Energy World
Save.... Energy, Money & Earth

GHP HOT WATER & PLUMBING

The world's best for your home, under one roof.

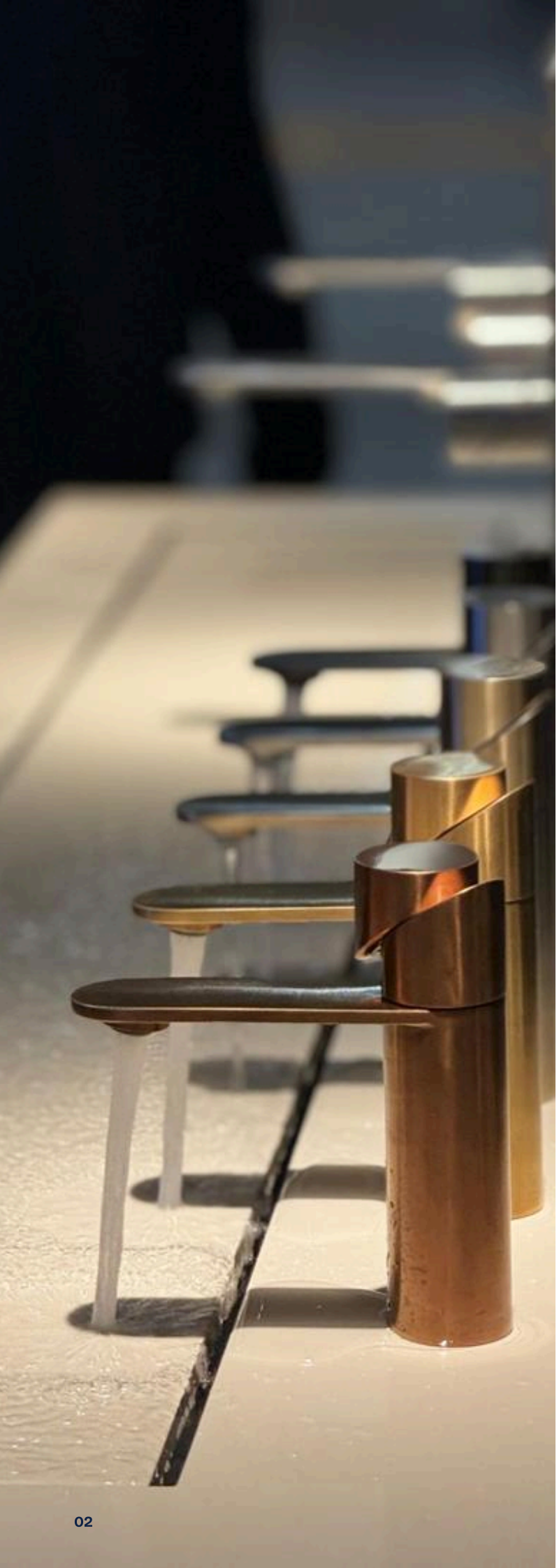
Plumbing, bath, water, hot water, solar and fresh air - supplied and installed by Energy World since 2009.

Our brands portfolio

Twenty brands, nine ranges, one counter

Huliot Group	Heliroma by Huliot Group	GRUNDFOS	fima CARLO FRATTINI	TOTO
GEBERIT	Oyster LifeStyle	PENTAIR	GHP HOT WATER & PLUMBING	sun Stellar Rising with the sun...
LEO EUROPE	STELLAR SANITÄR SS PLUMBING SOLUTIONS	MEA BUILDING SUCCESS	KESSEL	Nugreen Building Technologies Pvt. Ltd.
adani Solar	Panasonic	LUNOS	inair Fresh Air Ventilation system	EUREKA FORBES Aquaguard

01	02	03	04	05	06	07	08	09
Pipes & drainage	Tanks & pressure pumps	Bathroom fit-out	Wellness	Water treatment	Hot water	Solar power	Drains & building safety	Fresh air & home care



WELCOME TO ENERGY WORLD

One counter for the water, bath and energy of your home.

Since 2009 we have helped homeowners, architects, builders and plumbers across Haryana and western UP choose the right product for each stage of the build - and stayed with them after handover.

2009
Serving Panipat and the region since

2
Experience centres: Panipat and Sonipat (MPS)

9
Product ranges planned as one system

20
Brands, each chosen for one job it does best

01 **See it working**
Try the products at our Panipat and Sonipat experience centres before you choose.

02 **Sized to your house**
We size each item from your drawings or a site visit.

03 **Supplied and installed**
Genuine products with the maker's warranty, installed by our own team.

04 **Service after**
One number for service, spares and upgrades.

CONTENTS

Nine ranges. Every stage of the house.

Each range opens with what it does for your home and when it goes in. The products follow, brand by brand, with real photographs and the features that matter.

01 Pipes & drainage 05

Huliot Ultra Silent · Heliroma · Sanitar

02 Tanks & pressure pumps 15

Stellar · Grundfos · Leo

03 Bathroom fit-out 21

FIMA · TOTO · Geberit

04 Wellness 27

Oyster

05 Water treatment 29

Pentair

06 Hot water 33

GHP+ · Green Heat+

07 Solar power 43

Adani Solar · Panasonic

08 Drains & building safety 44

MEA · KESSEL · Nugreen

09 Fresh air & home care 49

LUNOS · InAir · Eureka Forbes

The right product at the right stage of the build.

Miss the stage and it costs breaking and re-doing later. This is what to decide, and when.

STAGE 1 · BEFORE THE SLAB

Foundation

Drainage under the slab and in the shafts.

HT Pro

Ultra Silent

STAGE 2 · BEFORE PLASTER

Brickwork & plaster

Supply lines, cisterns and mixer bodies hidden in the wall.

Heliroma multilayer

Geberit Duofix

FIMA bodies

TOTO in-wall

STAGE 3 · ROOF STAGE

Roof & terrace

Storage, pressure, treatment, hot water and power - planned together.

Stellar tank

Grundfos

Leo

Pentair

Heat pump

Solar plant

STAGE 4 · WITH THE FLOOR

Tiling

Channels and drains set to the finished floor level.

MEA drains

KESSEL Multistop

STAGE 5 · BEFORE HANDOVER

Finishing

Everything you see and touch every day.

TOTO

FIMA

Oyster

Robot cleaner

Huliot Group

ULTRA SILENT™ DRAINAGE SYSTEM

Drainage you barely hear.

Three-layer pipes with a mineral-filled middle layer, and mineral-filled fittings, that absorb the sound of flowing water.

Scan for datasheet

1. Push-fit socket with elastomer seal
2. Mineral-filled middle layer absorbs sound
3. Four green lines mark the pipe
4. Rubber-lined acoustic clamp
5. Fittings in quiet PP-MD

15 dB(A)	95 °C	pH 2-12	32-200 mm
at 2 L/s, tested to EN 14366	continuous operating temperature	chemical resistance	pipe sizes

01
Mineral-filled middle layer
The dense middle layer soaks up noise and vibration.

02
Push-fit joints
Push-fit sockets with elastomer seals; no glue, no welding.

03
Acoustic clamps
Rubber-lined clamps cut the vibration passed to the walls.

04
Made for flats and hotels
Pipes behind bedroom walls stay quiet — 15 dB(A) at 2 L/s (EN 14366).

ULTRA SILENT™ · FROM THE HELIROMA DATASHEET

Everything the datasheet promises.

Three-layer PP and PP-MD pipes and fittings. The middle layer of high-density polypropylene mixed with minerals gives strength and soundproofing. For waste water and other fluids from pH 2 to 12, at 95 °C continuously. Black pipe with four green lines; PP-MD fittings absorb shock and sound. Suitable outdoors when protected from direct sunlight, and can be stored outside for up to two years.

ADVANTAGES AND KEY FEATURES

- Excellent soundproof performance
- High temperature resistance
- Efficient design
- UV protection
- Long life expectancy
- Eco-friendly
- High mechanical resistance
- Easy and safe installation
- Wide dimensional range
- Lightweight
- Ideal for visual inspections
- National and international certifications

CLAMPS - FIXED POINT UNDER EACH SOCKET, SLIDING CLAMPS BETWEEN

Pipe Ø (mm)	Max clamp distance, horizontal (m)	Max clamp distance, vertical (m)
32	0.80	1.50
40	0.80	1.50
50	0.80	1.50
75	1.10	2.00
90	1.40	2.00
110	1.65	2.00
125	1.85	2.00
160	2.40	2.00
200	2.40	2.00

PRODUCT RANGE (SIZES IN MM)

Single socket pipe	32 - 200
Double socket pipe	32 - 125
Bends 15°, 45°, 87.5°	32 - 160 (45° to 200)
Branch 87.5°	32x32 - 160x160
Swept branch 87.5°	90x90 - 160x110
Double branch 67.5° / 87.5°	110x50, 110x110
Inspection pipe	50 - 200
Double socket / sleeve	32 - 200
End cap	40 - 200
Long WC bend	90, 110

PROPERTIES

Acoustic performance	15 dB(A) at 2 L/s (EN 14366)
Ring stiffness	SN16 (6.0 kN/m^2)
Seal material	SBR-NR, NBR, EPDM
Colour	Black outside, white inside
Density	Pipes 1.3-1.4 g/cm^3; fittings 1.18-1.25 g/cm^3
Connection	Push-fit
Sound tested to	DIN 4109:2018 and VDI 4100:2012

Fraunhofer SKZ AENOR Deutsches Institut für Bautechnik DIBt DANISH TECHNOLOGICAL INSTITUTE

Pipe, fittings and system certification.

