



## COMPANY PROFILE

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### OUR HISTORY

- Established in 1998
- Corporate headquarters located in San Diego, CA
- Satellite office operating in China allows us to oversee factory procedures, including production and quality control
- Superior supplier performance and competitive pricing has earned us a world-class reputation

### OUR CULTURE

- Providing superior and notably responsive customer service to ensure high customer retention
- Supporting our valued customers with clear and proactive communication
- Going beyond our responsibilities as a supplier to foster strong personal and business partnerships

### OUR VISION

- To deliver solutions for our customers
- To expand our partnerships with injection molders and contract manufacturers seeking to lower costs and consolidate their vendor base
- To continue being a global leader in the production and distribution of standard and custom inserts

### OUR EXPERTISE

- Offering a diverse set of manufacturing capabilities including cold headed, stamped, and screw machined components
- Value engineering and technical assistance aimed at cost reduction
- Visual and camera sorting to check for critical dimensions
- Fastener standardization consulting, when and where applicable

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# CUSTOM CAPABILITIES

Inserts International offers complete fastening solutions. In addition to our popular line of standard inserts, we have extensive experience manufacturing custom components, materials and finishes. Please contact us to discuss your specific project requirements.



## PRODUCTS

- Clinch Nuts
- Cold Formed Inserts
- Compression Limiters
- Custom Inserts
- Knurled Pins
- Machined Terminals
- Sleeves
- Spacers
- Stamped Bushings
- Standard Inserts
- Standoffs
- Threaded Studs
- Turned Bushings

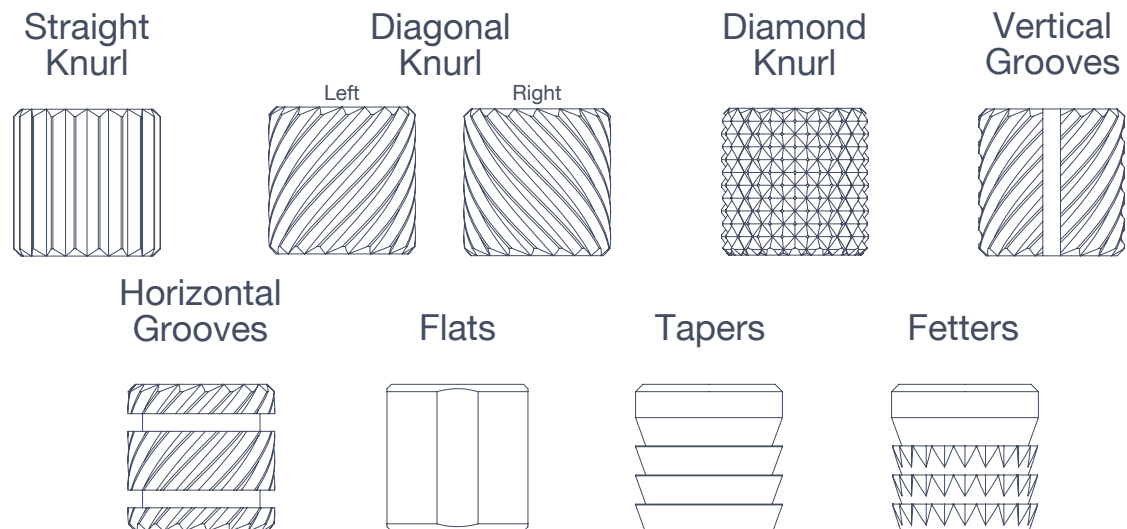
## FINISHES

- Anodizing
- Black Oxide
- Brass
- Chrome
- Copper
- Electropolish
- Gold
- Magni
- Nickel
- Passivation
- Powder Coating
- Silver
- Tin
- Viradact
- Zinc
- Zinc Nickel
- Others, by request

## MATERIALS

- Aluminum
- Brass
- Bronze
- Copper
- Phos Bronze
- Stainless Steel
- Steel
- Titanium
- Others, by request

## PROFILE OPTIONS FOR ADDED RESISTANCE AGAINST TORQUE & PULLOUT





APPLIANCE



AUTOMOTIVE



COMMUNICATION



CONSUMER PRODUCTS



DISPENSING SYSTEMS



ELECTRICAL



ELECTRONICS



ENERGY



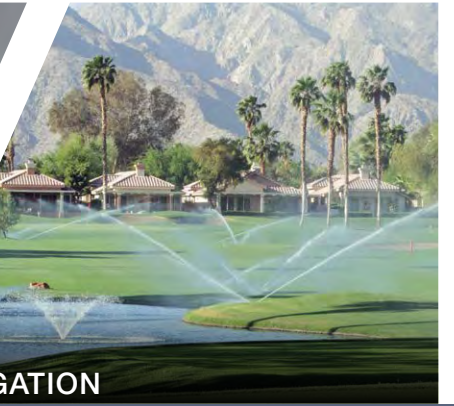
HEALTHCARE



HIGH TECHNOLOGY



H.V.A.C.



IRRIGATION

## INDUSTRIES

Components manufactured by Inserts International are used in critical applications across the globe. The images in this spread highlight the industries that trust in and depend on our quality products.



MARINE



MOLDING



OFFICE EQUIPMENT



PLUMBING



POOL/SPA



POWER TOOLS



PUMPS



SECURITY



SENSORS



SPORTING GOODS



TOYS



VALVES

# APPLICATION ENGINEERING & VALUE ADDED SOLUTIONS

In addition to cost savings and vendor consolidation, our core strength is value engineering: working closely with customers to develop fasteners that add integrity to an assembly while also reducing the overall cost of the finished product. **Below are a few examples of our work.**



## CASE STUDY A:

### CHALLENGE

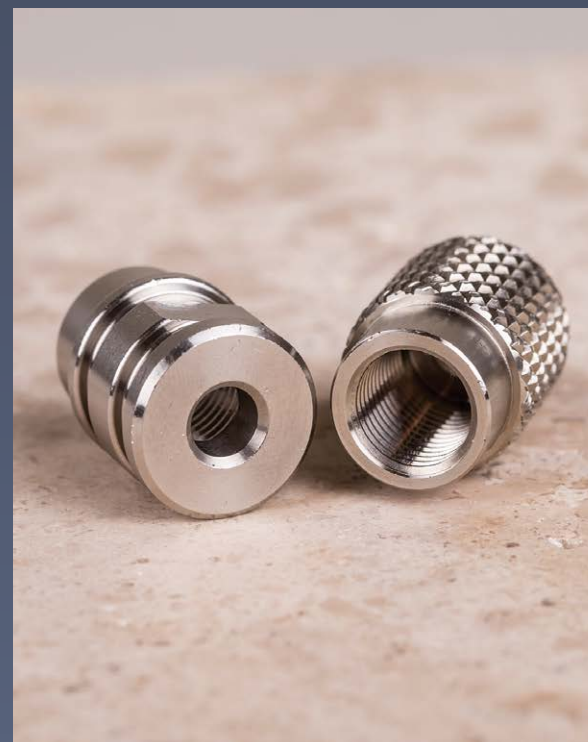
Our customer required a high strength insert and their specs outlined a heavy diamond knurl on 316SS material. As proposed, the design was not optimal for manufacturing. In order to achieve the coarse knurl pitch without crushing the ID of the part, we had to utilize specialized (and expensive) processing equipment. Furthermore, an additional honing operation was required after the knurl was applied, imposing added costs for both tooling and handling.

### SOLUTION

Inserts International suggested an insert profile with horizontal grooves and flats which improved resistance to torque and pullout while allowing the part to drop complete off the machine.

### RESULT

By eliminating the need for additional operations and specialized processing equipment, we were able to reduce costs and lead times for our customer.



## CASE STUDY B:

### CHALLENGE

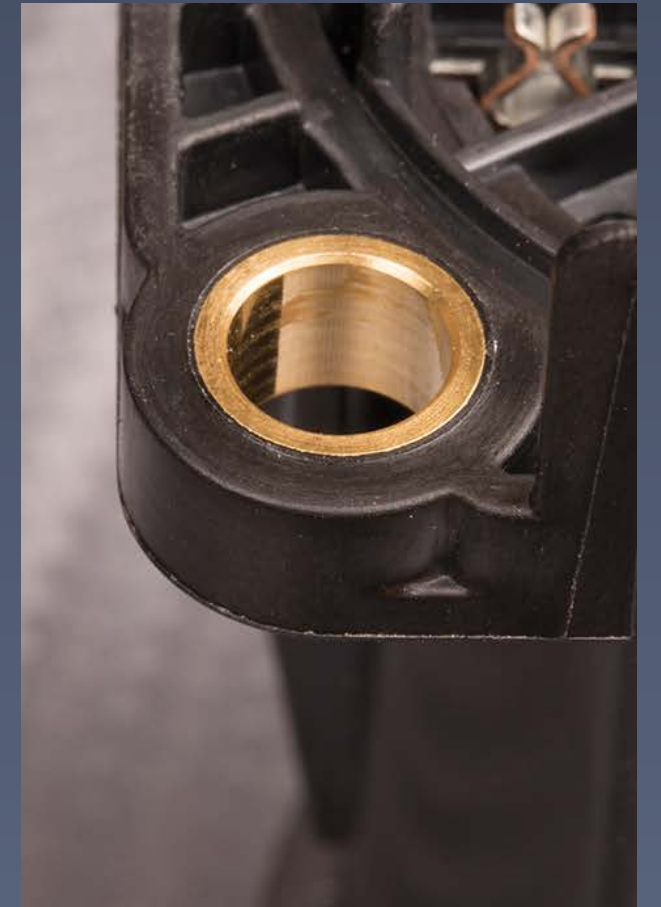
An automotive customer needed to reduce the cost and weight of a high-volume insert. The part was designed out of 36000 Series Brass and required a change of material in order to comply with revised ELV requirements (less than 1% lead).

### SOLUTION

First, we restructured the entire manufacturing process to maximize output and drastically reduce the amount of scrap. Despite brass raw material costs increasing due to the lower lead content, our streamlined method of production offset the charges and dropped the total piece price. We then presented our customer with an additional quote option out of aluminum, using the same automated manufacturing process to minimize costs.

### RESULT

Both inserts offered sizeable cost savings to our customer while the aluminum proposal reduced the overall weight of each part by 65%.



## OUR SERVICES INCLUDE:

- Technical Assistance Aimed at Cost Reduction
- Component Standardization Consulting
- Prototyping Options
- CAD Support

All of our customers have requirements and quality standards specific to their industry. We take these very seriously. As a contract supplier, our team is here to serve as an extension of you - to help you get a quality product to market on time, every time.

For additional examples of engineering challenges we have solved for our customers or to submit a part for review, please contact us at [sales@insertsintl.com](mailto:sales@insertsintl.com)

You may also call 619.241.7730 during regular business hours to speak directly with a representative about your requirements. We look forward to working with you!

# SUPPLY CHAIN MANAGEMENT

Inserts International strives for Total Customer Satisfaction. Our commitment to supporting our customers and their needs drives everything we do.



## ARE YOU IN NEED OF A VENDOR WHO CAN SUPPLY BOTH STANDARD AND CUSTOM FASTENING COMPONENTS?

With a wide range of manufacturing capabilities, Inserts International can assist you with vendor consolidation. We are your one-source solution for machined, stamped and cold-formed inserts. Based on your production requirements, we are able to consolidate your items into a single shipment, eliminating the hassles of managing different lots and deliveries from multiple vendors.



## ARE YOU STRUGGLING TO MANAGE YOUR INVENTORY LEVELS AND/OR FUTURE PRODUCTION REQUIREMENTS?

As an Inserts International customer, you will be assigned a service representative eager to manage all aspects of your account. In addition to handling orders, scheduling releases, assisting with new projects and answering all questions, your designated account coordinator will monitor inventory levels against standard production lead times to stay ahead of your future requirements.



