



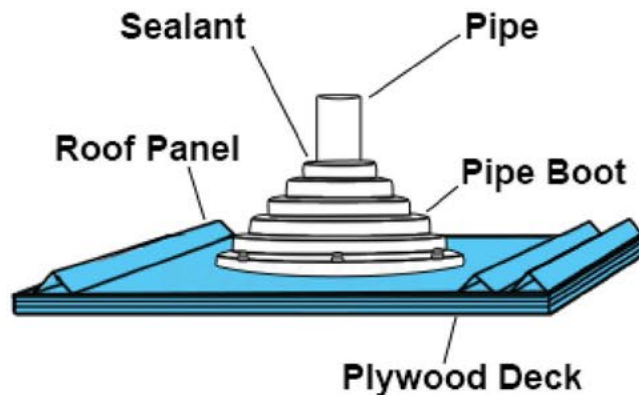
# METAL FASTENING

Systems, Inc

[www.metalfasteningssystem.com](http://www.metalfasteningssystem.com)

## Master Flash®

*Pipe/Roof Flashings for Every Application*



TYPICAL APPLICATION

Charlotte, NC.  
7670 Mikron Dr  
Stanley, NC. 28164  
(704) 822-3562

Raleigh, NC.  
2201 S Wilmington St  
Suite 101  
Raleigh, NC. 27603  
(919) 33-7794

Richmond, VA.  
8131 Virginia Pine Ct  
N. Chesterfield, VA. 23237  
(804) 912-1851

THE NEXT GENERATION OF HIGH PERFORMANCE FASTENERS AND ACCESSORIES

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**Fix-A-Flash, Extreme Angle, Mindy & Solar Multi-Port-MR Master Flash -----**

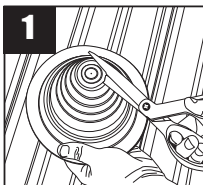
**End Cap, Solor Flash, Mini-Port, Solor Multi-Port-CT Master Flash -----**

**Technical Data for EPDM, Silicone & Roof Pitch Calculator -----**

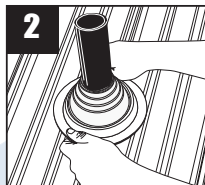
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## Pipe Boot Installation

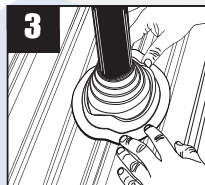
Measure & Trim



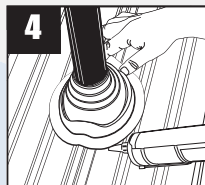
Slide



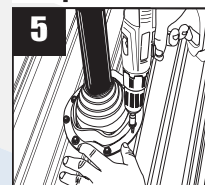
Form



Seal



Complete



## Universal Master Flash® All Around Performance



BROWN



BLACK



DARK GREY



LIGHT GREY



WHITE



DARK GREEN



LIGHT GREEN



DARK BLUE



LIGHT BLUE



BRIGHT RED



TERRA COTTA

### All Around Design Excellence

This universal flashing has been designed to fit virtually all panel configurations. Sleeve flexibility absorbs vibration and pipe movement caused by expansion/contraction. Easy on-site customization can accommodate all normal installations.

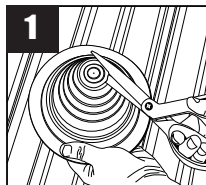
<b>Mini</b> Pipe Range: 0" - 3/4" (0 - 19mm) Top opening: Closed • Overall height: 1-1/2" (38mm) • Base: 4" (101mm)
<b>#1</b> Pipe Range: 1/4" - 2-1/2" (6 - 63mm) Top opening: Closed • Overall height: 3-1/4" (82mm) • Base: 3-1/4" (82mm)
<b>#2</b> Pipe Range: 1-3/4" - 3" (44 - 76mm) Top opening: 1-1/4" (31mm) • Overall height: 4" (101mm) • Base: 6-1/4" (158mm)
<b>#3</b> Pipe Range: 1/4" - 5" (6 - 127mm) Top opening: Closed • Overall height: 4" (101mm) • Base: 7-3/4" (196mm)
<b>#4</b> Pipe Range: 3" - 6-1/4" (76 - 158mm) Top opening: 2-1/4" (57mm) • Overall height: 4-3/4" (120mm) • Base: 9-1/4" (234mm)
<b>#5</b> Pipe Range: 4-1/4" - 7-3/4" (107 - 196mm) Top opening: 3-1/2" (88mm) • Overall height: 4-1/4" (107mm) • Base: 10-1/2" (266mm)
<b>#6</b> Pipe Range: 5" - 9" (127 - 228mm) Top opening: 5" (127mm) • Overall height: 6" (152mm) • Base: 13" (330mm)
<b>#7</b> Pipe Range: 6" - 11" (152 - 279mm) Top opening: 5-1/2" (139mm) • Overall height: 5-1/2" (139mm) • Base: 14-1/2" (368mm)
<b>#8</b> Pipe Range: 7" - 13" (177 - 330mm) Top opening: 6" (152mm) • Overall height: 6" (152mm) • Base: 16-1/2" (412mm)
<b>#9</b> Pipe Range: 9" - 19" (228 - 482mm) Top opening: 7-3/4" (196mm) • Overall height: 9" (228mm) • Base: 25-1/4" (641mm)



