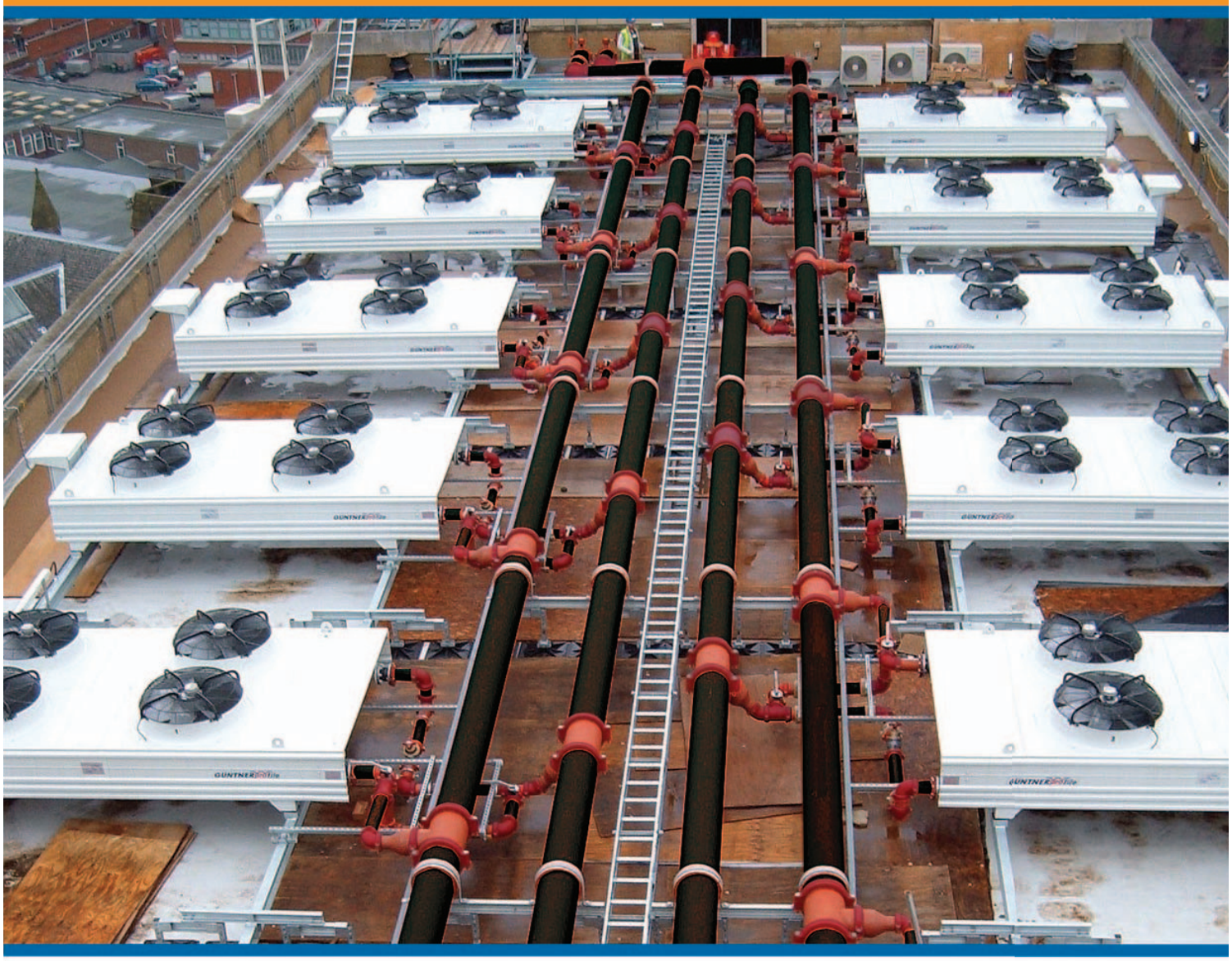


GENERAL DATA

GRINNELL MECHANICAL PRODUCTS

GRINNELL Mechanical Products, a premium brand of Tyco International, represents a complete suite of mechanical building construction solutions for commercial, industrial, institutional, mining, and governmental applications. Available products offer contractors, engineers, and distributors faster, more cost-effective tools for joining pipe over traditional welding methods. These products include Grooved Couplings and Fittings, Butterfly Valves, High-Pressure Ball Valves, Strainers, Circuit Balancing Valves, HDPE Systems, Stainless Steel Systems, and comprehensive, competitively priced engineering and planning support services. In addition to delivering innovative Grooved Piping Solutions, GRINNELL Products are backed by an industry-leading, 10-year Limited Warranty.