ULTRA SILENT™ · THREE-LAYER PIPE

ULTRA SILENT: the quiet comes from the middle.

1 External layer
Black PP: excellent impact resistance and long-term UV protection.

2 Middle layer
PP and PP-MD: high mechanical resistance and excellent soundproofing.

3 Internal layer
White PP: the best flow performance and high-contrast visual inspection.

ULTRA SILENT™ DESIGN DETAILS

Clever design
Swept-angle branches - higher discharge rate, smoother flow.

Internal plug
Smooth flow and a silent inspection opening.

Depth gauge
Shows the pipe is pushed fully home - a correct fit every time.

Extra socket depth
63 mm on ULTRA SILENT against 54 mm on a standard pipe - more stable, more solid.

HT PRO™ · THREE-LAYER PIPE, S16 SERIES

HT PRO: strength outside, smoothness inside.

1 External layer
Grey PP: excellent impact resistance even at low temperature, high mechanical performance.

2 Middle layer
PP compound: excellent performance.

3 Internal layer
White PP copolymer: smooth flow, chemical resistance, easy visual inspection.

HELIKLIMA · PE-RT II / AL / PE-RT II + BRASS PRESS FITTINGS

Hot and cold lines that never rust.

HELIKLIMA PE-RT II / AL / PE-RT II multilayer pipe with KLIMAPRESS brass press fittings — for hot and cold water supply.

Scan for datasheet

5 layers
PE-RT II / AL / PE-RT II

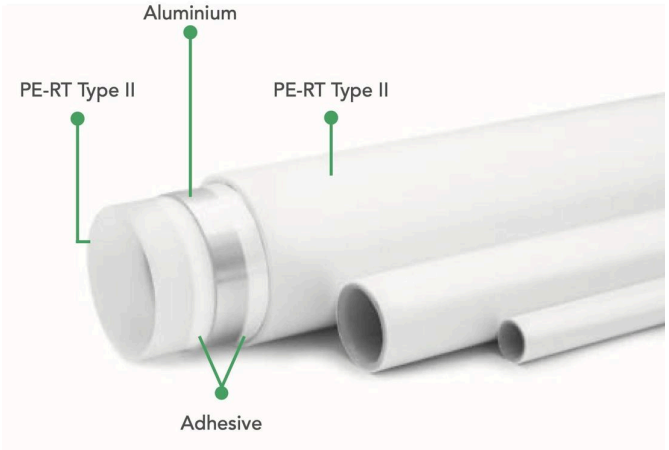
Ø 16-110 mm
coils and bars

Drinking water
approved

O_2 barrier
aluminium layer

APPROVED FOR DRINKING WATER · HEATING SYSTEMS · DISINFECTION RESISTANCE · ANTIMICROBIAL · LEGIONELLA CONTROL · 100% RECYCLABLE · ECO-FRIENDLY

FIVE LAYERS, ONE PIPE



PE-RT type II inside and out, laser edge-welded aluminium in the middle, bonded with adhesive: smooth and rust-free like plastic, holds its shape like metal.

SUPPLIED AS

Coils	4 m bars	5 m bars
16-32 mm	16-32 mm	40-110 mm

WHY MULTILAYER

01
5-layer pipe
PE-RT type II inside and out, laser edge-welded aluminium in the middle.

02
Approved for drinking water
Smooth inner wall — no corrosion, no limescale build-up.

03
Up to 70°C at 10 bar
For hot and cold water; burst pressure 80 bar; low linear expansion.

04
16 to 75 mm
One press system from bathroom lines to risers.

05
Oxygen barrier
The aluminium layer stops oxygen and protects the system.

HELIKLIMA MULTILAYER + KLIMAPRESS BRASS · FROM THE HELIROMA DATASHEETS

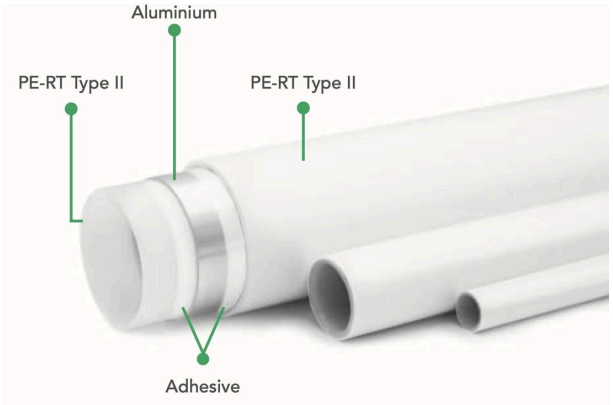
Everything the datasheets promise.

HELIKLIMA brings together the strength of metal and the corrosion resistance of plastic: five layers - PE-RT type II inside and out, laser edge-welded aluminium in the middle, all bonded together. For drinking water, heating and cooling. The inner wall is extremely smooth, so no corrosion, limescale or deposits.

APPROVED FOR DRINKING WATER · HEATING SYSTEMS · DISINFECTION RESISTANCE · ANTIMICROBIAL · LEGIONELLA CONTROL · 100% RECYCLABLE · ECO-FRIENDLY

HELIKLIMA PIPE - ADVANTAGES AND KEY FEATURES

- Lightweight, flexible, easy handling
- Large dimensional range
- Long life expectancy
- Fewer supports needed
- High chemical resistance
- Low roughness
- Oxygen diffusion barrier
- Raw material: PE-RT type II
- Eco-friendly
- Excellent hydrostatic stress performance
- Laser edge-welded aluminium
- Low linear expansion
- Corrosion resistant
- Drinkable water applications
- High resistance to temperature and pressure
- Sound insulation
- Easy and fast installation
- National and international certifications



PE-RT type II · adhesive · laser-welded aluminium · adhesive · PE-RT type II

KLIMAPRESS BRASS FITTINGS

- 100% compatible with existing HELIROMA components and tools
- Dimensional range Ø 16-75 mm
- Fittings without nickel plating, avoiding galvanic treatment
- Fitting body made of brass, 4MS approved
- Highly resistant to corrosion and oxidation
- Flow-efficient design
- Visual assurance of pipe position
- Quick installation
- Certification (AENOR)

PIPE SIZES - COILS 16-32 MM; 4 M BARS 16-32 MM; 5 M BARS 40-110 MM

Pipe (mm)	Inside Ø (mm)	Weight (kg/m)
16 x 2.0	12	0.108
20 x 2.0	16	0.137
25 x 2.5	20	0.207
32 x 3.0	26	0.320
40 x 4.0	32	0.510
50 x 4.5	41	0.748
63 x 6.0	51	1.192
75 x 7.5	60	1.790
90 x 8.5	73	2.700
110 x 10.0	90	3.900

HELIROMA PP-R · HELISYSTEM · ROMAFASER

Welded joints that become one with the pipe.

Scan for datasheet

Polypropylene random-copolymer pipes and fittings, heat-fused into one piece - for hot and cold water, heating and cooling.

- **Fused, not screwed** — Socket, butt or electrofusion welding - the joint becomes part of the pipe.
- **Fibreglass-reinforced option** — ROMAFASER: fibreglass middle layer for lower expansion and fewer supports.
- **Prevents limescale** — Very smooth wall, low pressure loss.
- **Corrosion and chemical resistant** — Long life expectancy.
- **Acoustic insulation** — Quieter water flow than metal pipe.
- Range: HELISYSTEM SDR 6 / 7,4; ROMAFASER fibreglass SDR 7,4; ROMAKLIMA SDR 11; ROMAFASER ANTI-UV; PP-RCT CT range
- Green or blue pipe with four coloured lines
- For drinking water, heating and cooling, HVAC, RO and compressed air

TECHNICAL DATA

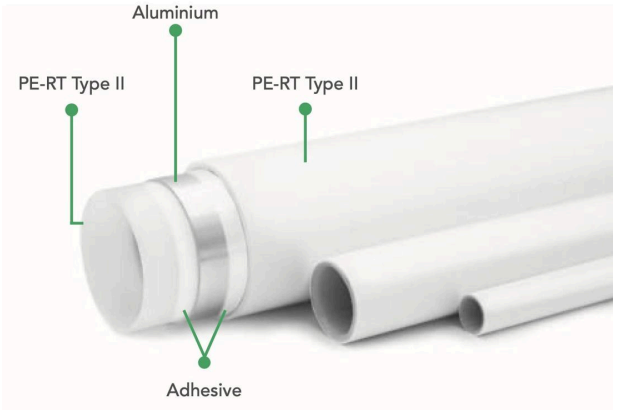
MATERIAL PP-R 100, MRS 10 MPa	SIZES Ø 20 to 110 mm
JOINING socket, butt or electrofusion welding	ROUGHNESS 0.007 mm
THERMAL CONDUCTIVITY 0.135 W/m·K	EXPANSION (FG PIPE) 0.035 mm/m·°C

Ø 20-110 mm, pipes

Fused welded joints

MRS 10 MPa, PP-R 100

0.007 mm roughness



HELIKLIMA INSULATED · PE-RT II / AL / PE-RT II

Hot stays hot, cold stays dry.

