

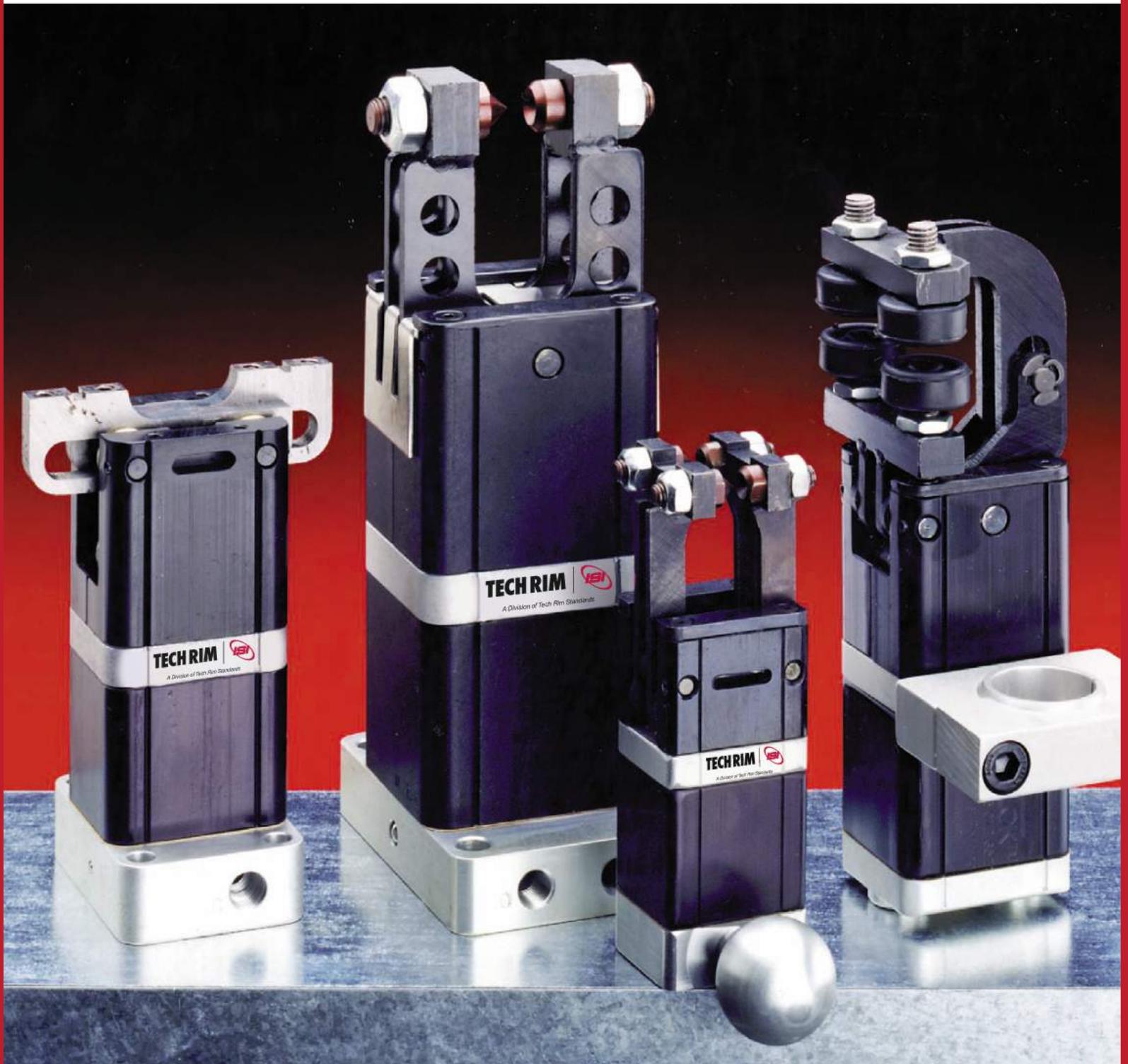


TECH RIM



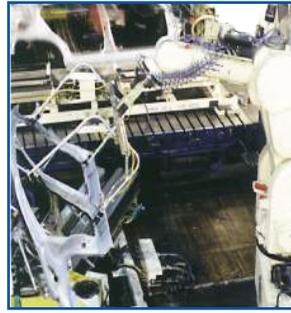
A Division of Tech Rim Standards

MODULAR GRIPPING SYSTEM



GL SERIES GRIPPERS

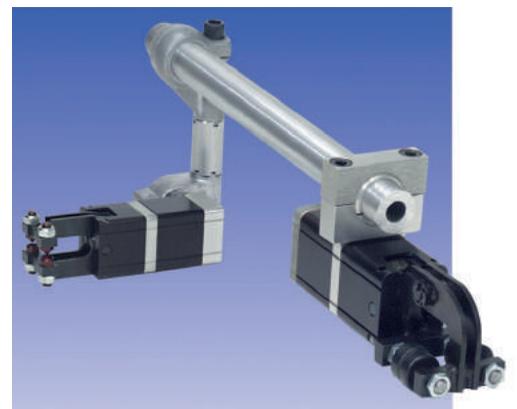
248.454.1977 www.techrimstandards.com

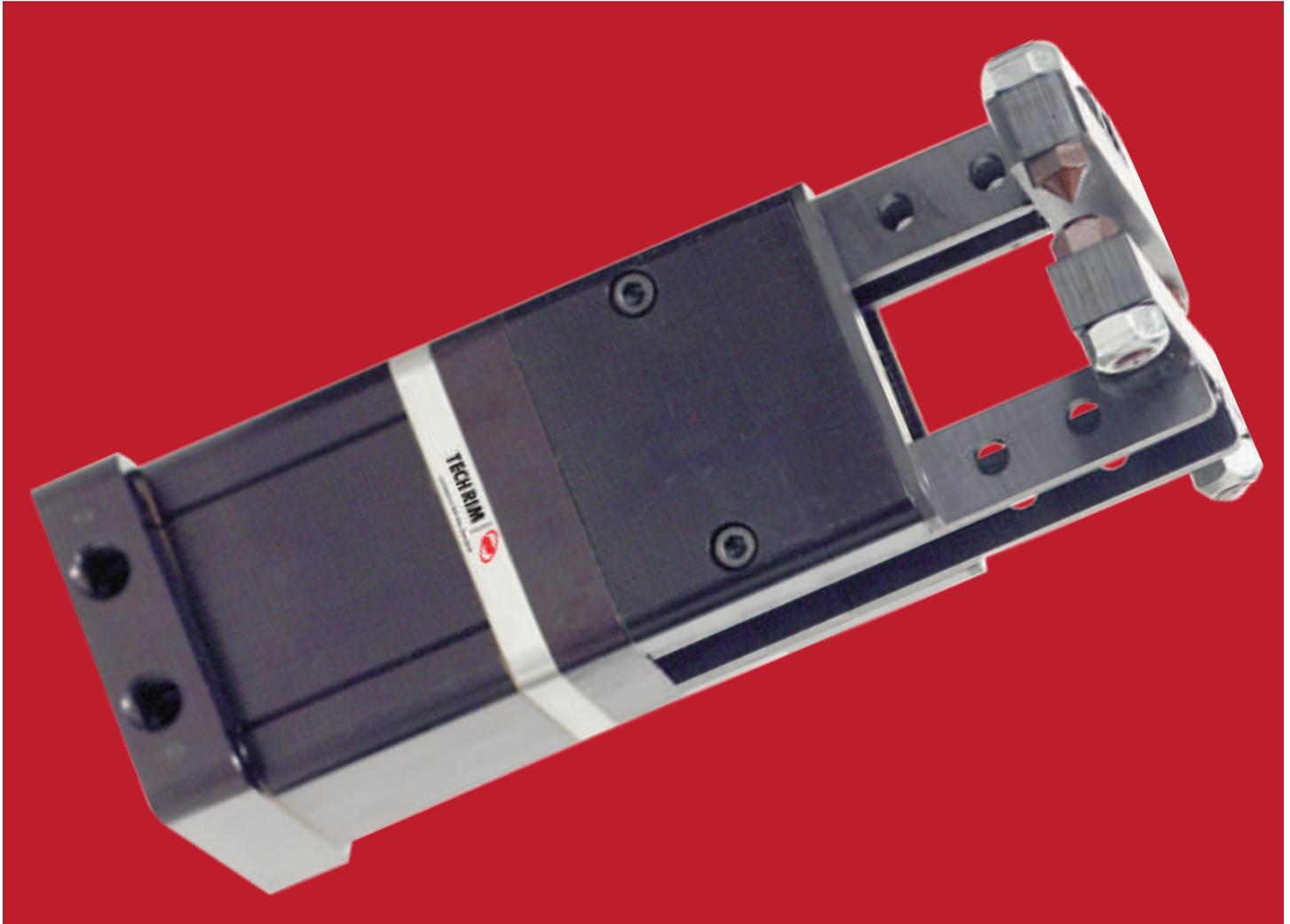


TECH RIM |

MODULAR GRIPPING SYSTEM

The GL Series Grippers have a versatile design that reduces end-effector engineering costs in automation design or retrofit. The GL Series Grippers compact size, power and durability make any process — material handling, transfer press, welding or assembly — more efficient, versatile and flexible.





**A GRIPPER SYSTEM —
BY DESIGN.**

The GL Series Gripper modular design lets you combine mounts, jaw styles and cylinder sizes into many flexible end-effector solutions — giving you customized solutions with standardized components.