MAKING CONNECTIONS...

Global Headquarters
Lansdale, Pennsylvania, USA

Research and Development
Cranston, Rhode Island, USA

REGIONAL HEADQUARTERS

North Asia
Shanghai, China

South Asia
Singapore

Australia
Sunshine, Victoria

Middle East
Dubai, United Arab Emirates

Europe
Enschede, The Netherlands
Paris, France
Manchester, U.K.
Rodgau, Germany
Budapest, Hungary
Milan, Italy
Wien, Austria
Mechelen, Belgium
Madrid, Spain
Lørenskog, Norway
Lammhult, Sweden

South America, Central America, and Caribbean
Pompano, Florida, USA

Mexico
Tlalnepantla, Mexico

The products and specifications published herein are for general evaluation and reference purposes only and are subject to change by GRINNELL Mechanical Products without notice. For the most up-to-date information, visit **www.grinnell.com**. The information provided in this catalogue should not be relied on as a substitute for professional advice concerning specific applications. ALTHOUGH GRINNELL MECHANICAL PRODUCTS ENDEAVORS TO ENSURE ACCURACY, ALL INFORMATION HEREIN IS PROVIDED ON AN "AS IS" BASIS, WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED. Without limiting the foregoing, GRINNELL Mechanical Products does not warrant the accuracy, adequacy, or completeness of any such information. All users of the information provided herein assume the risk of use or reliance on such information and GRINNELL Mechanical Products shall not be liable for any damages for such use including, but not limited to, indirect, special, incidental, or consequential damages. Terms and Conditions of sale can be found on www.grinnell.com.

BUILDING SOLUTIONS

Refer to back cover for country-specifIc contact information

Why Grooved?

Reduced Installation Time and Cost

Pipe grooving reduces installation cost by up to 30%, allowing contractors to minimise labour costs and remain within budget. Methods such as welding and soldering are labour intensive and can be very expensive in high-cost regions.

Retrofits and Repairs

GRINNELL Couplings and Fittings allow an installer to fabricate on-site and around complex problems and obstacles. If an owner unable to shut down a facility for important retrofits, GRINNELL Mechanical Products is the right solution. Fire permits are not required and building residents do not have to evacuate due to welding fumes.

Pipe Expansion Support

GRINNELL Flexible Couplings absorb linear and angular movements of pipe work due to temperature changes, eliminating or minimizing the use of braided and bellow type flex connectors. GRINNELL Mechanical Services offers customers assistance with designing flexible couplings into thermal expansion projects.

Compatibility With Hazardous Environments

Grooved Pipe does not require welding, threading, or cutting, eliminating cutting oils, fumes, and flames. It is the ideal method for joining pipe in enclosed, flammable, or hazardous sites like tunnels and mines. And it doesn't require burn or hot-works permits.

Connection Consistency

When construction calls for robust piping applications, GRINNELL Grooved Products maintain high pressures at each connection without sacrificing quality and reliability. GRINNELL Grooved Systems allow for quick assembly that is simple and consistent from one worker to the next. Projects are completed on time, and crews can readily move on to their next installations.

No Special Tools

Grooved Products are assembled onto a standard groove. No special tools or additional training to complete the job are required.

Why GRINNELL?

The Best Warranty in the Industry

GRINNELL Products are backed by a 10-year limited warranty. Our customers are proud to work with products manufactured by a market leader with an established brand name and a consistent history.

GRINNELL Mechanical Services

Our Services Group works seamlessly with engineers and contractors to create the most cost- and time-efficient piping solutions from design...to build. Our experts specialise in CAD blocks, cost comparisons, thermal movement analysis, and BIM.

