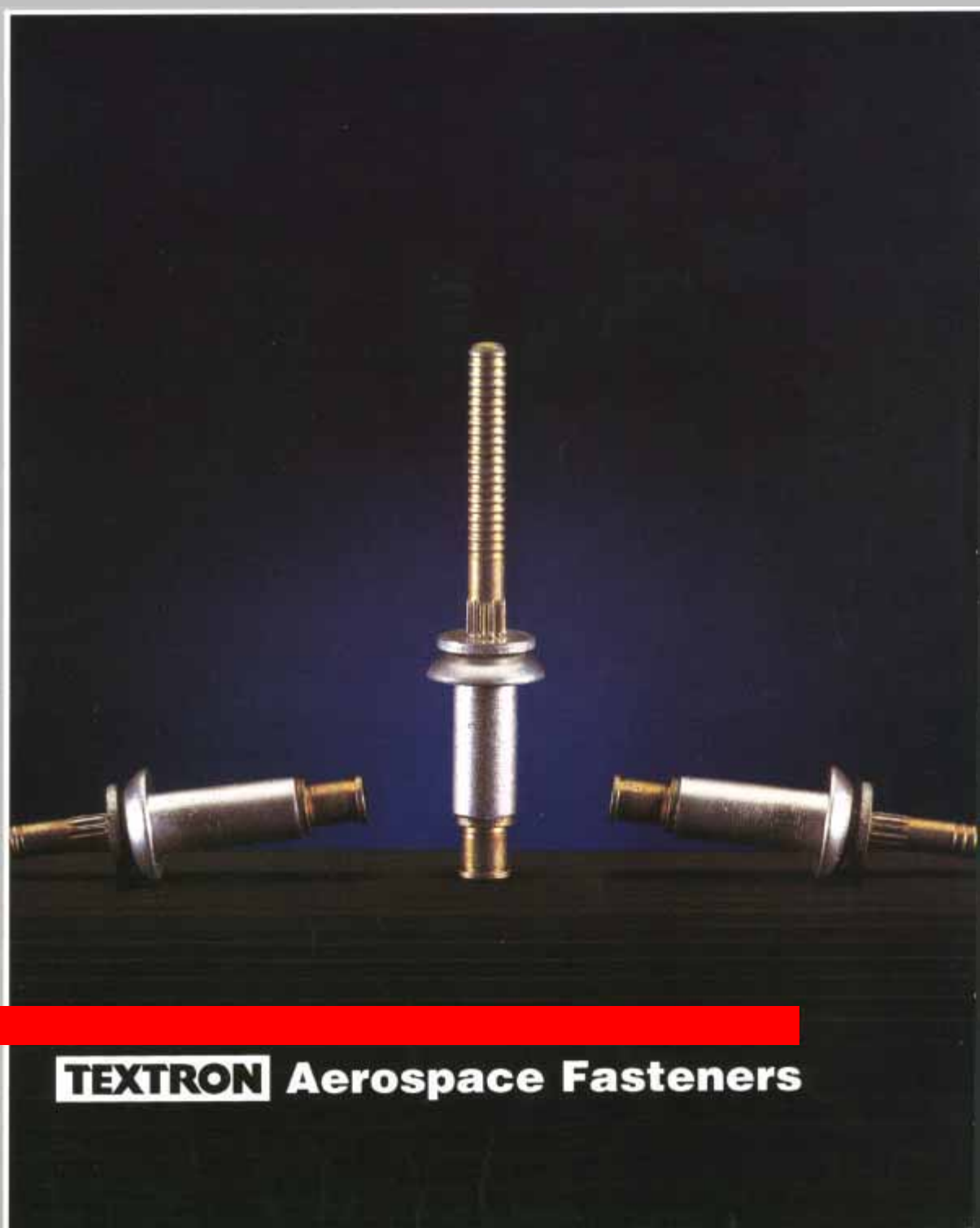
CHERRYMAX® RIVET

U.S. PATENT NO. 4012984



TEXTRON Aerospace Fasteners

WARRANTY

WARRANTY

Textron Aerospace Fasteners, a Division of Textron Inc. (hereinafter "TAF"). hereby warrants to the initial retail customer ("Warrantee") only that its products will be free from defects in material and workmanship, provided that the products are used in accordance with TAFís instruction as to maintenance, operation and use. The foregoing warranty is limited to products that are in the original container and the duration of the warranty is limited to 90 days from the date of first use by the Warrantee.

This Warrantee's only remedy and TAF's only obligation in the event of a defect or failure in the products, is that TAF will, at its sole option, repair, replace, or rework the products, but in no case shall the cost of the foregoing exceed the invoice price of the products.

This Warranty shall be void if any person seeking to make a claim for defective or failed products fails to notify TAF within thirty (30) days after receipt of evidence that the product is defective or has failed, or if said person fails to provide TAF with such evidence as is reasonably requested concerning the defect or failure, including without limitation, evidence of the date of purchase and date of installation.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TAF EXPRESSLY DISCLAIMS LIABILITY FOR ALL INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES ARISING FROM ANY DEFECT OR FAILURE IN ITS PRODUCTS. TAF FURTHER DISCLAIMS ALL LIABILITY RESULTING FROM THE USER'S CHOICE OF ITS PRODUCTS FOR ANY PARTICULAR APPLICATION.

The properties, strengths, dimensions, installed characteristics and all other information in this catalog is for guidance only to aid in the correct selection of the products described herein and is not intended or implied as part of the above warranty. All applications should be evaluated by the user of the products for functional suitability and evaluations.

NOTE: The properties, strengths, dimensions, installed characteristics and all other information in this catalog is for guidance only to aid in the correct selection of the products described herein and is not intended or implied as part of the above warranty. All applications should be evaluated for functional suitability and available samples of the described parts can be requested for installed tests, suitability and evaluations.

Supplier's Federal Identification Code-11815

ATTENTION
Blind rivets are not always a suitable substitute for solid rivets. Maintenance personnel are reminded that AC 43.13-1A chapter 2, section 3 stipulates: "Do not substitute hollow rivets for solid rivets in load carrying members without specific approval of the application by a representative of the Federal Aviation Administration. Blind rivets may be used in blind locations in accordance with the conditions listed in Chapter 5, provided the edgedistances and spacings are not less than the minimum listed in paragraph 99d."

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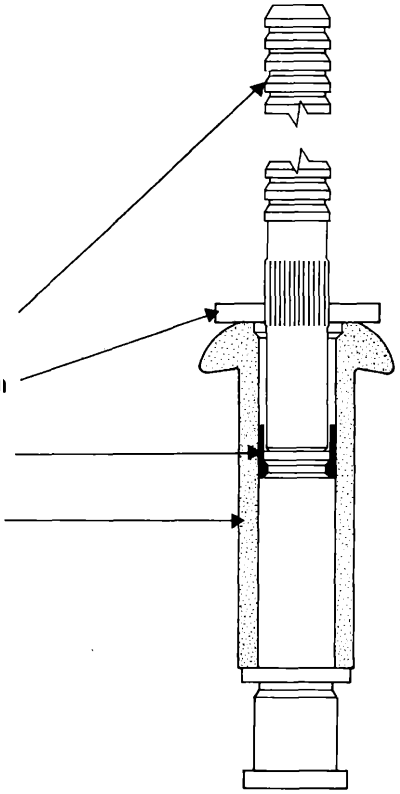
CHERRYMAX® RIVET FEATURES

The CherryMAX® Rivet is the most reliable, high strength structural fastener with visual inspectibility in the world today. It features the “Safe-lock” Locking Collar for more reliable joint integrity. Meets requirements of PS-CMR-3000.

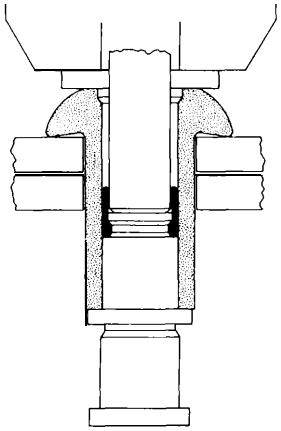
CherryMAX® Rivet consists of four components assembled as a single unit:

1. A fully serrated stem with break notch, shear-ring and integral grip adjustment cone.
2. A driving anvil to insure a visible mechanical lock with each fastener installation.
3. A separate, visible and inspectable locking collar that mechanically locks the stem to the rivet sleeve.
4. A rivet sleeve with recess in the head to receive the locking collar.

Covered by U.S. Patent No. 4012984

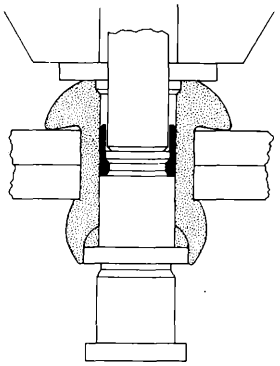


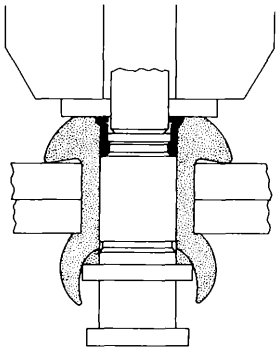
INSTALLATION



① The CherryMAX® Rivet is inserted into the prepared hole. The pulling head (installation tool) is slipped over the rivet’s stem. Applying a firm, steady pressure, which seats the rivet head, the installation tool is then actuated.

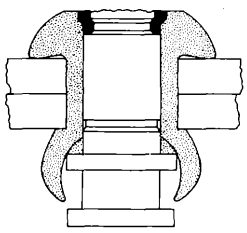
② The pulling head holds the rivet sleeve in place as it begins to pull the rivet stem thru the rivet sleeve. This pulling action causes the stem shear ring to upset the rivet sleeve and form the "bulbed” blind head.





③ The continued pulling action of the installation tool causes the stem shear ring to shear from the main body of the stem as the stem continues to move thru the rivet sleeve. This action allows the fastener to accommodate a minimum of 1/16" variation in structure thickness. The Locking Collar then contacts the Driving Anvil. As the stem continues to be pulled by the action of the installation tool, the "Safe-lock" Locking Collar deforms into the rivet sleeve head recess. Formation of the rivet sleeve's "bulbed” blind head is complete.

④ The "Safe-lock" Locking Collar fills the rivet sleeve head recess, locking the stem and rivet sleeve securely together. Continued pulling by the installation tool causes the stem to fracture at the break notch, providing a flush, burr-free, inspectable installation.



CHERRYMAX ® RIVET BENEFITS

DRIVING ANVIL

A driving anvil is part of each CherryMAX® Rivet assembly. This Driving Anvil eliminates wear and replacement of expendable installation tool components, considerably extending the life of the installation tool.

It also allows one pulling head to install:

— 1/8", 5/32", and 3/16" Nominal and Oversize Diameter Rivets
— Protruding, 100° Flush and 100° Flush Shear, Unisink, and 120° Flush Head Styles
— All CherryMAX® Rivet grip lengths
— All CherryMAX® Rivet sleeve/stem material combinations

LOCKING COLLAR

The CherryMAX® Rivet features the patented "Safe-Lock" Locking Collar which enhances joint integrity and reliability.

The "Safe-lock" Locking Collar is preformed to the stem during a sub-assembly operation, then deforms into the rivet sleeve head recess during installation, locking the rivet sleeve and stem together.

The "Safe-lock" Locking Collar is visible and inspectable after installation.

The "Safe-lock" Locking Collar installs flush with the rivet sleeve head.

The "Safe-lock" Locking Collar is approved for use in engine inlets and components. They will not vibrate loose after installation.

RIVET

The CherryMAX® Rivet is available in both nominal and 1/64" oversize shank diameters and is available in four material combinations:

— 5056 Aluminum Sleeve/Alloy Steel Stem (50KSI Shear)
— 5056 Aluminum Sleeve/Cres Stem (50KSI Shear)
— Monel Sleeve/Cres Stem (75KSI Shear)
— INCO 600 Sleeve/INCO X-750 Stem (75KSI Shear)

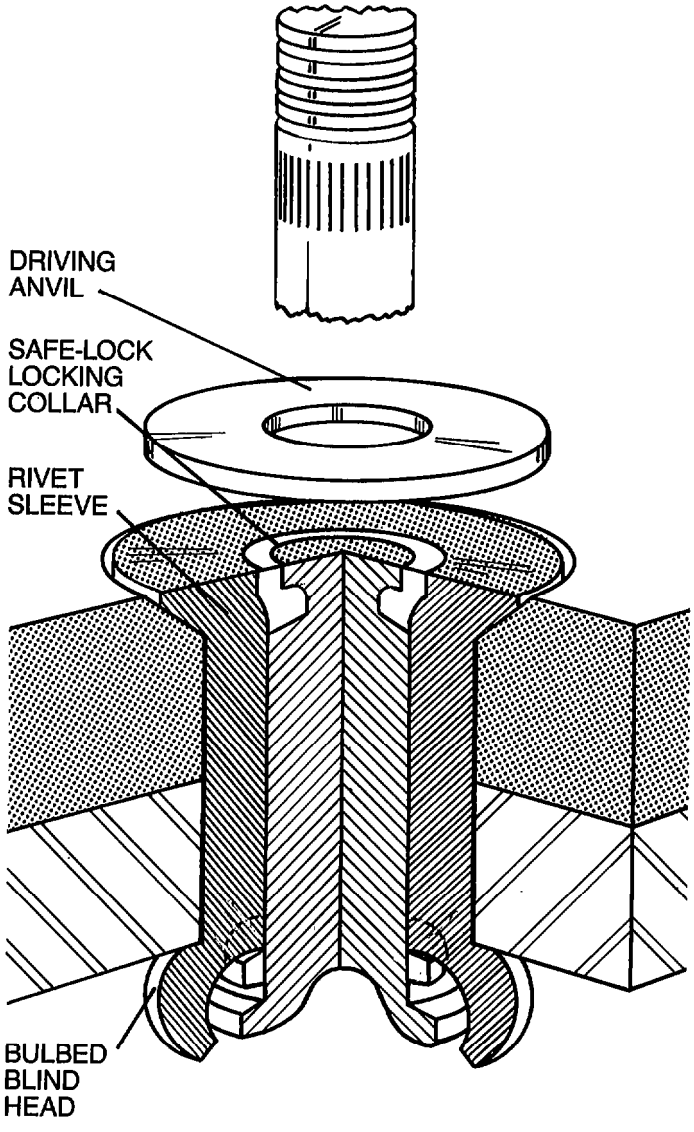
TOOLING SIMPLICITY

Lightweight, non-shifting installation tools require no adjusting.