**PROVEN TECHNOLOGY IN A
NEW-GENERATION DESIGN.**

Through state of the art research, engineering design and manufacturing , TechRim – ISI is committed to advancing and upgrading this proven componentry for the latest in industry demands, applications and solutions.

**COMPACT SIZE, HIGH
GRIP FORCE,
ULTRALIGHT WEIGHT.**

GL Grippers put more gripping power into smaller spaces, while reducing load-induced wear on automation tooling.

GL SERIES GRIPPER SIZES AVAILABLE

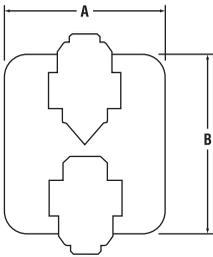


GL400
Bore Size: 1.50 in (Ø 38 mm)

GL500
Bore Size: 2.00 in (Ø 51 mm)

GL700
Bore Size: 2.75 in (Ø 70 mm)

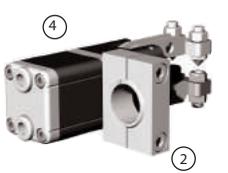
GL SERIES GRIPPER DIMENSIONS GL SERIES GRIPPER MOUNT STYLES



"A" Dimension
GL400 = 1.69 in. (43 mm)
GL500 = 2.25 in. (57 mm)
GL700 = 3.00 in. (76 mm)

"B" Dimension
GL400 = 1.88 in. (48 mm)
GL500 = 2.50 in. (63 mm)
GL700 = 3.25 in. (82 mm)

Note: All dimensions are ±.010 in. (.25mm).



M4 UniMount Ball & Rod Mounting Option
M4 Metric 25mm I.D. Ball
Note: Mount positions 2 or 4 only.



M6 UniMount Ball & Rod Mounting Option
MM6 Metric 25mm I.D. Ball
Note: Mount positions 1 or 3 only.



M5 UniMount Rear Flange Mounting Option



HRM Horizontal Rod Mount Adaptor Plate
(GL400 & GL500 Only)



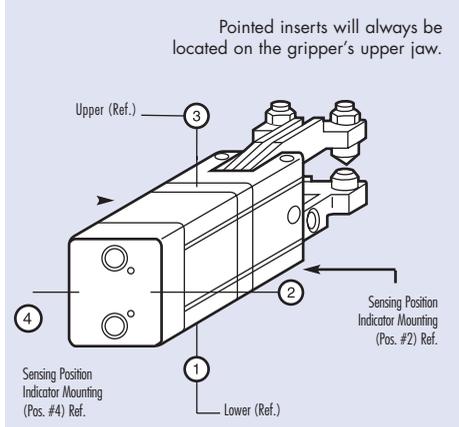
ORDERING AND PART CONFIGURATOR

To ensure proper part configurations- please use the 'color coded' boxes (Blue, Green and Orange) to start, and layout the Gripper design process.

