

35 + Years of Customer Excellence



MEM ENGINEERING PVT LTD Since 1988

www.memengineering.in

UL/FM Grooved & Threaded Fittings, Valves & Fire Pumps, HVAC Pumping solutions and IS Valves, Pre-Engineered Buildings, General steel structures and Automation for

IT & ITES * Data Centres * Commercial Buildings * Industrial buildings * Healthcare * Pharmaceuticals

UL/FM Approved Fittings, Valve & Pumps

Pre-Engineered Buildings (PEB)







500+ Corporate trusted customers



MEM Introduction

ABOUT US

MEM ENGINEERNG PVT LTD is a leading E&M, Automation and PEB (Pre-Engineered Buildings) solutions company that has its Head office in Chennai, Warehouse in Chennai with Sales and Service operations across India, MEM has marquee clients in all the regions of the country. Our customers include global technology leaders and consulting companies that see the value in our products and services. MEM today has the advantage of being part of brands that has a strong track record in product quality and reliability over 30 years.

Our products comply with the highest standards of quality, and we evolve to cater to a changing world around us by innovating constantly. It is our endeavor to help our customer achieve the highest level of comfort by consuming the least amount of energy with an objective to help build a sustainable environment. We take immense pride in collaborating with trusted global partners while still making what we can in India, to create a local ecosystem of partners and suppliers.





OUR VISION

To be a leader in the development of sustainable and innovative mechanical engineering solutions that address the evolving needs of our customers and contribute to a better world

OUR MISSION

To use our expertise in mechanical engineering to design and develop highquality products and provide building solutions that meet the needs of our customers, while striving for continuous improvement and innovation.

Management Team



Arunachalam K **Chairman & Managing Director, Director - National (Pumps)**

An engineer by background, Founder of "MEM Engineering". His undying passion and desire to do something "new and path breaking", was the primary reason of the MEM company's foray into multiple product / business domain serving diverse business segments. The company is today present in **design &** manufacturing pre-engineered buildings systems and an authorised marketing and technology partner with multinational companies like Armstrong Pumps, National Fittings Ltd, Lehry Valves & Instrumentation. We are also engaged in Advanced Automation technology for connected factories & buildings.

product development, marketing strategies, global business like a businessman whose primary focus is to provide

An Electronics and communication Engineer & Executive Post graduate in business management with over 18 years of experience was working with MNC companies like L&T, Armstrong, Moog Aerospace, Honeywell, he has played multiple roles including project & solution sales management, development in the field of Aerospace, HVAC, BMS, IoT, **Manufacturing** etc. Rao is a technocrat at heart and operates customised solutions to the customers.







GS RAO Director – Operations & Business Development

MEM Engineering Milestones

	\$°		
	Beacon Weir Pumps Pumping solutions for Building & Industrial Sectors		National Fittings Limite UL/FM Grooved and Thr Fittings Armstrong & CRI Pum HVAC Pumps & Controls
1988	1991	1994	2008 -10
Kirloskar Brothers Limited. Pumps & Valves – For Domestic, Building, Agriculture &		Manufacturing of Floway Diaphragm Valves & Check Valves Valves supplying to WTP / RO OEMs and User Industries across India	
Industrial Sectors		Beacon Weir Pumps	







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2015 -17

National Fittings Limited. Fittings & Pumps Armstrong / CRI / MBH Pumps HVAC Pumps, Dewatering and Submersible Sewage Pumps

National Fittings Limited.