Limited access capability with Right Angle and Offset Pulling Heads and Extensions for greater reach and "Split" tools for special applications including automation and robotics.

BULBED BLIND HEAD

Provides a large bearing surface area on the blind side of the structure, giving dependable results, even when installed in difficult thin sheet stack-up applications.



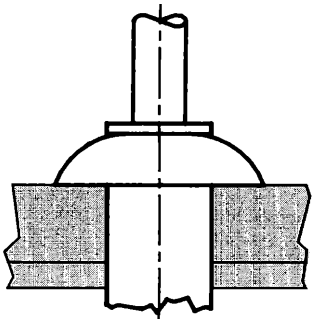
CHERRYMAX® RIVET SELECTION

NUMBERING SYSTEM

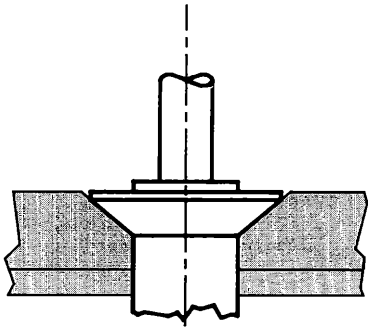
CHERRY PART NUMBER EXAMPLE: CR3242-6-04

- Maximum Grip Length in 16ths of an Inch (-04 = 4/16 = 1/4)
- Rivet Diameter in 32nds of an Inch (-6 = 6/32 = 3/16)
- Head Style: Odd Number = Protruding Head; Even Number = Flush Head
- Rivet Type & Material Combination (See Pages 9 thru 15)
- Cherrymax Rivet

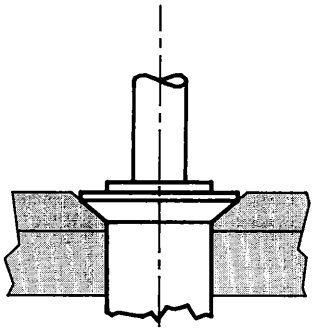
HEAD STYLES



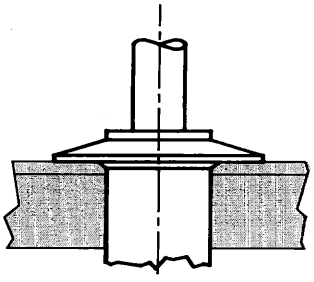
UNIVERSAL
(MS20470)
For protruding head applications
Available in both nominal & oversize



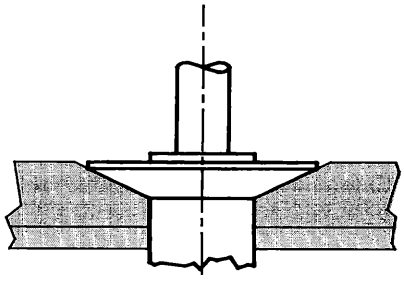
100° FLUSH
(MS20426)
For countersunk applications
Available in both nominal & oversize



100° FLUSH
(NAS1097)
For thin top sheet, machine countersunk applications
Available in nominal only



UNISINK
A combination flush and protruding head for use in very thin top sheets. Eliminates need for double-dimpling.
Available in oversize only

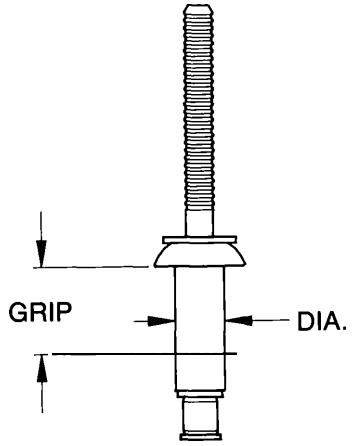


120° FLUSH
A large diameter, shallow flush head providing a wide bearing area in thin top sheet applications.
Available in oversize only

CHERRYMAX® RIVET SELECTION

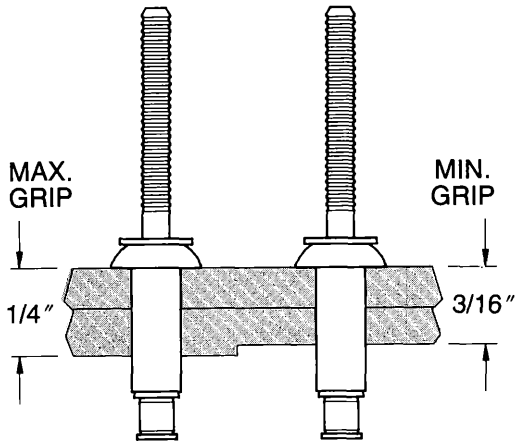
DIAMETER

Bulbed CherryMAX® rivets are offered in 1/8" (-4), 5/32" (-5), 3/16" (-6) and 1/4" (-8) shank diameters. They are available in nominal and 1/64" oversize. A gold colored driving anvil identifies nominal diameter. A silver colored driving anvil identifies oversize diameter.

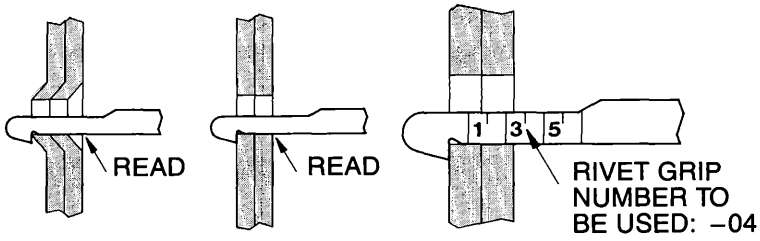


GRIP

The grip range of all CherryMAX® rivets is in increments of 1/16", with the last dash number indicating the maximum grip length in 16ths. Example: -04 grip rivet has a grip range of 3/16" (.188) to 1/4" (.250).



To determine the proper grip rivet to use, measure the material thickness with a Cherry 269C3 selector gage as shown here.
Always read to the next higher number.



CHERRYMAX® RIVET SELECTION

MECHANICAL PROPERTIES

Materials		Ultimate Shear Strength	Maximum Temperature
Sleeve	Stem		
5056 Aluminum	Alloy Steel	50,000 PSI	250°F
5056 Aluminum	CRES	50,000 PSI	250°F
Monel	CRES	75,000 PSI	900°F
Inco 600	Inco X-750	75,000 PSI	1400°F

MINIMUM RIVET SHEAR & TENSILE STRENGTH (LBS.) IN STEEL COUPONS

RIVET DIAM.	SHEET THICK.	SINGLE SHEAR					TENSILE						
		ALUMINUM		MONEL		INCO	ALUMINUM			MONEL			INCO
		Nom.	O/S	Nom.	O/S	O/S	Nom.		O/S	Nom.		O/S	O/S
		3212 3213 3214 3222 3223 3224	3242 3243 3245 3246 3252 3253 3255	3522 3523 3524	3552 3553 3555 3556	3852 3853	3212 3213 3222 3223	3214 3224	3242 3243 3245 3246 3252 3253 3255	3522 3523	3524	3552 3553 3555 3556	3852 3853
1/8 (-4)	2x.156	664	814	995	1220	1220	285	250	345	400	360	490	570
5/32 (-5)	2x.187	1030	1245	1545	1865	1865	445	390	530	635	555	740	860
3/16 (-6)	2x.219	1480	1685	2215	2525	2525	635	560	710	890	800	1000	1160
1/4 (-8)	2x.281	2615	2925	3920	4390	4390	1125	1000	1260	1570	1410	1755	2030

Values shown are fastener capabilities only. Design values will be limited by the bearing strength of the sheet material used.

GAGES

269C3 GRIP GAGE

NATIONAL STOCK NUMBER 5210-00-255-7544

A simple, self-explanatory gage for determining material thickness and proper rivet grip length.

T-172 RIVET HOLE SIZE GAGE

These are precision ground, go no-go gages used to check holes drilled for CherryMAX® rivets. They are made in both nominal and oversize rivet diameters.

RIVET DIAMETER	GAGE NUMBER	NATIONAL STOCK NO.	RIVET DIAMETER	GAGE NUMBER	NATIONAL STOCK NO.
1/8" Nominal	T-172-4	5220-00-478-4135	1/8" Oversize	T-172-400	5220-00-478-4137
5/32" Nominal	T-172-5	5220-01-021-3276	5/32" Oversize	T-172-500	5220-00-478-4140
3/16" Nominal	T-172-6	5220-00-478-4136	3/16" Oversize	T-172-600	5220-00-478-4141
1/4" Nominal	T-172-8	5220-00-478-4139	1/4" Oversize	T-172-800	5220-01-374-1340

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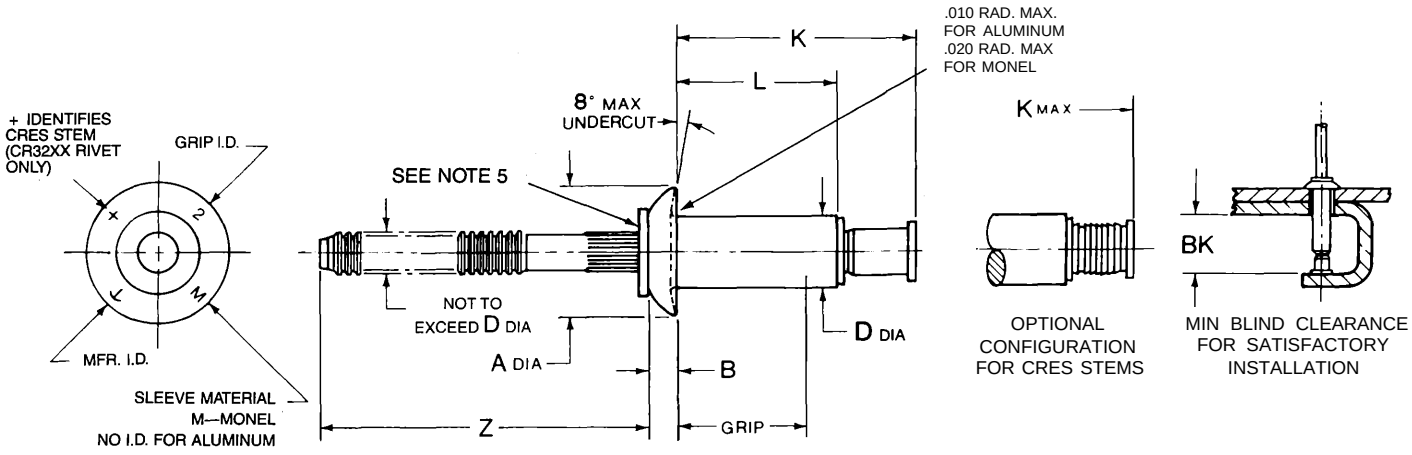
INSTALLED WEIGHTS — Pounds per 1000 pieces (Ref.)

RIVET DIAMETER AND GRIP LENGTH		ALUMINUM				MONEL				INCO 600	
		Nominal		Oversize		Nominal		Oversize		Oversize	
		3212 3214 3222 3224	3213 3223	3242 3246 3252	3243 3245 3253 3255	3522 3524	3523	3552 3556	3553 3555	3852	3853
-4 (1/8")	-01	—	.69	—	.88	—	1.28	—	1.32	—	1.35
	-02	.59	.79	.85	.99	1.05	1.52	1.14	1.58	1.16	1.61
	-03	.71	.93	.97	1.16	1.24	1.74	1.42	1.86	1.44	1.88
	-04	.86	1.07	1.14	1.33	1.44	1.90	1.70	2.14	1.72	2.17
	-05	1.00	1.21	1.31	1.50	1.66	2.16	1.98	2.42	2.01	2.44
	-06	1.14	1.36	1.47	1.66	1.88	2.38	2.26	2.70	2.28	2.73
	-07	1.28	1.50	1.64	1.83	2.00	2.61	2.54	2.98	2.56	3.02
	-08	1.42	1.64	1.81	2.00	2.22	2.83	2.82	3.26	2.89	3.29
	-09	1.56	1.78	1.98	2.17	2.44	3.05	3.10	3.54	3.22	3.56
-5 (5/32")	-01	—	1.26	—	1.55	—	2.41	—	2.46	—	2.53
	-02	1.02	1.41	1.34	1.71	1.84	2.81	1.87	2.90	1.99	2.98
	-03	1.22	1.63	1.56	1.98	2.15	3.14	2.26	3.34	2.37	3.44
	-04	1.45	1.86	1.82	2.24	2.50	3.46	2.87	3.78	2.90	3.91
	-05	1.67	2.08	2.09	2.51	2.86	3.81	3.30	4.22	3.33	4.26
	-06	1.90	2.31	2.36	2.78	3.22	4.17	3.74	4.66	3.85	4.77
	-07	2.12	2.53	2.63	3.05	3.58	4.53	4.18	5.10	4.31	5.21
	-08	2.35	2.75	2.90	3.32	3.94	4.92	4.62	5.54	4.75	5.67
	-09	2.57	2.98	3.16	3.58	4.29	5.24	5.06	5.98	5.19	6.13
	-10	2.79	3.20	3.43	3.85	4.64	5.56	5.50	6.42	5.63	6.55
	-11	3.01	3.42	3.70	4.12	4.99	5.87	5.94	6.86	6.07	6.97
-6 (3/16")	-01	—	2.01	—	2.39	—	3.84	—	3.99	—	4.13
	-02	1.75	2.20	2.00	2.58	3.04	4.38	3.12	4.51	3.24	4.65
	-03	2.00	2.52	2.28	2.93	3.54	4.87	3.69	5.08	3.82	5.22
	-04	2.33	2.85	2.62	3.27	4.04	5.38	4.27	5.66	4.33	5.80
	-05	2.64	3.16	2.97	3.62	4.54	5.86	4.85	6.24	4.97	6.37
	-06	2.97	3.49	3.32	3.97	5.04	6.36	5.43	6.82	5.55	6.95
	-07	3.28	3.80	3.67	4.32	5.54	6.86	6.01	7.40	6.13	7.53
	-08	3.61	4.13	4.02	4.67	6.04	7.36	6.59	7.98	6.72	8.11
	-09	3.93	4.45	4.36	5.01	6.54	7.86	7.17	8.56	7.30	8.69
	-10	4.25	4.77	4.71	5.36	7.04	8.35	7.75	9.14	7.88	9.27
	-11	4.57	5.09	5.06	5.71	7.54	8.85	8.33	9.72	8.47	9.85
	-12	4.90	5.42	5.41	6.06	8.04	9.34	8.91	10.30	9.05	10.44
-8 (1/4")	-02	—	4.79	—	—	—	9.17	—	9.92	—	10.28
	-03	4.08	5.35	4.50	5.74	6.98	10.01	7.45	10.95	7.73	11.37
	-04	4.61	5.92	5.32	6.57	7.63	10.80	8.58	11.98	8.90	12.42
	-05	5.14	6.49	5.71	7.14	8.98	12.29	9.71	13.01	10.07	13.41
	-06	5.67	7.06	6.28	7.81	10.04	13.28	10.84	14.04	11.24	14.54
	-07	6.20	7.63	6.91	8.48	11.05	14.20	11.97	15.07	12.38	15.67
	-08	6.73	8.19	7.54	9.11	12.38	15.26	13.10	16.10	13.62	16.70
	-09	7.26	8.76	8.17	9.74	13.01	16.25	14.23	17.13	14.80	17.73
	-10	7.79	9.33	8.80	10.37	13.64	17.23	15.36	18.16	15.96	18.76
	-11	8.32	9.90	9.43	11.00	15.81	18.21	16.49	19.19	17.09	19.79
	-12	8.85	10.47	10.06	11.63	16.78	19.18	17.62	20.22	18.24	20.82
	-13	9.36	11.03	10.69	12.26	17.73	20.13	18.75	21.25	19.36	21.86
	-14	9.91	11.60	11.32	12.89	18.69	21.09	19.88	22.28	20.51	22.89

