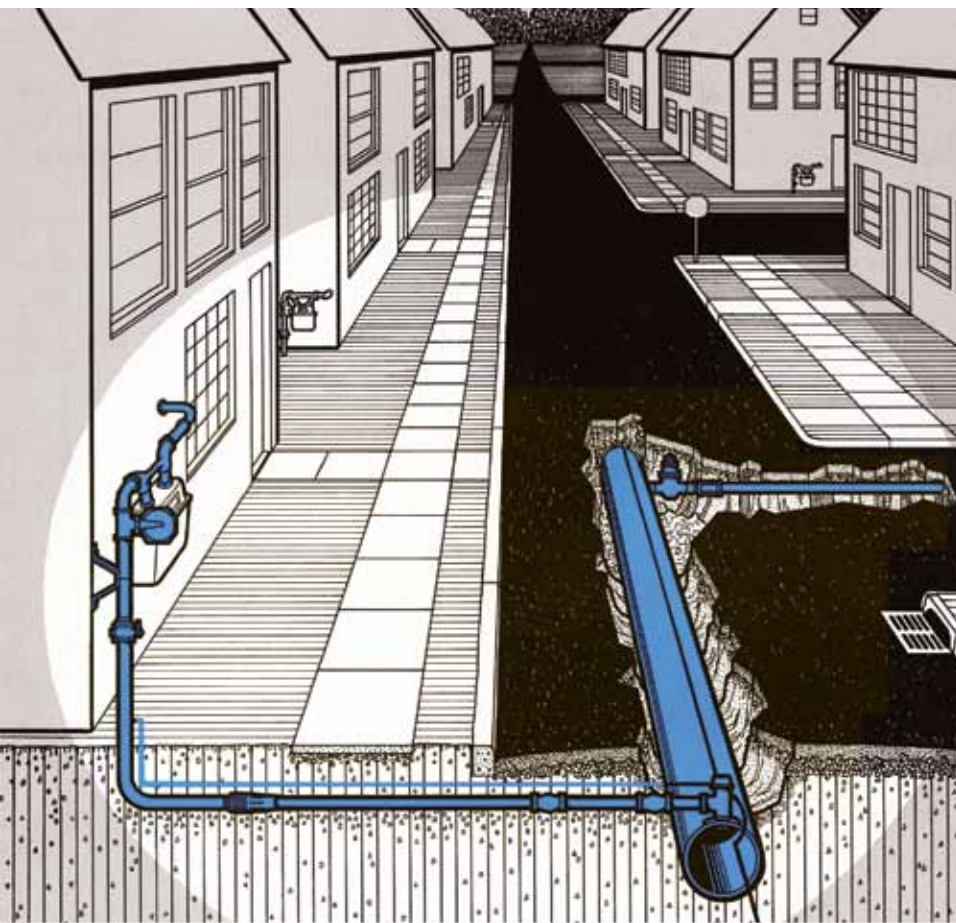




Gas Products



More than 60 years of quality and service to the utility industry

Richards Manufacturing Company supplies a wide variety of products to utilities for overhead and underground transmission and distribution. In the following pages you will find a wide selection of our standard electrical products reflecting many years of engineering and manufacturing excellence. Many nonstandard and specialty products are designed, manufactured and tested to meet our customers' requirements. If you do not find the product you need in this catalog, please contact the factory. In addition to the products described in this catalog, Richards provides:

Gas Products

Richards supplies natural gas utilities with a wide variety of meter accessories, manifold assemblies, and prefabricated meter assemblies. Please refer to our gas products catalog for more details.

Bus Bar Fabrication

Richards Manufacturing Company maintains a large inventory of copper and aluminum bus bars. Manufacturing processes include cutting, punching, drilling, milling, bending, and welding. Complete spot network bus vaults are designed and fabricated to meet space and ampacity requirements. Hot tinning and silver plating are part of our in-house capabilities.

Network Protectors – New And Reconditioned

Richards is the largest supplier of network protectors and related equipment in the world. We manufacture several different designs of new network protectors. We also recondition utility-owned network protectors and provide a wide variety of replacement parts for most existing designs.

High Voltage Products

Richards manufactures a variety of molded primary distribution connectors, including disconnectable splices up to 35kV and 600 Ampere Elbows up to 35kV. Richards also manufactures specialized 600 Ampere elbow connectors including compound elbows integrating various plugs into the elbow body.

Electronic Technology, Inc. (ETI)

ETI is a sister company to Richards with extensive engineering and manufacturing capabilities. ETI provides network protector manufacturing, reconditioning, and replacement parts. Products include microprocessor network protector relays, microprocessor capacitor bank controls and network monitoring transmitters, and receivers. Currently more than 30 major utilities are utilizing the ETI MNPR® or RCM™ to automate their underground networks.

TABLE OF CONTENTS

METER SWIVELS

Non-Insulated, Straight, Male Swivels	GP2
Insulated, Straight Male Swivels	GP2
Non-Insulated, Straight, Female Swivels	GP3
Insulated, Straight, Female Swivels	GP3
Non-Insulated, Swivel Elbows	GP3
Insulated Swivel Elbows	GP3
Non-Insulated, Offset Male Swivels	GP4
Insulated, Offset Male Swivels	GP5

METER ACCESSORIES

Meter Connection Nuts	GP5
Meter Nut Plugs	GP5
Meter Connection Adaptors	GP6
Meter Connection Blinds	GP6
Meter Connection Washers	GP6
Meter Set Support Brackets	GP7
Dust Caps	GP7
Gas relief vents	GP8
O-Ring Insulating Unions	GP8

METER BARS

MBSS	GP9
MBSS	GP10
MBSS	GP11
MBSS	GP12
MBST	GP13
MBST	GP14
MBST	GP15
MBST	GP16
MBSSL	GP17
MBSD	GP18
MBSD	GP18
MBLG	GP19
CMBV	GP19
CMB	GP20
CMB	GP21
CMBT	GP22
CMBT	GP23

CUSTOM INSTALLATION OPTIONS

Direct Pipe Meter Set Assemblies	GP24
Meter Sets And Meter Manifolds	GP25

WORKSHEETS

Meter Manifold Ordering Guide	GP26
Meter Bend Ordering Guide	GP27
Prefabricated Meter Set Assembly Ordering Guide	GP28
Meter Bar Ordering Guide	GP29

INDEX

Alphabetical Listing by Richards Part Number	GP30
--	------

METER SWIVELS

Non-Insulated, Straight, Male Swivels



RICHARDS PART NUMBER			PILOT SIZE	THREAD SIZE	LENGTH
BLACK	GALVANIZED	ZINC ELECTROPLATED			
SS-5LT-1 1/2	SS-5LT-1 1/2-G	SS-5LT-1 1/2-Z	5LT	1/2"	2-7/32"
SS-10LT-3/4	SS-10LT-3/4-G	SS-10LT-3/4-Z	10LT	3/4"	2-15/16"
SS-1A-3/4	SS-1A-3/4-G	SS-1A-3/4-Z	1A	3/4"	2-3/8"
SS-1A-01	SS-1A-01-G	SS-1A-01-Z	1A	1"	2-13/32"
SS-20LT-3/4	SS-20LT-3/4-G	SS-20LT-3/4-Z	20LT	3/4"	2-11/32"
SS-20LT-01	SS-20LT-01-G	SS-20LT-01-Z	20LT	1"	2-25/32"
SS-30LT-01	SS-30LT-01-G	SS-30LT-01-Z	30LT	1"	2-27/32"
SS-30LT-1 1/4	SS-30LT-1 1/4-G	SS-30LT-1 1/4-Z	30LT	1-1/4"	2-7/8"
SS-45LT-1 1/4	SS-45LT-1 1/4-G	SS-45LT-1 1/4-Z	45LT	1-1/4"	3-3/4"
SS-45LT-1 1/2	SS-45LT-1 1/2-G	SS-45LT-1 1/2-Z	45LT	1-1/2"	2-15/16"
SS-60LT-1 1/2	SS-60LT-1 1/2-G	SS-60LT-1 1/2-Z	60LT	1-1/2"	3-1/32"
SS-3&4-1 1/2	SS-3&4-1 1/2-G	SS-3&4-1 1/2-Z	SP 3 & 4	1-1/2"	3-1/16"
SS-100LT-2	SS-100LT-2-G	SS-100LT-2-Z	100LT	2"	3-13/16"

Insulated, Straight Male Swivels



RICHARDS PART NUMBER			PILOT SIZE	THREAD SIZE	LENGTH
BLACK	GALVANIZED	ZINC ELECTROPLATED			
SS-10LT-3/4-I	SS-10LT-3/4-GI	SS-10LT-3/4-ZI	10LT	3/4"	2-5/16"
SS-1A-3/4-I	SS-1A-3/4-GI	SS-1A-3/4-ZI	1A	3/4"	2-3/8"
SS-1A-01-I	SS-1A-01-GI	SS-1A-01-ZI	1A	1"	2-13/32"
SS-20LT-3/4-I	SS-20LT-3/4-GI	SS-20LT-3/4-ZI	20LT	3/4"	2-11/32"
SS-20LT-01-I	SS-20LT-01-GI	SS-20LT-01-ZI	20LT	1"	2-25/32"
SS-20LT-01-I4	SS-20LT-01-GI4	SS-20LT-01-ZI4	20LT	1"	3-13/16"
SS-30LT-01-I	SS-30LT-01-GI	SS-30LT-01-ZI	30LT	1"	2-27/32"
SS-30LT-1 1/4-I	SS-30LT-1 1/4-GI	SS-30LT-1 1/4-ZI	30LT	1-1/4"	2-7/8"
SS-45LT-1 1/4-I	SS-45LT-1 1/4-GI	SS-45LT-1 1/4-ZI	45LT	1-1/4"	3-3/4"
SS-45LT-1 1/2-I	SS-45LT-1 1/2-GI	SS-45LT-1 1/2-ZI	45LT	1-1/2"	2-15/16"
SS-3&4-1 1/2-I	SS-3&4-1 1/2-GI	SS-3&4-1 1/2-ZI	SP 3 & 4	1-1/2"	3-1/16"
SS-100LT-2-I	SS-100LT-2-GI	SS-100LT-2-ZI	100LT	2"	3-13/16"

Richards Swivels are also available with Pressure Taps. Please specify the size and location of the tap, and the type of plug when ordering.

METER SWIVELS

Non-Insulated, Straight, Female Swivels



RICHARDS PART NUMBER			PILOT SIZE	THREAD SIZE	OFFSET
BLACK	GALVANIZED	ZINC ELECTROPLATED			
FS-1A-3/4	FS-1A-3/4-G	FS-1A-3/4-Z	1A	3/4"	—
FS-20LT-3/4	FS-20LT-3/4-G	FS-20LT-3/4-Z	20LT	3/4"	—
FS-45LT-1 1/4	FS-45LT-1 1/4-G	FS-45LT-1 1/4-Z	45LT	1-1/4"	—

Insulated, Straight, Female Swivels



RICHARDS PART NUMBER			PILOT SIZE	THREAD SIZE	OFFSET
BLACK	GALVANIZED	ZINC ELECTROPLATED			
FS-1A-3/4-I	FS-1A-3/4-GI	FS-1A-3/4-ZI	1A	3/4"	—
FS-20LT-3/4-I	FS-20LT-3/4-GI	FS-20LT-3/4-ZI	20LT	3/4"	—
FS-45LT-1 1/4-I	FS-45LT-1 1/4-G	FS-45LT-1 1/4-Z	45LT	1-1/4"	—

Non-Insulated, Swivel Elbows



RICHARDS PART NUMBER			PILOT SIZE	THREAD SIZE	OFFSET
BLACK	GALVANIZED	ZINC ELECTROPLATED			
OS-90-3/4-20LT	OS-90-3/4-20LT-G	OS-90-3/4-20LT-Z	20LT	3/4"	—
OS-90-1-20LT	OS-90-1-20LT-G	OS-90-1-20LT-Z	20LT	1"	—
MEL-1 1/4-30LT	MEL-1 1/4-30LT-G	MEL-1 1/4-30LT-Z	30LT	1-1/4"	—

Insulated Swivel Elbows



RICHARDS PART NUMBER			PILOT SIZE	THREAD SIZE	OFFSET
BLACK	GALVANIZED	ZINC ELECTROPLATED			
OS-90-1-20LT-I	OS-90-1-20LT-GI	OS-90-1-20LT-ZI	20LT	1"	—

METER SWIVELS

Non-Insulated, Offset Male Swivels



RICHARDS PART NUMBER			PILOT SIZE	THREAD SIZE	OFFSET
BLACK	GALVANIZED	ZINC ELECTROPLATED			
OS-1/2-1 1/4-5LT	OS-1/2-1 1/4-5LT-G	OS-1/2-1 1/4-5LT-Z	5LT	1/2"	1-1/4"
OS-1/2-3-10LT	OS-1/2-3-10LT-G	OS-1/2-3-10LT-Z	10LT	1/2"	3"
OS-1/2-1 3/4-10LT	OS-1/2-1 3/4-10LT-G	OS-1/2-1 3/4-10LT-Z	10LT	1/2"	1-3/4"
OS-3/4-3/8-10LT	OS-3/4-3/8-10LT-G	OS-3/4-3/8-10LT-Z	10LT	3/4"	3/8"
OS-3/4-1-10LT	OS-3/4-1-10LT-G	OS-3/4-1-10LT-Z	10LT	3/4"	1"
OS-3/4-1 1/4-10LT	OS-3/4-1 1/4-10LT-G	OS-3/4-1 1/4-10LT-Z	10LT	3/4"	1-1/4"
OS-3/4-1 3/4-10LT	OS-3/4-1 3/4-10LT-G	OS-3/4-1 3/4-10LT-Z	10LT	3/4"	1-3/4"
OS-3/4-4-10LT	OS-3/4-4-10LT-G	OS-3/4-4-10LT-Z	10LT	3/4"	3-15/16"
OS-1/2-3-1A	OS-1/2-3-1A-G	OS-1/2-3-1A-Z	1A	1/2"	2-3/4"
OS-3/4-1-1A	OS-3/4-1-1A-G	OS-3/4-1-1A-Z	1A	3/4"	1"
OS-3/4-3-1A	OS-3/4-3-1A-G	OS-3/4-3-1A-Z	1A	3/4"	3"
OS-1-1-1A	OS-1-1-1A-G	OS-1-1-1A-Z	1A	1"	1"
OS-1/2-3-20LT	OS-1/2-3-20LT-G	OS-1/2-3-20LT-Z	20LT	1/2"	2-7/8"
OS-3/4-1 5/8-20LT	OS-3/4-1 5/8-20LT-G	OS-3/4-1 5/8-20LT-Z	20LT	3/4"	1-5/8"
OS-3/4-3-20LT	OS-3/4-3-20LT-G	OS-3/4-3-20LT-Z	20LT	3/4"	3"
OS-1-1-20LT	OS-1-1-20LT-G	OS-1-1-20LT-Z	20LT	1"	1"
OS-1-1 1/2-20LT	OS-1-1 1/2-20LT-G	OS-1-1 1/2-20LT-Z	20LT	1"	1-1/2"
OS-3/4-3-30LT	OS-3/4-3-30LT-G	OS-3/4-3-30LT-Z	30LT	3/4"	3"
OS-1-1-30LT	OS-1-1-30LT-G	OS-1-1-30LT-Z	30LT	1"	1"
OS-1-1 1/4-30LT	OS-1-1 1/4-30LT-G	OS-1-1 1/4-30LT-Z	30LT	1"	1-1/4"
OS-1-4 3/8-30LT	OS-1-4 3/8-30LT-G	OS-1-4 3/8-30LT-Z	30LT	1"	4-3/8"
OS-1 1/4-1-30LT	OS-1 1/4-1-30LT-G	OS-1 1/4-1-30LT-Z	30LT	1-1/4"	1"
OS-1 1/4-1 5/8-45LT	OS-1 1/4-1 5/8-45LT-G	OS-1 1/4-1 5/8-45LT-Z	45LT	1-1/4"	1-5/8"
OS-1 1/4-2-45LT	OS-1 1/4-2-45LT-G	OS-1 1/4-2-45LT-Z	45LT	1-1/4"	2"
OS-1 1/4-2 3/4-45LT	OS-1 1/4-2 3/4-45LT-G	OS-1 1/4-2 3/4-45LT-Z	45LT	1-1/4"	2-3/4"
OS-1 1/2-1-45LT	OS-1 1/2-1-45LT-G	OS-1 1/2-1-45LT-Z	45LT	1-1/2"	1"
OS-1 1/2-2-45LT	OS-1 1/2-2-45LT-G	OS-1 1/2-2-45LT-Z	45LT	1-1/2"	2"
OS-1 1/2-1-60LT	OS-1 1/2-1-60LT-G	OS-1 1/2-1-60LT-Z	60LT	1-1/2"	1"
OS-1 1/2-41/2-60LT	OS-1 1/2-41/2-60LT-G	OS-1 1/2-41/2-60LT-Z	60LT	1-1/2"	4-1/2"
OS-1 1/2-1-3&4	OS-1 1/2-1-3&4-G	OS-1 1/2-1-3&4-Z	3&4	1-1/2"	1"
OS-2-1-100LT	OS-2-1-100LT-G	OS-2-1-100LT-Z	100LT	2"	1"

