

# Pneumatic Gripper System (BPGS)

Best-in-class performance,  
built to last

*We make  
things MOVE<sup>®</sup>*



## We Make Things Move®

A forward-thinking innovator, Bimba provides industry-leading pneumatic, hydraulic, electric and vacuum motion solutions that are easy-to-use, reliable and ready for your engineering challenges.

Doing whatever it takes to help you get the job done is what the Bimba companies do best. With an extensive line of industry-leading air cylinders, rotary actuators, linear thrusters, rodless cylinders, NFPA, hydraulics, flow controls, position-sensing cylinders, valves, switches and air preparation equipment, the people of Bimba are ready to tackle your toughest applications.

Bimba is part of IMI Precision Engineering, a world leader in motion and fluid control technologies. Wherever precision, speed and engineering reliability are essential, we deliver exceptional solutions which improve the productivity and efficiency of customers' equipment.

Our range of high-performance products, such as actuators, valves, valve islands, pressure monitoring controls and air preparation products together with trusted products brands including IMI Norgren, IMI Buschjost, IMI FAS, IMI Herion and IMI Maxseal underpin our position as a leading global supplier.

Part of IMI plc, we have a sales and service network in 75 countries, as well as manufacturing capability in the USA, Germany, China, UK, Switzerland.

## Contents

---

**02** Introduction

---

**03** Pneumatic Gripper System (BPGS)

---

**04** Product Features

---

**05** How It Works

---

**06** How It Used

---

**07** How to Specify

---

**08** Regular Jaw Grippers

---

**14** Chisel Jaw Grippers

---

**20** Flange Jaw Grippers

---

**26** Shovel Jaw Grippers

---

**32** Angular Jaw Grippers

---

**38** Hot Metal Regular Jaw Grippers

---

**44** Hot Metal Flange Jaw Grippers

---

**49** Accessories

---

**62** Reconfigurable Kits

---

**71** Sensors

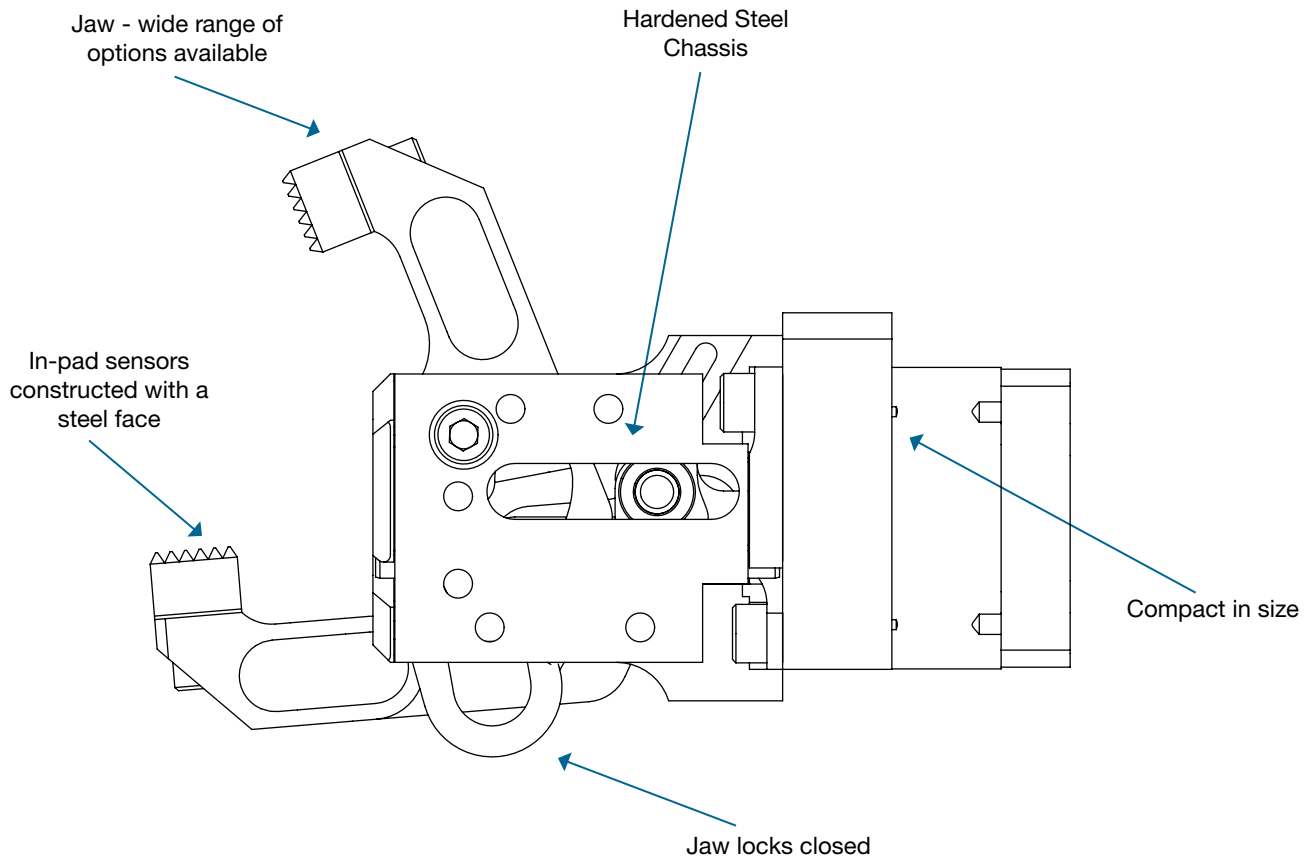
---

# Pneumatic Gripper System (BPGS)

Bimba's Pneumatic Gripper System (BPGS) provides a versatile yet rugged gripping solution for a wide range of applications. This gripper series complements the current line of angular and parallel grippers offering a high gripping force solution for various industries due to the many jaw options offered. Bimba offers angular, regular, chisel, flange, and shovel jaw types. This gripper series features a high gripping force that allows for picking up large heavy objects in the most demanding environments. The long-lasting hardened steel chassis ensures that the gripper can withstand hard impacts with the work piece and other items within the environment.



# Product Features



## Features and Benefits

- High gripping forces allow for picking up large heavy objects in demanding environments
  - » Up to 450 lbs. at 80 PSI
- Fast actuation time:
  - » 0.05 second close
  - » 0.09 second open
  - » 425 cycles per minute
- Easily repairable by using a single wrench reducing downtime
- Long-lasting hardened steel chassis ensures that the gripper can withstand hard impacts to the work piece and other items within
- Consult factory for custom options
  - » Part presence
  - » Double blank
- Compact in size
  - » 5.34" x 1.65" x 1.04"

Bimba's Pneumatic Gripper System (BPGS) is designed for reliable, high performing gripping solutions. This gripper system is a general purpose gripper for use as a transfer finger or end of arm tool (EOAT). The wide angle jaw opening accommodates blanks with inconsistent pickup locations. This gripper series comes standard with five different styles of jaws to accommodate your specific application.

## Jaw options:

- > Angular
- > Regular
- > Chisel
- > Flange
- > Shovel

## Materials of Construction

<b>Chassis:</b>	Hardened steel
<b>Front Face:</b>	Hardened steel
<b>Jaws:</b>	Hardened steel
<b>Jaw Pads:</b>	Hardened steel
<b>Body Sides:</b>	Hardened aluminum

## Technical Data

**Throat Depth:** 0.75" (19.1 mm)

**Flange Height:** 1.44" (36.7 mm)

**Ports:** 3/8 NPT or 1/8" Rc

**Lubrication:** Permanent for non-lube air

**Working Pressure:** 60 PSI min. - 100 psi max. (413 kPa min - 689 kPa max)

**Grip Force:** \*Up to 450 lb @ 80 PSI (200 kg @ 551 kPa)

**Cycles:** MCBF 5 million

**Actuation Time:** 0.05±0.01 sec close/<0.09 sec open

**Weight:** \*\*1.6 lbs. (0.73 kg)

**Air Ports:** 1/8" NPS or 1/8 Rc

**Operating Temperature:** Standard 32°F to 140°F (0°C to 60°C);  
Hot Metal 32°F to 1652°F (0°C to 900°C)

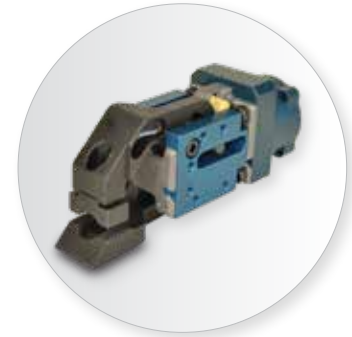
\*Double sided force measurement

\*\*Weight is with air fittings and 1.0" wide pads and without sensors

# How It's Used

## Application Ideas

- Sheet metal handling
- Automated welding
- Recreational vehicle
- Heavy truck
- White goods (appliances)
- Construction equipment
- Metal plating and coating
- Rail cars
- Military vehicle manufacturing
- Thermoforming
- Plating



## Target Applications

The Pneumatic Gripper System (BPGS) has an expanded list of target applications due to many applications requiring a versatile gripping solution. Since Bimba offers a wide range of jaw options, this gripper series is well suited for industries looking for high gripping force. Within the target industries, there are a variety of applications for the gripper system:

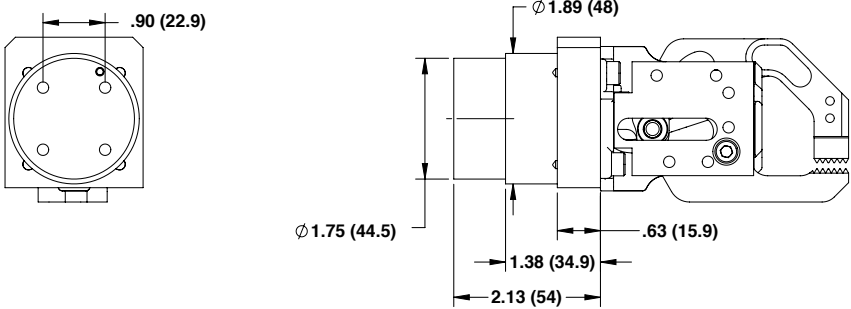
- Pick & place cut sheets
- Material transfer of sheet metal within a press
- Material clamping during welding operations
- Part transfer in plating application
- Lifting of heavy bags

## Advantages

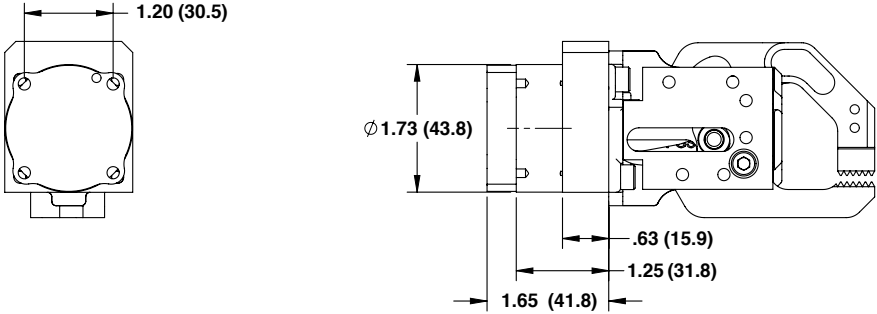
Feature	Advantage	Benefit
Repairable	Lower cost of ownership	Every part of the gripper can be replaced in only a few minutes reducing downtime and eliminating the need to buy another gripper
Single wrench repair	Reduced downtime	4mm hex wrench is all that is needed to repair and reconfigure the gripper making changes fast and easy
Hardened steel chassis	Durability	Enables the gripper to survive in harsh environments without breaking
Interchangeable pads	Flexibility	Allows you to match the gripper to the material being held
Adjustable jaw angle	Fast cycle times	By adjusting the gripper to the proper opening for an applications cycle time can increase by minimizing jaw travel
Double blank sensor	Die protection	Ensure only one sheet is loaded into the press die preventing costly damage to the press and die

## Dimensional Drawings

BPGS10



BPGS11





# Regular Jaw Grippers

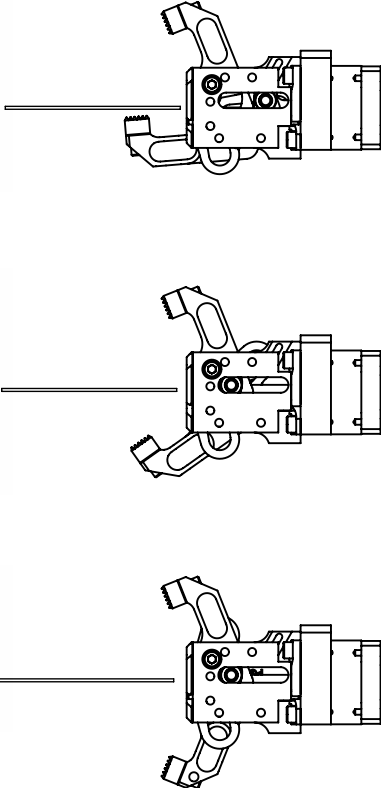
Bimba's regular jaw gripper is a general purpose gripper that is used for transfer finger or end-of-arm tool (EOAT). The wide angle jaw accomodates blanks with inconsistant pick up locations.





## BPGS Regular Jaw Gripper

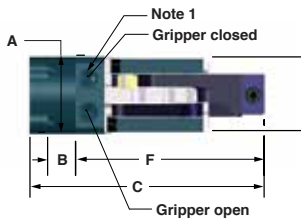
Diagram below illustrates blank placement between regular jaws, which are ideal for gripping blanks with an inconsistent pick up location:



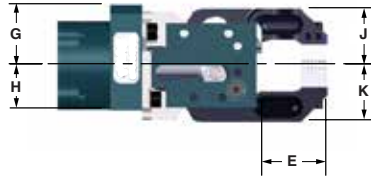
# How To Specify

## BPGS10 Regular Jaw Gripper - Jaw Angles

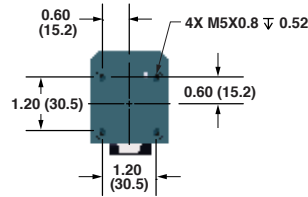
Top view



Side view

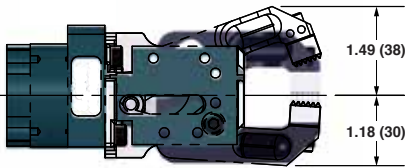


Back view

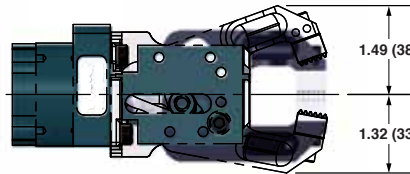


Dimensions	Inches	mm
A	1.73	43.9
B	0.63	16.0
C	5.24	133.1
D	1.73	43.9
E	1.25	31.8
F	4.23	107.4
G	1.18	29.8
H	0.86	21.9
J	1.18	30.0
K	1.21	30.7

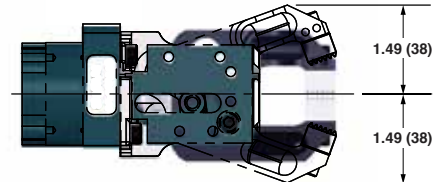
22° X 0°



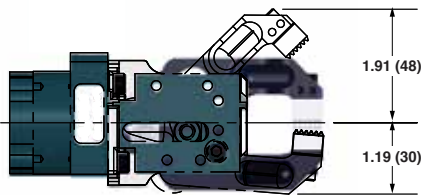
22° X 11°



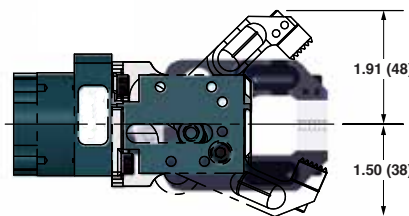
22° X 22°



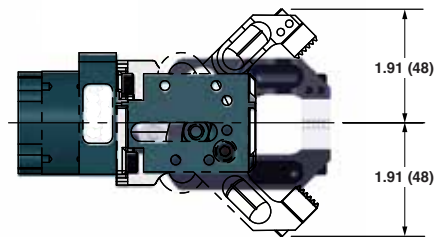
45° X 0°



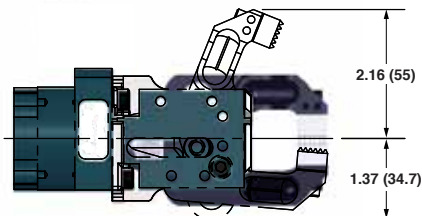
45° X 22°



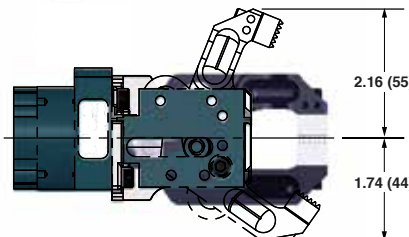
45° X 45°



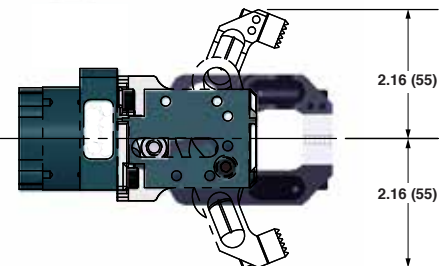
70° X 0°



70° X 35°

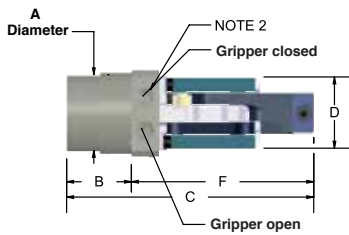


70° X 70°

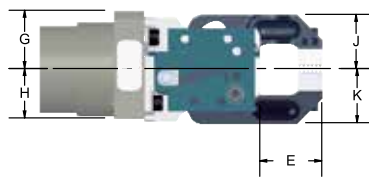


## BPGS11 Regular Jaw Gripper - Jaw Angles

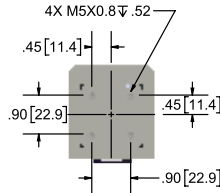
Top view



Side view



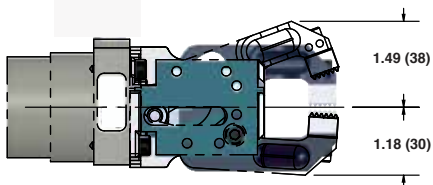
Back view



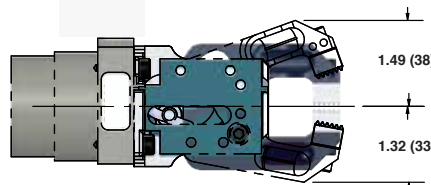
Dimensions	Inches	mm
A	1.75	44.5
B	1.50	38.1
C	5.72	145.3
D	1.65	41.9
E	1.25	31.8
F	4.22	107.2
G	1.18	29.8
H	1.00	25.4
J	1.11	28.1
K	1.11	28.1

Note 1: 1/8" NPS or 1/8 Rc

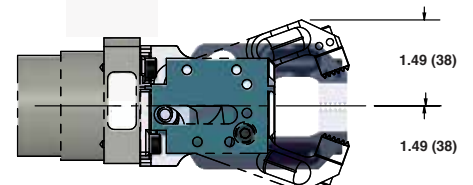
22° X 0°



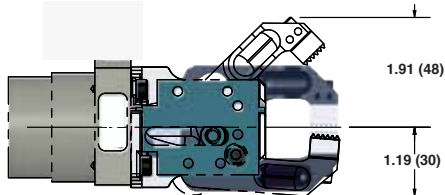
22° X 11°



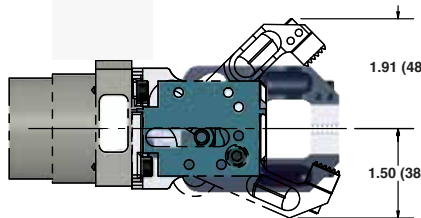
22° X 22°



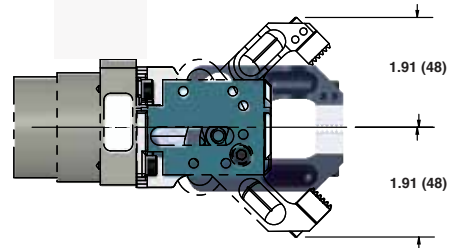
45° X 0°



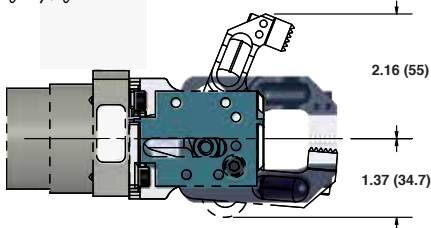
45° X 22°



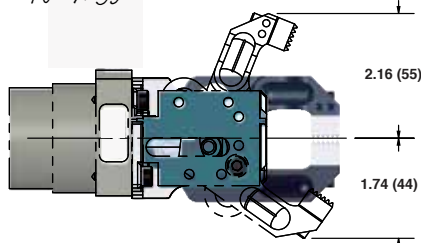
45° X 45°



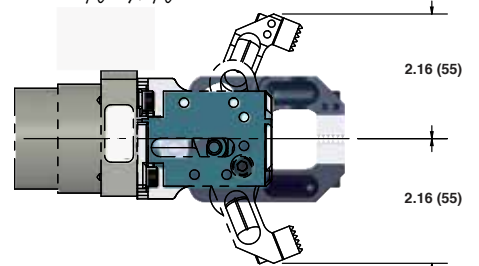
70° X 0°



70° X 35°



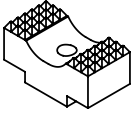
70° X 70°



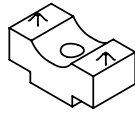
# How To Specify

## BPGS Regular Jaw Gripper - Gripper Pads

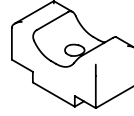
Regular pads



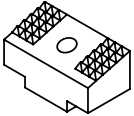
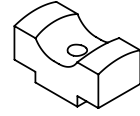
Double point pads



Smooth pads

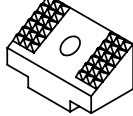


Convex pads

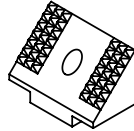


15°

Angled pads

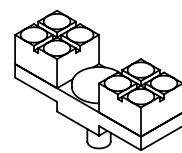


30°



45°

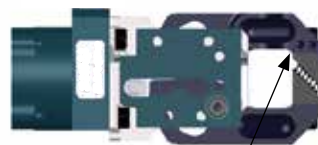
Rubber pads



Angled pad orientation



Code 1, 3 or 5



Code 2, 4 or 6

No pads (NUL)

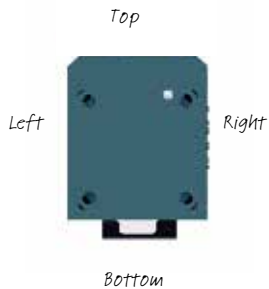


Grip range with no pads

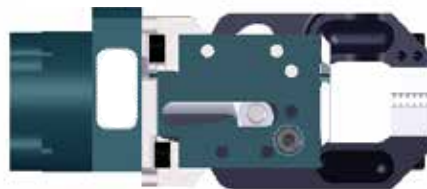
1.020" - 1.080"  
(25.9 - 27.4)

## BPGS Regular Jaw Gripper - Port Orientation

Back view



Side view



# How to Order

The model number for a regular jaw gripper consists of an alphanumeric cluster designating the following below.

An example of a regular jaw gripper with a standard body style, regular jaw gripper at 22° x 0° angle, indirect double blank sensor, NPN switch, mounted on the right side with a M8 connector, for material between 2.01 and 3.5mm in thickness with 1.0" wide regular flat pads, with a port orientation of a top 1/8" NPS is shown below. See details below:

Body Style		Sensor Type		Switch Output		Indirect Sensor		Material Thickness	
10	Standard 1.20"x1.20" bolt pattern	D	Indirect double blank	N	NPN	R	Micro M8/Right	1	0.50-2.00mm
		H	Indirect part present	P	PNP	L	Micro M8/Left	3	2.01-3.50mm
11	Crossover 0.90"x0.90" bolt pattern	I	In-Pad	2	2 Wire (3 Pin) <sup>1</sup>	E	Pico M12/Right	4	3.51-5.00mm
		N	No Sensor	T	2 Wire (4 Pin) <sup>1,2</sup>	W	Pico M12/Left	R	0.50-2.5mm <sup>6</sup>
				U	No Sensor	L	No Sensor	N	No Pads

## BPGS10R20DNR3M0E

Jaw		Jaw Angle		In Pad Sensor/Pad Type/Connector/ Pad Mount/Body Mount		Port Orientation	
R	Regular	20	22° x 0°	A	Reg (0°)/ Micro M8/ Top / Right	E	Top 1/8" NPS
		22	22° x 22°	B	Reg (0°)/ Micro M8/ Top / Left	F	Top 1/8" Rc
		40	45° x 0°	C	Reg (0°)/ Micro M8/ Bottom / Right	L	Right 1/8" NPS
		42	45° x 22°	D	Reg (0°)/ Micro M8/ Bottom / Left	M	Right 1/8" Rc
		44	45° x 45°	E	Reg (0°)/ Pico M12 (Internal Wire) / Top / Right	S	Bottom 1/8" NPS
		70	70° x 0°	F	Reg (0°)/ Pico M12 (Internal Wire) / Top / Left	T	Bottom 1/8" Rc
		73	70° x 35°	G	Reg (0°)/ Pico M12 (Internal Wire) / Bottom / Right	Z	Left 1/8" NPS
		77	70° x 70°	H	Reg (0°)/ Pico M12 (Internal Wire) / Bottom / Left	2	Left 1/8" Rc
				J	Reg (30°)/ Micro M8/ Top / Right		
				K	Reg (30°)/ Micro M8/ Top / Left		
				L	Reg (30°)/ Micro M8/ Bottom / Right		
				M	Reg (30°)/ Micro M8/ Bottom / Left		
				N	Reg (30°)/ Pico M12 (Internal Wire) / Top / Right		
				P	Reg (30°)/ Pico M12 (Internal Wire) / Top / Left		
				Q	Reg (30°)/ Pico M12 (Internal Wire) / Bottom / Right		
				R	Reg (30°)/ Pico M12 (Internal Wire) / Bottom / Left		
				S	Double Point / Micro M8 / Top / Right		
				T	Double Point / Micro M8 / Top / Left		
				U	Double Point / Micro M8 / Bottom / Right		
				V	Double Point / Micro M8 / Bottom / Left		
				W	Double Point / Pico M12 (Internal Wire) / Top / Right		
				Y	Double Point / Pico M12 (Internal Wire) / Top / Left		
				Z	Double Point / Pico M12 (Internal Wire) / Bottom / Right		
				2	Double Point / Pico M12 (Internal Wire) / Bottom / Left		
				I	Smooth (0°) / Micro M8 / Top / Right		
				9	Smooth (0°) / Micro M8 / Top / Left		
				3	Smooth (0°) / Micro M8 / Bottom / Right		
				4	Smooth (0°) / Micro M8 / Bottom / Left		
				5	Smooth (0°) / Micro M8 / Top / Right		
				6	Smooth (0°) / Micro M8 / Top / Left		
				7	Smooth (0°) / Micro M8 / Bottom / Right		
				8	Smooth (0°) / Micro M8 / Bottom / Left		
				L	No Sensor		

Pad Style	
0	0°
1	15° Forward slope
2	15° Rear slope
3	30° Forward slope
4	30° Rear slope
5	45° Forward slope
6	45° Rear slope
D	Double point <sup>4</sup>
S	Smooth <sup>5</sup>
C	Convex <sup>5</sup>
L	No Pads
R	Rubber

Pad Width	
S	0.5" <sup>3</sup>
M	1.0" <sup>3</sup>
D	1.5" <sup>6</sup>
U	No Pads

<sup>1</sup> Only available with In-Pad

<sup>2</sup> Only available with In-Pad A,B,C,D

<sup>3</sup> Cannot be used with "R" Pad type

<sup>4</sup> Cannot be used with "S" Pad width

<sup>5</sup> Cannot be used with "D" Pad width

<sup>6</sup> Use only with "R" Pad type



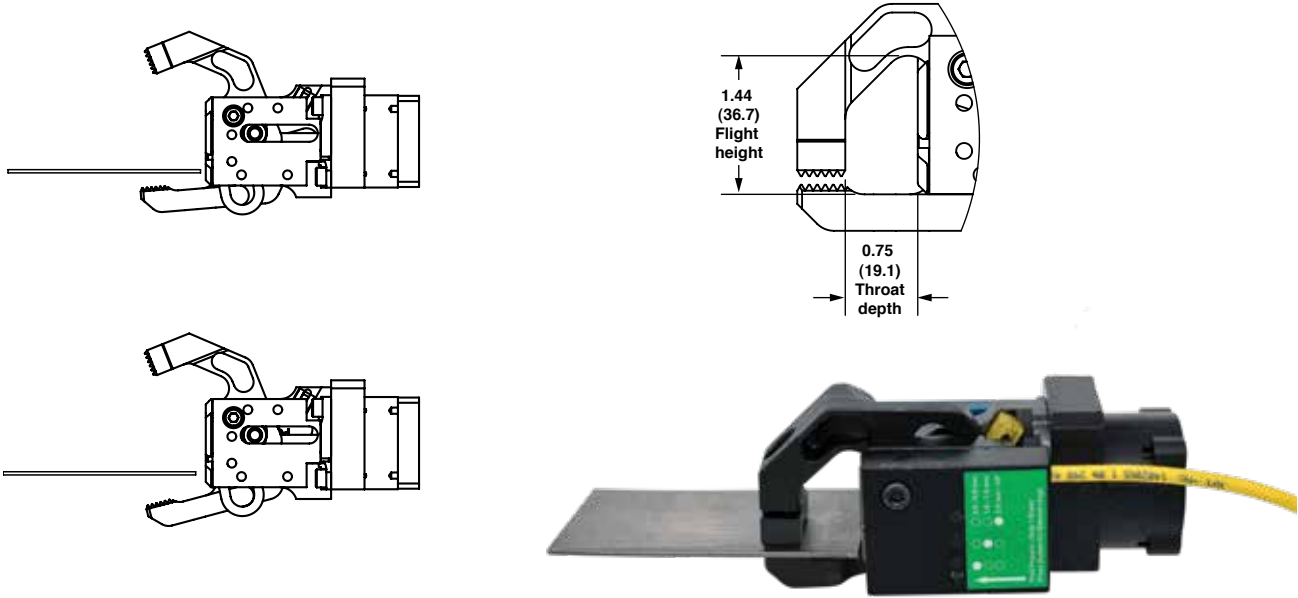
# Chisel Jaw Grippers

Bimba's low profile chisel jaws fit into applications that require a low or tight clearance and are ideal for picking up flat work pieces. The 14° lower chisel jaw allows the gripper to accommodate for variation in part presentation.