Lehry Valves HVAC, Fire protection & Plumbing Valves

Armstrong HVAC Pumps / Fire Pumps / Electrical Control Panels

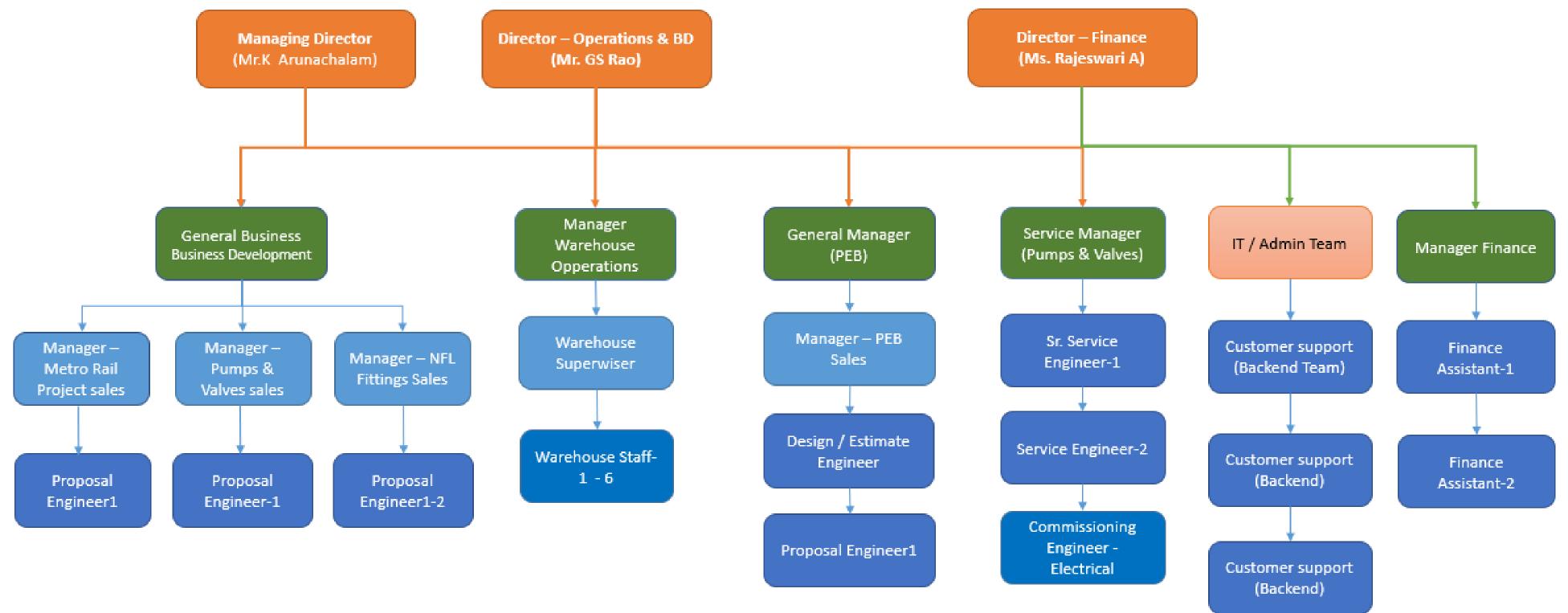
2020



iLEN / Knowledge Lens
An Industry 4.0 IoT solutions
for Connected Buildings / BMS
/ Connected Factories / Smart
Manufacturing
PEB & Structures
Pre-Engineered Buildings
General steel structures