METER SWIVELS

Insulated, Offset Male Swivels



RICHARDS PART NUMBER			PILOT SIZE	THREAD SIZE	OFFSET
BLACK	GALVANIZED	ZINC ELECTROPLATED			
OS-1-1-20LT-I	OS-1-1-20LT-GI	OS-1-1-20LT-ZI	20LT	1"	1"
OS-1-1-30LT-I	OS-1-1-30LT-GI	OS-1-1-30LT-ZI	30LT	1"	1"
OS-1 1/4-1-30LT-I	OS-1 1/4-1-30LT-GI	OS-1 1/4-1-30LT-ZI	30LT	1-1/4"	1"
OS-1 1/4-2-45LT-I	OS-1 1/4-2-45LT-GI	OS-1 1/4-2-45LT-ZI	45LT	1-1/4"	2"
OS-1 1/2-1-45LT-I	OS-1 1/2-1-45LT-GI	OS-1 1/2-1-45LT-ZI	45LT	1-1/2"	1"
OS-1 1/2-2-45LT-I	OS-1 1/2-2-45LT-GI	OS-1 1/2-2-45LT-ZI	45LT	1-1/2"	2"

METER CONNECTION NUTS



RICHARDS PART NUMBER			PILOT SIZE
BLACK	GALVANIZED	ZINC ELECTROPLATED	
N5LT	N5LT-G	N5LT-Z	5LT
N10LT	N10LT-G	N10LT-Z	10LT
N1A	N1A-G	N1A-Z	1A
NEMCO	NEMCO-G	NEMCO-Z	0 EMC0
N20LT	N20LT-G	N20LT-Z	20LT
N30LT	N30LT-G	N30LT-Z	30LT
N45LT	N45LT-G	N45LT-Z	45LT
N60LT	N60LT-G	N60LT-Z	60LT
N3&4	N3&4-G	N3&4-Z	SP 3&4
N100LT	N100LT-G	N100LT-Z	100LT



METER NUT PLUGS

RICHARDS PART NUMBER				PILOT SIZE
PLASTIC	BLACK	GALVANIZED	ZINC ELECTROPLATED	
PP-5LT	P5LT	P5LT-G	P5LT-Z	5LT
PP-10LT	P10LT	P10LT-G	P10LT-Z	10LT
PP-1A	P1A	P1A-G	P1A-Z	1A
PP-20LT	P20LT	P20LT-G	P20LT-Z	20LT
PP-30LT	P30LT	P30LT-G	P30LT-Z	30LT
PP-45LT	P45LT	P45LT-G	P45LT-Z	45LT

METER CONNECTION ADAPTORS

Meter connection adaptors allow you to change the size of your meter connection without changing swivels. For instance, you can turn an existing 10LT connection into a 20LT connection, or you can use one of our adaptors to attach a new connection swivel to an existing one. Special needs can be accommodated as well — call us with your particular request..

- Use existing connections
- No need to repipe existing meter installations
- Upsize or downsize meters with minimal effort



METER CONNECTION BLINDS

RICHARDS PART NUMBER	PILOT SIZE
B5LT	5LT
B10LT	10LT
B1A	1A
B1A	0 EMCO
B20LT	20LT
B30LT	30LT
B45LT	45LT
B3&4	SPRAGUE 3&4
B100LT	100LT
B5A	SPRAGUE #5



METER CONNECTION WASHERS

RICHARDS PART NUMBER		DIMENSIONS ID X OD	PILOT SIZE
0.100" THICK	1/8" THICK		
W5LT		3/4" X 1"	5LT
W10LT		31/32" X 1-5/16"	10LT
W1A	W1A - 1/8	31/32" X 1-3/8"	1A
W1A	W1A - 1/8	31/32" X 1-3/8"	0 EMCO
W20LT	W20LT - 1/8	1-9/32" X 1-21/32"	20LT
W30LT	W30LT - 1/8	1-15/32" X 1-7/8"	30LT
W45LT	W45LT - 1/8	1-21/32" X 2-7/32"	45LT
W3&4		1-15/32" X 2-1/8"	SPRAGUE 3&4
W100LT		2-3/16" X 2-13/16"	100LT
W5A		2-7/32" X 3-3/16"	SPRAGUE 5A



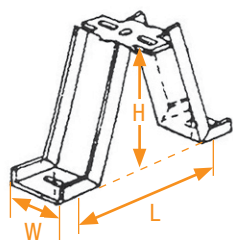
METER SET SUPPORT BRACKETS

- Keep your meter installations looking good and performing properly
- Prevent problems due to ground settlement
- Support meters and associated piping
- Prevent possible leaks and costly call backs

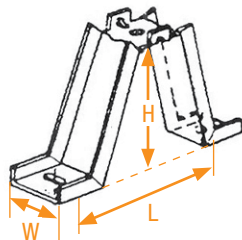


RICHARDS PART NUMBER			STYLE	DESCRIPTION	H	L	W
BLACK	GALVANIZED	ZINC ELECTROPLATED					
BR-F	BR-F-G	BR-F-Z	A	Flat tabs, riser or bar mount	5-3/4"	7-1/2"	2-1/4"
BR-U	BR-U-G	BR-U-Z	B	Tabs up, bar mount	5-3/4"	7-1/2"	2-1/4"
BR-A	BR-A-G	BR-A-Z	C	Adjustable	7-1/2" - 14"	9" - 14"	2-1/4"

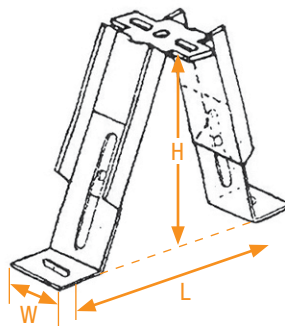
Meter brackets can be packaged with a "U" bolt for mounting on service risers and with hardware for meter bar attachment. Brackets can also be provided with various hardware for wall mounting. Please specify hardware required when ordering.



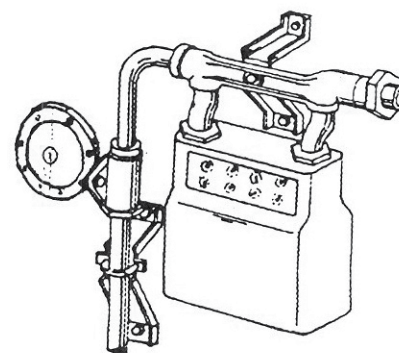
STYLE A



STYLE B



STYLE C - Adjustable



DUST CAPS

RICHARDS PART NUMBER	PILOT SIZE
DC-1	1"
DC-5LT	5LT
DC-1A	10LT
DC-10LT	1A
DC-EMCO	0 EMCO
DC-20LT	20LT
DC-30LT	30LT
DC-45LT	45LT
DC-100LT	100LT
DC-3&4	3&4
DC-5A	5A



GAS RELIEF VENTS

- Keeps water, insects and debris out of your relief piping
- Non corrosive aluminum
- 16" x 16", 0.018 gauge screen
- Made for use on all relief piping
- Screen designed to blow out in relief if the screen has become blocked



RICHARDS PART NUMBER	PIPE SIZE
GV-3/4	3/4"
GV-1	1"
GV-1 1/4	1-1/4"
GV-1 1/2	1-1/2"
GV-2	2"

O-RING INSULATING UNIONS

- Insulating unions protect against stray or induced currents to prevent galvanic and electrolytic corrosion
- 150-175 lb working pressure
- Confined O-Ring seal make Richards unions reusable — only light torque creates a gas-tight seal
- Integral insulation makes this union easy to install, no loose parts to align or lose
- Malleable iron nut and body
- Nylon insulation provides dielectric strength beyond the toughest requirements
- Available in black or galvanized



RICHARDS PART NUMBER		PIPE SIZE
BLACK	GLAVANIZED	
IU-1/2	IU-1/2-G	1/2"
IU-3/4	IU-3/4-G	3/4"
IU-1	IU-1-G	1"
IU-3/4X1	IU-3/4X1-G	3/4" X 1"
IU-1 1/4	IU-1 1/4-G	1-1/4"
IU-2	IU-2-G	2"

- Side Inlet
- Side Outlet
- Insulated Union Outlet
- Flat Gasket on Union Outlet



RICHARDS PART NUMBER			INLET SIZE	OUTLET SIZE	SWIVEL TAP SIZE	SWIVEL TAP C TO C
BLACK	GALVANIZED	ZINC ELECTROPLATED				
MBSS6-1-1-1-FI	MBSS6-1-1-1-FI-G	MBSS6-1-1-1-FI-Z	1"	1"	1"	6"
MBSS6-1-3/4-1-FI	MBSS6-1-3/4-1-FI-G	MBSS6-1-3/4-1-FI-Z	1"	3/4"	1"	6"
MBSS6-1-1-3/4-FI	MBSS6-1-1-3/4-FI-G	MBSS6-1-1-3/4-FI-Z	1"	1"	3/4"	6"
MBSS6-1-3/4-3/4-FI	MBSS6-1-3/4-3/4-FI-G	MBSS6-1-3/4-3/4-FI-Z	1"	3/4"	3/4"	6"
MBSS6-3/4-1-1-FI	MBSS6-3/4-1-1-FI-G	MBSS6-3/4-1-1-FI-Z	3/4"	1"	1"	6"
MBSS6-3/4-3/4-1-FI	MBSS6-3/4-3/4-1-FI-G	MBSS6-3/4-3/4-1-FI-Z	3/4"	3/4"	1"	6"
MBSS6-3/4-1-3/4-FI	MBSS6-3/4-1-3/4-FI-G	MBSS6-3/4-1-3/4-FI-Z	3/4"	1"	3/4"	6"
MBSS6-3/4-3/4-3/4-FI	MBSS6-3/4-3/4-3/4-FI-G	MBSS6-3/4-3/4-3/4-FI-Z	3/4"	3/4"	3/4"	6"
MBSS-1-1-1-FI	MBSS-1-1-1-FI-G	MBSS-1-1-1-FI-Z	1"	1"	1"	6-1/2"
MBSS-1-3/4-1-FI	MBSS-1-3/4-1-FI-G	MBSS-1-3/4-1-FI-Z	1"	3/4"	1"	6-1/2"
MBSS-1-1-3/4-FI	MBSS-1-1-3/4-FI-G	MBSS-1-1-3/4-FI-Z	1"	1"	3/4"	6-1/2"
MBSS-1-3/4-3/4-FI	MBSS-1-3/4-3/4-FI-G	MBSS-1-3/4-3/4-FI-Z	1"	3/4"	3/4"	6-1/2"
MBSS-3/4-1-1-FI	MBSS-3/4-1-1-FI-G	MBSS-3/4-1-1-FI-Z	3/4"	1"	1"	6-1/2"
MBSS-3/4-3/4-1-FI	MBSS-3/4-3/4-1-FI-G	MBSS-3/4-3/4-1-FI-Z	3/4"	3/4"	1"	6-1/2"
MBSS-3/4-1-3/4-FI	MBSS-3/4-1-3/4-FI-G	MBSS-3/4-1-3/4-FI-Z	3/4"	1"	3/4"	6-1/2"
MBSS-3/4-3/4-3/4-FI	MBSS-3/4-3/4-3/4-FI-G	MBSS-3/4-3/4-3/4-FI-Z	3/4"	3/4"	3/4"	6-1/2"

Richards Meter Bars are also available with PRESSURE TAPS. Please specify the size, location and type of plug when ordering.

- Side Inlet
- Side Outlet
- Insulated Union Outlet
- O-Ring Gasket on Union Outlet



RICHARDS PART NUMBER			INLET SIZE	OUTLET SIZE	SWIVEL TAP SIZE	SWIVEL TAP C TO C
BLACK	GALVANIZED	ZINC ELECTROPLATED				
MBSS6-1-1-1-OI	MBSS6-1-1-1-OI-G	MBSS6-1-1-1-OI-Z	1"	1"	1"	6"
MBSS6-1-3/4-1-OI	MBSS6-1-3/4-1-OI-G	MBSS6-1-3/4-1-OI-Z	1"	3/4"	1"	6"
MBSS6-1-1-3/4-OI	MBSS6-1-1-3/4-OI-G	MBSS6-1-1-3/4-OI-Z	1"	1"	3/4"	6"
MBSS6-1-3/4-3/4-OI	MBSS6-1-3/4-3/4-OI-G	MBSS6-1-3/4-3/4-OI-Z	1"	3/4"	3/4"	6"
MBSS6-3/4-1-1-OI	MBSS6-3/4-1-1-OI-G	MBSS6-3/4-1-1-OI-Z	3/4"	1"	1"	6"
MBSS6-3/4-3/4-1-OI	MBSS6-3/4-3/4-1-OI-G	MBSS6-3/4-3/4-1-OI-Z	3/4"	3/4"	1"	6"
MBSS6-3/4-1-3/4-OI	MBSS6-3/4-1-3/4-OI-G	MBSS6-3/4-1-3/4-OI-Z	3/4"	1"	3/4"	6"
MBSS6-3/4-3/4-3/4-OI	MBSS6-3/4-3/4-3/4-OI-G	MBSS6-3/4-3/4-3/4-OI-Z	3/4"	3/4"	3/4"	6"
MBSS-1-1-1-OI	MBSS-1-1-1-OI-G	MBSS-1-1-1-OI-Z	1"	1"	1"	6-1/2"
MBSS-1-3/4-1-OI	MBSS-1-3/4-1-OI-G	MBSS-1-3/4-1-OI-Z	1"	3/4"	1"	6-1/2"
MBSS-1-1-3/4-OI	MBSS-1-1-3/4-OI-G	MBSS-1-1-3/4-OI-Z	1"	1"	3/4"	6-1/2"
MBSS-1-3/4-3/4-OI	MBSS-1-3/4-3/4-OI-G	MBSS-1-3/4-3/4-OI-Z	1"	3/4"	3/4"	6-1/2"
MBSS-3/4-1-1-OI	MBSS-3/4-1-1-OI-G	MBSS-3/4-1-1-OI-Z	3/4"	1"	1"	6-1/2"
MBSS-3/4-3/4-1-OI	MBSS-3/4-3/4-1-OI-G	MBSS-3/4-3/4-1-OI-Z	3/4"	3/4"	1"	6-1/2"
MBSS-3/4-1-3/4-OI	MBSS-3/4-1-3/4-OI-G	MBSS-3/4-1-3/4-OI-Z	3/4"	1"	3/4"	6-1/2"
MBSS-3/4-3/4-3/4-OI	MBSS-3/4-3/4-3/4-OI-G	MBSS-3/4-3/4-3/4-OI-Z	3/4"	3/4"	3/4"	6-1/2"

Richards Meter Bars are also available with PRESSURE TAPS. Please specify the size, location and type of plug when ordering.