CHERRYMAX ® RIVET

UNIVERSAL HEAD / NOMINAL DIAMETER



DIA DASH NO.	D +.003 -.001	A ±.010	B +.010 -.000	BK MIN	Z (REF)	HOLE LIMITS
- 4	.126	.250	.054	.355	.87	.129-.132
- 5	.157	.312	.067	.370	.94	.160-.164
- 6	.189	.375	.080	.415	.94	.192-.196
- 8	.253	.500	.107	.485	.97	.256-.261

GRIP LIMITS 1/16		-4(1/8") DIAMETER			-5(5/32") DIAMETER			-6(3/16") DIAMETER			-8(1/4") DIAMETER		
MIN	MAX	DASH NO.	+.000 L - .030	K MAX	DASH	+.000 L - .030	K MAX	DASH NO.	+.000 L - .030	K MAX	DASH NO.	+.000 L - .030	K MAX
①	.062	4-01	.161	.38	5-01	.187	.41	6-01	.219	.47			
.063	.125	4-02	.224	.45	5-02	.230	.47	6-02	.262	.51	8-02	.315	.59
.126	.187	4-03	.287	.51	5-03	.293	.53	6-03	.325	.57	8-03	.378	.65
.188	.250	4-04	.349	.57	5-04	.355	.59	6-04	.387	.64	8-04	.440	.72
.251	.312	4-05	.412	.63	5-05	.418	.65	6-05	.450	.70	8-05	.503	.78
.313	.375	4-06	.474	.70	5-06	.480	.72	6-06	.512	.76	8-06	.565	.84
.376	.437	4-07	.537	.76	5-07	.543	.77	6-07	.575	.82	8-07	.628	.90
.438	.500	4-08	.599	.82	5-08	.605	.84	6-08	.637	.88	8-08	.690	.97
.501	.562	4-09	.662	.88	5-09	.668	.90	6-09	.700	.95	8-09	.753	1.03
.563	.625				5-10	.730	.96	6-10	.762	1.01	8-10	.815	1.09
.626	.687				5-11	.793	1.02	6-11	.825	1.07	8-11	.878	1.15
.688	.750							6-12	.887	1.13	8-12	.940	1.22
.751	.812										8-13	1.003	1.28
.813	.875										8-14	1.065	1.34

RIVET NUMBER	NAS 523 CODE	MATERIAL ④			FINISH		
		SLEEVE	STEM	LOCK COLLAR	SLEEVE	STEM	LOCK COLLAR
CR 3213	ARN	5056 ALUM. ALLOY QQ-A-430	8740 ALLOYSTEEL AMS 6322	A-286 CRES AMS 5731	CHEM FILM MIL-C-5541 PLAIN COLOR	CAD PLATE QQ-P-416 TYPE II CL. 2	PASSIVATED
CR 3223	—	5056 ALUM. ALLOY QQ-A-430	15-7 PH CRES AMS 5657	A-286 CRES AMS 5731	CHEM FILM MIL-C-5541 PLAIN COLOR	CAD PLATE QQ-P-416 TYPE I CL. 2	
CR 3523	ATM	MONEL QQ-N-281	15-7 PH CRES AMS 5657	A-286 CRES AMS 5731	NONE	NONE	
CR 3523P	—	MONEL QQ-N-281	15-7 PH CRES AMS 5657	A-286 CRES AMS 5731	ALUM. COAT CHERRY SPEC. C-123	NONE	

NOTE: ① Minimum grip for: -4 dia. = .025
Minimum grip for: -5 dia. = .031
Minimum grip for: -6 dia. = .037

2 Rivets with grips greater than their diameter are not required to meet expansion requirements of procurement specifications.

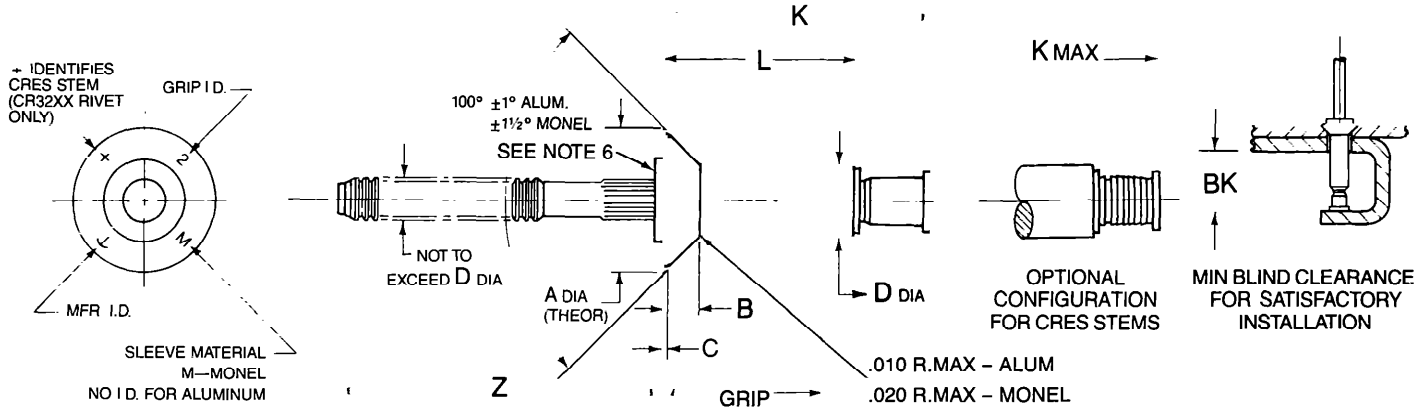
3 Do not clean or degrease prior to installation-lubricant must not be removed.

④ Chemical composition only.

5 Gold colored driving anvil. Identifies nominal rivets.

CHERRYMAX® RIVET

100° FLUSH HEAD / NOMINAL DIAMETER



HEAD MARKINGS VISIBLE AFTER INSTALLATION

DIA DASH NO.	D +.003 -.001	A ① ±.004	B (REF)	BK MIN	Z (REF)	C		HOLE LIMITS
						ALUM	MONEL	
-4	.126	.225	.041	.355	.87	.002-.010	.005-.015	.129-.132
-5	.157	.286	.054	.370	.94	.002-.012	.005-.015	.160-.164
-6	.189	.353	.069	.415	.94	.002-.012	.005-.015	.192-.196
-8	.253	.476	.095	.485	.97	.002-.016	.005-.015	.256-.261

GRIP LIMITS 1/16		-4(1/8") DIAMETER			-5(5/32") DIAMETER			-6(3/16") DIAMETER			-8(1/4") DIAMETER		
MIN	MAX	DASH NO.	+.000 L-.030	K MAX	DASH NO.	+.000 L-.030	K MAX	DASH NO.	+.000 L-.030	K MAX	DASH NO.	+.000 L-.030	K MAX
②	.125	4-02	.224	.45	5-02	.230	.47	6-02	.262	.51			
.126	.187	4-03	.287	.51	5-03	.293	.53	6-03	.325	.57	8-03	.378	.65
.188	.250	4-04	.349	.57	5-04	.355	.59	6-04	.387	.34	8-04	.440	.72
.251	.312	4-05	.412	.63	5-05	.418	.65	6-05	.450	.70	8-05	.503	.78
.313	.375	4-06	.474	.70	5-06	.480	.72	6-06	.512	.76	8-06	.565	.84
.376	.437	4-07	.537	.76	5-07	.543	.77	6-07	.575	.82	8-07	.628	.90
.438	.500	4-08	.599	.82	5-08	.605	.84	6-08	.637	.88	8-08	.690	.97
.501	.562	4-09	.662	.88	5-09	.668	.90	6-09	.700	.95	8-09	.753	1.03
.563	.625				5-10	.730	.96	6-10	.762	1.01	8-10	.815	1.09
.626	.687				5-11	.793	1.02	6-11	.825	1.07	8-11	.878	1.15
.688	.750							6-12	.887	1.13	8-12	.940	1.22
.751	.812										8-13	1.003	1.28
.813	.875										8-14	1.065	1.34

RIVET NUMBER	NAS 523 CODE	MATERIAL ⑤			FINISH		
		SLEEVE	STEM	LOCK COLLAR	SLEEVE	STEM	LOCK COLLAR
CR 3212	ARM	5056 ALUM. ALLOY QQ-A-430	8740 ALLOY STEEL AMS 6322	A-286 CRES AMS 5731	CHEM FILM MIL-C-5541 PLAIN COLOR	CAD PLATE QQ-P-416 TYPE II CL. 2	PASSIVATED
CR 3222	—	5056 ALUM. ALLOY QQ-A-430	15-7 PH CRES AMS 5657	A-286 CRES AMS 5731	CHEM FILM MIL-C-5541 PLAIN COLOR	CAD PLATE QQ-P-416 TYPE I CL. 2	
CR 3522	ATL	MONEL QQ-N-281	15-7 PH CRES AMS 5657	A-286 CRES AMS 5731	NONE	NONE	
CR 3522P	—	MONEL QQ-N-281	15-7 PH CRES AMS 5657	A-286 CRES AMS 5731	ALUM. COAT SPEC. C-123	NONE	

NOTE: ① *Head diameters are to theoretical projection.*

② *Minimum grip for:* -4 dia. = .063
Minimum grip for: -5 dia. = .065
Minimum grip for: -6 dia. = .080

3 *Rivets with grips greater than their diameter are not required to meet expansion requirements of procurement specifications.*

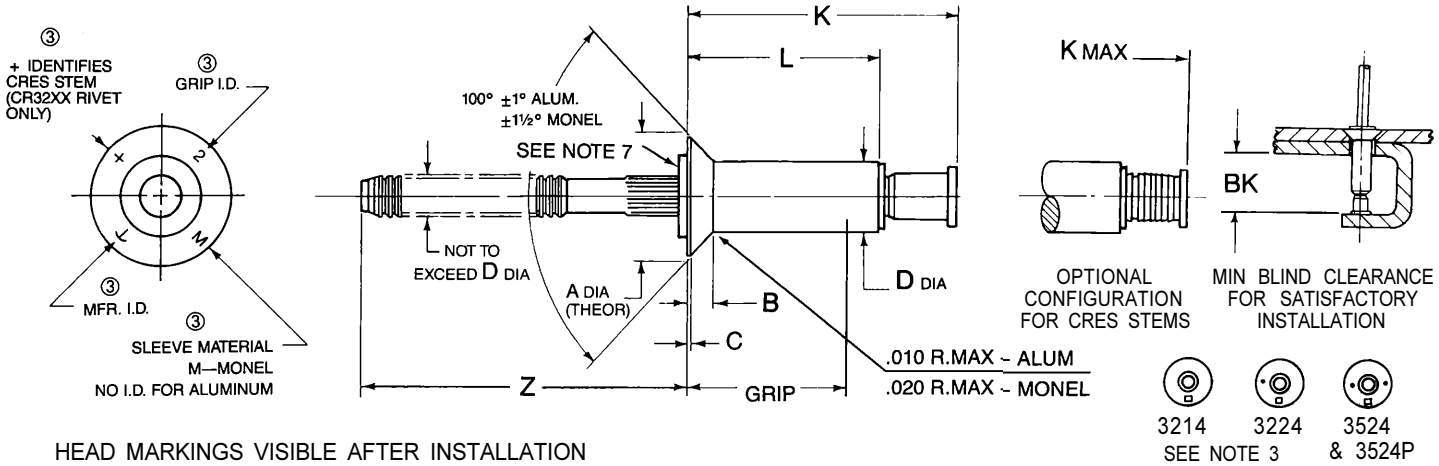
4 *Do not clean or degrease prior to installation—lubricant must not be removed.*