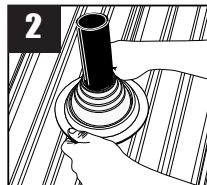
12 Colors • Two Compounds:  
EPDM / High Temp Red & Grey Silicone



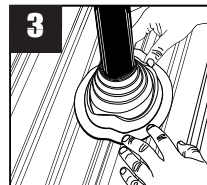
### Measure & Trim



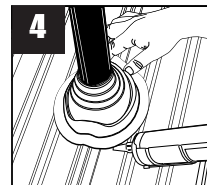
### Slide



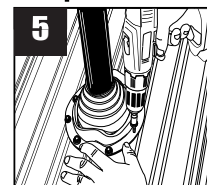
### Form



### Seal



### Complete



20  
YEAR  
WARRANTY

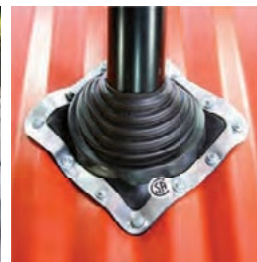




## Standard Master Flash®



Two Compounds:  
EPDM / High Temp Red Silicone



BROWN



BLACK



GREY



WHITE



DARK GREEN



LIGHT GREEN



DARK BLUE



LIGHT BLUE



BRIGHT RED



TERRA COTTA

**Mini** Pipe Range: 1/8" - 3/4" (3 - 19mm)

Top opening: Closed • Cut to suit pipe size: 1/8" - 3/4" (3-19mm) • Base: 2-1/4" (57mm)

**#1** Pipe Range: 1/4" - 2-3/4" (6 - 70mm)

Top opening: Closed • Cut to suit pipe size: 1/4" - 2-3/4" (6 - 70mm) • Base: 4-1/2" (114mm)

**#2** Pipe Range: 7/8" - 4" (22 - 101mm)

Top opening: 7/8" (22mm) • Cut to suit pipe size: 7/8" - 4" (22 - 101mm) • Base: 6" (152mm)

**#3** Pipe Range: 1/4" - 5-3/4" (6 - 146mm)

Top opening: Closed • Cut to suit pipe size: 1/4" - 5-3/4" (6 - 146mm) • Base: 8" (203mm)

**#4** Pipe Range: 2-3/4" - 7" (70 - 177mm)

Top opening: 2-1/4" (57mm) • Cut to suit pipe size: 2-3/4" - 7" (70 - 177mm) • Base: 10" (254mm)

**#5** Pipe Range: 4" - 8-1/4" (101 - 209mm)

Top opening: 3-1/2" (89mm) • Cut to suit pipe size: 4" - 8-1/4" (101 - 209mm) • Base: 11" (279mm)

**#6** Pipe Range: 4-3/4" - 10" (121 - 254mm)

Top opening: 3-3/4" (95mm) • Cut to suit pipe size: 4-3/4" - 10" (121 - 254mm) • Base: 12" (304mm)

**#7** Pipe Range: 5-1/2" - 11-1/2" (140 - 292mm)

Top opening: 4-3/4" (120mm) • Cut to suit pipe size: 5-1/2" - 11-1/2" (140 - 292mm) • Base: 14" (355mm)

**#8** Pipe Range: 6-3/4" - 13-1/2" (171 - 343mm)

Top opening: 5-1/2" (140mm) • Cut to suit pipe size: 6-3/4" - 13-1/2" (171 - 343mm) • Base: 17" (431mm)