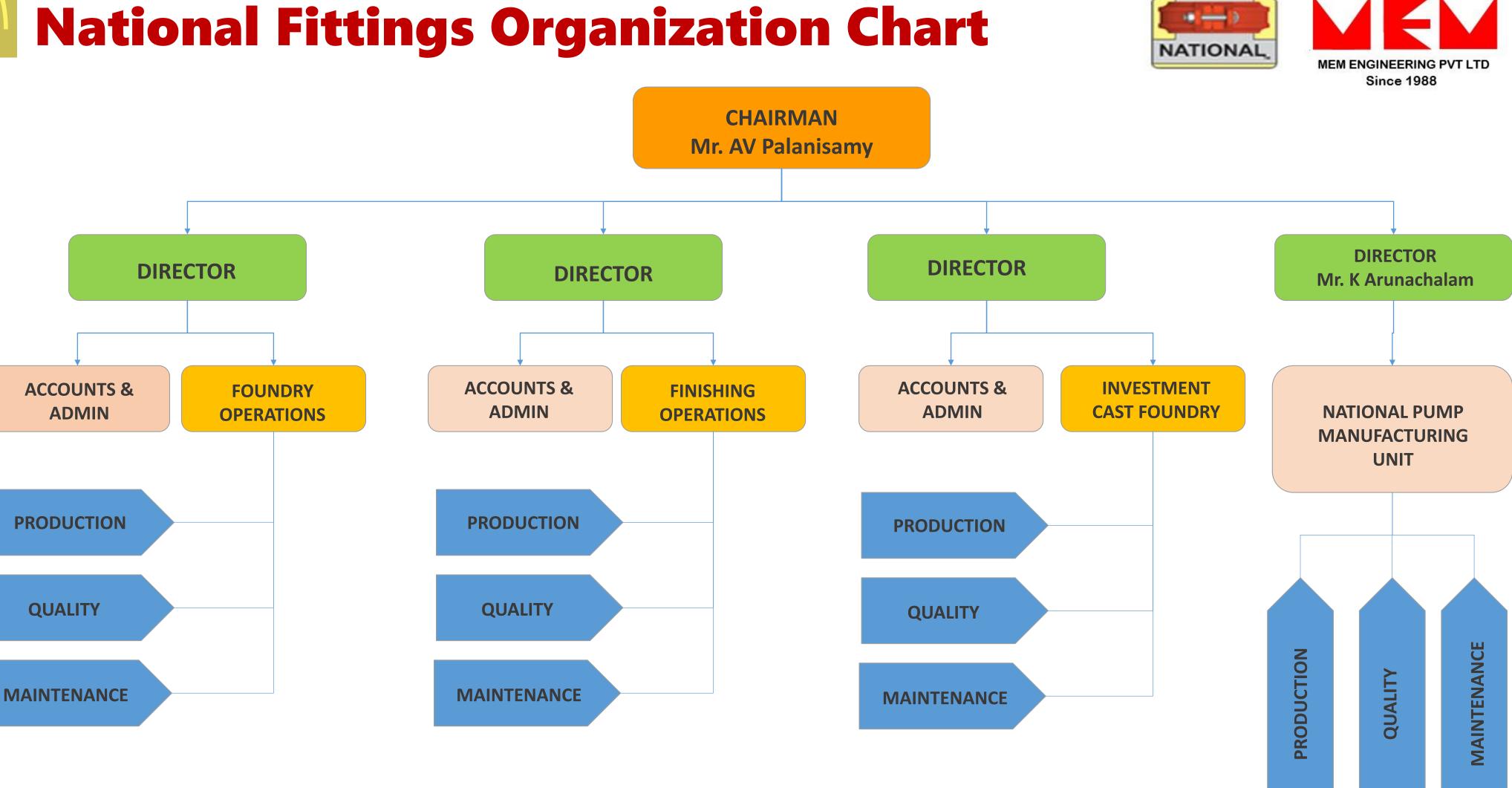


MEM Organization Chart











NATIONAL UL/FM GROOVED AND THREADED FITTINGS



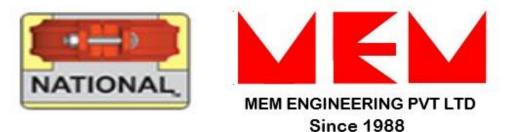


TECHNICALS

Grooved technology?

✓ Grooved Mechanical Piping Offers a Versatile Pipe-Joining Alternative

- \checkmark Two of the most important elements in any construction or upgrade project are safety and speed of completion.
- \checkmark While one way to increase safety is to eliminate hot work whenever possible, the reality is that welding is necessary for many tasks around a power plant. However, one area where welding may not always be required is in the installation or expansion of piping systems.
- \checkmark Although the pipe-joining method is critical for high-pressure, high-temperature process piping systems, the same cannot be said for balance-of-plant piping systems.
- \checkmark Services such as cooling water, reverse osmosis, fire protection, chemical treatment, lube oil, and compressed air can make use of alternative, flame-free joining methods—some of which can offer installation up to 10 times faster than welding.
- \checkmark Grooved mechanical piping is one of those alternatives.



Grooved System - A Novel Design

- \checkmark Grooved mechanical pipe joint consists of four elements: grooved-end pipe, a gasket, coupling housing, and fasteners.
- \checkmark Pipe groove is made by cold forming or machining a groove into the end of a pipe.
- \checkmark A gasket enclosed in the coupling housing is placed around two abutted grooved pipe ends, and the key section of the housing engages the grooves.
- \checkmark Bolts and nuts are tightened with a socket wrench, or impact wrench, holding the housing segments together.
- \checkmark In the installed state, the coupling housing encases the gasket and engages the grooves around the circumference of the pipe to create a leak-tight seal in a self-restrained pipe joint.
- \checkmark In addition to pipe-to-pipe joints, grooved couplings can be used to join pipe to grooved-end valves, fittings, and accessories to create a complete piping system.





Why National Fittings ?

- National Fittings has been a global leading manufacturer of UL / FM Certified Ductile Iron Grooved & Threaded Fittings.
- National products are tested and listed by UL, ULC and approved by Factory Mutual Organization [FM] and others as listed in this presentation.
- National has got an integrated manufacturing facility with 3 foundries for castings, 2 Machine shops, 1 Gasket mfg. unit, 1 SS investment casting unit and finishing operation facilities spread across 300,000 sqft. Area.
- These pipe fittings are being manufactured, Supplied, and exported for four decades to various countries like India, Middle East, North America, Europe, Australia and South America.