⑤ *Chemical composition only*

6 *Gold colored driving anvil. Identifies nominal rivets.*

CHERRYMAX ® RIVET

NAS 1097 100° FLUSH SHEAR HEAD / NOMINAL DIAMETER



HEAD MARKINGS VISIBLE AFTER INSTALLATION

DIA DASH NO.	D +.003 -.001	A ① ±.004	B (REF)	BK MIN	Z (REF)	C		HOLE LIMITS
						ALUM	MONEL	
-4	.126	.192	.028	.355	.87	.002-.010	.005-.015	.129-.132
-5	.157	.243	.037	.370	.94	.002-.012	.005-.015	.160-.164
-6	.189	.299	.046	.415	.94	.002-.012	.005-.015	.192-.196
-8	.253	.392	.060	.485	.97	.002-.016	.005-.015	.256-.261

GRIP LIMITS 1/16		-4(1/8") DIAMETER			-5(5/32") DIAMETER			-6(3/16") DIAMETER			-8(1/4") DIAMETER		
MIN	MAX	DASH NO.	+.000 L-.030	K MAX	DASH NO.	+.000 L-.030	K MAX	DASH NO.	+.000 L-.030	K MAX	DASH NO.	+.000 L-.030	K MAX
②	.125	4-02	.224	.45	5-02	.230	.47	6-02	.262	.51			
.126	.187	4-03	.287	.51	5-03	.293	.53	6-03	.325	.57	8-03	.378	.65
.188	.250	4-04	.349	.57	5-04	.355	.59	6-04	.387	.64	8-04	.440	.72
.251	.312	4-05	.412	.63	5-05	.418	.65	6-05	.450	.70	8-05	.503	.78
.313	.375	4-06	.474	.70	5-06	.480	.72	6-06	.512	.76	8-06	.565	.84
.376	.437	4-07	.537	.76	5-07	.543	.77	6-07	.575	.82	8-07	.628	.90
.438	.500	4-08	.599	.82	5-08	.605	.84	6-08	.637	.88	8-08	.690	.97
.501	.562	4-09	.662	.88	5-09	.668	.90	6-09	.700	.95	8-09	.753	1.03
.563	.625				5-10	.730	.96	6-10	.762	1.01	8-10	.815	1.09
.626	.687				5-11	.793	1.02	6-11	.825	1.07	8-11	.878	1.15
.688	.750							6-12	.887	1.13	8-12	.940	1.22
.751	.812										8-13	1.003	1.28
.813	.875										8-14	1.065	1.34

RIVET NUMBER	NAS 523 CODE	MATERIAL			FINISH		
		SLEEVE	STEM	LOCK COLLAR	SLEEVE	STEM	LOCK COLLAR
CR 3214	ASK	5056 ALUM. ALLOY QQ-A-430	8740 ALLOY STEEL AMS 6322	A-286 CRES AMS 5731	CHEM FILM MIL-C-5541 PLAIN COLOR	CAD PLATE QQ-P-416 TYPE II CL. 2	PASSIVATED
CR 3224	ATU	5056 ALUM. ALLOY QQ-A-430	15-7 PH CRES AMS 5657	A-286 CRES AMS 5731	CHEM FILM MIL-C-5541 PLAIN COLOR	CAD PLATE QQ-P-416 TYPE I CL. 2	
CR 3524	ASD	MONEL QQ-N-281	15-7 PH CRES AMS 5657	A-286 CRES AMS 5731	NONE	NONE	
CR 3524P	—	MONEL QQ-N-281	15-7 PH CRES AMS 5657	A-286 CRES AMS 5731	ALUM. COAT CHERRY SPEC. C-123	NONE	

NOTE: ① Head diameters are to theoretical projection.

② Minimum grip for: -4 dia. = .063
Minimum grip for: -5 dia. = .065
Minimum grip for: -6 dia. = .080

③ -6 and -8 diameter marking only; square depressed marking with dots identifies Cherrymax -4 and -5 diameters.

4 Rivets with grips greater than their diameter are not required to meet expansion requirements of procurement specifications.

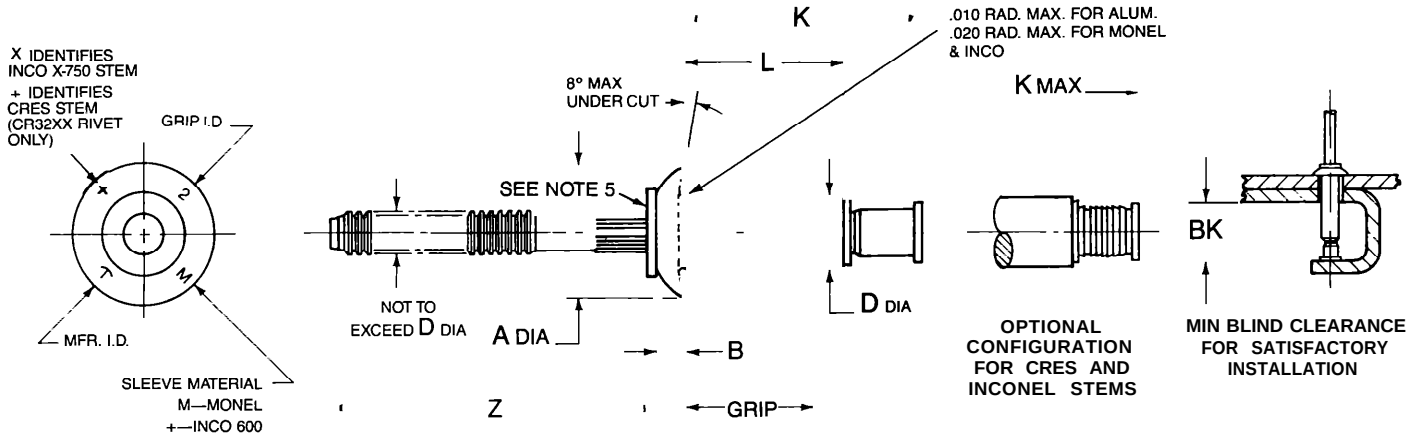
5 Do not clean or degrease prior to installation—lubricant must not be removed.

Chemical composition only.

7 Gold colored driving anvil. Identifies nominal rivets.

CHERRYMAX® RIVET

UNIVERSAL HEAD / OVERSIZE DIAMETER



DIA DASH NO.	D +.003 -.001	A +.010	B +.010 -.000	BK MIN	Z (REF)	HOLE LIMITS
- 4	.140	.250	.054	.390	.87	.143-.146
- 5	.173	.312	.067	.395	.94	.176-.180
- 6	.201	.375	.080	.410	.94	.205-.209
- 8	.267	.500	.107	.490	.96	.271-.275

GRIP LIMITS 1/16		-4(1/8") DIAMETER			-5(5/32") DIAMETER			-6(3/16") DIAMETER			-8(1/4") DIAMETER		
MIN	MAX	DASH NO.	+.000 L-.030	MAX	DASH NO.	+.000 L-.030	K MAX	DASH NO.	+.000 L-.030	MAX	DASH NO.	+.000 L-.030	K MAX
①	.062	4-01	.175	.37	5-01	.203	.43	6-01	.242	.45			
.063	.125	4-02	.238	.46	5-02	.246	.47	6-02	.265	.50	8-02	.313	.57
.126	.187	4-03	.301	.52	5-03	.309	.53	6-03	.328	.55	8-03	.375	.64
.188	.250	4-04	.363	.58	5-04	.371	.60	6-04	.390	.62	8-04	.437	.70
.251	.312	4-05	.426	.65	5-05	.434	.66	6-05	.453	.68	8-05	.500	.77
.313	.375	4-06	.488	.71	5-06	.496	.72	6-06	.515	.74	8-06	.562	.83
.376	.437	4-07	.551	.78	5-07	.559	.79	6-07	.578	.82	8-07	.625	.89
.438	.500	4-08	.613	.84	5-08	.621	.85	6-08	.640	.89	8-08	.687	.95
.501	.562	4-09	.676	.90	5-09	.684	.91	6-09	.703	.95	8-09	.750	1.02
.563	.625				5-10	.746	.98	6-10	.765	1.01	8-10	.812	1.08
.626	.687				5-11	.809	1.04	6-11	.828	1.07	8-11	.875	1.14
.688	.750							6-12	.890	1.14	8-12	.937	1.20
.751	.812										8-13	1.000	1.27
.813	.875										8-14	1.062	1.60

RIVET NUMBER	NAS 523 CODE	MATERIAL ④			FINISH		
		SLEEVE	STEM	LOCK COLLAR	SLEEVE	STEM	LOCK COLLAR
CR3243	ARE	5056 ALUM. ALLOY QQ-A-430	8740 ALLOY STEEL AMS 6322	A-286 CRES AMS 5731	CHEM FILM MIL-C-5541 PLAIN COLOR	CAD PLATE QQ-P-416 TYPE II CL. 2	
CR3253	ARP	5056 ALUM. ALLOY QQ-A-430	15-7 PH CRES AMS 5657	A-286 CRES AMS 5731	CHEM FILM MIL-C-5541 PLAIN COLOR	CAD PLATE QQ-P-416 TYPE I CL.2	
CR 3553	ARG	MONEL QQ-N-281	15-7 PH CRES AMS 5657	A-286 CRES AMS 5731	NONE	NONE	PASSIVATED
CR 3553P	—	MONEL QQ-N-281	15-7 PH CRES AMS 5657	A-286 CRES AMS 5731	ALUM.COAT CHERRY SPEC. C-123	NONE	
CR3853	—	INCO 600 AMS 5687	INCO X-750 AMS 5698	A-286 CRES AMS 5731	NONE	NONE	

NOTE: ① *Minimum grip* for: -4 dia. = .025
Minimum grip for: -5 dia. = .031
Minimum grip for: -6 dia. = .037

2 *Rivets with grips greater than their diameter are not required to meet expansion requirements of procurement specifications.*

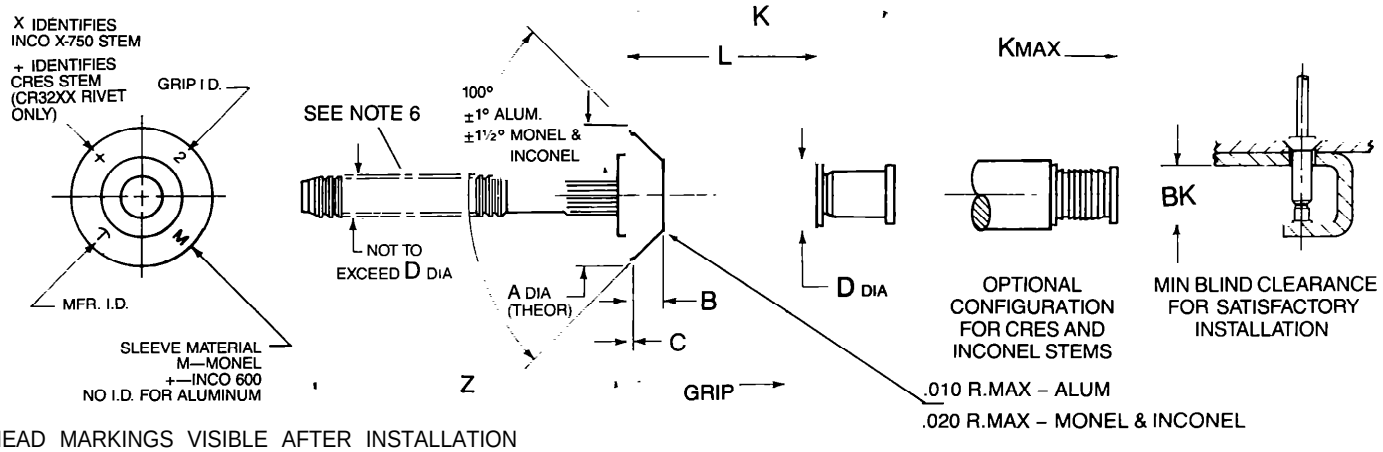
3 *Do not clean or degrease prior to installation–lubricant must not be removed.*

④ *Chemical composition only.*

5 *Silver colored driving anvil. Identifies oversize rivets.*

CHERRYMAX ® RIVET

100° FLUSH HEAD / OVERSIZE DIAMETER



HEAD MARKINGS VISIBLE AFTER INSTALLATION

DIA DASH NO.	D +.003 -.001	A ① ±.004	B (REF)	BK MIN	Z (REF)	C		HOLE LIMITS
						ALUM	MONEL/INCO	
-4	.140	.225	.035	.390	.87	.002-.010	.005-.015	.143-.146
-5	.173	.286	.047	.395	.94	.002-.012	.005-.015	.176-.180
-6	.201	.353	.063	.410	.94	.002-.012	.005-.015	.205-.209
-8	.267	.476	.086	.490	.96	.002-.016	.005-.015	.271-.275

GRIP LIMITS 1/16		-4(1/8") DIAMETER			-5(5/32") DIAMETER			-6(3/16") DIAMETER			-8(1/4") DIAMETER		
MIN	MAX	DASH NO.	+.000 L-.030	K MAX	DASH NO.	+.000 L-.030	K MAX	DASH NO.	+.000 L-.030	K MAX	DASH NO.	+.000 L-.030	K MAX
.045	.062	4-01	.200	.45									
②	.125	4-02	.238	.45	5-02	.266	.47	6-02	.265	.48			
.126	.187	4-03	.301	.52	5-03	.309	.53	6-03	.328	.55	8-03	.375	.64
.188	.250	4-04	.363	.58	5-04	.371	.60	6-04	.390	.62	8-04	.437	.70
.251	.312	4-05	.426	.65	5-05	.434	.66	6-05	.453	.68	8-05	.500	.77
.313	.375	4-06	.488	.71	5-06	.496	.72	6-06	.515	.74	8-06	.562	.83
.376	.437	4-07	.551	.78	5-07	.559	.79	6-07	.578	.82	8-07	.625	.89
.438	.500	4-08	.613	.84	5-08	.621	.85	6-08	.640	.89	8-08	.687	.95
.501	.562	4-09	.676	.90	5-09	.684	.91	6-09	.703	.95	8-09	.750	1.02
.563	.625				5-10	.746	.98	6-10	.765	1.01	8-10	.812	1.08
.626	.687				5-11	.809	1.04	6-11	.828	1.07	8-11	.875	1.14
.688	.750				5-12	.871	1.10	6-12	.890	1.14	8-12	.937	1.20
.751	.812							6-13	.953	1.20	8-13	1.000	1.27
.813	.875										8-14	1.062	1.60

RIVET NUMBER	NAS 523 CODE	MATERIAL ⑤			FINISH		
		SLEEVE	STEM	LOCK COLLAR	SLEEVE	STEM	LOCK COLLAR
CR 3242	ARD	5056 ALUM. ALLOY QQ-A-430	8740 ALLOY STEEL AMS 6322	A-286 CRES AMS 5731	CHEM FILM MIL-C-5541 PLAIN COLOR	CAD PLATE QQ-P-416 TYPE II CL. 2	PASSIVATED
CR 3252	ARO	5056 ALUM. ALLOY QQ-A-430	15-7 PH CRES AMS 5657	A-286 CRES AMS 5731	CHEM FILM MIL-C-5541 PLAIN COLOR	CAD PLATE QQ-P-416 TYPE I CL. 2	
CR 3552	ARF	MONEL QQ-N-281	15-7 PH CRES AMS 5657	A-286 CRES AMS 5731	NONE	NONE	
CR 3552P	—	MONEL QQ-N-281	15-7 PH CRES AMS 5657	A-286 CRES AMS 5731	ALUM. COAT CHERRY SPEC. C-123	NONE	
CR 3852	—	INCO 600 AMS 5687	INCO X-750 AMS 5698	A-286 CRES AMS 5731	NONE	NONE	

NOTE: ① Head diameters are to theoretical projection.