Green Solutions

All GRINNELL Mechanical Products cast are manufactured with 90% recycled metal that would otherwise contribute to our nation's solid waste stream. All waste paper, used cardboard, scrap wood, and EPDM waste from our plants is recycled.

Industry Pioneer

GRINNELL Mechanical Products has been in the pipe-joining business for over 160 years. We have strategic stocking locations throughout the world to serve our customers. We have the best channel partners who are focused, as we are, on innovation and growth.

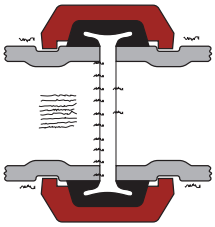
Great Service

At GRINNELL Mechanical Services, the customer always comes first. We pride ourselves on providing knowledgeable sales support, timely technical service, and quality customer care to all global customers.

Global Presence

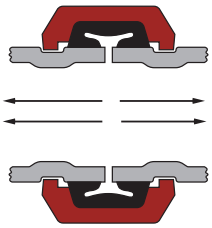
You can find our products in buildings and installations all over the world. We provide global solutions that flexibly address the challenges our customers face, including design in one country for construction in another.

Product Features and Benefits



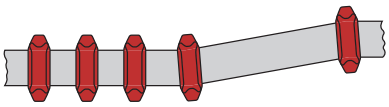
NOISE AND VIBRATION

GRINNELL Grooved Couplings provide excellent noise and vibration dampening. The engineered design of these couplings and gaskets offers pipe end gapping that helps to dissipate, isolate, and minimise noise and vibration transmission throughout the piping system.



DEPENDABILITY

The coupling housings are designed to engage into the grooves and provide a secure joint. The pipe ends are sealed by a pressure responsive gasket which is encapsulated by the ductile iron housing.



VERSATILITY

GRINNELL flexible couplings will accommodate misalignments. The maximum deflection information per coupling can be found in this catalogue.

ISO 9001 QUALITY ASSURANCE

SUPERIOR QUALITY

GRINNELL Piping Products are manufactured according to the ISO 9001:2008 Quality Assurance standard.

LONGEVITY AND PERFORMANCE

GRINNELL Piping Products are designed to last the lifetime of the pipeline and have been tested and approved by prominent approval agencies. Rolled grooving does not remove any metal from the pipe, therefore pipe integrity is fully maintained when grooved systems are used to join pipe.

CLEAN

Unlike with welding, GRINNELL Piping Products do not lead to the release of hazardous fumes or to the possible introduction of foreign materials in the pipeline.

Agency Listings and Approvals

Our products are associated with the following agencies, associations and laboratories. contact GRINNELL for specific listings, approvals and certifications.

General Code Groups, Associations, Laboratories, Government Agencies, and Approval Bodies

ACTIVFIRE
Active Fire Protection Product Certification

AMERICAN BUREAU OF SHIPPING (ABS)

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

AMERICAN WATER WORKS ASSOCIATION (AWWA) AWWA C-606

AMERICAN PETROLEUM INSTITUTE (API)
API Std. 5L

AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS (ASHRAE)

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)
- Power Piping, B-31.1
- Chemical Plant and Petroleum Refinery Piping, B-31.3
- Refrigeration Piping, B-31.5
- Building Services Piping, B31.9
- Elevator, Escalator, A17.1

ASTM
American Society of Testing Materials.
F-1476 Couplings,
F-1548 Fittings

BUILDING CONFIDENCE
Empowered by Achilles

BUILDING OFFICIALS AND CODE ADMINISTRATORS (BOCA)

BUREAU VERITAS (BV)

CERTIFICATION TO EUROPEAN PRESSURE EQUIPMENT DIRECTIVE 97/23/EC

CNBOP
Centrum Naukowo-Badawcze Ochrony Przeciwpozarowe

CNPP APSAD
National Centre for Prevention and Protection (FR)

COAST GUARD
Approved each vessel individually

CORPS OF ENGINEERS (COE)
GEGS 15000

CRN
Canadian Registration Number

CSTB
French Scientific and Technical Centre for Building

DNV
Det Norske Veritas

DVGW
Deutscher Verein des Gas-und Wasserfaches e.V.