TYPICAL WEIGHTS

Model	Example	lbs.	kg.
GL400	GL400-J2-M5	2.20	.998
GL500	GL500-J2-M5	4.40	1.996
GL700	GL700-J2-M5	9.90	4.491

MOUNTING AND SENSING POSITIONS:

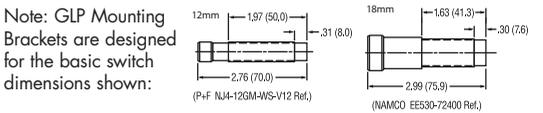


*For more information and feature availability, contact your local sales representative.

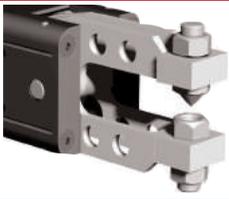
GL SERIES GRIPPER FIXED JAW OPTION

The fixed jaw option allows one jaw to be "fixed" in the closed position (L = lower, U = upper) while still allowing the other jaw to travel through its normal range.

Example: Fixed lower jaw



GL SERIES GRIPPER JAW STYLES

	J1 Gripper Jaw Single Insert 43° Opening		J2 Gripper Jaw Double Insert 43° Opening
	J3 Chisel Point Single Insert 43° Opening		J4 Chisel Point Double Insert 43° Opening
	J7 Drop Away Gripper Single Insert No Fixed Jaw Option		J8 Drop Away Gripper Double Insert No Fixed Jaw Option
	J9 Parallel Motion Outside Diameter Gripper		J10 Parallel Motion Inside Diameter Gripper
	J12F Fixed Jaw Single Insert Flange Gripper		J11F Fixed Jaw Double Insert Flange Gripper
	J28 Double Insert - 90° Opening Fixed Lower Jaw Gripper		
	J91 Single Insert 90° Opening Gripper		J90 Double Insert 180° Opening Gripper
	J181 Single Insert 180° Opening Gripper		J180 Double Insert 180° Opening Gripper

GL SERIES GRIPPER CLAMP ARMS

	C2A Gripper Clamp 90° Arm		C3A Gripper Clamp Straight Arm
---	--	---	---

GL SERIES GRIPPER DESIGN CONSIDERATIONS

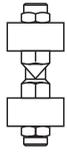
Customizing TechRim | ISI Gripper Jaws

If a TechRim | ISI Gripper requires alterations:

- The “altered” jaws should be designed to allow the gripper jaws to fully close while holding the part.
- Arm length should be kept to a minimum. The longer the gripper arm, the less gripping force.
- The “added” mass to an altered gripper should be kept to a minimum to reduce possible stress on the gripper linkages.
- When altered grippers have longer arms or excessive added mass, use flow controls.

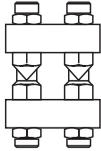
Note: Clamp arms C2A and C3A are typically used to trap and contain the product in conjunction with an overhead lift and carry or robotic system.

SINGLE INSERTS



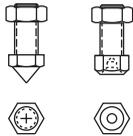
J1, J3, J7, J12F, J91, J181

DOUBLE INSERTS

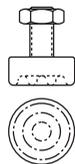


J2, J4, J8, J11F, J28, J90, J180

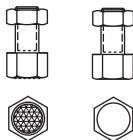
PT1/PT2: Concave and convex contact points, featuring hardened tool steel contact points, are the standard of the sheet metal industry.



PT3/PT4: 40 or 70 Durometer, special urethane compound and triple ring contact provides a non-marking contact point for Class A surfaces of all types with an extremely high anti-breakaway force.



PT5/PT6: Carbide insert or steel hexagon contact point for heavier, thicker metal parts or multiple thickness of sheet metal.



Note: TechRim | ISI will custom fit contact points to a specific part thickness or contour by providing steel or hardened urethane inserts to order — send us your application.

