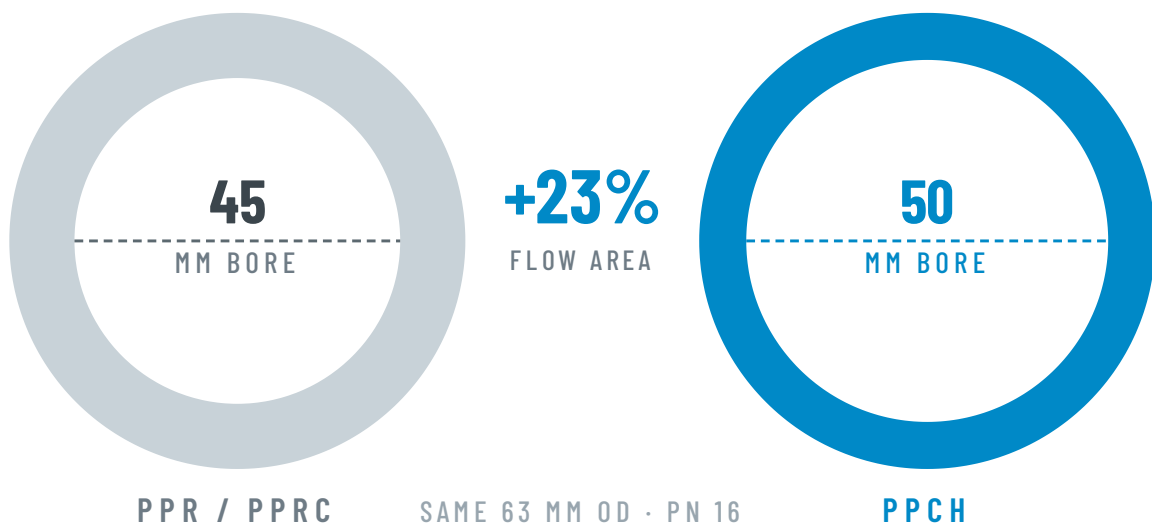


PPCH®

The Brand Become a Technology

MORE AIR SAME PIPE

FR Pneumatic piping for compressed air, instrument air, nitrogen and vacuum. Patented multi-layer glass reinforcement with a carbon UV shell – engineered so the compressor works less for the same delivered air.



DIAMETER RANGE

20 – 630 mm

PRESSURE CLASS

PN 10 – 25

STANDARD

ISO 15874-2
:2012

OWNERSHIP

Patented
+ registered TM

SINCE 1995

ABOUT ANJNEY

Anjney is a manufacturer of non-metallic industrial pipes and fittings built around one idea: **energy saving**. We have been in the piping industry since 1995, and every decade we have put a new generation of product into the market.

Each generation comes out of our own R&D and out of what our customers tell us they still struggle with — pressure drop across joints, moisture in the line, pipe sagging between supports, UV cracking on rooftop runs.

PPCH FR Pneumatic piping is the current answer. It carries more air through the same outside diameter, resists impact and UV, and is coded to the international colour convention for pneumatics.

WHAT WE PROTECT

Patented multi-layer glass reinforcement with UV layer • **PPCH** registered as a trade mark, Government of India • registered design for the multi-layer construction.



INTELLECTUAL PROPERTY ON RECORD

PATENT CERTIFICATE • THE PATENT OFFICE, GOVERNMENT OF INDIA

TRADE MARK CERTIFICATE • PPCH • TRADE MARKS REGISTRY, MUMBAI

PATENT NO.	412111
INVENTION	Multi Layered PPCH Pipe
APPLICATION	156/MUM/2014, filed 16 Jan 2014
GRANTED	22 Nov 2022 • 20-year term
PPCH TRADE MARK	3332845 • Class 19 • 10 Aug 2016
PPRCT TRADE MARK	3676896 • Class 17 • 13 Nov 2017
REGISTRY	Trade Marks Registry, Mumbai
REGISTERED DESIGN	Multi-layer construction with UV layer

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EXPERIENCE

3 decades

32 years in this industry

PPCH INSTALLATIONS

10,000+

successfully completed

CERTIFICATION

D&B • Bureau Veritas

THE BRAND THAT BECAME A TECHNOLOGY

ABOUT PPCH

BUILT FOR MINIMUM MAINTENANCE

PPCH is engineered around a single service promise: the lowest maintenance burden over the longest service life — a multi-layer glass reinforcement, a protective carbon layer and the blue identification strip that codes the line as pneumatic.