## IS YOUR COMPANY SHORT ON WAREHOUSE SPACE?

At Inserts International, we have ample space to house your assembly products. Located strategically along the US-Mexico border in San Diego, we are perfectly situated to service both your domestic facilities as well as your maquiladora partner plants. Through the effective use of stateside warehousing, we are able to reduce lead times, respond quickly to unexpected spikes in production, consolidate shipments, and pass along the cost savings to you - our valued customer.



## OUR SERVICES INCLUDE:

- Inventory Management
- Shipment Consolidation
- Consignment Programs
- JIT/KANBAN Delivery Options
- 'Dock to Stock' and 'Dock to Line' Support
- Handling of Freight, Duties and Customs

At Inserts International, our team oversees every step of production: from raw material and in-process components to finished inventory and ultimately the point of consumption. As your preferred vendor, we offer supply chain solutions. In addition to consolidating your assembly items, we also streamline the delivery of your product.

Inserts International has extensive experience with international customs. We manage the hassles of clearance and freight, so you don't have to. Our standard quotes are provided FOB San Diego, however we are happy to customize our pricing to reflect your preferred destination, as requested. Please contact Inserts International to discuss your specific program requirements.

# OUR COMMITMENT TO QUALITY

## MISSION STATEMENT

Inserts International works diligently to provide superior customer service, quality and costing. We are constantly striving to help our customers meet their goals, while achieving profitable growth in the process.



**INSERTS INTERNATIONAL MEETS THE REQUIREMENTS OF ISO 9001:2008**



**A FEW HIGHLIGHTS:**

- ISO & TS16949 Certified Manufacturing Sites
- SPC, PPAP, APQP, Material Certifications
- Certified Quality Auditors and Engineers
- Formal On-site Audits
- RoHS /REACH Compliance
- IMDS Support
- Lot Control / Product Traceability
- Camera Sorting Equipment

## QUALITY POLICY

At Inserts International, we take great pride in our ability to service our customers and consistently manufacture quality components. Our merited success is a direct reflection of the controls we have in place at every stage of production. As a solutions-oriented company, Inserts International is committed to continuous improvement, on-time delivery, and clear and effective communication to prevent errors and work towards total customer satisfaction.

Please visit our website for the latest information regarding Conflict Minerals, RoHS/REACH Compliance, International Manufacturing Regulations and other quality related topics.

[WWW.INSERTSINTERNATIONAL.COM](http://WWW.INSERTSINTERNATIONAL.COM)

## STANDARD INSERT SELECTION TABLE

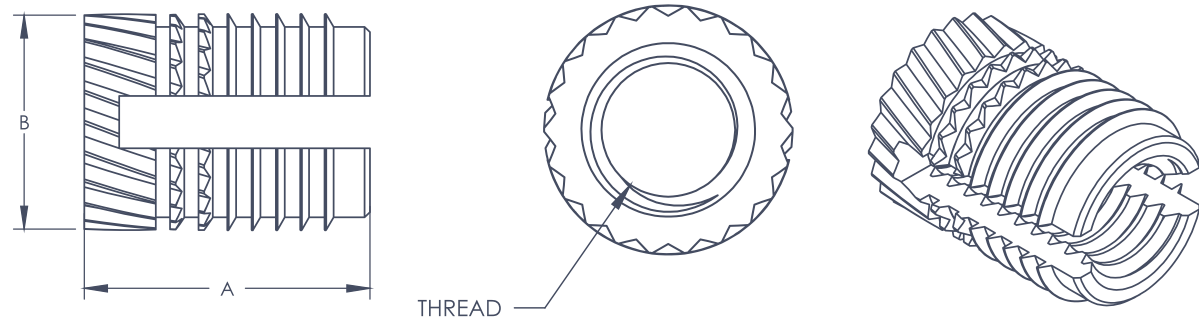
= Recommended  
 = Not Recommended

INSERTS INTERNATIONAL SERIES #	Image	INSTALLATION METHOD					BASE MATERIAL				
		Ultrasonic	Heat Stake/Thermal	Manual/Cold Press	Molded-In	Self Tapping	Hard Thermoplastics	Medium Thermoplastics	Soft Thermoplastics	Amorphous Thermoplastics	Thermosetting Plastics
I-40 Series											
I-41 Series											
I-42 Series											
I-43 Series											
I-46S Series											
I-46L Series											
I-55 Series											
I-64 Series											
I-72 Series											
I-77 Series											
I-85 Series											
I-86 Series											
I-87 Series											
I-88 Series											
I-90 Series											
I-91 Series											
I-92 Series											
I-93 Series											
I-96 Series											
I-97 Series											

- Above information to be confirmed by end user. Performance may vary for different plastics.
- When insert molding a part, please contact Inserts International to discuss ID options for alignment on core pins.


# I-40 Series

- ◆ PRESS-IN INSTALLATION
- ◆ EFFECTIVE IN VIBRATORY ENVIRONMENTS
- ◆ HIGH TORQUE AND PULL-OUT RESISTANCE
- ◆ SUITABLE FOR USE IN MOST THERMOSET PLASTICS




## STANDARD SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT $\Phi$	RECOMMENDED HOLE SIZE (+.004/- .000)	MIN. WALL THICKNESS
I40-02-56-157BR	2-56	.157	.146	.126	.063
I40-04-40-228BR	4-40	.228	.177	.157	.079
I40-06-32-283BR	6-32	.283	.209	.189	.094
I40-08-32-323BR	8-32	.323	.242	.220	.110
I40-10-24-374BR	10-24	.374	.272	.252	.126
I40-10-32-374BR	10-32	.374	.272	.252	.126
I40-14-20-500BR	1/4-20	.500	.335	.315	.157
I40-14-28-500BR	1/4-28	.500	.335	.315	.157
I40-516-18-500BR	5/16-18	.500	.398	.378	.189
I40-516-24-500BR	5/16-24	.500	.398	.378	.189



## METRIC SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT $\Phi$	RECOMMENDED HOLE SIZE (+.1/- .0)	MIN. WALL THICKNESS
I40-M2-4.0BR	M2	4.0	3.7	3.2	1.6
I40-M2.5-5.8BR	M2.5	5.8	4.5	4.0 <sup>o</sup>	2.0
I40-M3-5.8BR	M3	5.8	4.5	4.0	2.0
I40-M3.5-7.2BR	M3.5	7.2	5.3	4.8	2.4
I40-M4-8.2BR	M4	8.2	6.2	5.6	2.8
I40-M5-9.5BR	M5	9.5	6.9	6.4	3.2
I40-M6-12.7BR	M6	12.7	8.5	8.0	4.0
I40-M8-12.7BR	M8	12.7	10.1	9.6	4.8

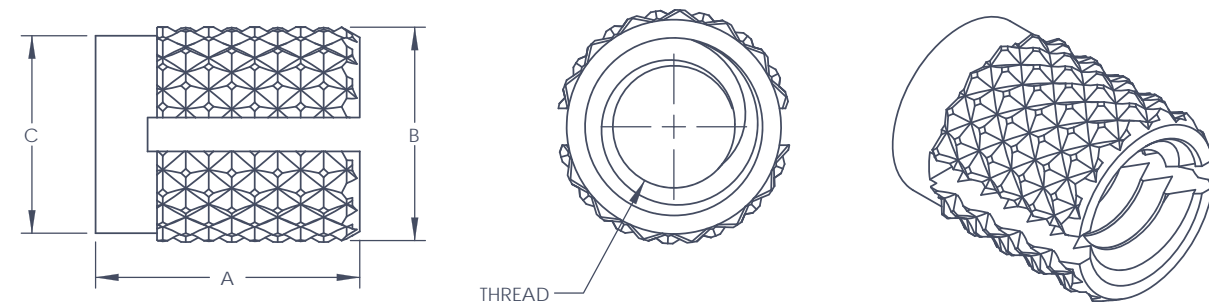


**NOTES:**

- Last characters of the part number define the material as follows: BR – Brass / Plain Finish.
- Standard specifications are listed in inches. Metric specifications are listed in millimeters.
- Additional lengths, materials and finishes are available by request. Please contact Inserts International to discuss your design preferences.
- Recommended hole size and wall thickness to be confirmed by end user. Performance may vary for different plastics.


# I-41 Series

- ◆ PRESS-IN INSTALLATION
- ◆ EFFECTIVE IN VIBRATORY ENVIRONMENTS
- ◆ DIAMOND KNURL OFFERS RESISTANCE AGAINST TORQUE AND PULL OUT
- ◆ SUITABLE FOR USE IN MOST THERMOSET PLASTICS




## STANDARD SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT $\Phi$	"C" BLANK $\Phi$	RECOMMENDED HOLE SIZE (+.004/- .000)	MIN. WALL THICKNESS
I41-02-56-155BR	2-56	.155	.136	.124	.126	.094
I41-04-40-186BR	4-40	.186	.165	.156	.157	.126
I41-06-32-249BR	6-32	.249	.197	.186	.189	.142
I41-08-32-312BR	8-32	.312	.230	.217	.220	.157
I41-10-24-371BR	10-24	.371	.260	.249	.252	.189
I41-10-32-371BR	10-32	.371	.260	.249	.252	.189
I41-14-20-497BR	1/4-20	.497	.327	.311	.315	.236
I41-14-28-497BR	1/4-28	.497	.327	.311	.315	.236
I41-516-18-497BR	5/16-18	.497	.390	.374	.378	.276
I41-516-24-497BR	5/16-24	.497	.390	.374	.378	.276



## METRIC SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT $\Phi$	"C" INSERT $\Phi$	RECOMMENDED HOLE SIZE (+.1/- .0)	MIN. WALL THICKNESS
I41-M2-3.9BR	M2	3.9	3.5	3.2	3.2	2.4
I41-M2.5-4.7BR	M2.5	4.7	4.2	4.0	4.0	3.2
I41-M3-4.7BR	M3	4.7	4.2	4.0	4.0	3.2
I41-M3.5-6.3BR	M3.5	6.3	5.0	4.7	4.8	3.6
I41-M4-7.9BR	M4	7.9	5.8	5.5	5.6	4.0
I41-M5-9.4BR	M5	9.4	6.6	6.3	6.4	4.8
I41-M6-12.6BR	M6	12.6	8.3	7.9	8.0	6.0
I41-M8-12.6BR	M8	12.6	9.9	9.5	9.6	7.0

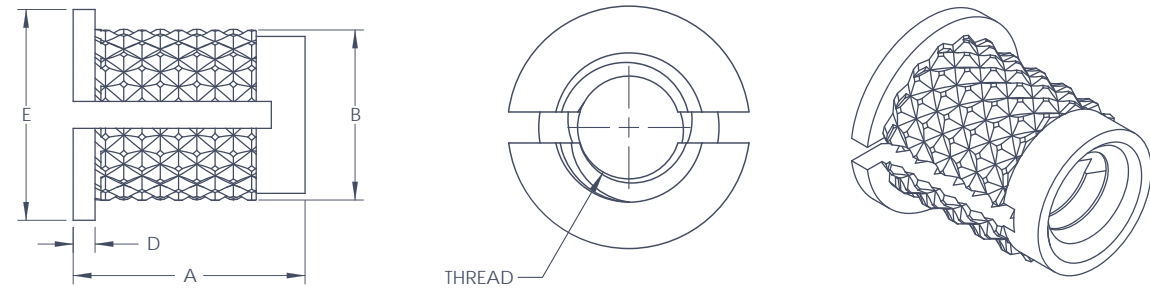


**NOTES:**

- Last characters of the part number define the material as follows: BR – Brass / Plain Finish.
- Standard specifications are listed in inches. Metric specifications are listed in millimeters.
- Additional lengths, materials and finishes are available by request. Please contact Inserts International to discuss your design preferences.
- Recommended hole size and wall thickness to be confirmed by end user. Performance may vary for different plastics.