- **Ductile Iron Grooved Fittings Ductile Iron Threaded Fittings Ductile Iron Butterfly Valves** Post Indicators **Stainless Steel Ball Valves Stainless Steel Fittings**





Grooved Products Expertise since 1980

- ✓ 1980 Established in USA
- ✓ 1982 Production in India under Interfit brand
- ✓ 1982 UL listing, FM approval for USA operations
- ✓ 1987 UL listing, FM approval Indianoperations
- \checkmark 1987 Finishing division moved to India from USA
- ✓ 1995 First to introduce short radiusfittings
- ✓ 1995 Gasket division moved from USA to India
- ✓ 1995 Started investment castings foundry
- ✓ 1995 Started production under National brand
- \checkmark 2003 Produced for Anvil (Gruvlock brand)
- ✓ 2006 First to cast fittings up to 24"
- \checkmark 2015 Expansion of manufacturing capacity





Manufacturing Facility Details

Annual Production Capacity (Grooved Fittings) = 7,500 Tons = 43,00,000 Items Annual Production Capacity (Grooved Fittings) = 1200 Tons = 7,00,000 Items





- ✓ 190,000 Sq. Ft foundry space across 3 locations
- ✓ 13,000 Tons foundry capacity per year
- ✓ 50,000 Sq. Ft investment casting foundry of 600 Tons
- ✓ 60,000 Sq. Ft machining, assembly and testing
- ✓ 300+ Manpower











National Foundry Units









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CERTIFICAT

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CERTIFICATE

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CERTIFICATE

The Certification Body of TÜV SÜD Management Service GmbH

certifies that

NFL

National Fitting Limited 112, Madhapur Road, Kaniyur Village, Karumathampatti (Via), Coimbatore - 641 659, Tamil Nadu, INDIA

has established and applies a Quality Management System for

Design, Manufacture and Supply of Metallic Ball Valves & Pipe Fittings.

An audit was performed, Order No. 4153487925.

Proof has been furnished that the requirements according to

ISO 9001:2015

are fulfilled.

The certificate is valid from 2021-02-07 until 2024-02-06.

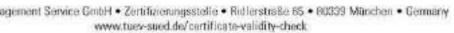
Certificate Registration No.: 12 100 35564 TMS.

t. Kote

Product Compliance Management Munich, 2021-01-07







TUV®



NATIONAL FITTINGS

Standards and Approvals

- ✓ ISO 9001 certified
- ✓ FM Factory Mutual Approved
- ✓ UL &ULc- Underwriters Laboratory Listed
- CDC / Fire Chief Marshall approvals in many GCC countries
- ✓ ANSI B31.1 and 31.9
- ✓ AWWA C 606
- ✓ Board of Standards, New York City, USA.
- ✓ Conforms to ASTM F-1476
- ✓ BBA AS BV DNV DVGW





Quality Control and Testing

Quality is inbuilt into every step of the process

✓ Inspection happens at regular intervals

✓ Inward, process and final UL/FM and Third party inspection at regular intervals.

✓ Test facilities available in-house

Specific Team's Responsibility

NFL Product Approvals / Certificates

< FM >	Certificate of Compli	dire
APPROVED	SF No 11	leneriit India Lad. 2/3-D, Part Madhapur Rd Karoyur Village nimbetore 641639 India
	FM Approvals C	lass: 1920, dated November 2007
	Approval Identification: 3015181	Approval Granted: February 22, 2010
	and strict conformity to the conditisections as above i	amer, continuing follow-up Facilities and Procedures Audits, whe Approval Guide, an online resource of FM Approvals. I with business and industry to reduce property losses.
	Nahllb. an	February 23, 2000
	Richard B. Dunne, Managar Hydraelliss Group FM Approvals 1151 Boston-Providence Tumpiles Norwood, MA 02062	Date
FM Approvals		
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INDUSTRY AND GOVERNMENT STANDARDS & APPROVALS













(ABS)	American Bureau of Shipping
(ANSI)	American National Standards Institution
(AWWA)	American Water Works Association : C-606
(API)	American Petroleum Institute
(ASHRAE)	American Society of Heating, Refrigeration & Air
	Conditioning Engineers
(ASME)	American Society of Mechanical Engineers
(ASTM)	American Society of Testing & Materials
(BBA)	British Board of Agreement
(BOCA)	Building Officials & Code Administrators
(BMI)	Bureau of Marine Inspection
(BPR)	Bureau of Public Roads
(CDC)	Civil Defense Certificate, Dubai
(COA)	Corps of Engineers - CEGS 15000
(FAA)	Federal Aviation administration;
	HVAC, Plumbing, Fire Protection
(FHA)	Federal Housing Administration
(FM)	Factory Mutual Engineering Corp.
(IAPMO)	International Association of Plumbing &
	Mechanical Officials
(MEA)	Materials and Equipment acceptance
(NAVFAC)	Naval facilities Engineering Command:
	NFGS 15000 Series
(NFPA)	National Fire Protection Association
(NSF)	NSF International
(SBCCI)	Southern Building Code Congress International
(TVA)	Tennessee Valley Authority;
	Fire Protection, Storm drains
(UL)	Underwriter's Laboratories, Inc.
(ULC)	Underwriter's Laboratories of Canada