**#8X Fix-A-Flash** Pipe Range: Closed Top 0" - 15" (0-381mm)

Top opening: Closed • Cut to suit pipe size: Closed 0" - 15" (0-381mm) • Base: 19-1/2" (495mm)

**#9** Pipe Range: 9-1/2" - 20-1/2" (241 - 520mm)

Top opening: 8" (203mm) • Cut to suit pipe size: 9-1/2" - 20-1/2" (241 - 520mm) • Base: 25" (635mm)

**#9X** Pipe Range: 8" - 20-1/2" (203 - 520mm)

Top opening: 6" (152mm) • Cut to suit pipe size: 8" - 20-1/2" (203 - 520mm) • Base: 25" (635mm)

**Maxi Closed** Pipe Range: 0" - 28-1/2" (0 - 724mm)

Top opening: Closed • Cut to suit pipe size: 0" - 28-1/2" (0 - 724mm) • Base: 34" (863mm)

**Maxi Open** Pipe Range: 12" - 28-1/2" (304 - 724mm)

Top opening: 10-1/4" (260mm) • Cut to suit pipe size: 12" - 28-1/2" (304 - 724mm) • Base: 34" (863mm)

**NOTE: Colors are only available for the Standard & Universal Master Flash**

### 35 Year Master Flash®

The Only ICC Flashing of its kind,  
Listed with the Florida & California Building Codes  
The first ICC listed flashing for the Metal Building  
Industry with a 35 year warranty  
One Compound: Black EPDM



**35 Year** Pipe Range: 1/8"-28-1/2" (0-136mm) • Base Range: 2-1/4" (57mm) to 34" (863mm)

## Universal Retrofit Master Flash®



Two Compounds:  
EPDM / High Temp Red & Grey Silicone

<b>#1</b> Pipe Range: 3/4" - 2-3/4" (19 - 70mm) Top opening: 3/4"(19mm) • Cut to suit pipe size: 3/4" - 2-3/4" (19 - 69mm) • Base: 6 - 1/4" (158mm)
<b>#2</b> Pipe Range: 2" - 7-1/4" (50 - 184mm) Top opening: 2" (50mm) • Cut to suit pipe size: 2" - 7-1/4" (50 - 184mm) • Base: 10-3/4" (273mm)
<b>#3</b> Pipe Range: 3-1/4" - 10" (95 - 254mm) Top opening: 3-1/4 (50mm) • Cut to suit pipe size: 3-1/4" - 10" (95 - 254mm) • Base: 14-1/2" (368mm)



## Retrofit Master Flash®



Two Compounds: EPDM / High Temp Red Silicone  
EPDM Application: plastic zip tie and fastener snaps included.  
Silicone Application: aluminum zip tie and fastener snaps included.

<b>#1</b> Pipe Range: 1/2" - 4" (12 - 101mm) Top opening: 1/2" (12mm) • Cut to suit pipe size: 1/2" - 4" (12-101mm) • Base: 8-3/16" (205mm)
<b>#2</b> Pipe Range: 4" - 9-1/4" (101 - 235mm) Top opening: 4" (101mm) • Cut to suit pipe size: 4" - 9-1/4" (101 - 235mm) • Base: 14-1/4" (362mm)
<b>#3</b> Pipe Range: 9-1/4" - 16-1/4" (235 - 412mm) Top opening: 9-1/4" (235mm) • Cut to suit pipe size: 9-1/4" - 16-1/4" (235 - 412mm) • Base: 21-1/2" (546mm)



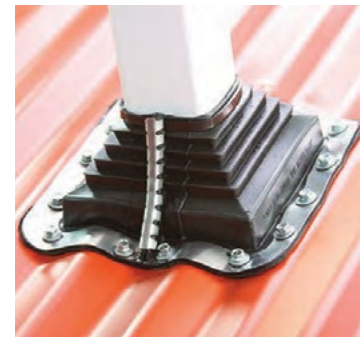
## Multi-Flash Square Vent Master Flash®

Two Applications • One Design



- Compound / EPDM
- Stainless steel gripper to secure a retro custom fit.