Minimum grip for: -4 dia. = .063
Minimum grip for: -5 dia. = .063
Minimum grip for: -6 dia. = .073

3 Rivets with grips greater than their diameter are not required to meet expansion requirements of procurement specifications.

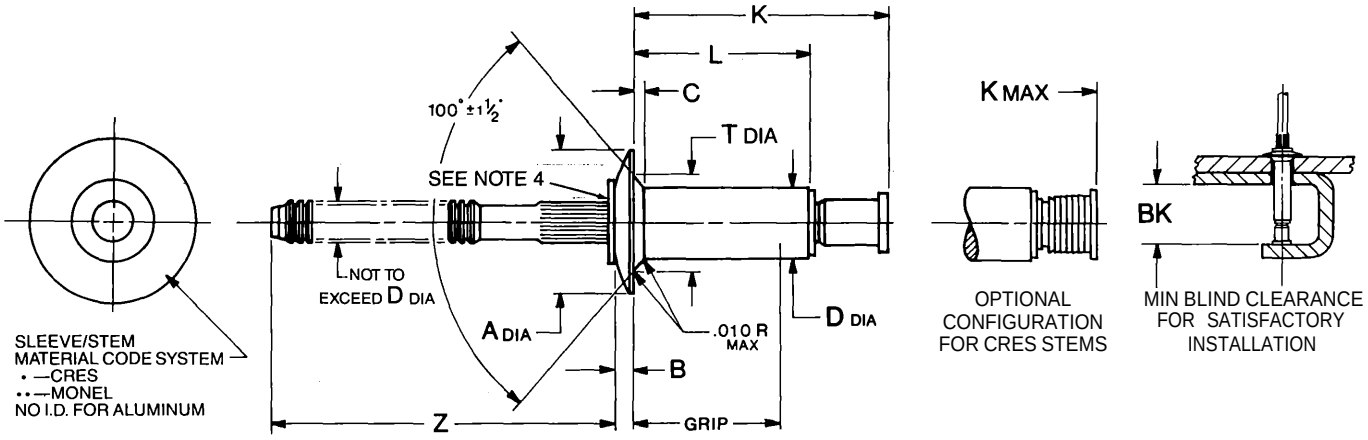
4 Do not clean or degrease prior to installation-lubricant must not be removed.

⑤ Chemical composition only.

6 Silver colored driving anvil. Identifies oversize rivets.

CHERRYMAX ® RIVET

UNISINK HEAD / OVERSIZE DIAMETER



DIA DASH NO.	D +.003 -.001	A ±.010	B +.010 -.000	C (REF).	T +.005	BK MIN	Z (REF)	HOLE LIMITS
- 4	.140	.220	.022	.011	.165	.375	.87	.143-.146
- 5	.173	.286	.030	.015	.208	.400	.94	.176-.180
- 6	.201	.353	.040	.023	.255	.435	.94	.205-.209

GRIP LIMITS 1/16		-4(1/8") DIAMETER			-5(5/32") DIAMETER			-6(3/16") DIAMETER		
MIN	MAX	DASH NO.	+.000 L -.030	MIX	DASH NO.	+.000 L -.030	MAX	DASH NO.	+.000 L-.030	K MAX
.033	.062	4-01	.170	.39						
.063	.125	4-02	.213	.43	5-02	.246	.46	6-02	.265	.50
.126	.187	4-03	.276	.50	5-03	.309	.52	6-03	.328	.56
.188	.250	4-04	.338	.56	5-04	.371	.59	6-04	.390	.62
.251	.312	4-05	.401	.62	5-05	.434	.65	6-05	.453	.68
.313	.375	4-06	.463	.68	5-06	.496	.71	6-06	.515	.75
.376	.437	4-07	.526	.74	5-07	.559	.77	6-07	.578	.81
.438	.500	4-08	.588	.80	5-08	.621	.83	6-08	.540	.87

RIVET NUMBER	NAS 523 CODE	MATERIAL ③			FINISH		
		SLEEVE	STEM	LOCK COLLAR	SLEEVE	STEM	LOCK COLLAR
CR 3245	ATK	5056 ALUM. ALLOY QQ-A-430	8740 ALLOY STEEL AMS 6322	A-286 CRES AMS5731	CHEM FILM MIL-C-5541 PLAIN COLOR	CAD PLATE QQ-P-416 TYPE II CL. 2	PASSIVATED
CR 3255	—	5056 ALUM. ALLOY QQ-A-430	15-7 PH CRES AMS 5657	A-286 CRES AMS5731	CHEM FILM MIL-C-5541 PLAIN COLOR	CAD PLATE QQ-P-416 TYPE I CL. 2	
CR 3555	—	MONEL QQ-N-281	15-7 PH CRES AMS 5657	A-286 CRES AMS5731	NONE	NONE	
CR 3555P	—	MONEL QQ-N-281	15-7 PH CRES AMS 5657	A-286 CRES AMS5731	ALUM. COAT CHERRY SPEC. C-123	NONE	

1 Rivets with grips greater than their diameter are not required to meet expansion requirements of procurement specifications.

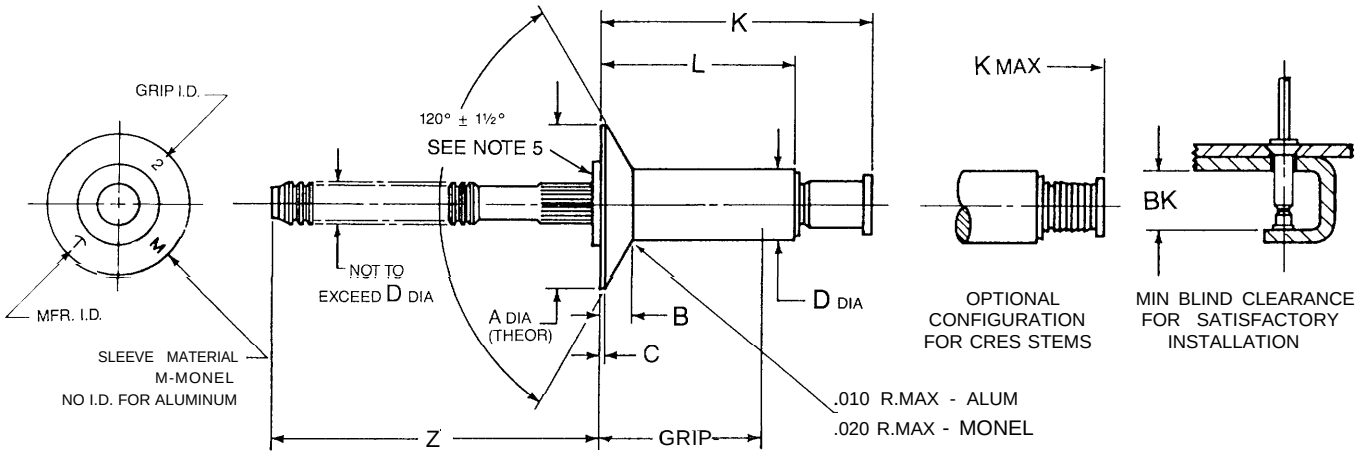
2 Do not clean or degrease prior to installation—lubricant must not be removed.

③ Chemical composition only.

4 Silver colored driving anvil. Identifies oversize rivets.

CHERRYMAX® RIVET

120° FLUSH HEAD / OVERSIZE DIAMETER



HEAD MARKINGS VISIBLE AFTER INSTALLATION

DIA DASH NO	DIA +.003 -.001	A ① ±.004	B (REF)	BK MIN	Z (REF)	C ALUM	C MONEL	HOLE LIMITS
-4	.140	.272	.038	.390	.87	.002-.010	.005-.015	.143-.146
-5	.173	.314	.041	.395	.94	.002-.012	.005-.015	.176-.180
-6	.201	.350	.048	.410	.94	.002-.012	.005-.015	.205-.209

GRIP LIMITS 1/16 MIN	GRIP LIMITS 1/16 MAX	-4(1/8") DIAMETER DASH NO.	-4(1/8") DIAMETER +.000 L -.030	-4(1/8") DIAMETER K MAX	-5(5/32") DIAMETER DASH NO.	-5(5/32") DIAMETER +.000 L -.030	-5(5/32") DIAMETER K MAX	-6(3/16") DIAMETER DASH NO	-6(3/16") DIAMETER +.000 L -.030	-6(3/16") DIAMETER K MAX
.063	.125	4-02	.238	.45	5-02	.266	.47	6-02	.265	.48
.126	.187	4-03	.301	.52	5-03	.309	.53	6-03	.328	.55
.188	.250	4-04	.363	.58	5-04	.371	.60	6-04	.390	.62
.251	.312	4-05	.426	.65	5-05	.434	.66	6-05	.453	.68
.313	.375	4-06	.488	.71	5-06	.496	.72	6-06	.515	.74

RIVET NUMBER	NAS 523 CODE	MATERIAL ④ SLEEVE	MATERIAL ④ STEM	MATERIAL ④ LOCK COLLAR	FINISH SLEEVE	FINISH STEM	FINISH LOCK COLLAR
CR 3246	-	5056 ALUM. ALLOY QQ-A-430	8740 ALLOY STEEL AMS 6322	A-286 CRES AMS 5731	CHEM FILM MIL-C-5541 PLAIN COLOR	CAD PLATE QQ-P-416 TYPE II CL. 2	PASSIVATED
CR 3556	-	MONEL QQ-N-281	15-7 PH CRES AMS 5657	A-286 CRES AMS 5731	NONE	NONE	
CR 3556P	-	MONEL QQ-N-281	15-7 PH CRES AMS 5657	A-286 CRES AMS 5731	ALUM. COAT CHERRY SPEC. C-123	NONE	

NOTE: ① Head diameters are to theoretical projection.

2 Rivets with grips greater than their diameter are not required to meet expansion requirements of procurement specifications.

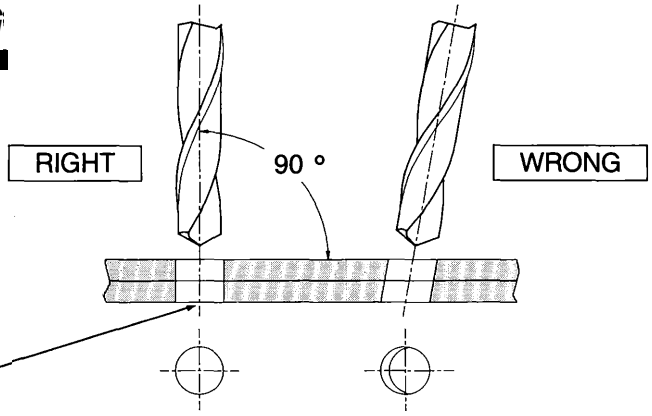
3 Do not clean or degrease prior to installation—lubricant must not be removed.

④ Chemical composition only

5 Silver colored driving anvil. identifies oversize rivets.

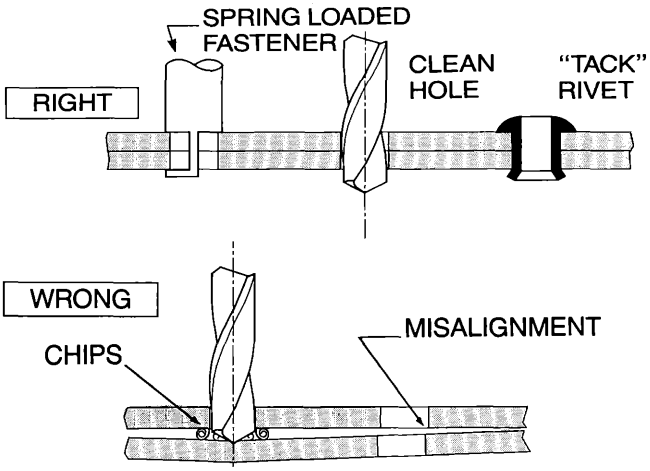
CHERRYMAX® RIVET INSTALLATION

DRILLING



Use a clean, sharp, properly ground drill. Improperly ground drills will create oval or oversize holes. Center the drill in the chuck so that the drill will run true. A "wobble" in the drill will create an oversize hole. Hold the drill perpendicular to the surface being drilled. Do not force the drill through the material.

DO NOT CHAMFER OR OTHERWISE REMOVE THE SHARP EDGE OF THE BLIND SIDE OF THE JOINT!



To insure proper hole alignment and to prevent burrs and chips from lodging between the sheets, the materials to be riveted should be clamped tightly together. Hole-filling, hollow, pull-thru rivets may be used in conjunction with spring-loaded clamps to prevent material "creep" and hole misalignment during the drilling operation.

DRILL SIZES

Drill sizes shown in table below are those which normally produce holes within the specified limits. To assure drilling accuracy, holes should be checked with a GO/NO-GO gage as shown on page 7.