WORLDWIDE

(AS)	AS 4041 - 1992 Australian Standard (3.24.10)
(BV)	Bureau Veritas
(DNV)	Det Norske Veritas
(DVGW)	Deutscher Verein des Gas-und Wasserfaches

Product Range – Partial Items

RIGID COUPLING STYLE 5	FLEXIBLE COUPLING STYLE 11	FLEXIBLE COUPLING STYLE 12
MECH. TEE GROOVED STYLE 15	MECH. CROSS STYLE 15 & 16	SPRINKLER OUTLET STYLE 13
EQUAL TEE STYLE 107 /110	EQUAL CROSS STYLE 135	END CAP STYLE 155 & 150

BODY & SIZE Ductile iron ASTM A536 Grade 65 45 12 1" through 32"

FINISH Red Paint to RAL3000 Galvanized to ASTMA 153 finish as optional

ELASTOMERS E P D M & different materials for differing services and fluids

More about Ductile Iron with UL and FM Fittings - Product Installation Videos







BOLTS AND NUTS

High tensile electro- galvanized steel square neck & oval neck types

Product UL Certificates

Certificate Number	20151012-EX4259	Certificate Number	20180305-EX4260
Report Reference	EX4259- 19900522	Report Reference	EX4260-19900522
Issue Date	2015-OCTOBER-12	Issue Date	2018-MARCH-05
Issued to:	National Fittings Ltd	Issued to:	NATIONAL FITTINGS LTD
	S F112/3-D, Part Mathapur Rd, Kaniyu Village Palladam Taluk, Combatore District Tn 641659 INDIA		S F112/3-D PART MATHAPUR RD, KANIYU VILLAGE PALLADAM TALUK
This is to certify that	FITTINGS, GROOVED AND PLAIN END		COMBATORE DISTRICT TN 641659 INDIA
representative samples of	Grooved end ductile iron fittings for use with Listed rubber	$(U_L)(U_L)(U_L)(U_L)(U_L)$	
	gasketed fittings for sizes and working pressures as shown below: Ductile Iron - Models: Style 100, Style 101, Style 110, Style 111, Style 115, Style 140, Style 150, Style 190, Style 105, Style 106, Style 107, Style 155, Style 1060, Style 1050, Style 1070, Style 1550, Style F105-D, Style F127, Style 135, Style 102,	This is to certify that representative samples of	FITTINGS, RUBBER GASKETED Rubber-gasketed fitting; Coupling, Models Style Style 10, Style 11, Style 12, Style 25, Style 25. Flange Adapter, Models Style 14, Style 14PN. Side Outlet, Models 13-U, Style 15G Style 16, Style 16A
	Style 103, Style 115TF, Style 120, Style 140, Style 145 and Style 145TF		Have been investigated by UL in accordance wi Standard(s) indicated on this Certificate.
	Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.	Standard(s) for Safety:	UL 213, Rubber Gasketed Fittings for Fire-Prote Service ULC/ORD C213, Rubber Gasketed Fittings for F
Standard(s) for Safety:	UL 213, UL Standard For Safety For Rubber Gasketed Fittings for Fire-Protection Service ULC/ORD C213, Rubber Gasketed Fittings for Fire- Protection Service	Additional Information:	Protection Service See the UL Online Certifications Directory at <u>www.ul.com/database</u> for additional information
Additional Information:	See the UL Online Certifications Directory at <u>www.ul.com/database</u> for additional information	Only those products bearing the UL Certification and Follow-Up Service.	Certification Mark should be considered as being covered by
nly those products bearing the UL o ertification and Follow-Up Service.	Certification Mark should be considered as being covered by UL's	Look for the UL Certification Mark or	n the product.
ook for the UL Certification Mark on	the product.		
	ՙԱԱԱԱԱԱԱ	Barnelly	<u>Ն</u> անաննան
Ce Mahrenholz, Director North American Certification Program	ա ա ա ա ա ա ա ա	Bruce Mahrenholz, Director North American Certification Program	provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please





