

# **MULTINOX™**

**Full T304 Stainless Steel Lockbolt System**





GOEBEL FASTENERS INC. is a subsidiary of GOEBEL GmbH, which has been the leading corporation in Europe for specialty fastener technology since 1979. We founded our U.S. headquarters in 2016, located in Houston, TX with one goal in mind. To provide unparalleled high quality products and first class service to each and every customer. Our products demonstrate innovation that not only exceeds the norm, but enhances quality, reduces maintenance, and increases application efficiency.

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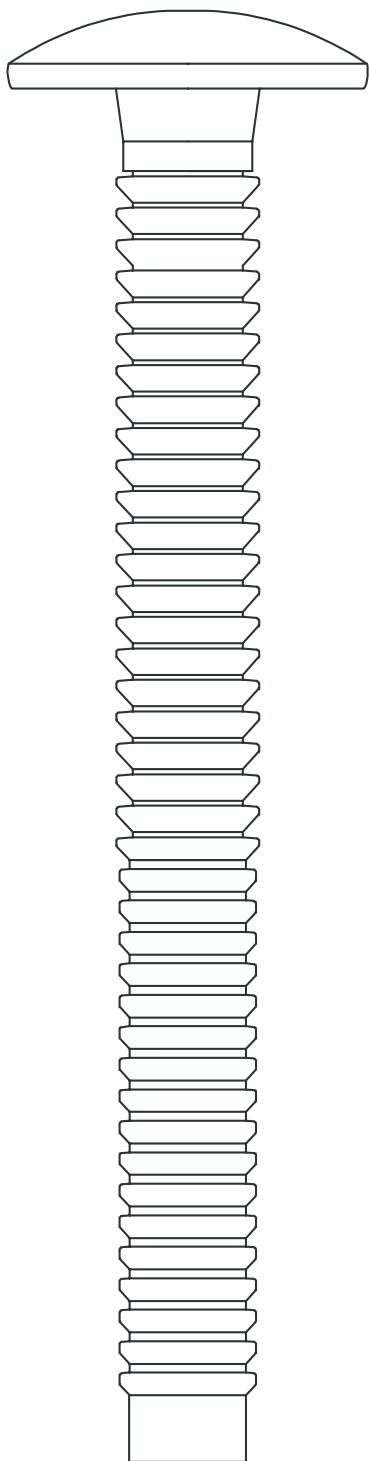
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# MULTINOX™

## Full T304 Stainless Steel Lockbolt System



In applications where a wide grip range is needed and a consistent flush pin break to the collar is favorable, the Goebel Multinox™ is the new and improved standard in the market. Essentially the Multinox's wide grip range and various sizes can replace up to 14 sizes of the classic 6-groove locking fastener system.

Similar to all Goebel engineered fasteners, the Multinox™ provides a top level of quality and vibration resistance. The Multinox™ installs consistently with reliable and identical installed values.

Available Sizes: 3/16", 1/4"

Materials: T304 Stainless Steel

Headstyles: Rivet Head, Truss Head, Button Head, 90° Flush Head

## Advantages

- Multi-Grip Design
- High Corrosion Resistance
- Vibration Resistance
- Flush Breaking Pin
- Efficient Installation Process
- Reduced Inventory Needed of Standard Parts

PATENT PENDING



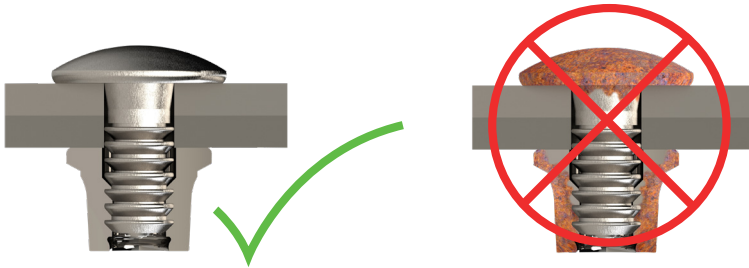
## 1. MULTI-GRIP DESIGN

The **MULTINOX™** wide grip range and various sizes can replace up to 14 sizes of the classic 6-groove locking fastener system. The unparalleled advantage of using a multi-grip part is that it improves cost efficiency, lowers inventory costs, and increases job site performance by simplifying the installation process.