Scan for datasheet

The same five-layer HELIKLIMA multilayer pipe, factory-sleeved in polyethylene foam and a film coating - red for hot lines, blue for cold.

- **Factory insulated** — PE foam sleeve and film coating, applied in the factory.
- **Colour coded** — Red and blue - hot and cold told apart at a glance.
- **Avoids condensation** — Low thermal conductivity keeps cold lines dry.
- **Lightweight and flexible** — Easy to install; bends by tool in 16-25 mm.
- **Drinking water approved** — Smooth inner wall: no corrosion, limescale or deposits.
- Low thermal conductivity; avoids condensation
- UV-protected, chemical-resistant film
- Vibration resistant; sound insulation
- Free of CFC and HCFC

TECHNICAL DATA

PIPE PE-RT II / AL / PE-RT II, 5 layers	INSULATION polyethylene foam + film coating
COLOURS red (hot) or blue (cold)	BENDING by tool for 16-25 mm

5 layers inside the sleeve

Red / blue hot / cold

PE foam factory insulation

UV protected film

HT PRO™ DRAINAGE PIPING SYSTEM

Drainage built to last, with a 10-year guarantee.

Scan for datasheet

Three-layer polypropylene pipes with push-fit sockets — halogen and cadmium free.

- **Three-layer pipe, S16 series** — Increased wall thickness for excellent performance.
- **Installs without tools** — Push-fit sockets with elastomer seals.
- **White interior** — Easy visual inspection and extremely smooth flow.
- **Certified by SKZ** — Made to EN 1451; 100% recyclable.
- **10-year guarantee** — High impact resistance even at -10°C.
- Outer grey PP, middle PP compound, inner white PP copolymer
- Also for ventilation and gravity rainwater drainage
- Can be stored outdoors for up to 18 months

Ø 32-160
mm

80 °C
continuous, 95 °C peaks

pH 2-12
chemical resistance

10 years
guarantee

TECHNICAL DATA

SIZES **Ø 32 to 160 mm**	WALL (S16) **1.8 mm (DN 32-50) to 4.9 mm (DN 160)**
WASTEWATER **80 °C continuous, 95 °C peaks**	COLD **impact resistant to -10 °C**
CHEMICALS **pH 2 to pH 12**	STANDARDS **EN 1451; SKZ A778 pipes, SKZ 5953 fittings**
EXPANSION **0.12 mm/m·°C**	COLOUR **grey RAL 7037, white inside**

CLEARBLACK™ SMART STP

Treat sewage. Reuse the water.

Scan for datasheet

ClearBlack is a compact sewage recycling plant (MBR membrane bio-reactor) with smartphone monitoring.

- **Reuse treated water** — For flushing, floor cleaning, gardening, and as RO feed.
- **Smartphone monitoring** — Real-time operation and performance on a phone app or web browser.
- **Fully automatic** — No 24 × 7 skilled operators needed.
- **Low power, low chemicals** — Low running cost over the plant's life.
- **Compact, quick to install** — Containerised plant that needs far less space.
- Handles a power cut of up to 24 hours without problems
- Solar-powered version available
- Treated water can be taken further with RO for process use

3-150 KLD
container plant

BOD < 10
mg/l treated

TSS < 5
mg/l, ultra-filtered

24 h
power cut tolerated

TECHNICAL DATA

TECHNOLOGY **MBR - membrane bio-reactor, ultra-filtered**	CONTAINER PLANTS **3 to 150 KLD**
CIVIL PLANTS **above 150 KLD, up to MLD**	TREATED BOD / COD **< 10 / < 50 mg/l**
TREATED TSS / O&G **< 5 / < 5 mg/l**	CONTROL **PLC / HMI, IoT on smartphone**

Scan for datasheet

LOCKSEAL™

Joints in concrete stay tight.

LockSeal protects push-fit pipe connections cast in concrete.

- **Against pouring vibration** — Joints stay in place while concrete is poured.
- **Against lift while drying** — Holds the connection as concrete sets.
- **Keeps slurry out** — Stops cement slurry entering the seal.
- **No tools needed** — Fit on the socket, push in the pipe, slide down.
- New shortened design for easier installation

TECHNICAL DATA

SIZES **DN 75, 110, 125, 160**	FOR **PP push-fit pipes cast in concrete**
TOOLS **none needed**	REMOVAL **release the band, open the clips**

DN 75-160
sizes

No tools
push on, clip in

Concrete
joints stay tight

Slurry
kept off the seal

Scan for datasheet

ULTRASEAL™ WATERPROOFING MEMBRANE

No seepage where the pipe meets the slab.

UltraSeal seals the pipe borehole between floors — for wet rooms and bathrooms.

- **Stops moisture between floors** — Seals the gap around the pipe where it passes through the slab.
- **Cuts structure-borne noise** — Elastic gasket keeps pipe vibration out of the concrete.
- **Geotextile membrane** — Bonds with sealants and bituminous cement.
- **European wet-room standard** — The geotextile membrane meets European standards for wet rooms.
- **Fast, no special tools** — Slides over the pipe and lies flat in the waterproofing layer.
- Fitted on the pipe in the borehole, then worked into the primer, insulating layers and final filling and coating

TECHNICAL DATA

SIZES **DN 110, 125, 160**	WATERTIGHTNESS **pass, EN 1928**
TENSILE FORCE **≥ 200 N/50 mm, EN 12311-2**	IMPACT **≥ 500 mm, EN 12691**
FLEXIBLE DOWN TO **-20 °C, EN 495-5**	SEAL **SBR/NR, -30 to 80 °C**

EN 1928
watertight

-20 °C
still flexible

≥ 500 mm
impact, EN 12691

DN 110-160
sizes

STAINLESS-STEEL PRESS-FIT PLUMBING · DOUBLE PRESS V PROFILE

Stainless lines that stay clean for the life of the building.

A stainless-steel plumbing system with Double Press V technology, designed in Germany - an alternative to plastic plumbing with health benefits and a very long life. Pipes are pressed, not welded or threaded, with a battery tool.

MATERIAL
EN 1.4404 (316L)
Stainless steel for tubes and fittings

FITTINGS
Double Press V profile
To DVGW W534

SIZES
Ø 15 to 54 mm
Tubes in 6 m lengths

SEALING O-RING
Up to 20 bar
Black EPDM, -20 to +110 °C

TUBES MADE TO
ASTM A249
Material DIN EN 10088, sizes DIN EN 10312; system to DVGW W 541 and W 534

Scan for datasheet

Scan for the Stellar Sanitar range on our website.

WHERE IT IS USED

Drinking water · Hot water lines · Heating · Cooling · Compressed air · Inert gas · Manifolds and headers

1 German design
Developed with German collaboration; systems tested to DVGW, WRAS, TUV and KIWA standards.

2 Rapid installation
Pressed joints save a lot of time against welding, threading, grooving or chemical fixing.

3 Two-factor safety
A press-detection sleeve and leak-path design - an unpressed joint cannot go unnoticed.

4 Fully annealed
Tubes, fittings and systems annealed for higher corrosion resistance in harsh water.

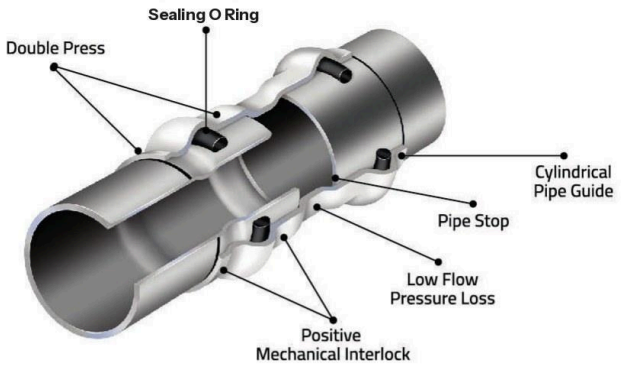
5 Food-grade steel
Stainless steel is infinitely recyclable and suited to drinking-water supply.

6 Flame-free work
Battery press tools - no flames, gas work or welding on site.

Zero leak Two-factor safety - a press-detection sleeve and leak-path fittings - means a missed press shows up before handover. Stellar Sanitar calls it a first in India.

INSIDE THE JOINT

Six details in every pressed fitting.



Double press
Two compression joints around the bead on each side lock the pipe mechanically around the O-ring.

Sealing O-ring
Black EPDM, pressed to a set shape: -20 to +110 °C and up to 20 bar - for drinking water, heating, cooling, compressed air and inert gas.