<b>#1</b> Pipe Range: Standard 3/8"-5" (20 - 125mm) Retrofit 1-1/2"-4" (38 - 101mm) Top opening: Closed • Overall height: 3-3/4" (95mm) • Base: 8" (203mm)
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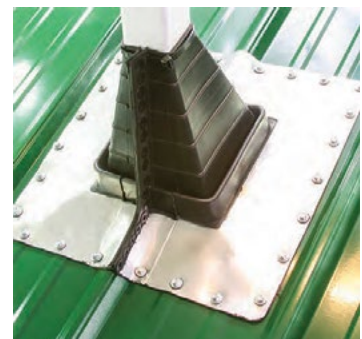


## Square Vent Master Flash®



• Two Sizes / One Compound / EPDM

<b>#1</b> Pipe Range: 2-1/2" - 4" (63 - 101mm) Top opening: 2-1/2" (63mm) • Cut to suit pipe size: 2-1/2" to 4" (63-101mm) • Base: 8" (203mm)
<b>#2</b> Pipe Range: 2-1/4" - 5" (57 - 127mm) Top opening: 2-1/4" (57mm) • Cut to suit pipe size: 2-1/4" to 5" (57-127mm) • Base: 15-3/4" (400mm)







## Multi-Flash Master Flash® "Two Flashings in one"



Two Compounds:  
EPDM / High Temp Grey Silicone



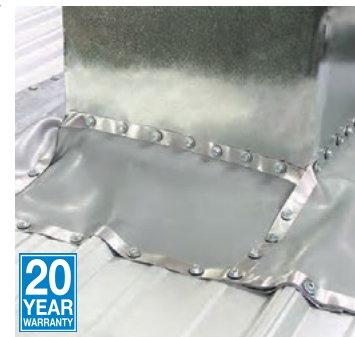
<b>Mini Port</b>	Pipe Range: Standard 1/4"-2-3/4" (6 - 70mm) Retrofit 1-1/4"-2-1/4" (25 - 57mm) Top opening: Closed • Overall height: 2-1/4" (57mm) • Base: 4-1/2" (114mm)
<b>#2</b>	Pipe Range: Standard 7/8"- 4" (22 - 101mm) Retrofit 1/2"- 3-1/2" (12 - 89mm) Top opening: 7/8" (22mm) • Overall height: 2-3/4" (70mm) • Base: 6" (152mm)
<b>#3</b>	Pipe Range: Standard 1/4" - 5-3/4" (6 - 146mm) Retrofit 2" - 4-1/2" (50 - 114mm) Top opening: Closed • Overall height: 3" (76mm) • Base: 8" (203mm)
<b>#4</b>	Pipe Range: Standard 2-3/4" - 7" (70 - 177mm) Retrofit 2-1/4" - 6-1/2" (57 - 165mm) Top opening: 2-3/4" (70mm) • Overall height: 4-3/4" (120mm) • Base: 10" (254mm)
<b>#5</b>	Pipe Range: Standard 4" - 8-1/4" (101 - 209mm) Retrofit 3-1/2" - 6-3/4" (90 - 171mm) Top opening: 4" (101mm) • Overall height: 4" (101mm) • Base: 11" (279mm)
<b>#6</b>	Pipe Range: Standard 4-3/4" - 10" (121 - 254mm) Retrofit 4-1/4" - 9-1/2" (108 - 241mm) Top opening: 4-3/4" (121mm) • Overall height: 4-1/2" (114mm) • Base: 12" (304mm)
<b>#7</b>	Pipe Range: Standard 5-1/2" - 11-1/2" (140 - 292mm) Retrofit 5" - 11" (127 - 279mm) Top opening: 5-1/2" (140mm) • Overall height: 5-1/2" (140mm) • Base: 14" (355mm)
<b>#8</b>	Pipe Range: Standard 6-3/4" - 13-1/2" (171 - 343mm) Retrofit 6-1/2" - 12" (165 - 304mm) Top opening: 6-3/4" (171mm) • Overall height: 5-3/4" (146mm) • Base: 17" (431mm)
<b>#9</b>	Pipe Range: Standard 9-1/2" - 20-1/2" (241 - 520mm) Retrofit 9" - 20" (228 - 508mm) Top opening: 9-1/2" (241mm) • Overall height: 5-3/4" (146mm) • Base: 25" (635mm)
<b>Maxi</b>	Pipe Range: Standard 12" - 28-1/2" (305 - 724mm) Retrofit 13" - 27" (330 - 685mm) Top opening: 12" (304mm) • Overall height: 7-1/2" (190mm) • Base: 34" (863mm)

## Box Gutter Expansion Joint Master Flash®

Applications: Transition Walls • Parapet Walls • Stepped Roofs • Corrugated Metal Roofs • Roof Penetrations  
Expansion Joint, Skylights...