—NOMINAL CHERRYMAX—			
RIVET DIAMETER	DRILL SIZE	HOLE SIZE	
		MIN.	MAX.
-4 (1/8")	#30	.129	.132
-5 (/32")	#20	.160	.164
-6 (3/16")	#10	.192	.196
-8 (1/4")	F	.256	.261

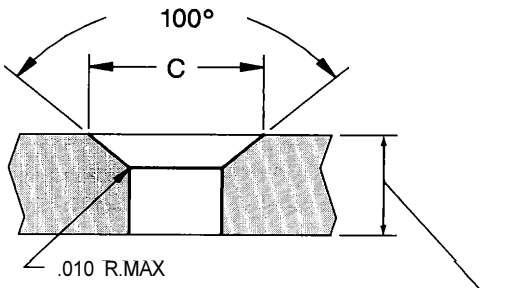
—OVERSIZE CHERRYMAX—			
RIVET DIAMETER	DRILL SIZE	HOLE SIZE	
		MIN.	MAX.
-4 (1/8")	#27	.143	.146
-5 (5/32")	#16	.176	.180
-6 (3/16")	# 5	.205	.209
-8 (1/4")	1	.271	.275

CHERRYMAX® RIVET INSTALLATION

COUNTERSINKING

Accurate countersinking is of primary importance to the structural integrity of a flush riveted joint. Standard countersinking procedures as used with solid rivets are also applicable to CherryMAX rivets. The following points, however, should be noted:

The countersink pilot should be no more than .001" smaller than the hole diameter. A greatly undersize pilot will produce countersinks which are not concentric with the hole, creating "cocked" head and head gapping problems.



Material thickness for non-dimpled countersinks should not be less than rivet head height ('B' dimension) plus .010". See table for 'B' dimensions.

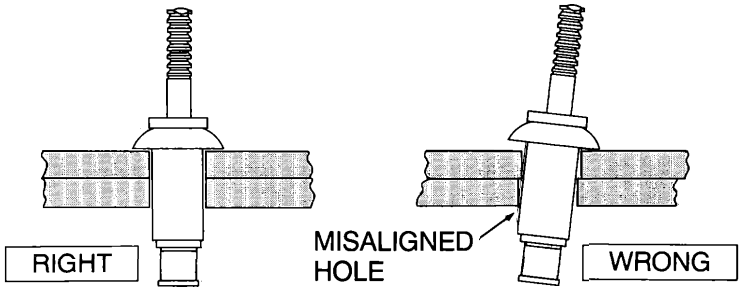
RIVET DIAMETER	MS20426 100° HEAD		NAS1097 100° HEAD		UNISINK 100° HEAD		120° HEAD	
	C MIN.	C MAX.	C MIN.	C MAX.	C MIN.	C MAX.	C MIN.	C MAX.
-4 (1/8")	.222	.228	.189	.195	.167	.173	.269	.275
-5 (5/32")	.283	.289	.240	.246	.210	.216	.311	.317
-6 (3/16")	.350	.356	.296	.302	.252	.258	.347	.353
-8 (1/4")	.473	.479	.389	.395	—	—	—	—

COMPARISON CHART OF RIVET HEADS "B" FOR CHERRYMAX FLUSH HEAD RIVETS

RIVET DIAMETER	B REF. CR3212 100° NOMINAL	CR3214 100° NAS1097	CR3242 100° OVERSIZE	CR3245 100° OVERSIZE UNISINK	CR3246 120° OVERSIZE
- 4 (1/8")	.041	.028	.035	.011	.038
- 5 (5/32")	.054	.037	.047	.015	.041
- 6 (3/16")	.069	.046	.063	.023	.048
- 8 (1/4")	.095	.086	.060	—	—

PLACING THE RIVET IN THE HOLE

The holes in the sheets to be fastened must be of the correct size and have proper alignment. Do not force the rivet into the hole! **To aid in achieving proper clamp-up of the sheets, use tack rivets and/or spring loaded clamps.**



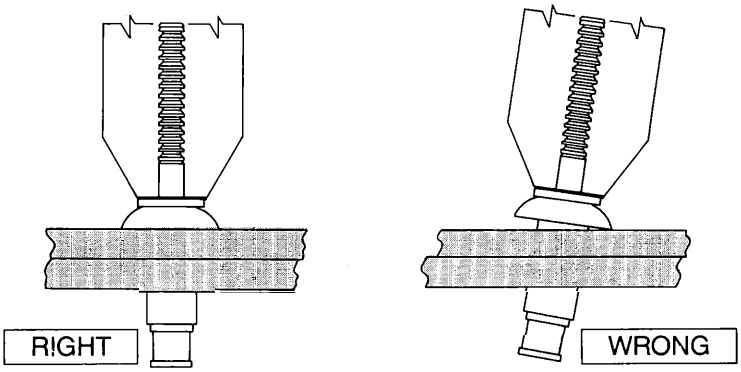
PLACING THE PULLING HEAD ON THE RIVET STEM

Hold the riveter and pulling head in line with the axis of the rivet as shown in the illustration. Press firmly against the head of the rivet to minimize head gapping and sheet gap. Apply a firm, steady pressure and pull the riveter trigger to begin installation sequence.

The installation cycle will help clamp the sheets together, seat the rivet head, and break the stem flush with the head of the rivet.

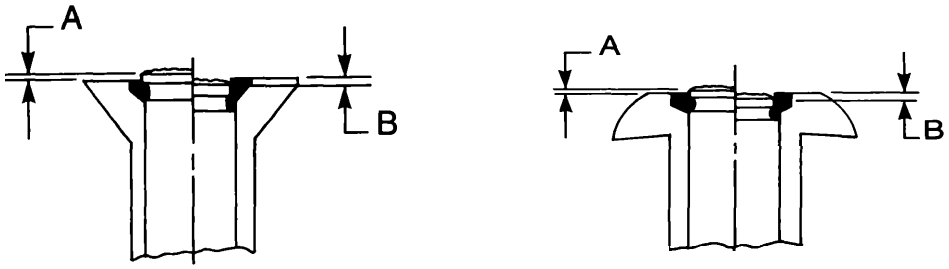
After the stem breaks, release the trigger.

The pin-tail portion of the stem will be ejected back thru the riveter head. A stem catcher bag may be obtained to collect the pin-tails, Part Number 670A20. See page 28.



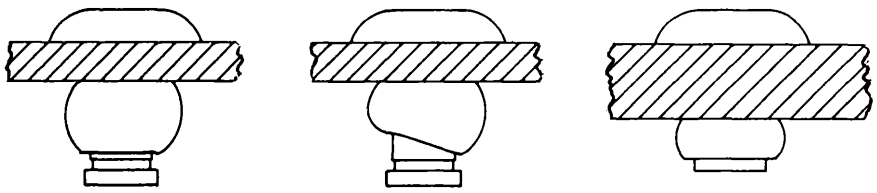
WARNING: Operating the riveter with a damaged or missing stem deflector, or using the deflector as a handle, **may** result in severe personal injury.

INSPECTION



Shown is typical installed fastener flushness acceptance criteria. Locking collar is to be flush with the top surface of the rivet head. Collar flash permissible is .020 max. Stem flushness shall be as indicated.

RIVET	A MAX.	B MAX.
-4 (1/8")	.010	.015
-5 (5/32")	.010	.020
-6 (6/16")	.010	.020
-8 (1/4")	.015	.025



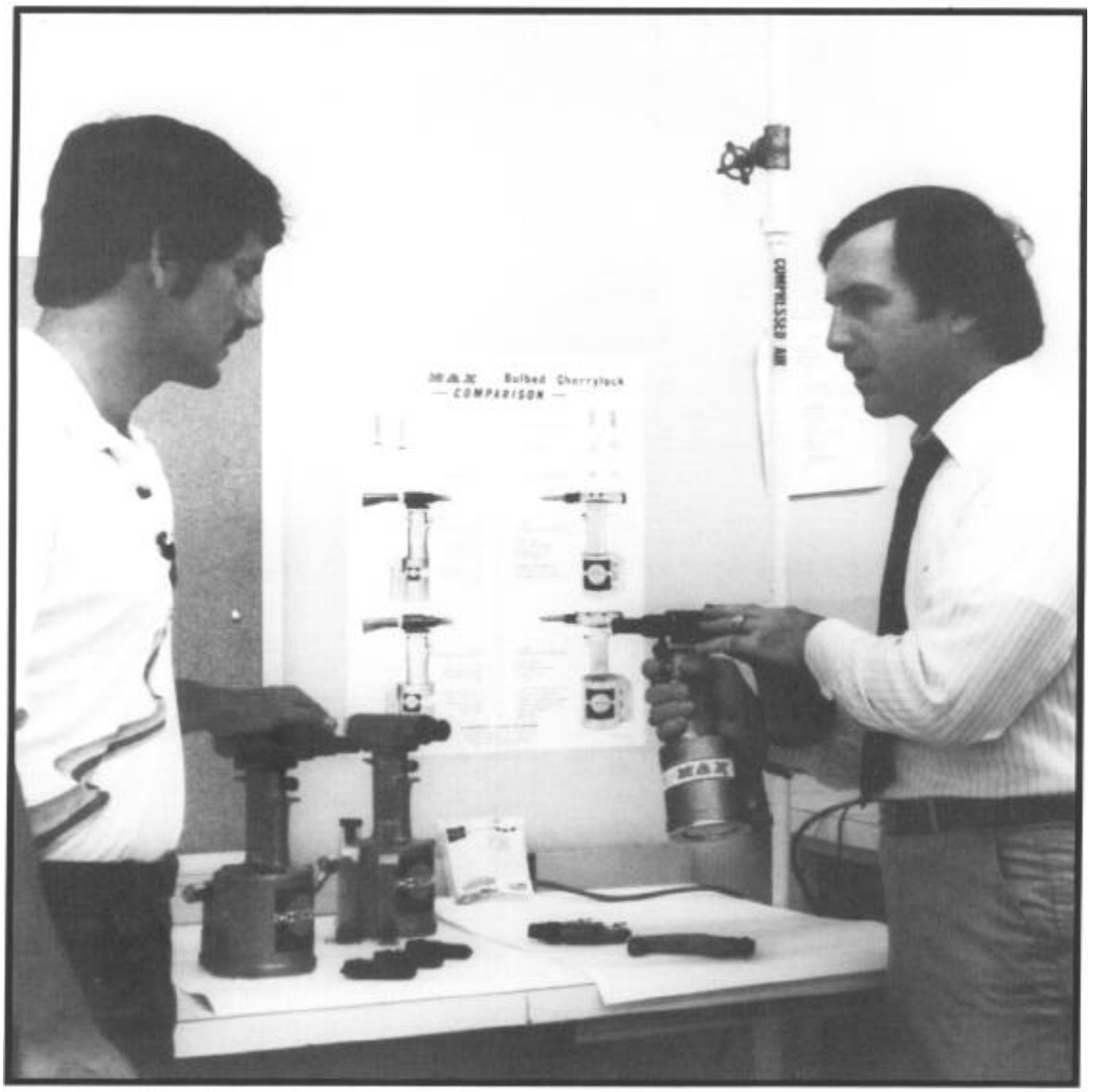
TYPICAL MIN. GRIP

IRREGULAR FORMATION MIN. GRIP

TYPICAL MAX. GRIP

ACCEPTABLE BLIND HEAD FORMATIONS.

CHERRYMAX® RIVET TOOLING



CherryMAX® tools are reliable, lightweight and versatile...one tool will install six diameters of rivets in all head styles and all material combinations without a change of pulling heads or adjustment of the tool.

TOOL SELECTION CHART

The tooling and pulling head combinations shown in the chart below will install the diameter rivets indicated by the shaded areas, in all grip lengths, head styles, and materials, **except as noted.**

For more information regarding installation tooling combinations, please contact Technical Service, Textron Aerospace Fasteners, Santa Ana, CA. 714/850-6048

CHERRY RIVETER MODEL	PULLING HEAD NUMBER	ALL GRIP LENGTHS, HEAD STYLES & MATERIALS EXCEPT AS NOTED							
		NOMINAL DIAMETER.				OVERSIZE DIAMETER			
		-4	-5	-6	-8	-4	-5	-6	-8
G27	—	■				■			
G83	H701B-456 ②	■	■	■		■	■	■	
G686B-S	H680B200A	■	■	■		■	■	■	
G689	H680B200A	■	■	■		■	■	■	
	H680B208				■				■
G700	H680B200A	■	①			■			
G701 A	H701B-456	■	■			■	■		
	H753A-456	■	■			■	■		
	H781-456	■	■			■	■		
G704B G704B-40SH G704B-SR	H701B-456	■	■	■		■	■	■	
	H753A-456	■	■	■		■	■	■	
	H781-456	■	■	■		■	■	■	
G744 G744-85SH	H744A-8				■				■
	H827-8				■				■
	H828-8				■				■
	H846A-456	■	■	■		■	■	■	
G749A	H749A-456	■	■	■		■	■	■	
	H753A-456	■	■	■		■	■	■	
	H781-456	■	■	■		■	■	■	
	H749-8				■				■
G750A	—	■	■	■		■	■	■	
	H750A-8				■				■
G784	H680B200A	■	■	■		■	■	■	
	H680B208				①				①

① *Will not install Monel or Inconel fasteners.*

② *Requires use of 700-244.*

CHERRYMAX® RIVET TOOLING

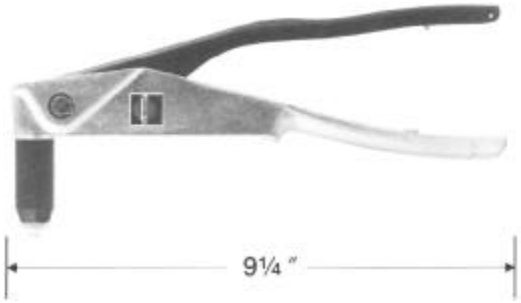
HAND RIVETERS & KITS

To obtain optimum advantage of CherryMAX® fasteners, it is recommended that CherryMAX® tooling be selected to install those fasteners.

G27

NATIONAL STOCK NUMBER 5120-01-393-1538

The G27 is a light-weight (13 oz) hand tool for use in low production applications such as repair, maintenance or prototype work. It is packaged in a rugged plastic case with room for an assortment of popular usage rivets. The pulling head is an integral part of this riveter.