# I-42 Series

- ◆ PRESS-IN INSTALLATION
- ◆ EFFECTIVE IN VIBRATORY ENVIRONMENTS
- ◆ DIAMOND KNURL OFFERS RESISTANCE AGAINST TORQUE AND PULL OUT
- ◆ SUITABLE FOR USE IN MOST THERMOSET PLASTICS
- ◆ REVERSE HEAD ENHANCES PULL OUT PERFORMANCE IN THROUGH-HOLE APPLICATIONS



## STANDARD SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT $\Phi$	"D" HEAD THICKNESS	"E" HEAD $\Phi$	RECOMMENDED HOLE SIZE (+.004/-0.000)	MIN. WALL THICKNESS
I42-02-56-155BR	2-56	.155	.136	.017	.187	.126	.094
I42-04-40-186BR	4-40	.186	.165	.020	.218	.157	.126
I42-06-32-249BR	6-32	.249	.197	.026	.250	.189	.142
I42-08-32-312BR	8-32	.312	.230	.032	.281	.220	.157
I42-10-24-371BR	10-24	.371	.260	.039	.312	.252	.189
I42-10-32-371BR	10-32	.371	.260	.039	.312	.252	.189
I42-14-20-497BR	1/4-20	.497	.327	.049	.375	.315	.236
I42-14-28-497BR	1/4-28	.497	.327	.049	.375	.315	.236
I42-516-18-497BR	5/16-18	.497	.390	.049	.437	.378	.276
I42-516-24-497BR	5/16-24	.497	.390	.049	.437	.378	.276



## METRIC SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT $\Phi$	"D" HEAD THICKNESS	"E" HEAD $\Phi$	RECOMMENDED HOLE SIZE (+.1/-0)	MIN. WALL THICKNESS
I42-M2-3.9BR	M2	3.9	3.5	0.43	4.8	3.2	2.4
I42-M2.5-4.7BR	M2.5	4.7	4.2	0.51	5.5	4.0	3.2
I42-M3-4.7BR	M3	4.7	4.2	0.51	5.5	4.0	3.2
I42-M3.5-6.3BR	M3.5	6.3	5.0	0.66	6.4	4.8	3.6
I42-M4-7.9BR	M4	7.9	5.8	0.82	7.1	5.6	4.0
I42-M5-9.4BR	M5	9.4	6.6	0.99	7.9	6.4	4.8
I42-M6-12.6BR	M6	12.6	8.3	1.25	9.5	8.0	6.0
I42-M8-12.6BR	M8	12.6	9.9	1.25	11.1	9.6	7.0

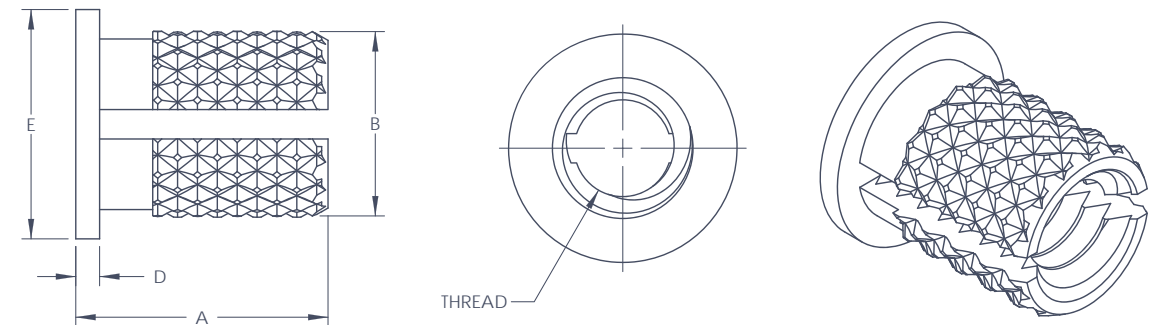


**NOTES:**

- Last characters of the part number define the material as follows: BR – Brass / Plain Finish.
- Standard specifications are listed in inches. Metric specifications are listed in millimeters.
- Additional lengths, materials and finishes are available by request. Please contact Inserts International to discuss your design preferences.
- Recommended hole size and wall thickness to be confirmed by end user. Performance may vary for different plastics.

# I-43 Series

- ◆ PRESS-IN INSTALLATION
- ◆ EFFECTIVE IN VIBRATORY ENVIRONMENTS
- ◆ DIAMOND KNURL OFFERS RESISTANCE AGAINST TORQUE AND PULL OUT
- ◆ SUITABLE FOR USE IN MOST THERMOSET PLASTICS
- ◆ HEAD PROVIDES GREATER BEARING SURFACE



## STANDARD SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT $\Phi$	"D" HEAD THICKNESS	"E" HEAD $\Phi$	RECOMMENDED HOLE SIZE (+.004/-0.000)	MIN. WALL THICKNESS
I43-02-56-155BR	2-56	.155	.136	.017	.187	.126	.094
I43-04-40-186BR	4-40	.186	.165	.020	.218	.157	.126
I43-06-32-249BR	6-32	.249	.197	.026	.250	.189	.142
I43-08-32-312BR	8-32	.312	.230	.032	.281	.220	.157
I43-10-24-371BR	10-24	.371	.260	.039	.312	.252	.189
I43-10-32-371BR	10-32	.371	.260	.039	.312	.252	.189
I43-14-20-497BR	1/4-20	.497	.327	.049	.375	.315	.236
I43-14-28-497BR	1/4-28	.497	.327	.049	.375	.315	.236
I43-516-18-497BR	5/16-18	.497	.390	.049	.437	.378	.276
I43-516-24-497BR	5/16-24	.497	.390	.049	.437	.378	.276



## METRIC SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT $\Phi$	"D" HEAD THICKNESS	"E" HEAD $\Phi$	RECOMMENDED HOLE SIZE (+.1/-0)	MIN. WALL THICKNESS
I43-M2-3.9BR	M2	3.9	3.5	0.43	4.8	3.2	2.4
I43-M2.5-4.7BR	M2.5	4.7	4.2	0.51	5.5	4.0	3.2
I43-M3-4.7BR	M3	4.7	4.2	0.51	5.5	4.0	3.2
I43-M3.5-6.3BR	M3.5	6.3	5.0	0.66	6.4	4.8	3.6
I43-M4-7.9BR	M4	7.9	5.8	0.82	7.1	5.6	4.0
I43-M5-9.4BR	M5	9.4	6.6	0.99	7.9	6.4	4.8
I43-M6-12.6BR	M6	12.6	8.3	1.25	9.5	8.0	6.0
I43-M8-12.6BR	M8	12.6	9.9	1.25	11.1	9.6	7.0

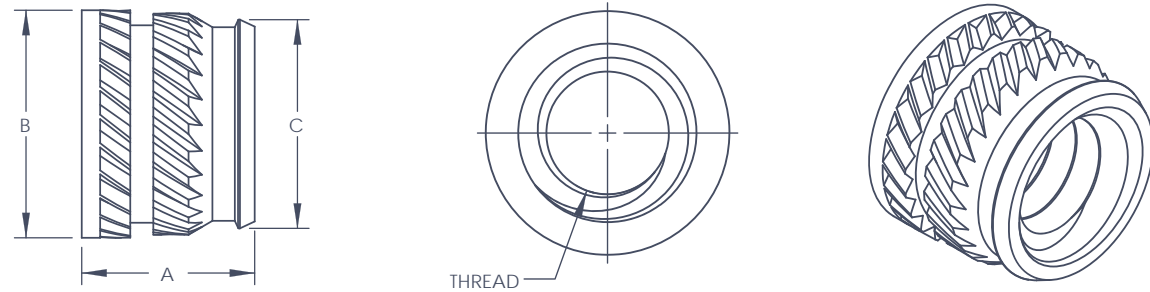


**NOTES:**

- Last characters of the part number define the material as follows: BR – Brass / Plain Finish.
- Standard specifications are listed in inches. Metric specifications are listed in millimeters.
- Additional lengths, materials and finishes are available by request. Please contact Inserts International to discuss your design preferences.
- Recommended hole size and wall thickness to be confirmed by end user. Performance may vary for different plastics.

# I-46S Series

- ◆ HEAT/ULTRASONIC INSTALLATION
- ◆ HIGH TORQUE AND PULL OUT RESISTANCE
- ◆ SELF-ALIGNING FEATURE EASES INSTALLATION
- ◆ DESIGNED FOR USE IN A TAPERED HOLE



## STANDARD SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT Φ	"C" PILOT Φ	RECOMMENDED "G" (±.001)	HOLE "H" (±.001)	MIN. WALL THICKNESS
I46S-02-56-115BR	2-56	.115	.136	.122	.118	.123	.080
I46S-04-40-135BR	4-40	.135	.172	.157	.153	.159	.093
I46S-06-32-150BR	6-32	.150	.220	.203	.199	.206	.116
I46S-08-32-185BR	8-32	.185	.250	.230	.226	.234	.133
I46S-10-24-225BR	10-24	.225	.296	.272	.267	.277	.159
I46S-10-32-225BR	10-32	.225	.296	.272	.267	.277	.159
I46S-14-20-300BR	1/4-20	.300	.375	.354	.349	.363	.194
I46S-14-28-300BR	1/4-28	.300	.375	.354	.349	.363	.194
I46S-516-18-335BR	5/16-18	.335	.469	.439	.431	.448	.245
I46S-516-24-335BR	5/16-24	.335	.469	.439	.431	.448	.245
I46S-38-16-375BR	3/8-16	.375	.563	.530	.523	.540	.293
I46S-38-24-375BR	3/8-24	.375	.563	.530	.523	.540	.293



## METRIC SPECIFICATIONS

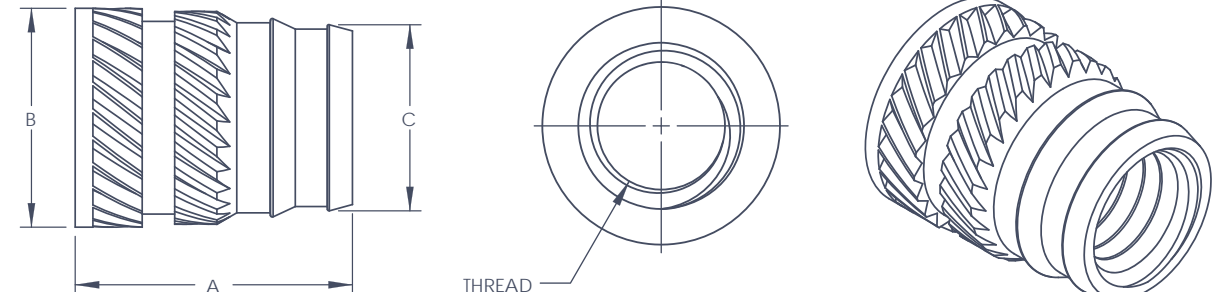
PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT Φ	"C" PILOT Φ	RECOMMENDED "G" (±.03)	HOLE "H" (±.03)	MIN. WALL THICKNESS
I46S-M2-2.9BR	M2	2.9	3.5	2.9	2.7	3.1	2.0
I46S-M2.5-3.4BR	M2.5	3.4	4.4	3.7	3.6	4.0	2.4
I46S-M3-3.8BR	M3	3.8	5.6	4.8	4.7	5.2	3.0
I46S-M3.5-3.8BR	M3.5	3.8	5.6	4.8	4.7	5.2	3.0
I46S-M4-4.7BR	M4	4.7	6.4	5.4	5.3	5.9	3.4
I46S-M5-6.7BR	M5	6.7	8.3	7.2	7.1	8.0	4.4
I46S-M6-7.6BR	M6	7.6	9.5	8.4	8.2	9.2	4.9
I46S-M8-8.5BR	M8	8.5	11.9	10.3	10.2	11.4	6.2
I46S-M10-9.5BR	M10	9.5	14.3	12.5	12.4	13.7	7.5

**NOTES:**

- Last characters of the part number define the material as follows: BR – Brass / Plain Finish.
- Standard specifications are listed in inches. Metric specifications are listed in millimeters.
- Additional lengths, materials and finishes are available by request. Please contact Inserts International to discuss your design preferences.
- Recommended hole size and wall thickness to be confirmed by end user. Performance may vary for different plastics.