MERITS OF PPCH TECHNOLOGY

TECHNOLOGY	FEATURE	WHAT IT DOES ON YOUR PLANT
Controlled crystallinity	Greater inner diameter	Higher material strength allows a thinner wall at the same pressure class — so more of the pipe is bore.
Multi-layer extrusion	Ultra-smooth inner surface $R_a 0.1 - 0.3 \mu m$	Low internal friction and low pressure loss along the run. Hazen-Williams C of 150 – 155.
Sandwich glass reinforcement	Insulating glass-fibre middle layer	Breaks the thermal path through the wall, so the line stays above dew point and makes far less condensate.
Carbon UV layer	Carbon-loaded outer shell	Long service life on rooftop and outdoor runs where unprotected polymer piping chalks and cracks.
Electrofusion welding	Obstruction-free welded joints	No internal bead, no thread restriction, no step change in bore — the joint does not become the bottleneck.

APPLICATION

- **Compressed air** — plant ring mains and drops
- **Instrument air** — dry, clean, oil-free lines
- **Nitrogen** — inerting and blanketing lines
- **Vacuum** — suction and transfer lines



ELECTROFUSION TECHNOLOGY



Above 160 mm we join PPCH by electrofusion. A resistance coil moulded into the fitting melts pipe and fitting into one homogeneous wall from inside the socket, so nothing is displaced into the bore — no internal bead, no step, no restriction at the joint. Butt-welded systems leave a raised ring at every joint that the compressor pays for continuously. Available on PPCH up to **630 mm**.

PROVEN ALONGSIDE EVERY MAJOR COMPRESSOR BRAND

PPCH pipelines run downstream of compressor packages from across the industry. We have supplied plants operating:

ELGI

ATLAS COPCO

INGERSOLL RAND

CHICAGO PNEUMATIC

KAESER

FS CURTIS

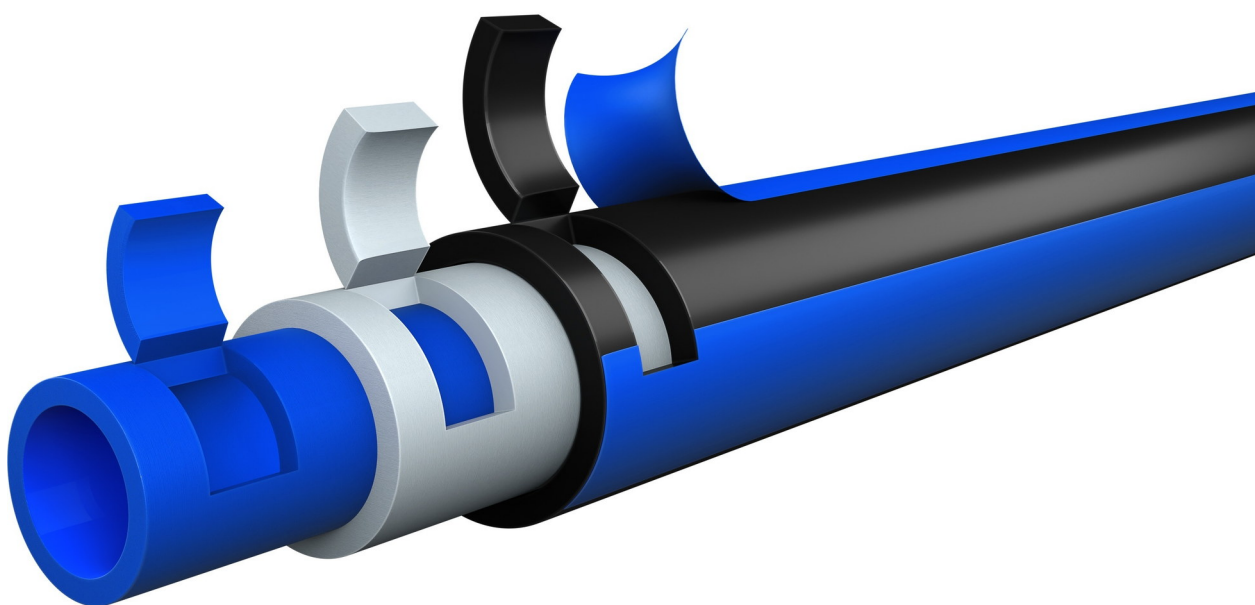
KIRLOSKAR PNEUMATIC

GARDNER DENVER

COMPAIR

HOW IT IS BUILT

STRENGTH OF PRODUCTS



1 Carbon outer layer

A high-grade polymer shell loaded with carbon for long-term UV stability. Compressed-air headers run outdoors more often than anyone plans for.