- Side Inlet
- Side Outlet
- Standard Union Outlet
- Flat Gasket on Union Outlet



RICHARDS PART NUMBER			INLET SIZE	OUTLET SIZE	SWIVEL TAP SIZE	SWIVEL TAP C TO C
BLACK	GALVANIZED	ZINC ELECTROPLATED				
MBSS6-1-1-1-F	MBSS6-1-1-1-F-G	MBSS6-1-1-1-F-Z	1"	1"	1"	6"
MBSS6-1-3/4-1-F	MBSS6-1-3/4-1-F-G	MBSS6-1-3/4-1-F-Z	1"	3/4"	1"	6"
MBSS6-1-1-3/4-F	MBSS6-1-1-3/4-F-G	MBSS6-1-1-3/4-F-Z	1"	1"	3/4"	6"
MBSS6-1-3/4-3/4-F	MBSS6-1-3/4-3/4-F-G	MBSS6-1-3/4-3/4-F-Z	1"	3/4"	3/4"	6"
MBSS6-3/4-1-1-F	MBSS6-3/4-1-1-F-G	MBSS6-3/4-1-1-F-Z	3/4"	1"	1"	6"
MBSS6-3/4-3/4-1-F	MBSS6-3/4-3/4-1-F-G	MBSS6-3/4-3/4-1-F-Z	3/4"	3/4"	1"	6"
MBSS6-3/4-1-3/4-F	MBSS6-3/4-1-3/4-F-G	MBSS6-3/4-1-3/4-F-Z	3/4"	1"	3/4"	6"
MBSS6-3/4-3/4-3/4-F	MBSS6-3/4-3/4-3/4-F-G	MBSS6-3/4-3/4-3/4-F-Z	3/4"	3/4"	3/4"	6"
MBSS-1-1-1-F	MBSS-1-1-1-F-G	MBSS-1-1-1-F-Z	1"	1"	1"	6-1/2"
MBSS-1-3/4-1-F	MBSS-1-3/4-1-F-G	MBSS-1-3/4-1-F-Z	1"	3/4"	1"	6-1/2"
MBSS-1-1-3/4-F	MBSS-1-1-3/4-F-G	MBSS-1-1-3/4-F-Z	1"	1"	3/4"	6-1/2"
MBSS-1-3/4-3/4-F	MBSS-1-3/4-3/4-F-G	MBSS-1-3/4-3/4-F-Z	1"	3/4"	3/4"	6-1/2"
MBSS-3/4-1-1-F	MBSS-3/4-1-1-F-G	MBSS-3/4-1-1-F-Z	3/4"	1"	1"	6-1/2"
MBSS-3/4-3/4-1-F	MBSS-3/4-3/4-1-F-G	MBSS-3/4-3/4-1-F-Z	3/4"	3/4"	1"	6-1/2"
MBSS-3/4-1-3/4-F	MBSS-3/4-1-3/4-F-G	MBSS-3/4-1-3/4-F-Z	3/4"	1"	3/4"	6-1/2"
MBSS-3/4-3/4-3/4-F	MBSS-3/4-3/4-3/4-F-G	MBSS-3/4-3/4-3/4-F-Z	3/4"	3/4"	3/4"	6-1/2"

Richards Meter Bars are also available with PRESSURE TAPS. Please specify the size, location and type of plug when ordering.

METER BARS

MBSS

- Side Inlet
- Side Outlet
- Standard Union Outlet
- O-Ring Gasket on Union Outlet



RICHARDS PART NUMBER			INLET SIZE	OUTLET SIZE	SWIVEL TAP SIZE	SWIVEL TAP C TO C
BLACK	GALVANIZED	ZINC ELECTROPLATED				
MBSS6-1-3/4-1-0	MBSS6-1-3/4-1-0-G	MBSS6-1-3/4-1-0-Z	1"	3/4"	1"	6"
MBSS6-1-1-3/4-0	MBSS6-1-1-3/4-0-G	MBSS6-1-1-3/4-0-Z	1"	1"	3/4"	6"
MBSS6-1-3/4-3/4-0	MBSS6-1-3/4-3/4-0-G	MBSS6-1-3/4-3/4-0-Z	1"	3/4"	3/4"	6"
MBSS6-3/4-1-1-0	MBSS6-3/4-1-1-0-G	MBSS6-3/4-1-1-0-Z	3/4"	1"	1"	6"
MBSS6-3/4-3/4-1-0	MBSS6-3/4-3/4-1-0-G	MBSS6-3/4-3/4-1-0-Z	3/4"	3/4"	1"	6"
MBSS6-3/4-1-3/4-0	MBSS6-3/4-1-3/4-0-G	MBSS6-3/4-1-3/4-0-Z	3/4"	1"	3/4"	6"
MBSS6-3/4-3/4-3/4-0	MBSS6-3/4-3/4-3/4-0-G	MBSS6-3/4-3/4-3/4-0-Z	3/4"	3/4"	3/4"	6"
MBSS-1-1-1-0	MBSS-1-1-1-0-G	MBSS-1-1-1-0-Z	1"	1"	1"	6-1/2"
MBSS-1-3/4-1-0	MBSS-1-3/4-1-0-G	MBSS-1-3/4-1-0-Z	1"	3/4"	1"	6-1/2"
MBSS-1-1-3/4-0	MBSS-1-1-3/4-0-G	MBSS-1-1-3/4-0-Z	1"	1"	3/4"	6-1/2"
MBSS-1-3/4-3/4-0	MBSS-1-3/4-3/4-0-G	MBSS-1-3/4-3/4-0-Z	1"	3/4"	3/4"	6-1/2"
MBSS-3/4-1-1-0	MBSS-3/4-1-1-0-G	MBSS-3/4-1-1-0-Z	3/4"	1"	1"	6-1/2"
MBSS-3/4-3/4-1-0	MBSS-3/4-3/4-1-0-G	MBSS-3/4-3/4-1-0-Z	3/4"	3/4"	1"	6-1/2"
MBSS-3/4-1-3/4-0	MBSS-3/4-1-3/4-0-G	MBSS-3/4-1-3/4-0-Z	3/4"	1"	3/4"	6-1/2"
MBSS-3/4-3/4-3/4-0	MBSS-3/4-3/4-3/4-0-G	MBSS-3/4-3/4-3/4-0-Z	3/4"	3/4"	3/4"	6-1/2"

Richards Meter Bars are also available with PRESSURE TAPS. Please specify the size, location and type of plug when ordering.

GP12

- Side Inlet
- Top Outlet
- Insulated Union Outlet
- Flat Gasket on Union Outlet



RICHARDS PART NUMBER			INLET SIZE	OUTLET SIZE	SWIVEL TAP SIZE	SWIVEL TAP C TO C
BLACK	GALVANIZED	ZINC ELECTROPLATED				
MBST6-1-1-1-FI	MBST6-1-1-1-FI-G	MBST6-1-1-1-FI-Z	1"	1"	1"	6"
MBST6-1-3/4-1-FI	MBST6-1-3/4-1-FI-G	MBST6-1-3/4-1-FI-Z	1"	3/4"	1"	6"
MBST6-1-1-3/4-FI	MBST6-1-1-3/4-FI-G	MBST6-1-1-3/4-FI-Z	1"	1"	3/4"	6"
MBST6-1-3/4-3/4-FI	MBST6-1-3/4-3/4-FI-G	MBST6-1-3/4-3/4-FI-Z	1"	3/4"	3/4"	6"
MBST6-3/4-1-1-FI	MBST6-3/4-1-1-FI-G	MBST6-3/4-1-1-FI-Z	3/4"	1"	1"	6"
MBST6-3/4-3/4-1-FI	MBST6-3/4-3/4-1-FI-G	MBST6-3/4-3/4-1-FI-Z	3/4"	3/4"	1"	6"
MBST6-3/4-1-3/4-FI	MBST6-3/4-1-3/4-FI-G	MBST6-3/4-1-3/4-FI-Z	3/4"	1"	3/4"	6"
MBST6-3/4-3/4-3/4-FI	MBST6-3/4-3/4-3/4-FI-G	MBST6-3/4-3/4-3/4-FI-Z	3/4"	3/4"	3/4"	6"
MBST-1-1-1-FI	MBST-1-1-1-FI-G	MBST-1-1-1-FI-Z	1"	1"	1"	6-1/2"
MBST-1-3/4-1-FI	MBST-1-3/4-1-FI-G	MBST-1-3/4-1-FI-Z	1"	3/4"	1"	6-1/2"
MBST-1-1-3/4-FI	MBST-1-1-3/4-FI-G	MBST-1-1-3/4-FI-Z	1"	1"	3/4"	6-1/2"
MBST-1-3/4-3/4-FI	MBST-1-3/4-3/4-FI-G	MBST-1-3/4-3/4-FI-Z	1"	3/4"	3/4"	6-1/2"
MBST-3/4-1-1-FI	MBST-3/4-1-1-FI-G	MBST-3/4-1-1-FI-Z	3/4"	1"	1"	6-1/2"
MBST-3/4-3/4-1-FI	MBST-3/4-3/4-1-FI-G	MBST-3/4-3/4-1-FI-Z	3/4"	3/4"	1"	6-1/2"
MBST-3/4-1-3/4-FI	MBST-3/4-1-3/4-FI-G	MBST-3/4-1-3/4-FI-Z	3/4"	1"	3/4"	6-1/2"
MBST-3/4-3/4-3/4-FI	MBST-3/4-3/4-3/4-FI-G	MBST-3/4-3/4-3/4-FI-Z	3/4"	3/4"	3/4"	6-1/2"
MBST7-1 1/4-FI	MBST7-1 1/4-FI-G	MBST7-1 1/4-FI-Z	1-1/4"	1-1/4"	1-1/4"	7"

Richards Meter Bars are also available with PRESSURE TAPS. Please specify the size, location and type of plug when ordering.

METER BARS

MBST

- Side Inlet
- Top Outlet
- Insulated Union Outlet
- O-Ring Gasket on Union Outlet



RICHARDS PART NUMBER			INLET SIZE	OUTLET SIZE	SWIVEL TAP SIZE	SWIVEL TAP C TO C
BLACK	GALVANIZED	ZINC ELECTROPLATED				
MBST6-1-1-1-OI	MBST6-1-1-1-OI-G	MBST6-1-1-1-OI-Z	1"	1"	1"	6"
MBST6-1-3/4-1-OI	MBST6-1-3/4-1-OI-G	MBST6-1-3/4-1-OI-Z	1"	3/4"	1"	6"
MBST6-1-1-3/4-OI	MBST6-1-1-3/4-OI-G	MBST6-1-1-3/4-OI-Z	1"	1"	3/4"	6"
MBST6-1-3/4-3/4-OI	MBST6-1-3/4-3/4-OI-G	MBST6-1-3/4-3/4-OI-Z	1"	3/4"	3/4"	6"
MBST6-3/4-1-1-OI	MBST6-3/4-1-1-OI-G	MBST6-3/4-1-1-OI-Z	3/4"	1"	1"	6"
MBST6-3/4-3/4-1-OI	MBST6-3/4-3/4-1-OI-G	MBST6-3/4-3/4-1-OI-Z	3/4"	3/4"	1"	6"
MBST6-3/4-1-3/4-OI	MBST6-3/4-1-3/4-OI-G	MBST6-3/4-1-3/4-OI-Z	3/4"	1"	3/4"	6"
MBST6-3/4-3/4-3/4-OI	MBST6-3/4-3/4-3/4-OI-G	MBST6-3/4-3/4-3/4-OI-Z	3/4"	3/4"	3/4"	6"
MBST-1-1-1-OI	MBST-1-1-1-OI-G	MBST-1-1-1-OI-Z	1"	1"	1"	6-1/2"
MBST-1-3/4-1-OI	MBST-1-3/4-1-OI-G	MBST-1-3/4-1-OI-Z	1"	3/4"	1"	6-1/2"
MBST-1-1-3/4-OI	MBST-1-1-3/4-OI-G	MBST-1-1-3/4-OI-Z	1"	1"	3/4"	6-1/2"
MBST-1-3/4-3/4-OI	MBST-1-3/4-3/4-OI-G	MBST-1-3/4-3/4-OI-Z	1"	3/4"	3/4"	6-1/2"
MBST-3/4-1-1-OI	MBST-3/4-1-1-OI-G	MBST-3/4-1-1-OI-Z	3/4"	1"	1"	6-1/2"
MBST-3/4-3/4-1-OI	MBST-3/4-3/4-1-OI-G	MBST-3/4-3/4-1-OI-Z	3/4"	3/4"	1"	6-1/2"
MBST-3/4-1-3/4-OI	MBST-3/4-1-3/4-OI-G	MBST-3/4-1-3/4-OI-Z	3/4"	1"	3/4"	6-1/2"
MBST-3/4-3/4-3/4-OI	MBST-3/4-3/4-3/4-OI-G	MBST-3/4-3/4-3/4-OI-Z	3/4"	3/4"	3/4"	6-1/2"
MBST7-1 1/4-OI	MBST7-1 1/4-OI-G	MBST7-1 1/4-OI-Z	1-1/4"	1-1/4"	1-1/4"	7"

Richards Meter Bars are also available with PRESSURE TAPS. Please specify the size, location and type of plug when ordering.

GP14

METER BARS

MBST

- Side Inlet
- Top Outlet
- Standard Union Outlet
- Flat Gasket on Union Outlet



RICHARDS PART NUMBER			INLET SIZE	OUTLET SIZE	SWIVEL TAP SIZE	SWIVEL TAP C TO C
BLACK	GALVANIZED	ZINC ELECTROPLATED				
MBST6-1-1-1-F	MBST6-1-1-1-F-G	MBST6-1-1-1-F-Z	1"	1"	1"	6"
MBST6-1-3/4-1-F	MBST6-1-3/4-1-F-G	MBST6-1-3/4-1-F-Z	1"	3/4"	1"	6"
MBST6-1-1-3/4-F	MBST6-1-1-3/4-F-G	MBST6-1-1-3/4-F-Z	1"	1"	3/4"	6"
MBST6-1-3/4-3/4-F	MBST6-1-3/4-3/4-F-G	MBST6-1-3/4-3/4-F-Z	1"	3/4"	3/4"	6"
MBST6-3/4-1-1-F	MBST6-3/4-1-1-F-G	MBST6-3/4-1-1-F-Z	3/4"	1"	1"	6"
MBST6-3/4-3/4-1-F	MBST6-3/4-3/4-1-F-G	MBST6-3/4-3/4-1-F-Z	3/4"	3/4"	1"	6"
MBST6-3/4-1-3/4-F	MBST6-3/4-1-3/4-F-G	MBST6-3/4-1-3/4-F-Z	3/4"	1"	3/4"	6"
MBST6-3/4-3/4-3/4-F	MBST6-3/4-3/4-3/4-F-G	MBST6-3/4-3/4-3/4-F-Z	3/4"	3/4"	3/4"	6"
MBST-1-1-1-F	MBST-1-1-1-F-G	MBST-1-1-1-F-Z	1"	1"	1"	6-1/2"
MBST-1-3/4-1-F	MBST-1-3/4-1-F-G	MBST-1-3/4-1-F-Z	1"	3/4"	1"	6-1/2"
MBST-1-1-3/4-F	MBST-1-1-3/4-F-G	MBST-1-1-3/4-F-Z	1"	1"	3/4"	6-1/2"
MBST-1-3/4-3/4-F	MBST-1-3/4-3/4-F-G	MBST-1-3/4-3/4-F-Z	1"	3/4"	3/4"	6-1/2"
MBST-3/4-1-1-F	MBST-3/4-1-1-F-G	MBST-3/4-1-1-F-Z	3/4"	1"	1"	6-1/2"
MBST-3/4-3/4-1-F	MBST-3/4-3/4-1-F-G	MBST-3/4-3/4-1-F-Z	3/4"	3/4"	1"	6-1/2"
MBST-3/4-1-3/4-F	MBST-3/4-1-3/4-F-G	MBST-3/4-1-3/4-F-Z	3/4"	1"	3/4"	6-1/2"
MBST-3/4-3/4-3/4-F	MBST-3/4-3/4-3/4-F-G	MBST-3/4-3/4-3/4-F-Z	3/4"	3/4"	3/4"	6-1/2"
MBST7-1 1/4-F	MBST7-1 1/4-F-G	MBST7-1 1/4-F-Z	1-1/4"	1-1/4"	1-1/4"	7"

Richards Meter Bars are also available with PRESSURE TAPS. Please specify the size, location and type of plug when ordering.