G750A

NATIONAL STOCK NUMBER 5120-01-432-9361

The Cherry G750A hand hydraulic riveting tool provides the versatility of a pneumatic-hydraulic riveter but with the lightweight, high pull strength ratio desirability not found in other hand riveters. The Cherry G750A has a unique 2-stage hydraulic power cylinder that provides the user with the ease of pulling the handle without the strain normally endured to install a high strength fastener. This patentable 2-stage power feature allows the user to squeeze the handle throughout the increase power requirement, without feeling the need to squeeze harder to install the fastener. The Cherry G750A hand riveter can install a variety of blind fastener styles, diameters, head configurations, and material combinations. The G750A with the standard pulling head can install CherryMAX® and SST™ blind rivets in -4, -5, -6, diameters, and -05, -06 diameter MaxiBOLT blind bolts or threaded inserts by simply changing the pulling head.

G750ACMR

NATIONAL STOCK NUMBER 5120-01-432-6190

The Cherry G750ACMR hydraulic riveter tool kit includes the G750A with an H750A-456 pulling head, and adapter assembly, a right angle pulling head, an offset pulling head and a sturdy plastic carrying case.

1 Ea. G750A Hydraulic Hand Riveter
(Includes Pulling Head)
1 Ea. H781-456 Offset Pulling Head
1 Ea. H753A-456 Right Angle Pulling Head
1 Ea. 750A-088 Adapter Assembly
1 Ea. H781-456 Tool Sheet
1 Ea. H753A-456 Tool Sheet

POWER RIVETERS

NOTE: Pulling Heads for the tools described below must be ordered separately. They are listed in the Tool Selection Chart on page 20.

G701A

NATIONAL STOCK NUMBER 5130-01-044-7206
MILITARY PART NUMBER M85188T1

The G701A weighs 3½ Ibs. and can be operated in any position. It has a rivet setting stroke of .492", and a pulling capacity of 1614 Ibs. on 90 psi air pressure at the inlet. The G701A consumes approximately 2 CFM of air at 20 cycles per minute and its maximum noise level under load does not exceed 85 dB(A).

G704B

NATIONAL STOCK NUMBER 5130-01-393-1584
MILITARY PART NUMBER M85188T2

The G704B weighs 4½ Ibs. and can be operated in any position. It has a rivet setting stroke of .518" and a pulling capacity of 3136 Ibs. on 90 psi air pressure at the inlet. Normal operating air pressure is 90-120 psi at the inlet. The G704B consumes approximately 4 CFM of air at 20 cycles per minute and its maximum noise level under load does not exceed 85 dB(A).

G744

NATIONAL STOCK NUMBER 5130-01-151-1856

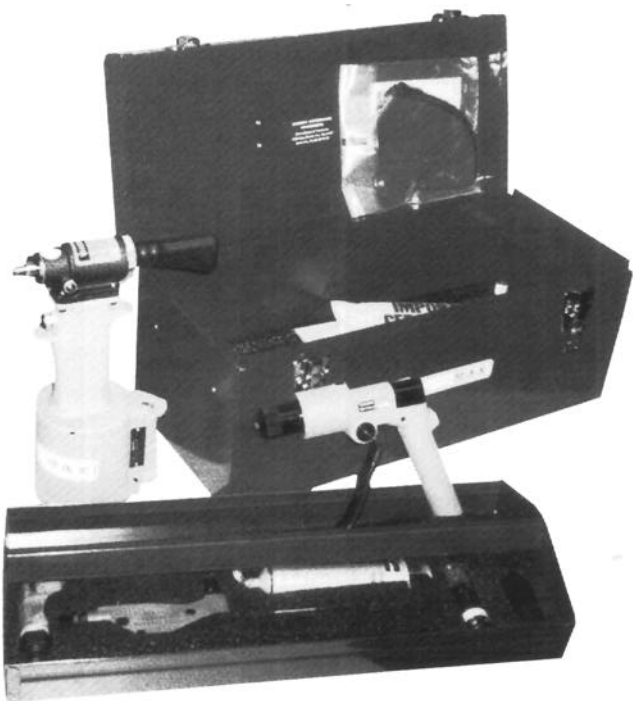
The G744 weighs 7 Ibs. and can be operated in any position. It has a rivet setting stroke of .625" and a pulling capacity of 3800 Ibs. on 90 psi air pressure at the inlet. Normal operating air pressure is 90-120 psi at the inlet. The G744 consumes approximately 6.5 CFM of air at 20 cycles per minute and its maximum noise level under load is 85 dB(A).

** WARNING: Operating these tools with a damaged or missing stem deflector, or using deflector as a handle, **may** result in severe personal injury.*

HAND/POWER RIVETER KITS

G704B/G750A-CMR

The G704B/G750A-CMR Power and Hand Riveter Kit weighs just 26 lbs. and contains all the tools necessary to install 1/8". 5/32" and 3/16" diameter CherryMAX rivets in all head styles, materials and grip lengths. The kit is readily portable and allows the operator to install rivets with or without compressed air. The kit includes the Cherry G704B power riveter for riveting at production speed and the G750A hand tool which permits riveting where compressed air is unavailable. Details and dimensions of the riveter and pulling head are outlined elsewhere in this catalog.



The G704B/G750A-CMR Kit contains the following items:

1 Ea. G704B Power Riveter
1 Ea. G750A Hand Riveter
1 Ea. H701B-456 Straight Pulling Head
1 Ea. H781-456 Offset Pulling Head
1 Ea. H753A-456 Right Angle Pulling Head
1 Ea. 700A77 Air Bleeder
1 Ea. 745A45 Air Bleeder
1 Ea. 750A-088 Adapter Assembly
1 Ea. 704A12-6 6" Extension
1 Ea. 704A12-12 12" Extension
1 Ea. 670A20 Stem Catcher Bag
1 Ea. P1258 Metal Tool Box
1 Ea. 750-040 Air Bleeder Adapter
1 Ea. 700A77 Air Bleeder
1 Ea. 745A45 Air Bleeder
1 Ea. G704B Power Riveter Manual
1 Ea. G750A Hand Riveter Manual
7 Ea. Pulling Head Tool Sheets
1 Ea. 269C3 Selector Gage
1 Ea. CherryMAX Process Manual
1 Ea. CherryMAX Pocket Card

POWER RIVETER KITS

G704BCMR

NATIONAL STOCK NUMBER 5130-01-089-1229

The G704BCMR Power Riveter Kit weighs just 13-1/2 lbs. and contains all the tools necessary to install 1/8,5/32 and 3/16" diameter CherryMAX rivets in all head styles, materials and grip lengths. The kit is readily portable and where compressed air is available, will permit riveting at production speed. Details and dimensions of the riveter and pulling head are outlined elsewhere in this catalog.

The G704BCMR Power Riveter Kit contains the following items:

1 Ea. G704B Power Riveter
1 Ea. H701B-456 Straight Pulling Head
1 Ea. 700A77 Air Bleeder
1 Ea. 269C3 Selector Gage
1 Ea. 670A20 Stem Catcher Bag
1 Ea. P1258 Metal Carrying Case
1 Ea. G704B Power Riveter Manual
1 Ea. H701B-456 Pulling Head Sheet
1 Ea. CherryMAX Process Manual
1 Ea. CherryMAX Pocket Card

G744CMR

NATIONAL STOCK NUMBER 5130-01-154-7052

The G744CMR Power Riveter Kit weighs just 18 lbs. and contains all the tools necessary to install 1/8,5/32,3/16 and 1/4" diameter CherryMAX rivets in all head styles, materials and grip lengths. The kit is readily portable and where compressed air is available, will permit riveting at production speed. Details and dimensions of the riveter and pulling head are outlined elsewhere in this catalog.

The G744CMR Power Riveter Kit contains the following items:

1 Ea.G744 Power Riveter
1 Ea. H744A-8 Straight Pulling Head
1 Ea. H846A-456 Straight Pulling Head
1 Ea. 700A77 Air Bleeder
1 Ea. 269C3 Selector Gage
1 Ea. 670A20 Stem Catcher Bag
1 Set T172 Hole Gages (8 sizes)
2 Ea. 1/8" Allen Keys
1 Ea. G744 Power Riveter Manual
1 Ea. H744A-8 Pulling Head Sheet
1 Ea. H846A-456 Pulling Head Sheet
1 Ea. CherryMAX Process Manual
1 Ea. CherryMAX Pocket Card
1 Ea. P1258 Metal Carrying Case

CHERRYMAX® RIVET TOOLING

SPLIT POWER RIVETERS

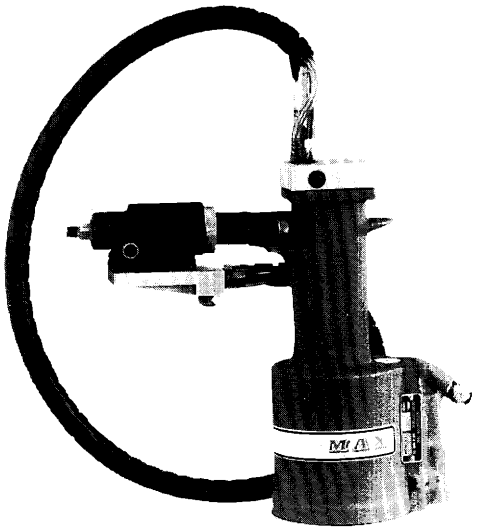
G704B-SR AND G704B-40SR

G704B-SR NATIONAL STOCK NUMBER 5130-01-237-0488

The G704B-SR and G704B-40SR Split Riveters were designed specifically for the installation of CherryMAX rivets in extremely limited access applications. They transmit power from the power unit through three feet of flexible hose (for the G704BSR), and eight feet of hose (for the G704B-40SR), to a small, lightweight head. By utilizing the appropriate pulling head, design problems and operator fatigue can be greatly reduced.

The riveters have a rivet setting stroke of .518" and a pulling capacity of 3136 lbs. on 90 psi air pressure at the air inlet. Normal operating air pressure range is 90-120 psi at the inlet. The maximum noise level under load does not exceed 85dB(A).

Pulling heads must be ordered separately. They are listed, along with the riveter's capacity (same as the G704B), in the tool selection chart on page 20.



G704B-40SH AND G744-85SH

G704B-40SH NATIONAL STOCK NUMBER 5130-01-374-1335

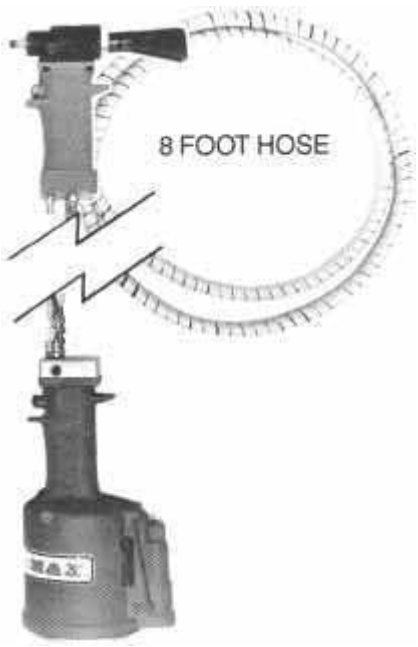
The G704B-40SH and G744-85SH Split CherryMAX Riveters are designed specifically for the easiest and most efficient installation of CherryMAX rivets. In using these “split” tools, the power unit rests on the floor and transmits its power through 8 feet of hose to a lightweight pistol-grip handle. This facilitates rivet installation in many limited access areas and also greatly reduces operator fatigue.

The G704B-40SH and G744-85SH Riveters operate on 90 - 120 psi of air pressure at the air inlet and differ in capacity as follows:

G704B-40SH . . . . . .518" stroke. . . . . .3136 lbs. pull
G744-85SH . . . . . .625" stroke. . . . . .3800 lbs. pull

The difference in stroke and pull determines the size of rivets that can be installed with these riveters.

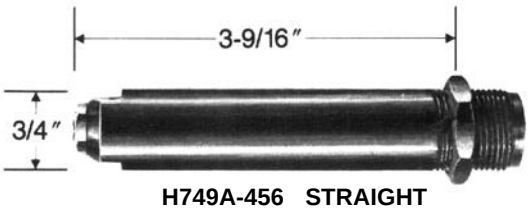
Pulling heads must be ordered separately. They are listed, along with the riveter’s capacity, in the tool selection chart on page 20.



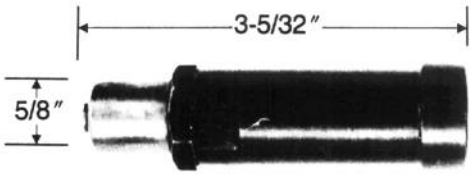
PULLING HEADS

The pulling heads shown below are not furnished with riveters and must be ordered separately. When selecting the proper pulling head refer to the tool selection chart on page 20 for the appropriate riveter/pulling head combination.