GL SERIES GRIPPER CONTACT POINTS

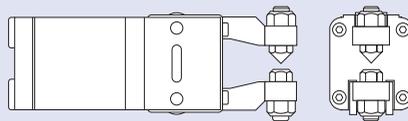
	Standard	Standard	Optional	Optional	Optional
GL400 SERIES					
	X4-PT1 Steel Convex Insert	X4-PT2 Steel Concave Insert	X4-PT3 Urethane 40 Durometer Shore "A" X4-PT4 Urethane 70 Durometer Shore "A"	X4-PT5 Carbide Bit Steel Hexagon Insert	X4-PT6 Steel Hexagon Insert
GL500, GL700					
	X5-PT1 Steel Convex Insert	X5-PT2 Steel Concave Insert	X5-PT3 Urethane 40 Durometer Shore A X5-PT4 Urethane 70 Durometer Shore A	X5-PT5 Carbide Insert Steel Hexagon Insert	X5-PT6 Steel Hexagon Insert

Note: PT1/PT2 supplied standard.

GL SERIES GRIPPER FORCE CHART

Gripper Model	Air Pressure Applied	Clamp Force (Pounds)									
		J1 J2	J3 J4	J7 J8	J9 J10	J11F J12F	C2A	C3A	J28	J90-91 J180-181	
GL400 Series	60 psi (4 Bars)	120.0	120.0	71.0	27.0	94.0	57.0	52.0	73.0	73.0	
	70 psi (4 Bars)	140.0	140.0	81.0	31.0	113.0	68.0	61.0	85.0	85.0	
	80 psi (5 Bars)	160.0	160.0	104.0	36.0	139.0	78.0	70.0	97.0	97.0	
	90 psi (6 Bars)	180.0	180.0	120.0	40.0	153.0	89.0	79.0	109.0	109.0	
GL500 Series	60 psi (4 Bars)	254.0	254.0	104.0	62.0	121.0	123.0	106.0	127.0	127.0	
	70 psi (4 Bars)	296.0	296.0	118.0	70.0	145.0	140.0	120.0	148.0	148.0	
	80 psi (5 Bars)	339.0	339.0	144.0	82.0	171.0	160.0	139.0	169.0	169.0	
	90 psi (6 Bars)	380.0	380.0	176.0	91.0	183.0	180.0	156.0	190.0	190.0	
GL700 Series	60 psi (4 Bars)	478.0	—	TBD	—	160.0	170.0	150.0	—	186.0	
	70 psi (4 Bars)	558.0	—	TBD	—	200.0	195.0	170.0	—	217.0	
	80 psi (5 Bars)	638.0	—	TBD	—	250.0	228.0	196.0	—	248.0	
	90 psi (6 Bars)	717.0	—	TBD	—	300.0	356.0	220.0	—	279.0	

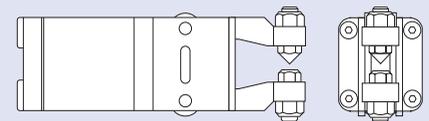
GL SERIES GRIPPER WELD GUARD OPTION



- 18 GA (.048) stainless steel
- Enveloping cover
- Designed to minimize buildup and contamination
- Recommended for welding applications

(J1-2, 11F-12F, 90-91 & 180-181 Jaw Styles Only)