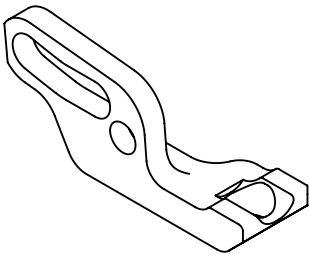


## BPGS Chisel Jaw Gripper

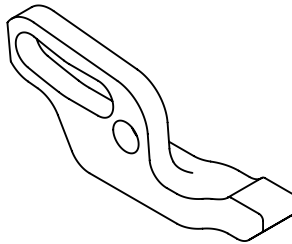
Diagram below illustrates blank placement between chisel jaws to meet low clearance requirements:



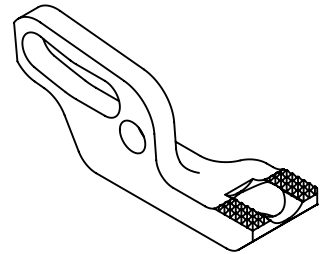
## BPGS Jaw Styles - Chisel Jaw Gripper



(A) Style jaws  
1.0" Wide without teeth



(B) Style jaws  
0.50" Wide without teeth

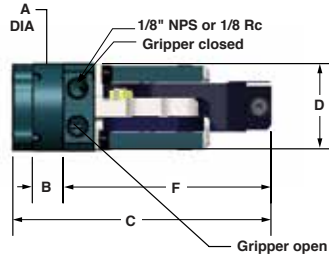


(C, D, E) Style jaws  
1.0" Wide with teeth

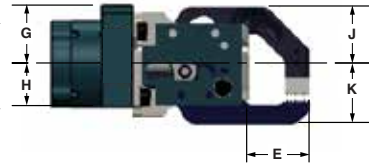
# How To Specify

## BPGS10 Chisel Jaw Gripper - Jaw Angles

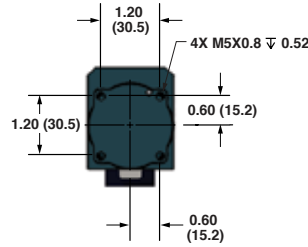
Top view



Side view

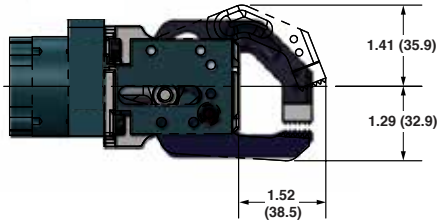


Back view

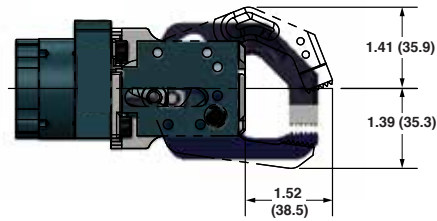


Dimensions	Inches	mm
A	1.73	43.9
B	0.63	16.0
C	5.24	133.1
D	1.73	43.9
E	1.25	31.8
F	4.23	107.4
G	1.18	29.8
H	0.86	21.9
J	1.18	30.0
K	1.21	30.7

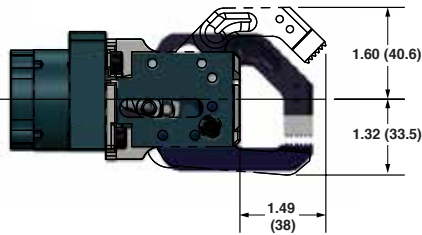
22° X 0°



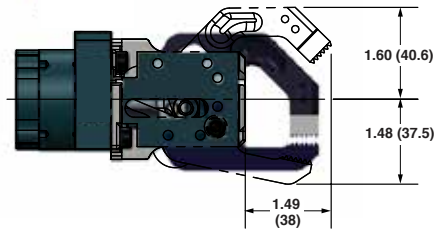
22° X 14°



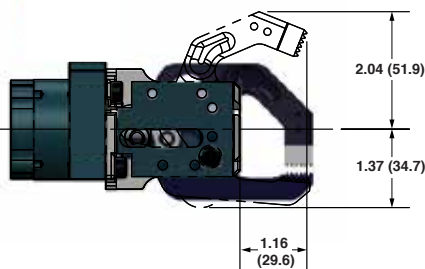
45° X 0°



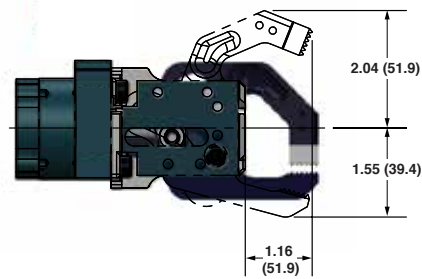
45° X 14°



70° X 0°



70° X 14°



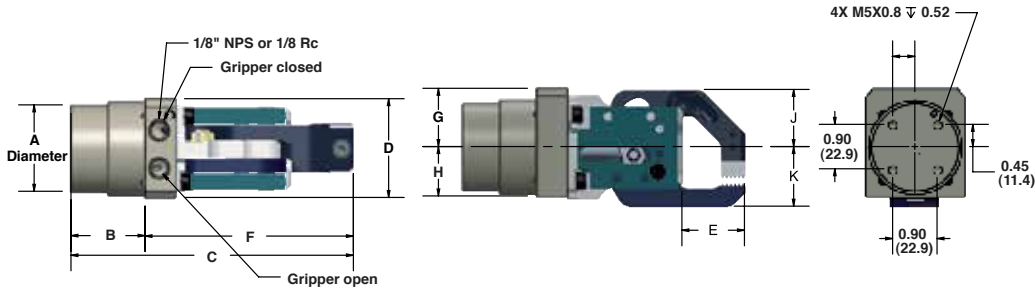


## BPGS11 Chisel Jaw Gripper - Jaw Angles

Top view

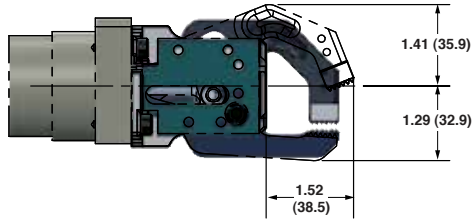
Side view

Back view

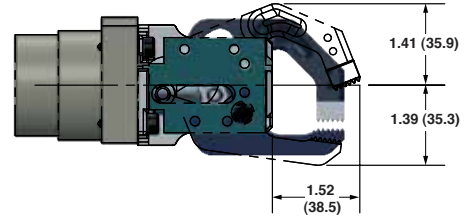


Dimensions	Inches	mm
A	1.75	44.5
B	1.50	38.1
C	5.72	145.3
D	2.00	50.8
E	1.25	31.8
F	4.23	107.4
G	1.18	29.8
H	1.00	25.4
J	1.18	30.0
K	1.21	30.7

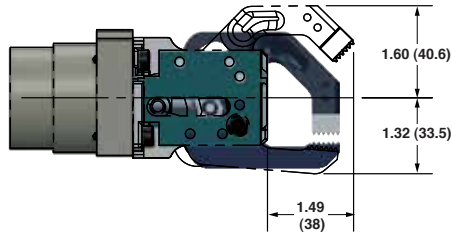
22° X 0°



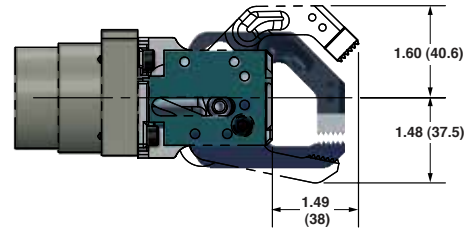
22° X 14°



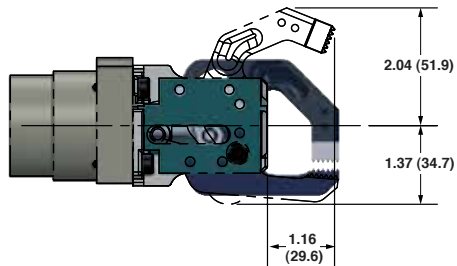
45° X 0°



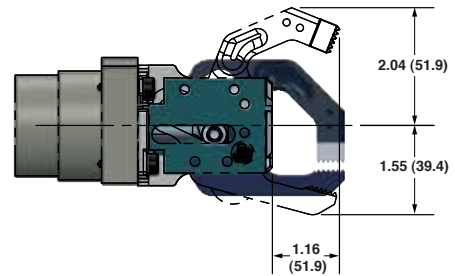
45° X 14°



70° X 0°

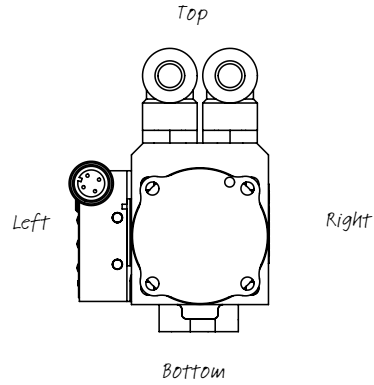


70° X 14°



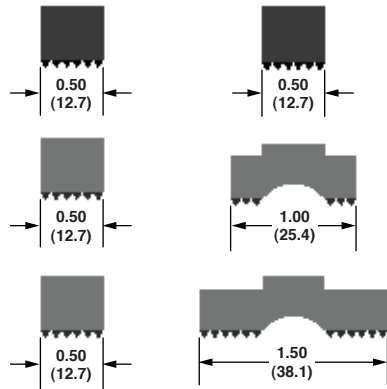
# How To Specify

## BPGS Chisel Jaw Gripper - Port Orientation

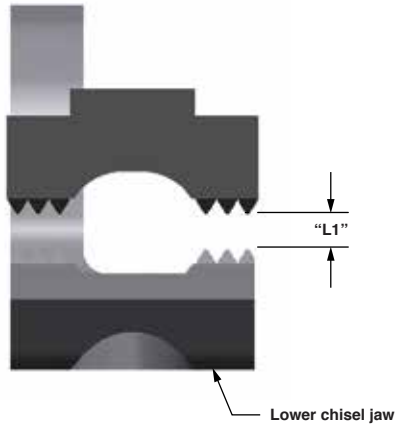
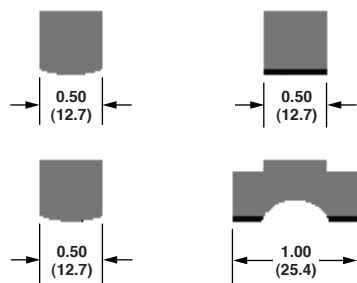


## BPGS Jaw Pad - Chisel Jaw Gripper

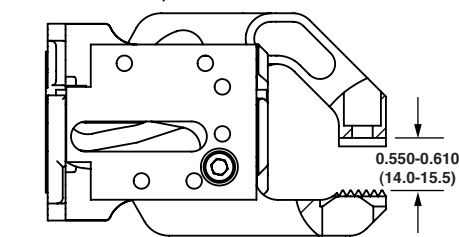
### Regular pads



### Convex pads

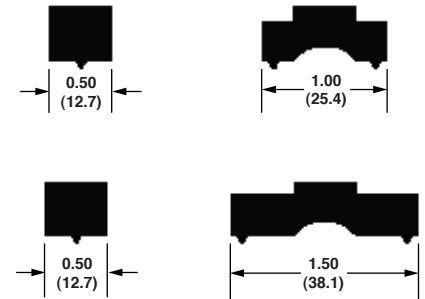


### No pads (NVL) Lower chisel jaw

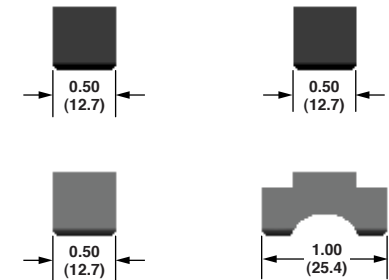


Grip range with no pads

### Double point pads



### Smooth pads



# How to Order

The model number for a chisel jaw gripper consists of an alphanumeric cluster designating the following below.

An example of a chisel jaw gripper with a standard body style, chisel jaw gripper at 22° x 0° angle, indirect double blank sensor, NPN switch, mounted on the right side with a M8 connector, for material between 2.01 and 3.5mm in thickness with 0.5" wide regular flat pads, with a port orientation of a top 1/8" NPS is shown below. See details below:

Body Style		Sensor Type		Switch Output		Indirect Sensor		Material Thickness	
10	Standard 1.20"x1.20" bolt pattern	D	Indirect double blank	N	NPN	R	Micro M8/Right	1	0.50-2.00mm
		H	Indirect part present	P	PNP	L	Micro M8/Left	3	2.01-3.50mm
11	Crossover 0.90"x0.90" bolt pattern	I	In-Pad	2	2 Wire (3 Pin) <sup>4</sup>	E	Pico M12/Right	4	3.51-5.00mm
		N	No Sensor	T	2 Wire (4 Pin) <sup>4,5</sup>	W	Pico M12/Left	6	5.01-6.50mm
				U	No Sensor	L	No Sensor	7	6.51-8.00mm
								9	8.01-9.50mm
								N	No Pads

## BPGS10B20DNR3S0E

Jaw		Jaw Angle		In Pad Sensor/Pad Type/Connector/ Pad Mount/Body Mount		Port Orientation	
A	Chisel (1.0" wide without teeth)	20	22° x 0°	A	Reg (0°) / Micro M8 / Top / Right	E	Top 1/8" NPS
B	Chisel (0.5" wide without teeth)	21	22° x 14°	B	Reg (0°) / Micro M8 / Top / Left	F	Top 1/8" Rc
C	Chisel (1.0" wide with teeth) <sup>1</sup>	40	45° x 0°	E	Reg (0°) / Pico M12 (Internal Wire) / Top / Right	L	Right 1/8" NPS
D	Chisel (1.0" wide with teeth) <sup>2</sup>	41	45° x 14°	F	Reg (0°) / Pico M12 (Internal Wire) / Top / Left	M	Right 1/8" Rc
E	Chisel (1.0" wide with teeth) <sup>3</sup>	70	70° x 0°	S	Double Point / Micro M8 / Top / Right	S	Bottom 1/8" NPS
				T	Double Point / Micro M8 / Top / Left	T	Bottom 1/8" Rc
				W	Double Point / Pico M12 (Internal Wire) / Top / Right	Z	Left 1/8" NPS
				Y	Double Point / Pico M12 (Internal Wire) / Top / Left	2	Left 1/8" Rc
				I	Smooth (0°) / Micro M8 / Top / Right		
				9	Smooth (0°) / Micro M8 / Top / Left		
				L	No Sensor		

Pad Style	
0	0°
D	Double point <sup>6</sup>
S	Smooth <sup>7</sup>
C	Convex <sup>7</sup>
L	No Pads

Pad Width	
S	0.5"
M	1.0"
D	1.5"
U	No Pads

<sup>1</sup> Use with Material Thickness 1 or 2

<sup>2</sup> Use with Material Thickness 4 or 6

<sup>3</sup> Use with Material Thickness 7 or 9

<sup>4</sup> Only available with In-Pad

<sup>5</sup> Only available with In-Pad A,B,C,D

<sup>6</sup> Cannot be used with "S" Pad width

<sup>7</sup> Cannot be used with "D" Pad width



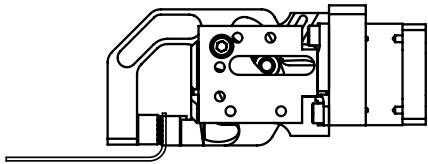
# Flange Jaw Grippers

Bimba's flange jaw grippers are mounted 90° to the work piece and allows the gripper to reach around a formed flange edge. The flange jaw gripper is a great choice for applications with no lift and/or panels that have a flange or projecting edge that can be used for gripping.



## BPGS Flange Jaw Gripper

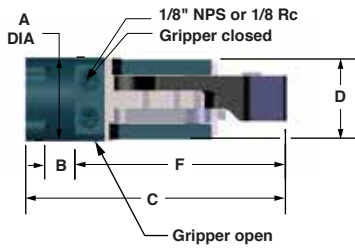
Diagram below shows a flange gripper mounted 90° to a work piece:



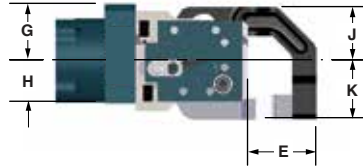
# How To Specify

## BPGS10 Flange Jaw Gripper - Jaw Angles

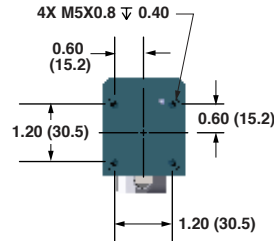
Top view



Side view

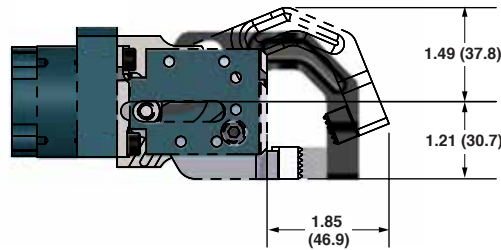


Back view

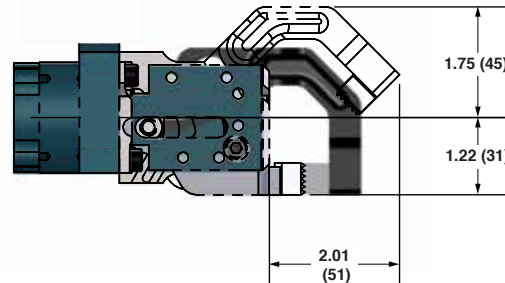


Dimensions	Inches	mm
A	1.73	43.8
B	0.63	15.9
C	5.40	137.2
D	1.65	41.9
E	1.41	35.8
F	4.38	111.2
G	1.18	29.8
H	0.86	21.9
J	1.18	29.9
K	1.21	30.7

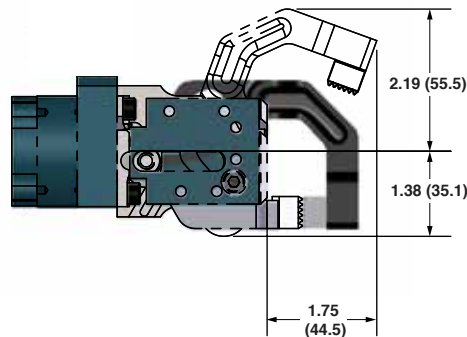
22° X 0°



45° X 0°

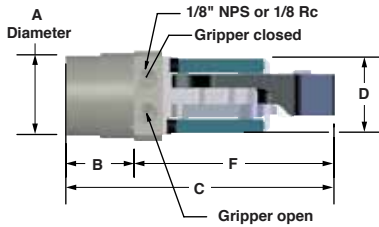


70° X 0°

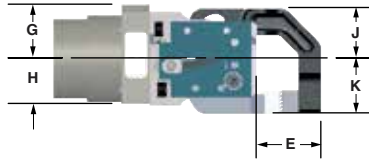


## BPGS11 Flange Jaw Gripper - Jaw Angles

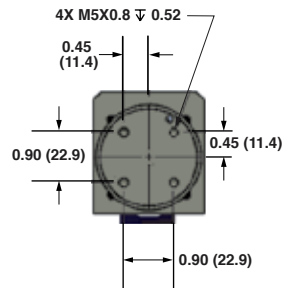
Top view



Side view

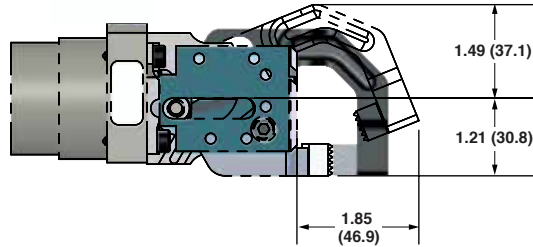


Back view

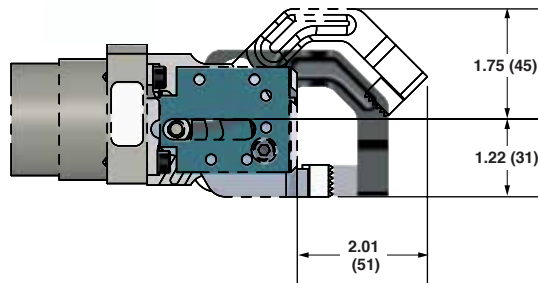


Dimensions	Inches	mm
A	1.73	44.5
B	1.50	38.1
C	5.89	149.6
D	1.65	41.9
E	1.41	35.8
F	4.38	111.2
G	1.18	29.8
H	1	25.4
J	1.18	29.9
K	1.21	30.7

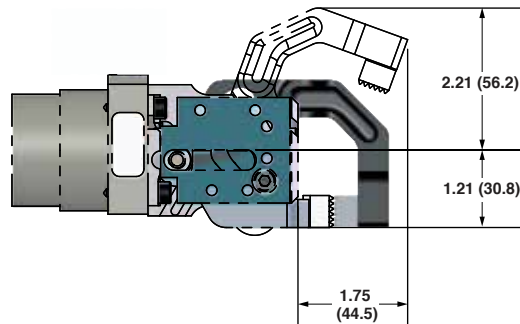
22° X 0°



45° X 0°

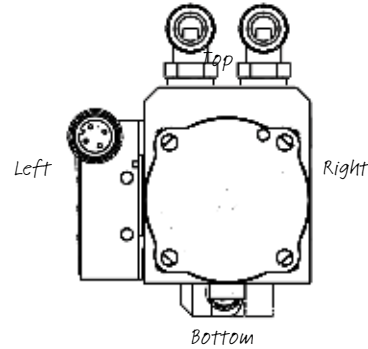


70° X 0°



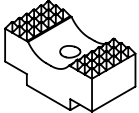
# How To Specify

## BPGS Flange Jaw Gripper - Port Orientation

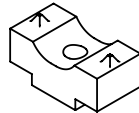


## BPGS Jaw Pad - Flange Jaw Gripper

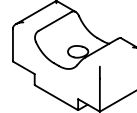
Regular pads



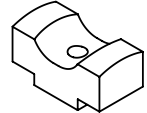
Double point pads



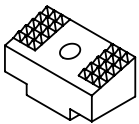
Smooth pads



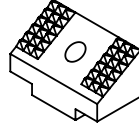
Convex pads



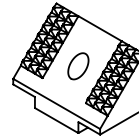
Angular pads



15°

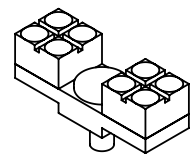


30°

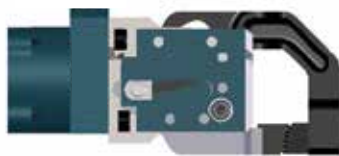


45°

Rubber pads



Angled pad orientation

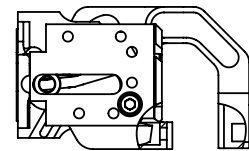


Code 1 (15° angle)



Code 2, 4, 6

No pads (NVL)



Grip range with no pads

1.020 - 1.080  
(25.9 - 27.4)



# How to Order

The model number for flange jaw gripper consists of an alphanumeric cluster designating the following below.

An example of a flange jaw gripper with a standard body style, flange jaw at 22° x 0° jaw angle, indirect double blank sensor, NPN switch, mounted on the right side with a M8 connector, for material between 0.5 and 2.0mm in thickness with 1.0" wide regular flat pads, with a port orientation of a top 1/8" NPS is shown below. See details below:

Body Style		Sensor Type		Switch Output		Indirect Sensor		Material Thickness	
10	Standard 1.20"x1.20" bolt pattern	D	Indirect double blank	N	NPN	R	Micro M8/Right	1	0.50-2.00mm
		H	Indirect part present	P	PNP	L	Micro M8/Left	3	2.01-3.50mm
11	Crossover 0.90"x0.90" bolt pattern	I	In-Pad	2	2 Wire (3 Pin) <sup>1</sup>	E	Pico M12/Right	4	3.51-5.00mm
		N	No Sensor	T	2 Wire (4 Pin) <sup>1,2</sup>	W	Pico M12/Left	R	2.01-3.50mm
				U	No Sensor	L	No Sensor	N	No Pads

## BPGS10F20DNR1M0E

Jaw		Jaw Angle		In Pad Sensor Pad Type/Connector/ Pad Mount/Body Mount		Port Orientation	
F	Flange	20	22° x 0°	A	Reg (0°)/ Micro M8/ Top / Right	E	Top 1/8" NPS
		40	45° x 0°	B	Reg (0°)/ Micro M8/ Top / Left	F	Top 1/8" Rc
		70	70° x 0°	C	Reg (0°)/ Micro M8/ Bottom / Right	L	Right 1/8" NPS
				D	Reg (0°)/ Micro M8/ Bottom / Left	M	Right 1/8" Rc
				E	Reg (0°)/ Pico M12 (Internal Wire) / Top / Right	S	Bottom 1/8" NPS
				F	Reg (0°)/ Pico M12 (Internal Wire) / Top / Left	T	Bottom 1/8" Rc
				G	Reg (0°)/ Pico M12 (Internal Wire) / Bottom / Right	Z	Left 1/8" NPS
				H	Reg (0°)/ Pico M12 (Internal Wire) / Bottom / Left	2	Left 1/8" Rc
				K	Reg (30°)/ Micro M8/ Top / Left		
				M	Reg (30°)/ Micro M8/ Bottom / Left	<b>Pad Style</b>	
				P	Reg (30°)/ Pico M12 (Internal Wire) / Top / Left	0	0°
				R	Reg (30°)/ Pico M12 (Internal Wire) / Bottom / Left	1	15° Forward slope
				T	Double Point / Micro M8 / Top / Left	2	15° Rear slope
				V	Double Point / Micro M8 / Bottom / Left	4	30° Rear slope
				W	Double Point / Pico M12 (Internal Wire) / Top / Right	6	45° Rear slope
				Y	Double Point / Pico M12 (Internal Wire) / Top / Left	D	Double point <sup>4</sup>
				Z	Double Point / Pico M12 (Internal Wire) / Bottom / Right	S	Smooth <sup>5</sup>
				2	Double Point / Pico M12 (Internal Wire) / Bottom / Left	C	Convex <sup>6</sup>
				I	Smooth (0°) / Micro M8 / Top / Right	R	Rubber
				9	Smooth (0°) / Micro M8 / Top / Left	L	No Pads
				3	Smooth (0°) / Micro M8 / Bottom / Right	<b>Pad Width</b>	
				4	Smooth (0°) / Micro M8 / Bottom / Left	S	0.5" <sup>3</sup>
				6	Smooth (0°) / Micro M8 / Top / Left	M	1.0" <sup>3</sup>
				8	Smooth (0°) / Micro M8 / Bottom / Left	D	1.5" <sup>6</sup>
				L	No Sensor	U	No Pads

<sup>1</sup> Only available with In-Pad

<sup>2</sup> Only available with In-Pad A,B,C,D

<sup>3</sup> Cannot be used with "R" Pad width

<sup>4</sup> Cannot be used with "S" Pad width

<sup>5</sup> Cannot be used with "S" Pad width

<sup>6</sup> Use with "R" Pad style



# Shovel Jaw Grippers

Bimba's shovel jaw gripper is ideal for applications with low clearance. The lower jaw provides a scoop to absorb motion/shake of the work piece during transfer.