Cylindrical pipe guide
The pipe goes in straight, so the O-ring is not damaged and pipe and fitting stay on one axis.

Pipe stop
An internal stop sets the pipe at the correct joining position.

Positive mechanical interlock
The press tool grips the whole circumference of the fitting.

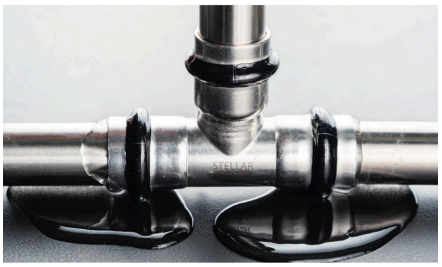
Very low pressure loss
The fitting bore matches the pipe bore, so flow and pressure loss at the joint are negligible.

DUAL FACTOR SAFETY

Press-detection sleeve
A black sleeve sits on every unpressed joint. It stays in place until the joint is pressed with the proper tool, which cuts it off - so one look along the line shows any press that was missed.

Leak-path technology
An unpressed connection leaks visibly during pressure testing, and the leak also shows as a pressure drop in a central leakage test - so it is found before the walls are closed.

Pressed joint: dry under test.

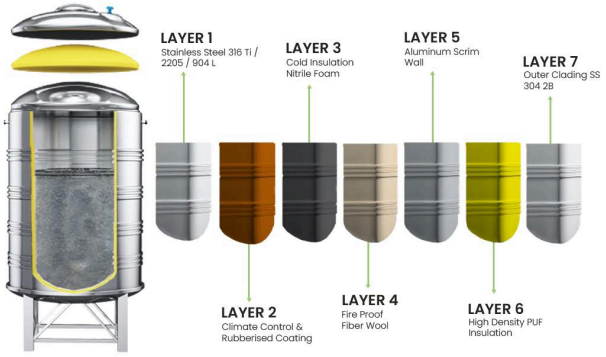


Unpressed joint: leaks on purpose, so it cannot be missed.

Certification standards. German collaboration and Indian infrastructure with R&D facilities and labs, so the systems meet the qualification tests and standards of DVGW, WRAS, TUV, KIWA and ISO.

STAINLESS-STEEL WATER STORAGE

Water that stays cool, clean and safe on the roof.



Round SS tanks

Overhead stainless-steel tanks in standard sizes, on their own stand.

Seven layers

Inner SS 316Ti, 2205 or 904L; rubberised coating; nitrile foam; fire-proof fibre wool; aluminium scrim wall; high-density PUF; outer SS 304 2B.

10 years
warranty, 15-20 year design life

1.0 / 1.5 mm
inner tank thickness options

500 L +
500, 1000, 1500, 2000 L and above

Stellar tanks on a Panipat rooftop (TDI Connaught).

SCALA2 · ALL-IN-ONE BOOSTER

Strong pressure at every tap, quietly.

SCALA2 is a complete booster in one box — pump, motor, controller, pressure sensor and non-return valve built in.

Scan for datasheet

1. Self-priming, with de-air function
2. Ready, tool-free installation out of the box
3. User-friendly controls for quick setup
4. Permanent-magnet motor with speed control
5. Dry-running protection
6. IPX4D - indoors or outdoors

44 dB(A)	8 taps	8 m	45 m
as quiet as a quiet dishwasher	up to 3 floors	lifts water from below the pump	maximum head

01
Self-priming
Lifts water from a tank below the pump.

02
Constant pressure
Adjusts its speed to how many taps are open.

03
Very quiet
As low as 44 dB(A) — about as quiet as a quiet dishwasher.

04
Protects itself
Dry-run protection and automatic restart.

05
Indoor or outdoor
Splash-proof, compact, easy to install.

- Lifts water from up to 8 m depth - shallow wells or underground tanks
- One size for all domestic applications
- Permanent-magnet motor with speed control

TECHNICAL DATA

NOISE 44 dB(A)	MAX HEAD 45 m
MAX SYSTEM PRESSURE 10 bar	MAX INLET PRESSURE 6 bar
LIQUID / AMBIENT max 45 °C / 55 °C	POWER INPUT P1 550 W
ENCLOSURE IPX4D	SERVES up to 8 taps, 3 floors

SCALA1 · ALL-IN-ONE BOOSTER

Water on demand, controlled from your phone.

Scan for datasheet

SCALA1 integrates pump, motor, diaphragm tank, pressure and flow sensor, dry-run protection, controller and non-return valve in one unit.

- **All-in-one** — No separate pressure controller or tank to select.
- **Bluetooth built in** — Set up, monitor and troubleshoot with the Grundfos GO Remote app.
- **Easy twin system** — Connect two SCALA1 pumps for back-up and more flow.
- **Quiet** — Max 55 dB(A) sound pressure level.
- **Outdoor-ready** — IPX4D enclosure; drinking water approved.
- Pumps from roof tank, break tank, ground tank or shallow well (under 8 m)
- Twin setup: duty/assist or duty/standby, set up in GO Remote

55 dB(A)
max sound level

Bluetooth
GO Remote app

IPX4D
outdoor-ready

Twin
two pumps, one system

TECHNICAL DATA

MAX SYSTEM PRESSURE 8 bar	LIQUID TEMPERATURE 0 to 45 °C
AMBIENT max 55 °C	MAINS 1 x 115-230 V, 50/60 Hz
ENCLOSURE IPx4D	SOUND max 55 dB(A)
START/STOP max 25 per hour	MODELS 3-25, 3-35, 3-45, 5-25, 5-55

Scan for datasheet

CM BOOSTER WITH PRESSURE TANK

Small booster. Full pressure on every floor.

A compact Grundfos CM pump with a 24 L or 60 L pressure tank, for homes and light commercial use.

- **Stainless-steel hydraulics** — Long-life parts that resist corrosion and wear.
- **Pressure tank** — Starts only when pressure drops — up to 100 starts an hour.
- **Silent and compact** — High-efficiency motor, highly reliable design.
- **Built-in thermal protection** — Class F insulation for safe operation.

24 / 60 L
pressure tank

100
starts an hour, max

Class F
motor insulation

Stainless
hydraulics

MAGNA3 · SMART CIRCULATOR

The circulator that thinks for itself.

For heating, cooling and domestic hot-water circulation — permanent-magnet motor, no maintenance.

Scan for datasheet

1. Display: choose AUTOADAPT or FLOWADAPT
2. Permanent-magnet motor, no maintenance
3. Flanged pump housing
4. Links to building management

up to 75 %	-10 to 110 °C	AUTOADAPT	BMS
lower energy cost	heating and cooling	with FLOWLIMIT and FLOWADAPT	ready to link

01
Best efficiency
Cuts energy cost by up to 75%.

02
AUTOADAPT
With FLOWLIMIT and FLOWADAPT for full system control.

03
-10 °C to 110 °C
Suits both heating and cooling projects.

04
BMS-ready
Easy link to building management systems.

MULTILIFT MSS · LIFTING STATION

Wastewater out of the basement, automatically.

Scan for datasheet

A complete lifting station - tank, pump and controller - that lifts wastewater from below the sewer line into the sewer.

- **Made for one house** — For one-family houses and installations that do not need a back-up pump.
- **Leak and odour free** — A sealed tank with the pump and level control built in.
- **Clog-free vortex hydraulics** — Handles domestic wastewater without blocking.
- **Level control 220** — Automatic pump start and stop, with a high-water alarm.

TECHNICAL DATA

TANK (MSS) 44 L	MAX FLOW 10 L/s
MAX HEAD 11.8 m	CONTROLLER LC 220 - start/stop, high-water alarm
RANGE MSS, M, MD, MLD (44 to 1,350 L)	

44 L tank
10 L/s max flow
11.8 m max head
Alarm high-water warning

UNILIFT KP · DRAINAGE PUMP

The stainless pump for the sump.

Scan for datasheet

A light, stainless-steel submersible pump for drain water and grey wastewater - fixed in a sump or carried where it is needed.

- **Stainless steel** — Robust, durable and corrosion free; very little maintenance.
- **No shaft seal** — Canned (wet-runner) rotor sealed from the stator - reliable and service friendly.
- **Solids up to 10 mm** — A clip-on strainer keeps larger particles out.
- **Float switch option** — Automatic on and off between two water levels, or manual operation.
- **Protects itself** — Built-in thermal overload protection with automatic restart.

TECHNICAL DATA

MODELS KP 150 / 250 / 350	POWER P2 0.14 / 0.25 / 0.35 kW
OUTLET 1¼" female	LIQUID TEMPERATURE 0 to 50 °C
PH 4 to 9	MAX DEPTH 10 m
ENCLOSURE IP68	WEIGHT 6.3 to 7.2 kg

10 mm max solids
0-50 °C liquid temperature
10 m max depth
IP68 enclosure

LEO MAC550 · INVERTER BOOSTER

Constant pressure, quietly.

Scan for datasheet

A compact booster with a permanent-magnet motor and inverter that adjusts its speed to the taps that are open.