# I-46L Series

- ◆ HEAT/ULTRASONIC INSTALLATION
- ◆ HIGH TORQUE AND PULL OUT RESISTANCE
- ◆ SELF-ALIGNING FEATURE EASES INSTALLATION
- ◆ DESIGNED FOR USE IN A TAPERED HOLE



## STANDARD SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT Φ	"C" PILOT Φ	RECOMMENDED "G" (±.001)	HOLE "H" (±.001)	MIN. WALL THICKNESS
I46L-02-56-188BR	2-56	.188	.136	.115	.107	.123	.080
I46L-04-40-219BR	4-40	.219	.172	.144	.141	.159	.093
I46L-06-32-250BR	6-32	.250	.220	.190	.185	.206	.116
I46L-08-32-312BR	8-32	.312	.250	.212	.208	.234	.133
I46L-10-24-375BR	10-24	.375	.297	.251	.246	.277	.159
I46L-10-32-375BR	10-32	.375	.297	.251	.246	.277	.159
I46L-14-20-500BR	1/4-20	.500	.375	.332	.321	.363	.194
I46L-14-28-500BR	1/4-28	.500	.375	.332	.321	.363	.194
I46L-516-18-562BR	5/16-18	.562	.469	.406	.401	.448	.245
I46L-516-24-562BR	5/16-24	.562	.469	.406	.401	.448	.245
I46L-38-16-625BR	3/8-16	.625	.563	.493	.488	.540	.293
I46L-38-24-625BR	3/8-24	.625	.563	.493	.488	.540	.293



## METRIC SPECIFICATIONS

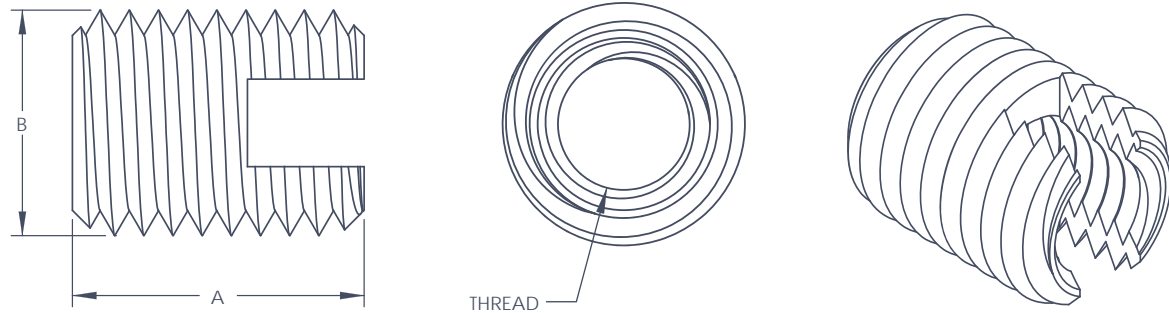
PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT Φ	"C" PILOT Φ	RECOMMENDED "G" (±.03)	HOLE "H" (±.03)	MIN. WALL THICKNESS
I46L-M2-4.8BR	M2	4.8	3.5	2.9	2.7	3.1	2.0
I46L-M2.5-5.6BR	M2.5	5.6	4.4	3.7	3.6	4.0	2.4
I46L-M3-6.4BR	M3	6.4	5.6	4.8	4.7	5.2	3.0
I46L-M3.5-6.4BR	M3.5	6.4	5.6	4.8	4.7	5.2	3.0
I46L-M4-7.9BR	M4	7.9	6.4	5.4	5.3	5.9	3.4
I46L-M5-11.1BR	M5	11.1	8.3	7.2	7.1	8.0	4.4
I46L-M6-12.7BR	M6	12.7	9.5	8.4	8.2	9.2	4.9
I46L-M8-14.3BR	M8	14.3	11.9	10.3	10.2	11.4	6.2
I46L-M10-15.9BR	M10	15.9	14.3	12.5	12.4	13.7	7.5

**NOTES:**

- Last characters of the part number define the material as follows: BR – Brass / Plain Finish.
- Standard specifications are listed in inches. Metric specifications are listed in millimeters.
- Additional lengths, materials and finishes are available by request. Please contact Inserts International to discuss your design preferences.
- Recommended hole size and wall thickness to be confirmed by end user. Performance may vary for different plastics.

# I-55 Series

- ◆ TAPPING MACHINE INSTALLATION
- ◆ HIGH PULL OUT PERFORMANCE
- ◆ ABLE TO CARRY HIGH LOADS IN WEAK PLASTICS



## STANDARD SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT Ø	THERMOPLASTICS RECOMMENDED HOLE SIZE (+.004/- .000)	THERMOSETTING RECOMMENDED HOLE SIZE (+.004/- .000)
I55-02-56-236BR	2-56	.236	.177	.157-.161	.161-.169
I55-04-40-236BR	4-40	.236	.177	.157-.161	.161-.169
I55-06-32-315BR	6-32	.315	.236	.209-.213	.217-.224
I55-08-32-315BR	8-32	.315	.256	.228-.232	.236-.244
I55-10-24-394BR	10-24	.394	.315	.280-.283	.287-.299
I55-10-32-394BR	10-32	.394	.315	.280-.283	.287-.299
I55-14-20-551BR	1/4-20	.551	.394	.339-.346	.354-.370
I55-14-28-551BR	1/4-28	.551	.394	.339-.346	.354-.370
I55-516-18-591BR	5/16-18	.591	.472	.417-.425	.433-.449
I55-516-24-591BR	5/16-24	.591	.472	.417-.425	.433-.449
I55-38-16-709BR	3/8-16	.709	.551	.496-.504	.512-.528
I55-38-24-709BR	3/8-24	.709	.551	.496-.504	.512-.528



## METRIC SPECIFICATIONS

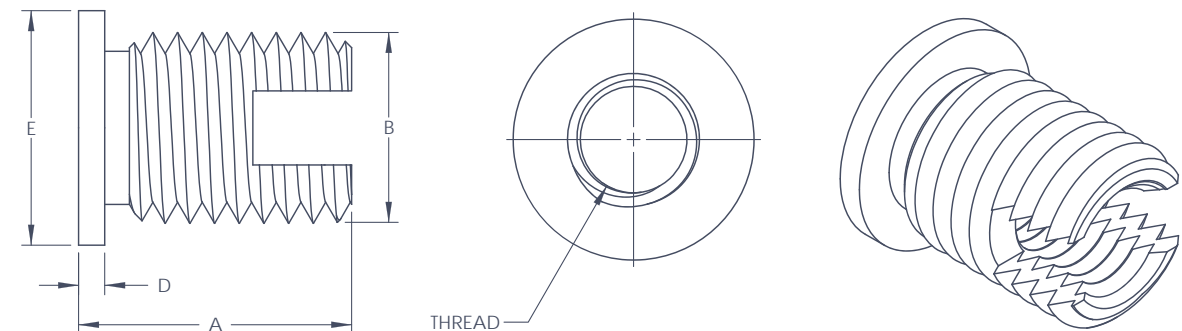
PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT Ø	THERMOPLASTICS RECOMMENDED HOLE SIZE (+.1/- .0)	THERMOSETTING RECOMMENDED HOLE SIZE (+.1/- .0)
I55-M2-6.0BR	M2	6.0	4.5	4.0-4.1	4.1-4.3
I55-M2.5-6.0BR	M2.5	6.0	4.5	4.0-4.1	4.1-4.3
I55-M3-6.0BR	M3	6.0	5.0	4.5-4.6	4.6-4.8
I55-M3.5-8.0BR	M3.5	8.0	6.0	5.3-5.4	5.5-5.7
I55-M4-8.0BR	M4	8.0	6.5	5.8-5.9	6.0-6.2
I55-M5-10.0BR	M5	10.0	8.0	7.1-7.2	7.3-7.6
I55-M6-14.0BR	M6	14.0	10.0	8.6-8.8	9.0-9.4
I55-M8-15.0BR	M8	15.0	12.0	10.6-10.8	11.0-11.4
I55-M10-18.0BR	M10	18.0	14.0	12.6-12.8	13.0-13.4

**NOTES:**

- Last characters of the part number define the material as follows: BR – Brass / Plain Finish.
- Standard specifications are listed in inches. Metric specifications are listed in millimeters.
- Additional lengths, materials and finishes are available by request. Please contact Inserts International to discuss your design preferences.
- Recommended hole size and wall thickness to be confirmed by end user. Performance may vary for different plastics.

# I-64 Series

- ◆ TAPPING MACHINE INSTALLATION
- ◆ HIGH PULL OUT PERFORMANCE
- ◆ ABLE TO CARRY HIGH LOADS IN WEAK PLASTICS
- ◆ HEAD PROVIDES GREATER BEARING SURFACE



## STANDARD SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT Ø	"D" HEAD THICKNESS	"E" HEAD Ø	THERMOPLASTICS RECOMMENDED HOLE SIZE (+.004/- .000)	THERMOSETTING RECOMMENDED HOLE SIZE (+.004/- .000)
I64-02-56-236BR	2-56	.236	.177	.023	.236	.157-.161	.161-.169
I64-04-40-236BR	4-40	.236	.177	.023	.236	.157-.161	.161-.169
I64-06-32-315BR	6-32	.315	.236	.029	.295	.209-.213	.217-.224
I64-08-32-315BR	8-32	.315	.256	.035	.312	.228-.232	.236-.244
I64-10-24-394BR	10-24	.394	.315	.042	.374	.280-.283	.287-.299
I64-10-32-394BR	10-32	.394	.315	.042	.374	.280-.283	.287-.299
I64-14-20-551BR	1/4-20	.551	.394	.052	.472	.339-.346	.354-.370
I64-14-28-551BR	1/4-28	.551	.394	.052	.472	.339-.346	.354-.370
I64-516-18-591BR	5/16-18	.591	.472	.052	.551	.417-.425	.433-.449
I64-516-24-591BR	5/16-24	.591	.472	.052	.551	.417-.425	.433-.449
I64-38-16-709BR	3/8-16	.709	.551	.062	.630	.496-.504	.512-.528
I64-38-24-709BR	3/8-24	.709	.551	.062	.630	.496-.504	.512-.528



## METRIC SPECIFICATIONS

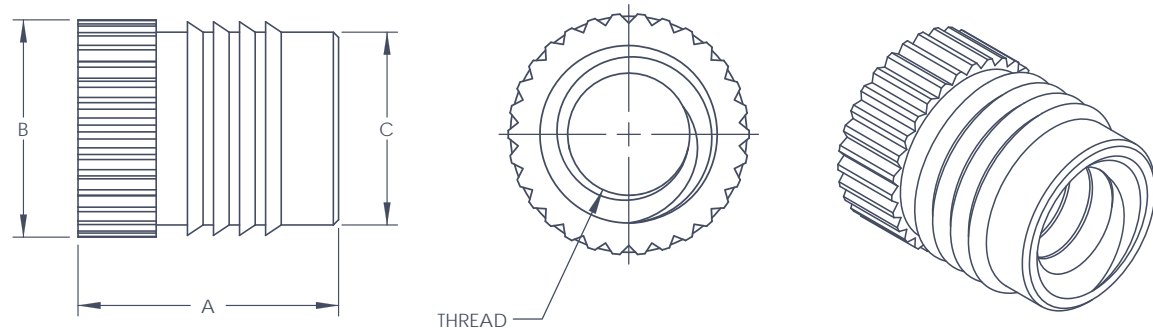
PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT Ø	"D" HEAD THICKNESS	"E" HEAD Ø	THERMOPLASTICS RECOMMENDED HOLE SIZE (+.1/- .0)	THERMOSETTING RECOMMENDED HOLE SIZE (+.1/- .0)
I64-M2-6.0BR	M2	6.0	4.5	0.58	6.0	4.0-4.1	4.1-4.3
I64-M2.5-6.0BR	M2.5	6.0	4.5	0.58	6.0	4.0-4.1	4.1-4.3
I64-M3-6.0BR	M3	6.0	5.0	0.58	6.5	4.5-4.6	4.6-4.8
I64-M3.5-8.0BR	M3.5	8.0	6.0	0.73	7.5	5.3-5.4	5.5-5.7
I64-M4-8.0BR	M4	8.0	6.5	0.89	8.0	5.8-5.9	6.0-6.2
I64-M5-10.0BR	M5	10.0	8.0	1.06	9.5	7.1-7.2	7.3-7.6
I64-M6-14.0BR	M6	14.0	10.0	1.32	12.0	8.6-8.8	9.0-9.4
I64-M8-15.0BR	M8	15.0	12.0	1.32	14.0	10.6-10.8	11.0-11.4
I64-M10-18.0BR	M10	18.0	14.0	1.57	16.0	12.6-12.8	13.0-13.4

**NOTES:**

- Last characters of the part number define the material as follows: BR – Brass / Plain Finish.
- Standard specifications are listed in inches. Metric specifications are listed in millimeters.
- Additional lengths, materials and finishes are available by request. Please contact Inserts International to discuss your design preferences.
- Recommended hole size and wall thickness to be confirmed by end user. Performance may vary for different plastics.