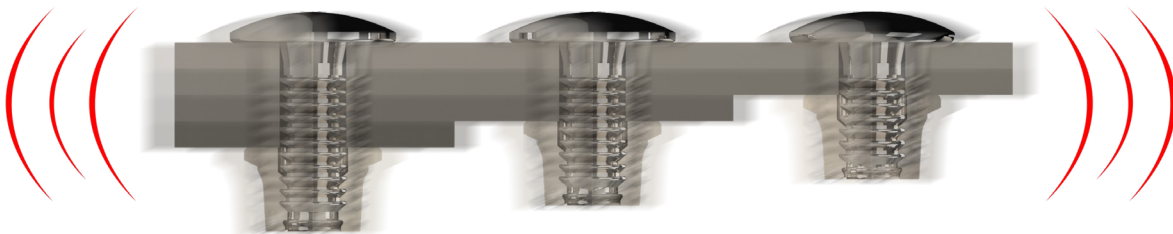
## 2. HIGH CORROSION RESISTANCE

The **MULTINOX™** pin and collar parts are made of polished T304 stainless steel. Upon request the **MULTINOX™** pin can be coated with chrome or nickel plating. These newly developed and patented parts are only available from Goebel and promote a high corrosion resistant solution. Stainless steel is the time proven solution for industrial applications, especially in harsh environments. By using stainless steel parts, the application is guaranteed to have lower maintenance costs, increase structural integrity, and keep investments profitable. Further information on stainless steel can be found on our website.



## 3. VIBRATION RESISTANCE

The **MULTINOX™** has been tested and developed to be vibration resistant in all applications. During the installation process the collar is swagged onto the pin and locks in place via the grooves. The locking feature guarantees consistent clamping forces, shearing and tensile values once installed. You can be certain that once these parts are installed, the application is secure.





#### 4. FLUSH BREAKING PIN

Stainless steel is known as a ductile material and the efforts to guarantee consistent flush breaking was a challenge. To ensure consistency, we developed a patented design that has proven to break flush every time. This is guaranteed by various design factors and thus creates a smooth, safe, and simple installation during every use.



#### 5. EFFICIENT INSTALLATION PROCESS

Goebel offers a wide range of installation tools for our patented **MULTINOX™** T304 Stainless Steel Lockbolt System. They range from hand tools, cordless battery tools, and pneumatic air tools. Choosing the best tool for your application is simple depending on the frequency of use. All our tools are user intuitive and our parts are easy to identify on the job site. **MULTINOX™** lockbolts are installed within seconds and depending on the tool used can be set up to 1,200pcs per hour. The operator can easily identify a solid flush installation and can continue working efficiently.

##### OUR TOOLS FEATURE:

- Ergonomic Design
- Safe & Quiet Setting Process
- Consistent Installation Setting Each Time



#### 6. REDUCED INVENTORY NEEDED OF STANDARD PARTS

The **MULTINOX™** wide grip range and various sizes can replace up to 14 sizes of the classic 6-groove locking fastener system. This major advantage reduces the need to stock multiple parts for various sizes. Creating a cost efficient inventory system is vital in today's manufacturing setting and these parts will help you achieve that. Our Multionx parts will save you time, space, and money by simplifying your inventory process.



**CLASSIC 6-GROOVE LOCKING FASTENER SYSTEM**

VS.



**MULTINOX**





## INSTALLATION SEQUENCE



The Multinox<sup>M</sup> pin is inserted in the prepared hole from one side, whereas the collar is placed on top of the pin's end and is pushed down until it reaches the working piece.



The pin is inserted in the nose piece of the installation tool. The nose piece goes downwards along the pin until it reaches the collar.

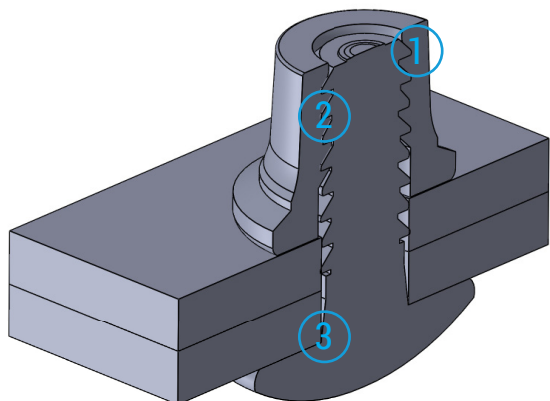


The next step is pushing the button of the installation tool, the swaging process of the collar starts immediately. In the meantime the jaws inside of the mouthpiece started to pull the pin until it breaks off. The setting process is done by now.