METER BARS

MBST

- Side Inlet
- Top Outlet
- Standard Union Outlet
- O-Ring Gasket on Union Outlet



RICHARDS PART NUMBER			INLET SIZE	OUTLET SIZE	SWIVEL TAP SIZE	SWIVEL TAP C TO C
BLACK	GALVANIZED	ZINC ELECTROPLATED				
MBST6-1-1-1-0	MBST6-1-1-1-0-G	MBST6-1-1-1-0-Z	1"	1"	1"	6"
MBST6-1-3/4-1-0	MBST6-1-3/4-1-0-G	MBST6-1-3/4-1-0-Z	1"	3/4"	1"	6"
MBST6-1-1-3/4-0	MBST6-1-1-3/4-0-G	MBST6-1-1-3/4-0-Z	1"	1"	3/4"	6"
MBST6-1-3/4-3/4-0	MBST6-1-3/4-3/4-0-G	MBST6-1-3/4-3/4-0-Z	1"	3/4"	3/4"	6"
MBST6-3/4-1-1-0	MBST6-3/4-1-1-0-G	MBST6-3/4-1-1-0-Z	3/4"	1"	1"	6"
MBST6-3/4-3/4-1-0	MBST6-3/4-3/4-1-0-G	MBST6-3/4-3/4-1-0-Z	3/4"	3/4"	1"	6"
MBST6-3/4-1-3/4-0	MBST6-3/4-1-3/4-0-G	MBST6-3/4-1-3/4-0-Z	3/4"	1"	3/4"	6"
MBST6-3/4-3/4-3/4-0	MBST6-3/4-3/4-3/4-0-G	MBST6-3/4-3/4-3/4-0-Z	3/4"	3/4"	3/4"	6"
MBST-1-1-1-0	MBST-1-1-1-0-G	MBST-1-1-1-0-Z	1"	1"	1"	6-1/2"
MBST-1-3/4-1-0	MBST-1-3/4-1-0-G	MBST-1-3/4-1-0-Z	1"	3/4"	1"	6-1/2"
MBST-1-1-3/4-0	MBST-1-1-3/4-0-G	MBST-1-1-3/4-0-Z	1"	1"	3/4"	6-1/2"
MBST-1-3/4-3/4-0	MBST-1-3/4-3/4-0-G	MBST-1-3/4-3/4-0-Z	1"	3/4"	3/4"	6-1/2"
MBST-3/4-1-1-0	MBST-3/4-1-1-0-G	MBST-3/4-1-1-0-Z	3/4"	1"	1"	6-1/2"
MBST-3/4-3/4-1-0	MBST-3/4-3/4-1-0-G	MBST-3/4-3/4-1-0-Z	3/4"	3/4"	1"	6-1/2"
MBST-3/4-1-3/4-0	MBST-3/4-1-3/4-0-G	MBST-3/4-1-3/4-0-Z	3/4"	1"	3/4"	6-1/2"
MBST-3/4-3/4-3/4-0	MBST-3/4-3/4-3/4-0-G	MBST-3/4-3/4-3/4-0-Z	3/4"	3/4"	3/4"	6-1/2"
MBST7-1 1/4-0	MBST7-1 1/4-0-G	MBST7-1 1/4-0-Z	1-1/4"	1-1/4"	1-1/4"	7"

Richards Meter Bars are also available with PRESSURE TAPS. Please specify the size, location and type of plug when ordering.

GP16

METER BARS

MBSSL

- Side Inlet
- Sleeved Outlet



RICHARDS PART NUMBER			INLET SIZE	OUTLET SIZE	SWIVEL TAP SIZE	SWIVEL TAP C TO C
BLACK	GALVANIZED	ZINC ELECTROPLATED				
MBSSL6-1-1-1	MBSSL6-1-1-1-G	MBSSL6-1-1-1-Z	1"	1"	1"	6"
MBSSL6-1-3/4-1	MBSSL6-1-3/4-1-G	MBSSL6-1-3/4-1-Z	1"	3/4"	1"	6"
MBSSL6-1-1-3/4	MBSSL6-1-1-3/4-G	MBSSL6-1-1-3/4-Z	1"	1"	3/4"	6"
MBSSL6-1-3/4-3/4	MBSSL6-1-3/4-3/4-G	MBSSL6-1-3/4-3/4-Z	1"	3/4"	3/4"	6"
MBSSL6-3/4-1-1	MBSSL6-3/4-1-1-G	MBSSL6-3/4-1-1-Z	3/4"	1"	1"	6"
MBSSL6-3/4-3/4-1	MBSSL6-3/4-3/4-1-G	MBSSL6-3/4-3/4-1-Z	3/4"	3/4"	1"	6"
MBSSL6-3/4-1-3/4	MBSSL6-3/4-1-3/4-G	MBSSL6-3/4-1-3/4-Z	3/4"	1"	3/4"	6"
MBSSL6-3/4-3/4-3/4	MBSSL6-3/4-3/4-3/4-G	MBSSL6-3/4-3/4-3/4-Z	3/4"	3/4"	3/4"	6"
MBSSL-1-1-1	MBSSL-1-1-1-G	MBSSL-1-1-1-Z	1"	1"	1"	6-1/2"
MBSSL-1-3/4-1	MBSSL-1-3/4-1-G	MBSSL-1-3/4-1-Z	1"	3/4"	1"	6-1/2"
MBSSL-1-1-3/4	MBSSL-1-1-3/4-G	MBSSL-1-1-3/4-Z	1"	1"	3/4"	6-1/2"
MBSSL-1-3/4-3/4	MBSSL-1-3/4-3/4-G	MBSSL-1-3/4-3/4-Z	1"	3/4"	3/4"	6-1/2"
MBSSL-3/4-1-1	MBSSL-3/4-1-1-G	MBSSL-3/4-1-1-Z	3/4"	1"	1"	6-1/2"
MBSSL-3/4-3/4-1	MBSSL-3/4-3/4-1-G	MBSSL-3/4-3/4-1-Z	3/4"	3/4"	1"	6-1/2"
MBSSL-3/4-1-3/4	MBSSL-3/4-1-3/4-G	MBSSL-3/4-1-3/4-Z	3/4"	1"	3/4"	6-1/2"
MBSSL-3/4-3/4-3/4	MBSSL-3/4-3/4-3/4-G	MBSSL-3/4-3/4-3/4-Z	3/4"	3/4"	3/4"	6-1/2"

Richards Meter Bars are also available with PRESSURE TAPS. Please specify the size, location and type of plug when ordering.

METER BARS

MBSD

- Side Inlet
- Side Outlet
- Direct Thread Outlet



RICHARDS PART NUMBER			INLET SIZE	OUTLET SIZE	SWIVEL TAP SIZE	SWIVEL TAP C TO C
BLACK	GALVANIZED	ZINC ELECTROPLATED				
MBSD6-1-1-1	MBSD6-1-1-1-G	MBSD6-1-1-1-Z	1"	1"	1"	6"
MBSD6-1-1/2-1	MBSD6-1-1/2-1-G	MBSD6-1-1/2-1-Z	1-1/2"	1-1/2"	1-1/2"	6"
MBSD6-1-3/4-1	MBSD6-1-3/4-1-G	MBSD6-1-3/4-1-Z	1"	3/4"	1"	6"
MBSD6-1-1-3/4	MBSD6-1-1-3/4-G	MBSD6-1-1-3/4-Z	1"	1"	3/4"	6"
MBSD6-1-3/4-3/4	MBSD6-1-3/4-3/4-G	MBSD6-1-3/4-3/4-Z	1"	3/4"	3/4"	6"
MBSD6-3/4-1-1	MBSD6-3/4-1-1-G	MBSD6-3/4-1-1-Z	3/4"	1"	1"	6"
MBSD6-3/4-3/4-1	MBSD6-3/4-3/4-1-G	MBSD6-3/4-3/4-1-Z	3/4"	3/4"	1"	6"
MBSD6-3/4-1-3/4	MBSD6-3/4-1-3/4-G	MBSD6-3/4-1-3/4-Z	3/4"	1"	3/4"	6"
MBSD6-3/4-3/4-3/4	MBSD6-3/4-3/4-3/4-G	MBSD6-3/4-3/4-3/4-Z	3/4"	3/4"	3/4"	6"

Richards Meter Bars are also available with PRESSURE TAPS. Please specify the size, location and type of plug when ordering.

METER BARS

MBSD

- Side Inlet
- Top Outlet



RICHARDS PART NUMBER			INLET SIZE	OUTLET SIZE	SWIVEL TAP SIZE	SWIVEL TAP C TO C
BLACK	GALVANIZED	ZINC ELECTROPLATED				
MBSD6-1-1/2	MBSD6-1-1/2-G	MBSD6-1-1/2-Z	1-1/2"	1-1/2"	1-1/2"	6"

METER BARS

MBLG

- Rear Center Inlet
- Side Outlet



RICHARDS PART NUMBER			INLET SIZE	OUTLET SIZE	SWIVEL TAP SIZE	SWIVEL TAP C TO C
BLACK	GALVANIZED	ZINC ELECTROPLATED				
MBLG-1-1-1	MBLG-1-1-1-G	MBLG-1-1-1-Z	1"	1"	1"	6"
MBLG-1-3/4-1	MBLG-1-3/4-1-G	MBLG-1-3/4-1-Z	1"	3/4"	1"	6"
MBLG-1-1-3/4	MBLG-1-1-3/4-G	MBLG-1-1-3/4-Z	1"	1"	3/4"	6"
MBLG-1-3/4-3/4	MBLG-1-3/4-3/4-G	MBLG-1-3/4-3/4-Z	1"	3/4"	3/4"	6"
MBLG-3/4-1-1	MBLG-3/4-1-1-G	MBLG-3/4-1-1-Z	3/4"	1"	1"	6"
MBLG-3/4-3/4-1	MBLG-3/4-3/4-1-G	MBLG-3/4-3/4-1-Z	3/4"	3/4"	1"	6"
MBLG-3/4-1-3/4	MBLG-3/4-1-3/4-G	MBLG-3/4-1-3/4-Z	3/4"	1"	3/4"	6"
MBLG-3/4-3/4-3/4	MBLG-3/4-3/4-3/4-G	MBLG-3/4-3/4-3/4-Z	3/4"	3/4"	3/4"	6"
MBLG7-1 1/4	MBLG7-1 1/4-G	MBLG7-1 1/4-Z	1-1/4"	1-1/4"	1-1/4"	7"

METER BARS

CMBV

- Center Rear Inlet with Integral Valve for Manifold Use
- Top O-Ring Insulated Union Outlet



RICHARDS PART NUMBER			INLET SIZE	OUTLET SIZE	SWIVEL TAP SIZE	SWIVEL TAP C TO C
BLACK	GALVANIZED	ZINC ELECTROPLATED				
CMBV-20LT	CMBV-20LT-G	CMBV-20LT-Z	1"	1"	20LT	6"

Richards Meter Bars are also available with PRESSURE TAPS. Please specify the size, location and type of plug when ordering.

METER BARS

CMB

- Side Inlet
- Side Outlet
- Integral Swivels
- Insulated O-Ring Union



RICHARDS PART NUMBER			INLET SIZE	OUTLET SIZE	SWIVEL TAP SIZE	SWIVEL TAP C TO C
BLACK	GALVANIZED	ZINC ELECTROPLATED				
CMB-1-1-20LT-I	CMB-1-1-20LT-GI	CMB-1-1-20LT-ZI	1"	1"	20LT	6"
CMB-1-3/4-20LT-I	CMB-1-3/4-20LT-GI	CMB-1-3/4-20LT-ZI	1"	3/4"	20LT	6"
CMB-3/4-1-20LT-I	CMB-3/4-1-20LT-GI	CMB-3/4-1-20LT-ZI	3/4"	1"	20LT	6"
CMB-3/4-3/4-20LT-I	CMB-3/4-3/4-20LT-GI	CMB-3/4-3/4-20LT-ZI	3/4"	3/4"	20LT	6"
CMB-1-1-1A-I	CMB-1-1-1A-GI	CMB-1-1-1A-ZI	1"	1"	1A	6"
CMB-1-3/4-1A-I	CMB-1-3/4-1A-GI	CMB-1-3/4-1A-ZI	1"	3/4"	1A	6"
CMB-3/4-1-1A-I	CMB-3/4-1-1A-GI	CMB-3/4-1-1A-ZI	3/4"	1"	1A	6"
CMB-3/4-3/4-1A-I	CMB-3/4-3/4-1A-GI	CMB-3/4-3/4-1A-ZI	3/4"	3/4"	1A	6"
CMB-1-1-0EMCO-I	CMB-1-1-0EMCO-GI	CMB-1-1-0EMCO-ZI	1"	1"	0EMCO	6"
CMB-1-3/4-0EMCO-I	CMB-1-3/4-0EMCO-GI	CMB-1-3/4-0EMCO-ZI	1"	3/4"	0EMCO	6"
CMB-3/4-1-0EMCO-I	CMB-3/4-1-0EMCO-GI	CMB-3/4-1-0EMCO-ZI	3/4"	1"	0EMCO	6"
CMB-3/4-0EMCO-I	CMB-3/4-0EMCO-GI	CMB-3/4-0EMCO-ZI	3/4"	3/4"	0EMCO	6"
CMB8-1 1/4-30LT-I	CMB8-1 1/4-30LT-GI	CMB8-1 1/4-30LT-ZI	1-1/4"	1-1/4"	30LT	8-1/4"

Richards Meter Bars are also available with PRESSURE TAPS. Please specify the size, location and type of plug when ordering.

METER BARS

CMB

- Side Inlet
- Side Outlet
- Integral Swivels
- Standard O-Ring Union



RICHARDS PART NUMBER			INLET SIZE	OUTLET SIZE	SWIVEL TAP SIZE	SWIVEL TAP C TO C
BLACK	GALVANIZED	ZINC ELECTROPLATED				
CMB-1-1-20LT	CMB-1-1-20LT-G	CMB-1-1-20LT-Z	1"	1"	20LT	6"
CMB-1-3/4-20LT	CMB-1-3/4-20LT-G	CMB-1-3/4-20LT-Z	1"	3/4"	20LT	6"
CMB-3/4-1-20LT	CMB-3/4-1-20LT-G	CMB-3/4-1-20LT-Z	3/4"	1"	20LT	6"
CMB-3/4-3/4-20LT	CMB-3/4-3/4-20LT-G	CMB-3/4-3/4-20LT-Z	3/4"	3/4"	20LT	6"
CMB-1-1-1A	CMB-1-1-1A-G	CMB-1-1-1A-Z	1"	1"	1A	6"
CMB-1-3/4-1A	CMB-1-3/4-1A-G	CMB-1-3/4-1A-Z	1"	3/4"	1A	6"
CMB-3/4-1-1A	CMB-3/4-1-1A-G	CMB-3/4-1-1A-Z	3/4"	1"	1A	6"
CMB-3/4-3/4-1A	CMB-3/4-3/4-1A-G	CMB-3/4-3/4-1A-Z	3/4"	3/4"	1A	6"
CMB-1-1-0EMCO	CMB-1-1-0EMCO-G	CMB-1-1-0EMCO-Z	1"	1"	0EMCO	6"
CMB-1-3/4-0EMCO	CMB-1-3/4-0EMCO-G	CMB-1-3/4-0EMCO-Z	1"	3/4"	0EMCO	6"
CMB-3/4-1-0EMCO	CMB-3/4-1-0EMCO-G	CMB-3/4-1-0EMCO-Z	3/4"	1"	0EMCO	6"
CMB-3/4-0EMCO	CMB-3/4-0EMCO-G	CMB-3/4-0EMCO-Z	3/4"	3/4"	0EMCO	6"
CMB8-1 1/4-30LT	CMB8-1 1/4-30LT-G	CMB8-1 1/4-30LT-Z	1-1/4"	1-1/4"	30LT	8-1/4"