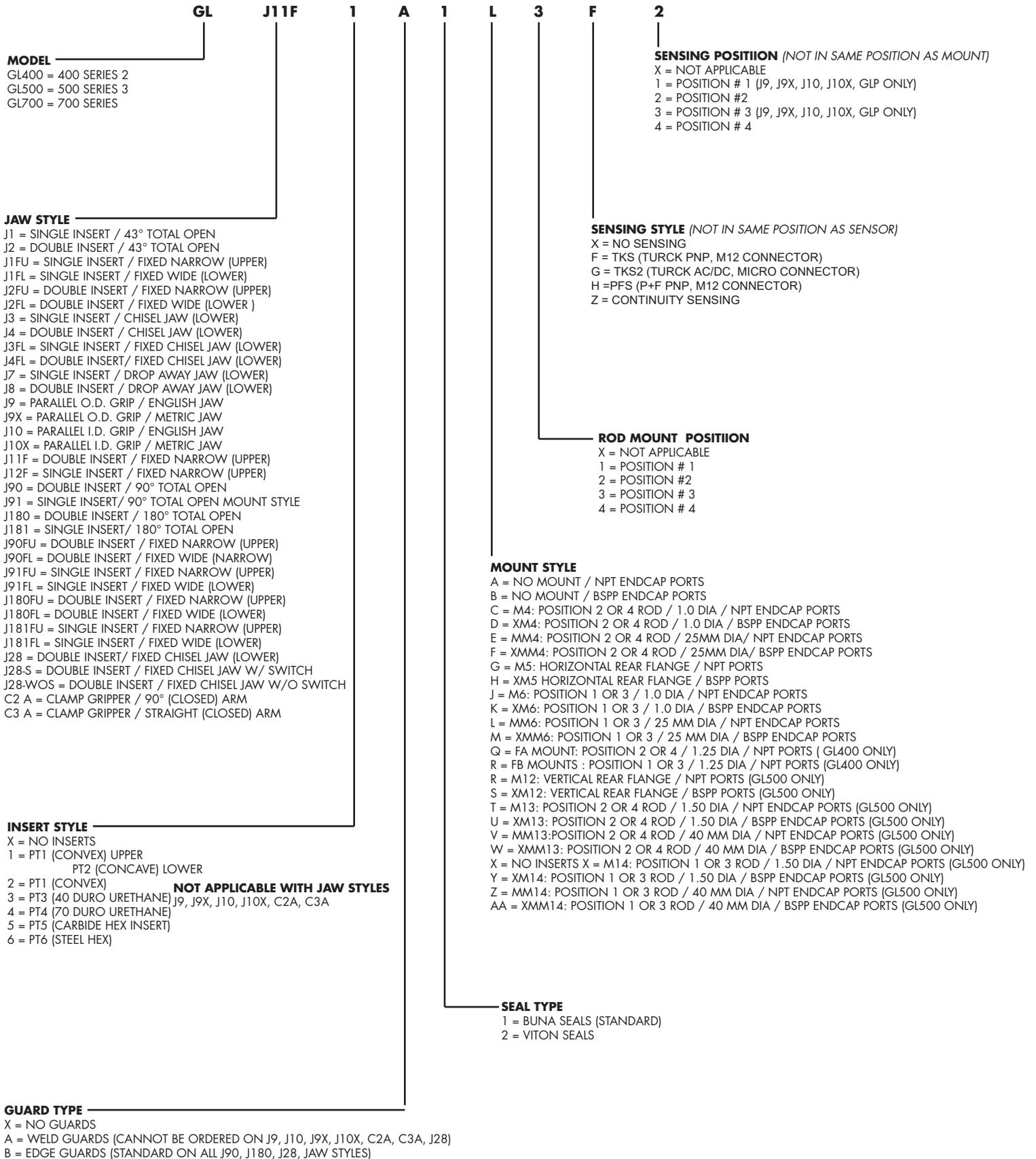
GL SERIES GRIPPER FLASH GUARD OPTION



- .12 thick hardened steel
- Face-mounted / flush surface
- Designed to aid in part locating and for use as gauging surface

DIMENSION AND TECHNICAL INFORMATION ARE SUBJECT TO CHANGE WITHOUT NOTICE.

GL SERIES GRIPPER GENERAL ORDERING INFORMATION





TECH RIM IS THE ONE!

At Tech Rim Standards we understand and appreciate the value of your business. That is why we have made it our mission to provide you with timely delivery of standardized componentry, and thousands of solution based products at very affordable prices.

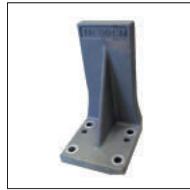
In addition to our standard offerings, we design and manufacture high quality production parts, as well as complex detail / NC components for industrial, factory automation, aerospace and automotive applications.

Our manufacturing and engineering capabilities are local as well as LCC, allowing for efficient world-wide shipping to our expansive customer base.

Tech Rim Standards, LLC
2619 Bond
Rochester Hills, Mi. 48309

248.454.1977 p
248.454.1978 f

www.techrimstandards.com



Your Global Standards Tool Source

