25 in.-lbs.	25 in.-lbs.
Mz	20 in.-lbs.	20 in.-lbs.



PGS25

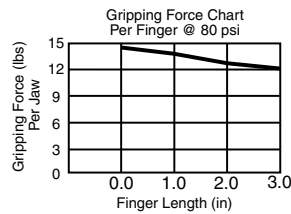


PGL25



Specifications

	PGS35	PGL35
Grip Force @ 100 psi	35 lbs	35 lbs
Stroke	0.75	0.75
Repeatability	+/- .001	+/- .001
Bore Dia.	0.70	0.70
Operating Temperature		
Buna-N	-30° to 180°F	-30° to 180°F
FKM	-20° to 300°F	-20° to 300°F
Max. Actuation Speed	0.12 sec	0.12 sec
Displacement	0.38 cu in	0.38 cu in
Maximum Pressure	120 psi	120 psi
Unit Weight	5 oz	5 oz



Grip Force vs. Finger Length

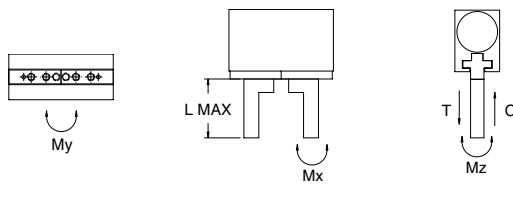
L-Finger Length	PGS35	PGL35
1	28 lbs.	28 lbs.
2	26 lbs.	26 lbs.
3	24 lbs.	24 lbs.
4	19 lbs.	19 lbs.
5	8 lbs.	8 lbs.

Static Condition

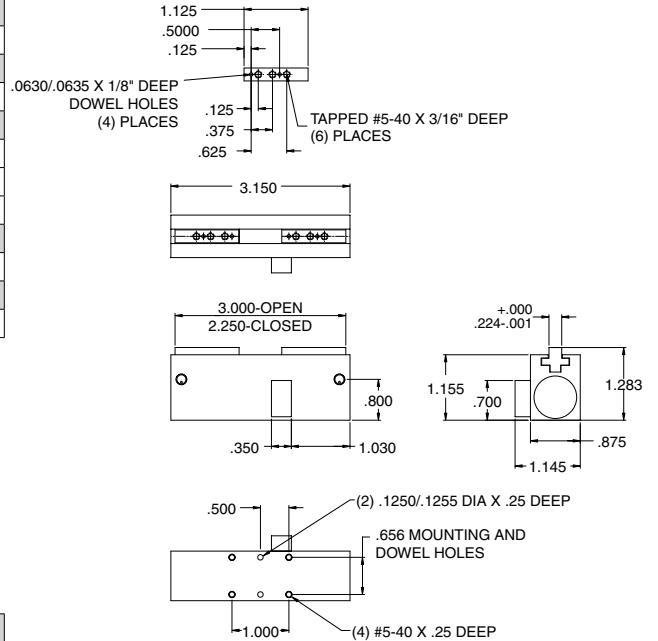
Load Capacity	PGS35	PGL35
C-compression	80 lbs.	80 lbs.
T-tension	80 lbs.	80 lbs.
Mx	80 in.-lbs.	80 in.-lbs.
My	100 in.-lbs.	100 in.-lbs.
Mz	80 in.-lbs.	80 in.-lbs.

Dynamic Condition

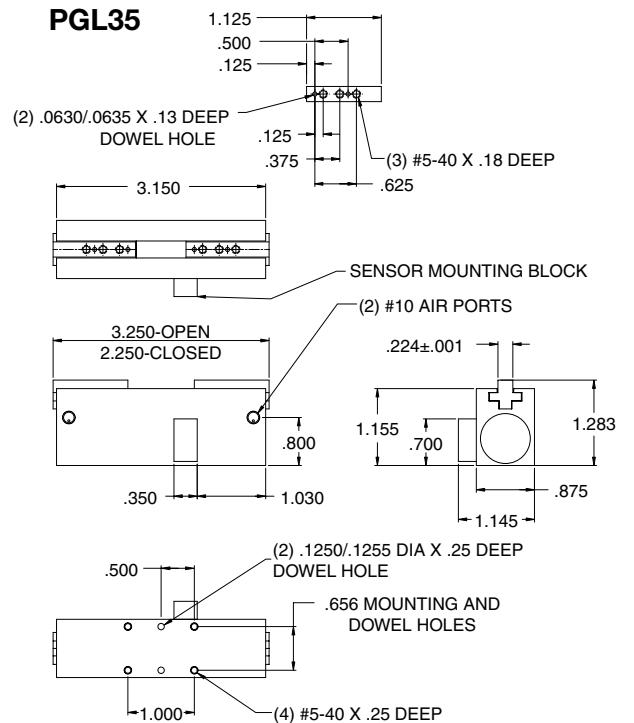
Load Capacity	PGS35	PGL35
C-compression	45 lbs.	45 lbs.
T-tension	45 lbs.	45 lbs.
Mx	30 in.-lbs.	30 in.-lbs.
My	40 in.-lbs.	40 in.-lbs.
Mz	30 in.-lbs.	30 in.-lbs.