# I-72 Series

- ◆ PRESS-IN INSTALLATION
- ◆ SHARP FINS AND STRAIGHT KNURLS OFFER INCREASED PULL OUT AND TORQUE PERFORMANCE
- ◆ SELF-ALIGNING FEATURE EASES INSTALLATION



## STANDARD SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT $\Phi$	"C" PILOT $\Phi$	FINS	RECOMMENDED HOLE SIZE (+.004/- .000)	MIN. WALL THICKNESS
I72-02-56-157BR	2-56	.157	.147	.123	2	.126	.063
I72-04-40-187BR	4-40	.187	.178	.154	3	.157	.079
I72-06-32-250BR	6-32	.250	.209	.185	4	.189	.094
I72-08-32-312BR	8-32	.312	.240	.218	5	.220	.110
I72-10-24-375BR	10-24	.375	.274	.248	5	.252	.126
I72-10-32-375BR	10-32	.375	.274	.248	5	.252	.128
I72-14-20-500BR	1/4-20	.500	.337	.310	7	.315	.157
I72-14-28-500BR	1/4-28	.500	.337	.310	7	.315	.157
I72-516-18-500BR	5/16-18	.500	.400	.375	7	.378	.189
I72-516-24-500BR	5/16-24	.500	.400	.375	7	.378	.189



## METRIC SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT $\Phi$	"C" PILOT $\Phi$	FINS	RECOMMENDED HOLE SIZE (+.1/- .0)	MIN. WALL THICKNESS
I72-M2-4.0BR	M2	4.0	3.7	3.1	2	3.2	1.6
I72-M2.5-4.8BR	M2.5	4.8	4.5	3.9	3	4.0	2.0
I72-M3-4.8BR	M3	4.8	4.5	3.9	3	4.0	2.0
I72-M3.5-6.4BR	M3.5	6.4	5.3	4.7	4	4.8	2.4
I72-M4-7.9BR	M4	7.9	6.1	5.5	5	5.6	2.8
I72-M5-9.5BR	M5	9.5	7.0	6.3	5	6.4	3.2
I72-M6-12.7BR	M6	12.7	8.6	7.9	7	8.0	4.0
I72-M8-12.7BR	M8	12.7	10.2	9.5	7	9.6	4.8

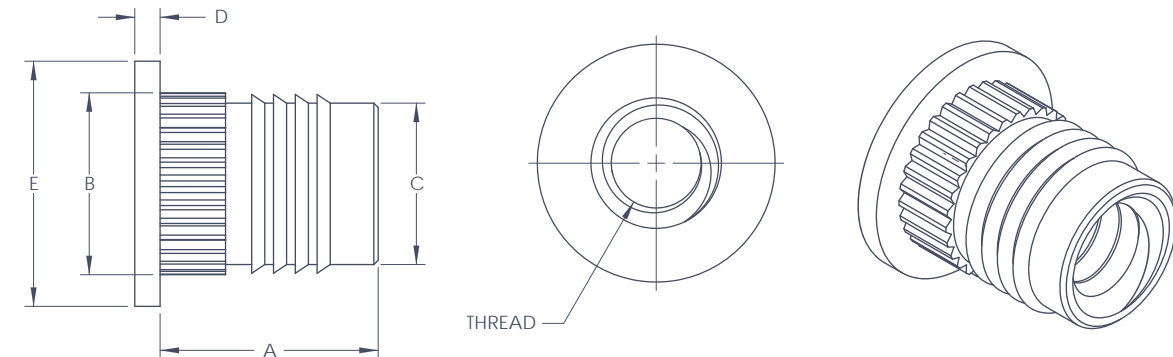


**NOTES:**

- Last characters of the part number define the material as follows: BR – Brass / Plain Finish.
- Standard specifications are listed in inches. Metric specifications are listed in millimeters.
- Additional lengths, materials and finishes are available by request. Please contact Inserts International to discuss your design preferences.
- Recommended hole size and wall thickness to be confirmed by end user. Performance may vary for different plastics.

# I-77 Series

- ◆ PRESS-IN INSTALLATION
- ◆ SHARP FINS AND STRAIGHT KNURLS OFFER INCREASED PULL OUT AND TORQUE PERFORMANCE
- ◆ SELF-ALIGNING FEATURE EASES INSTALLATION
- ◆ HEAD PROVIDES GREATER BEARING SURFACE



## STANDARD SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT $\Phi$	"C" PILOT $\Phi$	"D" HEAD THICKNESS	"E" HEAD $\Phi$	FINS	RECOMMENDED HOLE SIZE (+.004/- .001)	MIN. WALL THICKNESS
I77-02-56-157BR	2-56	.157	.147	.123	.018	.189	2	.126	.063
I77-04-40-187BR	4-40	.187	.178	.154	.023	.217	3	.157	.079
I77-06-32-250BR	6-32	.250	.209	.185	.029	.250	4	.189	.094
I77-08-32-312BR	8-32	.312	.240	.218	.035	.281	5	.220	.110
I77-10-24-375BR	10-24	.375	.274	.248	.042	.312	5	.252	.126
I77-10-32-375BR	10-32	.375	.274	.248	.042	.312	5	.252	.128
I77-14-20-500BR	1/4-20	.500	.337	.310	.052	.375	7	.315	.157
I77-14-28-500BR	1/4-28	.500	.337	.310	.052	.375	7	.315	.157
I77-516-18-500BR	5/16-18	.500	.400	.375	.052	.433	7	.378	.189
I77-516-24-500BR	5/16-24	.500	.400	.375	.052	.433	7	.378	.189



## METRIC SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT $\Phi$	"C" PILOT $\Phi$	"D" HEAD THICKNESS	"E" HEAD $\Phi$	FINS	RECOMMENDED HOLE SIZE (+.1/- .0)	MIN. WALL THICKNESS
I77-M2-4.0BR	M2	4.0	3.7	3.1	0.45	4.8	2	3.2	1.6
I77-M2.5-4.8BR	M2.5	4.8	4.5	3.9	0.58	5.5	3	4.0	2.0
I77-M3-4.8BR	M3	4.8	4.5	3.9	0.58	5.5	3	4.0	2.0
I77-M3.5-6.4BR	M3.5	6.4	5.3	4.7	0.74	6.4	4	4.8	2.4
I77-M4-7.9BR	M4	7.9	6.1	5.5	0.89	7.1	5	5.6	2.8
I77-M5-9.5BR	M5	9.5	7.0	6.3	1.07	7.9	5	6.4	3.2
I77-M6-12.7BR	M6	12.7	8.6	7.9	1.32	9.5	7	8.0	4.0
I77-M8-12.7BR	M8	12.7	10.2	9.5	1.32	11.0	7	9.6	4.8

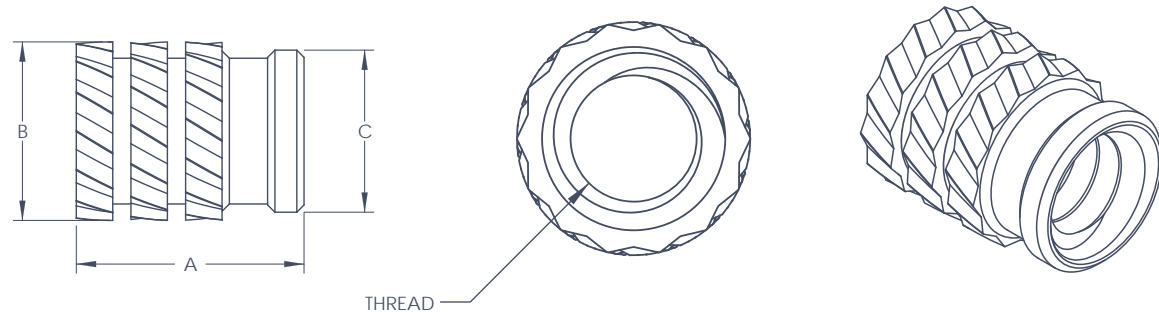


**NOTES:**

- Last characters of the part number define the material as follows: BR – Brass / Plain Finish.
- Standard specifications are listed in inches. Metric specifications are listed in millimeters.
- Additional lengths, materials and finishes are available by request. Please contact Inserts International to discuss your design preferences.
- Recommended hole size and wall thickness to be confirmed by end user. Performance may vary for different plastics.

# I-85 Series

- ◆ PRESS-IN INSTALLATION (HOLE SHOULD BE MOLDED PRIOR TO INSERTION)
- ◆ HIGH TORQUE PERFORMANCE
- ◆ MOST COMMONLY USED IN THERMOSET PLASTICS
- ◆ SELF-ALIGNING FEATURE EASES INSTALLATION



## STANDARD SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT Ø	"C" PILOT Ø	RECOMMENDED HOLE SIZE (+.004/- .000)	MIN. WALL THICKNESS
I85-02-56-162BR	2-56	.162	.131	.117	.122	.063
I85-04-40-208BR	4-40	.208	.165	.146	.150	.079
I85-06-32-247BR	6-32	.247	.196	.178	.181	.098
I85-08-32-292BR	8-32	.292	.228	.209	.213	.098
I85-10-24-326BR	10-24	.326	.259	.241	.244	.098
I85-10-32-326BR	10-32	.326	.259	.241	.244	.098
I85-14-20-362BR	1/4-20	.362	.332	.304	.307	.110
I85-14-28-362BR	1/4-28	.362	.332	.304	.307	.110
I85-516-18-362BR	5/16-18	.362	.383	.365	.366	.150
I85-516-24-362BR	5/16-24	.362	.383	.365	.366	.150
I85-38-16-362BR	3/8-16	.362	.499	.481	.484	.197
I85-38-24-362BR	3/8-24	.362	.499	.481	.484	.197