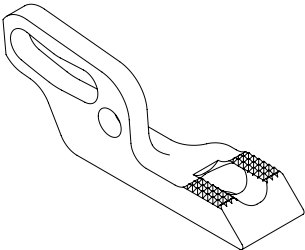


## BPGS Shovel Jaw Gripper

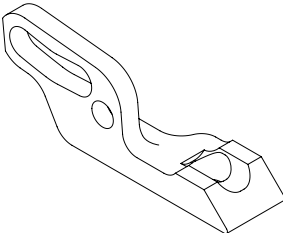
Diagram below illustrates blank placement using a shovel jaw gripper:



## BPGS Shovel Jaw Style



*(S, T, U) Style jaws*  
*Shovel jaw with teeth*



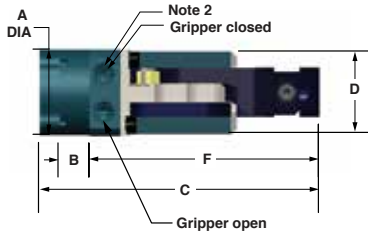
*(V, W, Y) Style jaws*  
*Shovel jaw without teeth*

# How To Specify

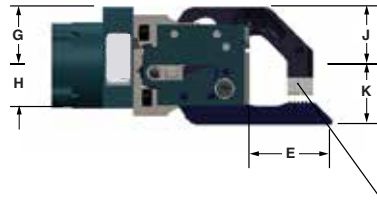
## BPGS10 Shovel Jaw Gripper - Jaw Angles

PNEUMATIC GRIPPER SYSTEM (BPGS)

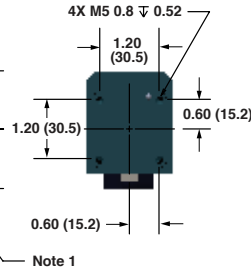
Top view



Side view

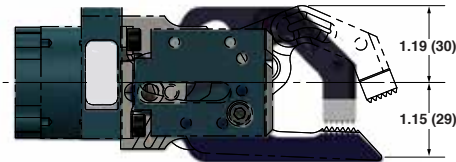


Back view

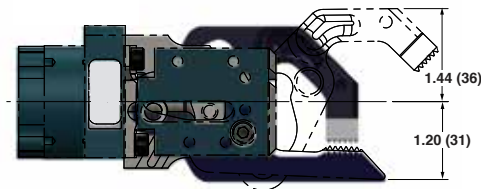


Dimensions	Inches	mm
A	1.73	43.9
B	0.63	16.0
C	5.24	133.1
D	1.73	43.9
E	1.25	31.8
F	4.23	107.4
G	1.18	29.8
H	0.86	21.9
J	1.18	30.0
K	1.21	30.7

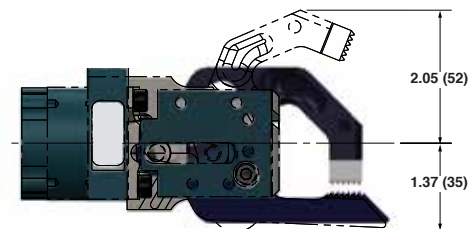
22° X 0°



45° X 0°

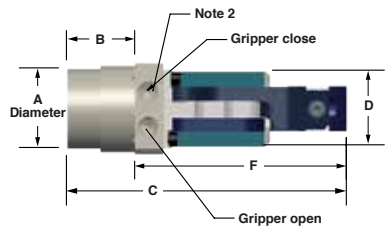


70° X 0°

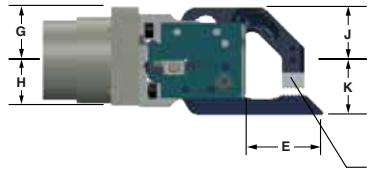


## BPGS11 Shovel Jaw Gripper - Jaw Angles

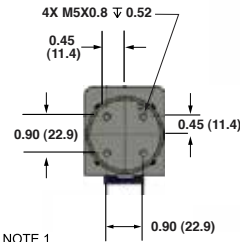
Top view



Side view



Back view



Dimensions	Inches	mm
A	1.75	43.8
B	1.5	15.9
C	6.14	143.5
D	1.65	41.9
E	1.64	42.2
F	4.65	117.6
G	1.18	29.8
H	1	21.9
J	1.16	28.1
K	1.2	28.1

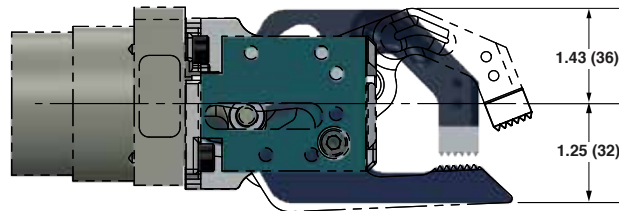
**Note 1**

See page 34 for various gripper pads

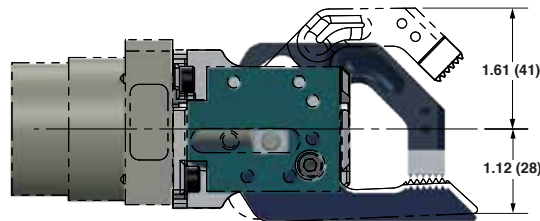
**Note 2**

1/8 NPS or 1/8 Rc

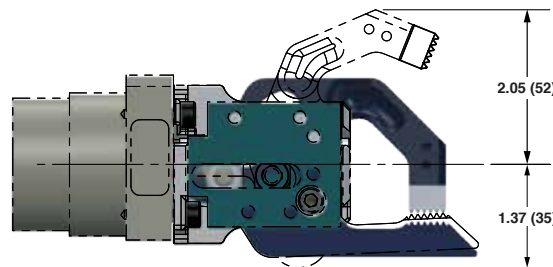
22° X 0°



45° X 0°



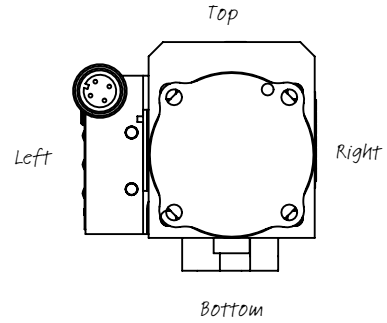
70° X 0°



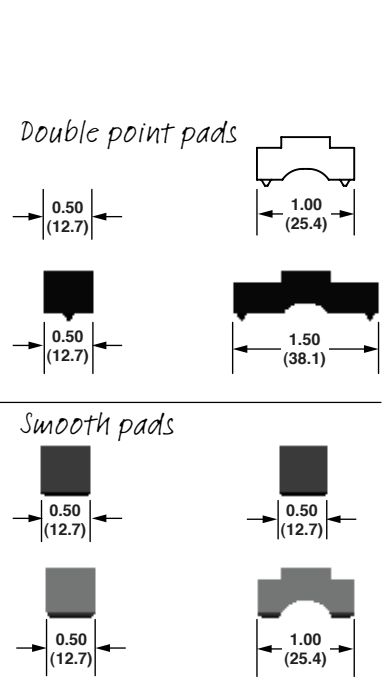
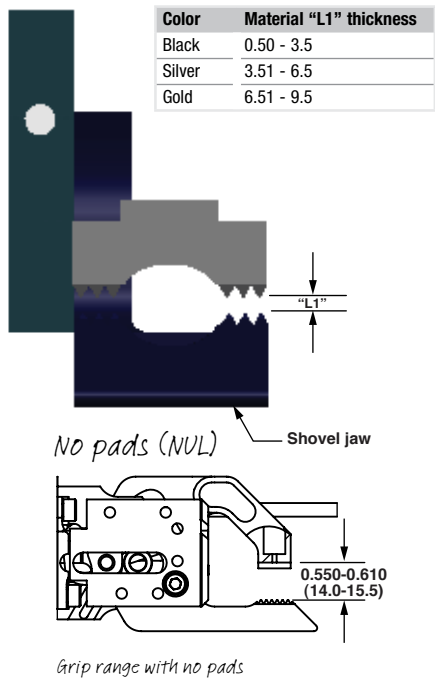
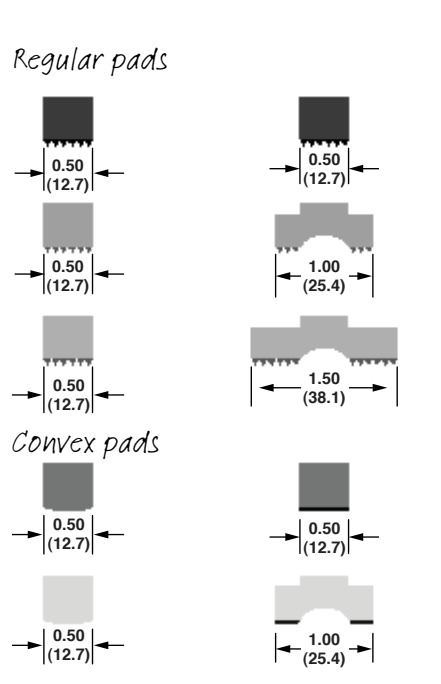
# How To Specify

## BPGS Shovel Jaw Gripper - Port Orientation

PNEUMATIC GRIPPER SYSTEM (BPGS)



## BPGS Jaw Pad - Shovel Jaw



# How to Order

The model number for shovel jaw gripper consists of an alphanumeric cluster designating the following below.

An example of a shovel jaw gripper with a standard body style, shovel jaw at 22° x 0° angle, indirect double blank sensor, NPN switch, mounted on the right side with a M8 connector, for material between 0.5 and 2.0mm in thickness with 1.0" wide regular flat pads, with a port orientation of a top 1/8" NPS is shown below. See details below:

Body Style		Sensor Type		Switch Output		Indirect Sensor		Material Thickness	
10	Standard 1.20"x1.20" bolt pattern	D	Indirect double blank	N	NPN	R	Micro M8/Right	1	0.50-2.00mm
		H	Indirect part present	P	PNP	L	Micro M8/Left	3	2.01-3.50mm
11	Crossover 0.90"x0.90" bolt pattern	I	In-Pad	2	2 Wire (3 Pin) <sup>1</sup>	E	Pico M12/Right	5	3.51-5.00mm
		N	No Sensor	T	2 Wire (4 Pin) <sup>1,2</sup>	W	Pico M12/Left	N	No Pads
				U	No Sensor				

## BPGS10S20DNR1M0E

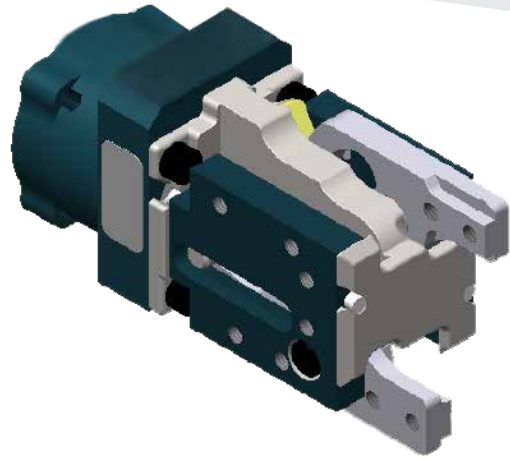
Jaw		Jaw Angle		In Pad Sensor/Pad Type/Connector/ Pad Mount/Body Mount		Port Orientation	
S	Shovel (1.0" wide without teeth, 0.50-3.50mm material thickness)	20	22° x 0°	A	Reg (0°)/ Micro M8/ Top / Right	E	Top 1/8" NPS
T	Shovel (1.0" wide without teeth, 3.51-6.50mm material thickness)	40	45° x 0°	B	Reg (0°)/ Micro M8/ Top / Left	F	Top 1/8" Rc
U	Shovel (1.0" wide without teeth, 6.51-9.50mm material thickness)	70	70° x 0°	E	Reg (0°)/ Pico M12 (Internal Wire) / Top / Right	L	Right 1/8" NPS
V	Shovel (1.0" wide with teeth, 0.50-3.50mm material thickness)			F	Reg (0°)/ Pico M12 (Internal Wire) / Top / Left	M	Right 1/8" Rc
W	Shovel (1.0" wide with teeth, 3.51-6.50mm material thickness)			S	Double Point / Micro M8 / Top / Right	S	Bottom 1/8" NPS
Y	Shovel (1.0" wide with teeth, 6.51-9.50mm material thickness)			T	Double Point / Micro M8 / Top / Left	T	Bottom 1/8" Rc
				W	Double Point / Pico M12 (Internal Wire) / Top / Right	Z	Left 1/8" NPS
				Y	Double Point / Pico M12 (Internal Wire) / Top / Left	2	Left 1/8" Rc
				I	Smooth (0°) / Micro M8 / Top / Right	<b>Pad Style</b>	
				9	Smooth (0°) / Micro M8 / Top / Left	0	0°
				L	No Sensor	D	Double point <sup>3</sup>
						S	Smooth <sup>4</sup>
						C	Convex <sup>4</sup>
						L	No Pads
						<b>Pad Width</b>	
						S	0.5"
						M	1.0"
						D	1.5"
						U	No Pads

<sup>1</sup> Only available with In-Pad  
<sup>2</sup> Only available with In-Pad A,B,C,D  
<sup>3</sup> Cannot be used with "S" Pad width  
<sup>4</sup> Cannot be used with "D" Pad width



# Angular Grippers

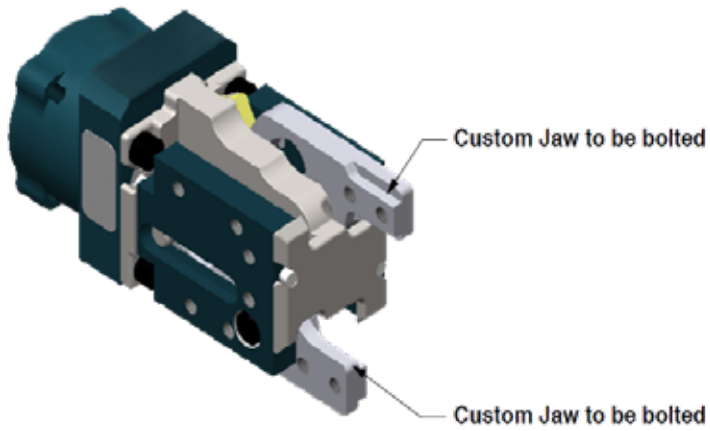
Bimba's angular grippers provide users the ability to bolt on custom jaws to the gripper. The angular grippers are ideal for flexible applications due to the ability to use custom jaws designed for your specific application.





## BPGS Angular Gripper

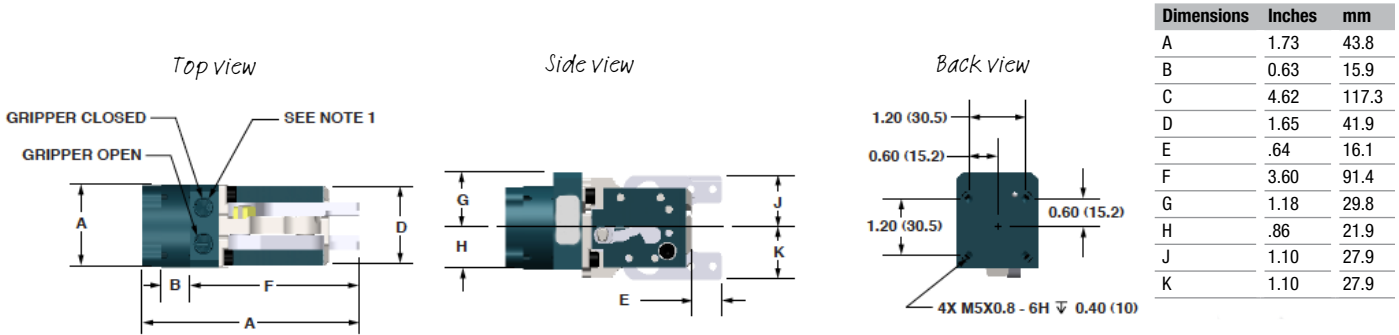
---



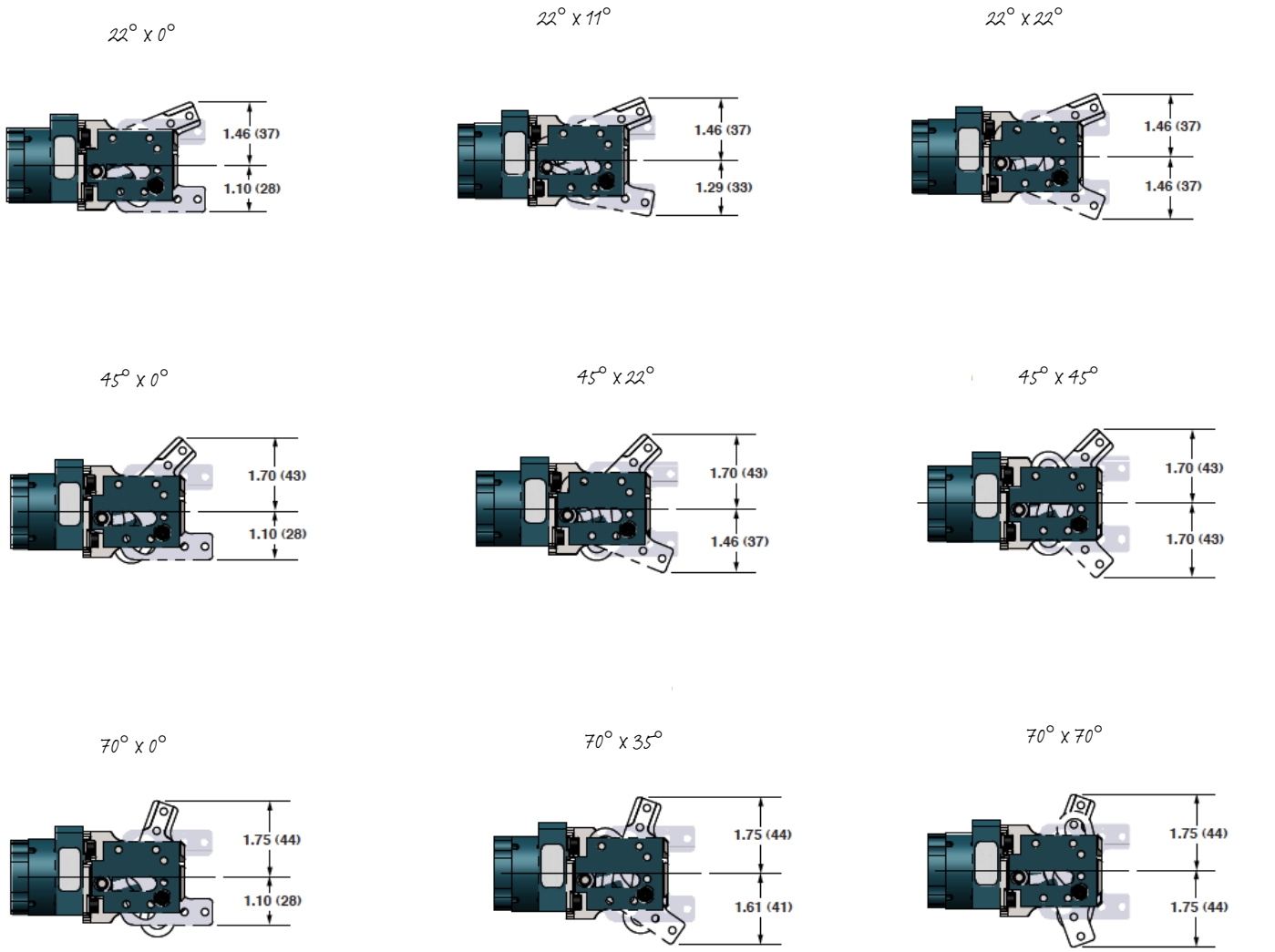
# How To Specify

## BPGS Angular Gripper - Jaw Angles

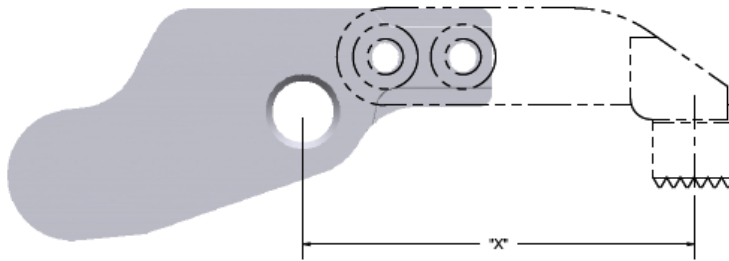
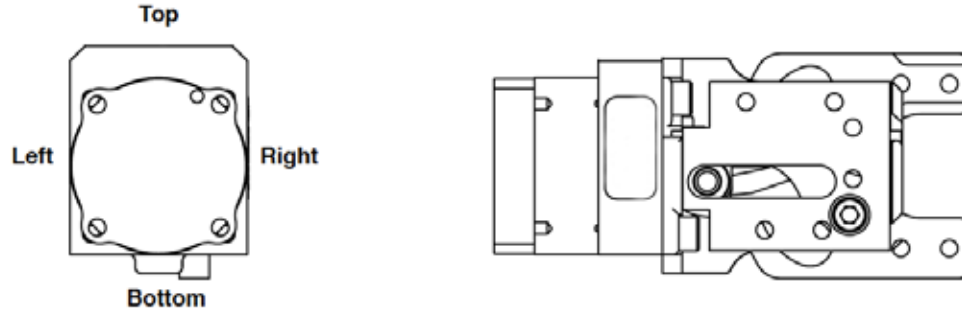
PNEUMATIC GRIPPER SYSTEM (BPGS)



Dimensions	Inches	mm
A	1.73	43.8
B	0.63	15.9
C	4.62	117.3
D	1.65	41.9
E	.64	16.1
F	3.60	91.4
G	1.18	29.8
H	.86	21.9
J	1.10	27.9
K	1.10	27.9



## BPGS Angular Gripper - Port Orientation



$$\text{Grip Force (F)} = \frac{684 \text{ lbs.in}}{X(\text{in})} \text{ or } \frac{7.88 \text{ kg.m}}{X(\text{m})}$$

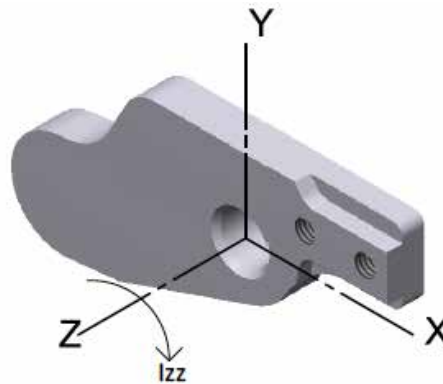
In order to achieve rated MCBD of million cycles, it is recommended that moment of inertia along lzz be less than -

For fully open jaws,  $lzz < 0.588 \text{ lbs.in}^2$

For 45 opening,  $lzz < 0.882 \text{ lbs.in}^2$

For 22 opening,  $lzz < 1.176 \text{ lbs.in}^2$

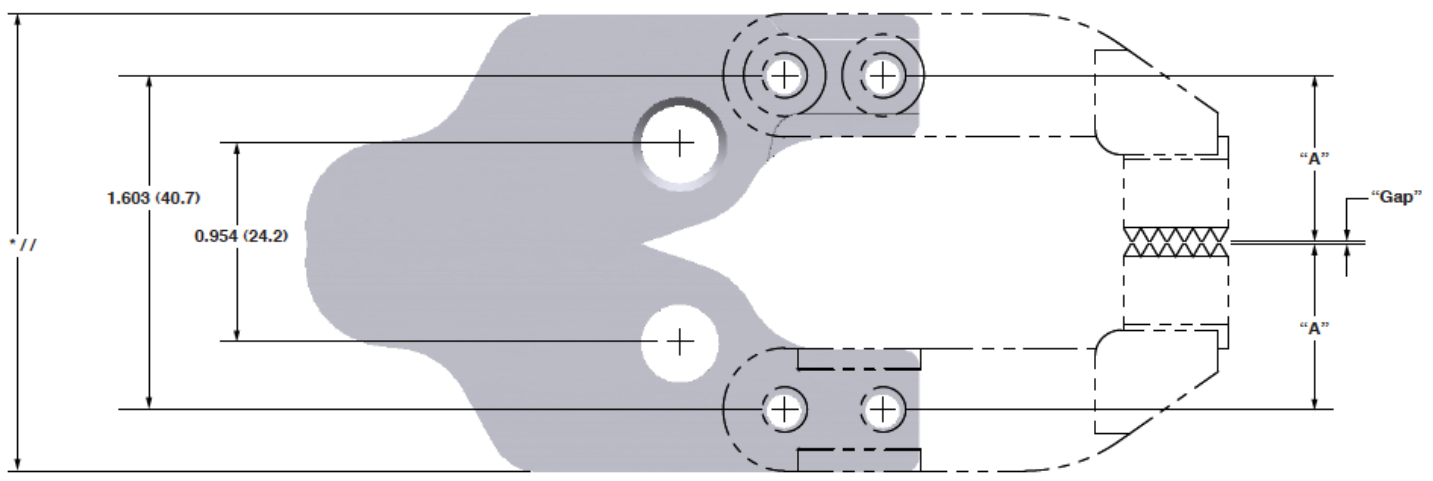
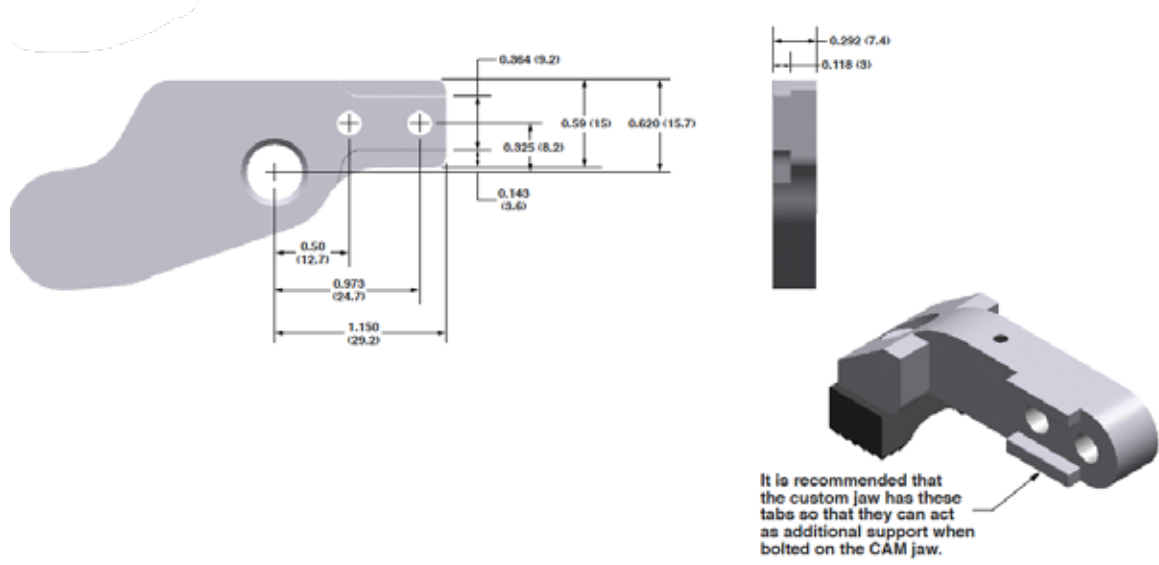
This includes mounting hardware, pads and jaw extension.



# How To Specify

## BPGS Angular Gripper - Port Orientation

PNEUMATIC GRIPPER SYSTEM (BPGS)



The gap between the grip points when the jaws are parallel is Gap =  
 Material Thickness - \*0.5mm  
 \*0.5mm is used as a correction factor for fits and tolerances  
 \*// indicates the 2 surfaces are parallel

Example - For material thickness of 2mm, Gap is 2mm - 0.5mm=1.5mm  
 $A = \frac{40.7\text{mm} - 1.5\text{mm}}{2} = 19.6\text{mm}$

The model number for z line jaw gripper consists of an alphanumeric cluster designating the jaw type and angle, and the port orientation.

An example of an angular jaw gripper with a standard body style, angular jaw at 70° x 70° angle, with a port orientation of a top 1/8" NPS is shown below. See details below:

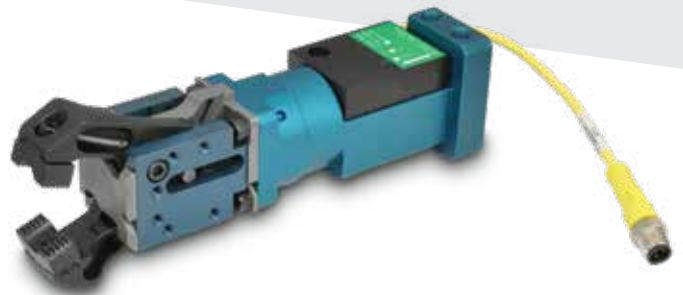
## BPGS10 Z 77 NUL NUL E

Body Style		Jaw		Jaw Angle		No Sensor	No Pad	Port Orientation	
10	Standard 1.20"x1.20" bolt pattern	Z	Angular	20	22° x 0°			E	Top 1/8" NPS
11	Crossover 0.90"x0.90" bolt pattern			21	22° x 11°			F	Top 1/8" Rc
				22	22° x 22°			L	Right 1/8" NPS
				40	45° x 0°			M	Right 1/8" Rc
				42	45° x 22°			S	Bottom 1/8" NPS
				44	45° x 45°			T	Bottom 1/8" Rc
				70	70° x 0°			Z	Left 1/8" NPS
				73	70° x 35°				
				77	70° x 70°			2	Left 1/8" Rc



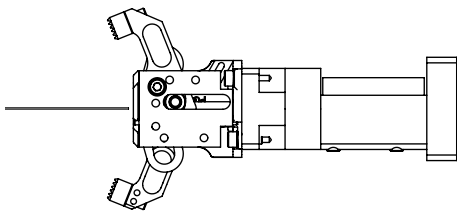
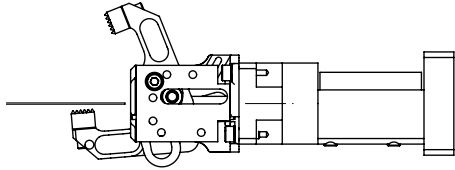
# Hot Metal Regular Grippers

Bimba's Hot Metal Regular Grippers are designed to withstand temperatures up to 900°C. These grippers may be paired with a high temperature tooling system to protect plumbing and electrical wiring from the heat, without the need for external heat wraps. The wide angle jaw opening can accommodate banks with inconsistent pick up location.