METER BARS

CMBT

- Side Inlet
- Top Outlet
- Integral Swivels
- Insulated O-Ring Union



RICHARDS PART NUMBER			INLET SIZE	OUTLET SIZE	SWIVEL TAP SIZE	SWIVEL TAP C TO C
BLACK	GALVANIZED	ZINC ELECTROPLATED				
CMBT-1-1-20LT-I	CMBT-1-1-20LT-GI	CMBT-1-1-20LT-ZI	1"	1"	20LT	6"
CMBT-1-3/4-20LT-I	CMBT-1-3/4-20LT-GI	CMBT-1-3/4-20LT-ZI	1"	3/4"	20LT	6"
CMBT-3/4-1-20LT-I	CMBT-3/4-1-20LT-GI	CMBT-3/4-1-20LT-ZI	3/4"	1"	20LT	6"
CMBT-3/4-3/4-20LT-I	CMBT-3/4-3/4-20LT-GI	CMBT-3/4-3/4-20LT-ZI	3/4"	3/4"	20LT	6"
CMBT-1-1-1A-I	CMBT-1-1-1A-GI	CMBT-1-1-1A-ZI	1"	1"	1A	6"
CMBT-1-3/4-1A-I	CMBT-1-3/4-1A-GI	CMBT-1-3/4-1A-ZI	1"	3/4"	1A	6"
CMBT-3/4-1-1A-I	CMBT-3/4-1-1A-GI	CMBT-3/4-1-1A-ZI	3/4"	1"	1A	6"
CMBT-3/4-3/4-1A-I	CMBT-3/4-3/4-1A-GI	CMBT-3/4-3/4-1A-ZI	3/4"	3/4"	1A	6"
CMBT-1-1-0EMCO-I	CMBT-1-1-0EMCO-GI	CMBT-1-1-0EMCO-ZI	1"	1"	0EMCO	6"
CMBT-1-3/4-0EMCO-I	CMBT-1-3/4-0EMCO-GI	CMBT-1-3/4-0EMCO-ZI	1"	3/4"	0EMCO	6"
CMBT-3/4-1-0EMCO-I	CMBT-3/4-1-0EMCO-GI	CMBT-3/4-1-0EMCO-ZI	3/4"	1"	0EMCO	6"
CMBT-3/4-0EMCO-I	CMBT-3/4-0EMCO-GI	CMBT-3/4-0EMCO-ZI	3/4"	3/4"	0EMCO	6"

METER BARS

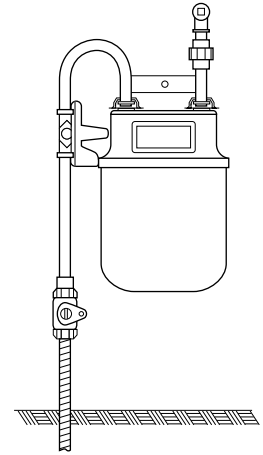
CMBT

- Side Inlet
- Top Outlet
- Integral Swivels
- Standard O-Ring Union

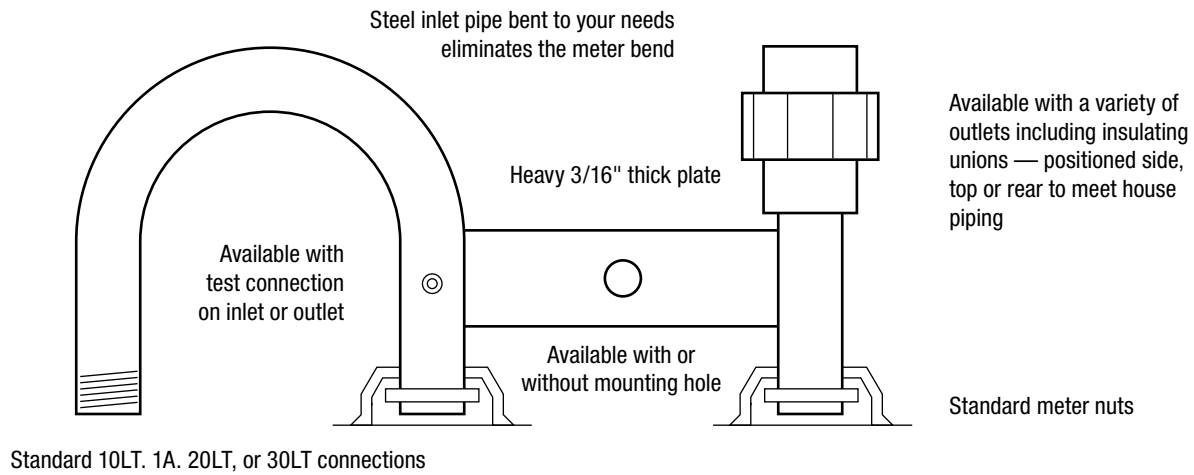


RICHARDS PART NUMBER			INLET SIZE	OUTLET SIZE	SWIVEL TAP SIZE	SWIVEL TAP C TO C
BLACK	GALVANIZED	ZINC ELECTROPLATED				
CMBT-1-1-20LT	CMBT-1-1-20LT-G	CMBT-1-1-20LT-Z	1"	1"	20LT	6"
CMBT-1-3/4-20LT	CMBT-1-3/4-20LT-G	CMBT-1-3/4-20LT-Z	1"	3/4"	20LT	6"
CMBT-3/4-1-20LT	CMBT-3/4-1-20LT-G	CMBT-3/4-1-20LT-Z	3/4"	1"	20LT	6"
CMBT-3/4-3/4-20LT	CMBT-3/4-3/4-20LT-G	CMBT-3/4-3/4-20LT-Z	3/4"	3/4"	20LT	6"
CMBT-1-1-1A	CMBT-1-1-1A-G	CMBT-1-1-1A-Z	1"	1"	1A	6"
CMBT-1-3/4-1A	CMBT-1-3/4-1A-G	CMBT-1-3/4-1A-Z	1"	3/4"	1A	6"
CMBT-3/4-1-1A	CMBT-3/4-1-1A-G	CMBT-3/4-1-1A-Z	3/4"	1"	1A	6"
CMBT-3/4-3/4-1A	CMBT-3/4-3/4-1A-G	CMBT-3/4-3/4-1A-Z	3/4"	3/4"	1A	6"
CMBT-1-1-0EMCO	CMBT-1-1-0EMCO-G	CMBT-1-1-0EMCO-Z	1"	1"	0EMCO	6"
CMBT-1-3/4-0EMCO	CMBT-1-3/4-0EMCO-G	CMBT-1-3/4-0EMCO-Z	1"	3/4"	0EMCO	6"
CMBT-3/4-1-0EMCO	CMBT-3/4-1-0EMCO-G	CMBT-3/4-1-0EMCO-Z	3/4"	1"	0EMCO	6"
CMBT-3/4-0EMCO	CMBT-3/4-0EMCO-G	CMBT-3/4-0EMCO-Z	3/4"	3/4"	0EMCO	6"

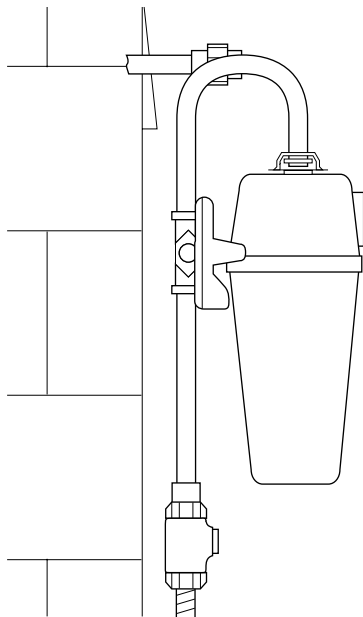
- Eliminates virtually all of the threaded connections associated with a standard meter bend, meter bar, and swivel installation
- Provides a strong, lightweight, all-steel, meter hook up
- Versatile — virtually any inlet/outlet configuration can be accommodated
- Unrestricted flow to the meter
- Cost effective
- Factory coated



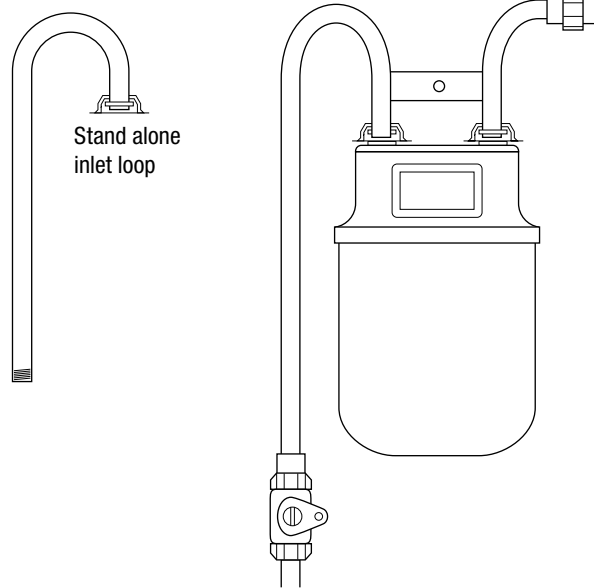
Examples of Richards Direct Pipe installations that utilize 90-degree or 180-degree bends or loops ...



Complete meter installation rear in – rear out with regulator



Complete meter installation side inlet – side outlet low pressure



- Pressure Tested
- Economical
- Attractive
- Factory Painted

Examples of some of the prefabricated meter set assembly configurations that Richards can build for you using approved components ...



Richards Meter Sets and Meter Manifolds make meter installation easy, fast, uniform, and error free. The photos below show several popular designs for prefabricated meter sets and manifolds. Richards will build meter sets and manifolds to your company's specifications using approved components.



Please use this form as a guide to help you when ordering. (Complete all that apply)

1. Header Pipe Size:

☐ 1" ☐ 1-1/4" ☐ 1-1/2" ☐ 2"

2. Number of meter connection: _____

3. Pipe size of the meter connections:

☐ 3/4" ☐ 1" ☐ 1-1/4"

4. Number of inches separating the meter connections: _____

5. Number of inches from the manifold inlet to the center of the first connection: _____

6. Number of inches from the center of the last meter connection to the end of the manifold: _____

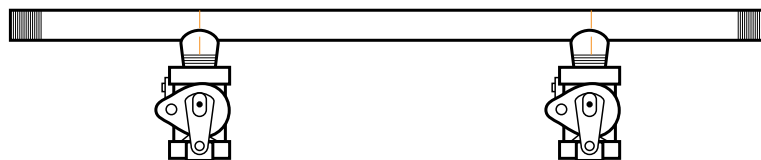
7. The meter connections should be:

☐ Straight ☐ Bent

8. Dimension of the meter connection take off pipe: _____

9. Do you require a valve on the meter take off?

☐ Yes ☐ No If yes, what valve model? _____



Please use this form as a guide to help you when ordering. (Complete all that apply)

1. Type of Bend:

☐ 90° ☐ 180°

2. Pipe Size:

☐ 3/4" ☐ 1" ☐ 1-1/4"

3. Inlet Side:

☐ Threaded ☐ Plain

4. Outlet Side:

☐ Threaded ☐ Swivel Connection

5. Connection Size:

☐ 10LT ☐ 1A ☐ EMCO ☐ 20LT ☐ 30LT

6. Radius (for 90° bends) in inches: _____

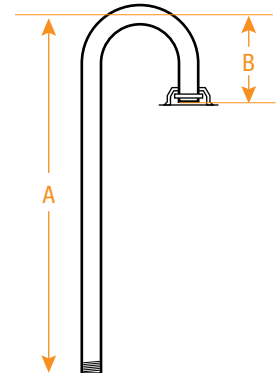
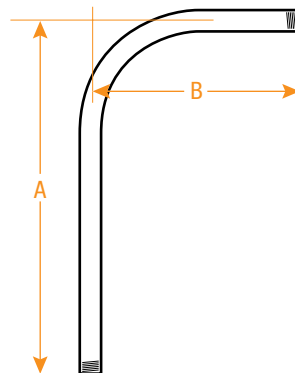
7. Center to Center (for 180° loops) in inches: _____

8. Inlet Dimension (A): _____

9. Outlet Dimension (B): _____

10. Finish:

☐ Black ☐ Galvanized ☐ Zinc Plated ☐ Painted (Color: _____)



Please use this form as a guide to help you when ordering. (Complete all that apply) For examples please see page GP25.

1. Size of meter connection:

☐ 10LT ☐ 1A ☐ EMCO ☐ 20LT ☐ 30LT ☐ 45LT

2. Size pipe:

☐ 3/4" ☐ 1" ☐ 1-1/4" ☐ 1-1/2"

3. Degree of bend on the inlet:

☐ 90° ☐ 180°

4. Number of inches on the inlet side to the center of the bend: _____

5. Center to Center on the meter hub:

☐ 6" ☐ 6-1/2"

6. Direction of the outlet:

☐ Top Outlet ☐ 90° Side Outlet ☐ 90° Back Outlet

7. Do you want an insulated union on the outlet?

☐ Yes ☐ No

8. Do you want a pressure tap?

☐ Yes ☐ No If yes, what size? ☐ 1/8" ☐ 1/4"

9. Location of your pressure tap: _____

10. Do you want your prefab painted?

☐ Yes ☐ No If yes, what color? _____

11. Do you want a regulator on your prefab?

☐ Yes ☐ No If yes, which regulator do you want? _____

12. Do you want a valve?

☐ Yes ☐ No If yes, which valve? _____

13. Nipple length (if needed): _____

Please use this form as a guide to help you when ordering. (Complete all that apply)

1. Inlet Location:

☐ Side ☐ Top ☐ Rear

2. Inlet Thread:

☐ 3/4" ☐ 1" ☐ 1-1/4"

3. Outlet Location:

☐ Side ☐ Top ☐ Rear

4. Outlet Style:

☐ Insulated Union ☐ Threaded

5. Outlet Size:

☐ 3/4" ☐ 1" ☐ 1-1/4"

6. Swivel Connections:

☐ 3/4" ☐ 1" ☐ 1-1/4"

7. Swivel Connections Integral:

☐ 10LT ☐ 1A ☐ EMC0 ☐ 20LT ☐ 30LT

8. Swivels Center To Center:

☐ 6" ☐ 6-1/2" ☐ 7" ☐ 8-1/4"

9. Finish:

☐ Black ☐ Galvanized ☐ Zinc Plated ☐ Painted (Color: _____)