- **Constant pressure** — Speed follows water demand.
- **Quiet** — Water-cooled motor, 47 dB in normal use.
- **Self-protecting** — Dry-run, leak and voltage protection.
- **All built in** — Non-return valve, sensor and expansion vessel.
- Permanent-magnet motor with inverter - constant pressure
- Touch panel shows pressure and fault codes
- Dry-run, leak and over/under-voltage protection
- Non-return valve, pressure sensor and expansion vessel built in

550 W	4 m³/h
power	max flow
40 m	**47 dB**
max head	normal use

TECHNICAL DATA

POWER	MAX FLOW
550 W	4.0 m^3/h
MAX HEAD	NOISE
40 m	47 dB in normal use

Recirculation pump

Keeps hot water moving in the loop so it reaches the tap sooner.

Booster set with panel

Multi-pump sets for apartments and commercial buildings.

Homes

A compact booster for steady pressure in bathrooms and the kitchen.

Apartments and hotels

Booster sets with a control panel and more than one pump.

Hot-water loops

A recirculation pump on the return line of the heat pump or geyser.

Service

Supplied, installed and serviced by our team.

fima CARLO FRATTINI rubinetterie

ITALY · SINCE 1960

Italian designer mixers and showers

Davide Vercelli
Design

Sliding handle

Full collection

Made in Italy

SLIDE · DESIGN DAVIDE VERCELLI

No lever. Just slide.

Scan for datasheet

The heart of SLIDE is its sliding mechanism that replaces the traditional lever. BIG SEE Product Design Award 2026 winner.

TECHNICAL DATA

DESIGN **Davide Vercelli**	MATERIAL **AISI 316 stainless steel**
CONTROL **sliding handle instead of a lever**	VERSIONS **single lever, two-hole, three-hole, wall-mounted**
HANDLE INSERTS **resin (horn, ivory, tortoise), marble, walnut**	MARBLES **Oro Calacatta, Nero Portoro, Verde Guatemala, Rosso Levanto**

01 Sliding handle
A new, intuitive way to open and set the water.

02 Award-winning design
BIG SEE Product Design Award 2026.

03 Full collection
Basin, tall basin, wall-mounted, bath and shower.

04 Made in Italy
FIMA Carlo Frattini, family-run since 1960.

- 316 steel with molybdenum: far more corrosion resistant than standard stainless
- 100 % and infinitely recyclable without losing its properties
- On the wall-mounted mixer the handle slides towards the wall to open

Signature handle

Many finishes

Made in Italy
FIMA Carlo Frattini craftsmanship.

SO COLLECTION

One shape, endless ways to style it.

SO was created to meet today's design needs, with unlimited ways to customise it — for designers and for you.

- **Signature handle** — A cylinder, cut in section and gently rounded.
- **Single or double control** — Basin, three-hole, wall-mounted and shower versions.
- **Many finishes** — Galvanic, PVD and glass options to mix and match.
- **Made in Italy** — FIMA Carlo Frattini craftsmanship.

Scan for datasheet

SPILLO TECH

A timeless mixer, made trendy.

Spillo Tech, the newest member of the Spillo family — the care for details turns a classic into a statement.

- **3D surface finishes** — Cross (diamond-inspired facets), Knurled and Vertical.
- **Base and handle matched** — Texture runs through the whole mixer.
- **Complete collection** — Basin, floor-mounted, bath and shower sets.
- **PVD colours** — Gold, bronze, champagne and more.

Scan for datasheet

Slim profile
A thin, elegant body and spout.

Smooth water flow
Shaped to deliver water evenly.

PVD finishes
Gold, champagne and amber bronze.

SPILLO UP

Thin lines, an iconic shape.

Spillo Up has slim outlines and linear shapes that follow the continuous flow of water.

- **Slim profile** — A thin, elegant body and spout.
- **Smooth water flow** — Shaped to deliver water evenly.
- **Basin to tall basin** — XS, medium and wall-mounted versions.
- **PVD finishes** — Gold, champagne and amber bronze.

Scan for datasheet

SPILLO STEEL · AISI 316L

Stainless steel that stays like new.

The excellence of stainless steel and an essential design — a complete collection for basin and shower.

- **AISI 316L stainless steel** — Unalterable over time, easy to keep clean.
- **Healthy material** — 316L contains no toxic metals.
- **Eco-friendly** — Long-lasting and recyclable.
- **Complete collection** — Basin, wall-mounted and shower components.

Scan for datasheet

305 mm
Rough-in

0.05 to 0.75 MPa
Water pressure

EWATER+

CEFIONTECT

NEOREST NX I

NEOREST. The only one.

Scan for datasheet

Exquisitely designed for technology, comfort and well-being — a new form of pure luxury.

TECHNICAL DATA

MODEL CS902VM#NW1 (Silver)	FLUSH TORNADO FLUSH, 3.8 / 3.0 L
ROUGH-IN 305 mm	WATER PRESSURE 0.05 to 0.75 MPa
POWER 220-230 V, 50/60 Hz	SIZE 468 W x 800 D x 565 H mm

01 EWATER+
Electrolyzed water cleans the bowl, wand and under the seat — no chemicals.

02 CEFIONTECT
Ultra-smooth glaze leaves waste nowhere to cling.

03 PREMIST
A film of water before every use helps waste wash away.

04 TORNADO FLUSH
A powerful swirl cleans the whole bowl.

05 Comfort
Warm-water wash, heated seat, warm-air dryer, auto lid.

- Water pressure, water and seat temperature each in 5 settings
- Automatic lid open/close, automatic flush, warm-air drying, deodoriser
- CEFIONTECT glaze, RIMLESS bowl, PREMIST and EWATER+

WALL-HUNG TOILETS + CONCEALED TANK & FLUSH PANEL

A floor you can clean in one swipe.

Scan for datasheet

TOTO wall-hung toilets with a concealed tank and flush panel — the tank hides in the wall. Features vary by model.

TORNADO FLUSH — On most models, a powerful swirl cleans the whole bowl.

RIMLESS — On TORNADO FLUSH models, no rim for dirt to hide under.

CEFIONTECT — Ultra-smooth glaze on selected models.

Water saving — 4.5 / 3.0 L dual flush on many models.

Concealed tank — Slim flush panel in nickel, black, glass, gold and more.

Wall-hung — Floor stays clear underneath for easy cleaning.

- CEFIONTECT: ultra-smooth glaze, easier to clean, less toilet cleaner
- TORNADO FLUSH: 360° cleaning power using less water, quieter flush
- RIMLESS: no rim where waste and germs can hide

TORNADO FLUSH | **RIMLESS**

CEFIONTECT | **Water saving**

WITHOUT

A floor-mounted toilet with corners and a base that collect dirt.

WITH TOTO WALL-HUNG

A clean, open floor and a toilet that stays cleaner, longer.

WASHBASINS · LINEARCERAM · COLOUR COLLECTION

Thin, strong, and beautifully coloured.

Scan for datasheet

Simple and beautiful in appearance, comfortable and streamlined in design. LINEARCERAM and CEFIONTECT on selected models.

LINEARCERAM models — Twice as strong as standard fireclay, with edges as thin as 4 mm.

CEFIONTECT — A smooth glaze that resists dirt (on CEFIONTECT models).

Colour collection — Mandarin orange, scarlet red, ash blue, forest green and more.

Every type — Counter-top (console), self-rimming, semi-recessed, under-counter, wall-hung and floor-standing.

LINEARCERAM models | **CEFIONTECT**

Colour collection | **Every type**

WITHOUT

A plain, thick white basin that stains and dulls.

WITH TOTO BASINS

A slim, coloured basin that stays bright and shapes the whole room.

Marble shelf-top

Overhead shower
Envelops the whole body.

Hidden storage

Z SELECTION · SHOWER COLUMN

Design down to every detail.

Meticulous attention to design and function for an even richer shower.

- **Stainless-steel panel** — A rich range of colours and finishes.
- **Marble shelf-top** — Artificial-marble shelf for your essentials.
- **Overhead shower** — Envelops the whole body.
- **Hidden storage** — A rack that keeps things out of sight.

Scan for datasheet

ZA SERIES

Faucet and basin in harmony.

An asymmetrical faucet handle as thin as a flower petal, in harmony with the washbasin bowl.

- **Petal-thin handle** — Organic shape matched to the bowl's curve.
- **Tall-vessel faucet** — Made for counter-top basins.
- **COMFORT GLIDE** — Smooth lever, easy to use every day.
- **Full set** — Basin faucet and floor-standing bath & shower set.

Scan for datasheet

GA · GB · GC · GE · GF SERIES

Faucets with quiet dignity.

GB: stately squareness and beveled edges you will want to draw your finger along.

- **GB** — Square, beveled, dignified.
- **GA** — Subtle and sharp — a timeless design.
- **GC · GE** — Classical lines and sculptural V-edges.
- **GF** — A refined cylinder with a high-end finish.
- **Full range** — Basin, wall-mounted, bath and shower mixers.