## BPGS10 Hot Metal Regular Gripper

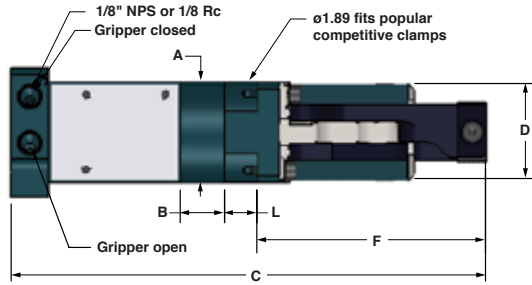
Diagram below illustrates blank placement using a hot metal jaw gripper:



# How To Specify

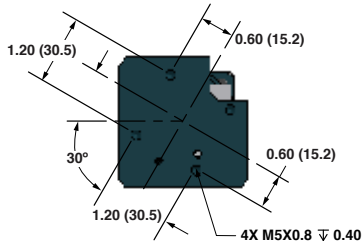
## BPGS10 Hot Metal Regular Jaw Gripper - Jaw Angles

Top view

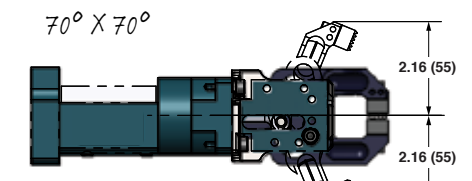
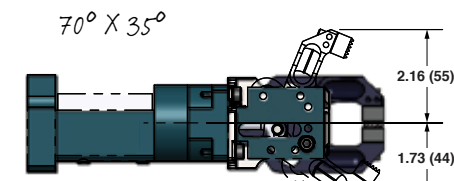
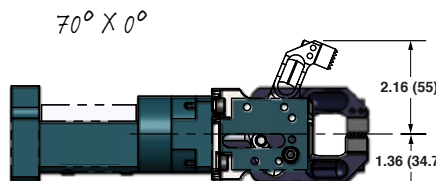
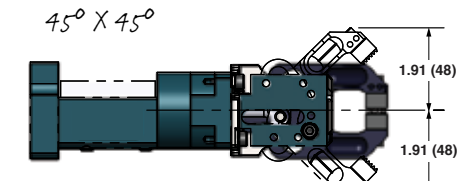
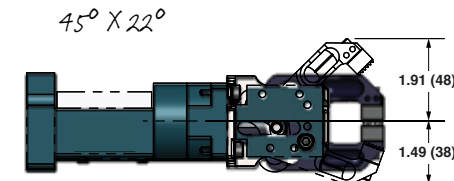
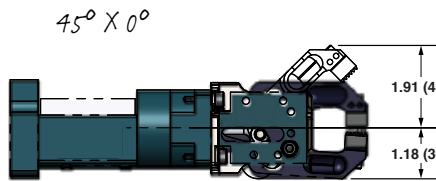
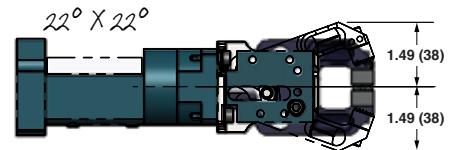
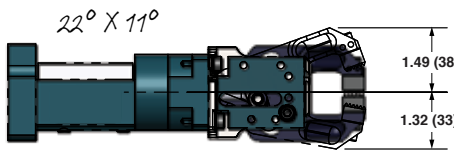
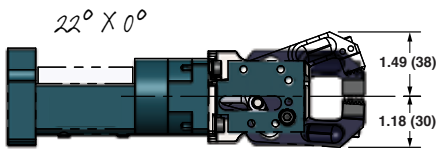
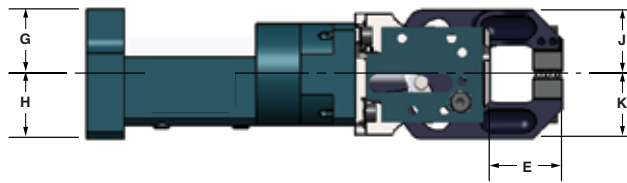


Dimensions	Inches	mm
A	1.75	44.5
B	0.77	19.6
C	8.23	209.2
D	1.65	41.9
E	1.25	31.8
F	3.97	100.8
G	1.12	28.3
H	1.12	28.3
J	1.1	27.9
K	1.1	27.9
L	0.56	14.2

Back view

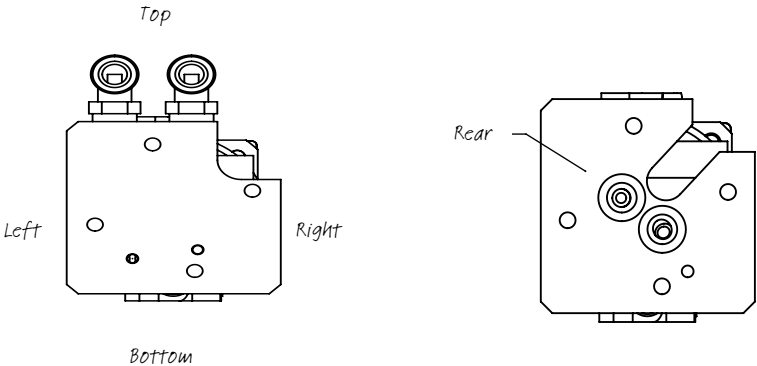


Side view



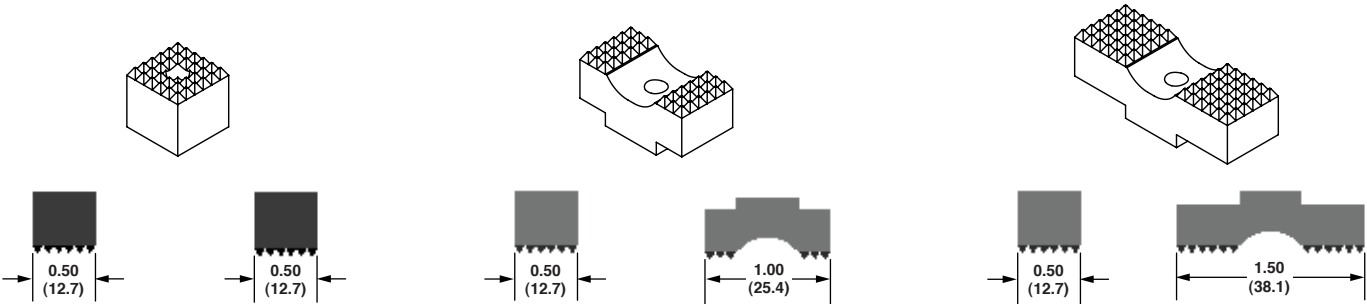


## BPGS10 Hot Metal Regular Jaw Gripper - Port Orientation

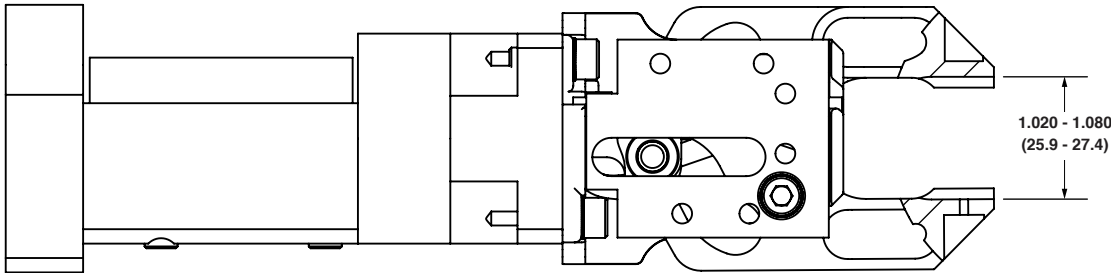


## BPGS10 Jaw Pad - Hot Metal Regular Jaw

Regular pads



No pads (NVL)

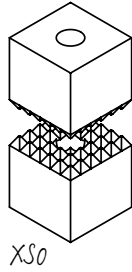


Grip range with no pads

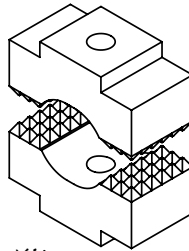
# How To Specify

## BPGS10 Jaw Pads - Flat Pads for General Purpose Gripping

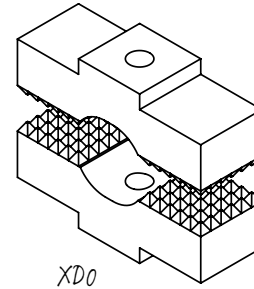
PNEUMATIC GRIPPER SYSTEM (BPGS)



XS0

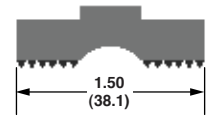
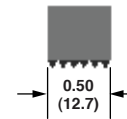
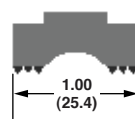
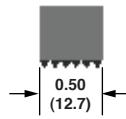
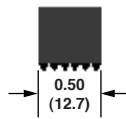
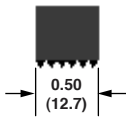
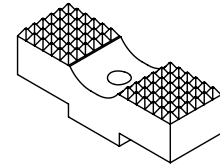
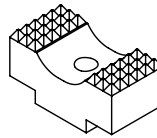
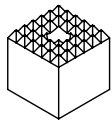


XM0



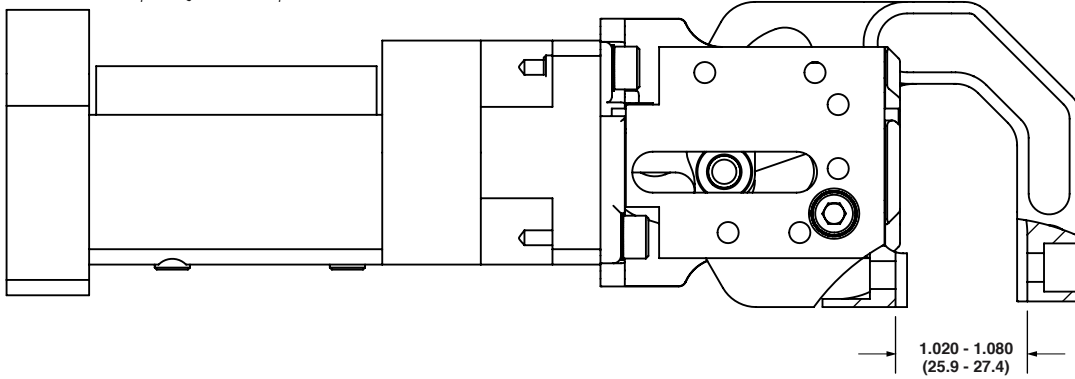
XD0

### Regular pads



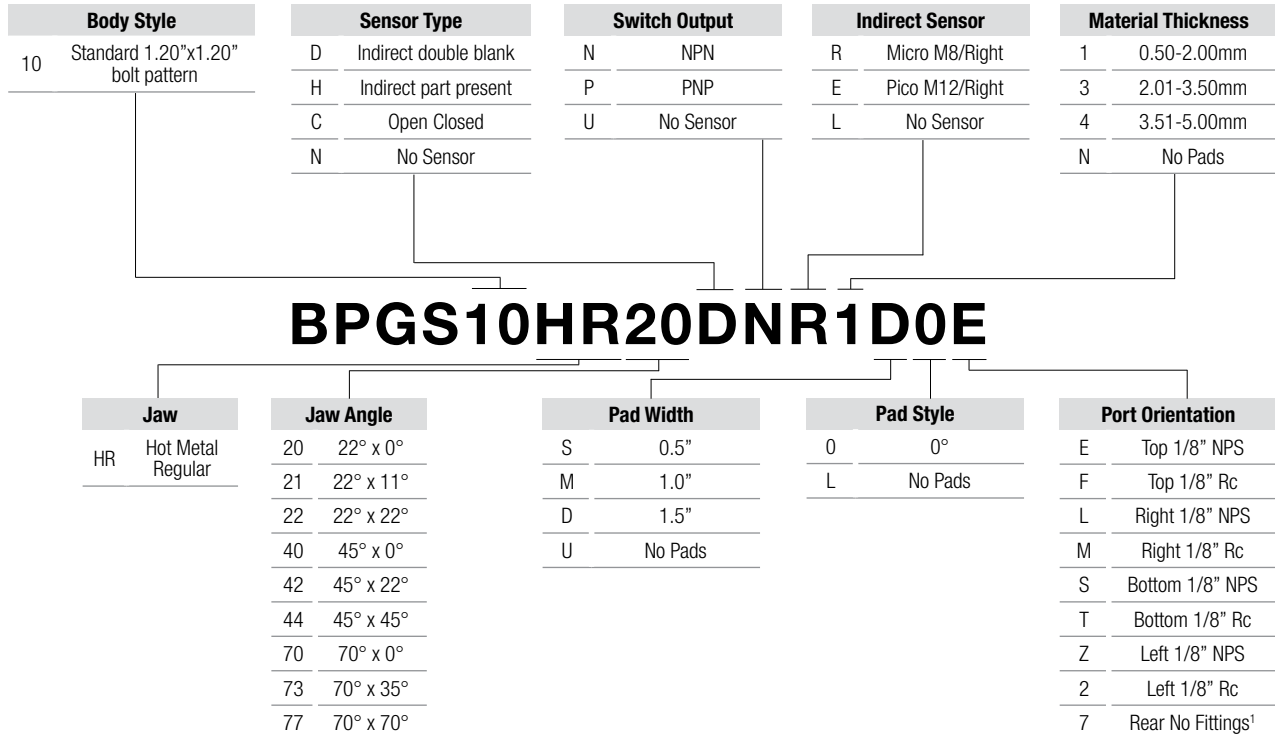
### No pads (NVL)

Grip range with no pads



The model number for hot metal regular jaw gripper consists of an alphanumeric cluster designating the following below.

An example of a hot metal regular jaw gripper with a standard body style, regular jaw at 22° x 0° jaw angle, indirect double blank sensor, NPN switch, mounted on the right side with a M8 connector, for material between 0.5 and 2.0mm in thickness with 1.5" wide regular flat pads, with a port orientation of a top 1/8" NPS is shown below. See details below:



<sup>1</sup> BPGS10TELXXPX not included



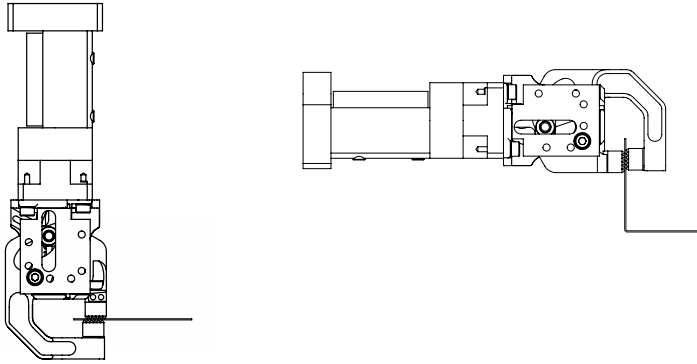
# Hot Metal Flange Jaw Grippers

Bimba's hot metal flange jaw grippers are designed to grab workpieces at up to 900°C. The gripper is mounted 90° to the work piece and allows the gripper to reach around a formed flange edge. The flange jaw gripper is a great choice for applications with no lift and/or panels that have a flange or projecting edge that can be used for gripping.



## BPGS10 Hot Metal Flange Jaw Gripper

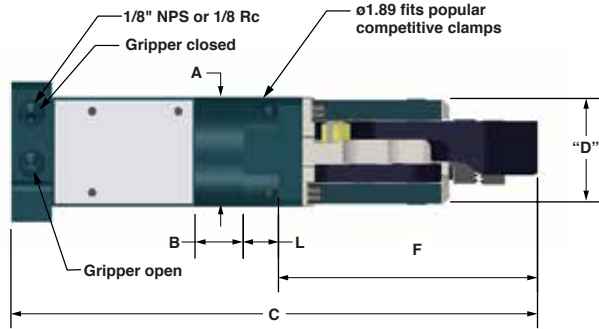
Diagram below illustrates blank placement using a hot metal flange jaw gripper:



# How To Specify

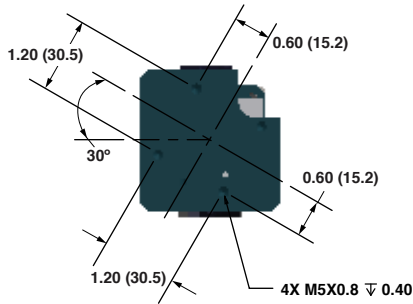
## BPGS10 Hot Metal Flange Jaw Gripper - Jaw Angles

Top view

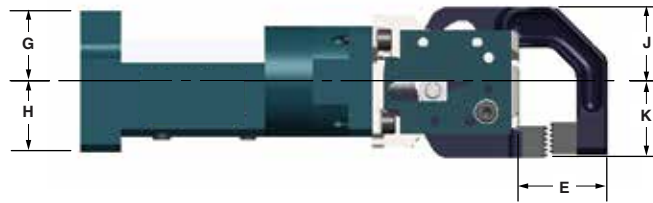


Dimensions	Inches	mm
A	1.75	44.5
B	0.77	19.6
C	8.39	213.2
D	1.65	41.9
E	1.41	35.8
F	4.13	104.9
G	1.12	28.3
H	1.12	28.3
J	1.18	29.9
K	1.21	30.7
L	0.56	14.2

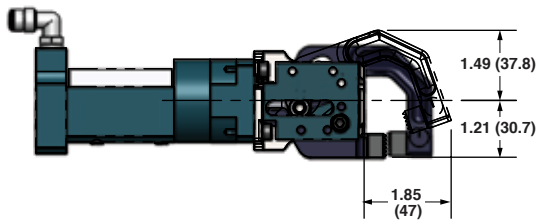
Back view



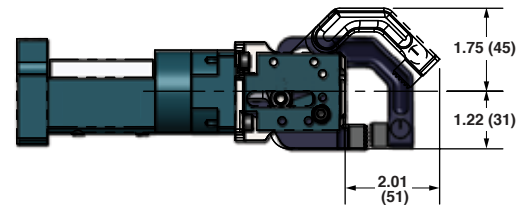
Side view



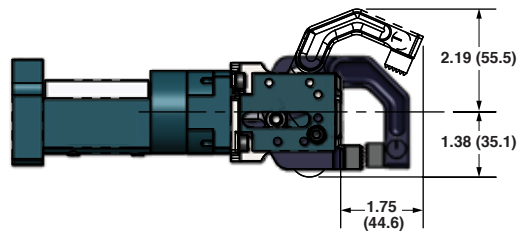
22° X 0°



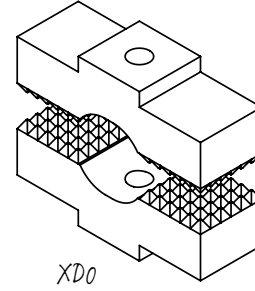
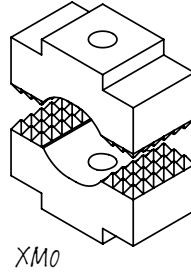
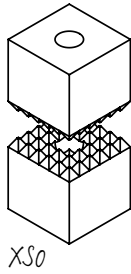
45° X 0°



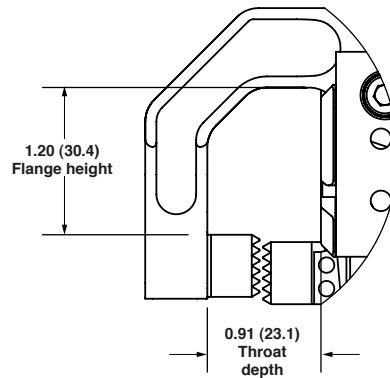
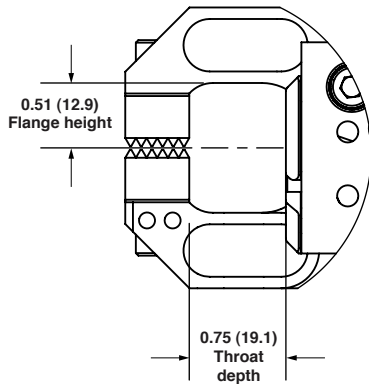
70° X 0°



## BPGS10 Jaw Pads - Flat Pads for General Purpose Gripping



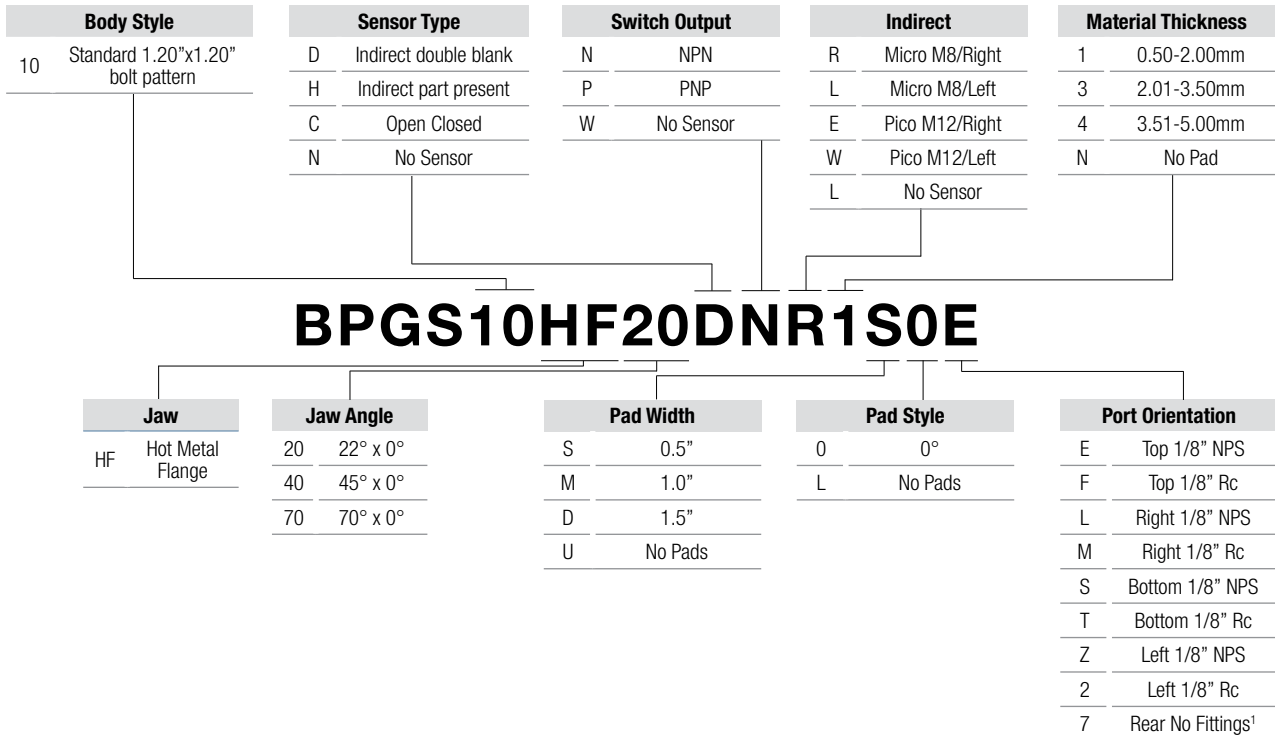
## BPGS10 Flange Height and Throat Depth



# How to Order

The model number for hot metal flange jaw gripper consists of an alphanumeric cluster designating the following below.

An example of a hot metal flange jaw gripper with a standard body style, flange jaw, 22° x 0° angle, indirect double blank sensor, NPN switch, mounted on the right side with a M8 connector, for material between 0.5 and 2.0mm in thickness with 1.5" wide regular flat pads, with a port orientation of a top 1/8" NPS is shown below. See details below:



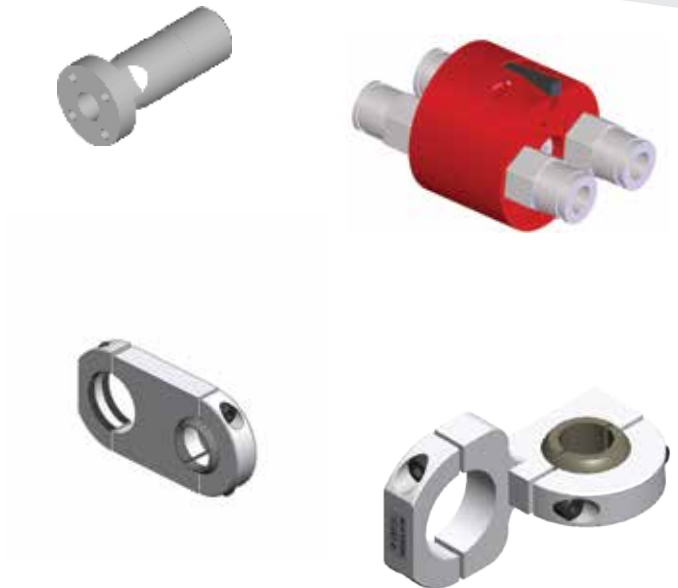
<sup>1</sup> BPGS10TELXXPX not included





# Accessories



Bimba offers a wide range of accessories for the Pneumatic Gripper System such as part gaging kits, internal wiring mount adapters, telescope and stud mounts, rotational clamps, and gripper valves.