10. Pressure Tap: Size _____

11. Pressure Tap: Type Plug _____

12. Pressure Tap: Location _____



INDEX

Alphabetical Listing by Richards Part Number

B1A	GP6	CMB8-1 1/4-30LT	GP21	DC-EMCO	GP7	MBSD6-3/4-3/4-3/4-G	GP18	MBSS-3/4-3/4-3/4-F-Z	GP11
B1A	GP6	CMB8-1 1/4-30LT-G	GP21	FS-1A-3/4	GP3	MBSD6-3/4-3/4-3/4-Z	GP18	MBSS-3/4-3/4-3/4-O	GP12
B3&4	GP6	CMB8-1 1/4-30LT-GI	GP20	FS-1A-3/4-G	GP3	MBSS-1-1-1-F	GP11	MBSS-3/4-3/4-3/4-O-G	GP12
B5A	GP6	CMB8-1 1/4-30LT-I	GP20	FS-1A-3/4-GI	GP3	MBSS-1-1-1-F-G	GP11	MBSS-3/4-3/4-3/4-OI	GP10
B5LT	GP6	CMB8-1 1/4-30LT-Z	GP21	FS-1A-3/4-I	GP3	MBSS-1-1-1-Fl	GP9	MBSS-3/4-3/4-3/4-OI-G	GP10
B10LT	GP6	CMB8-1 1/4-30LT-ZI	GP20	FS-1A-3/4-Z	GP3	MBSS-1-1-1-Fl-G	GP9	MBSS-3/4-3/4-3/4-OI-Z	GP10
B20LT	GP6	CMBT-1-1-OEMCO	GP23	FS-1A-3/4-ZI	GP3	MBSS-1-1-1-Fl-Z	GP9	MBSS-3/4-3/4-3/4-O-Z	GP12
B30LT	GP6	CMBT-1-1-OEMCO-G	GP23	FS-45LT-1/4	GP3	MBSS-1-1-1-F-Z	GP11	MBSS6-1-1-1-F	GP11
B45LT	GP6	CMBT-1-1-OEMCO-GI	GP22	FS-20LT-3/4-G	GP3	MBSS-1-1-1-O	GP12	MBSS6-1-1-1-F-G	GP11
B100LT	GP6	CMBT-1-1-OEMCO-I	GP22	FS-20LT-3/4-GI	GP3	MBSS-1-1-1-O-G	GP12	MBSS6-1-1-1-Fl	GP9
BR-A	GP7	CMBT-1-1-OEMCO-Z	GP23	FS-20LT-3/4-I	GP3	MBSS-1-1-1-OI	GP10	MBSS6-1-1-1-Fl-G	GP9
BR-A-G	GP7	CMBT-1-1-OEMCO-ZI	GP22	FS-20LT-3/4-Z	GP3	MBSS-1-1-1-OI-G	GP10	MBSS6-1-1-1-Fl-Z	GP9
BR-A-Z	GP7	CMBT-1-1-1A	GP23	FS-20LT-3/4-ZI	GP3	MBSS-1-1-1-OI-Z	GP10	MBSS6-1-1-1-F-Z	GP11
BR-F	GP7	CMBT-1-1-1A-G	GP23	FS-45LT-1 1/4	GP3	MBSS-1-1-1-O-Z	GP12	MBSS6-1-1-1-OI	GP10
BR-F-G	GP7	CMBT-1-1-1A-GI	GP22	FS-45LT-1 1/4-G	GP3	MBSS-1-1-3/4-F	GP11	MBSS6-1-1-1-OI-G	GP10
BR-F-Z	GP7	CMBT-1-1-1A-I	GP22	FS-45LT-1 1/4-G	GP3	MBSS-1-1-3/4-F-G	GP11	MBSS6-1-1-1-OI-Z	GP10
BR-U	GP7	CMBT-1-1-1A-Z	GP23	FS-45LT-1 1/4-I	GP3	MBSS-1-1-3/4-Fl	GP9	MBSS6-1-1-3/4-F	GP11
BR-U-G	GP7	CMBT-1-1-1A-ZI	GP22	FS-45LT-1 1/4-Z	GP3	MBSS-1-1-3/4-Fl-G	GP9	MBSS6-1-1-3/4-F-G	GP11
BR-U-Z	GP7	CMBT-1-1-20LT	GP23	FS-45LT-1 1/4-Z	GP3	MBSS-1-1-3/4-Fl-Z	GP9	MBSS6-1-1-3/4-Fl	GP9
CMB-1-1-OEMCO	GP21	CMBT-1-1-20LT-G	GP23	GV-1	GP8	MBSS-1-1-3/4-F-Z	GP11	MBSS6-1-1-3/4-Fl-G	GP9
CMB-1-1-OEMCO-G	GP21	CMBT-1-1-20LT-GI	GP22	GV-1 1/2	GP8	MBSS-1-1-3/4-O	GP12	MBSS6-1-1-3/4-Fl-Z	GP9
CMB-1-1-OEMCO-GI	GP20	CMBT-1-1-20LT-I	GP22	GV-1 1/4	GP8	MBSS-1-1-3/4-O-G	GP12	MBSS6-1-1-3/4-F-Z	GP11
CMB-1-1-OEMCO-I	GP20	CMBT-1-1-20LT-Z	GP23	GV-2	GP8	MBSS-1-1-3/4-OI	GP10	MBSS6-1-1-3/4-O	GP12
CMB-1-1-OEMCO-Z	GP21	CMBT-1-1-20LT-ZI	GP22	GV-3/4	GP8	MBSS-1-1-3/4-OI-G	GP10	MBSS6-1-1-3/4-O-G	GP12
CMB-1-1-OEMCO-ZI	GP20	CMBT-1-3/4-OEMCO	GP23	IU-1	GP8	MBSS-1-1-3/4-OI-Z	GP10	MBSS6-1-1-3/4-OI	GP10
CMB-1-1-1A	GP21	CMBT-1-3/4-OEMCO-G	GP23	IU-1 1/4	GP8	MBSS-1-1-3/4-O-Z	GP12	MBSS6-1-1-3/4-OI-G	GP10
CMB-1-1-1A-G	GP21	CMBT-1-3/4-OEMCO-GI	GP22	IU-1 1/4-G	GP8	MBSS-1-3/4-1-F	GP11	MBSS6-1-1-3/4-OI-Z	GP10
CMB-1-1-1A-GI	GP20	CMBT-1-3/4-OEMCO-I	GP22	IU-1/2	GP8	MBSS-1-3/4-1-F-G	GP11	MBSS6-1-1-3/4-O-Z	GP12
CMB-1-1-1A-I	GP20	CMBT-1-3/4-OEMCO-Z	GP23	IU-1/2-G	GP8	MBSS-1-3/4-1-Fl	GP9	MBSS6-1-3/4-1-F	GP11
CMB-1-1-1A-Z	GP21	CMBT-1-3/4-OEMCO-ZI	GP22	IU-1-G	GP8	MBSS-1-3/4-1-Fl-G	GP9	MBSS6-1-3/4-1-F-G	GP11
CMB-1-1-1A-ZI	GP20	CMBT-1-3/4-1A	GP23	IU-2	GP8	MBSS-1-3/4-1-Fl-Z	GP9	MBSS6-1-3/4-1-Fl	GP9
CMB-1-1-20LT	GP21	CMBT-1-3/4-1A-G	GP23	IU-2-G	GP8	MBSS-1-3/4-1-F-Z	GP11	MBSS6-1-3/4-1-Fl-G	GP9
CMB-1-1-20LT-G	GP21	CMBT-1-3/4-1A-GI	GP22	IU-3-G	GP8	MBSS-1-3/4-1-O	GP12	MBSS6-1-3/4-1-Fl-Z	GP9
CMB-1-1-20LT-GI	GP20	CMBT-1-3/4-1A-I	GP22	IU-3/4-G	GP8	MBSS-1-3/4-1-O-G	GP12	MBSS6-1-3/4-1-F-Z	GP11
CMB-1-1-20LT-I	GP20	CMBT-1-3/4-1A-Z	GP23	IU-3/4X1	GP8	MBSS-1-3/4-1-OI	GP10	MBSS6-1-3/4-1-O	GP12
CMB-1-1-20LT-Z	GP21	CMBT-1-3/4-1A-ZI	GP22	IU-3/4X1-G	GP8	MBSS-1-3/4-1-OI-G	GP10	MBSS6-1-3/4-1-O-G	GP12
CMB-1-1-20LT-ZI	GP20	CMBT-1-3/4-20LT	GP23	MBLG-1-1-1	GP19	MBSS-1-3/4-1-OI-Z	GP10	MBSS6-1-3/4-1-OI	GP10
CMB-1-1-20LT-ZI	GP20	CMBT-1-3/4-20LT-G	GP23	MBLG-1-1-1-G	GP19	MBSS-1-3/4-1-O-Z	GP12	MBSS6-1-3/4-1-OI-G	GP10
CMB-1-3/4-OEMCO	GP21	CMBT-1-3/4-20LT-GI	GP22	MBLG-1-1-1-Z	GP19	MBSS-1-3/4-3/4-F	GP11	MBSS6-1-3/4-1-OI-Z	GP10
CMB-1-3/4-OEMCO-G	GP21	CMBT-1-3/4-20LT-I	GP22	MBLG-1-1-3/4	GP19	MBSS-1-3/4-3/4-F-G	GP11	MBSS6-1-3/4-1-O-Z	GP12
CMB-1-3/4-OEMCO-GI	GP20	CMBT-1-3/4-20LT-Z	GP23	MBLG-1-1-3/4-G	GP19	MBSS-1-3/4-3/4-Fl	GP9	MBSS6-1-3/4-3/4-F	GP11
CMB-1-3/4-OEMCO-I	GP20	CMBT-1-3/4-20LT-ZI	GP22	MBLG-1-1-3/4-Z	GP19	MBSS-1-3/4-3/4-Fl-G	GP9	MBSS6-1-3/4-3/4-F-G	GP11
CMB-1-3/4-OEMCO-Z	GP21	CMBT-3/4-OEMCO	GP23	MBLG-1-3/4-1	GP19	MBSS-1-3/4-3/4-Fl-Z	GP9	MBSS6-1-3/4-3/4-Fl	GP9
CMB-1-3/4-OEMCO-ZI	GP20	CMBT-3/4-OEMCO-G	GP23	MBLG-1-3/4-1-G	GP19	MBSS-1-3/4-3/4-F-Z	GP11	MBSS6-1-3/4-3/4-Fl-G	GP9
CMB-1-3/4-1A	GP21	CMBT-3/4-OEMCO-GI	GP22	MBLG-1-3/4-1-Z	GP19	MBSS-1-3/4-3/4-O	GP12	MBSS6-1-3/4-3/4-Fl-Z	GP9
CMB-1-3/4-1A-G	GP21	CMBT-3/4-OEMCO-I	GP22	MBLG-1-3/4-3/4	GP19	MBSS-1-3/4-3/4-O-G	GP12	MBSS6-1-3/4-3/4-F-Z	GP11
CMB-1-3/4-1A-GI	GP20	CMBT-3/4-OEMCO-Z	GP23	MBLG-1-3/4-3/4-G	GP19	MBSS-1-3/4-3/4-OI	GP10	MBSS6-1-3/4-3/4-O	GP12
CMB-1-3/4-1A-I	GP20	CMBT-3/4-OEMCO-ZI	GP22	MBLG-1-3/4-3/4-I	GP19	MBSS-1-3/4-3/4-OI-G	GP10	MBSS6-1-3/4-3/4-O-G	GP12
CMB-1-3/4-1A-Z	GP21	CMBT-3/4-1-OEMCO	GP23	MBLG-3/4-1-1	GP19	MBSS-1-3/4-3/4-OI-Z	GP10	MBSS6-1-3/4-3/4-OI	GP10
CMB-1-3/4-1A-ZI	GP20	CMBT-3/4-1-OEMCO-G	GP23	MBLG-3/4-1-1-G	GP19	MBSS-1-3/4-3/4-O-Z	GP12	MBSS6-1-3/4-3/4-OI-G	GP10
CMB-1-3/4-20LT	GP21	CMBT-3/4-1-OEMCO-GI	GP22	MBLG-3/4-1-1-Z	GP19	MBSS-3/4-1-1-F	GP11	MBSS6-1-3/4-3/4-OI-Z	GP10
CMB-1-3/4-20LT-G	GP21	CMBT-3/4-1-OEMCO-I	GP22	MBLG-3/4-1-1-Z	GP19	MBSS-3/4-1-1-F-G	GP11	MBSS6-1-3/4-3/4-O-Z	GP12
CMB-1-3/4-20LT-GI	GP20	CMBT-3/4-1-OEMCO-Z	GP23	MBLG-3/4-1-1-Z	GP19	MBSS-3/4-1-1-Fl	GP9	MBSS6-3/4-1-1-F	GP11
CMB-1-3/4-20LT-I	GP20	CMBT-3/4-1-OEMCO-ZI	GP22	MBLG-3/4-1-3/4	GP19	MBSS-3/4-1-1-Fl-G	GP9	MBSS6-3/4-1-1-F-G	GP11
CMB-1-3/4-20LT-Z	GP21	CMBT-3/4-1-1A	GP23	MBLG-3/4-1-3/4-G	GP19	MBSS-3/4-1-1-Fl-Z	GP9	MBSS6-3/4-1-1-Fl	GP9
CMB-1-3/4-20LT-ZI	GP20	CMBT-3/4-1-1A-G	GP23	MBLG-3/4-1-3/4-I	GP19	MBSS-3/4-1-1-Fl-Z	GP9	MBSS6-3/4-1-1-Fl-G	GP9
CMB-3/4-OEMCO	GP21	CMBT-3/4-1-1A-GI	GP22	MBLG-3/4-3/4-1	GP19	MBSS-3/4-1-1-F-Z	GP11	MBSS6-3/4-1-1-Fl-Z	GP9
CMB-3/4-OEMCO-G	GP21	CMBT-3/4-1-1A-I	GP22	MBLG-3/4-3/4-1-G	GP19	MBSS-3/4-1-1-O	GP12	MBSS6-3/4-1-1-Fl-Z	GP9
CMB-3/4-OEMCO-GI	GP20	CMBT-3/4-1-1A-Z	GP23	MBLG-3/4-3/4-1-Z	GP19	MBSS-3/4-1-1-O-G	GP12	MBSS6-3/4-1-1-F-Z	GP11
CMB-3/4-OEMCO-I	GP20	CMBT-3/4-1-1A-ZI	GP22	MBLG-3/4-3/4-3/4	GP19	MBSS-3/4-1-1-OI	GP10	MBSS6-3/4-1-1-O	GP12
CMB-3/4-OEMCO-Z	GP21	CMBT-3/4-1-20LT	GP23	MBLG-3/4-3/4-3/4-G	GP19	MBSS-3/4-1-1-OI-G	GP10	MBSS6-3/4-1-1-O-G	GP12
CMB-3/4-OEMCO-ZI	GP20	CMBT-3/4-1-20LT-G	GP23	MBLG-3/4-3/4-3/4-I	GP19	MBSS-3/4-1-1-OI-Z	GP10	MBSS6-3/4-1-1-OI	GP10
CMB-3/4-1-OEMCO	GP21	CMBT-3/4-1-20LT-GI	GP22	MBLG7-1 1/4	GP19	MBSS-3/4-1-1-O-Z	GP12	MBSS6-3/4-1-1-OI-G	GP10
CMB-3/4-1-OEMCO-G	GP21	CMBT-3/4-1-20LT-I	GP22	MBLG7-1 1/4-G	GP19	MBSS-3/4-1-1-O-Z	GP12	MBSS6-3/4-1-1-OI-Z	GP10
CMB-3/4-1-OEMCO-GI	GP20	CMBT-3/4-1-20LT-Z	GP23	MBLG7-1 1/4-Z	GP19	MBSS-3/4-1-1-F-Z	GP11	MBSS6-3/4-1-1-F-Z	GP11
CMB-3/4-1-OEMCO-I	GP20	CMBT-3/4-1-20LT-ZI	GP22	MBSD6-1-1-1	GP18	MBSS-3/4-1-1-F-G	GP11	MBSS6-3/4-1-1-O-Z	GP12
CMB-3/4-1-OEMCO-Z	GP21	CMBT-3/4-1-20LT-ZI	GP22	MBSD6-1-1-1-G	GP18	MBSS-3/4-1-3/4-Fl	GP9	MBSS6-3/4-1-3/4-F	GP11
CMB-3/4-1-OEMCO-ZI	GP20	CMBT-3/4-3/4-1A	GP23	MBSD6-1-1-1-Z	GP18	MBSS-3/4-1-3/4-Fl-G	GP9	MBSS6-3/4-1-3/4-F-G	GP11
CMB-3/4-1-1A	GP21	CMBT-3/4-3/4-1A-G	GP23	MBSD6-1-1/2	GP18	MBSS-3/4-1-3/4-Fl-Z	GP9	MBSS6-3/4-1-3/4-Fl	GP9
CMB-3/4-1-1A-G	GP21	CMBT-3/4-3/4-1A-GI	GP22	MBSD6-1-1/2-1	GP18	MBSS-3/4-1-3/4-F-Z	GP11	MBSS6-3/4-1-3/4-Fl-G	GP9
CMB-3/4-1-1A-GI	GP20	CMBT-3/4-3/4-1A-I	GP22	MBSD6-1-1/2-1-G	GP18	MBSS-3/4-1-3/4-O	GP12	MBSS6-3/4-1-3/4-Fl-Z	GP9
CMB-3/4-1-1A-I	GP20	CMBT-3/4-3/4-1A-Z	GP23	MBSD6-1-1/2-1-Z	GP18	MBSS-3/4-1-3/4-O-G	GP12	MBSS6-3/4-1-3/4-F-Z	GP11
CMB-3/4-1-1A-Z	GP21	CMBT-3/4-3/4-1A-ZI	GP22	MBSD6-1-1/2-G	GP18	MBSS-3/4-1-3/4-OI	GP10	MBSS6-3/4-1-3/4-O	GP12
CMB-3/4-1-1A-ZI	GP20	CMBT-3/4-3/4-20LT	GP23	MBSD6-1-1/2-Z	GP18	MBSS-3/4-1-3/4-OI-G	GP10	MBSS6-3/4-1-3/4-O-G	GP12
CMB-3/4-1-20LT	GP21	CMBT-3/4-3/4-20LT-G	GP23	MBSD6-1-1-3/4	GP18	MBSS-3/4-1-3/4-OI-Z	GP10	MBSS6-3/4-1-3/4-OI	GP10
CMB-3/4-1-20LT-G	GP21	CMBT-3/4-3/4-20LT-GI	GP22	MBSD6-1-1-3/4-G	GP18	MBSS-3/4-1-3/4-O-Z	GP12	MBSS6-3/4-1-3/4-OI-G	GP10
CMB-3/4-1-20LT-GI	GP20	CMBT-3/4-3/4-20LT-I	GP22	MBSD6-1-1-3/4-I	GP18	MBSS-3/4-3/4-1-F	GP11	MBSS6-3/4-1-3/4-OI-Z	GP10
CMB-3/4-1-20LT-I	GP20	CMBT-3/4-3/4-20LT-Z	GP23	MBSD6-1-3/4-1	GP18	MBSS-3/4-3/4-1-F-G	GP11	MBSS6-3/4-3/4-1-F	GP11
CMB-3/4-1-20LT-Z	GP21	CMBT-3/4-3/4-20LT-ZI	GP22	MBSD6-1-3/4-1-G	GP18	MBSS-3/4-3/4-1-Fl	GP9	MBSS6-3/4-3/4-1-F-G	GP9
CMB-3/4-1-20LT-ZI	GP20	CMBV-20LT	GP19	MBSD6-1-3/4-1-I	GP18	MBSS-3/4-3/4-1-Fl-G	GP9	MBSS6-3/4-3/4-1-FI	GP9
CMB-3/4-3/4-1A	GP21	CMBV-20LT-G	GP19	MBSD6-1-3/4-3/4	GP18	MBSS-3/4-3/4-1-Fl-Z	GP9	MBSS6-3/4-3/4-1-Fl-G	GP9
CMB-3/4-3/4-1A-G	GP21	CMBV-20LT-Z	GP19	MBSD6-1-3/4-3/4-Z	GP18	MBSS-3/4-3/4-1-O	GP12	MBSS6-3/4-3/4-1-Fl-Z	GP9
CMB-3/4-3/4-1A-GI	GP20	DC-1	GP7	MBSD6-3/4-1-1	GP18	MBSS-3/4-3/4-1-O-G	GP12	MBSS6-3/4-3/4-1-F-Z	GP11
CMB-3/4-3/4-1A-I	GP20	DC-1A	GP7	MBSD6-3/4-1-1-G	GP18	MBSS-3/4-3/4-1-OI	GP10	MBSS6-3/4-3/4-1-O	GP12
CMB-3/4-3/4-1A-Z	GP21	DC-3&4	GP7	MBSD6-3/4-1-1-I	GP18	MBSS-3/4-3/4-1-OI-G	GP10	MBSS6-3/4-3/4-1-O-G	GP12
CMB-3/4-3/4-1A-ZI	GP20	DC-5A	GP7	MBSD6-3/4-1-3/4	GP18	MBSS-3/4-3/4-1-OI-Z	GP10	MBSS6-3/4-3/4-1-OI	GP10
CMB-3/4-3/4-20LT	GP21	DC-5LT	GP7	MBSD6-3/4-1-3/4-G	GP18	MBSS-3/4-3/4-1-O-Z	GP12	MBSS6-3/4-3/4-1-OI-G	GP10
CMB-3/4-3/4-20LT-G	GP21	DC-10LT	GP7	MBSD6-3/4-1-3/4-I	GP18	MBSS-3/4-3/4-3/4-F	GP11	MBSS6-3/4-3/4-1-OI-Z	GP10
CMB-3/4-3/4-20LT-GI	GP20	DC-20LT	GP7	MBSD6-3/4-3/4-1	GP18	MBSS-3/4-3/4-3/4-F-G	GP11	MBSS6-3/4-3/4-1-O-Z	GP12
CMB-3/4-3/4-20LT-I	GP20	DC-30LT	GP7	MBSD6-3/4-3/4-1-G	GP18	MBSS-3/4-3/4-3/4-Fl	GP9	MBSS6-3/4-3/4-3/4-F	GP11
CMB-3/4-3/4-20LT-Z	GP21	DC-45LT	GP7	MBSD6-3/4-3/4-1-I	GP18	MBSS-3/4-3/4-3/4-Fl-G	GP9	MBSS6-3/4-3/4-3/4-F-G	GP11
CMB-3/4-3/4-20LT-ZI	GP20	DC-100LT	GP7	MBSD6-3/4-3/4-3/4	GP18	MBSS-3/4-3/4-3/4-Fl-Z	GP9	MBSS6-3/4-3/4-3/4-Fl	GP9