Width: 9", 12", & 18" Thick: (.059) Available Lengths: 12', 33' & 50' One Compound / EPDM



## (SLF) Stretchable Linear Flash Master Flash® Roof Flashing System Stretch and Seal

Applications: Transition Walls • Parapet Walls • Stepped Roofs • Corrugated Metal Roofs • Roof Penetrations • Square Vents • Large Pipes • Skylights



One Compound / EPDM

Width: 11" (280mm) Thick (1.7mm) Available Lengths: 12' & 33'



**Fix-A-Flash Master Flash®** Oversized hole in your roofing? Aztec has the answer...  
The base is designed for a oversized hole cut for your pipe flashing



Two Compounds:  
EPDM / High Temp Red Silicone



**Fix-A-Flash Closed Top** Pipe Range: 0"-15" (0 - 381mm)  
Top opening: Closed • Overall height: 0" - 15" (0 - 381mm) • Large Base: 19-1/2" (495mm)

## Extreme Angle Master Flash®

The built in 40° degree pitch allows to handle any extreme roof pitch (35° - 65°)



Two Compounds:  
EPDM / High Temp Grey Silicone



#1 Pipe Range: 1/4" - 5-3/4" (6 - 146mm)  
Top opening: Closed • Cut to suit pipe size: 1/4" - 5-3/4" (6 - 146mm) • Base: 11" (279mm)

## Middy Master Flash®

"2 Port Design" Multiple Functions



Two Compounds:  
EPDM / High Temp Red Silicone



**Middy** Pipe Range: ONE center port: 0" - 2" (0 - 50mm) • One side ports: 1/8" - 3/8" (3-9mm)  
Top opening: Closed • Overall height: 2" (50mm) • Base: 3-3/4" (95mm)

## Solar Multi-Port - MR (Metal Roof) Master Flash®

5 Port Design for the Metal Roofing Industry



Two Compounds:  
EPDM / High Temp Red & Grey Silicone



**SMP-MR** Pipe Range: ONE Center port: 0" - 1-15/16" (0 - 49mm) • TWO Side ports: 3/8" (9.6mm) • TWO ports: 3/4" (20mm)  
Top opening diameter: Closed • Overall height: 2-1/2" (63mm) • Base: 4-1/2" (114mm)



## End Cap Master Flash®

### Standing Seam Roof End Cap Flashing



Flexible width allows for most panel configurations  
Expansion feature accommodates all seam heights  
allows side wall of end cap to form on roof panels  
Base allows application at both terminating points  
of the sheeting or roofing material.



**Applications:**  
Skylights • Metal Curbs  
Ridge Applications  
Job site Retrofit

<b>#Mini</b>	Overall Height: 3/4" (19mm) Inner Depth: 2" (50mm) • Base: 2-3/4" (70mm) Wide X 3" (76mm) Long
<b>#1</b>	Overall Height: 3" (76mm) Inner Wall Width: 3" (76mm) • Inner Depth: 2" (50mm) • Base: 4-1/4" (107mm)
<b>#2</b>	Overall Height: 3-1/4" (83mm) Inner Wall Width: 5-1/4" (133mm) • Inner Depth: 4-1/4" (107mm) • Base: 7-1/4" (184mm)

## Solar-Flash Master Flash®

### Specifically designed for solar applications



Two Compounds: EPDM / High Temp Red & Grey Silicone  
The pitch canal allows for maximum flexibility, easily  
accommodating up to a 60° degree pitch without affecting  
performance.

<b>#1</b>	Pipe Range: 3/4"-1" (19 - 25mm) Top opening: .60" (15mm) • Overall height: 2-1/2" (63mm) • Base: 4" (101mm)
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## Mini-Port Master Flash®



Two Compounds:  
EPDM / High Temp Grey Silicone

<b>Mini Port</b>	Pipe Range: Center port: 1-15/16" (0 - 49mm) Side port 3/8" (9.6mm) Top opening: Closed • Cut to suit pipe size: 0" 13/16" (0 - 20mm) • Base: 3" (76mm)
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## Solar Multi-Port - CT (Clay Tile) Master Flash®

### No Fasteners Required! Just WeatherMaster™ Sealant



One Compound:  
EPDM Rubber

<b>SMP-CT</b>	Pipe Range: ONE Center port: 0" - 1-15/16" (0 - 49mm) • TWO Side ports: 3/8" (9.6mm) • TWO ports: 3/4" (20mm) Top opening diameter: Closed • Overall height: 2-1/2" (63mm) • Base: 4-1/2" (114mm)
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Master Flash®  
Roof Pitch Calculator



As part of a standard classification system for rubber products these general specifications present conservative engineering minimums which should be used for design criteria.