# How to Accessorize

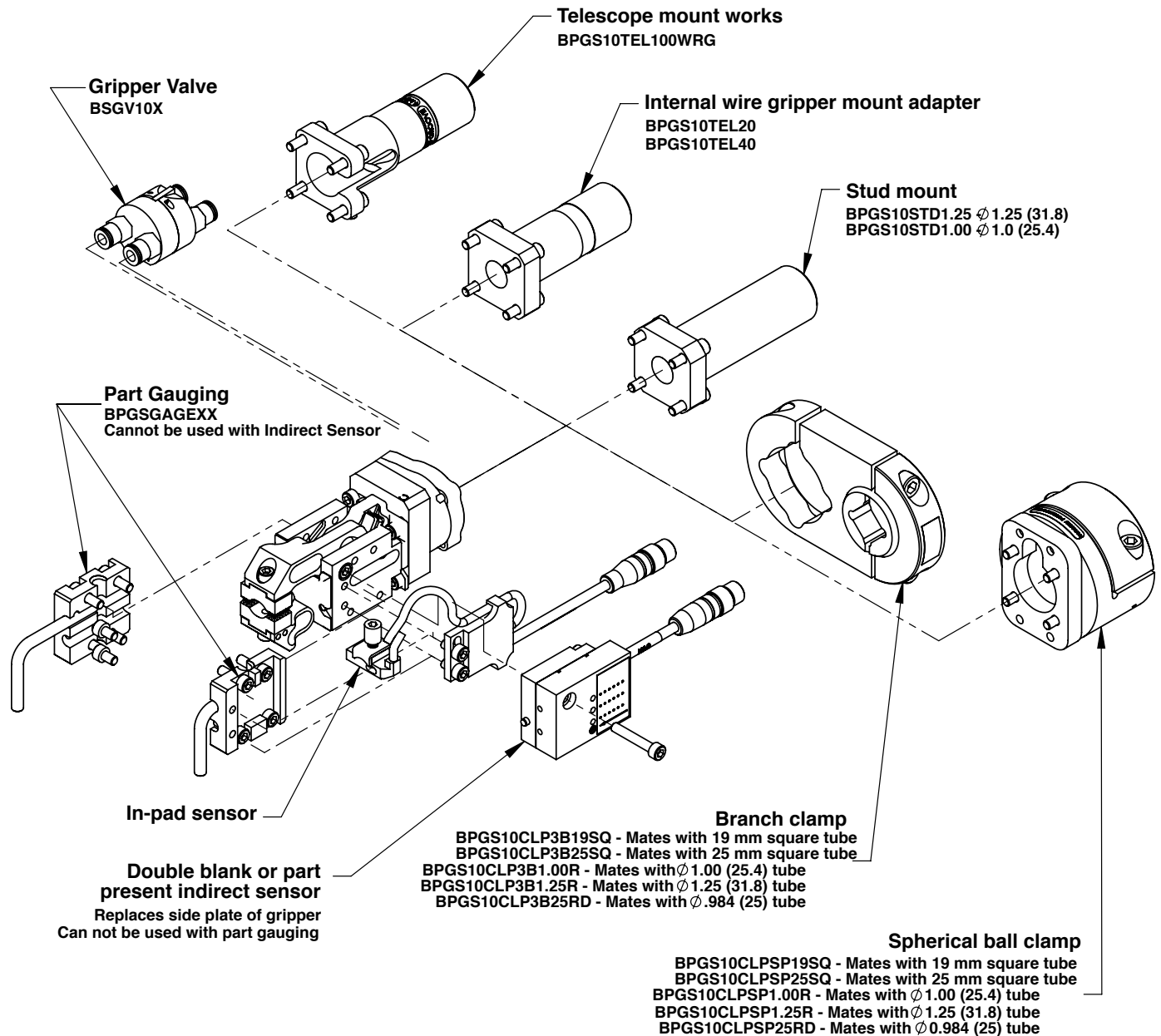
## Quick Find

### BPGS Accessories

<p>Overview</p>  <p>Page 52</p>	<p>Part gaging kit</p>  <p>Page 53</p>	<p>Part gaging</p>  <p>Page 54</p>	<p>Spherical mount</p>  <p>Page 55</p>	<p>Internal air/electrics adapter</p>  <p>Page 56</p>	<p>Telescope and stud mount</p>  <p>Page 57</p>
<p>Bolt clamp</p>  <p>Page 58</p>	<p>Branch clamp</p>  <p>Page 59</p>	<p>Gripper valve</p>  <p>Page 61</p>			

## BPGS Accessories

These accessories apply to all non-hot metal versions of the BPGS10 Pneumatic Gripper Series

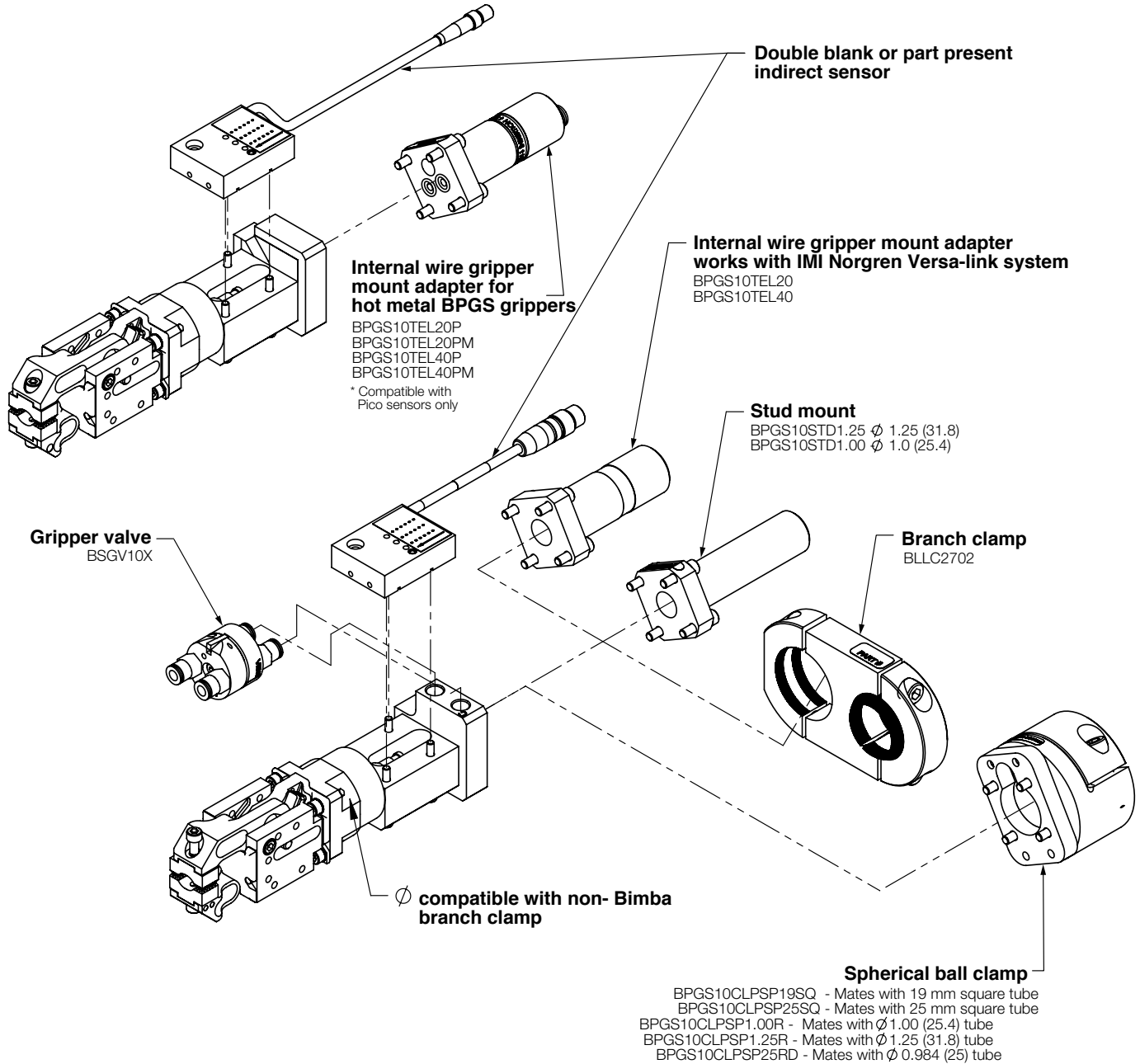


Dimensions in inches (mm) are for reference only

# How to Accessorize

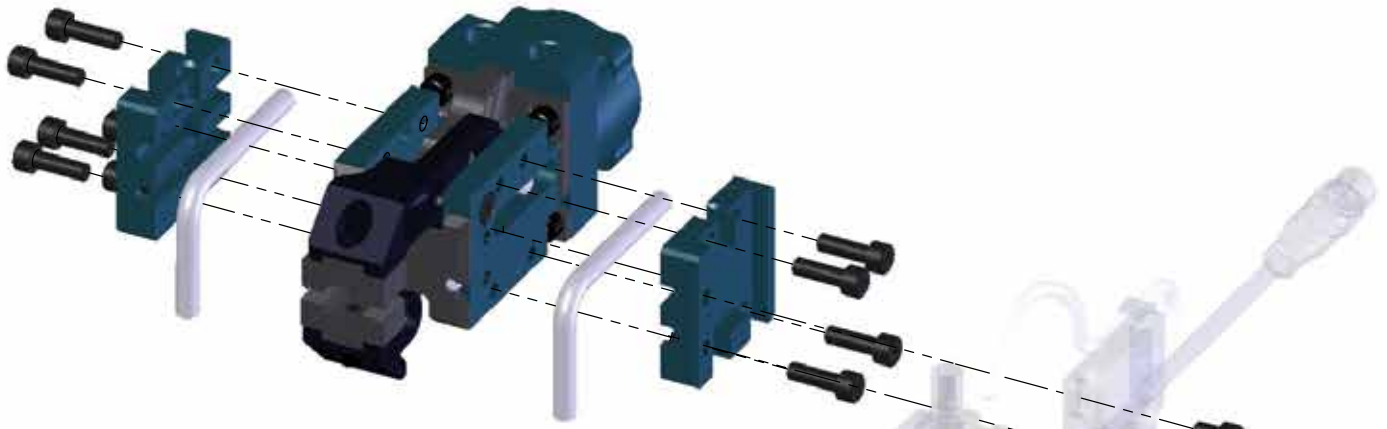
## BPGS10 Hot Metal Gripper Accessories

These accessories apply to the BPGS10 hot metal grippers: regular (BPGS10HR) and flange (BPGS10HF) hot metal jaw gripper



Dimensions in inches (mm) are for reference only

## Part Gaging for BPGS



M5 X 8 mm bolts supplied for mounting in-pad sensor

Part number	Description
BPGSGAGE90D30LA	Aluminum clamp plates - part straightening for regular gripper
BPGSGAGE90D30LS	Steel clamp plates - part straightening for regular gripper
BPGSGAGECHSL14A	Aluminum clamp plates - easy part release for 14° chisel gripper
BPGSGAGECHSL14S	Steel clamp plates - easy part release for 14° chisel gripper
BPGSGAGEFLGU45A	Aluminum clamp plates - easy part release for 45° flange gripper
BPGSGAGEFLGU45S	Steel clamp plates - easy part release for 45° flange gripper
BPGSGAGEFLGU70A	Aluminum clamp plates - easy part release for 70° flange gripper
BPGSGAGEFLGU70S	Steel clamp plates - easy part release for 70° flange gripper

## Needed for Assembly

Adhesive	Tool	Torque
Removable thread checker (e.g. Loctite™ 242)	4 mm hex key	72 in-lb (8.1 Nm)

## Part Gaging Kit Contents

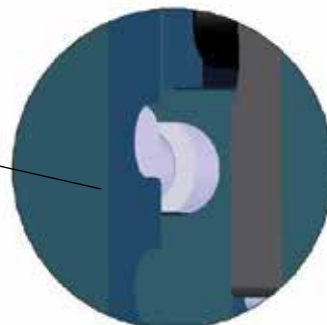
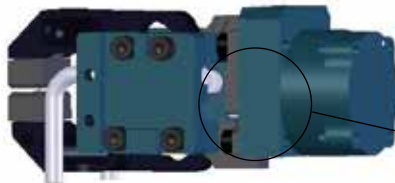
Qty.	Description
2	Clamps plates
2	Rods
8	SHCS (M5 X 12)
2	SHCS (M5 X 8)*

\*Bolts to mount in-pad sensor in place

## Assembly Instructions

- Apply removable thread checker (e.g. Loctite™ 242) to bolts
- Loosely assemble clamp plates
- Place gage rod in desired position
- Tighten bolts evenly to 72 in-lb (8.1 Nm)
- Ensure that gaging plates are parallel to gripper side plate when fully torqued

Rod is still accessible to unlock jaws  
Use a small blunt object to push rod forward to unlock jaws



# How to Accessorize

## Part Gaging for BPGS - BPGSGAGEXX

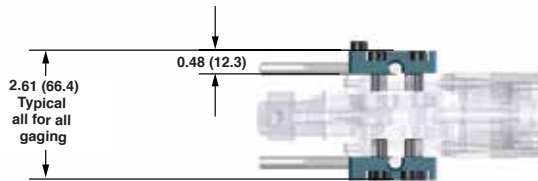
- Used with BPGS series grippers for easy part removal
- Rods can be moved in several different positions
- Rods can be custom made per customer specifications to stabilize parts during transfer
- Can be used to position parts



Part number	Gripper	Clamp plate material	Weight lb (kg)
BPGSGAGE90D30LS	Regular	Steel	0.650 (.29)
BPGSGAGE90D30LA	Regular	Aluminum	0.300 (.14)
BPGSGAGECHSL14S	Chisel	Steel	0.670 (.30)
BPGSGAGECHSL14A	Chisel	Aluminum	0.320 (.14)
BPGSGAGEFLGU45S	Flange	Steel	0.680 (.31)
BPGSGAGEFLGU45A	Flange	Aluminum	0.330 (.15)
BPGSGAGEFLGU70S	Flange	Steel	0.680 (.31)
BPGSGAGEFLGU70A	Flange	Aluminum	0.330 (.15)

Note: Gaging can be used with in-pad sensors.  
Gaging can NOT be used with indirect sensors.

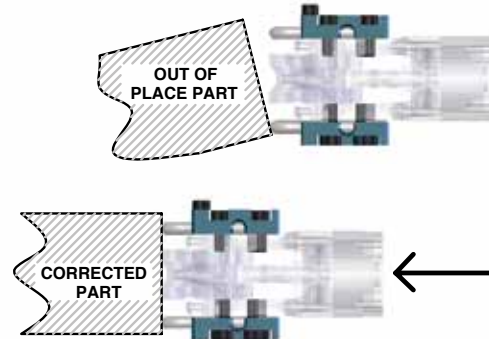
## Technical Data



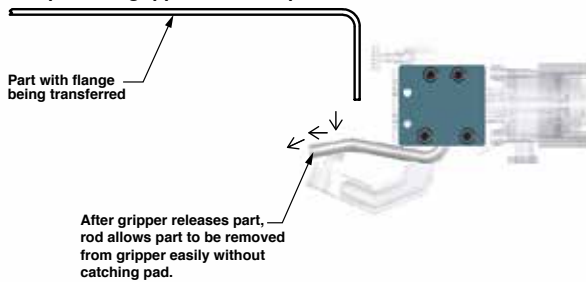
Allows parts to be straightened before gripper closes



Can be used to correct part orientation as gripper moves in

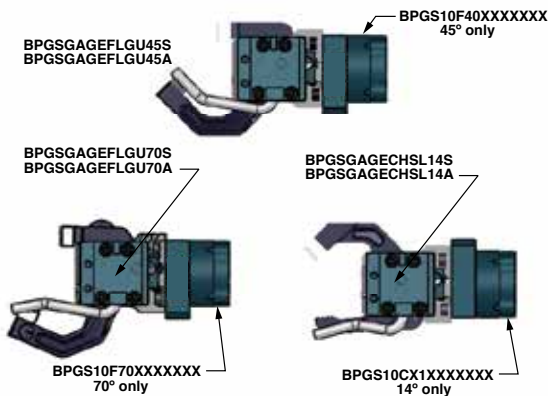


Can be used to prevent parts from hanging up on the gripper when the part is released



Part with flange being transferred

After gripper releases part, rod allows part to be removed from gripper easily without catching pad.



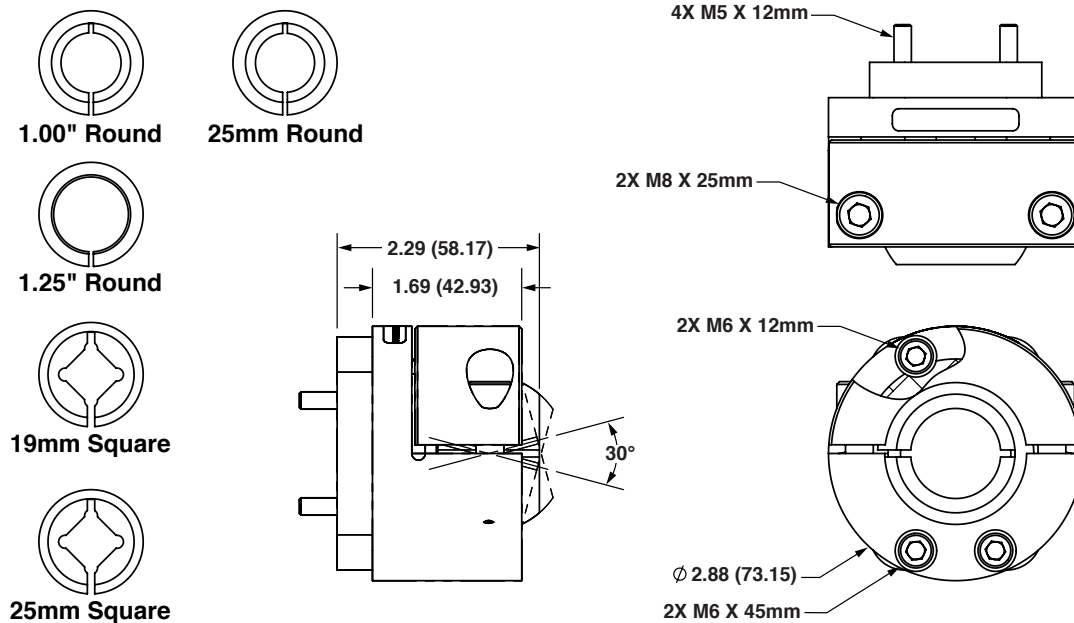
## Spherical Mount - BPGS10CLPSPXXXX

- BPGS10CLPSPXXXX accommodates 1.00" round, 1.25" round, 25 mm round, 19 mm square & 25 mm square tubes
- Spherical ball clamp allows 360° rotation and 30° of angular adjustment

Part number	Weight
BPGS10CLPSP1.00R	1.35 lbs (0.61 kg)
BPGS10CLPSP1.25R	1.21 lbs (0.55 kg)
BPGS10CLPSP25RD	1.35 lbs (0.61 kg)
BPGS10CLPSP19SQ	1.37 lbs (0.62 kg)
BPGS10CLPSP25SQ	1.26 lbs (0.57 kg)



## Technical Data



Dimensions in inches (mm) are for reference only

# How to Accessorize

## Internal Wire Gripper Mount Adapter - BPGS10TEL100WRG

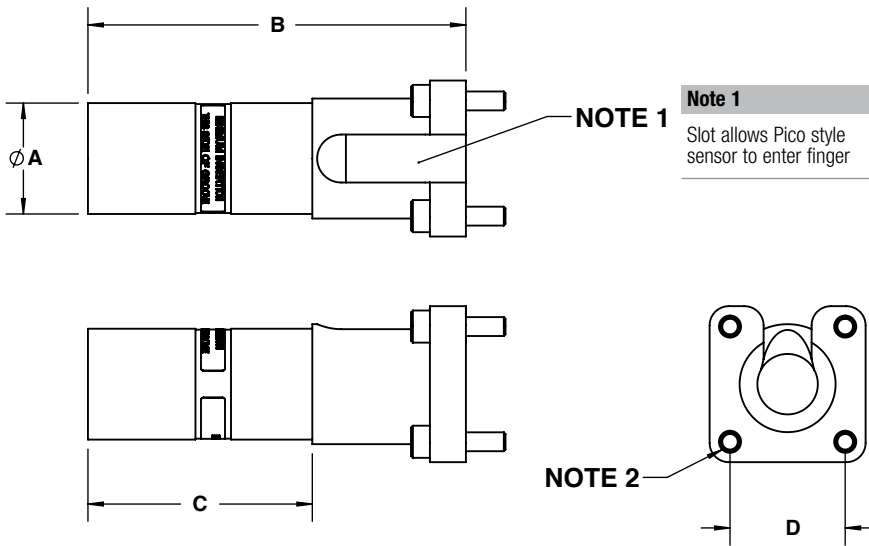
- Provides telescoping adjustment of gripper position
- Provides entry point for Pico style sensor cable into finger
- Telescoping O.D. sized for insertion into standard Bimba 1.25" O.D. finger link or tubing

Dim	Weight
BPGS10TEL100WRG	0.322 lbs / 146 g



### Technical Data

BPGS10TEL100WRG		
Dim	mm	Inches
øA	29.4	1.16
B	100.0	3.94
C	59.4	2.34
D	30.5	1.20



Note 2 Adapter	Bolt size for mounting
BPGS10TEL100WRG	4X M5 X 20

Dimensions in inches (mm) are for reference only

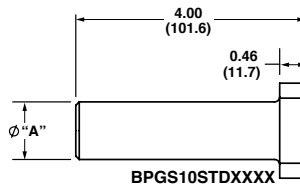
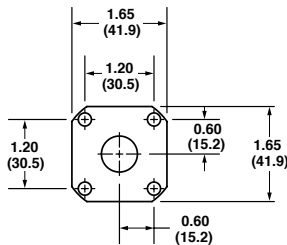


## Telescope & Stud Mounts for BPGS10 Series - BPGS10STDXX, BPGS10TELX

- BPGS10STDXXXX provide mounting stud compatible with various diameter tooling components



### Technical Data



BPGS10STDXXXX	
$\phi "A"$	
Inch	mm
0.984	25
1.00	25.4
1.08	27.4
1.181	30

BPGS10STDXXXX

Substitute	Feature	Weight
1.00	$\phi 1.0''$ X 4'' Long	0.400 lbs / 180 g
1.08	$\phi 1.08''$ X 4'' Long	0.400 lbs / 180 g
1.25	$\phi 1.25''$ X 4'' Long	0.410 lbs / 185 g
25MM	$\phi 25$ mm X 4'' Long	0.250 lbs / 115 g
30MM	$\phi 30$ mm X 4'' Long	0.260 lbs / 120 g

# How to Accessorize

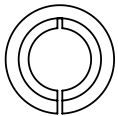
## 3 Bolt Clamp for BPGS10 Series - BPGS10CLX3BXXXX

- BPGS10CLX3BXXXX provides 360° rotation of gripper independent of ball
- BPGS10CLX3BXXXX accommodates 1.00" round, 1.25" round, 19 mm square, 25 mm square tubes and 25 mm round
- Spherical ball clamp allows 360° rotation and 30° angular adjustment

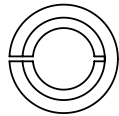


Part number	Description	Weight
BPGS10CLP3B1.00R	57.2 mm center to center for 1.00 tube	0.93 lbs / 422 g
BPGS10CLP3B1.25R	57.2 mm center to center for 1.25 tube	0.78 lbs / 352 g
BPGS10CLP3B19SQ	57.2 mm center to center for 19 mm tube	0.94 lbs / 428 g
BPGS10CLP3B25SQ	57.2 mm center to center for 25 mm tube	0.84 lbs / 378 g
BPGS10CLP3B25RD	57.2 mm center to center for 25 mm tube	1.03 lbs / 468 g
BPGS10CLT3B1.00R	79.5 mm center to center for 1.00 tube	1.21 lbs / 549 g
BPGS10CLT3B1.25R	79.5 mm center to center for 1.25 tube	1.07 lbs / 485 g
BPGS10CLT3B19SQ	79.5 mm center to center for 19 mm tube	1.23 lbs / 560 g
BPGS10CLT3B25SQ	79.5 mm center to center for 25 mm tube	1.13 lbs / 511 g
BPGS10CLT3B25RD	79.5 mm center to center for 25 mm tube	1.21 lbs / 552 g

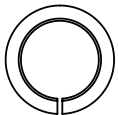
## Technical Data



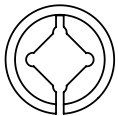
1.00" Round



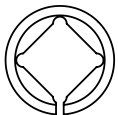
25 mm Round



1.25" Round

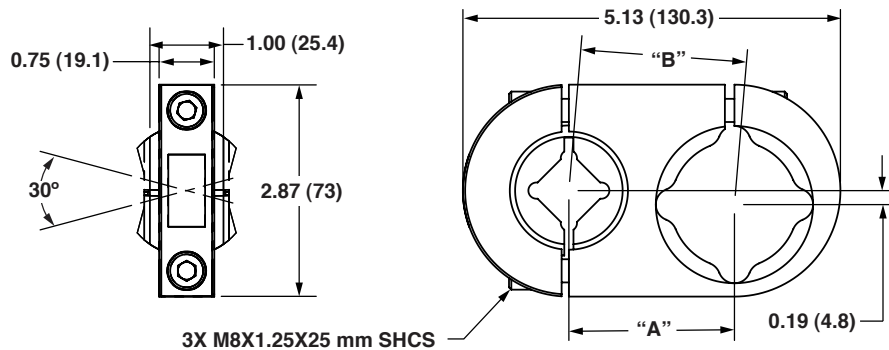


19 mm Square



25 mm Square

Part family	"A"	"B"
BPGS10CLP3BXXXX	2.25 (57.2)	2.26 (57.4)
BPGS10CLT3BXXXX	3.13 (79.5)	3.14 (79.8)



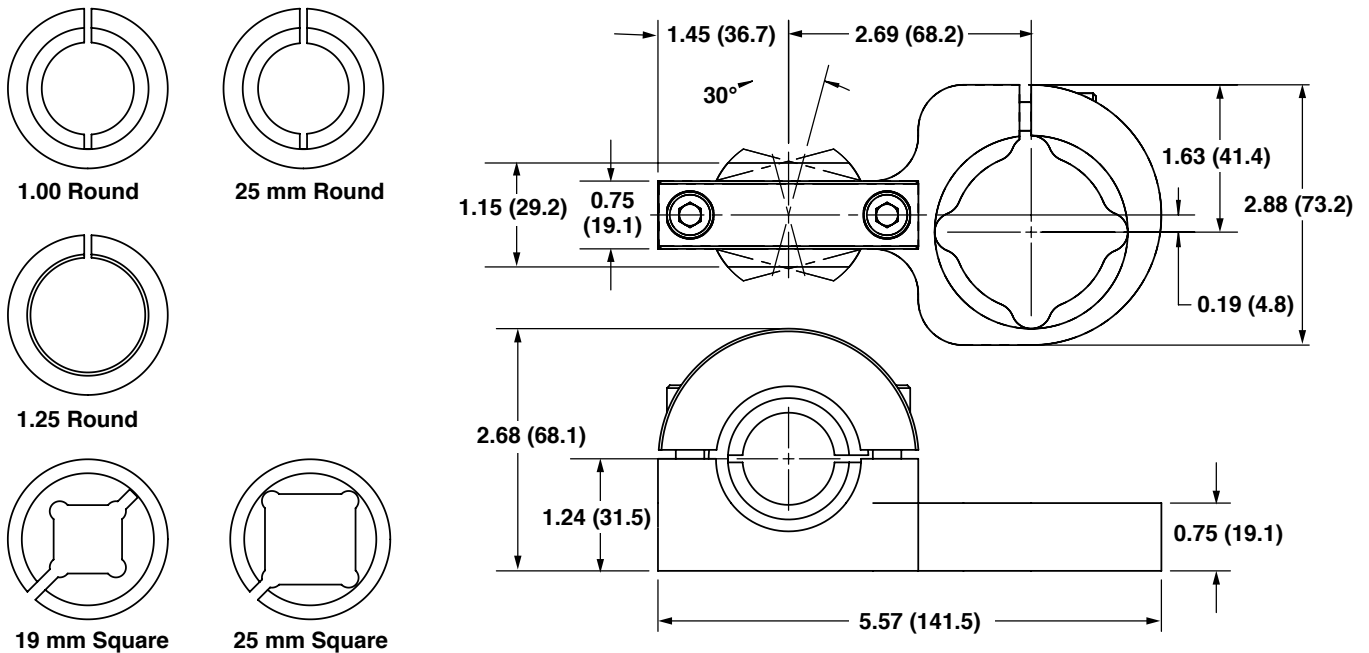
## 3 Bolt Clamp for BPGS10 Series Grippers Rotated - BPGS10CLR3BXXXX

- BPGS10CLR3BXXXX provides 360° rotation of gripper independent of ball
- BPGS10CLR3BXXXX accommodates 1.00", round, 25mm round, 1.25" round, 19mm square & 25mm square tubes
- Spherical ball clamp allows 360° rotation and 30° of angular adjustment
- Ball clamp is 90° to gripper clamp



Part number	Description	Weight
BPGS10CLR3B1.00R	For 1.00" tube	1.07 lbs (485 kg)
BPGS10CLR3B25RD	For 25 mm tube	1.07 lbs (485 kg)
BPGS10CLR3B1.25R	For 1.25" tube	0.92 lbs (415 kg)
BPGS10CLR3B19SQ	For 19 mm square tube	1.08 lbs (491 kg)
BPGS10CLR3B25SQ	For 25 mm square tube	1.16 lbs (441 kg)

## Technical Data



# How to Accessorize

## 1.75" Branch Clamp to 25mm Spherical Clamp Rotated - BLLC2302R

- Used to mount BPGS10H and BPGS11 series grippers to 25mm OD branch link tubing, or stud
- Spherical ball clamp allows 360° rotation and 30° of angular adjustment

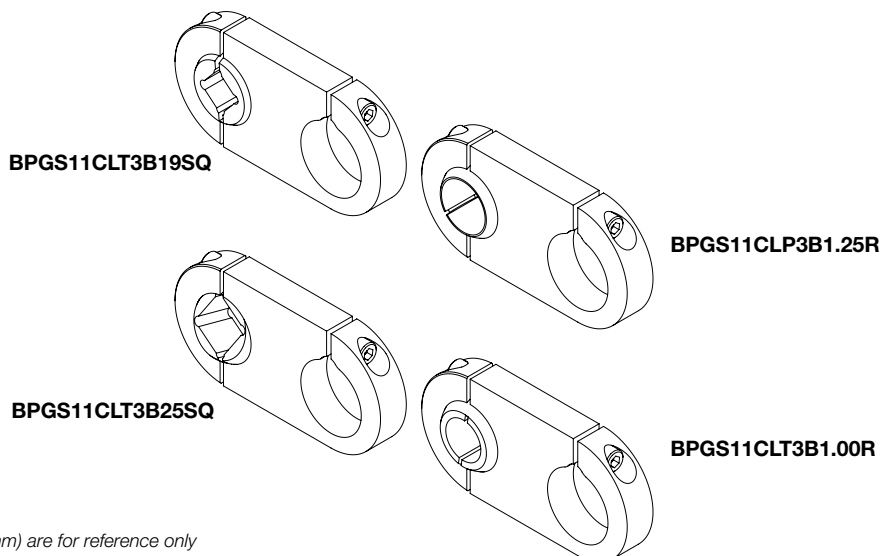
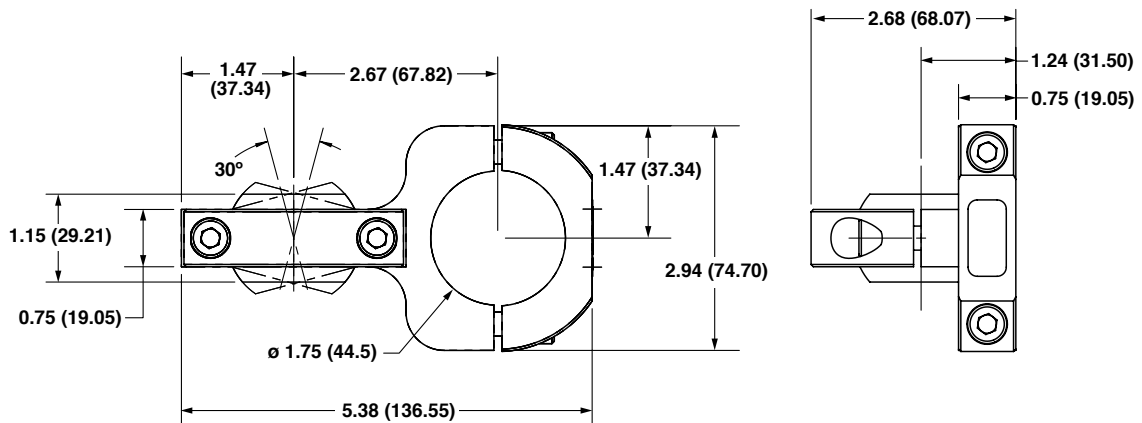
Part number	Description	Weight
BLLC2302R	1.75" Branch clamp to 90° rotated 25mm spherical clamp	1.11 lbs (0.502 kg)