FACTORY MUTUAL ENGINEERING CORP. (FM)
Approved for Fire Protection Services

FEDERAL AVIATION ADMINISTRATION (FAA)
HVAC, Plumbing and Fire Protection

FEDERAL HOUSING ADMINISTRATION (FHA)

GENERAL SERVICES ADMINISTRATION (GSA)
15000 Series

GERMANISCHER LLOYD
Germanischer Lloyd

INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS (IAPMO)

ICC-ES
National Evaluation Service, Inc.

LLOYD'S
Lloyd's Register of Shipping

(LPCB) LOSS PREVENTION CERTIFICATION BOARD
Approved for Fire Protection Services
Issue 03, 04, 07
Cert No. 570, 669, 673

MATERIAL EQUIPMENT AND ACCEPTANCE (MEA)

MILITARY SPECIFICATIONS (MIL)
- MIL-P – 10388 Fittings
- MIL-C – 10387 Couplings
- MIL-P – 11087A (CE) Steel Pipe
- Grooved MIL-I – 45208 Inspection

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

NATIONAL INSTITUTE OF HEALTH (NIH)
Department of Health – 5000 Series

NAVAL FACILITIES ENGINEERING COMMAND (NAVFAC)
NFGS 15000 Series

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NSF INTERNATIONAL
The Public Health and Safety Company

PRESSURE EQUIPMENT DIRECTIVE (PED)

RINA
Registro Italiano Navale

SOUTHERN BUILDING CODE CONGRESS INTERNATIONAL (SBCCI)
Standard Plumbing

UNDERWRITERS LABORATORIES, INC. (UL)
Listed for Fire Protection Services

UNDERWRITERS LABORATORIES OF CANADA (ULC)
Listed for Fire Protection Services

UNIFORM PLUMBING CODE (UPC)

VERBAND DER SACHVERSICHERE E.V. (VDS)
Approved for Fire Protective Service

VETERANS AFFAIRS (VA)
15000 Series

WATERMARK
Standards Australia Limited

WRAS
Water Regulations Advisory Scheme (UK)

WSD
Pending Approved for Potable Water Service (HK)

Refer to back cover for country-specific contact information

Product Design and Testing

Pre-Manufactured/Product Design

All GRINNELL Products are designed and tested at our state-of-the-art Research and Development Technology Centre.

Foundry and Assembly

Casting

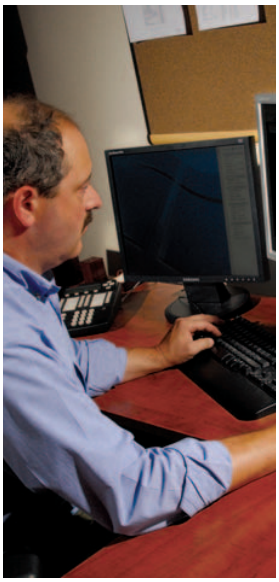
GRINNELL castings poured at our foundries are made of ductile iron ASTM A536m, Grade 65-45-12. A rigorous quality control programme monitors all steps of the manufacturing process. Samples are continuously tested, chemically and physically, to ensure all products meet our high material specifications.

Rubber Injection

We manufacture our gaskets using rubber injection presses and tooling to mould different types of rubber compounds specifically designed for the many applications required by our customers. Physical tests are performed on finished gasket samples to verify compliance with specifications including ASTM D 2000.

Paint Process

Using a computer controlled process, each product is spray-washed, dried, preheated, dipped, and fully cured prior to assembly or packaging. All integral parts are inspected to maintain consistent paint coverage and surface condition



Tooling

Using product designs from our Research and Development Department, our pattern centre and contracted pattern makers design and build patterns and moulds that produce products to the highest tolerances. Tooling is continually inspected by our in-house certified specialists to ensure finished products meet our specifications and requirements of approving agencies.

ISO 9001:2008 Certified

Certificate of Quality System Registration

TYCO FIRE & BUILDING PRODUCTS
Research & Development Centre, 1467 Elmwood Avenue,
Cranston, RI 02910, USA

has complied with the requirements of the following:

ISO 9001:2008

and is authorised to use the LPCB mark on stationery and publications related to the following products and/or services

Research, design, development and manufacturing support for the fire protection ...ipment, pipe couplings, fittings, related piping system components and CPVC pipe and fitting manufactures of Tyco Fire and Building Products.