2 Blue identification strip

Precision-coded to the international pneumatic convention, so maintenance can identify the service at a glance.

3 Low thermal expansion

The glass-fibre layer holds expansion to **0.035 mm/m·K** – roughly a quarter of plain PP, PPR or PPRC.

4 Thermal break

Wall conductivity is **0.135 Btu/hr·ft·°F** against 43.66 for steel – two orders of magnitude lower.

5 A dry line

Because the wall does not conduct plant heat away, the air inside stays above its dew point for longer – less condensate, less water at the tool.

DESIGN NOTE

Lower expansion and higher flexural modulus (3000 MPa) mean less sag between hangers, so support spacing can be opened up.

BORE GAINED AT THE SAME OUTSIDE DIAMETER · PN 16

NOMINAL SIZE	PPR / PPRC BORE	PPCH BORE	BORE GAIN	FLOW-AREA GAIN
63 mm – 2"	45	50	+11.1%	+23.5%
90 mm – 3"	65	72	+10.8%	+22.7%
110 mm – 4"	79	87	+10.1%	+21.3%
160 mm – 6"	116	127	+9.5%	+19.9%

INTERMEDIATE EXPANSION	WALL CONDUCTIVITY	FLEXURAL MODULUS	SURFACE ROUGHNESS
0.035	0.135	3000	0.1 – 0.3

MEASURED AGAINST THE ALTERNATIVES

TECHNICAL EVALUATION

PPCH



ALUMINIUM



METAL



PARAMETER	PPCH	ALUMINIUM	METAL (GI/MS/CI/SS)	WHY IT MATTERS
Surface roughness R_a	0.1 – 0.3 μm	0.7 – 1.0 μm	1.0 – 1.7 μm	Lower roughness, lower friction loss
Hazen-Williams C	150 – 155	130 – 135	130 – 135	Higher C supports flow
Joint type	Socket / electrofusion	Push-fit	Threaded	Welded joints do not restrict bore
Wall conductivity	0.135	27.09	43.66	Btu/hr-ft ² F – lower means less condensate
Corrosion	None	Corrosive	Highly corrosive	Drives rescaling and rework
Maintenance	Nil	Humid air	Corroded air	Where the running cost hides

PPR / PPRC AGAINST PPCH

TECHNICAL PARAMETER	UNIT	PPR / PPRC	PPCH	COMMENT
Tensile strength at yield	MPA	24	26	More stiffness, less chance of breakage
MRS at 20 °C / 50 years	MPA	10	12.5	More strength, so less wall is needed
CRS at 70 °C / 50 years	MPA	3.2 – 3.6	5.93	Holds up in high-temperature service
Flexural modulus	MPA	800	3000	Least sagging, so fewer supports
Design stress (σ)	MPA	2.13	4.3	Underwrites the long-life claim
Life in direct sunlight	YEARS	2 – 3	10 – 20	Carbon UV layer does the work
LPL at 20 °C / 50 years	MPA	10.02	11.97	Performance at low temperature
LPL at 70 °C / 50 years	MPA	3.2	5.38	Performance at high temperature

LPL = lower prediction limit of hydrostatic strength (ISO 9080). MRS = minimum required strength (ISO 12162). CRS = creep rupture strength. Figures are typical values – please confirm against the current product datasheet for design work.

PIPES AND FITTINGS

PRODUCT RANGE

PPCH FR Pneumatic Pipes to ISO 15874-2:2012. **PPCH Fittings** to DIN 16962 Part 5-10 / ISO 15874-2:2012.

20 mm to 160 mm socket fusion · 200 mm to 630 mm electrofusion.