INDEX

MBSS6-3/4-3/4-3/4-Fl-G.....	GP9	MBST-1-3/4-1-0I-Z.....	GP14	MBST6-1-3/4-1-F-Z.....	GP15	N10LT.....	GP5	OS-1/2-3-10LT-G.....	GP4
MBSS6-3/4-3/4-3/4-Fl-Z.....	GP9	MBST-1-3/4-1-0-Z.....	GP16	MBST6-1-3/4-1-0.....	GP16	N10LT-G.....	GP5	OS-1/2-3-10LT-Z.....	GP4
MBSS6-3/4-3/4-3/4-F-Z.....	GP11	MBST-1-3/4-3/4-F.....	GP15	MBST6-1-3/4-1-0-G.....	GP16	N10LT-Z.....	GP5	OS-1/2-3-20LT.....	GP4
MBSS6-3/4-3/4-3/4-0.....	GP12	MBST-1-3/4-3/4-F-G.....	GP15	MBST6-1-3/4-1-0I.....	GP14	N20LT.....	GP5	OS-1/2-3-20LT-G.....	GP4
MBSS6-3/4-3/4-3/4-0-G.....	GP12	MBST-1-3/4-3/4-Fl.....	GP13	MBST6-1-3/4-1-0I-G.....	GP14	N20LT-G.....	GP5	OS-1/2-3-20LT-Z.....	GP4
MBSS6-3/4-3/4-3/4-0I.....	GP10	MBST-1-3/4-3/4-Fl-G.....	GP13	MBST6-1-3/4-1-0I-Z.....	GP14	N20LT-Z.....	GP5	OS-1-4-3/8-30LT.....	GP4
MBSS6-3/4-3/4-3/4-0I-G.....	GP10	MBST-1-3/4-3/4-Fl-Z.....	GP13	MBST6-1-3/4-1-0-Z.....	GP16	N30LT.....	GP5	OS-1-4-3/8-30LT-G.....	GP4
MBSS6-3/4-3/4-3/4-0I-Z.....	GP10	MBST-1-3/4-3/4-F-Z.....	GP15	MBST6-1-3/4-3/4-F.....	GP15	N30LT-G.....	GP5	OS-1-4-3/8-30LT-Z.....	GP4
MBSS6-3/4-3/4-3/4-0-Z.....	GP12	MBST-1-3/4-3/4-0.....	GP16	MBST6-1-3/4-3/4-F-G.....	GP15	N30LT-Z.....	GP5	OS-2-1-100LT.....	GP4
MBSSL-1-1-1.....	GP17	MBST-1-3/4-3/4-0-G.....	GP16	MBST6-1-3/4-3/4-Fl.....	GP13	N45LT.....	GP5	OS-2-1-100LT-G.....	GP4
MBSSL-1-1-1-G.....	GP17	MBST-1-3/4-3/4-0I.....	GP14	MBST6-1-3/4-3/4-Fl-G.....	GP13	N45LT-G.....	GP5	OS-2-1-100LT-Z.....	GP4
MBSSL-1-1-1-Z.....	GP17	MBST-1-3/4-3/4-0I-G.....	GP14	MBST6-1-3/4-3/4-Fl-Z.....	GP13	N45LT-Z.....	GP5	OS-3/4-1 1/4-10LT.....	GP4
MBSSL-1-1-3/4.....	GP17	MBST-1-3/4-3/4-0I-Z.....	GP14	MBST6-1-3/4-3/4-F-Z.....	GP15	N60LT.....	GP5	OS-3/4-1 1/4-10LT-G.....	GP4
MBSSL-1-1-3/4-G.....	GP17	MBST-1-3/4-3/4-0-Z.....	GP16	MBST6-1-3/4-3/4-0.....	GP16	N60LT-G.....	GP5	OS-3/4-1 1/4-10LT-Z.....	GP4
MBSSL-1-1-3/4-Z.....	GP17	MBST-1-3/4-1-F.....	GP15	MBST6-1-3/4-3/4-0-G.....	GP16	N60LT-Z.....	GP5	OS-3/4-1-1A.....	GP4
MBSSL-1-3/4-1.....	GP17	MBST-3/4-1-1-F-G.....	GP15	MBST6-1-3/4-3/4-0I.....	GP14	N100LT.....	GP5	OS-3/4-1-1A-G.....	GP4
MBSSL-1-3/4-1-G.....	GP17	MBST-3/4-1-1-FI.....	GP13	MBST6-1-3/4-3/4-0I-G.....	GP14	N100LT-G.....	GP5	OS-3/4-1-1A-Z.....	GP4
MBSSL-1-3/4-1-Z.....	GP17	MBST-3/4-1-1-FI-G.....	GP13	MBST6-1-3/4-3/4-0I-Z.....	GP14	N100LT-Z.....	GP5	OS-3/4-1 3/4-10LT.....	GP4
MBSSL-1-3/4-3/4.....	GP17	MBST-3/4-1-1-FI-Z.....	GP13	MBST6-1-3/4-3/4-0-Z.....	GP16	NEMCO.....	GP5	OS-3/4-1 3/4-10LT-G.....	GP4
MBSSL-1-3/4-3/4-G.....	GP17	MBST-3/4-1-1-F-Z.....	GP15	MBST6-3/4-1-1-F.....	GP15	NEMCO-G.....	GP5	OS-3/4-1 3/4-10LT-Z.....	GP4
MBSSL-1-3/4-3/4-Z.....	GP17	MBST-3/4-1-1-0.....	GP16	MBST6-3/4-1-1-F-G.....	GP15	NEMCO-Z.....	GP5	OS-3/4-1 5/8-20LT.....	GP4
MBSSL-3/4-1-1.....	GP17	MBST-3/4-1-1-0-G.....	GP16	MBST6-3/4-1-1-Fl.....	GP13	OS-1-1 1/2-20LT.....	GP4	OS-3/4-1 5/8-20LT-G.....	GP4
MBSSL-3/4-1-1-G.....	GP17	MBST-3/4-1-1-0I.....	GP14	MBST6-3/4-1-1-Fl-G.....	GP13	OS-1-1 1/2-20LT-G.....	GP4	OS-3/4-1 5/8-20LT-Z.....	GP4
MBSSL-3/4-1-1-Z.....	GP17	MBST-3/4-1-1-0I-G.....	GP14	MBST6-3/4-1-1-Fl-Z.....	GP13	OS-1-1 1/2-20LT-Z.....	GP4	OS-3/4-1-10LT.....	GP4
MBSSL-3/4-1-3/4.....	GP17	MBST-3/4-1-1-0I-Z.....	GP14	MBST6-3/4-1-1-F-Z.....	GP15	OS-1-1 1/4-30LT.....	GP4	OS-3/4-1-10LT-G.....	GP4
MBSSL-3/4-1-3/4-G.....	GP17	MBST-3/4-1-1-0-Z.....	GP16	MBST6-3/4-1-1-0.....	GP16	OS-1-1 1/4-30LT-G.....	GP4	OS-3/4-1-10LT-Z.....	GP4
MBSSL-3/4-1-3/4-Z.....	GP17	MBST-3/4-1-3/4-F.....	GP15	MBST6-3/4-1-1-0-G.....	GP16	OS-1-1 1/4-30LT-Z.....	GP4	OS-3/4-3-1A.....	GP4
MBSSL-3/4-3/4-1.....	GP17	MBST-3/4-1-3/4-F-G.....	GP15	MBST6-3/4-1-1-0I.....	GP14	OS-1-1-1A.....	GP4	OS-3/4-3-1A-G.....	GP4
MBSSL-3/4-3/4-1-G.....	GP17	MBST-3/4-1-3/4-Fl.....	GP13	MBST6-3/4-1-1-0I-G.....	GP14	OS-1-1-1A-G.....	GP4	OS-3/4-3-1A-Z.....	GP4
MBSSL-3/4-3/4-1-Z.....	GP17	MBST-3/4-1-3/4-Fl-G.....	GP13	MBST6-3/4-1-1-0I-Z.....	GP14	OS-1-1-1A-Z.....	GP4	OS-3/4-3/8-10LT.....	GP4
MBSSL-3/4-3/4-3/4.....	GP17	MBST-3/4-1-3/4-Fl-Z.....	GP13	MBST6-3/4-1-1-0-Z.....	GP16	OS-1 1/2-1-3&4.....	GP4	OS-3/4-3/8-10LT-G.....	GP4
MBSSL-3/4-3/4-3/4-G.....	GP17	MBST-3/4-1-3/4-F-Z.....	GP15	MBST6-3/4-1-3/4-F.....	GP15	OS-1 1/2-1-3&4-G.....	GP4	OS-3/4-3/8-10LT-Z.....	GP4
MBSSL-3/4-3/4-3/4-Z.....	GP17	MBST-3/4-1-3/4-0.....	GP16	MBST6-3/4-1-3/4-F-G.....	GP15	OS-1 1/2-1-3&4-Z.....	GP4	OS-3/4-3-20LT.....	GP4
MBSSL6-1-1-1.....	GP17	MBST-3/4-1-3/4-0-G.....	GP16	MBST6-3/4-1-3/4-Fl.....	GP13	OS-1 1/2-1-45LT.....	GP4	OS-3/4-3-20LT-G.....	GP4
MBSSL6-1-1-1-G.....	GP17	MBST-3/4-1-3/4-0I.....	GP14	MBST6-3/4-1-3/4-Fl-G.....	GP13	OS-1 1/2-1-45LT-G.....	GP4	OS-3/4-3-20LT-Z.....	GP4
MBSSL6-1-1-1-Z.....	GP17	MBST-3/4-1-3/4-0I-G.....	GP14	MBST6-3/4-1-3/4-Fl-Z.....	GP13	OS-1 1/2-1-45LT-GI.....	GP5	OS-3/4-3-30LT.....	GP4
MBSSL6-1-1-3/4.....	GP17	MBST-3/4-1-3/4-0I-Z.....	GP14	MBST6-3/4-1-3/4-F-Z.....	GP15	OS-1 1/2-1-45LT-I.....	GP5	OS-3/4-3-30LT-G.....	GP4
MBSSL6-1-1-3/4-G.....	GP17	MBST-3/4-1-3/4-0-Z.....	GP16	MBST6-3/4-1-3/4-0.....	GP16	OS-1 1/2-1-45LT-Z.....	GP4	OS-3/4-3-30LT-Z.....	GP4
MBSSL6-1-1-3/4-Z.....	GP17	MBST-3/4-3/4-1-F.....	GP15	MBST6-3/4-1-3/4-0-G.....	GP16	OS-1 1/2-1-45LT-ZI.....	GP5	OS-3/4-4-10LT.....	GP4
MBSSL6-1-3/4-1.....	GP17	MBST-3/4-3/4-1-F-G.....	GP15	MBST6-3/4-1-3/4-0I.....	GP14	OS-1 1/2-1-60LT.....	GP4	OS-3/4-4-10LT-G.....	GP4
MBSSL6-1-3/4-1-G.....	GP17	MBST-3/4-3/4-1-Fl.....	GP13	MBST6-3/4-1-3/4-0I-G.....	GP14	OS-1 1/2-1-60LT-G.....	GP4	OS-3/4-4-10LT-Z.....	GP4
MBSSL6-1-3/4-1-Z.....	GP17	MBST-3/4-3/4-1-Fl-G.....	GP13	MBST6-3/4-1-3/4-0I-Z.....	GP14	OS-1 1/2-1-60LT-Z.....	GP4	OS-90-1-20LT.....	GP3
MBSSL6-1-3/4-3/4.....	GP17	MBST-3/4-3/4-1-Fl-Z.....	GP13	MBST6-3/4-1-3/4-0-Z.....	GP16	OS-1 1/2-2-45LT.....	GP4	OS-90-1-20LT-G.....	GP3
MBSSL6-1-3/4-3/4-G.....	GP17	MBST-3/4-3/4-1-F-Z.....	GP15	MBST6-3/4-3/4-1-F.....	GP15	OS-1 1/2-2-45LT-G.....	GP4	OS-90-1-20LT-GI.....	GP3
MBSSL6-1-3/4-3/4-Z.....	GP17	MBST-3/4-3/4-1-0.....	GP16	MBST6-3/4-3/4-1-F-G.....	GP15	OS-1 1/2-2-45LT-GI.....	GP5	OS-90-1-20LT-I.....	GP3
MBSSL6-3/4-1-1.....	GP17	MBST-3/4-3/4-1-0-G.....	GP16	MBST6-3/4-3/4-1-Fl.....	GP13	OS-1 1/2-2-45LT-I.....	GP5	OS-90-1-20LT-Z.....	GP3
MBSSL6-3/4-1-1-G.....	GP17	MBST-3/4-3/4-1-0I.....	GP14	MBST6-3/4-3/4-1-Fl-G.....	GP13	OS-1 1/2-2-45LT-Z.....	GP4	OS-90-1-20LT-ZI.....	GP3
MBSSL6-3/4-1-1-Z.....	GP17	MBST-3/4-3/4-1-0I-G.....	GP14	MBST6-3/4-3/4-1-Fl-Z.....	GP13	OS-1 1/2-2-45LT-ZI.....	GP5	OS-90-3/4-20LT.....	GP3
MBSSL6-3/4-1-3/4.....	GP17	MBST-3/4-3/4-1-0I-Z.....	GP14	MBST6-3/4-3/4-1-F-Z.....	GP15	OS-1 1/2-41/2-60LT.....	GP4	OS-90-3/4-20LT-G.....	GP3