(UL)

CERTIFICATE OF COMPLIANCE

Report Reference Issue Date

Certificate Number 20151012- EX5184 EX5184-19980408 2015-OCTOBER-12

exceed 300 psig

Issued to: National Fittings Ltd

This is to certify that representative samples of

FITTINGS, CAST IRON, DUCTILE IRON, MALLEABLE IRON AND BRONZE

> Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

S F112/3-D, Part Mathapur Rd, Kaniyu Village

Palladam Taluk, Combatore District Tn 641659 INDIA

Ductile Iron Threaded Fittings, with rated pressure not to

Ductile Iron Threaded Fittings (ANSI B16.3) Standard(s) for Safety: Fittings fabricated with dimensional specifications in accordance with ANSI/ASME B16.3 Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

es are provided on behalf of UL LLC (UL) or any authorized lice

Look for the UL Certification Mark on the product.

Bamples Bruce Mah unc

Page 1 of 1

Models Style 2, Style 5, , Style 25. vle 14PN.

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or Fire-Protection

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ing covered by UL's

(UL

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Product FM Certificates



Note: The certificate of compliance's are updated only when some changes take place in the product range. Otherwise, the date appears in the certificate refers to the date on which the updation has taken place. Also, the certificates could be accessed thru UL/FM websites - where in all our certificates are shall appear for the products for which we are having approval.









Pipe Fittings

These fittings are suitable for interconnecting piping, valves and other components in both wet and dry automatic sprinkler systems. Installation should be according to applicable sprinkler system fabrication rules. These rules limit the minimum size of sprinkler piping to 1 in., nominal. FM Approved pipe fittings of smaller sizes are intended for use as valve trim, gauge connections, and for other peripheral service. The water flow path of the sprinkler system cannot be designed using smaller sizes than 1 in., nominal. Unless otherwise noted in the listing, these fittings have 175 psi (1205 kPa) rated working pressure.

Threaded connections on fittings can be made to FM Approved threadable thinwall pipe or to Schedule 40 pipe. Refer to the "Steel Pipe" listings for a summary of the various types of FM Approved steel pipe suitable for threading or grooving."

The fittings manufacturer's installation instructions must be observed in all cases. When connections are made to FM Approved pipe, the pipe manufacturer's installation instructions must also be followed.

Unless otherwise stated below, the maximum ambient temperature to which these fittings should be subjected is 225°F (107°C).

Pipe Fittings

National Fittings, Pipe Fittings

Product Designation	Fitting Description	Nominal P ipe Size, in.	Max Working Pressure, psi (kPa)	Remarks
l.105	90° Elbow	76.1, 139.7, 165.1 mm	232 (1600)	с
l.105	90° Elbow	8, 10, 12	300 (2070)	с
I.105	90° Elbow	5, 6 133, 139.7, 159, 165.1 mm	400 (2760)	с
l.105	90° Elbow	1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4 76.1, 108 mm	500 (3445)	с
I.106	45° Elbow	8, 10, 12	300 (2070)	с
I.106	45° Elbow	5, 6 133, 139.7, 159, 165.1 mm	400 (2760)	с
I.106	45° Elbow	1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4 76.1 mm, 108 mm	500 (3445)	с
I.107	Equal Tee	8, 10, 12	300 (2070)	с
I.107	Equal Tee	5, 6 133, 139.7, 159, 165.1 mm	400 (2760)	с
I.107	Equal Tee	1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4 76.1 mm, 108 mm	500 (3445)	с
I.120	Reducing Tee, Grooved	3 x 76.1 mm 139.7 mm x 4 165.1 mm x 139.7 mm	232 (1600)	с
I.120	Reducing Tee, Grooved	8 x 4, 6 219.1 mm x 165.1 mm 10 x 6, 8 12 x 4, 6, 8, 10	300 (2070)	с
I.120	Reducing Tee, Grooved	2-1/2 x 1, 1-1/4, 1-1/2, 2 3 x 2-1/2 4 x 2-1/2 6 x 1, 1-1⁄4, 1-1⁄2, 2, 3, 4, 76.1 mm 139.7 mm x 1, 1-1⁄4, 1-1⁄2, 2, 3, 76.1 mm 165.1 mm x 1, 1-1⁄4, 1-1⁄2, 2, 3, 4, 76.1 mm	400 (2760)	с
l.120	Reducing Tee, Grooved	2 x 1, 1-1⁄4, 1-1⁄2 3 x 1, 1-1⁄4, 1-1⁄2, 2 4 x 1, 1-1⁄4, 1-1⁄2, 2, 3, 76.1 mm 76.1 mm x 1, 1-1⁄4, 1-1⁄2	500 (3445)	с
I.120 T	Reducing Tee, Grooved x Threaded	2-1/2 x 1, 1-1/4, 1-1/2, 2 6 x 1, 1-1⁄4, 1-1⁄2, 2, 3, 4, 76.1 mm 139.7 mm x 1, 1-1⁄4, 1-1⁄2, 2, 3, 76.1 mm 165.1 mm x 1, 1-1⁄4, 1-1⁄2, 2, 3, 4, 76.1 mm	400 (2760)	c, d