**PPCH FR PNEUMATIC PIPE**

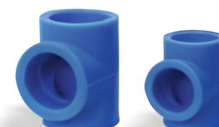
20-50 mm, PN16/PN20
63-630 mm, PN10/16/20

**ELBOW**

20-160 mm, PN25
200-630 mm

**COUPLER**

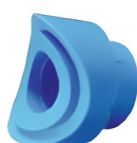
20-160 mm, PN25
200-630 mm

**EQUAL TEE**

20-160 mm, PN25
200-630 mm

**REDUCER**

20-160 mm, PN25

**BRANCH ADAPTER**

All relevant sizes

**REDUCING TEE / BRANCH ADAPTOR**

20-160 mm, PN25
connects up to 315 mm

**LONG RADIUS ELBOW**

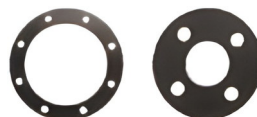
20, 32, 50, 63 mm, PN25

**CORE FLANGE**

20-160 mm, PN25
200-630 mm

**ELBOW 45°**

20-160 mm, PN25

**STEP FLANGE (ELECTROSTATIC METAL)**

20-630 mm

**FEMALE THREADED TEE / ELBOW**

20 mm 1/2", 25 mm 1/2"/3/4"
32 mm 3/4"/1", PN25

**MALE THREADED JOINT / ADAPTOR**

20-63 mm × 1/2"-2", PN25

**FEMALE THREADED JOINT / ADAPTOR**

20-63 mm × 1/2"-2", PN25

**FEMALE THREADED UNION**

20-63 mm × 1/2"-2", PN25

**MALE THREADED UNION**

20-63 mm × 1/2"-2", PN25

Please confirm the pipe size required for your application area before ordering. Sizing depends on flow demand, run length, number of drops and allowable pressure drop – send us the layout and we will size the network with you.

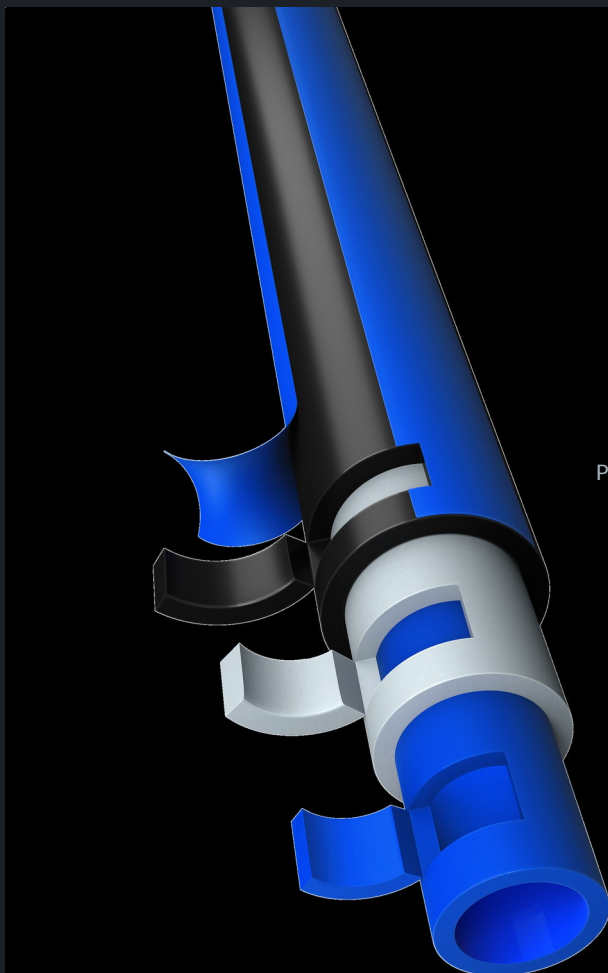
INSTALLED AND RUNNING

OUR CLIENTS

10,000+ PPCH INSTALLATIONS · 7,500+ INDUSTRIAL CLIENTS · 32 YEARS



Company marks are the property of their respective owners and are shown solely to indicate supply history. Reference visits can be arranged on request.



CREATE ENERGY BY SAVING ENERGY

PPCH FR Pneumatic Piping · compressed air, instrument air, nitrogen and vacuum. 20 to 630 mm, PN 10 to PN 25, to ISO 15874-2:2012.



Piping For Air, Water & Temperature

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