MBSSL6-3/4-1-3/4-G.....	GP17	MBST-3/4-3/4-1-0-Z.....	GP16	MBST6-3/4-3/4-1-0.....	GP16	OS-1 1/2-41/2-60LT-G.....	GP4	OS-90-3/4-20LT-Z.....	GP3
MBSSL6-3/4-1-3/4-Z.....	GP17	MBST-3/4-3/4-3/4-F.....	GP15	MBST6-3/4-3/4-1-0-G.....	GP16	OS-1 1/2-41/2-60LT-Z.....	GP4	P1A.....	GP5
MBSSL6-3/4-3/4-1.....	GP17	MBST-3/4-3/4-3/4-F-G.....	GP15	MBST6-3/4-3/4-1-0I.....	GP14	OS-1 1/4-1 5/8-45LT.....	GP4	P1A-G.....	GP5
MBSSL6-3/4-3/4-1-G.....	GP17	MBST-3/4-3/4-3/4-Fl.....	GP13	MBST6-3/4-3/4-1-0I-G.....	GP14	OS-1 1/4-1 5/8-45LT-G.....	GP4	P1A-Z.....	GP5
MBSSL6-3/4-3/4-1-Z.....	GP17	MBST-3/4-3/4-3/4-Fl-G.....	GP13	MBST6-3/4-3/4-1-0I-Z.....	GP14	OS-1 1/4-1 5/8-45LT-Z.....	GP4	P5LT.....	GP5
MBSSL6-3/4-3/4-3/4.....	GP17	MBST-3/4-3/4-3/4-Fl-Z.....	GP13	MBST6-3/4-3/4-1-0-Z.....	GP16	OS-1 1/4-1-30LT.....	GP4	P5LT-G.....	GP5
MBSSL6-3/4-3/4-3/4-G.....	GP17	MBST-3/4-3/4-3/4-F-Z.....	GP15	MBST6-3/4-3/4-3/4-F.....	GP15	OS-1 1/4-1-30LT-G.....	GP4	P5LT-Z.....	GP5
MBSSL6-3/4-3/4-3/4-Z.....	GP17	MBST-3/4-3/4-3/4-0.....	GP16	MBST6-3/4-3/4-3/4-F-G.....	GP15	OS-1 1/4-1-30LT-GI.....	GP5	P10LT.....	GP5
MBST-1-1-1.....	GP15	MBST-3/4-3/4-3/4-0-G.....	GP16	MBST6-3/4-3/4-3/4-Fl.....	GP13	OS-1 1/4-1-30LT-I.....	GP5	P10LT-G.....	GP5
MBST-1-1-1-F-G.....	GP15	MBST-3/4-3/4-3/4-0I.....	GP14	MBST6-3/4-3/4-3/4-Fl-G.....	GP13	OS-1 1/4-1-30LT-Z.....	GP4	P10LT-Z.....	GP5
MBST-1-1-1-FI.....	GP13	MBST-3/4-3/4-3/4-0I-G.....	GP14	MBST6-3/4-3/4-3/4-Fl-Z.....	GP13	OS-1 1/4-1-30LT-ZI.....	GP5	P20LT.....	GP5
MBST-1-1-1-FI-G.....	GP13	MBST-3/4-3/4-3/4-0I-Z.....	GP14	MBST6-3/4-3/4-3/4-F-Z.....	GP15	OS-1 1/4-2 3/4-45LT.....	GP4	P20LT-G.....	GP5
MBST-1-1-1-FI-Z.....	GP13	MBST-3/4-3/4-3/4-0-Z.....	GP16	MBST6-3/4-3/4-3/4-0.....	GP16	OS-1 1/4-2 3/4-45LT-G.....	GP4	P20LT-Z.....	GP5
MBST-1-1-1-F-Z.....	GP15	MBST6-1-1-1-F.....	GP15	MBST6-3/4-3/4-3/4-0-G.....	GP16	OS-1 1/4-2 3/4-45LT-Z.....	GP4	P30LT.....	GP5
MBST-1-1-1-0.....	GP16	MBST6-1-1-1-F-G.....	GP15	MBST6-3/4-3/4-3/4-0I.....	GP14	OS-1 1/4-2-45LT.....	GP4	P30LT-G.....	GP5
MBST-1-1-1-0-G.....	GP16	MBST6-1-1-1-Fl.....	GP13	MBST6-3/4-3/4-3/4-0I-G.....	GP14	OS-1 1/4-2-45LT-G.....	GP4	P30LT-Z.....	GP5
MBST-1-1-1-0I.....	GP14	MBST6-1-1-1-Fl-G.....	GP13	MBST6-3/4-3/4-3/4-0I-Z.....	GP14	OS-1 1/4-2-45LT-GI.....	GP5	P45LT.....	GP5
MBST-1-1-1-0I-G.....	GP14	MBST6-1-1-1-Fl-Z.....	GP13	MBST6-3/4-3/4-3/4-0-Z.....	GP16	OS-1 1/4-2-45LT-I.....	GP5	P45LT-G.....	GP5
MBST-1-1-1-0I-Z.....	GP14	MBST6-1-1-1-F-Z.....	GP15	MBST7-1 1/4-F.....	GP15	OS-1 1/4-2-45LT-Z.....	GP4	P45LT-Z.....	GP5
MBST-1-1-1-0-Z.....	GP16	MBST6-1-1-1-0.....	GP16	MBST7-1 1/4-F-G.....	GP15	OS-1 1/4-2-45LT-ZI.....	GP5	PP-1A.....	GP5
MBST-1-1-1-3/4-F.....	GP15	MBST6-1-1-1-0-G.....	GP16	MBST7-1 1/4-Fl.....	GP13	OS-1-1-20LT.....	GP4	PP-5LT.....	GP5
MBST-1-1-1-3/4-F-G.....	GP15	MBST6-1-1-1-0I.....	GP14	MBST7-1 1/4-Fl-G.....	GP13	OS-1-1-20LT-G.....	GP4	PP-10LT.....	GP5
MBST-1-1-1-3/4-Fl.....	GP13	MBST6-1-1-1-0I-G.....	GP14	MBST7-1 1/4-Fi-Z.....	GP13	OS-1-1-20LT-GI.....	GP5	PP-20LT.....	GP5
MBST-1-1-1-3/4-Fl-G.....	GP13	MBST6-1-1-1-0I-Z.....	GP14	MBST7-1 1/4-Fi-Z.....	GP15	OS-1-1-20LT-I.....	GP5	PP-30LT.....	GP5
MBST-1-1-1-3/4-Fl-Z.....	GP13	MBST6-1-1-1-0-Z.....	GP16	MBST7-1 1/4-0.....	GP16	OS-1-1-20LT-Z.....	GP4	PP-45LT.....	GP5
MBST-1-1-1-3/4-F-Z.....	GP15	MBST6-1-1-1-3/4-F.....	GP15	MBST7-1 1/4-0-G.....	GP16	OS-1-1-20LT-ZI.....	GP5	SS-1A-01.....	GP2
MBST-1-1-1-3/4-0.....	GP16	MBST6-1-1-1-3/4-F-G.....	GP15	MBST7-1 1/4-0I.....	GP14	OS-1-1-30LT.....	GP4	SS-1A-01-G.....	GP2
MBST-1-1-1-3/4-0-G.....	GP16	MBST6-1-1-1-3/4-Fl.....	GP13	MBST7-1 1/4-0I-G.....	GP14	OS-1-1-30LT-G.....	GP4	SS-1A-01-GI.....	GP2
MBST-1-1-1-3/4-0I.....	GP14	MBST6-1-1-1-3/4-Fl-G.....	GP13	MBST7-1 1/4-0I-Z.....	GP14	OS-1-1-30LT-GI.....	GP5	SS-1A-01-I.....	GP2
MBST-1-1-1-3/4-0I-G.....	GP14	MBST6-1-1-1-3/4-Fi-Z.....	GP13	MBST7-1 1/4-0-Z.....	GP16	OS-1-1-30LT-I.....	GP5	SS-1A-01-Z.....	GP2
MBST-1-1-1-3/4-0I-Z.....	GP14	MBST6-1-1-1-3/4-F-Z.....	GP15	MEL-1 1/4-30LT.....	GP3	OS-1-1-30LT-Z.....	GP4	SS-1A-01-ZI.....	GP2
MBST-1-1-1-3/4-0-Z.....	GP16	MBST6-1-1-1-3/4-0.....	GP16	MEL-1 1/4-30LT-G.....	GP3	OS-1-1-30LT-ZI.....	GP5	SS-1A-3/4.....	GP2
MBST-1-3/4-1-F.....	GP15	MBST6-1-1-1-3/4-0-G.....	GP16	MEL-1 1/4-30LT-Z.....	GP3	OS-1/2-1 1/4-5LT.....	GP4	SS-1A-3/4-G.....	GP2
MBST-1-3/4-1-F-G.....	GP15	MBST6-1-1-1-3/4-0I.....	GP14	N1A.....	GP5	OS-1/2-1 1/4-5LT-G.....	GP4	SS-1A-3/4-GI.....	GP2
MBST-1-3/4-1-Fi.....	GP13	MBST6-1-1-1-3/4-0I-G.....	GP14	N1A-G.....	GP5	OS-1/2-1 1/4-5LT-Z.....	GP4	SS-1A-3/4-I.....	GP2
MBST-1-3/4-1-Fi-G.....	GP13	MBST6-1-1-1-3/4-0I-Z.....	GP14	N1A-Z.....	GP5	OS-1/2-1 3/4-10LT.....	GP4	SS-1A-3/4-Z.....	GP2
MBST-1-3/4-1-Fi-Z.....	GP13	MBST6-1-1-1-3/4-0-Z.....	GP16	N3&4.....	GP5	OS-1/2-1 3/4-10LT-G.....	GP4	SS-1A-3/4-ZI.....	GP2
MBST-1-3/4-1-F-Z.....	GP15	MBST6-1-3/4-1-F.....	GP15	N3&4-G.....	GP5	OS-1/2-1 3/4-10LT-Z.....	GP4	SS-3&4-1 1/2.....	GP2
MBST-1-3/4-1-0.....	GP16	MBST6-1-3/4-1-F-G.....	GP15	N3&4-Z.....	GP5	OS-1/2-3-1A.....	GP4	SS-3&4-1 1/2-G.....	GP2
MBST-1-3/4-1-0-G.....	GP16	MBST6-1-3/4-1-Fl.....	GP13	N5LT.....	GP5	OS-1/2-3-1A-G.....	GP4	SS-3&4-1 1/2-GI.....	GP2
MBST-1-3/4-1-0I.....	GP14	MBST6-1-3/4-1-Fi-G.....	GP13	N5LT-G.....	GP5	OS-1/2-3-1A-Z.....	GP4	SS-3&4-1 1/2-I.....	GP2
MBST-1-3/4-1-0I-G.....	GP14	MBST6-1-3/4-1-Fi-Z.....	GP13	N5LT-Z.....	GP5	OS-1/2-3-10LT.....	GP4	SS-3&4-1 1/2-Z.....	GP2

INDEX

SS-3&4-1 1/2-ZI	GP2
SS-5LT-1 1/2	GP2
SS-5LT-1 1/2-G	GP2
SS-5LT-1 1/2-Z	GP2
SS-10LT-3/4	GP2
SS-10LT-3/4-G	GP2
SS-10LT-3/4-GI	GP2
SS-10LT-3/4-I	GP2
SS-10LT-3/4-Z	GP2
SS-10LT-3/4-ZI	GP2
SS-20LT-01	GP2
SS-20LT-01-G	GP2
SS-20LT-01-GI	GP2
SS-20LT-01-GI4	GP2
SS-20LT-01-I	GP2
SS-20LT-01-I4	GP2
SS-20LT-01-Z	GP2
SS-20LT-01-ZI	GP2
SS-20LT-01-ZI4	GP2
SS-20LT-3/4	GP2
SS-20LT-3/4-G	GP2
SS-20LT-3/4-GI	GP2
SS-20LT-3/4-I	GP2
SS-20LT-3/4-Z	GP2
SS-20LT-3/4-ZI	GP2
SS-30LT-01	GP2
SS-30LT-1 1/4	GP2
SS-30LT-1 1/4-G	GP2
SS-30LT-1 1/4-GI	GP2
SS-30LT-1 1/4-I	GP2
SS-30LT-1 1/4-Z	GP2
SS-30LT-1 1/4-ZI	GP2
SS-30LT-01-G	GP2
SS-30LT-01-GI	GP2
SS-30LT-01-I	GP2
SS-30LT-01-Z	GP2
SS-30LT-01-ZI	GP2
SS-45LT-1 1/2	GP2
SS-45LT-1 1/2-G	GP2
SS-45LT-1 1/2-GI	GP2
SS-45LT-1 1/2-I	GP2
SS-45LT-1 1/2-Z	GP2
SS-45LT-1 1/2-ZI	GP2
SS-45LT-1 1/4	GP2
SS-45LT-1 1/4-G	GP2
SS-45LT-1 1/4-GI	GP2
SS-45LT-1 1/4-I	GP2
SS-45LT-1 1/4-Z	GP2
SS-45LT-1 1/4-ZI	GP2
SS-60LT-1 1/2	GP2
SS-60LT-1 1/2-G	GP2
SS-60LT-1 1/2-Z	GP2
SS-100LT-2	GP2
SS-100LT-2-G	GP2
SS-100LT-2-GI	GP2
SS-100LT-2-I	GP2
SS-100LT-2-Z	GP2
SS-100LT-2-ZI	GP2
W1A	GP6
W1A	GP6
W1A - 1/8	GP6
W1A - 1/8	GP6
W3&4	GP6
W5A	GP6
W5LT	GP6
W10LT	GP6
W20LT	GP6
W20LT -1/8	GP6
W30LT	GP6
W30LT - 1/8	GP6
W45LT	GP6
W45LT - 1/8	GP6
W100LT	GP6