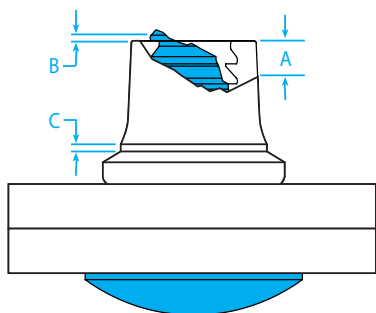


The result is a flush broken pin and a tight fitting collar. The combination of the pin and collar result in a high permanent clamping force and are mechanically locked.

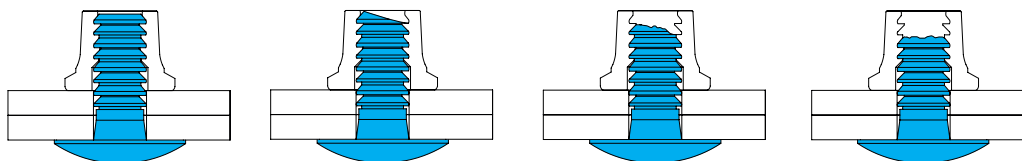
## INSPECTION DATA



- 1 The Multinox™ design guarantees flush breaking stainless steel pins. These pins lock with the custom stainless steel collar. The Multinox™ can be used for various grip ranges and therefore reduce inventory levels.
- 2 The pin grooves are being filled up by collar material during the swaging process. This locks the working piece and results in guaranteed vibration resistance. With increased customer satisfaction and reduced warranty claims, this part is a great solution for any application.
- 3 The Multinox™ lockbolt system has unique features which result in high yield values, consistent clamp loads, and gaps are filled out by the collar swaging process.

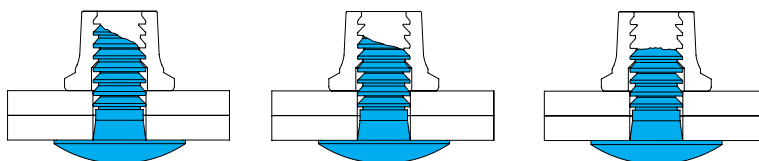


DIAMETER	A MAX	B MAX	C MAX
6 (3/16")	.062	.031	.050
8 (1/4")	.125	.093	.100



Acceptable breaking of the pin.

- flush with the end of the collar
- up to a maximum of two witness marks within the collar



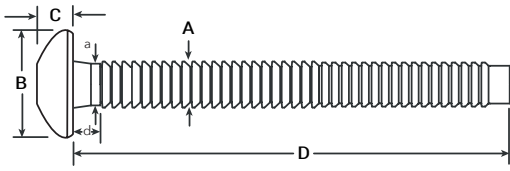
Unacceptable breaking of the pin.