## METRIC SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT Ø	"C" PILOT Ø	RECOMMENDED HOLE SIZE (+.1/- .0)	MIN. WALL THICKNESS
I85-M2-4.1BR	M2	4.1	3.3	3.0	3.1	1.6
I85-M2.5-5.3BR	M2.5	5.3	4.2	3.7	3.8	2.0
I85-M3-5.3BR	M3	5.3	4.2	3.7	3.8	2.0
I85-M3.5-6.3BR	M3.5	6.3	5.0	4.5	4.6	2.5
I85-M4-7.4BR	M4	7.4	5.8	5.3	5.4	2.5
I85-M5-8.3BR	M5	8.3	6.6	6.1	6.2	2.5
I85-M6-9.2BR	M6	9.2	8.2	7.7	7.8	2.8
I85-M8-9.2BR	M8	9.2	9.7	9.3	9.3	3.8
I85-M10-9.2BR	M10	9.2	12.7	12.2	12.3	5.0

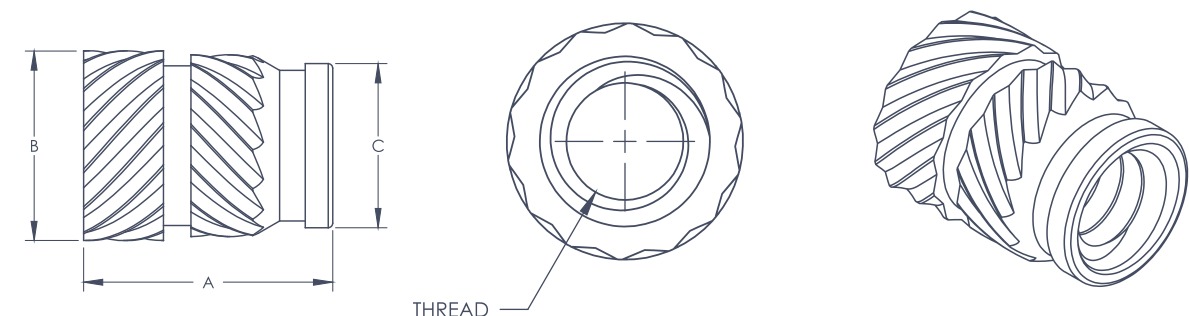


**NOTES:**

- Last characters of the part number define the material as follows: BR – Brass / Plain Finish.
- Standard specifications are listed in inches. Metric specifications are listed in millimeters.
- Additional lengths, materials and finishes are available by request. Please contact Inserts International to discuss your design preferences.
- Recommended hole size and wall thickness to be confirmed by end user. Performance may vary for different plastics.

# I-86 Series

- ◆ HEAT/ULTRASONIC INSTALLATION
- ◆ HIGH TORQUE AND PULL OUT RESISTANCE
- ◆ SELF-ALIGNING FEATURE EASES INSTALLATION
- ◆ DESIGNED FOR USE IN A STRAIGHT HOLE



## STANDARD SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT Ø	"C" PILOT Ø	RECOMMENDED HOLE SIZE (+.004/- .000)	MIN. WALL THICKNESS
I86-02-56-157BR	2-56	.157	.141	.123	.126	.051
I86-04-40-226BR	4-40	.226	.181	.154	.157	.063
I86-06-32-281BR	6-32	.281	.214	.185	.189	.071
I86-08-32-321BR	8-32	.321	.248	.218	.220	.083
I86-10-24-375BR	10-24	.375	.278	.249	.252	.102
I86-10-32-375BR	10-32	.375	.278	.249	.252	.102
I86-14-20-500BR	1/4-20	.500	.341	.312	.315	.130
I86-14-28-500BR	1/4-28	.500	.341	.312	.315	.130
I86-516-18-500BR	5/16-18	.500	.403	.374	.378	.177
I86-516-24-500BR	5/16-24	.500	.403	.374	.378	.177
I86-38-16-500BR	3/8-16	.500	.494	.465	.469	.236
I86-38-24-500BR	3/8-24	.500	.494	.465	.469	.236



## METRIC SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT Ø	"C" PILOT Ø	RECOMMENDED HOLE SIZE (+.1/- .0)	MIN. WALL THICKNESS
I86-M2-4.0BR	M2	4.0	3.6	3.1	3.2	1.3
I86-M2.5-5.7BR	M2.5	5.7	4.6	3.9	4.0	1.6
I86-M3-5.7BR	M3	5.7	4.6	3.9	4.0	1.6
I86-M3.5-7.1BR	M3.5	7.1	5.4	4.7	4.8	1.8
I86-M4-8.1BR	M4	8.1	6.3	5.5	5.6	2.1
I86-M5-9.5BR	M5	9.5	7.1	6.3	6.4	2.6
I86-M6-12.7BR	M6	12.7	8.7	7.9	8.0	3.3
I86-M8-12.7BR	M8	12.7	10.2	9.5	9.6	4.5
I86-M10-12.7BR	M10	12.7	12.6	11.8	11.9	6.0

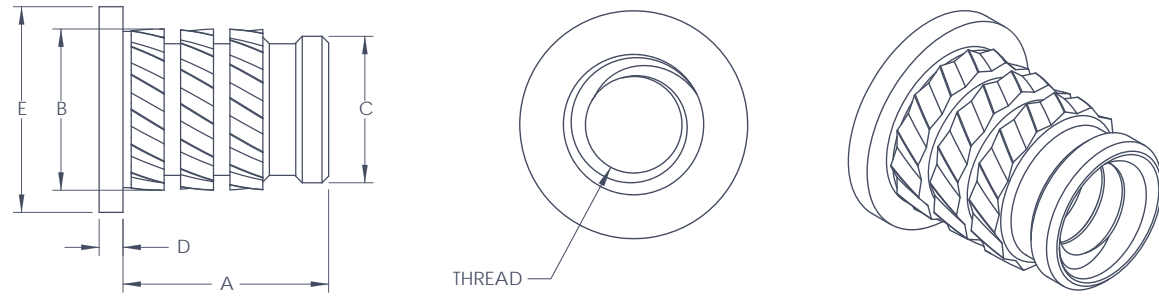


**NOTES:**

- Last characters of the part number define the material as follows: BR – Brass / Plain Finish.
- Standard specifications are listed in inches. Metric specifications are listed in millimeters.
- Additional lengths, materials and finishes are available by request. Please contact Inserts International to discuss your design preferences.
- Recommended hole size and wall thickness to be confirmed by end user. Performance may vary for different plastics.

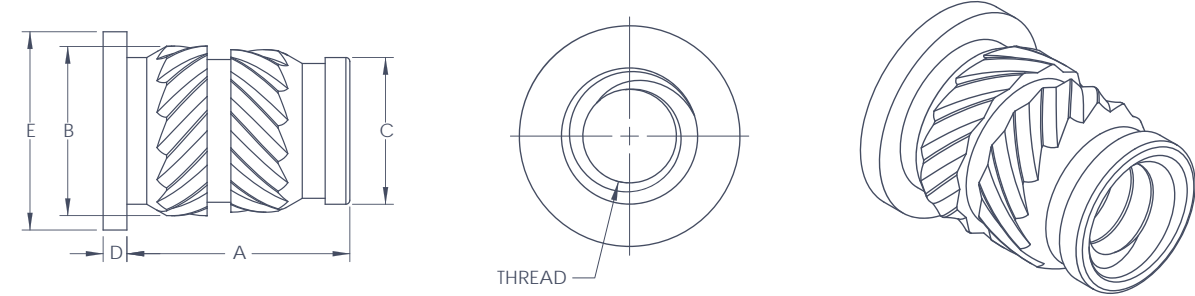
# I-87 Series

- ◆ PRESS-IN INSTALLATION (HOLE SHOULD BE MOLDED PRIOR TO INSERTION)
- ◆ HIGH TORQUE PERFORMANCE
- ◆ MOST COMMONLY USED IN THERMOSET PLASTICS
- ◆ SELF-ALIGNING FEATURE EASES INSTALLATION
- ◆ HEAD PROVIDES GREATER BEARING SURFACE



# I-88 Series

- ◆ HEAT/ULTRASONIC INSTALLATION
- ◆ HIGH TORQUE AND PULL OUT RESISTANCE
- ◆ SELF-ALIGNING FEATURE EASES INSTALLATION
- ◆ HEAD PROVIDES GREATER BEARING SURFACE



## STANDARD SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT Φ	"C" PILOT Φ	"D" HEAD THICKNESS	"E" HEAD Φ	RECOMMENDED HOLE SIZE (+.004/-0.000)	MIN. WALL THICKNESS
I87-02-56-162BR	2-56	.162	.131	.117	.020	.187	.122	.063
I87-04-40-208BR	4-40	.208	.165	.146	.023	.218	.150	.079
I87-06-32-247BR	6-32	.247	.196	.178	.029	.250	.181	.098
I87-08-32-292BR	8-32	.292	.228	.209	.035	.281	.213	.098
I87-10-24-326BR	10-24	.326	.259	.241	.042	.312	.244	.098
I87-10-32-326BR	10-32	.326	.259	.241	.042	.312	.244	.098
I87-14-20-362BR	1/4-20	.362	.332	.304	.052	.375	.307	.110
I87-14-28-362BR	1/4-28	.362	.332	.304	.052	.375	.307	.110
I87-516-18-362BR	5/16-18	.362	.383	.365	.052	.437	.366	.150
I87-516-24-362BR	5/16-24	.362	.383	.365	.052	.437	.366	.150
I87-38-16-362BR	3/8-16	.362	.499	.481	.062	.551	.484	.197
I87-38-24-362BR	3/8-24	.362	.499	.481	.062	.551	.484	.197



## STANDARD SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT Φ	"C" PILOT Φ	"D" HEAD THICKNESS	"E" HEAD Φ	RECOMMENDED HOLE SIZE (+.004/-0.000)	MIN. WALL THICKNESS
I88-02-56-157BR	2-56	.157	.141	.123	.021	.187	.126	.051
I88-04-40-226BR	4-40	.226	.181	.154	.024	.218	.157	.063
I88-06-32-281BR	6-32	.281	.214	.185	.030	.250	.189	.071
I88-08-32-321BR	8-32	.321	.248	.218	.036	.281	.220	.083
I88-10-24-375BR	10-24	.375	.278	.249	.043	.312	.252	.102
I88-10-32-375BR	10-32	.375	.278	.249	.043	.312	.252	.102
I88-14-20-500BR	1/4-20	.500	.341	.312	.053	.375	.315	.130
I88-14-28-500BR	1/4-28	.500	.341	.312	.053	.375	.315	.130
I88-516-18-500BR	5/16-18	.500	.403	.374	.053	.437	.378	.177
I88-516-24-500BR	5/16-24	.500	.403	.374	.053	.437	.378	.177
I88-38-16-500BR	3/8-16	.500	.494	.465	.063	.551	.469	.236
I88-38-24-500BR	3/8-24	.500	.494	.465	.063	.551	.469	.236



## METRIC SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT Φ	"C" PILOT Φ	"D" HEAD THICKNESS	"E" HEAD Φ	RECOMMENDED HOLE SIZE (+.1/-0)	MIN. WALL THICKNESS
I87-M2-4.1BR	M2	4.1	3.3	3.0	0.51	4.8	3.1	1.6
I87-M2.5-5.3BR	M2.5	5.3	4.2	3.7	0.58	5.5	3.8	2.0
I87-M3-5.3BR	M3	5.3	4.2	3.7	0.58	5.5	3.8	2.0
I87-M3.5-6.3BR	M3.5	6.3	5.0	4.5	0.74	6.4	4.6	2.5
I87-M4-7.4BR	M4	7.4	5.8	5.3	0.89	7.1	5.4	2.5
I87-M5-8.3BR	M5	8.3	6.6	6.1	1.07	7.9	6.2	2.5
I87-M6-9.2BR	M6	9.2	8.2	7.7	1.32	9.5	7.8	2.8
I87-M8-9.2BR	M8	9.2	9.7	9.3	1.32	11.1	9.3	3.8
I87-M10-9.2BR	M10	9.2	12.7	12.2	1.57	14.0	12.3	5.0