Scan for datasheet

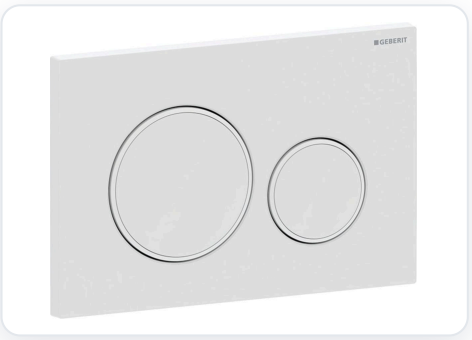
GM · GO · GR · GS · GT SERIES

Sculpture for the basin.

GR: the weight of a metal ingot cut at right angles, with gentle curves on the spout and handle.

- **GR** — Sharp edges and soft curves — a regal look.
- **GM** — Bold arches and reflective curves.
- **GO** — Flowing, organic, graceful.
- **GS · GT** — Soft modern curves, or slim and sleek lines.
- **Tall & short** — For vessel and counter basins.

Scan for datasheet



0.1 to 10 bar
Flow pressure

Duofix frame

Dual flush
Big and small flush to save water.

DUOFIX FRAME + SIGMA20 FLUSH PLATE

The part you never see, built to last.

Scan for datasheet

The Geberit Duofix frame and concealed cistern sit inside the wall; only the flush plate shows.

TECHNICAL DATA

FRAME **steel, powder-coated, 50 x 112 cm**	CISTERN **Sigma 12 cm, fully insulated**
FLUSH (FACTORY) **6 L full / 3 L reduced**	ADJUSTABLE **full 4-7.5 L, reduced 2-4 L**
FLOW PRESSURE **0.1 to 10 bar**	WC FIT **EN 33, projection up to 70 cm**

01 **Duofix frame**
Holds the wall-hung toilet; the cistern stays hidden in the wall.

02 **Dual flush**
Big and small flush to save water.

03 **Service through the plate**
Remove the plate to reach parts — no breaking tiles.

04 **50 years spare parts**
On replaceable mechanical parts of the cistern and flush plate.

- Tool-free installation and maintenance of the cistern
- Single, dual or stop-and-go flush from the front
- Connection bend adjusts 45 mm in depth without tools

Oyster LifeStyle

INDIA

A spa at home

Soft, white finish
Easy to clean and keep bright.

Since 2003

FREESTANDING BATHTUBS

A bathtub that is the centrepiece.

Scan for datasheet

Freestanding Oyster bathtubs in clean white — on display at our Panipat experience centre.

- **Freestanding design** — Place it where the bathroom looks best.
- **Soft, white finish** — Easy to clean and keep bright.
- **Many shapes and sizes** — Oval, round and classic clawfoot models.
- **Since 2003** — Made in India, with 700+ dealers worldwide.
- Cascadia: full-HD TFT display, constant-temperature heating, ozonizer, underwater lighting
- Grandeur: waterfall intake, bubble bath, water-shortage and leakage protection

TECHNICAL DATA

CASCADIA **freestanding, 1720 x 830 x 680 mm**	GRANDEUR **8 hydro jets, 1 HP motor, 1700 x 880 x 600 mm**
MATERIAL **Lucite / GP acrylic**	WASTE **automatic pop-up waste (Cascadia)**

WITHOUT
A plain shower corner with nowhere to relax.

WITH OYSTER
A long, warm soak at home — a bathroom that feels like a spa.

Many sizes

Neat built-in look

Since 2003

BUILT-IN BATHTUBS

A deep, warm soak after a long day.

Scan for datasheet

Oyster built-in bathtubs in clean white acrylic — sized for compact and large bathrooms.

- **Many sizes** — Rectangular, corner, round and P-shape models.
- **Smooth white acrylic** — Smooth, glossy Lucite acrylic finish.
- **Neat built-in look** — With optional front or side panels.
- **Since 2003** — Made in India, with 700+ dealers worldwide.
- Pillow and waste coupling (chain plug or pop-up) ordered separately for plain tubs
- Stainless-steel stand ordered separately when front or side panels are fitted

TECHNICAL DATA

SHAPES **rectangular, oval, corner, P-shape**	MATERIAL **Lucite acrylic or GP acrylic**
BENELLA **1520 x 760 x 530 mm**	PLACIDA (CORNER) **1370 x 1370 x 610 mm**

WITHOUT
Only a quick shower — never a moment to relax.

WITH OYSTER
A long, warm soak at home whenever you want.

Water and air jets

Built-in or corner

Easy controls
Simple touch panel.

See it in Panipat

WHIRLPOOL BATHTUBS

A massage bath, at the touch of a button.

Scan for datasheet

Oyster whirlpool bathtubs with water and air jets — a spa-style massage in your own bathroom.

- **Water and air jets** — Hydro and air massage in your own tub.
- **Built-in or corner** — Shapes and sizes for every bathroom.
- **Easy controls** — Simple touch panel.
- **See it in Panipat** — On display at our experience centre.
- Feather-touch digital control panel, Bluetooth, chromotherapy light and ozonizer
- Automatic pop-up waste with filler and overflow
- Safety: dry-burning protection, earth-leakage breaker, water-level sensor

TECHNICAL DATA

BODY **Lucite acrylic, SS frame (built-in models)**	WATER MASSAGE **up to 8 hydro + slim hydro jets (Mesi)**
AIR MASSAGE **up to 14 extra-slim air jets (Mesi)**	MOTORS **1100 W Koller (water), 600 W Koller with silencer (air)**
HEATER **optional 3 kW online heater**	SIZE (MESI) **1860 x 1510 x 720 mm**

Massage jets

Since 2003

OUTDOOR SPA POOLS

Your own spa on the terrace.

Scan for datasheet

Oyster outdoor spa pools for terraces, farmhouses and villas — warm water and massage jets under the sky.

- **Massage jets** — Relaxing hydro-massage for the family.
- **Insulated cabinet & cover** — Keeps heat in, dust and dirt out.
- **Farmhouses & villas** — A centrepiece for the terrace or lawn.
- **Since 2003** — Made in India, with 700+ dealers worldwide.
- Cover supplied with every model; perimeter PU insulation keeps heat in
- Paper-cartridge filtration, ozonizer, chromotherapy and air massage
- Power-saving smart meter to manage filtering and heating

TECHNICAL DATA

SHELL **PMMA sheet 3.4 mm, resin and fibre reinforced**	PREMIUM CONTROLS **Balboa (USA) control, ozone generator and online heater**
PUMPS **double pump on all models except Hydra**	AHAVA **600 L, 2050 x 1460 x 860 mm, 4 + 1 seats**
NEOSHA **1000 L, 6 seats, 2120 x 2120 x 900 mm**	ZARYA **1200 L, 2240 x 2240 x 900 mm**

PENTAIR

USA · SINCE 1966

Clean, soft water for the whole house

SAND FILTER · CARBON FILTER · SOFTENER

Sand, carbon, softener: clean, soft water.

Scan for datasheet

Sand filter removes dirt, carbon removes smell and chlorine, and the softener stops scale in pipes, taps and heaters.

WITHOUT
White scale on taps and tiles, dry-feeling skin, and scale building up in geysers.

WITH PENTAIR
Shining fittings, skin and hair that feel less dry, and less scale in geysers and pipes.

01 · 1 · Sand filter
Removes sand, silt and dirt — always first.

02 · 2 · Carbon filter
Removes chlorine, smell and colour.

03 · 3 · Softener
Fleck automatic valve; resin stops scale forming.

04 · Composite vessels
Will not rust; Pentair Structural vessels are WQA/NSF-certified.

Sand and carbon filters
Dirt out first, then chlorine, smell and colour.

Automatic control valve
Runs backwash and regeneration by itself.

Tablet salt
Topped up in the brine tank to recharge the softener.

- No metal parts touch the water - the vessel cannot rust
- Light-proof shell prevents algae growth

TECHNICAL DATA

VESSEL seamless polyethylene liner, fibreglass wound, epoxy sealed	CAPACITY 33 to 2,500 litres
HYDROTEST 100 % of vessels at 1.1 x operating pressure	DESIGN 1 lakh cycle test, burst 4 x operating pressure
COMPLIANCE PED 97/23/EC CE	WARRANTY 3 years, rust-free

THREE STAGES, THREE JOBS

What each vessel does for your home.

Inlet — Borewell or supply

Sand — Dirt out

Carbon — Chlorine and smell out

Softener — Hardness out

Your house — Clean, soft water to every tap

1 Sand filter

Takes out what you can see

- Removes sand, silt, rust flakes and muddy colour
- Protects the carbon and the softener behind it
- Keeps pump seals, tap aerators and washing-machine valves clear
- Cleans itself by backwashing - set on the valve

2 Carbon filter

Takes out what you can smell

- Removes chlorine taste and smell from supply water
- Reduces colour and organic odours
- Gentler on skin and hair in the shower
- Shields the softener resin from chlorine

3 Softener

Takes out what you cannot see

- Swaps calcium and magnesium for sodium - no white scale
- Taps, tiles and glass stay clear; less descaling
- Geysers, heat pumps and boilers keep their efficiency
- Less soap and detergent; softer laundry

WHAT YOU SEE AT HOME, AND WHAT FIXES IT

White crust on taps, showers and glass	Softener	Geyser or heat pump scaling up, slow heating	Softener
Soap that will not lather; stiff laundry	Softener	Chlorine or medicine-like smell in the bath	Carbon filter
Muddy or yellow water, silt in the tank	Sand filter	Clogged aerators and shower heads	Sand filter + softener

WHERE DOES YOUR WATER STAND?