PGS35



PGL35



Grippers

PG Series Gripper

Series	Bracket P/N
PG	SB-PG

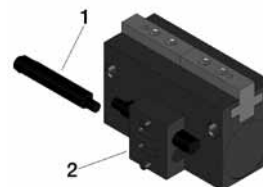


Sensor Description	Standard Cord Set	Quick Disconnect
Hall PNP	CS-20TP	CS-20TP-QD
Hall NPN	CS-20TN	CS-20TN-QD

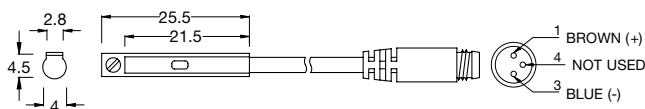
See page 17 for sensor specifications

PG Series Switch Information

	Switch or Bracket Description	Standard Part No.	Quick Disconnect Part No.
1	Hall Effect PNP (Sourcing) 4mm	CS-20TP	CS-20TP-QD
1	Hall Effect NPN (Sinking) 4mm	CS-20TN	CS-20TN-QD
2	Switch Bracket	PGSB	PGSB

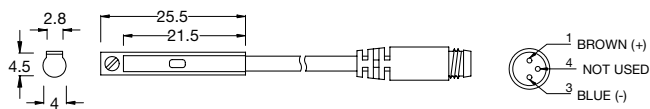


Electro Switch (PNP NO) 8 mm Connector - CS-20TP-QD



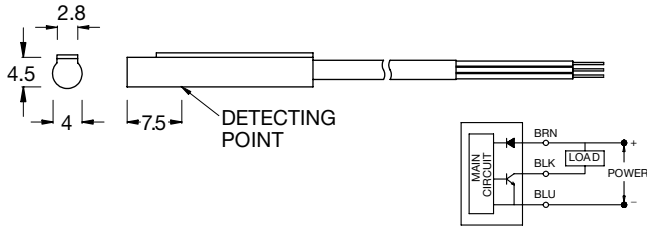
Sensor Type	Solid State Output
Switching Logic	Normally Open
Output	PNP Current Sourcing
Operating Voltage	5-30 VDC
Switching Current	50mA max.
Power Rating*	1.5 Watts
Voltage Drop	1.5 V @ 25 mA max.
Current Consumption	15 mA @ 24 VDC max.
Leakage Current	0.01 mA max.
LED Indicator	Green
Cable	-
Operating Frequency	1000 Hz
Magnetic Requirement	40 Gauss parallel
Temperature Range	14 to 158°F (-10 to 70°C)
Shock / Vibration	50G/9G
Enclosure Classification	IEC 529 IP67 (NEMA 6)
Protection Circuit	Reverse Polarity, Surge Suppression
Set Screw Max. Torque	1.77 in-lbs (0.2 N-m)