## METRIC SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT Φ	"C" PILOT Φ	"D" HEAD THICKNESS	"E" HEAD Φ	RECOMMENDED HOLE SIZE (+.1/-0)	MIN. WALL THICKNESS
I88-M2-4.0BR	M2	4.0	3.6	3.1	0.53	4.8	3.2	1.3
I88-M2.5-5.7BR	M2.5	5.7	4.6	3.9	0.61	5.5	4.0	1.6
I88-M3-5.7BR	M3	5.7	4.6	3.9	0.61	5.5	4.0	1.6
I88-M3.5-7.1BR	M3.5	7.1	5.4	4.7	0.76	6.4	4.8	1.8
I88-M4-8.1BR	M4	8.1	6.3	5.5	0.91	7.1	5.6	2.1
I88-M5-9.5BR	M5	9.5	7.1	6.3	1.09	7.9	6.4	2.6
I88-M6-12.7BR	M6	12.7	8.7	7.9	1.35	9.5	8.0	3.3
I88-M8-12.7BR	M8	12.7	10.2	9.5	1.35	11.1	9.6	4.5
I88-M10-12.7BR	M10	12.7	12.6	11.8	1.60	14.0	11.9	6.0



**NOTES:**

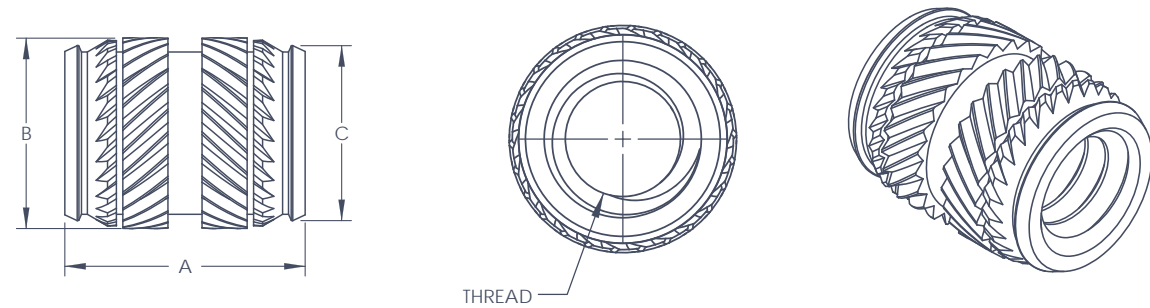
- Last characters of the part number define the material as follows: BR – Brass / Plain Finish.
- Standard specifications are listed in inches. Metric specifications are listed in millimeters.
- Additional lengths, materials and finishes are available by request. Please contact Inserts International to discuss your design preferences.
- Recommended hole size and wall thickness to be confirmed by end user. Performance may vary for different plastics.

**NOTES:**

- Last characters of the part number define the material as follows: BR – Brass / Plain Finish.
- Standard specifications are listed in inches. Metric specifications are listed in millimeters.
- Additional lengths, materials and finishes are available by request. Please contact Inserts International to discuss your design preferences.
- Recommended hole size and wall thickness to be confirmed by end user. Performance may vary for different plastics.

# I-90 Series

- ◆ SYMMETRICAL PROFILE ASSISTS WITH AUTOMATIC FEEDING
- ◆ HIGH TORQUE AND PULL OUT RESISTANCE
- ◆ SELF-ALIGNING FEATURE EASES INSTALLATION



## STANDARD SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT $\Phi$	"C" PILOT $\Phi$	RECOMMENDED HOLE SIZE (+.004/- .000)	MIN. WALL THICKNESS
I90-02-56-155BR	2-56	.155	.137	.123	.125	.051
I90-04-40-224BR	4-40	.224	.174	.154	.157	.063
I90-06-32-279BR	6-32	.279	.205	.185	.189	.071
I90-08-32-319BR	8-32	.319	.239	.218	.220	.083
I90-10-24-373BR	10-24	.373	.269	.249	.252	.102
I90-10-32-373BR	10-32	.373	.269	.249	.252	.102
I90-14-20-498BR	1/4-20	.498	.333	.312	.315	.130
I90-14-28-498BR	1/4-28	.498	.333	.312	.315	.130
I90-516-18-498BR	5/16-18	.498	.394	.374	.378	.177
I90-516-24-498BR	5/16-24	.498	.394	.374	.378	.177
I90-38-16-498BR	3/8-16	.498	.485	.465	.469	.236
I90-38-24-498BR	3/8-24	.498	.485	.465	.469	.236

## METRIC SPECIFICATIONS

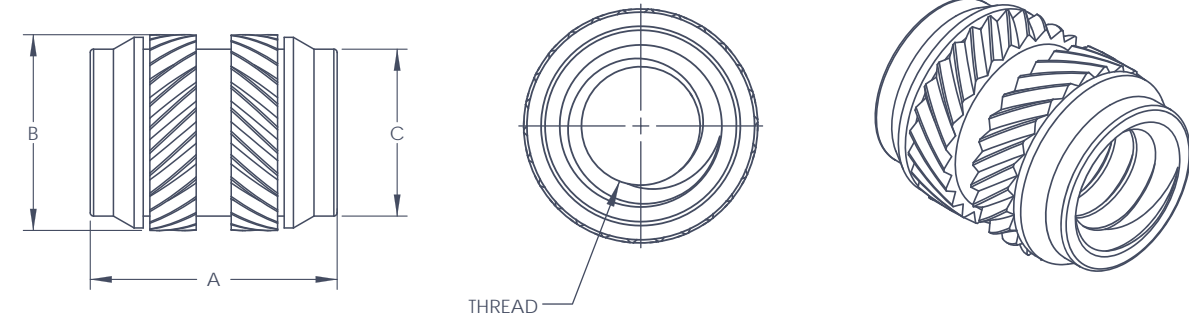
PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT $\Phi$	"C" PILOT $\Phi$	RECOMMENDED HOLE SIZE (+.1/- .0)	MIN. WALL THICKNESS
I90-M2-4.0BR	M2	4.0	3.5	3.1	3.2	1.3
I90-M2.5-5.7BR	M2.5	5.7	4.4	3.9	4.0	1.6
I90-M3-5.7BR	M3	5.7	4.4	3.9	4.0	1.6
I90-M3.5-7.1BR	M3.5	7.1	5.2	4.7	4.8	1.8
I90-M4-8.1BR	M4	8.1	6.1	5.5	5.6	2.1
I90-M5-9.5BR	M5	9.5	6.8	6.3	6.4	2.6
I90-M6-12.7BR	M6	12.7	8.5	7.9	8.0	3.3
I90-M8-12.7BR	M8	12.7	10.0	9.5	9.6	4.5
I90-M10-12.7BR	M10	12.7	12.3	11.8	11.9	6.0

**NOTES:**

- Last characters of the part number define the material as follows: BR – Brass / Plain Finish.
- Standard specifications are listed in inches. Metric specifications are listed in millimeters.
- Additional lengths, materials and finishes are available by request. Please contact Inserts International to discuss your design preferences.
- Recommended hole size and wall thickness to be confirmed by end user. Performance may vary for different plastics.

# I-91 Series

- ◆ SYMMETRICAL PROFILE ASSISTS WITH AUTOMATIC FEEDING
- ◆ HIGH TORQUE AND PULL OUT RESISTANCE
- ◆ SELF-ALIGNING FEATURE EASES INSTALLATION



## STANDARD SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT $\Phi$	"C" PILOT $\Phi$	RECOMMENDED HOLE SIZE (+.004/- .000)	MIN. WALL THICKNESS
I91-02-56-155BR	2-56	.155	.137	.123	.125	.051
I91-04-40-224BR	4-40	.224	.174	.154	.157	.063
I91-06-32-279BR	6-32	.279	.205	.185	.189	.071
I91-08-32-319BR	8-32	.319	.239	.218	.220	.083
I91-10-24-373BR	10-24	.373	.269	.249	.252	.102
I91-10-32-373BR	10-32	.373	.269	.249	.252	.102
I91-14-20-498BR	1/4-20	.498	.333	.312	.315	.130
I91-14-28-498BR	1/4-28	.498	.333	.312	.315	.130
I91-516-18-498BR	5/16-18	.498	.394	.374	.378	.177
I91-516-24-498BR	5/16-24	.498	.394	.374	.378	.177
I91-38-16-498BR	3/8-16	.498	.485	.465	.469	.236
I91-38-24-498BR	3/8-24	.498	.485	.465	.469	.236

## METRIC SPECIFICATIONS

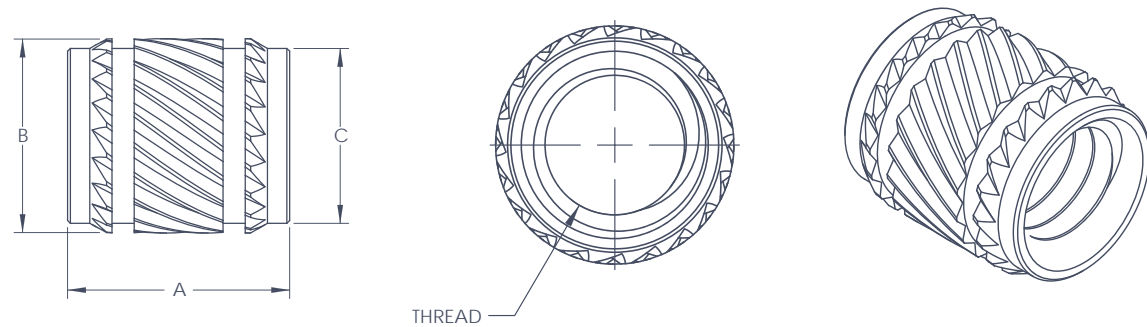
PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT $\Phi$	"C" PILOT $\Phi$	RECOMMENDED HOLE SIZE (+.1/- .0)	MIN. WALL THICKNESS
I91-M2-4.0BR	M2	4.0	3.5	3.1	3.2	1.3
I91-M2.5-5.7BR	M2.5	5.7	4.4	3.9	4.0	1.6
I91-M3-5.7BR	M3	5.7	4.4	3.9	4.0	1.6
I91-M3.5-7.1BR	M3.5	7.1	5.2	4.7	4.8	1.8
I91-M4-8.1BR	M4	8.1	6.1	5.5	5.6	2.1
I91-M5-9.5BR	M5	9.5	6.8	6.3	6.4	2.6
I91-M6-12.7BR	M6	12.7	8.5	7.9	8.0	3.3
I91-M8-12.7BR	M8	12.7	10.0	9.5	9.6	4.5
I91-M10-12.7BR	M10	12.7	12.3	11.8	11.9	6.0

**NOTES:**

- Last characters of the part number define the material as follows: BR – Brass / Plain Finish.
- Standard specifications are listed in inches. Metric specifications are listed in millimeters.
- Additional lengths, materials and finishes are available by request. Please contact Inserts International to discuss your design preferences.
- Recommended hole size and wall thickness to be confirmed by end user. Performance may vary for different plastics.