ISO Quality, Price & Availability / Two Compounds

ADVANCED OZONE RESISTANCE tested to...	EPDM 70 hour @ 500 pphm	RED SILICONE 70 hour @ 500 pphm
HIGH TEMPERATURE RESISTANCE Tested to	+135°C (+275°F) +100°C (+212°F)	+260°C (+500°F) +225°C (+437°F)
Intermittent Continuous		
LOW TEMPERATURE RESISTANCE tested to...	- 55°C (-67°F)	- 74°C (-101°F)
COMPRESSION SET Maximum...	25%	50%

\*Complete specification data and testing methods are available upon request.

EP DM MasterFlash® Engineering Specifications	
AST M D2000 M3 BA510 A14 B13 C12 F17 Z1 Z2 Z3 Z4 Z5 Z6 Z7	
GRADE 3	
TYPE B	GENERAL TEST TEMP 100C
CLASS A	VOLUME SWELL NO REQ
5	50 DUROMETER (RANGE)
10	TENSILE 10 MPa (APPROX 1450 PSI)
A14	HEAT AGING 70 hrs @ 100C
B13	COMPRESSION SET 22 hrs @ 70C
	MAX 25% ASTM D395B
C12	OZONE RESISTANCE
	70 hrs @ 50pphm ASTM D1171
	100% QUALITY RETENTION
F17	LOW TEMPERATURE BRITTLNESS
	3 min @ -40C PASS ASTM D2137 A, 9.3.2
Z1	55 DUROMETER (SPECIFIC TARGET)
Z2	EPDM (SPECIFIC ELASTOMER)
Z3	HORIZONTAL FLAME RESISTANCE, UL 94
	NOT TO EXCEED 3" / min
Z4	OZONE RESISTANCE ADVANCED REQUIREMENT
	70 hrs @ 500 pphm @ 100F
Z5	ACCELERATED WEATHERING RESISTANCE
	(U.V. LIGHT), ASTM G-53
Z6	TEAR RESISTANCE, ASTM D-624, DIE "C"
Z7	RESISTANCE TO DISCOLORATION, ASTM D-1148 (GREY ONLY)

SILICONE MasterFlash® Engineering Specifications	
AST M D2000 M4 GE 505 A19 B37 C12 F19 G11 Z1 Z2 Z3 Z4	
GRADE 4	
TYPE G	GENERAL TEST TEMP 225C
CLASS E	VOLUME SWELL MAX 80%
5	50 DUROMETER (RANGE)
05	TENSILE 5 MPa (MINIMUM 725 PSI)
A19	HEAT AGING 70 hrs @ 225C
	CHANGE IN HARDNESS MAX + 10 pts
	CHANGE IN TENSILE MAX -30%
	CHANGE IN ULTIMATE ELONGATION MAX -30%
B37	COMPRESSION SET 22 hrs @ 175C
	MAX 50% ASTM D395B
C12	OZONE RESISTANCE
	70 hrs @ 50pphm PASS ASTM D1171
F19	LOW TEMPERATURE BRITTLNESS
	3 min @ -40C PASS ASTM D2137 A, 9.3.2
G11	TEAR RESISTANCE, ASTM D-624, DIE "B"
Z1	55 DUROMETER (SPECIFIC TARGET)
Z2	SILICONE (SPECIFIC ELASTOMER)
Z3	HORIZONTAL FLAME RESISTANCE, UL 94
	NOT TO EXCEED 3" / min
Z4	OZONE RESISTANCE ADVANCED REQUIREMENT
	70 hrs @ 500 pphm @ 100F

The "Z" Parameters are proprietary standards adopted by Aztec Washer to more clearly indicate the type of material and its superior performance characteristics as related to the typical pipe flashing environment.

NOTE: the additional of "Z3" to assure compliance with international building codes and "Z4" which clearly exceeds the performance required by the industry standard, "C12".

The Master Flash pipe flashing enjoys the only listing granted to date by the International Association of Plumbing and Mechanical Officials and carries the U.P.C. (Uniform Plumbing Code) seal.