- three witness marks within collar

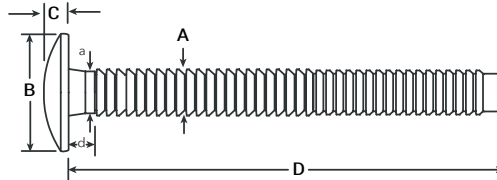


## DATE AND DIMENSION

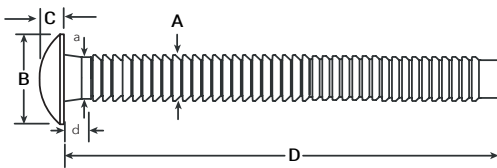
### HEAD STYLE OPTIONS



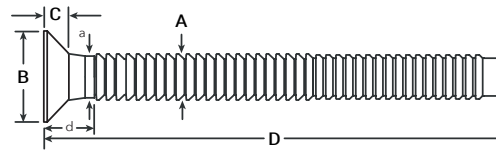
BUTTON HEAD MGBH



TRUSS HEAD MGTH



RIVET HEAD MGRH



90° FLUSH HEAD MGFH

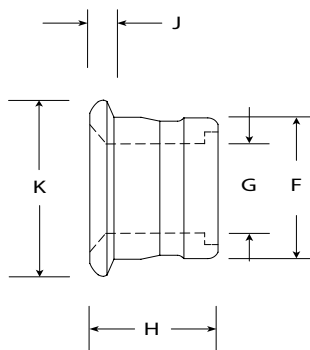
Diameter	Grip Number	Grip Range	Hole Size Range	A MAX	B	C	D	a MAX	d REF
<b>Button Head Dimensions</b>									
6 (3/16")	10	.062-.625	.189-.219	0.188	.360-.390	.111-.127	1.771-1.831	.192	.087
	20	.312-1.250	.189-.219	0.188	.360-.390	.111-.127	2.353-2.413	.192	.312
8 (1/4")	10	.125-.625	0.281	0.250	.480-.520	.135-.155	1.965-2.040	.259	.125
	20	.312-1.250	0.281	0.250	480-.520	.135-.155	2.560-2.635	.259	.312
<b>Truss Head Dimensions</b>									
8 (1/4")	10	.125-.625	.281	.250	.530-.595	.115-.135	1.965-2.040	.259	.125
	20	.312-1.250	.281	.250	.530-.595	.115-.135	2.560-2.635	.259	.312
<b>Rivet Head Dimensions</b>									
6 (3/16")	10	.062-.625	.189-.219	.188	.467-.488	.098-.110	1.771-1.831	.192	.087
	10	.312-1.250	.189-.219	.188	.467-.488	.098-.110	2.353-2.413	.192	.312
<b>90° Flush Head Dimensions</b>									
6 (3/16")	10	.062-.625	.189-.219	.188	.325-.360	.075-.090	1.771-1.831	.192	-
	20	.312-1.250	.189-.219	.188	.325-.360	.075-.090	2.353-2.413	.192	.312
8 (1/4")	10	.125-.625	.281	.250	.435-.475	.115-.130	1.965-2.040	.259	-
	20	.312-1.250	.281	.250	.435-.475	.115-.130	2.560-2.635	.259	.312



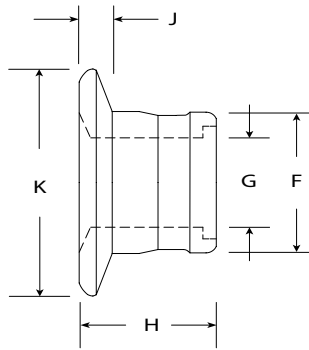


## DATE AND DIMENSION

### COLLAR STYLE OPTIONS



STANDARD FLANGE MGCS



MEDIUM FLANGE MGCM

### COLLAR DIMENSIONS

COLLAR	DIAMETER	F	G	H	K
MGCS	3/16"	.305-.315	.188-.204	.267-.283	.375-.405
	1/4"	.395-.405	.250-.260	.365-.385	.485-.515
MGCM	3/16"	.305-.315	.188-.204	.295-.315	.495-.535
	1/4"	.395-.405	.247-.260	.432-.462	.665-.715

### INSTALLED VALUES IN NOMINAL GRIP (lbs.)

DIAMETER		ALUMINUM		STEEL / STAINLESS STEEL	
		MIN. (lbf.)	TYPICAL (lbf.)	MIN. (lbf.)	TYPICAL (lbf.)
3/16"	Shear	750	1000	1725	2000
	Tensile	900	1300	1650	2700
	Clamp	550	800	1025	1500
1/4"	Shear	1200	1600	2200	2700
	Tensile	1620	2500	2950	4000
	Clamp	950	1400	1350	2000



## ORDERING INFORMATION

### PINS

The table below shows how the item code is created. Please use those charts for ordering.

Example: MGBH-J8-10 is a Multinox fastener, Button Head, Stainless Steel (316), 1/4" Diameter, Grip Range 10

HEAD STYLE	PREFIX	MATERIAL	CODE	DIA.	CODE	GRIP RANGE	CODE	FINISH	CODE
BUTTON HEAD	BH	STEEL	S	3/16"	6	.062-0.625	10	ZINC PLATED	Z
TRUSS HEAD	TH	STAINLESS STEEL 304	I	1/4"	8	.312-.1.250	20	CLEAR CHRO-MATE	C
BROAD TRUSS HEAD	BTH	STAINLESS STEEL 316	J					PASSIVATED	P
RIVET HEAD	RH								
90° FLUSH HEAD	FH								

## ORDERING INFORMATION

### COLLARS

The table below shows how the item code is created. Please use those charts for ordering.

