

Metal-Tack[®] Selection Guide



Division of Gripnail Corporation

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Select the Right Metal-Tack for Your Application

Metal-Tacks are available in three materials, three head diameters, two point lengths and graduated grip ranges from .010" to .125". Use the Selection Chart and the following guidelines to help you select the best Metal-Tack for your application. Contact Amtak Customer Service if you have any questions.

Qualifying Your Application

Metal-Tack selection is based upon two factors. The material that is going to be fastened (attachment) and the material that the attachment is going to be fastened to (base metal).

ATTACHMENT– The part that you are fastening is referred to as the attachment. Typical attachments are nameplates, wiring clips and small components. The attachment will need to have a hole in it and will be secured between the head of the Metal-Tack and the base metal. Consult the Selection Chart for a range of attachment hole sizes. Larger holes provide an easier "target" for the operator.

BASE METAL– Metal-Tacks will fasten to most malleable metals including steel, stainless steel, brass, bronze and aluminum. Metal-Tacks will also fasten to many grades of cast iron and die cast material. It is best to select an RDS tack for cast iron class 35 and higher and a large point fastener is recommended for softer materials such as zinc die-castings and aluminum.

Tack Material and Corrosion Resistance

Standard Metal-Tacks are manufactured from carbon steel, and are zinc chromate plated. They will pass a minimum 120-hour salt spray test in accordance with ASTM B117. They may be driven into base metals as hard as HRB90.

Stainless Steel Metal-Tacks are manufactured from Carpenter 455 stainless steel and are not plated. The fasteners have a small amount of carbon and form slight blush rust after exposure to corrosive environments. They can penetrate base metals as hard as HRB90 as well as many grades of stainless steel.

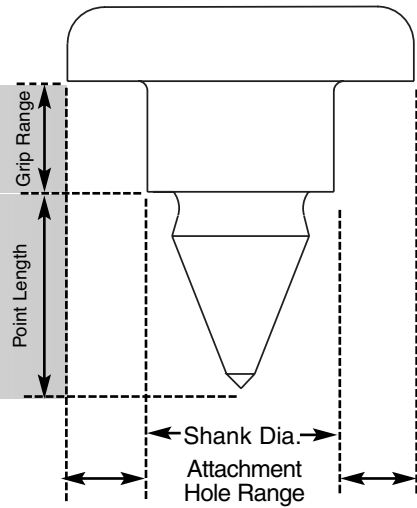
RDS Metal-Tacks are manufactured from a special steel alloy that allows them to become harder and tougher than standard fasteners. RDS Metal-Tacks can penetrate materials as hard as HRB100. They are also zinc chromate plated for the same corrosion protection as standard tacks.

Special Fasteners & Platings: If the exact fastener for your application does not appear on the Selection Chart, call us to see if we might be able to make it for you. Many special sized Metal-Tacks have been produced with a variety of grip lengths, shank diameters and point lengths for specific applications. Fasteners can also be manufactured with crossed drilled holes for attaching wires. Special platings are also available to meet particular corrosion or cosmetic requirements.

Important Dimensions

Grip Range: Your attachment (nameplate, wire clip etc.) must fit between the head of the Metal-Tack and the surface of the base metal. The grip range may penetrate the base metal up to .010".

Point Length: Two sizes of point lengths are offered (.062" & .106"). Use the larger point for increased withdrawal resistance except in thin metals.



Attachment Hole Range:

The hole in your attachment must be greater than the shank diameter and less than the head diameter. A larger hole gives the operator an easier "target".

Metal-Tack Selection Chart

	Grip Range (Attachment thickness)	Attachment Hole Range	Part Numbers			Shank Dia.	Point Length
			Carbon Steel	Stainless Steel	RDS Steel		
41 Series	.020 - .030	.187 - .219	4136			.149 - .175**	0.106
1/4" Head Dia.	.015 - .025	.125 - .219	4164	4364		.096 - .118	0.106
Large Points	.030 - .040	.157 - .219	4139	4339		.104 - .137	0.106
	.050 - .060	.187 - .219	4156			.123 - .175	0.106
	.060 - .070	.187 - .219	4148			.104 - .164	0.106
	.115 - .125	.187 - .219	4106			.104 - .178	0.106
Small Point	.010 - .020	.109 - .219	4138			.069 - .086	0.062
31,33,34 Series	.010 - .020	.109 - .156	3158	3358	3458	0.104	0.106
3/16" Head Dia.	.020 - .030	.109 - .156	3170	3370		0.104	0.106
Large Points	.020 - .030	.109 - .156	3161*			0.104	0.106
	.030 - .040	.109 - .156	3126	3326	3426	0.104	0.106
	.050 - .060	.109 - .156	3123			0.104	0.106
	.060 - .070	.109 - .156	3124			0.104	0.106
Small Point	.015 - .025	.094 - .156	3155	3355		0.086	0.062
	.030 - .040	.094 - .156	3105	3305		0.086	0.062
51 Series	.010 - .020	.109 - .125	5158			0.104	0.106
5/32" Head Dia.	.020 - .030	.109 - .125	5170			0.104	0.106
Large Point	.030 - .040	.109 - .125	5126			0.104	0.106

Notes: * 3161 has a beveled head edge
 ** All 41 Series Metal-Tacks have tapered shanks

Application Equipment

Air Hammer & Driver Selection

A lightweight, portable air hammer #221 is used for making attachments to large pieces of equipment or machinery. This tool was designed specifically for applying Metal-Tacks and operates between 60 to 90 psi. The Metal-Tack is held on the tip of a magnetic driver, which allows the operator a clear view of his fastening operation.

Selecting a Magnetic Driver

Two types of drivers are available for applying Metal-Tacks.

Recessed Drivers have a slight counter bore in the tip, which allows for the fastener to be centered on the driver. This also assists the operator in steadying the fastener. These drivers are particularly helpful when fasteners are being applied to a vertical surface.



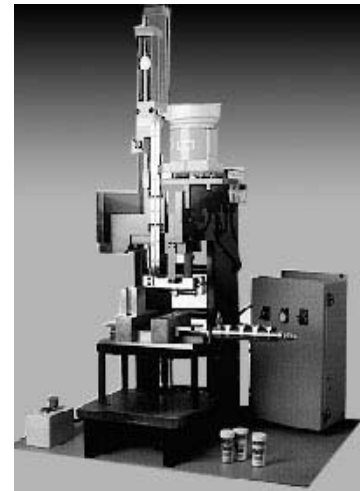
Flat Faced Drivers have a smooth face and may be used with all sizes of Metal-Tacks.

Extended Drivers are available for applications where additional clearance is needed between the air hammer and the base metal.

Automated Equipment

The Metal-Tack Bench Press can be ordered in any one of four levels of automation and may also be integrated into assembly line operations. The press features an air over oil drive cylinder for a quick approach stroke and minimum power stroke. The manual model press uses simple hand positioning for both fasteners and components.

A vibratory bowl fastener feed and multiple component feeds may be added to create a totally hands free fastening system.



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