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Advantages of grooving over threading or welding

- ✓ Reduced Cost
 - Savings up to 30 % on the installed system
 - Less skill and less work force required
- ✓ Reliability
 - Globally accepted by approval agencies
 - Proven Technology over 50 years
- \checkmark Allows expansion and contraction at eachjoint
- ✓ Option for Rigidity and/or Flexibility
- \checkmark Removal of Fire Hazard at the work site
- ✓ Retrofit of existing facilities
 - Practical and with minimum disturbance

WELDING ME

- End Beveling of p
- Welding cost
- Weld Testing
- Additional Skill fo accessible or diffi
- Multi level, highe
- Preventive steps
- Have to leave sp
 - Welding proce





Welding Vs. Grooving

THOD	GROOVING METHOD
pipe	 Square cut pipes used Grooving at shop level provides improved productivity Bolting method is fast and easy
or un - ficult positions er position dangers s for fire hazards	 Low skill for workers Segment testing is easy and fast Branch take off is cleanand fast
bacingfor ess	 Better use of space, piping could be close to wall, roof or floor



Highlights of National Grooved System

- ✓ Installed Cost is less
- ✓ Rigidity and Flexibility attainable
- Expansion, contraction, angularity without additional fixtures
- ✓ No Fire Hazard
- ✓ Buried and Cross country piping is faster
- ✓ Each Joint acts like a Union
- Reduced propagation of Noise and vibration in piping
- ✓ Shop and Field Fabrication helps faster completion
- ✓ Wide acceptance by the **international specification agencies**
- ✓ High Pressure up to 1000 psi with 1.5 safety factor
- ✓ Indian product
- ✓ 40 years of uninterrupted manufacturing with global exposure and acceptance
- \checkmark Single source for product up to 32"







NFL Grooved Project Installations



For Product Installation videos : <u>https://memengineering.in/installations</u>







NFL Grooved Project Installations



For Product Installation videos : <u>https://memengineering.in/installations</u>







Key Project & References

		1			1	1		the annual scenario
IT PAR	KS	INDUSTRIAL	METRO RAIL	_S AIRPORTS	INFRASTRUCTURE	AUTOMOTIVE	HOSPITALS	OTHERS
T4, Del HCL, In Cogniza Motorol	H, Lodha I India, nfosys, ant, la, Nokia, ber city, n, IBM,	Tata (First Solar), MRF, Corteco, Phillips, Ashirwad Pipes, Sundaram Fasteners, KONE, Comcast, Asian Paints, Eaton, Danfoss, IGCAR, NTPL, GARC, Herrenknecht	Delhi, Chenna Bangalore, Hyderabad, Jaipur, Pune, Kochi, Kolkat ,Mumbai & NCRTC Metr	Airport Ltd	Jindal Steel, J&K, HP Tunnel, Amazon, Ford, Anthem Bioscience, Avigna, IICC Dwarka	General Motors Daimler India, Volvo India, Ford, Caterpilla SKF India, Royal Enfield	CMC, Womens	Coco Cola, PepsiCo, Marriot Bangalore, Several Reverse Osmosis Plants in India and OEMs
SL#	PROJECT	/ CONTRACTOR		Ref. PERSON & DESIGNATION			CONTACT NUMBER	
1	WIPRO (F	PAN INDIA)		Mr. Nagaraj Pattar (Manager Engineering)		+91-73378 35115		
2	BOSCH			Mr. Sridhar (Global Real-estate -MEP)		IEP)	+91-9916567561	
3	3 Mumbai Metro Rail / TATA Projects			Mr. Manish Kumar S (Project Manager)			+91-96433 09610	
4	4 KRCL & IRCON / Savronik Systems			Mr. Satish Kumar (Manager Procurement)			+91-9999760183	
5	Mumbai	Costal Road / L&T I	td.	Mr. Ravi Roushan (Sr. Project Engineer)			+91-79032 24612	