Example: MGCW-J8 is a wide Flange Multinox Collar, Stainless Steel (316), 1/4"

FLANGE STYLE	CODE	MATERIAL	CODE	DIA.	CODE	FINISH	CODE
Multinox Collar Standard	MGCS	ALUMINUM	A	3/16"	6	ZINC PLATED	Z
Multinox Collar Medium	MGCM	STEEL	S	1/4"	8	CLEAR CHROMATE	C
		STAINLESS STEEL 304	I			PASSIVATED	P
		STAINLESS STEEL 316	J				

## TOOLING

### WEIGHT AND DIMENSIONS



GO-12-P

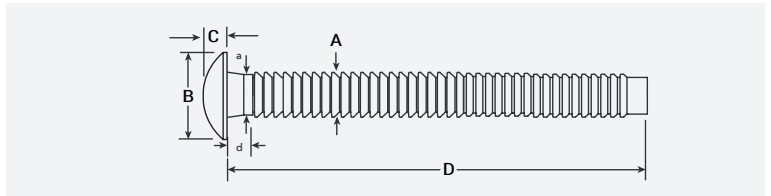
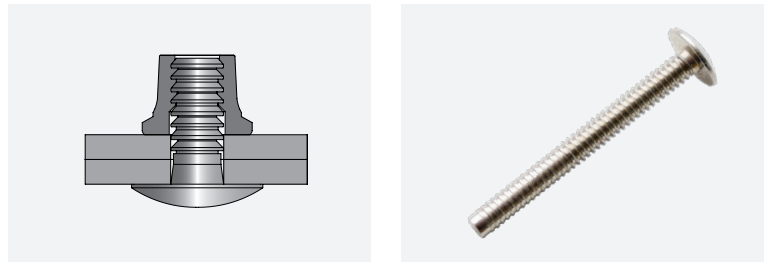


GO 400

MODEL	TYPE	CAPACITY	WEIGHT	LENGTH	HEIGHT	ITEM CODE
GO-12-P	Hand Ratchet Tool	3/16" up to 1/4"	2.43 lbs	7.32"	8.15"	22450 00300
GO 400	Cordless Tool	3/16" up to 1/4"	3.70 lbs	11.42"	11.22"	22660 40102



**LOCKBOLTS - MULTINOX™**  
RIVET HEAD



Body: **AISI 304 STAINLESS STEEL**  
Finish: **POLISHED & PASSIVATED**

DESCRIPTION ITEM-CODE	BODY LENGTH D		GRIP NUMBER	GRIP RANGE		d REF	
	in	mm		in	mm	in	mm
<b>6 3/16" (4.8 mm)</b>							
MGRH-I6-10P	1.771 - 1.831	44.983 - 46.507	10	.0625 - .625	1.588 - 15.875	.087	2.210
MGRH-I6-20P	2.353 - 2.413	59.766 - 61.290	20	.312 - 1.250	7.925 - 31.750	.312	7.925

**6 3/16" (4.8 mm)**  
B = .467-.488" 11.862-12.395 mm  
C = .098-.110" 2.489-2.794 mm  
A MAX = .186" 4.724 mm  
a MAX = .192" 4.887 mm  
Hole Size MAX = .219" 5.563 mm

<b>8 1/4" (6.4 mm)</b>							
MGRH-I8-10P	1.771 - 1.831	44.983 - 46.507	10	.125 - .625	1.588 - 15.875	.125	3.175
MGRH-I8-20P	2.353 - 2.413	59.766 - 61.290	20	.312 - 1.250	7.925 - 31.750	.312	7.925

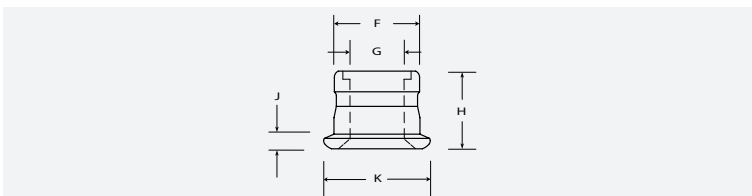
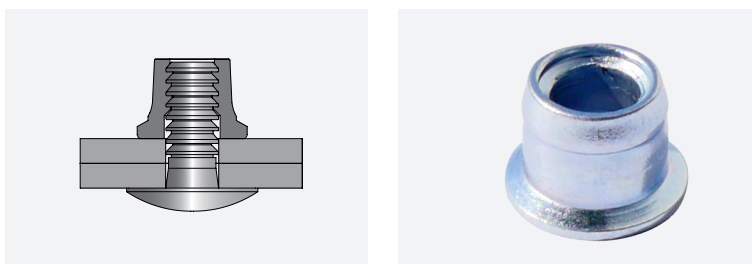
**8 1/4" (6.4 mm)**  
B = .480-.520" 12.192-13.208 mm  
C = .134-.154" 3.404-3.911 mm  
A MAX = .250" 6.350 mm  
a MAX = .259" 6.577 mm  
Hole Size MAX = .281" 7.134 mm