Electro Switch (NPN NO) 8 mm Connector - CS-20TN-QD



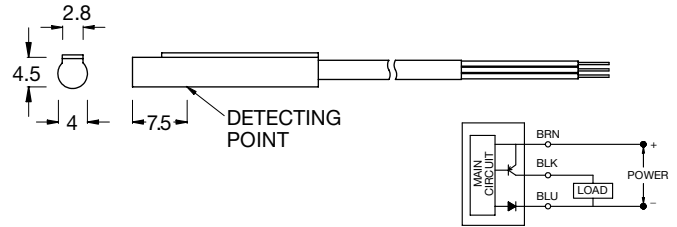
Sensor Type	Solid State Output
Switching Logic	Normally Open
Output	NPN Current Sinking
Operating Voltage	5-30 VDC
Switching Current	50mA max.
Power Rating*	1.5 Watts
Voltage Drop	0.5 V @ 25 mA max.
Current Consumption	12 mA @ 24 VDC max.
Leakage Current	0.01 mA max.
LED Indicator	Red
Cable	-
Operating Frequency	1000 Hz
Magnetic Requirement	40 Gauss parallel
Temperature Range	14 to 158°F (-10 to 70°C)
Shock / Vibration	50G/9G
Enclosure Classification	IEC 529 IP67 (NEMA 6)
Protection Circuit	Reverse Polarity, Surge Suppression
Set Screw Max. Torque	1.77 in-lbs (0.2 N-m)

Electro Switch (NPN NO) Flying Lead - CS-20TN



Sensor Type	Solid State Output
Switching Logic	Normally Open
Output	NPN Current Sourcing
Operating Voltage	5-30 VDC
Switching Current	50mA max.
Power Rating*	1.5 Watts
Voltage Drop	0.5 V @ 25 mA max.
Current Consumption	12 mA @ 24 VDC max.
Leakage Current	0.01 mA max.
LED Indicator	Red
Cable	-
Operating Frequency	1000 Hz
Magnetic Requirement	40 Gauss parallel
Temperature Range	14 to 158°F (-10 to 70°C)
Shock / Vibration	50G/9G
Enclosure Classification	IEC 529 IP67 (NEMA 6)
Protection Circuit	Reverse Polarity, Surge Suppression
Set Screw Max. Torque	1.77 in-lbs (0.2 N-m)

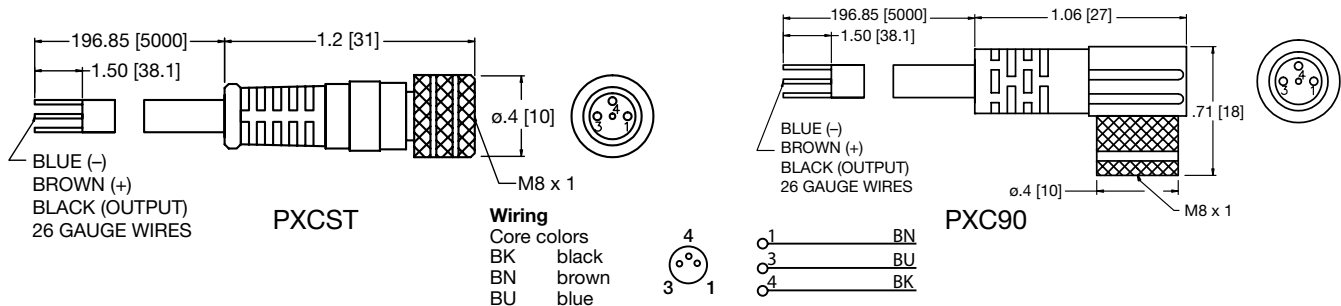
Electro Switch (PNP NO) Flying Lead - CS-20TP



Sensor Type	Solid State Output
Switching Logic	Normally Open
Output	PNP Current Sinking
Operating Voltage	5-30 VDC
Switching Current	50mA max.
Power Rating*	1.5 Watts
Voltage Drop	1.5 V @ 25 mA max.
Current Consumption	12 mA @ 24 VDC max.
Leakage Current	0.01 mA max.
LED Indicator	Green
Cable	Abrasion resistant polyurethane
Operating Frequency	1000 Hz
Magnetic Requirement	40 Gauss parallel
Temperature Range	14 to 158°F (-10 to 70°C)
Shock / Vibration	50G/9G
Enclosure Classification	IEC 529 IP67 (NEMA 6)
Protection Circuit	Reverse Polarity, Surge Suppression
Set Screw Max. Torque	1.77 in-lbs (0.2 N-m)

*Switches are not designed for wet environments. Please see your distributor for additional information.

Quick Disconnect Cables



Order Code	Type	Operating Voltage	Current Rating	Cable Material	Protection	Connector
PXCST	Straight 5 m Cable (3 x 26 Gauge wire)	60 AC/75 DC	3 A	PUR	IP 68, III	M8
PXC90	90° 5 m Cable (3 x 26 Gauge wire)	60 AC/75 DC	3 A	PUR	IP 68, III	M8



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