IT PAR	KS	INDUSTRIAL	METRO RAI	LS	AIRPORTS	INFRASTRUCTURE	AUTOMOTIVE	HOSPITALS	OTHERS
T4, Del HCL, Ir Cogniz Motoro DLF cy	H, Lodha II India, nfosys, ant, Ia, Nokia, ber city, n, IBM,	Tata (First Solar), MRF, Corteco, Phillips, Ashirwad Pipes, Sundaram Fasteners, KONE, Comcast, Asian Paints, Eaton, Danfoss, IGCAR, NTPL, GARC, Herrenknecht	Delhi, Chenn Bangalore, Hyderabad, Jaipur, Pune, Kochi, Kolkat ,Mumbai & NCRTC Metr	, ta	DIAL (Delhi), Mumbai Int"I Airport Ltd	Jindal Steel, J&K, HP Tunnel, Amazon, Ford, Anthem Bioscience, Avigna, IICC Dwarka	General Motor Daimler India, Volvo India, Ford, Caterpilla SKF India, Royal Enfield	CMC, Womens	Coco Cola, PepsiCo, Marriot Bangalore, Several Reverse Osmosis Plants in India and OEMs
SL#	SL# PROJECT / CONTRACTOR			Ref. PERSON & DESIGNATION			CONTACT NUM	IBER	
1	1 WIPRO (PAN INDIA)			Mr. Nagaraj Pattar (Manager Engineering)			+91-73378 35115		
2	2 BOSCH			Mr. Sridhar (Global Real-estate -MEP)			+91-9916567561		
3	3 Mumbai Metro Rail / TATA Projects		Mr. Manish Kumar S (Project Manager)			+91-96433 09610			
4	4 KRCL & IRCON / Savronik Systems		Mr. Satish Kumar (Manager Procurement)			+91-9999760183			
5	Mumbai	Costal Road / L&T L	td.	Mr.	Ravi Roushai	n (Sr. Project Engi	neer)	+91-79032 24612	





COMPETITOR COMPARISON CHART

PARAMETERS	NATIONAL	COMPETITOR-1	COMPETITOR-2	COMPETITOR-3
Company Origin / Manufacturing	INDIA	USA	Europe / USA	China
Total Years of Experience in Mfg. Grooved Fittings	40+	80	25	10
UL / FM Certification	Direct	Direct	Direct	Cross Listing
EPDM Gasket Supplied for Fire protection services	Grade "E"	Grade "A"	Grade "A"	Grade "A"
Delivery	Ready / 4-8 Weeks	10 / 12 / 16 Weeks	10 / 12 / 16 Weeks	Ready / 6-10 Weeks
Product Durability (Weight / Width maintained)	25+ Years	25+ Years	25 Years	10 Years
No. of Manufacturing facilities	3 Foundries, 2 Machine shops, 1 SS Investment casting unit, 1 Gasket Mfg. Unit – Integrated Facility with 1500 Ton / Month capacity @ Coimbatore, TN, INDIA	Factories and foundries across USA, Europe & China (Imported)	Factories and foundries across USA, Europe & China (Imported)	Factories and foundries based in China (Imported)
No. of Listed Grooved Fittings manufactured	1200	2500	1500	800
Market Price	Medium	High	High	Low
Brand presence in Global Market	INDIA, USA, ME, AUSTRALIA, CANADA & EUROPE	GLOBAL MARKET	EUROPE, ASIA, USA	CHINA, ASIA, INDIA



REF NO: NF/MEM/006/19-20

This is to certify that M/s. MEM ENGINEERING PVT LIMITED having their office at D1, GROUND FLOOR, HALLS TOWERS, 33, HALLS ROAD, EGMORE, CHENNAI-600008 is an authorised distributor for Domestic Sales- India for our products namely "NATIONAL" brand DI GROOVED COUPLINGS AND FITTINGS, SS BALL VALVES AND THREADED FITTINGS effective from 1st April 2013.

MEM is also authorised to submit proposals for project requirements and secure orders for execution.

Yours Sincerely

For National Fittings Limited

Sagn Gondingin

Jayaram Govindarajan Whole Time Director



NATIONAL FITTINGS LIMITED

CIN: L29199TZ1993PLC008034 . GSTIN: 33AAACI4737M1ZG



7th Feb 2020

TO WHOMSOEVER IT MAY CONCERN



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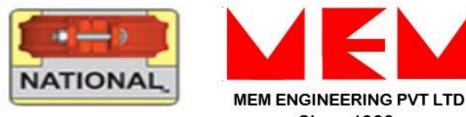


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