**INSTALLED VALUES IN NOMINAL GRIP FOR STAINLESS STEEL**

DIAMETER	SHEAR		TENSILE		CLAMP	
	MIN. (lbf.)	TYPICAL (lbf.)	MIN. (lbf.)	TYPICAL (lbf.)	MIN. (lbf.)	TYPICAL (lbf.)
	MIN. (kn)	TYPICAL (kn)	MIN. (kn)	TYPICAL (kn)	MIN. (kn)	TYPICAL (kn)
<b>6 3/16" (4.8 mm)</b>						
3/16"	1725	2000	1650	2700	1025	1500
4.8 mm	7.67	8.90	7.34	12.01	4.56	6.67
<b>8 1/4" (6.4 mm)</b>						
1/4"	2200	2700	2950	4000	1350	2000
6.4 mm	9.79	12.01	13.12	17.79	6.00	8.90



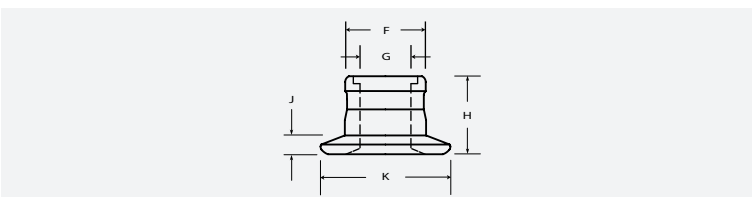
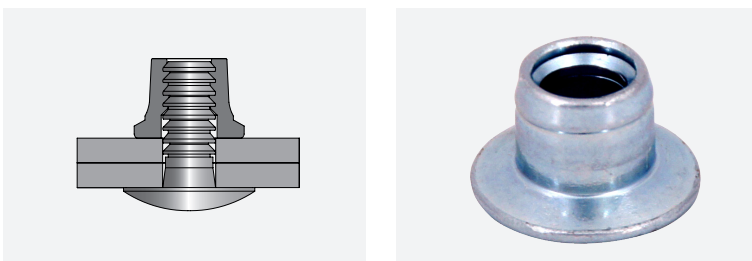
## LOCKBOLTS - COLLAR FOR MULTINOX™ STANDARD



Body: **AISI 304 STAINLESS STEEL**  
Finish: **ZINC PLATED**

DIAMETER	DESCRIPTION ITEM-CODE	BODY LENGTH H in / mm	J REF in / mm	K in / mm	F in / mm	G in / mm
<b>6</b>						
3/16"	MGCS-I6Z	.267 - .283	.055	.375 - .405	.305 - .315	.188 - .204
4.8 mm		6.782 - 7.188	1.400	9.525 - 10.289	7.747 - 8.001	4.995 - 5.182
<b>8</b>						
1/4"	MGCS-I8Z	.367 - .383	.062	.485 - .515	.395 - .405	.250 - .260
6.4 mm		9.322 - 9.728	1.575	12.319 - 13.081	10.033 - 12.573	6.35 - 6.604

## LOCKBOLTS - COLLAR FOR MULTINOX™ MEDIUM



Body: **AISI 304 STAINLESS STEEL**  
Finish: **ZINC PLATED**

DIAMETER	DESCRIPTION ITEM-CODE	BODY LENGTH H in / mm	J REF in / mm	K in / mm	F in / mm	G in / mm
<b>6</b>						
3/16"	MGCM-I6Z	.295 - .315	.100	.490 - .540	.305 - .315	.188 - .204
4.8 mm		7.493 - 8.001	2.540	12.573 - 13.589	10.033 - 12.573	4.995 - 5.182
<b>8</b>						
1/4"	MGCM-I8Z	.432 - .462	.100	.665 - .715	.395 - .405	.250 - .260
6.4 mm		10.972 - 11.734	2.540	16.916 - 18.161	16.891 - 18.161	6.35 - 6.604



NOTES





NOTES

**40 YEARS  
OF  
EXCEEDING EXPECTATIONS**



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