T A Hunter

for and on behalf of LPCB

...tificate No: 570
...ue Number: 07
...e of Issue: 16 August 2011
...e of Expiry: 15 August 2014

breglobal

...PCB is part of BRE Global Limited, Watford, WD25 9XX T: +44 (0)1923 664100 F: +44 (0)1923 664910 W: www.redbooklive.com
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© BRE Global Ltd, 2009

Certificate of Quality System Registration

TYCO FLOW CONTROL (M) SDN. BHD.
(TYCO FIRE SUPPRESSION & BUILDING PRODUCTS, MALAYSIA)
Lot 886, C1 & C2, Jalan Subang 9, Taman Perindustrian Subang,
47500 Subang, Selangor, Malaysia

has complied with the requirements of the following:

ISO 9001:2008

and is authorised to use the LPCB mark on stationery and publications related to the following products and/or services

Assembly of couplings and marketing of couplings and fittings.

T A Hunter

for and on behalf of LPCB

Certificate No: 673
Issue Number: 03
Date of Issue: 03 December 2010
Date of Expiry: 02 December 2013

breglobal

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Certificate of Quality System Registration

TYCO FIRE & BUILDING PRODUCTS
200 Central Castings Drive, Anniston, AL 36206 USA

has complied with the requirements of the following:

ISO 9001:2008

and is authorised to use the LPCB mark on stationery and publications related to the following products and/or services

Design and manufacture of pipe couplings, fittings, related piping systems components and castings.

T A Hunter

for and on behalf of LPCB

Certificate No: 669
Issue Number: 04
Date of Issue: 01 March 2011
Date of Expiry: 28 February 2014

breglobal

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Tyco Acquires Shurjoint

SHURJOINT®

In April of 2012 Tyco acquired Shurjoint, broadening its grooved product portfolio and expertise in innovative mechanical solutions. Shurjoint allows Tyco to improve service to the HVAC, mining, oil and gas, and industrial markets.

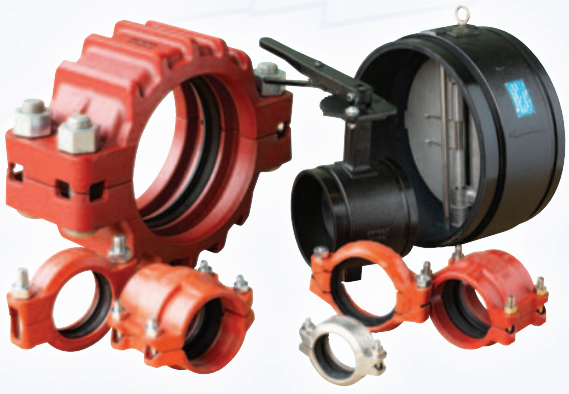
About Shurjoint

Shurjoint Piping Products has offered quality grooved piping solutions since 1974. To date, Shurjoint has developed and currently offers 3,000 individual piping components in 15 to 2400mm (*½" to 96"*) sizes, for use with a variety of piping materials including carbon steel, stainless steel, ductile iron, PVC, HDPE, and CPVC. Shurjoint continuously invests in research, engineering and development, resulting in innovative products and new solutions for the changing needs of the industry.

The synergies of joining Tyco and Shurjoint Piping Products will result in true value to customers by broadening the product portfolio and engineering expertise. To learn more about Shurjoint Piping Products, visit **www.shurjoint.com**.

Taipei 101, 509.2M, the world tallest building 2004 - 2010

Typical Applications	
HVAC	Reverse Osmosis
Fire Protection	Desalination
Water Supply & Treatment	Mining & Tunnel Boring
Plumbing	Marine
Municipal	Gas
Food Processing	Chemical
Pulp & Paper	Oil
Agriculture	Air