90° rotated LLC2302R  
Branch Clamp

### Technical Data

Weight:  
1.11 lbs/502 g



Dimensions in inches (mm) are for reference only

## BPGS Gripper Valve - BSGV100, 102, 103

- Redirects air from the gripper "closed" air port to the gripper "open" air port
- "Vents" or shuts air off to a single gripper without turning air off the entire system
- Mounts in-line with grippers or rail receivers
- Easily release incorrectly gripped panels

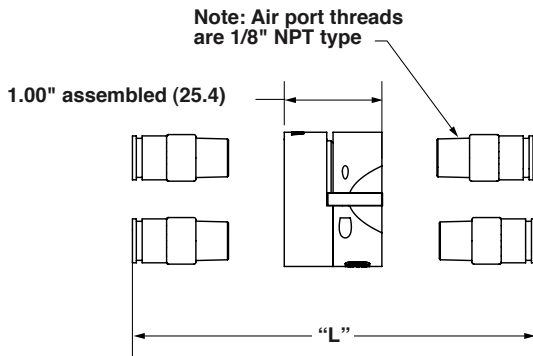


BSGV10X

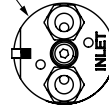
Air fitting	Code
None	0
1/4" push type	2
3/8" push type	3

## Technical Data

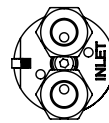
Part number	Air fitting	"L"	Weight
BSVG100	None		
BSVG102	1/4" push type	2.21 (56.1 mm)	1.32 grams
BSVG103	3/8" push type	2.76 (70.1 mm)	



ø 1.38 type (35.1)

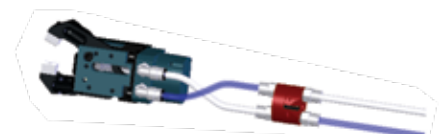
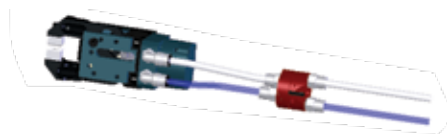
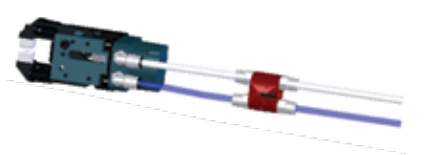


Shown with fitting for 1/4" hose



Shown with fitting for 3/8" hose

1.52 (38.6) max with 3/8" fitting



Dimensions in inches (mm) are for reference only



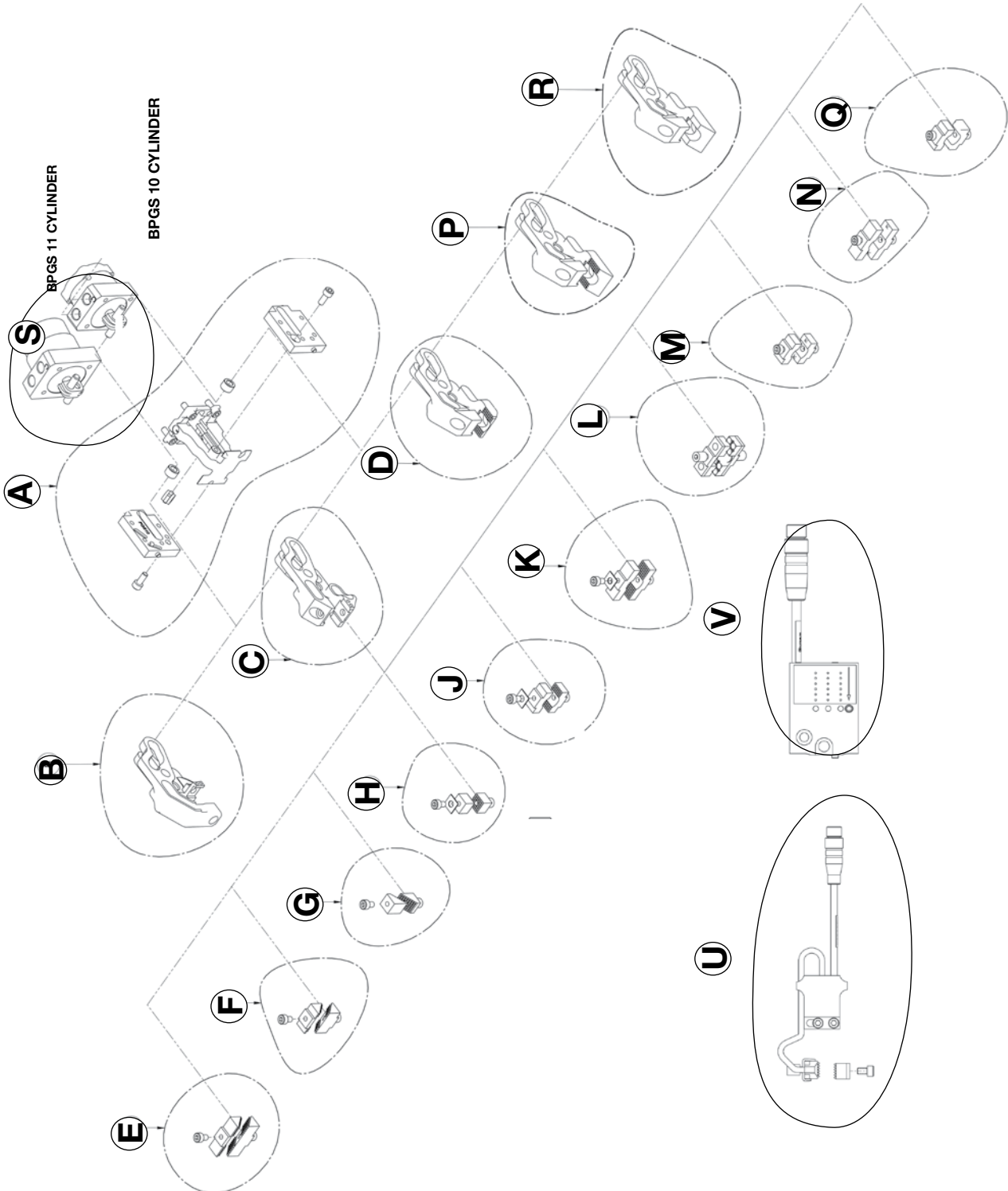
# Reconfigurable Kits

Bimba offers a wide variety of reconfigurable kits since our grippers take less than one minute to repair or reconfigure. Our grippers can be easily repaired by using a single wrench reducing downtime for your operations.



## BPGS Reconfigurable Kits

- The diagram below shows the corresponding ID# denoted in the tables within this section

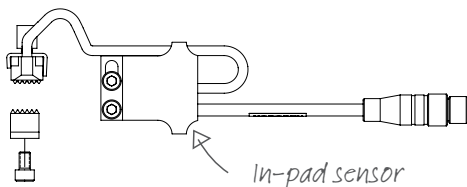


# How to Accessorize

## Sensors, Air Cylinders, and Air Fittings Kit

### In-Pad Sensor Kits

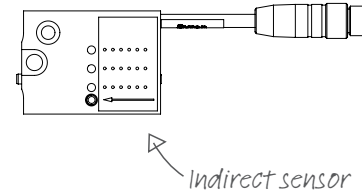
Part number	Output	Connector	Material thickness	Pad type
BSGS40034KS	2 Wire	Micro 4 pin 1 key	0.5-3.5 mm	Regular
BSGS40034KG	2 Wire	Micro 4 pin 1 key	2.01-5.0 mm	Regular
BSGS40021KS	2 Wire	Micro 3 pin 2 key	0.5-3.5 mm	Single point
BSGS40021KG	2 Wire	Micro 3 pin 2 key	2.01-5.0 mm	Single point
BSGS40020KS	2 Wire	Micro 3 pin 2 key	0.5-3.5 mm	Regular
BSGS40020KG	2 Wire	Micro 3 pin 2 Key	2.01-5.0 mm	Regular
BSGS40020PKS	2 Wire	Pico (Internal wire)	0.5-3.5 mm	Regular
BSGS40020PKG	2 Wire	Pico (Internal wire)	2.01-5.0 mm	Regular
BSGS40020KS-30	2 Wire	Micro 3 pin 2 Key	0.5-3.5 mm	30°
BSGS40020-S-KS	2 Wire	Micro 3 pin 2 Key	0.5-3.5 mm	Smooth (0°)
BSGS40020-S-KG	2 Wire	Micro 3 pin 2 Key	2.01-5.0 mm	Smooth (0°)
BSGS40020-30-S-KS	2 Wire	Micro 3 pin 2 Key	0.5-3.5 mm	Smooth (30°)
BSGS40020-30-S-KG	2 Wire	Micro 3 pin 2 Key	2.01-5.0 mm	Smooth (30°)
BSGS40034KS	2 Wire	Micro 4 pin 1 key	2.01-3.50 mm	Regualr
BSGS40034KC	2 Wire	Micro 4 pin 1 key	0.5-2.00 mm	Regular
BSGS40034KG	2 Wire	Micro 4 pin 1 key	3.51-5.0 mm	Regular
BSGS40034KO	2 Wire	Micro 4 pin 1 key	5.01-6.50 mm	Regular
BSGS40015KS	PNP	Micro 4 pin 1 key	0.5-3.5 mm	Regular
BSGS40015KG	PNP	Micro 4 pin 1 key	2.01-5.0 mm	Regular
BSGS40015PKS	PNP	Pico (Internal wire)	0.5-3.5 mm	Regular
BSGS40015PKG	PNP	Pico (Internal wire)	2.01-5.0 mm	Regular
BSGS40015KS-30	PNP	Micro 4 pin 1 key	0.5-3.5 mm	30°
BSGS40015KG-30	PNP	Micro 4 pin 1 key	2.01-5.0 mm	30°
BSGS40015PKS-30	PNP	Pico (Internal wire)	0.5-3.5 mm	30°
BSGS40015PKG-30	PNP	Pico (Internal wire)	2.01-5.0 mm	30°
BSGS40015-DPKS	PNP	Micro 4 pin 1 key	0.5-3.5 mm	Double point
BSGS40015-DPKG	PNP	Micro 4 pin 1 key	2.01-5.0 mm	Double point
BSGS40015P-DPKS	PNP	Pico (Internal wire)	0.5-3.5 mm	Double point
BSGS40015P-DPKG	PNP	Pico (Internal wire)	2.01-5.0 mm	Double point
BSGS40015-S-KS	PNP	Micro 4 pin 1 key	0.5-3.5 mm	Smooth (0°)
BSGS40015-S-KG	PNP	Micro 4 pin 1 key	2.01-5.0 mm	Smooth (0°)
BSGS40015-30-S-KS	PNP	Micro 4 pin 1 key	0.5-3.5 mm	Smooth (30°)
BSGS40015-30-S-KG	PNP	Micro 4 pin 1 key	2.01-5.0 mm	Smooth (30°)
BSGS40014KS	NPN	Micro 4 pin 1 key	0.5-3.5 mm	Regular
BSGS40014KG	NPN	Micro 4 Pin 1 key	2.01-5.0 mm	Regular
BSGS40014PKS	NPN	Pico (Internal wire)	0.5-3.5 mm	Regular
BSGS40014PKG	NPN	Pico (Internal wire)	2.01-5.0 mm	Regular
BSGS40014KS-30	NPN	Micro 4 pin 1 key	0.5-3.5 mm	30°
BSGS40014KG-30	NPN	Micro 4 pin 1 key	2.01-5.0 mm	30°
BSGS40014PKS-30	NPN	Pico (Internal wire)	0.5-3.5 mm	30°
BSGS40014PKG-30	NPN	Pico (Internal wire)	2.01-5.0 mm	30°
BSGS40014-S-KS	NPN	Micro 4 pin 1 key	0.5-3.5 mm	Smooth (0°)
BSGS40014-S-KG	NPN	Micro 4 pin 1 key	2.01-5.0 mm	Smooth (0°)
BSGS40014-30-S-KS	NPN	Micro 4 pin 1 key	0.5-3.5 mm	Smooth (30°)
BSGS40014-30-S-KG	NPN	Micro 4 pin 1 key	2.01-5.0 mm	Smooth (30°)



### Indirect Sensor Kits

Part number	Output	Connector	Sensor type
BSGS40040-K	NPN	Micro	Double blank
BSGS40040P4-K	NPN	Pico 4 pin (Internal wire)	Double blank
BSGS40041-K	PNP	Micro	Double blank
BSGS40041P4-K	PNP	Pico 4 pin (Internal wire)	Double blank
BSGG40042-K	NPN	Micro	Part present
BSGS40042P-K	NPN	Pico 3 pin (Internal wire)	Part present
BSGS40042F-K	NPN	Micro	Part present
BSGS40042FP-K	NPN	Pico 3 pin (Internal wire)	Part present
BSGS40043-K	PNP	Micro	Part present
BSGS40043P-K	PNP	Pico 3 pin (Internal wire)	Part present
BSGS40043F-K	PNP	Micro	Part present
BSGS40043FP-K	PNP	Micro	Part present
BSGS40034KC	2 Wire	Micro	Part present

Flange jaw



### Cylinders

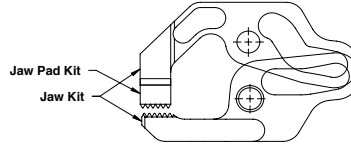
ID#	Gripper	Part number	Description	Color
S	BPGS10	10144	1/8" NPS air ports	Blue
		10144-01	1/8 Rc air ports	Black



## Chassis Kit and Jaw Kits for Regular, Flange, Shovel, and Chisel Grippers

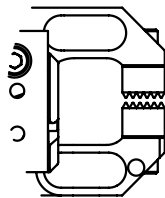
### Chassis Kit

ID#	Description	Part number	QTY
(A)	Front end kit	BPGS10FRNTENDKIT	1



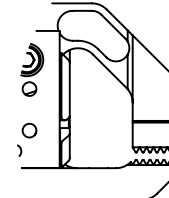
### Regular Jaw Kit

ID#	Description	Part number	Quantity	Material thickness	Jaw open angle
(C)	Symmetrical regular jaw kit (0.5-5.0)	BPGS10RSYMJAWKIT	1		70 X 70 45 X 45 22 X 22
(C)	0° Regular jaw kit (0.5-5.0)	BPGS10R0DJAWKIT	1	0.5-5.0mm	70 X 0 45 X 0 22 X 0
(C)	50% Regular jaw kit (0.5-5.0)	BPGS10R50JAWKIT	1		70 X 35 45 X 22 22 X 11



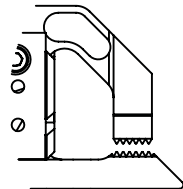
### Chisel with teeth C, D & E Jaw Kits

ID#	Description	Part number	Quantity	Material thickness	Jaw open angle
(D)	0° Chisel jaw kit (0.5-3.5)	BPGS10C0DJAWKIT	1	0.5-3.5 mm	70 X 0
(D)	0° Chisel jaw kit (3.51-6.5)	BPGS10D0DJAWKIT	1	3.51-6.5 mm	45 X 0
(D)	0° Chisel jaw kit (6.51-9.5)	BPGS10E0DJAWKIT	1	6.51-9.5 mm	22 X 0
(D)	14° Chisel jaw kit (0.5-3.5)	BPGS10C14DJAWKIT	1	0.5-3.5 mm	70 X 14
(D)	14° Chisel jaw kit (3.51-6.5)	BPGS10D14DJAWKIT	1	3.51-6.5 mm	45 X 14
(D)	14° Chisel jaw kit (6.51-9.5)	BPGS10E14DJAWKIT	1	6.51-9.5mm	22 X 14



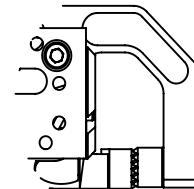
### Shovel with Teeth S, T, & U Jaw Kits Shovel without Teeth V, W, & Y jaw Kits

ID#	Description	Part number	Quantity	Material thickness	Jaw open angle
(P)	0° Shovel jaw kit (0.5-3.5)	BPGS10S0DJAWKIT	1	0.5-3.5 mm	
(P)	0° Shovel jaw kit (3.51-6.5)	BPGS10T0DJAWKIT	1	3.51-6.5 mm	
(P)	0° Shovel jaw kit (6.51-9.5)	BPGS10U0DJAWKIT	1	6.51-9.5 mm	70 X 0
(R)	0° Shovel jaw kit (0.5-3.5)	BPGS10V0DJAWKIT	1	0.5-3.5 mm	45 X 0
(R)	0° Shovel jaw kit (3.51-6.5)	BPGS10W0DJAWKIT	1	3.51-6.5 mm	22 X 0
(R)	0° Shovel jaw kit (6.51-9.5)	BPGS10Y0DJAWKIT	1	6.51-9.5 mm	



### Flange Jaw Kit

ID#	Description	Part number	Quantity	Material thickness	Jaw open angle
(B)	Flange jaw kit (0.5-5.0)	BPGS10FJAWKIT	1	0.5-5.0 mm	70 X 0 45 X 0 22 X 0



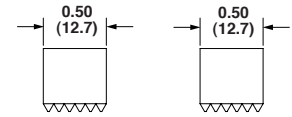
Dimensions in inches (mm) are for reference only

# How to Accessorize

## Chisel and Shovel Jaw Pad Kits

Chisel or Shovel Jaw Pads 0.5"  
(12.7 mm) Wide

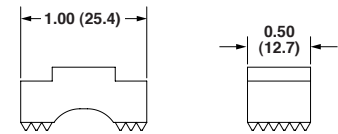
ID#	Part number	Material thickness when used with specified jaw Kit description	Material thickness when used with specified jaw		
			Black jaw	Silver jaw	Gold jaw
Ⓜ	BLKR1068SS1	1 Black pad with shim	0.50 - 2.0 mm	3.51 - 5.0 mm	6.51 - 8.0 mm
Ⓜ	BLKR1068SS2	1 Silver pad	2.01 - 3.5 mm	5.01 - 6.5 mm	8.01 - 9.5 mm



LKR1068SS1  
LKR1068SS2

Chisel or Shovel Jaw Pads 1.0"  
(25.4 mm) Wide

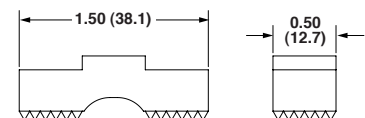
ID#	Part number	Material thickness when used with specified jaw Kit description	Material thickness when used with specified jaw		
			Black jaw	Silver jaw	Gold jaw
Ⓜ	BLKR1068MS1	1 Black pad with shim	0.50 - 2.0 mm	3.51 - 5.0 mm	6.51 - 8.0 mm
Ⓜ	BLKR1068MS2	1 Silver pad	2.01 - 3.5 mm	5.01 - 6.5 mm	8.01 - 9.5 mm



LKR1068MS1  
LKR1068MS2

Chisel or Shovel Jaw Pads 1.5"  
(38.1 mm) Wide

ID#	Part number	Material thickness when used with specified jaw Kit description	Material thickness when used with specified jaw		
			Black jaw	Silver jaw	Gold jaw
Ⓜ	BLKR1068DS1	1 Black pad with shim	0.50 - 2.0 mm	3.51 - 5.0 mm	6.51 - 8.0 mm
Ⓜ	BLKR1068DS2	1 Silver pad	2.01 - 3.5 mm	5.01 - 6.5 mm	8.01 - 9.5 mm



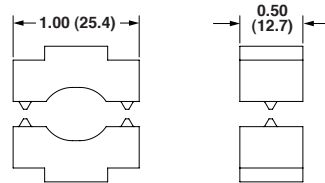
BLKR1068DS1  
BLKR1068DS2

NOTES: 1. Chisel and shovel jaw grippers only have upper jaw pads.  
2. Angled pads cannot be used with chisel or shovel jaw grippers.

## Regular and Flange Jaw Pad Kits

### Non-Angled Double Point Pads 1.0" (25.4 mm) Widths

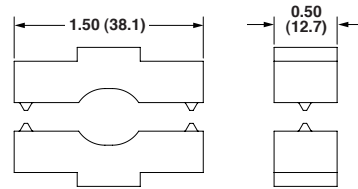
ID#	Part Number	Description
Ⓜ	BLKR1050MP1	Material thickness 0.5-2.0 mm
Ⓜ	BLKR1050MP2	Material thickness 2.01-3.5 mm
Ⓜ	BLKR1050MP3	Material thickness 3.51-5.0 mm



BLKR1050MP1  
BLKR1050MP2  
BLKR1050MP3

### Non-Angled Double Point Pads 1.5" (38.1 mm) Widths

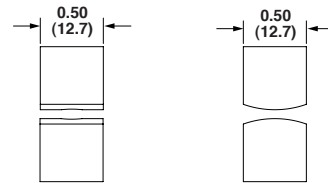
ID#	Part Number	Description
Ⓝ	BLKR1050DP1	Material thickness 0.5-2.0 mm
Ⓝ	BLKR1050DP2	Material thickness 2.01-3.5 mm
Ⓝ	BLKR1050DP3	Material thickness 3.51-5.0 mm



BLKR1050DP1  
BLKR1050DP2  
BLKR1050DP3

### Convex Pads 0.5" (12.7 mm) & 1.0" (25.4 mm) Widths

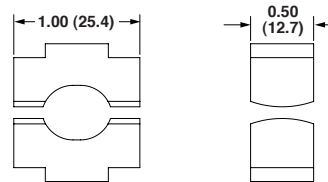
ID#	Part number	Description
Ⓞ	BLKR10501SC	Material thickness 0.5-2.0 mm
Ⓞ	BLKR10503SC	Material thickness 2.01-3.5 mm
Ⓞ	BLKR10504SC	Material thickness 3.51-5.0 mm



BLKR10501SC  
BLKR10503SC  
BLKR10504SC

### Convex 1.0" (25.4 mm) Widths

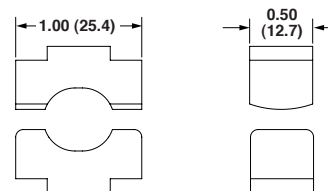
ID#	Part number	Description
Ⓞ	BLKR10501MC	Material thickness 0.5-2.0 mm
Ⓞ	BLKR10503MC	Material thickness 2.01-3.5 mm
Ⓞ	BLKR10504MC	Material thickness 3.51-5.0 mm



BLKR10501MC  
BLKR10503MC  
BLKR10504MC

### Convex- Smooth Pads 0.5" (12.7 mm)

ID#	Part number	Description
Ⓞ	BLKR10501MC-MS	Material thickness 0.5-2.0 mm
Ⓞ	BLKR10503MC-MS	Material thickness 2.01-3.5 mm
Ⓞ	BLKR10504MC-MS	Material thickness 3.51-5.0 mm



BLKR10501MC-MS  
BLKR10503MC-MS  
BLKR10504MC-MS

Dimensions in inches (mm) are for reference only

# How to Accessorize

## Regular or Flange Jaw Pad Kits

### Angled Double Pads 1.5" (38.1 mm) Wide

#### 15° angle

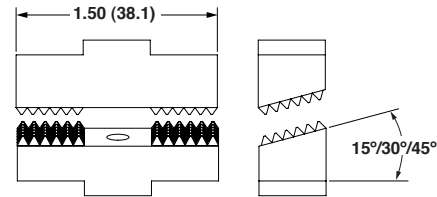
ID#	Part number	Description
Ⓔ	BLKR1050DS1-15	15° pad for material thickness 0.5-2.0 mm
Ⓔ	BLKR1050DS2-15	15° pad for material thickness 2.01-3.50 mm
Ⓔ	BLKR1050DS3-15	15° pad for material thickness 3.51-5.0 mm

#### 30° angle

Ⓔ	BLKR1050DS1-30	30° pad for material thickness 0.5-2.0 mm
Ⓔ	BLKR1050DS2-30	30° pad for material thickness 2.01-3.5 mm
Ⓔ	BLKR1050DS3-30	30° pad for material thickness 3.51-5.0 mm

#### 45° angle

Ⓔ	BLKR1050DS1-45	45° pad for material thickness 0.5-2.0 mm
Ⓔ	BLKR1050DS2-45	45° pad for material thickness 2.01-3.5 mm
Ⓔ	BLKR1050DS3-45	45° pad for material thickness 3.51-5.0 mm



BLKR1050DS1-15  
 BLKR1050DS2-15  
 BLKR1050DS3-15  
 BLKR1050DS1-30  
 BLKR1050DS2-30  
 BLKR1050DS3-30  
 BLKR1050DS1-45  
 BLKR1050DS2-45  
 BLKR1050DS3-45

### Angled Mid Pads 1.0" (25.4 mm) Wide

#### 15° angle

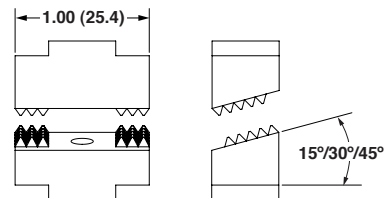
ID#	Part number	Description
Ⓕ	BLKR1050MS1-15	15° pad for material thickness 0.5-2.0 mm
Ⓕ	BLKR1050MS2-15	15° pad for material thickness 2.01-3.5 mm
Ⓕ	BLKR1050MS3-15	15° pad for material thickness 3.51-5.0 mm

#### 30° angle

Ⓕ	BLKR1050MS1-30	30° pad for material thickness 0.5-2.0 mm
Ⓕ	BLKR1050MS2-30	30° pad for material thickness 2.01-3.5 mm
Ⓕ	BLKR1050MS3-30	30° pad for material thickness 3.51-5.0 mm

#### 45° angle

Ⓕ	BLKR1050MS1-45	45° pad for material thickness 0.5-2.0 mm
Ⓕ	BLKR1050MS2-45	45° pad for material thickness 2.01-3.5 mm
Ⓕ	BLKR1050MS3-45	45° pad for material thickness 3.51-5.0 mm



BLKR1050MS1-15  
 BLKR1050MS2-15  
 BLKR1050MS3-15  
 BLKR1050MS1-30  
 BLKR1050MS2-30  
 BLKR1050MS3-30  
 BLKR1050MS1-45  
 BLKR1050MS2-45  
 BLKR1050MS3-45

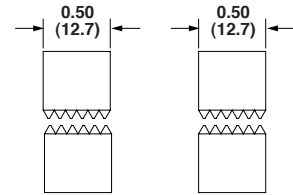
NOTE: 1. Angled pads cannot be used with chisel or shovel jaw grippers.

Dimensions in inches (mm) are for reference only

## Regular or Flange Jaw Pad Kits

### Non-Angled Single Pads 0.5" (12.7 mm) Wide

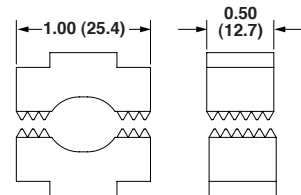
ID#	Part number	Description
Ⓜ	BLKR1050SS1	Material thickness 0.5-2.0 mm
Ⓜ	BLKR1050SS2	Material thickness 2.01-3.5 mm
Ⓜ	BLKR1050SS3	Material thickness 3.51-5.0 mm



BLKR1050SS1  
BLKR1050SS2  
BLKR1050SS3

### Non-angled Mid Pads 1.0" (25.4 mm) Wide

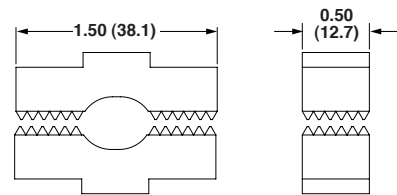
ID#	Part number	Description
Ⓜ	BLKR1050MS1	Material thickness 0.5-2.0 mm
Ⓜ	BLKR1050MS2	Material thickness 2.01-3.5 mm
Ⓜ	BLKR1050MS3	Material thickness 3.51-5.0 mm



BLKR1050MS1  
BLKR1050MS2  
BLKR1050MS3

### Non-Angled Double Pads 1.5" (38.1 mm) Wide

ID#	Part number	Description
Ⓜ	BLKR1050DS1	Material thickness 0.5-2.0 mm
Ⓜ	BLKR1050DS2	Material thickness 2.01-3.5 mm
Ⓜ	BLKR1050DS3	Material thickness 3.51-5.0 mm



BLKR1050DS1  
BLKR1050DS2  
BLKR1050DS3

NOTES: 1. Angled pads cannot be used with chisel or shovel jaw grippers.