Soft	Moderately hard	Hard	Very hard
0-60 ppm	61-120 ppm	121-180 ppm	over 180 ppm

Hardness as calcium carbonate, by the widely used USGS scale. We test your water before sizing the softener.

WHAT IS INSIDE EACH VESSEL

SAND FILTER

Graded filter sand over gravel layers

Traps particles as water passes down; backwashing lifts and rinses them out.

CARBON FILTER

Granular activated carbon

A huge inner surface holds chlorine and odour-causing compounds.

SOFTENER

Ion-exchange resin beads

Hold calcium and magnesium, release sodium; brine recharges them.

HOW OFTEN DOES THE SOFTENER RECHARGE?

Soft water per recharge, by resin size and water hardness.

SOFT WATER BETWEEN RECHARGES
resin (L) x 50,000 / hardness (ppm)

SALT PER RECHARGE
resin (L) x 120 g

DAYS SHOWN FOR
3,000 L of water a day

HARDNESS	100 L resin 12 kg salt per recharge	150 L resin 18 kg salt per recharge	200 L resin 24 kg salt per recharge
200 ppm	25,000 L every 8.3 days · 43 kg salt/month	37,500 L every 12.5 days · 43 kg salt/month	50,000 L every 16.7 days · 43 kg salt/month
300 ppm	16,667 L every 5.6 days · 65 kg salt/month	25,000 L every 8.3 days · 65 kg salt/month	33,333 L every 11.1 days · 65 kg salt/month
400 ppm	12,500 L every 4.2 days · 86 kg salt/month	18,750 L every 6.2 days · 86 kg salt/month	25,000 L every 8.3 days · 86 kg salt/month
500 ppm	10,000 L every 3.3 days · 108 kg salt/month	15,000 L every 5.0 days · 108 kg salt/month	20,000 L every 6.7 days · 108 kg salt/month
600 ppm	8,333 L every 2.8 days · 130 kg salt/month	12,500 L every 4.2 days · 130 kg salt/month	16,667 L every 5.6 days · 130 kg salt/month
800 ppm	6,250 L every 2.1 days · 173 kg salt/month	9,375 L every 3.1 days · 173 kg salt/month	12,500 L every 4.2 days · 173 kg salt/month

SIZING IT - A WORKED EXAMPLE

A building uses **3,000 L a day** of water at **400 ppm**. To recharge about every **3 days**: 3,000 x 400 x 3 / 50,000 = **72 L of resin** - choose the **100 L** softener. It gives 12,500 L between recharges (about 4 days) and uses 12 kg of salt each time - about 86 kg a month.

Worked example, not a quotation. Assumes standard softening resin removing about 50 g of hardness (as CaCO3) per litre per recharge at a salt setting of about 120 g per litre. Days and monthly salt are for 3,000 litres a day - for other use, scale the days in proportion (half the water, twice the days). The valve keeps a small reserve, so it recharges a little earlier. We test your water on site and set the valve to your hardness and daily use.

GOOD TO KNOW

Salt follows hardness, not tank size. A bigger softener recharges less often but uses more salt each time, so the salt used in a month is about the same for the same water. A bigger tank simply gives longer runs between recharges and more soft water at the peak hour.

WHICH SIZE FOR YOUR BUILDING?

Smallest of 100, 150 or 200 L that recharges about every 3 to 4 days.

WATER A DAY	200 PPM	300 PPM	400 PPM	600 PPM
1,000 L	Home unit needs 14 L	Home unit needs 21 L	Home unit needs 28 L	Home unit needs 42 L
2,000 L	Home unit needs 28 L	Home unit needs 42 L	100 L needs 56 L	100 L needs 84 L
3,000 L	Home unit needs 42 L	100 L needs 63 L	100 L needs 84 L	150 L needs 126 L
5,000 L	100 L needs 70 L	150 L needs 105 L	150 L needs 140 L	Twin / larger needs 210 L
8,000 L	150 L needs 112 L	200 L needs 168 L	Twin / larger needs 224 L	Twin / larger needs 336 L

Resin needed = water a day x hardness x 3.5 days / 50,000, rounded up to the next size. Below 50 L a smaller home softener is enough; above 200 L, twin or larger units. As a guide, a family of five uses roughly 1,000 litres a day.

MAINTENANCE SCHEDULE AND MEDIA LIFE

Look after it, and it looks after the house.

PART	WHAT IS DONE	HOW OFTEN	MEDIA LIFE	SHORTENED BY
Sand filter	Automatic backwash	every 2-3 days, or when pressure drops	Media: typically 3-5 years	Heavy silt, iron or muddy borewell water
Carbon filter	Automatic backwash	about once a week	Carbon: typically 1-2 years	High chlorine, organics or skipped backwash
Softener resin	Recharge with salt	by the hardness table	Resin: typically 5-10 years	Chlorine, iron or running out of salt
Brine tank	Top up tablet salt	check every 2 weeks	Clean the tank once a year	Damp salt bridging or mushing
Control valves	Service visit	once a year	Settings, seals and timer checked	Voltage swings, sand in the valve

Typical industry ranges, not a guarantee - the actual life of sand, carbon and resin depends on the quality of your water and how much of it passes through. We test the water at installation and at each yearly service, and tell you when media needs changing.

LOOKING AFTER IT

Salt

Keep the brine tank topped up with tablet salt; the valve draws what it needs.

Sand and carbon

Backwash automatically on the timer set at installation.

Service

A yearly check of valve settings, salt use and hardness by our team.

AIR-SOURCE HEAT PUMP + STORAGE TANK

Hot water from the air, for the whole house.

The outdoor unit takes heat from the air and stores hot water in an insulated tank for every bathroom.

Scan for datasheet

01 Saves electricity
Moves heat instead of making it — far less power than a geyser.

02 Works all year
Even on cooler days, with electric backup for faster heating.

03 Safe
Pressure, temperature and current protection, plus a T&P relief valve.

04 One system, every bathroom
Back-to-back hot showers for the family.

₹13 a day instead of ₹56 with a geyser, for 200 litres a day heated from 25 to 55 °C at ₹8 a unit (heat pump COP 4.2). Your saving depends on how much hot water the house uses.

Residential
Split units with matched tanks, and all-in-one units.

Commercial
Hotels, hostels, hospitals and gyms.

High temperature
For processes that need hotter water.

Swimming pool
Pool heating through the year.

HEAT PUMP OR ELECTRIC GEYSER

One unit of power in. About four units of heat out.

1 Air in
A fan draws outside air across the evaporator - even cold air holds heat.

2 Heat lifted
The refrigerant boils, the compressor squeezes it and its temperature rises.

3 Into the water
A heat exchanger passes that heat into the water in the tank.

4 Ready, stored
An insulated tank holds the hot water for every bathroom.

1 unit of electricity + **3.2** units of free heat from the air = **4.2** units of heat in the water (COP 4.2)

Geyser
1 unit in = 1 unit of heat

THE SAVING IN KILOCALORIES - A FAMILY OF FOUR

HEAT TO WARM THE WATER	200 LITRES, 25 TO 55 °C	IN ELECTRICITY	GEYSER USES	HEAT PUMP USES	FREE FROM THE AIR
1 kcal	**6,000 kcal**	**6.97 units**	**6.97 units**	**1.66 units**	**4,570 kcal**
raises 1 litre of water by 1 °C	200 L x 30 °C	860 kcal = 1 unit (kWh)	every kcal paid for	1,430 kcal from electricity	76 % of the heat, at no cost

200 LITRES A DAY, THREE WAYS

₹56 a day, electric geyser

₹44 a day, gas

₹13 a day, GHP+ heat pump

0.5 kW of rooftop solar covers a heat pump's daily power - a geyser needs 2.09 kW, 4.2 times the roof

WHERE THE 6,000 KCAL IN THE TANK COMES FROM

1,430 kcal from electricity | 4,570 kcal taken free from the outdoor air

Geyser: all 6,000 kcal paid for as electricity

TEN YEARS OF HOT WATER FOR A FAMILY OF FOUR

ELECTRIC GEYSER
₹2,03,720

GHP+ HEAT PUMP
₹48,500

STAYS IN YOUR POCKET
₹1,55,210
at today's ₹8 tariff; more if power prices rise

WHY IT COSTS LESS TO RUN

Most of the heat is free
About three quarters of the heat in the water comes from the air.

Works day and night
Unlike solar, it does not need sunshine or a clear sky.