How to Build GRINNELL Part Numbers

Pipe Size		Digits 06-07-08-09	
Nominal mm *Inches*	O.D. mm *Inches*	Sizes Codes for Outlet Fittings & Reducers Example: 4" x 2" 4220 (Biggest Size First)	Sizes Codes for Couplings & Fittings
15 *½*	21.3 *0.840*	05	n/a
20 *¾*	26.9 *1.050*	07	n/a
25 *1*	33.7 *1.315*	10	0034
32 *1 ¼*	42.4 *1.660*	12	0042
40 *1 ½*	48.3 *1.900*	15	0048
50 *2*	60.3 *2.375*	20	0060
65 *2 ½*	73.0 *2.875*	25	0073
65 *76.1mm*	76.1 *3.000*	26	0076
80 *3*	88.9 *3.500*	30	0089
100 *108.0mm*	108.0 *4.252*	41	0108
100 *4*	114.3 *4.500*	42	0114
125 *133.0mm*	133.0 *5.236*	51	0133
125 *139.7mm*	139.7 *5.500*	52	0139
125 *5*	141.3 *5.563*	53	0141
150 *159.0mm*	159.0 *6.260*	61	0159
150 *165.1mm*	165.1 *6.500*	62	0165
150 *6*	168.3 *6.625*	63	0168
200 *8*	219.1 *8.625*	80	0219
250 *10*	273.0 *10.750*	11	0273
300 *12*	323.9 *12.750*	13	0324
350 *14*	355.6 *14.000*	14	0355
400 *16*	406.4 *16.000*	16	0406
450 *18*	457.2 *18.000*	18	0457
500 *20*	508.0 *20.000*	21	0508
600 *24*	609.6 *24.000*	24	0610

Figure No.

7 7 4 M E 0 0 8 9 1

Internal Code · Gasket · Size · Finish

Digits 01, 02, & 03: Figure number

Digit 04: Internal Code

Digit 05: Gasket: E for C-style EPDM (Grade E)
T for Tri-Seal EPDM (Grade E)
B for C-style Nitrile/Buna-N (Grade T)
D for C-style EPDM (Grade EN, suitable for potable water applications)
V for C-style Fluoro Elastomer (Grade O)
S for C-style Silicone (Grade L)

Outlet Fitting DIGIT 05
T = BSP thread
N = NPT thread
G = Grooved

Digits 06 thru 09: Size

Digit 10: Finish: 0 for Painted Orange
1 for Painted Red (RAL 3000)
2 for Galvanised
3 for Unpainted
4 for Stainless Steel 316
5 for Painted White (RAL 9010)
R for Rilsan

Coupling Part Number Example:

774ME00891:

Fig. Number · Internal Code · Gasket · Size · Finish

Figure Number: 774 · Rigid Standard Weight Coupling
Internal Code: M
Gasket: E · EPDM C-style
Size: 0089 · 88.9mm (*3"*)
Finish: 1 · Painted Red

Outlet Fitting Part Number Example:

730AG63261:

Fig. Number · Internal Code · Outlet · Size · Finish

Figure number: 730 · Mechanical Tee
Internal Code: A
Outlet: G · Grooved (T for BSP Thread; N for NPT Thread)
Size: 6326 - 168.3 x 76.1mm (*6" x 2 ½"*)
Finish: 1 · Painted Red

"All Mechanical Tees have standard EPDM Gaskets. Nitrile (Buna-N) optional"

GRINNELL Website

www.grinnell.com

To learn more about GRINNELL Mechanical Products, visit www.grinnell.com. Our Website provides a wide variety of tools and information at your fingertips.

Please select the EMEA region on the map to see region specific information.

Browse These Website Features

Resources Tab
Useful for everyday operations, the Resources tab includes a conversion calculator to convert many units of measurement and a Product Cross Reference tool to search for GRINNELL Mechanical Product equivalents.

Literature Tab
The Literature tab showcases all marketing materials for viewing, downloading, or saving to your preferred location. Marketing literature includes catalogues, brochures, installation manuals, flyers, and price books.

Products Tab
The Products tab organizes all product information such as pricing, technical data, 3D CAD drawings, and part summary sheets. All product information is available for printing and saving to your preferred location. Searching for any product by name or figure number and downloading custom submittal sheets are also available through this tab.

Tech Data
The Tech Data icon provides direct access to technical information on all of our products. It also provides access to online registration for automatic e-mail updates.

GRINNELL Home Page