### Angled Single Pads 0.5" (12.7 mm) Wide

#### 15° angle

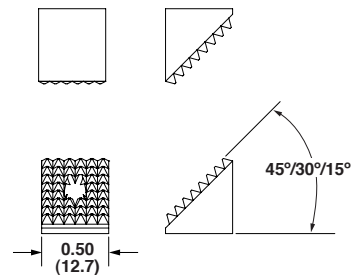
ID#	Part number	Description
Ⓜ	BLKR1050SS1-15	15° pad for material thickness 0.5-2.0 mm
Ⓜ	BLKR1050SS2-15	15° pad for material thickness 2.01-3.5 mm
Ⓜ	BLKR1050SS3-15	15° pad for material thickness 3.51-5.0 mm

#### 30° angle

Ⓜ	BLKR1050SS1-30	30° pad for material thickness 0.5-2.0 mm
Ⓜ	BLKR1050SS2-30	30° pad for material thickness 2.01-3.5 mm
Ⓜ	BLKR1050SS3-30	30° pad for material thickness 3.51-5.0 mm

#### 45° angle

Ⓜ	BLKR1050SS1-45	45° pad for material thickness 0.5-2.0 mm
Ⓜ	BLKR1050SS2-45	45° pad for material thickness 2.01-3.5 mm
Ⓜ	BLKR1050SS3-45	45° pad for material thickness 3.51-5.0 mm



BLKR1050SS1-15  
BLKR1050SS2-15  
BLKR1050SS3-15  
BLKR1050SS1-30  
BLKR1050SS2-30  
BLKR1050SS3-30  
BLKR1050SS1-45  
BLKR1050SS2-45  
BLKR1050SS3-45

Dimensions in inches (mm) are for reference only

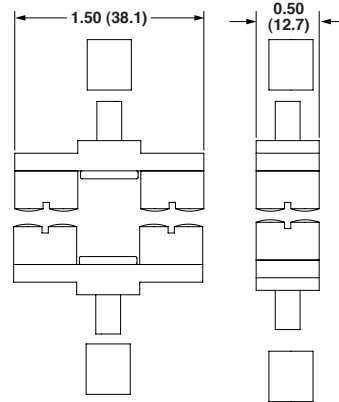
# How to Accessorize

## Regular and Flange Jaw Pad Kits

### Rubber Pads 1.5" (38.1 mm) Wide

ID#	Part number	Description
L	BLKR1050DR0	Material thickness 0.5-2.0 mm

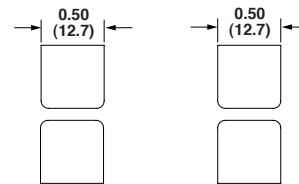
NOTES: In-pad sensor kits include the adequate gripper pad for each kit.



BLKR1050DR0

### Smooth Pads 0.5" (12.7 mm) Widths

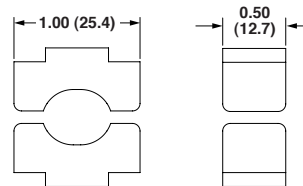
ID#	Part number	Description
①	BLKR10501SS	Material thickness 0.5-2.0 mm
②	BLKR10503SS	Material thickness 2.01-3.5 mm
③	BLKR10504SS	Material thickness 3.51-5.0 mm



BLKR10501SS  
BLKR10503SS  
BLKR10504SS

### Smooth Pads 1.0" (25.4 mm) Widths

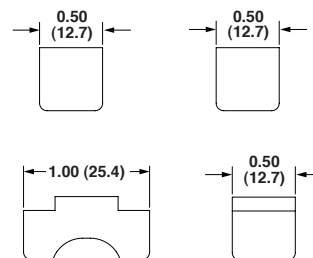
ID#	Part number	Description
①	BLKR10501MS	Material thickness 0.5-2.0 mm
②	BLKR10503MS	Material thickness 2.01-3.5 mm
③	BLKR10504MS	Material thickness 3.51-5.0 mm



BLKR10501MS  
BLKR10503MS  
BLKR10504MS

### Smooth Pads 0.5" (12.7 mm) & 1.0" (25.4 mm) Widths

ID#	Part number	Description
①	BLKR10681MS	Material thickness 0.5-2.0 mm, 3.51-5.0 mm, 6.51-8.0 mm
②	BLKR10682MS	Material thickness 2.01-3.5 mm, 5.01-6.5 mm, 8.01-9.5 mm



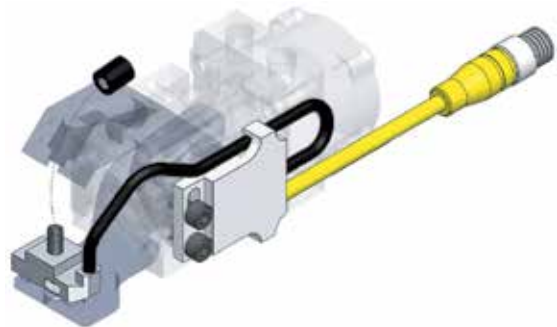
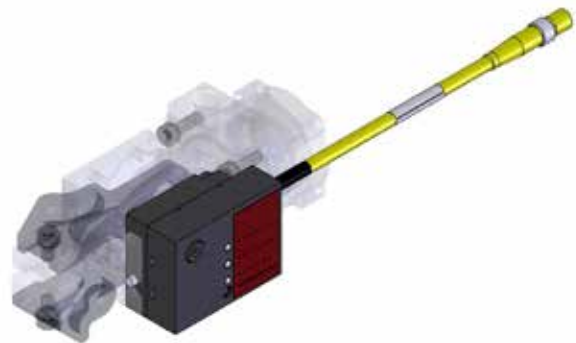
BLKR10681MS  
BLKR10682MS

Dimensions in inches (mm) are for reference only



# Sensors

Bimba offers extremely durable sensors that are designed for the BPGS gripper system in press room conditions. Indirect sensors can be used for either part present and/or double blank sensing. Our sensors are quick and easy push button calibration with in-pad sensors detecting steel or aluminum. We offer a wide material thickness range, with part present or double blank detection capacity up to 9.55mm blank thickness.



# How to Accessorize

## Quick Find

### Indirect Double Blank and Present Sensors

**BSGS40040, BSGS40041,  
BSGS40042, BSGS40043**  
M12 Pin/1 Key  
NPN/PNP Output



Page 73

**BSGS40040FP, BSGS40041P4,  
BSGS40042P, BSGS40043P,  
BSGS40042FP, BSGS40043FP**  
M8 Pin  
NPN/PNP Output



Page 74

### In-pad Part Present Sensor, M12 4 Pin/1 Key

**BSGS40014 and BSGS40015**  
0° Standard Pad,  
NPN/PNP Output  
M12 4 Pin/1 Key



Page 75

**BSGS40014-30 and  
BSGS40015-30**  
30° Standard Pad,  
NPN/PNP Output  
M12 Pin/1 Key



Page 76

**BSGS40014-DP and  
BSGS40015-DP**  
0° Dual Point Pad,  
NPN/PNP Output  
M12 4 Pin/1 Key



Page 77

**BSGS40034**  
0° Standard Pad,  
Two Wire Output  
M12 4 Pin/1 Key



Page 78

### In-pad Part Present Sensor, M12 3 Pin/2 Key 1/2-20

**BSGS40020**  
0° Standard Pad,  
Two Wire Output  
M12 3 Pin/2 Key 1/2-20



Page 79

**BSGS40020-30**  
30° Standard Pad,  
Two Wire Output  
M12 3 Pin/2 Key 1/2-20



Page 80

**BSGS40021**  
0° Dual Point Pad,  
Two wire output  
M12 3 Pin/2 Key 1/2-20



Page 81

### In-pad Part Present Sensor, M8 3 Pin

**BSGS40014P and  
BSGS40015P**  
0° Standard Pad,  
NPN/PNP Output  
M8 3 Pin



Page 82

**BSGS40014P-30 and  
BSGS40015-30**  
30° Standard Pad,  
NPN/PNP Output  
M8 3 Pin



Page 83

**BSGS40014-DP and  
BSGS40015-DP**  
0° Dual Point Pad,  
NPN/PNP Output  
M8 3 Pin



Page 84

**BSGS40020P**  
0° Standard Pad,  
Two Wire Output  
M8 3 Pin



Page 85



## Part Present / Double Blank Sensor with M12 Connector

- Easy calibration
- Abrasion and impact resistant
- Impervious to contamination from coolants and oils
- LED's for visual feedback
- Interface directly to programmable controllers



### Technical Data

**Power/sensor connector:**  
4-Pin 12 mm (micro type) molded connector

**Supply voltage range:**  
10 VDC to 30 VDC

**Maximum continuous load current:**  
100mA

**Operating temperature range:**  
0°C to +60°C

**Response time:**  
50ms max.

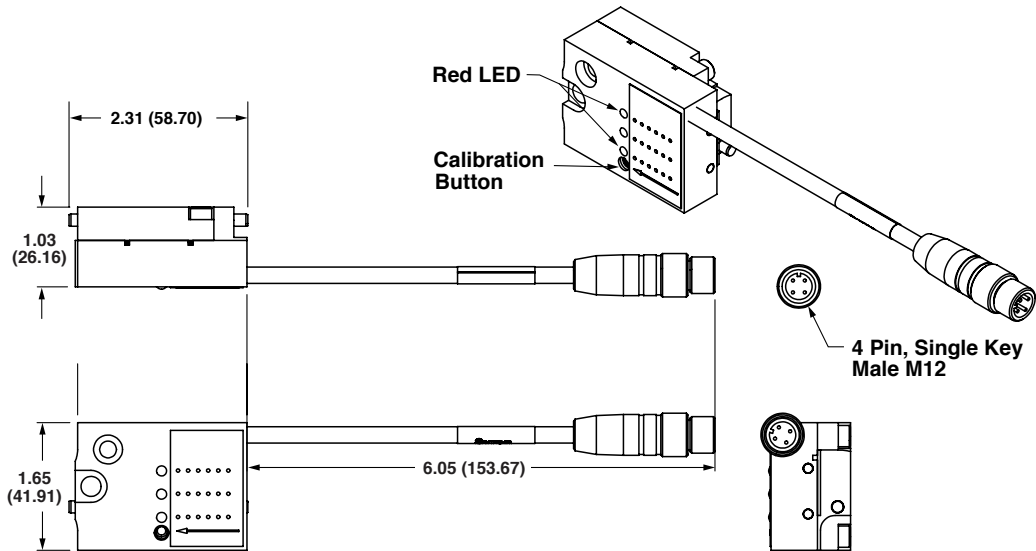
**Part present indicator lights:**  
Red

**Double blank indicator lights:**  
Red - Blinking

**Short circuit protection:**  
Yes

**Overload protection:**  
Yes

**Weight:**  
0.31 lbs (140 g)



### Ordering Information

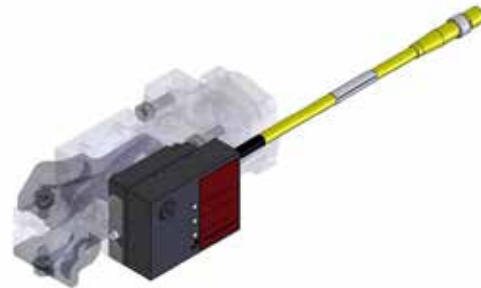
Part number	Sensor type	Switch type
BSGS40040-K	Double blank	NPN (Current sinking)
BSGS40041-K	Double blank	PNP (Current sourcing)
BSGS40042-K	Part present	NPN (Current sinking)
BSGS40043-K	Part present	PNP (Current sourcing)
BSGS40042F-K	Part present flange	NPN (Current sinking)
BSGS40043F-K	Part present flange	PNP (Current sourcing)

*Dimensions in inches (mm) are for reference only*

# How to Accessorize

## Part Present / Double Blank Sensor with M8 Connector

- Easy calibration
- Abrasion and impact resistant
- Impervious to contamination from coolants and oil
- LED's for visual feedback
- Interface directly to programmable controllers
- Compatible with IMI Norgren internal electrics system



### Technical Data

**Power/sensor connector:**  
4-Pin 8 mm (Pico type) molded connector

**Supply voltage range:**  
10 VDC to 30 VDC

**Maximum continuous load current:**  
100mA

**Operating temperature range:**  
0°C to +60°C

**Response time:**  
50ms max.

**Part present indicator lights:**  
Red

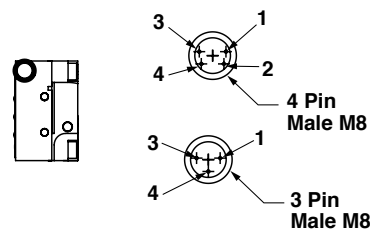
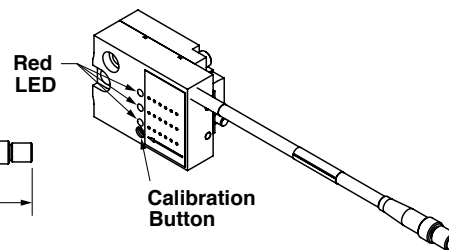
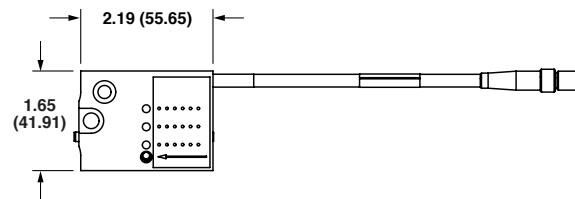
**Double blank indicator lights:**  
Red-Blinking

**Short circuit protection:**  
Yes

**Overload protection:**  
Current limits at 325mA typ.

**Reverse polarity protection:**  
Up to 36 VDC

**Weight:**  
0.31 lbs (140 g)



### Ordering Information

Part number	# of Pins	Sensor Type	Switch Type
BSGS40040FP4	4 pins	Double Blank Flange	NPN (Current Sinking)
BSGS40041FP4	4 pins	Double Blank Flange	PNP (Current Sourcing)
BSGS40040P4-K	4 pins	Double Blank	NPN (Current Sinking)
BSGS40041P4-K	4 pins	Double Blank	PNP (Current Sourcing)
BSGS40042P-K	3 pins	Part Present	NPN (Current Sinking)
BSGS40043P-K	3 pins	Part Present	PNP (Current Sourcing)
BSGS40042FP-K	3 pins	Part Present Flange	NPN (Current Sinking)
BSGS40043FP-K	3 pins	Part Present Flange	PNP (Current Sourcing)

Dimensions in inches (mm) are for reference only

## In-Pad Part Present Sensor, M12 4 PIN/1 Key 0° Standard Pad, NPN/PNP Outlet

- Abrasion and impact resistant
- Eliminates sensor position adjustments
- LED for part present status of sensor
- Interface directly to PLC
- Impervious to coolants and oils



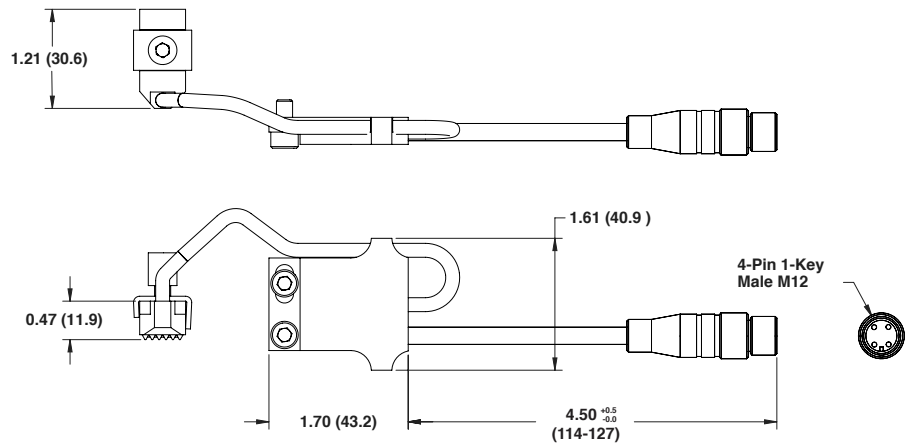
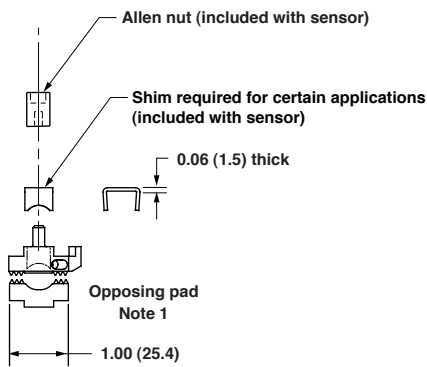
### Technical Data

**Supply voltage range:**  
10 VDC (min) to 30 VDC (max)  
**Maximum continuous load current:**  
200 mA  
**Operating temperature range:**  
0°C (min) to 60°C (max)  
**Sensing range:**  
1.2 mm above gripper pad

**Response time:**  
25ms turn-on time, 60ms turn-off time  
**Target material:**  
Steel and aluminum  
**Indicator light:**  
RED: On when target is detected;  
360° visibility

**Short circuit protection:**  
Automatically resets when short is removed  
**Overload protection:**  
Current limits at 325 mA typ.  
**Reverse polarity protection:**  
Up to 36 volts DC

**Weight:**  
0.15 lbs (68 g)



### Ordering Information

Part number (note 1)	Description	Sensor type	Material thickness (note 2)
BSGS40014	Sensor	NPN	Various
BSGS40014KS	Sensor with opposing pad (Kit)	NPN	0.50-3.50 mm
BSGS40014KG	Sensor with opposing pad (Kit)	NPN	2.01-5.00 mm
BSGS40015	Sensor	PNP	Various
BSGS40015KS	Sensor with opposing pad (Kit)	PNP	0.50-3.50 mm
BSGS40015KG	Sensor with opposing pad (Kit)	PNP	2.01-5.00 mm

Note 1 - The standard sensor part number (without a KS or KG suffix) can be used with a chisel jaw or flange jaw gripper, or with a regular jaw gripper already fitted with an in-pad sensor. For new installation of an in-pad sensor on a regular jaw gripper, select the part numbers with a KS or KG suffix to include the opposing pad in your kit.

Note 2 - Sensor must be ordered based on thickness of the material being handled. Pad thickness changes to ensure full jaw movement and cam lock action of gripper actuator.

#### Spare parts

B07750 - allen nut  
B07769 - shim

Dimensions in inches (mm) are for reference only

# How to Accessorize

## In-Pad Part Present Sensor, M12 4 Pin/1 Key 30° Standard Pad, NPN/PNP Outlet

- Abrasion and impact resistant
- Eliminates sensor position adjustments
- Interface directly to PLC
- Impervious to coolants and oils



### Technical Data

**Supply voltage range:**  
10 VDC (min) to 30 VDC (max)

**Maximum continuous load current:**  
200 mA

**Operating temperature range:**  
0°C (min) to 60°C (max)

**Sensing range:**  
1.2 mm above gripper pad

**Response time:**  
25 ms turn-on time, 60 ms turn-off time

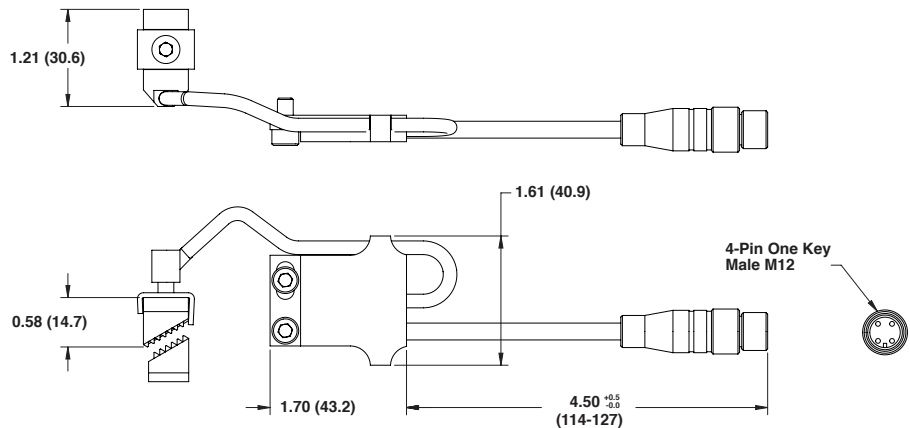
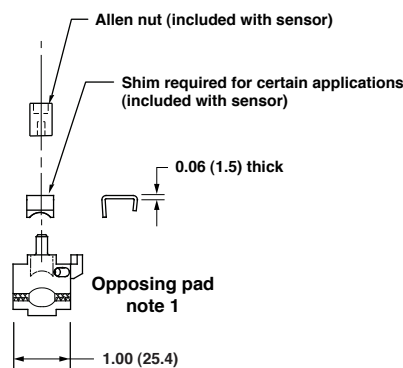
**Target material:**  
Steel and aluminum

**Short circuit protection:**  
Automatically resets when short is removed

**Overload protection:**  
Current limits at 325 mA typ.

**Reverse polarity protection:**  
Up to 36 volts DC

**Weight:**  
0.15 lbs (68 g)



### Ordering Information

Part number (note 1)	Description	NPN/PNP	Material thickness (note 2)
BSGS40014-30	Sensor	NPN	Various
BSGS40014KS-30	Sensor with opposing pad (Kit)	NPN	0.50-3.50 mm
BSGS40014KG-30	Sensor with opposing pad (Kit)	NPN	2.01-5.00 mm
BSGS40015-30	Sensor	PNP	Various
BSGS40015KS-30	Sensor with opposing pad (Kit)	PNP	0.50-3.50 mm
BSGS40015KG-30	Sensor with opposing pad (Kit)	PNP	2.01-5.00 mm

Note 1 - The standard sensor part number (without a KS or KG suffix) can be used with a chisel jaw or flange jaw gripper, or with a regular jaw gripper already fitted with an in-pad sensor. For new installation of an in-pad sensor on a regular jaw gripper, select the part numbers with a KS or KG suffix to include the opposing pad in your kit.

Note 2 - Sensor must be ordered based on thickness of the material being handled. Pad thickness changes to ensure full jaw movement and cam lock action of gripper actuator.

#### Spare parts

B07750 - allen nut  
B07769 - shim

Dimensions in inches (mm) are for reference only

## In-Pad Part Present Sensor, M12 4 Pin/1 Key 0° Dual Point Pad, NPN/PNP Outlet

- Abrasion and impact resistant
- Eliminates sensor position adjustments
- Ideal for coated panels
- LED for part present status of sensor
- Interface directly to PLC
- Impervious to coolants and oils
- May be used with regular jaw grippers, PGS10R and PGS10R



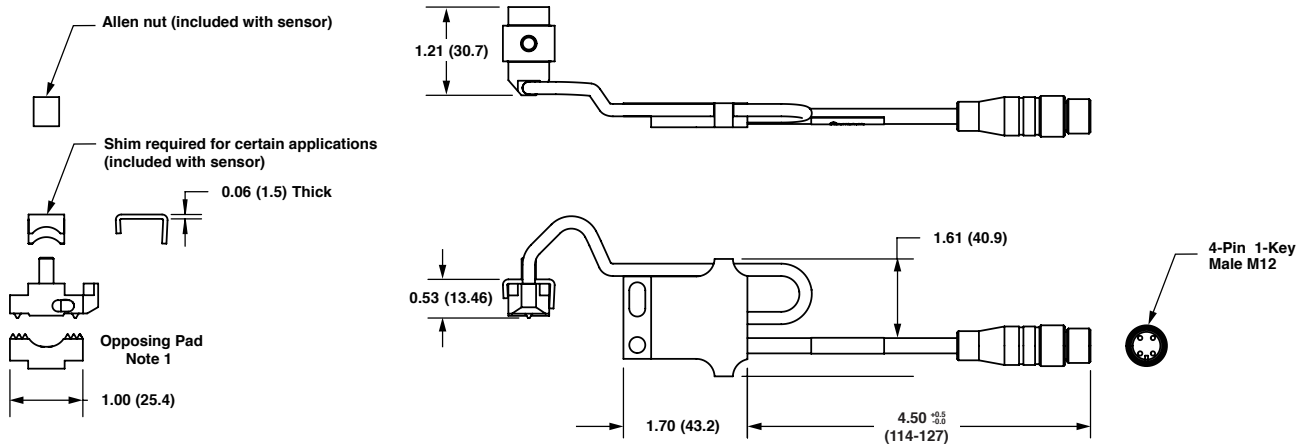
### Technical Data

**Supply voltage range:**  
10 VDC (min) to 30 VDC (max)  
**Maximum continuous load current:**  
200 mA  
**Operating temperature range:**  
0°C (min) to 60°C (max)  
**Sensing range:**  
1.2 mm above gripper pad

**Response time:**  
25 ms turn-on time, 60 ms turn-off time  
**Target material:**  
Steel and Aluminum  
**Indicator light:**  
RED: On when target is detected: 360° visibility

**Short circuit protection:**  
Automatically resets when short is removed  
**Overload protection:**  
Current limits at 325 mA typ.  
**Reverse polarity protection:**  
Up to 36 volts DC

**Weight:**  
0.15 lbs (68 g)



### Ordering Information

Part number (note 1)	Description	NPN/PNP	Material thickness (Note 2)
BSGS40014-DP	Sensor	NPN	Various
BSGS40014-DPKS	Sensor with opposing pad (silver)	NPN	0.50-3.50 mm
BSGS40014-DPKG	Sensor with opposing pad (gold)	NPN	2.01-5.00 mm
BSGS40015-DP	Sensor	PNP	Various
BSGS40015-DPKS	Sensor with opposing pad (silver)	PNP	0.50-3.50 mm
BSGS40015-DPKG	Sensor with opposing pad (gold)	PNP	2.01-5.00 mm

Note 1 - Order sensor part number shown above if sensor is being used with a chisel or flange jaw gripper or is a replacement sensor for a regular jaw gripper already fitted with an in-pad sensor. For new installation in regular jaw gripper, add KS or KG at the end of the part number for a kit containing the opposing pad.

Note 2 - Sensor must be ordered based on thickness of the material being handled. Pad thickness changes to insure full jaw movement and cam lock action of gripper actuator.

#### Spare parts

B07750 - allen nut  
B07769 - shim

Dimensions in inches (mm) are for reference only

# How to Accessorize

## In-Pad Part Present Sensor, M12 4 Pin/1 Key 0° Standard Pad, Two Wire Output

- Abrasion and impact resistant
- Eliminates sensor position adjustments
- Interface directly to PLC
- Impervious to coolants and oils



### Technical Data

**Power/sensor connector:**  
3-pin 8 mm (pico type) male connector

**Supply voltage range:**  
24 VDC

**Maximum off-state leakage current:**  
1.3mA @ 24 VDC

**Maximum continuous load current:**  
40mA

**Operating temperature range:**  
0°C (min) to 60°C (max)

**Sensing range:**  
1.2 mm above gripper pad

**Response time:**  
25ms turn-on time, 60ms turn-off time

**Target material:**  
Steel and aluminum

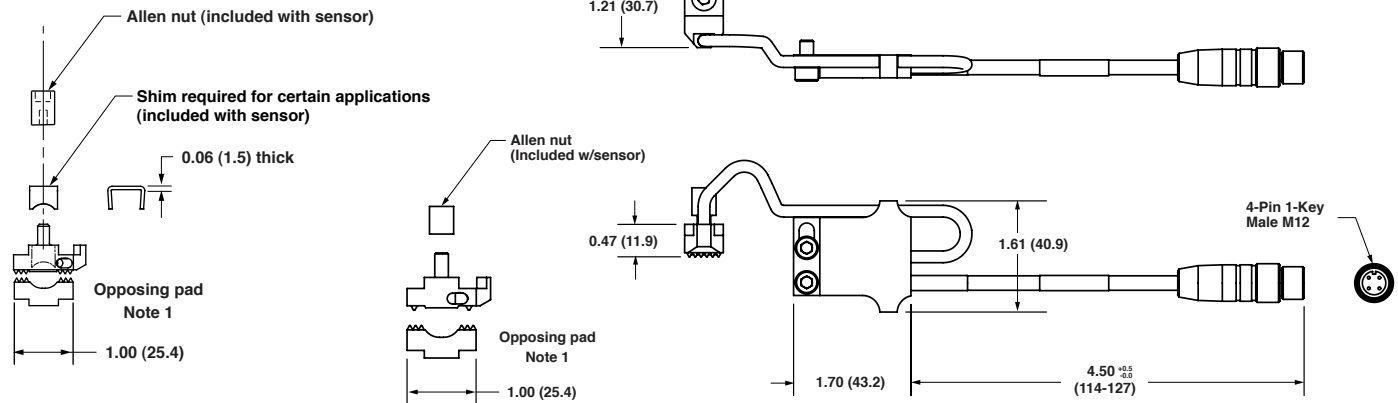
**Indicator light:**  
RED: On when target is detected; 360° visibility

**Short circuit protection:**  
Yes: Automatically resets when short is removed

**Overload protection:**  
Yes

**On-state voltage drop:**  
8.5 V

**Weight:**  
0.15 lbs (68 g)



### Ordering Information

Part number (note 1)	Description	Material thickness (note 2)
BSGS40034	Sensor	Various
BSGS40034KC	Sensor with opposing pad (copper)	0.40 - 2.00 mm
BSGS40034KS	Sensor with opposing pad (silver)	2.01 - 3.50 mm
BSGS40034KG	Sensor with opposing pad (gold)	3.51 - 5.00 mm
BSGS40034KO	Sensor with opposing pad (olive)	5.01 - 6.50 mm

Note 1 - The standard sensor part number (without a KS or KG suffix) can be used with a chisel jaw or flange jaw gripper, or with a regular jaw gripper already fitted with an in-pad sensor. For new installation of an in-pad sensor on a regular jaw gripper, select the part numbers with a KS or KG suffix to include the opposing pad in your kit.