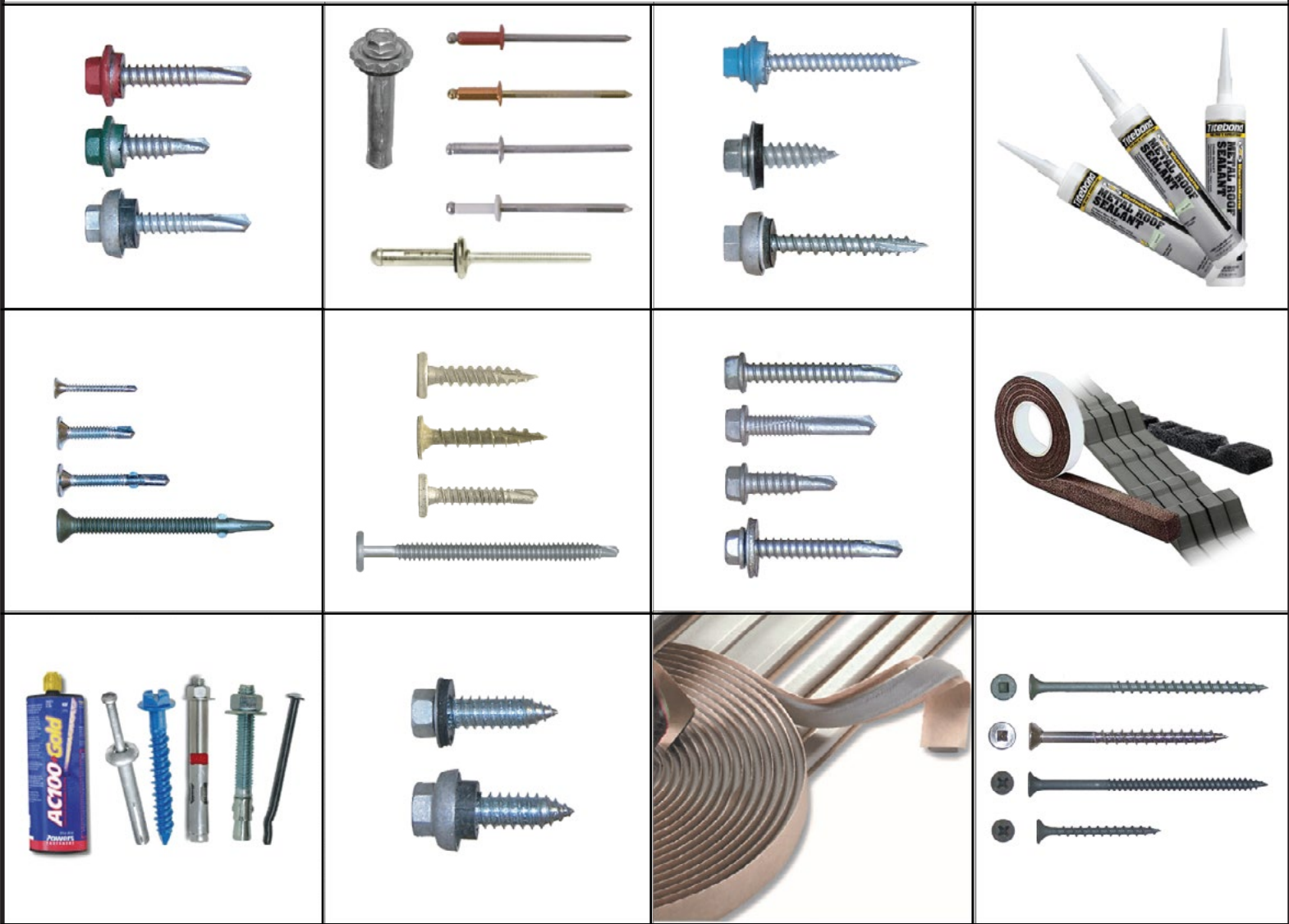


# METAL FASTENING

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S y s t e m s , I n c

[www.metalfasteningssystem.com](http://www.metalfasteningssystem.com)



**Charlotte, NC.**  
7670 Mikron Dr  
Stanley, NC. 28164  
(704) 822-3562

**Raleigh, NC.**  
2201 S Wilmington St  
Suite 101  
Raleigh, NC. 27603  
(919) 33-7794

**Richmond, VA.**  
8131 Virginia Pine Ct  
N. Chesterfield, VA. 23237  
(804) 912-1851