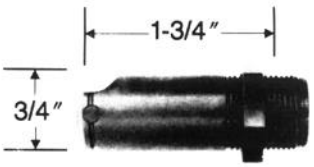
FOR INSTALLING 1/8, 5/32 AND 3/16" NOMINAL & OVERSIZE CHERRYMAX® RIVETS



H749A-456 STRAIGHT
NSN 5130-01-104-5370

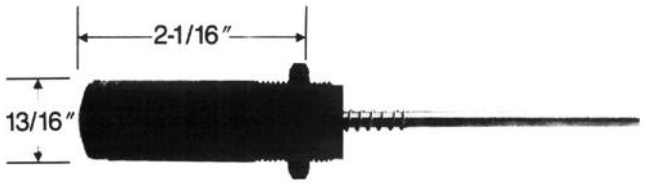


H680B200A STRAIGHT
NSN 5130-01-044-7198

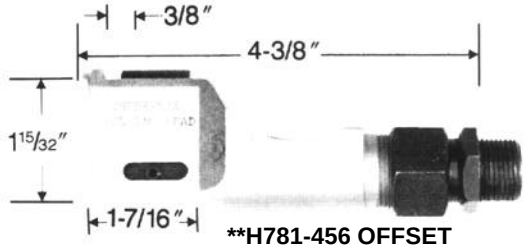


H701B-456 STRAIGHT
NSN 5130-01-393-2927
Military Part Number M85188S1

***H753A-456 RIGHT ANGLE**
NSN 5130-01-393-2926
Military Part Number M85188S2



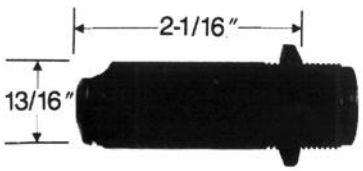
H846A-456 STRAIGHT



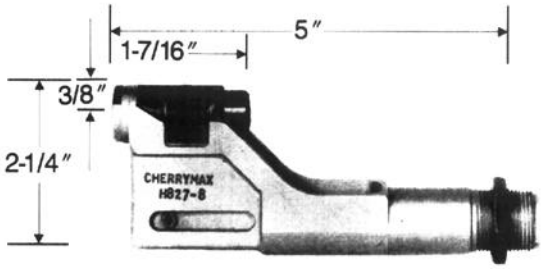
****H781-456 OFFSET**
NSN 5130-01-393-2925
Military Part Number M85188S3

*Use 744A20 adapter when used with G744
**H781-456 replaces H763-456

FOR INSTALLING 1/4" NOMINAL AND OVERSIZE CHERRYMAX® RIVETS

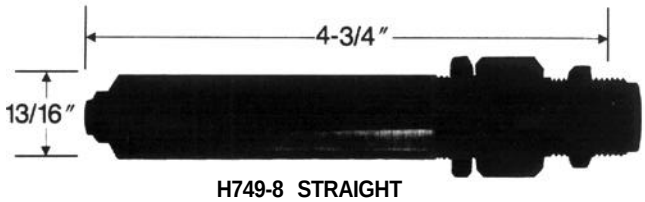


H744A-8 STRAIGHT

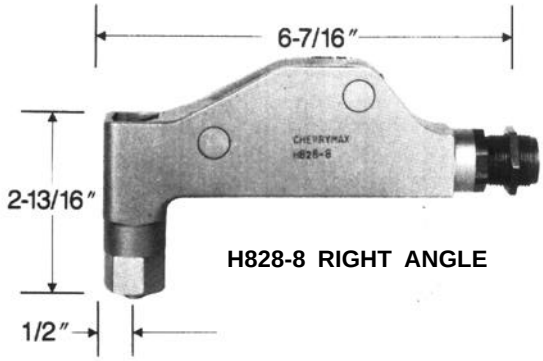


***H827-8 OFFSET**

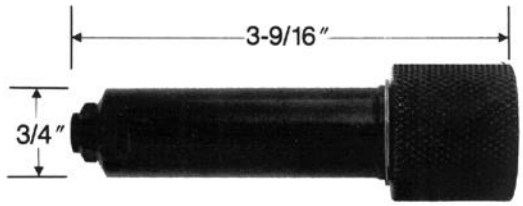
*Available by order only



H749-8 STRAIGHT
NSN 5130-01-332-4858



H828-8 RIGHT ANGLE



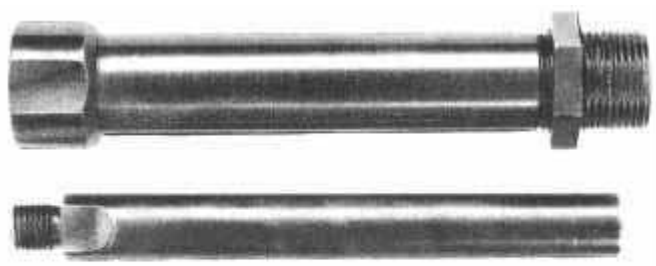
H680B208 STRAIGHT

EXTENSIONS

Combinations of these extensions may be used to reach many restricted installation areas by increasing the overall length of the pulling head.

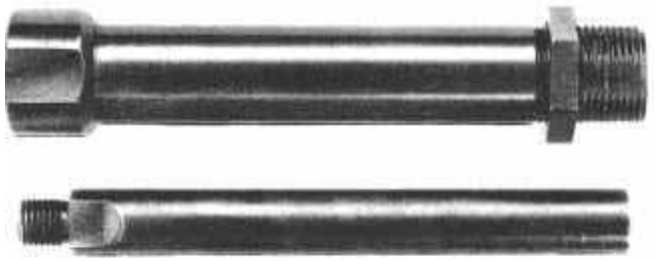
704A12-2 (2") NSN 5130-01-145-0206
704A12-4 (4') NSN 5130-01-1450207
704A12-6 (6") NSN 5130-01-145-0208
704A12-12 (12") NSN 5130-01-178-0331

These extensions will fit directly on to the G701A, G704B, G749A, G845A and G846 CherryMAX® Riveters and will accept any of the pulling heads listed for those riveters in the Tool Selection Chart on page 20.



744B35-2 (2")
744B35-4 (4")
744B35-6 (6")
744B3512 (12")

Any combination of these extensions may be used to reach the desired length. They fit directly on the G-744 CherryMAX riveters and will accept any of the pulling heads listed for that riveter in the tool selection chart on page 20.



753B21 (1-1/8")

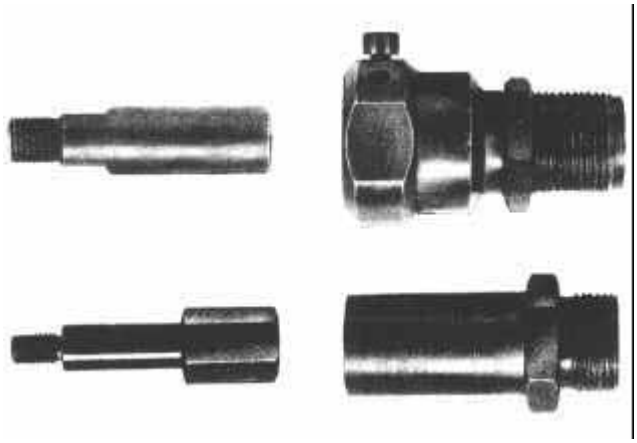
This extension increases the overall length of the H753A-456 right angle pulling head nosepiece to approximately 2-3/16", enabling it to reach into more restricted areas.

ADAPTERS

These adapters fit the G701A, G704B, G749A, G845A, and G846 CherryMAX® riveters to accept pulling heads designed for the installation of MS-type blind rivets in shorter grip lengths.

704A6 NSN 5130-01-145-6189

Permits the use of H9040 snap-on type pulling head.



704A9 NSN 5130-01-134-8231

Permits the use of H9015 screw-on type pulling head.

ADAPTERS

These adapters permit various Cherry riveters to accept pulling heads for the installation of CherryMAX rivets that the riveters were not originally intended to pull.

6808205 NSN 5130-01-175-4015

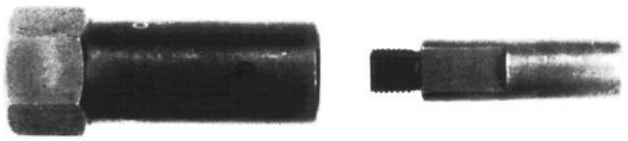
Permits the G686B-S, G689, G700 and G784 to accept the H753A-456 and H781-456 pulling heads for installing 1/8, 5/32 and 3/16" CherryMAX® rivets.

744A20

Permits the G744 riveter to accept the H701-456, H753-456 and H781-456 pulling heads for installing 1/8, 5/32 and 3/16" CherryMAX® rivets and G846 up to -4 grip wiredraw rivets.

740A26

Permits the G740A and G86A Cherry riveters to accept the H749A-456, H753A-456 and H781-456 pulling heads for installing 1/8, 5/32 and 3/16" CherryMAX® rivets.



ACCESSORIES

701B32 MAGNETIC DRIVING ANVIL CATCHER

The 701B32 magnetic driving anvil catcher provides a method to securely catch and hold the driving anvil as they fall away after CherryMAX® rivet installation. This anvil catcher slips onto the nose of the pulling head without any need for permanent attachment.

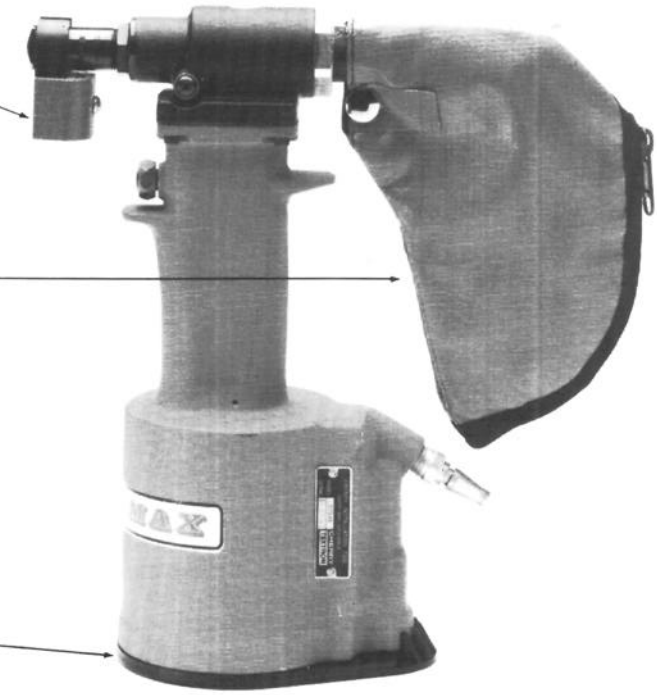
670A20 STEM CATCHER BAG

NSN 5130-01-154-1141

The 620A20 stem catcher bag is a convenient accessory which helps eliminate litter from the shop floor. This plastic bag equipped with a heavy-duty zipper snaps over the stem deflector of the G701A, G704B, G744, G845A, and G846 CherryMAX® riveters to catch the spent stems as they are ejected from the rear of the riveter head.

700D107 URETHANE BASE PLATE

The 700D107 Urethane Base Plate replaces the standard aluminum base plate of the G704B, G704B-SR, and G846 riveters. The urethane base stabilizes the riveter, lightens it, is shock absorbing, and protects finished surfaces from marring. The urethane base is impervious to industrial solvents, installs easily, and adds to overall installation tool performance.



CHERRYMAX® RIVET TOOLING

MAINTENANCE ITEMS

To keep CherryMAX hydraulic tools operating at peak efficiency, it is absolutely essential that the hydraulic system be kept full of fluid and free of air.

Based on the same principle used in bleeding the hydraulic brake system of an automobile, the Cherry Air Bleeders shown below will quickly and easily remove all air and assure the complete filling of the tool with hydraulic fluid. They may be used in the tool crib or right on the production line, since it requires but a few minutes to perform this vital function. The air bleeder is a small item, but does a really big job . . . it prevents downtime.

700A77 AIR BLEEDER
NSN 5130-01-104-5372
For servicing all Cherry pneumatic/hydraulic power riveters.

745845 AIR BLEEDER
NSN 5120-01-089-1230
For servicing the Cherry G749A hydraulic hand riveter.

An assortment of O-rings, seals, screws, washers and gaskets likely to need replacing in time, is available in kit form for each Cherry power riveter. To avoid unnecessary downtime, it is advisable to have these kits on hand for the tools to be serviced:

CHERRY TOOL	SERVICE KIT NO.	NSN#
G701A	G701KS	—
G704B	G704KS	5130-01-105-4177
G704B-SR	G704KS	5130-01-105-4177
G704B-40SH	G704B-40SHKS	—
G704B-40SR	G704B-40SHKS	—
G744	G744KS	5130-01-267-9952
G744-85SH	G744-85SHKS	—
G749A	G749KS	—
G750A	G750AKS	—

DISASSEMBLY/ASSEMBLY TOOLS

To completely dismantle and reassemble Cherry hydraulic tools, it is advisable to use certain special wrenches designed for that purpose as shown below:

POWER CYLINDER TOOL

RIVETER NO.	TOOL NO.	N S N #
G70IA	702B62	—
G704B	700A62	5130-01-104-5371
G744	700A62	5130-01-104-5371

700B61 PISTON ROD WRENCH
NSN 5130-01-108-5000

700B65 PACKING PLUG WRENCH
NSN 5130-01-104-5373

700A60 SEAL GUIDE
NSN 5130-01-267-9839

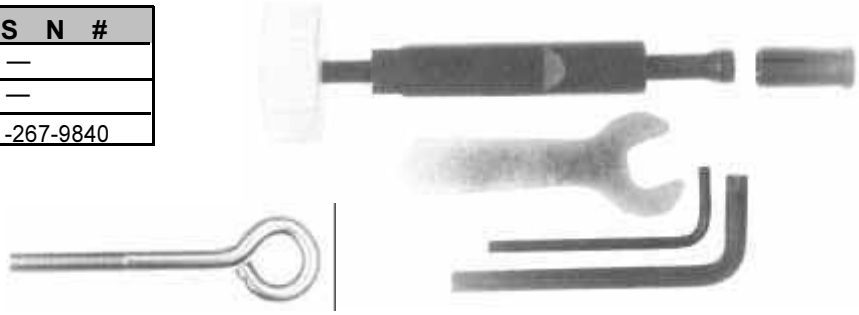
The tools listed below are for use in dismantling and reassembling the air inlet valve on Cherry hydraulic tools:

VALVE SPRING INSTALLATION KIT

RIVETER NO.	KIT NO.	N S N #
G701 A	836B700	—
G704B	836B700	—
G744	836B740	5130-01-267-9841

VALVE SLEEVE REMOVAL KIT

RIVETER NO.	KIT NO.	N S N #
G701A	837B700	—
G704B	837B700	—
G744	837B740	5130-01-267-9840



P-1178 VALVE SPOOL EXTRACTOR

G750A

G750A Hand-Riveter The Cherry hand hydraulic riveting tool provides the versatility of a pneumatic-hydraulic riveter, but ,with the lightweight, high strength ratio desirability not found in other hand riveters.

TEXTRON Aerospace Fasteners

1224 East Warner Ave., P.O. Box 2157, Santa Ana, CA 92707-0157
(714) 545-5511 FAX (714) 850-6095

CHERRY

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