Note 2 - Sensor must be ordered based on thickness of the material being handled. Pad thickness changes to ensure full jaw movement and cam lock action of gripper actuator.

#### Spare parts

B07750 - allen nut  
B07769 - shim

Dimensions in inches (mm) are for reference only

## In-Pad Part Present Sensor, M12 3 Pin/2 Key 1/2-20 0° Standard Pad, Two Wire Output

- Abrasion and impact resistant
- Eliminates sensor position adjustments
- Interface directly to PLC
- Impervious to coolants and oils



### Technical Data

**Power/sensor connector:**

3-pin 1/2-20unf (micro type), two key male connector

**Supply voltage range:**

24 V AC/DC to 140 V AC/DC

**Maximum off-state leakage current:**

1.3mA @ 120V

**Maximum continuous load current:**

40mA

**Operating temperature range:**

0°C (min) to 60°C (max)

**Sensing range:**

1.2mm above gripper pad

**Response time:**

25ms turn-on time, 25ms turn-off time.

**Target material:**

Steel and aluminum

**Indicator light:**

RED: On when target is detected, 360° visibility

**Short circuit protection:**

Yes: Automatically resets when short is removed

**Overload protection:**

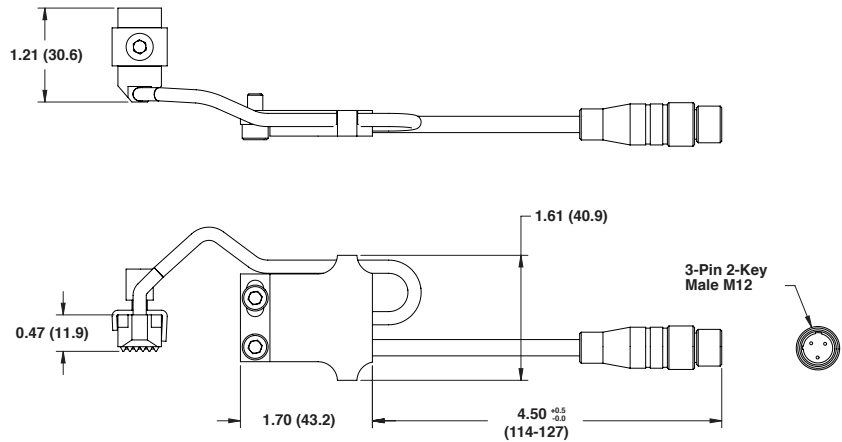
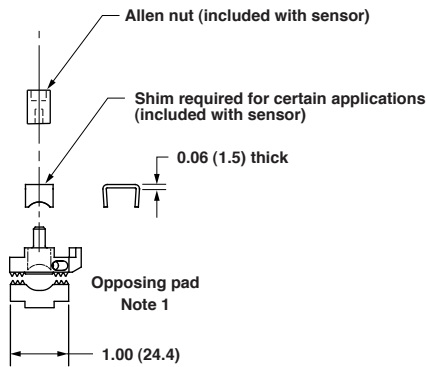
Yes

**On-state voltage drop:**

8.5 V

**Weight:**

0.15 lbs (68 g)



### Ordering Information

Part number (note 1)	Description	Material thickness (note 2)
BSGS40020	Sensor	Various
BSGS40020KS	Sensor with opposing pad	0.50-3.50 mm
BSGS40020KG	Sensor with opposing pad	2.01-5.00 mm

Note 1 - The standard sensor part number (without a KS or KG suffix) can be used with a chisel jaw or flange jaw gripper, or with a regular jaw gripper already fitted with an in-pad sensor. For new installation of an in-pad sensor on a regular jaw gripper, select the part numbers with a KS or KG suffix to include the opposing pad in your kit.

Note 2 - Sensor must be ordered based on thickness of the material being handled. Pad thickness changes to ensure full jaw movement and cam lock action of gripper actuator.

**Spare parts**

B07750 - allen nut

B07769 - shim

Dimensions in inches (mm) are for reference only

# How to Accessorize

## In-Pad Part Present Sensor, M12 3 Pin/2 Key 1/2-20 30° Standard Pad, Two Wire Output

- Abrasion and impact resistant
- Eliminates sensor position adjustments
- LED for on/off status of sensor
- Interface directly to PLC
- Impervious to coolants and oils



### Technical Data

#### Power/sensor connector:

3-pin 1/2-20unf (micro type), two key male connector

#### Supply voltage range:

24 V AC/DC to 140 V AC/DC

#### Maximum off-state leakage current:

1.3mA @ 120V

#### Maximum continuous load current:

40mA

#### Operating temperature range:

0°C (min) to 60°C (max)

#### Sensing range:

1.2 mm above gripper pad

#### Response time:

25ms turn-on time, 25ms turn-off time

#### Target material:

Steel and aluminum

#### Indicator light:

RED: On when target is detected; 360° visibility

#### Short circuit protection:

Yes: Automatically resets when short is removed

#### Overload protection:

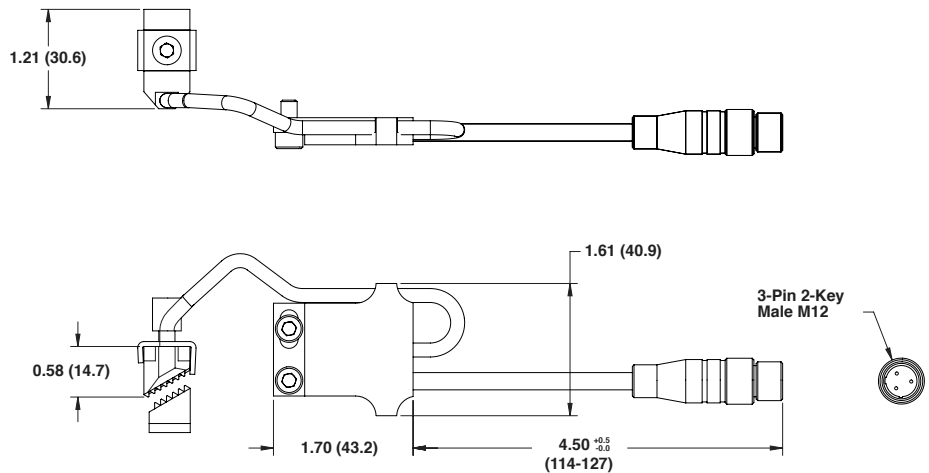
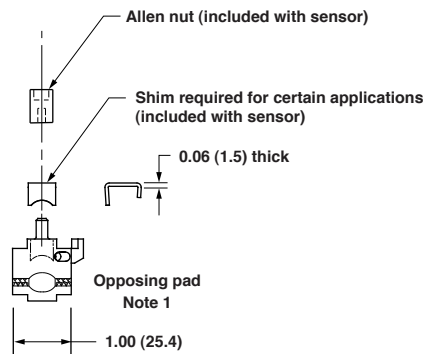
Yes

#### On-state voltage drop:

8.5 V

#### Weight:

0.15 lbs (70 g)



### Ordering Information

Part number (note 1)	Description	Material thickness (note 2)
BSGS40020-30	Sensor	Various
BSGS40020KS-30	Sensor with opposing pad	0.50-3.50 mm
BSGS40020KG-30	Sensor with opposing pad	2.01-5.00 mm

Note 1 - The standard sensor part number (without a KS or KG suffix) can be used with a chisel jaw or flange jaw gripper, or with a regular jaw gripper already fitted with an in-pad sensor. For new installation of an in-pad sensor on a regular jaw gripper, select the part numbers with a KS or KG suffix to include the opposing pad in your kit.

Note 2 - Sensor must be ordered based on thickness of the material being handled. Pad thickness changes to ensure full jaw movement and cam lock action of gripper actuator.

#### Spare parts

B07750 - allen nut  
B07769 - shim

Dimensions in inches (mm) are for reference only



## In-Pad Part Present Sensor, M12 3 Pin/2 Key 1/2-20 0° Dual Point Pad, Two Wire Output

- Abrasion and impact resistant
- Eliminates sensor position adjustments
- For use with coated panels
- LED for on/off status of sensor
- Interface directly to PLC
- Impervious to coolants and oils
- May be used with regular jaw grippers, PGS10R and PGS10L



### Technical Data

**Power/sensor connector:**

3-pin 1/2-20unf (micro type), two key male connector

**Supply voltage range:**

24 V AC/DC to 140 V AC/DC

**Maximum off-state leakage current:**

1.3mA @ 120 V

**Maximum continuous load current:**

40mA

**Operating temperature range:**

0°C (min) to 60°C (max)

**Sensing range:**

1.2 mm above gripper pad

**Response time:**

25ms turn-on time, 25ms turn-off time.

**Target material:**

Steel and aluminum

**Indicator light:**

RED: On when target is detected; 360° visibility

**Short circuit protection:**

Yes: Automatically resets when short is removed

**Overload protection:**

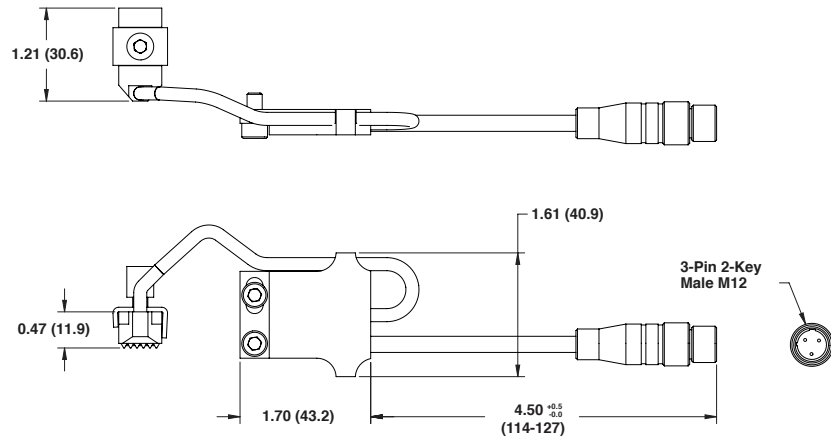
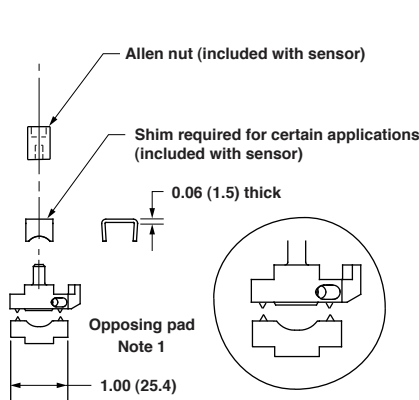
Yes

**On-state voltage drop:**

8.5 V

**Weight:**

0.15 lbs (70 g)



### Ordering Information

Part number (note 1)	Description	Material thickness (note 2)
BSGS40021	Sensor	Various
BSGS40021KS	Sensor with opposing pad (Kit)	0.50-3.50 mm
BSGS40021KG	Sensor with opposing pad (Kit)	2.01-5.00 mm

Note 1 - The standard sensor part number (without a KS or KG suffix) can be used with a chisel jaw or flange jaw gripper, or with a regular jaw gripper already fitted with an in-pad sensor. For new installation of an in-pad sensor on a regular jaw gripper, select the part numbers with a KS or KG suffix to include the opposing pad in your kit.

Note 2 - Sensor must be ordered based on thickness of the material being handled. Pad thickness changes to ensure full jaw movement and cam lock action of gripper actuator.

**Spare parts**

- B07750 - allen nut
- B07769 - shim

Dimensions in inches (mm) are for reference only

# How to Accessorize

## In-Pad Part Present Sensor, M8 3 Pin 0° Standard Pad, NPN/PNP Output

- Abrasion and impact resistant
- Eliminates sensor position adjustments
- Interface directly to PLC
- Impervious to coolants and oils



### Technical Data

**Supply voltage range:**  
10 VDC (min) to 30 VDC (max)

**Maximum continuous load current:**  
200 mA

**Operating temperature range:**  
0°C (min) to 60°C (max)

**Sensing range:**  
1.2 mm above gripper pad

**Response time:**  
25 ms turn-on time, 60 ms turn-off time

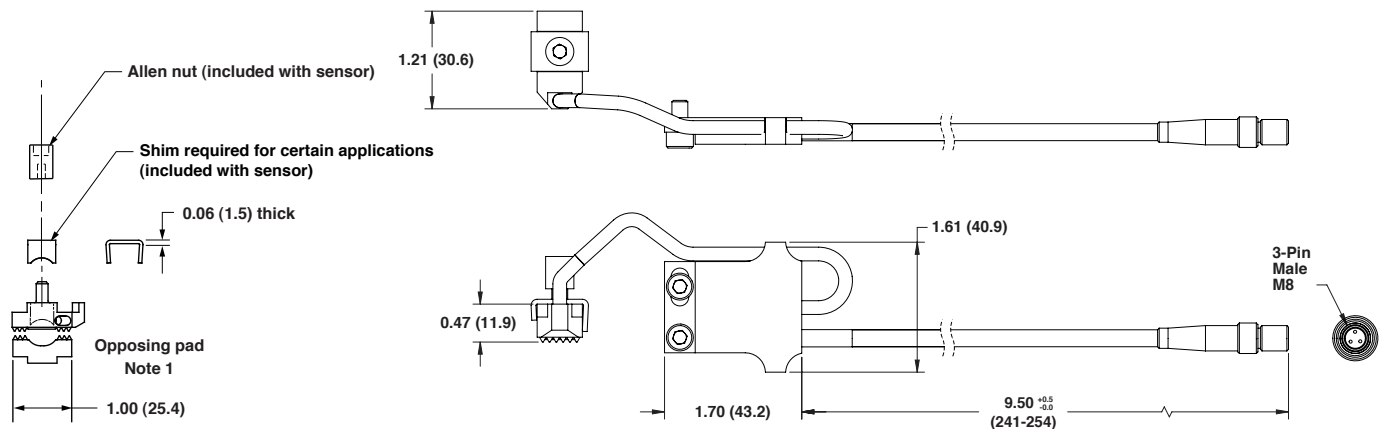
**Target material:**  
Steel and aluminum

**Short circuit protection:**  
Automatically resets when short is removed

**Overload protection:**  
Current limits at 325 mA typ.

**Reverse polarity protection:**  
Up to 36 volts DC

**Weight:**  
0.15 lbs (68 g)



### Ordering Information

Part number (note 1)	Description	NPN/PNP	Material thickness (note 2)
BSGS40014P	Sensor	NPN	Various
BSGS40014PKS	Sensor with opposing pad (Kit)	NPN	0.50-3.50 mm
BSGS40014PKG	Sensor with opposing pad (Kit)	NPN	2.01-5.00 mm
BSGS40015P	Sensor	PNP	Various
BSGS40015PKS	Sensor with opposing pad (Kit)	PNP	0.50-3.50 mm
BSGS40015PKG	Sensor with opposing pad (Kit)	PNP	2.01-5.00 mm

Note 1 - The standard sensor part number (without a KS or KG suffix) can be used with a chisel jaw or flange jaw gripper, or with a regular jaw gripper already fitted with an in-pad sensor. For new installation of an in-pad sensor on a regular jaw gripper, select the part numbers with a KS or KG suffix to include the opposing pad in your kit.

Note 2 - Sensor must be ordered based on thickness of the material being handled. Pad thickness changes to ensure full jaw movement and cam lock action of gripper actuator.

#### Spare parts

- B07750 - allen nut
- B07769 - shim

Dimensions in inches (mm) are for reference only

## In-Pad Part Present Sensor, M8 3 Pin 30° Standard Pad, NPN/PNP Output

- Abrasion and impact resistant
- Eliminates sensor position adjustments
- Interface directly to PLC
- Impervious to coolants and oils



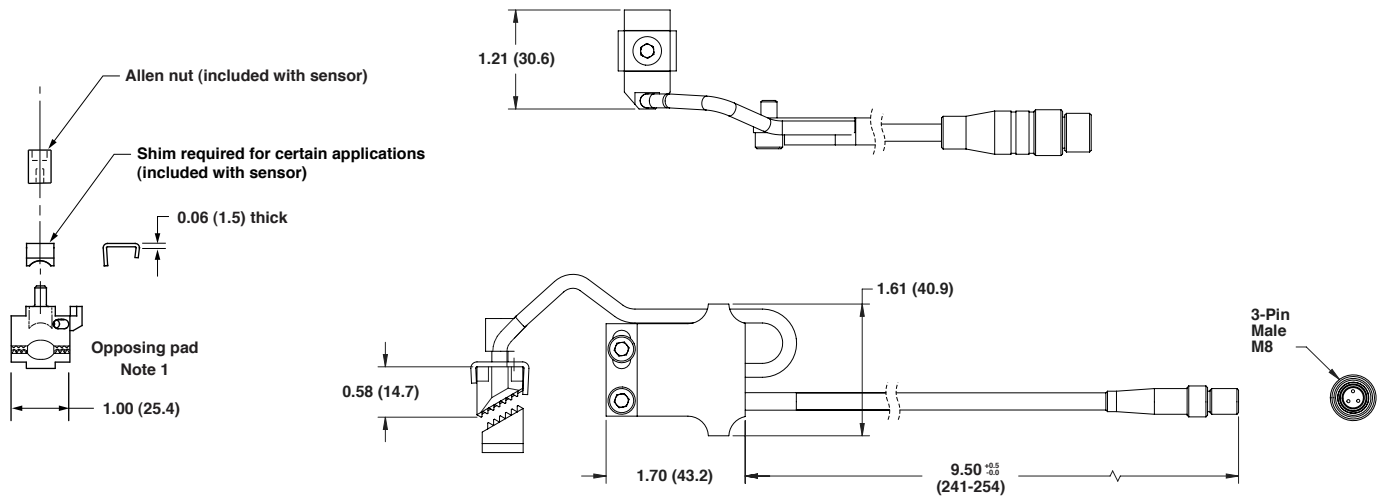
### Technical Data

**Supply voltage range:**  
10 VDC (min) to 30 VDC (max)  
**Maximum continuous load current:**  
200 mA  
**Operating temperature range:**  
0°C (min) to 60°C (max)

**Sensing range:**  
1.2 mm above gripper pad  
**Response time:**  
25 ms turn-on time, 60 ms turn-off time  
**Target material:**  
Steel and aluminum

**Short circuit protection:**  
Automatically resets when short is removed  
**Overload protection:**  
Current limits at 325 mA typ.  
**Reverse polarity protection:**  
Up to 36 volts DC

**Weight:**  
0.15 lbs (68 g)



### Ordering Information

Part number (note 1)	Description	NPN/PNP	Material thickness (Note 2)
BSGS40014P-30	Sensor	NPN	Various
BSGS40014PKS-30	Sensor with opposing pad	NPN	0.50-3.50 mm
BSGS40014PKG-30	Sensor with opposing pad	NPN	2.01-5.00 mm
BSGS40015P-30	Sensor	PNP	Various
BSGS40015PKS-30	Sensor with opposing pad	PNP	0.50-3.50 mm
BSGS40015PKG-30	Sensor with opposing pad	PNP	2.01-5.00 mm

Note 1 - Order sensor part number shown above if the sensor is a replacement sensor for a regular jaw gripper already fitted with an angled in-pad sensor. For new installation in regular jaw gripper, add KS or KG at the end of the part number for a kit containing the opposing pad. Angle of opposing pad must match angle of sensor.

Note 2 - Sensor must be ordered based on thickness of the material being handled. Pad thickness changes to insure full jaw movement and cam lock action of gripper actuator.

#### Spare parts

B07750 - allen nut  
B07769 - shim

Dimensions in inches (mm) are for reference only

# How to Accessorize

## In-Pad Part Present Sensor, M8 3 Pin 0° Dual Point Pad, NPN/PNP Output

- Abrasion and impact resistant
- Eliminates sensor position adjustments
- For use with coated panels
- LED for on/off status of sensor
- Interface directly to PLC
- Impervious to coolants and oils
- May be used with regular jaw grippers, PGS10R and PGS10R



### Technical Data

**Supply voltage range:**  
10 VDC (min) to 30 VDC (max)

**Maximum continuous load current:**  
200 mA

**Operating temperature range:**  
0°C (min) to 60°C (max)

**Sensing range:**  
1.2 mm above gripper pad

**Response time:**  
25 ms turn-on time, 60 ms turn-off time

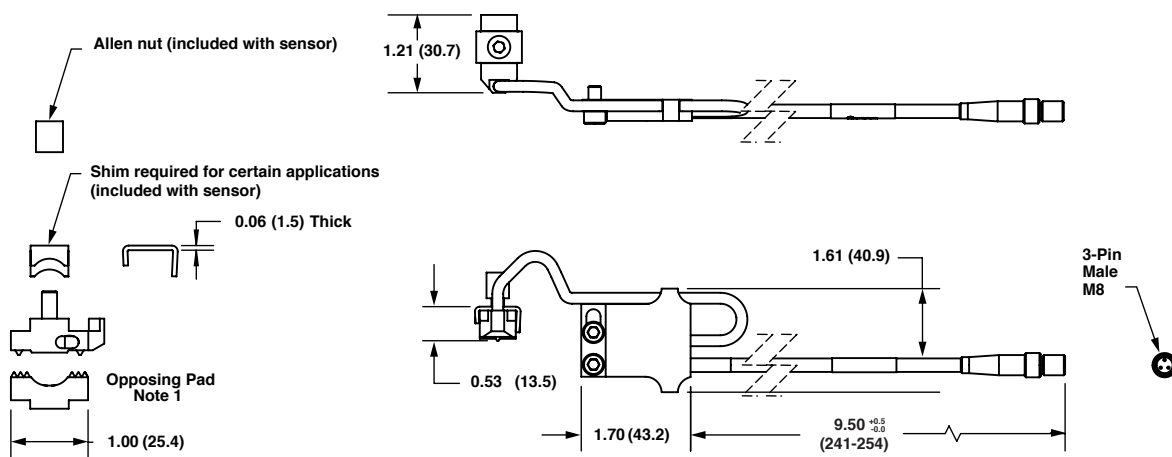
**Target material:**  
Steel and aluminum

**Short circuit protection:**  
Automatically resets when short is removed

**Overload protection:**  
Current limits at 325 mA typ.

**Reverse polarity protection:**  
Up to 36 volts DC

**Weight:**  
0.15 lbs (68 g)



### Ordering Information

Part number (note 1)	Description	NPN/PNP	Material thickness (Note 2)
BSGS40014-DP	Sensor	NPN	Various
BSGS40014-DPKS	Sensor with opposing pad (silver)	NPN	0.50-3.50 mm
BSGS40014-DPKG	Sensor with opposing pad (gold)	NPN	2.01-5.00 mm
BSGS40015-DP	Sensor	PNP	Various
BSGS40015-DPKS	Sensor with opposing pad (silver)	PNP	0.50-3.50 mm
BSGS40015-DPKG	Sensor with opposing pad (gold)	PNP	2.01-5.00 mm

Note 1 - Order sensor part number shown above if sensor is being used with a chisel or flange jaw gripper or is a replacement sensor for a regular jaw gripper already fitted with an in-pad sensor. For new installation in regular jaw gripper, add KS or KG at the end of the part number for a kit containing the opposing pad.

Note 2 - Sensor must be ordered based on thickness of the material being handled. Pad thickness changes to insure full jaw movement and cam lock action of gripper actuator.

#### Spare parts

B07750 - allen nut  
B07769 - shim

Dimensions in inches (mm) are for reference only

## In-Pad Part Present Sensor, M8 3 Pin 0° Standard Pad, Two Wire Output

- Abrasion and impact resistant
- Eliminates sensor position adjustments
- Interface directly to PLC
- Impervious to coolants and oils



### Technical Data

**Power/sensor connector:**  
3-pin 8 mm (pico type) male connector

**Supply voltage range:**  
24 VDC

**Maximum off-state leakage current:**  
1.3mA @ 24 VDC

**Maximum continuous load current:**  
40mA

**Operating temperature range:**  
0°C (min) to 60°C (max)

**Sensing range:**  
1.2 mm above gripper pad

**Response time:**  
25ms turn-on time, 60ms turn-off time

**Target material:**  
Steel and aluminum

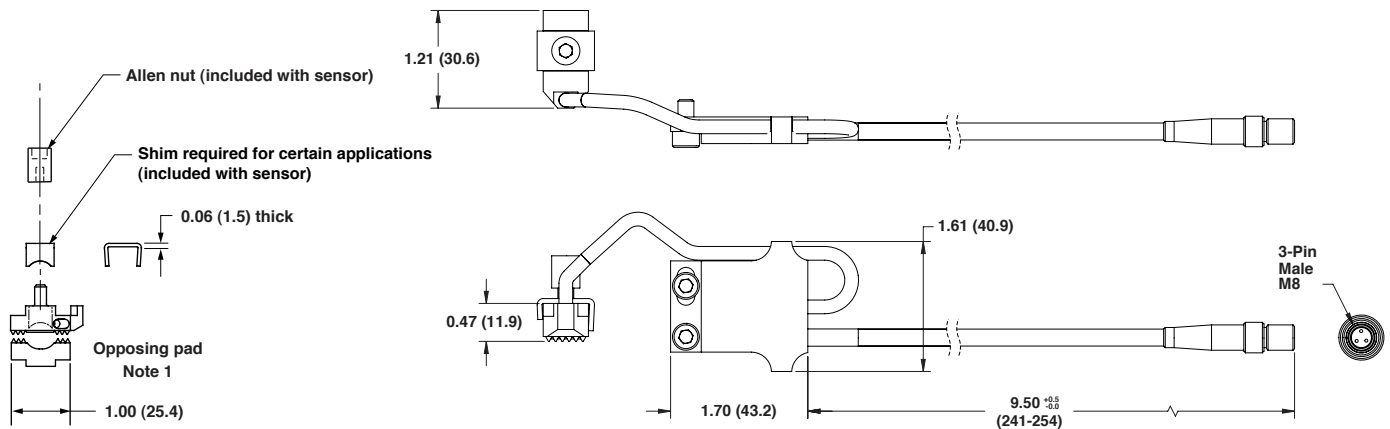
**Indicator light:**  
RED: On when target is detected; 360° visibility

**Short circuit protection:**  
Yes: Automatically resets when short is removed

**Overload protection:**  
Yes

**On-state voltage drop:**  
8.5 V

**Weight:**  
0.15 lbs (68 g)



### Ordering Information

Part number (note 1)	Description	Material thickness (note 2)
BSGS40020P	Sensor	Various
BSGS40020PKS	Sensor with opposing pad (Kit)	0.50-3.50 mm
BSGS40020PKG	Sensor with opposing pad (Kit)	2.01-5.00 mm

Note 1 - The standard sensor part number (without a KS or KG suffix) can be used with a chisel jaw or flange jaw gripper, or with a regular jaw gripper already fitted with an in-pad sensor. For new installation of an in-pad sensor on a regular jaw gripper, select the part numbers with a KS or KG suffix to include the opposing pad in your kit.

Note 2 - Sensor must be ordered based on thickness of the material being handled. Pad thickness changes to ensure full jaw movement and cam lock action of gripper actuator.

#### Spare parts

B07750 - allen nut  
B07769 - shim

Dimensions in inches (mm) are for reference only

# How to Accessorize

## Accessories

---

3 Pin M8 Extension Cables  
C4-S (2000mm)  
C4-SX (5000mm)

4 Pin M8 Extension Cables  
BSCE13032PL0200 (200 mm)  
BSCE13032PL0400 (400 mm)  
BSCE13032PL0600 (600 mm)

4 Pin M12 Extension Cables  
CBL-M12-FLY-04-S-02 (2000mm)  
CBL-M12-FLY-04-S-06 (6000mm)



IMI Precision Engineering operates four global centres of technical excellence and a sales and service network in 75 countries, as well as manufacturing capability in the USA, Germany, China, UK, Switzerland, Czech Republic, Mexico and Brazil.

For information on all IMI Precision Engineering companies visit [www.imi-precision.com](http://www.imi-precision.com)

**Supported by distributors worldwide.**



Due to our policy of continuous development, Bimba reserves the right to change specifications without prior notice.

BIM-BPGS-0319

Selected Images used under license from Shutterstock.com

**Bimba**

25150 S. Governors Hwy  
University Park, IL 60484

Tel: +1 708 534 8544

Fax: +1 708 235 2014

For further information, scan this QR code or visit [www.bimba.com](http://www.bimba.com)