# I-92 Series

- ◆ SYMMETRICAL PROFILE ASSISTS WITH AUTOMATIC FEEDING
- ◆ MINIATURE INSERT - IDEAL FOR USE IN SMALL PLASTIC PRODUCTS
- ◆ ALLOWS FOR COMPACT BOSS DESIGN



## METRIC SPECIFICATIONS

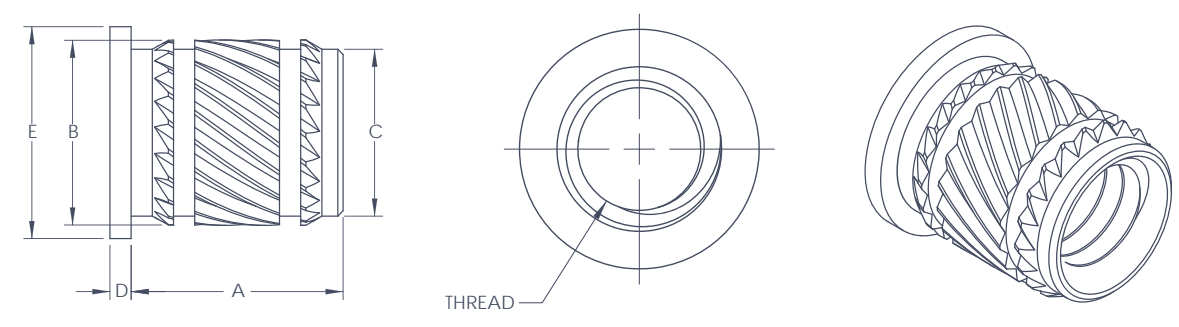
PART NUMBER METRIC	THREAD	"A" INSERT LENGTH	"B" INSERT Φ	"C" PILOT Φ	RECOMMENDED HOLE SIZE (+ .1 / - .0)	MIN. WALL THICKNESS
I92-M1.6-3.0BR	M1.6	3.0	2.5	2.1	2.2	0.8
I92-M2-3.0BR	M2	3.0	3.0	2.6	2.7	0.8
I92-M2.5-4.0BR	M2.5	4.0	3.7	3.2	3.2	1.0

**NOTES:**

- Last characters of the part number define the material as follows: BR – Brass / Plain Finish.
- Standard specifications are listed in inches. Metric specifications are listed in millimeters.
- Additional lengths, materials and finishes are available by request. Please contact Inserts International to discuss your design preferences.
- Recommended hole size and wall thickness to be confirmed by end user. Performance may vary for different plastics.

# I-93 Series

- ◆ MINIATURE INSERT - IDEAL FOR USE IN SMALL PLASTIC PRODUCTS
- ◆ ALLOWS FOR COMPACT BOSS DESIGN



## METRIC SPECIFICATIONS

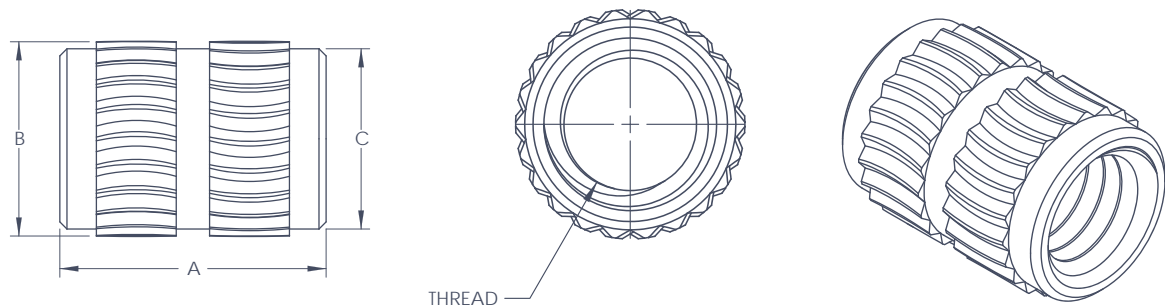
PART NUMBER METRIC	THREAD	"A" INSERT LENGTH	"B" INSERT Φ	"C" PILOT Φ	"D" HEAD THICKNESS	"E" HEAD Φ	RECOMMENDED HOLE SIZE (+ .1 / - .0)	MIN. WALL THICKNESS
I92-M1.6-3.0BR	M1.6	3.0	2.5	2.1	0.40	3.0	2.2	0.8
I92-M2-3.0BR	M2	3.0	3.0	2.6	0.40	3.5	2.7	0.8
I92-M2.5-4.0BR	M2.5	4.0	3.7	3.2	0.40	4.0	3.2	1.0

**NOTES:**

- Last characters of the part number define the material as follows: BR – Brass / Plain Finish.
- Standard specifications are listed in inches. Metric specifications are listed in millimeters.
- Additional lengths, materials and finishes are available by request. Please contact Inserts International to discuss your design preferences.
- Recommended hole size and wall thickness to be confirmed by end user. Performance may vary for different plastics.


# I-96 Series

- ◆ HEAT INSTALLATION
- ◆ SUITABLE FOR USE IN AMORPHOUS THERMOPLASTICS
- ◆ ROUNDED KRURL PATTERN REDUCES STRESS ON THE BOSS
- ◆ HIGH TORQUE PERFORMANCE
- ◆ IDEAL FOR USE WITH AUTOMATED ASSEMBLY SYSTEMS




## STANDARD SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT $\Phi$	"C" PILOT $\Phi$	RECOMMENDED HOLE SIZE (+.004/-0.000)	MIN. WALL THICKNESS
I96-02-56-155BR	2-56	.155	.137	.123	.126	.055
I96-04-40-228BR	4-40	.228	.174	.154	.157	.071
I96-06-32-281BR	6-32	.281	.206	.185	.189	.083
I96-08-32-320BR	8-32	.320	.239	.218	.220	.094
I96-10-24-374BR	10-24	.374	.270	.249	.252	.110
I96-10-32-374BR	10-32	.374	.270	.249	.252	.110
I96-14-20-500BR	1/4-20	.500	.333	.312	.315	.142
I96-14-28-500BR	1/4-28	.500	.333	.312	.315	.142
I96-516-18-500BR	5/16-18	.500	.393	.375	.378	.197
I96-516-24-500BR	5/16-24	.500	.393	.375	.378	.197



## METRIC SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT $\Phi$	"C" PILOT $\Phi$	RECOMMENDED HOLE SIZE (+.1/-0)	MIN. WALL THICKNESS
I96-M2-3.9BR	M2	3.9	3.5	3.1	3.2	1.4
I96-M2.5-5.8BR	M2.5	5.8	4.4	3.9	4.0	1.8
I96-M3-5.8BR	M3	5.8	4.4	3.9	4.0	1.8
I96-M3.5-7.1BR	M3.5	7.1	5.2	4.7	4.8	2.1
I96-M4-8.1BR	M4	8.1	6.1	5.5	5.6	2.4
I96-M5-9.5BR	M5	9.5	6.9	6.3	6.4	2.8
I96-M6-12.7BR	M6	12.7	8.5	7.9	8.0	3.6
I96-M8-12.7BR	M8	12.7	10.0	9.5	9.6	5.0

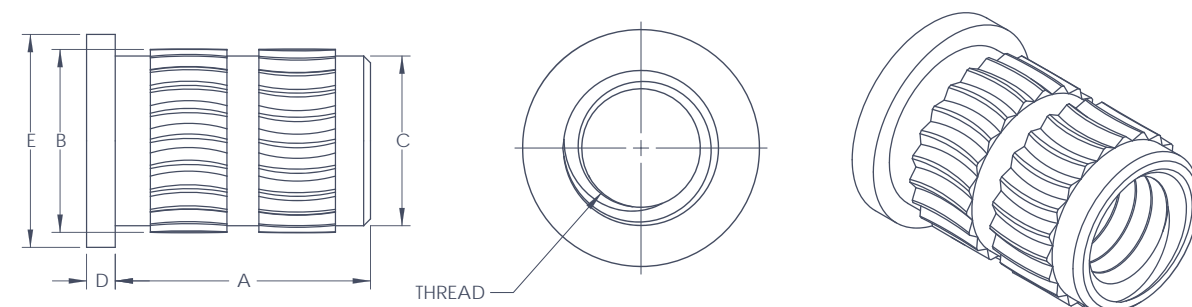


**NOTES:**

- Last characters of the part number define the material as follows: BR – Brass / Plain Finish.
- Standard specifications are listed in inches. Metric specifications are listed in millimeters.
- Additional lengths, materials and finishes are available by request. Please contact Inserts International to discuss your design preferences.
- Recommended hole size and wall thickness to be confirmed by end user. Performance may vary for different plastics.


# I-97 Series

- ◆ HEAT INSTALLATION
- ◆ SUITABLE FOR USE IN AMORPHOUS THERMOPLASTICS
- ◆ ROUNDED KRURL PATTERN REDUCES STRESS ON THE BOSS
- ◆ HIGH TORQUE PERFORMANCE
- ◆ HEAD PROVIDES GREATER BEARING SURFACE




## STANDARD SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT $\Phi$	"C" PILOT $\Phi$	"D" HEAD THICKNESS	"E" HEAD $\Phi$	RECOMMENDED HOLE SIZE (+.004/-0.000)	MIN. WALL THICKNESS
I97-02-56-155BR	2-56	.155	.137	.123	.020	.187	.126	.055
I97-04-40-228BR	4-40	.228	.174	.154	.023	.217	.157	.071
I97-06-32-281BR	6-32	.281	.206	.185	.029	.250	.189	.083
I97-08-32-320BR	8-32	.320	.239	.218	.035	.280	.220	.094
I97-10-24-374BR	10-24	.374	.270	.249	.042	.312	.252	.110
I97-10-32-374BR	10-32	.374	.270	.249	.042	.312	.252	.110
I97-14-20-500BR	1/4-20	.500	.333	.312	.052	.375	.315	.142
I97-14-28-500BR	1/4-28	.500	.333	.312	.052	.375	.315	.142
I97-516-18-500BR	5/16-18	.500	.393	.375	.052	.437	.378	.197
I97-516-24-500BR	5/16-24	.500	.393	.375	.052	.437	.378	.197



## METRIC SPECIFICATIONS

PART NUMBER	THREAD	"A" INSERT LENGTH	"B" INSERT $\Phi$	"C" PILOT $\Phi$	"D" HEAD THICKNESS	"E" HEAD $\Phi$	RECOMMENDED HOLE SIZE (+.1/-0)	MIN. WALL THICKNESS
I97-M2-3.9BR	M2	3.9	3.5	3.1	0.51	4.8	3.2	1.4
I97-M2.5-5.8BR	M2.5	5.8	4.4	3.9	0.58	5.5	4.0	1.8
I97-M3-5.8BR	M3	5.8	4.4	3.9	0.58	5.5	4.0	1.8
I97-M3.5-7.1BR	M3.5	7.1	5.2	4.7	0.74	6.4	4.8	2.1
I97-M4-8.1BR	M4	8.1	6.1	5.5	0.89	7.1	5.6	2.4
I97-M5-9.5BR	M5	9.5	6.9	6.3	1.07	7.9	6.4	2.8
I97-M6-12.7BR	M6	12.7	8.5	7.9	1.32	9.5	8.0	3.6
I97-M8-12.7BR	M8	12.7	10.0	9.5	1.32	11.1	9.6	5.0



**NOTES:**

- Last characters of the part number define the material as follows: BR – Brass / Plain Finish.
- Standard specifications are listed in inches. Metric specifications are listed in millimeters.
- Additional lengths, materials and finishes are available by request. Please contact Inserts International to discuss your design preferences.
- Recommended hole size and wall thickness to be confirmed by end user. Performance may vary for different plastics.

# WORKING TOGETHER

Please contact Inserts International to discuss your print, usage and engineering requirements. Below are some items to consider when starting a new project:

## INSTALLATION METHOD

- How do you plan on installing the insert?
- Will you be using an automated assembly process?
- If insert molding, what size core pin will be used?

## PRODUCTION & APPLICATION

- Which industry will employ the final product/assembly?
- Does the insert need to withstand a high temperature environment?
- Are there any torque and/or pull out requirements?
- Will value engineering proposals [to lower cost] be considered?
- Is Level 3 PPAP required with sample submission?

## FINISH SPECIFICATIONS

- Will the part require a protective coating?
- Are there any salt spray and/or corrosion requirements?

## PROJECT TIMELINE

- When is the project expected to launch?
- Are there any trial and/or production dates we should be aware of?

Any additional information you feel is important is also important to us. At Inserts International, we are always striving to satisfy our customers. We invite your inquiries and look forward to the opportunity of earning your business!

# CONTACT US:

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HOURS OF OPERATION:

MONDAY-FRIDAY 8:00AM - 4:30PM