Stored, not instant
It heats the tank steadily, so the meter never sees a 2-3 kW geyser load per bathroom.

Pays back fastest on big draws
The more hot water a building uses daily, the bigger the yearly saving.

WHAT HOT WATER COSTS TO MAKE

From a family home to a 10,000-litre building.

Heat needed in kilocalories, the electricity it takes with a geyser and with a GHP+ heat pump, and what that costs a year.

HOT WATER A DAY	HEAT NEEDED	GEYSER / HEAT PUMP	RUNNING COST A YEAR — GEYSER / HEAT PUMP	SAVED A YEAR	CO_2 SAVED
300 L Family of six (50 L a person)	9,000 kcal a day	10.5 / 2.5 units a day	₹30,544 / ₹7,272	₹23,272 2,909 units	2.1 t
500 L Villa or guest house	15,000 kcal a day	17.4 / 4.2 units a day	₹50,907 / ₹12,121	₹38,786 4,848 units	3.4 t
1,000 L 10-room hotel (100 L a room)	30,000 kcal a day	34.9 / 8.3 units a day	₹1,01,813 / ₹24,241	₹77,572 9,696 units	6.9 t
2,000 L 40-bed hostel (50 L a person)	60,000 kcal a day	69.7 / 16.6 units a day	₹2,03,626 / ₹48,482	₹1,55,144 19,393 units	13.8 t
3,000 L 30-room hotel (100 L a room)	90,000 kcal a day	104.6 / 24.9 units a day	₹3,05,439 / ₹72,724	₹2,32,716 29,089 units	20.7 t
5,000 L 50-bed hospital (100 L a bed)	150,000 kcal a day	174.3 / 41.5 units a day	₹5,09,066 / ₹1,21,206	₹3,87,859 48,482 units	34.4 t
10,000 L 200-person hostel or factory	300,000 kcal a day	348.7 / 83.0 units a day	₹10,18,131 / ₹2,42,412	₹7,75,719 96,965 units	68.8 t

WORK IT OUT FOR YOUR BUILDING

HEAT NEEDED A DAY
litres x temperature rise = kcal

UNITS WITH A GEYSER
kcal / 860

UNITS WITH A HEAT PUMP
kcal / 860 / 4.2

SAVING A YEAR
units saved a day x ₹ a unit x 365

Water heated from 25 to 55 °C (a 30 °C rise), electricity at ₹8 a unit, heat pump COP 4.2, a geyser turning every unit into heat. CO_2 at about 0.71 kg per unit of grid power (CEA grid average). Planning figures per room, bed and person from our sizing guide. Your saving depends on how much hot water the building really uses and on your tariff - commercial tariffs are often higher, which makes the saving bigger. We work it out from your occupancy and your bill.

TYPES OF HEAT PUMP

Same principle, different heat sources.

Every heat pump moves heat from somewhere cooler to somewhere warmer. What changes is where the heat comes from and how hot the water needs to be.

Air to water

IN THE GHP+ RANGE

Takes heat from the outdoor air and puts it into water.

BEST FOR	Homes, hotels, hospitals, hostels - hot water and space heating.
WHY CHOOSE IT	Hot water to 60 °C (up to 75 °C with the backup heater on the All in One); works from -15 to 43 °C ambient.
WITH US	GHP+ home units; commercial units on a project basis

Swimming-pool heating

PROJECT BASIS

An air-to-water heat pump made for pool water, warming it a few degrees at a time as it circulates through the unit.

BEST FOR	Private, hotel and club pools - to swim comfortably through the cooler months.
WHY CHOOSE IT	Pool water is kept at about 26-30 °C, a low temperature where a heat pump works at its most efficient.
WITH US	Project basis - sized from pool area, depth and cover

Water to water

FOR REFERENCE

Takes heat from water - a borewell, a lake, or the warm return of a chiller - instead of air.

BEST FOR	Buildings with a chiller or process heat to recover; sites with a steady water source.
WHY CHOOSE IT	The source stays at a steady temperature, so output and efficiency stay steady through the year.
WITH US	Described for reference - not in our current supply

Ground source

FOR REFERENCE

A closed loop of pipe in boreholes or trenches draws heat from the ground, which stays at an even temperature all year.

BEST FOR	Large sites with land or space to drill; long-term, high-efficiency plant.
WHY CHOOSE IT	Highest year-round efficiency, at a higher installation cost for the ground loop.
WITH US	Described for reference - not in our current supply

CO_2 (R744)

FOR REFERENCE

Uses carbon dioxide as the refrigerant, in a transcritical cycle.

BEST FOR	Very hot water from cold inlet water - laundries, kitchens, food plants.
WHY CHOOSE IT	A natural refrigerant with a GWP of 1; at its best making water around 80-90 °C from a cold supply.
WITH US	Described for reference - not in our current supply

EVI (enhanced vapour injection)

FOR REFERENCE

The compressor takes a second injection of refrigerant vapour part-way through compression.

BEST FOR	Very cold climates and high water temperatures.
WHY CHOOSE IT	Keeps output and efficiency up in deep cold, where a standard compressor falls away.
WITH US	Described for reference - not in our current supply

Heat pump ERV

FOR REFERENCE

A fresh-air ventilator that recovers heat from the stale air going out, with a small heat pump that heats or cools the fresh air coming in.

BEST FOR	Closed rooms that need fresh air - bedrooms, classrooms, offices, clinics.
WHY CHOOSE IT	Fresh air without throwing away the heating or cooling; also dries the incoming air.
WITH US	Described for reference; for heat recovery without a heat pump, see LUNOS and InAir

Radiant heating

IN THE GHP+ RANGE

Low-temperature warm water from a heat pump runs through underfloor loops or radiators.

BEST FOR	Villas and apartments that want warm floors in winter.
WHY CHOOSE IT	Underfloor flow at 32-38 °C, where a heat pump is at its most efficient; radiators at 45-50 °C.
WITH US	GHP+ monoblock with GHP+ underfloor pipe

We supply GHP+ home units, and commercial and swimming-pool heat pumps on a project basis, designed for the building. The other types are described for reference.

PROJECTS AND COMMERCIAL WORK

Anywhere a building draws hot water every day.

The more hot water a building uses, and the more regularly it uses it, the faster a heat pump pays for itself. These are starting figures - the real number comes from occupancy and fittings.

Hotels and resorts
100 L a room
Peak at 7 a.m. and again at 7 p.m. Store for the peak hour, not the day.

Hospitals and nursing homes
100 L a bed
Hot water is not optional - specify two units so one can be serviced.

Hostels and staff quarters
50 L a person
Heavy, predictable morning draw. The biggest savings of any application.

Gyms and spas
30 L a member a visit
Long showers, short windows. Storage matters more than output.

Salons
15 L a chair an hour
Small draw, all day. A 300 L tank and one GHp-008A1 usually covers it.

Canteens and kitchens
20 L a cover
Wash-up water at 55 °C. Check whether the dishwasher needs hotter.

Factories
by process
Wash-down, pre-heat, process water. Send us the schedule and we will size it.

Swimming pools
by volume
A different duty - pool heating runs at a lower temperature, with COP 5 to 20.

BUILT INTO GHP+ HEAT PUMPS AND TANKS

Saves electricity about ¼ of a geyser*	**Heat from the air** air-source technology	**Day & night** rain or shine, unlike solar	**Quiet running** 52 dB(A)	**Splash-proof** IPX4, made for outdoors	**Fast hot water** 165 litres an hour
Low-ambient operation down to −15 °C	**Keeps water hot** 45 mm PU insulation	**Backup heater** 3 kW for the coldest days	**Pressure-rated** 6 bar, works with pumps	**Enamel-lined tank** resists corrosion	**Magnesium anode** extra protection

WHAT A COMMERCIAL JOB LOOKS LIKE

01
Survey and sizing
We measure the draw, look at the plant room, and put a written schedule on paper.

02
Written proposal
Units, tanks, pipework, electrical load, what it costs to run and what it saves.

03
Installation
Our team, or your contractor with our drawings and our engineer on commissioning.

04
Service
A yearly service visit, and one number to call for the whole system.

Feature values vary by model - the figures shown are for the GHP+ split range and tanks; see each family's table.

Multilayer pipe | **Made for hot water**

MULTILAYER PIPE · BRASS PRESS FITTINGS · MANIFOLDS

Scan for datasheet

Hot-water plumbing built to last.

Multilayer pipe with brass press fittings, manifolds and ball valves — made for hot water from your heat pump.

BENEFITS FOR YOU

No rust in the water
Multilayer pipe does not corrode like GI.

Hot water stays hot
Insulated lines lose less heat on the way to the tap.

Neat, leak-tight joints
Pressed brass fittings, no threading.

One bathroom at a time
Manifold lines let you isolate a room for repairs.

01 **Multilayer pipe**
Aluminium core: no rust, low expansion.

02 **Brass press fittings**
Pressed joints, no threading.

03 **Manifolds and valves**
One line to every bathroom, easy to isolate.

04 **Made for hot water**
Works with GHP+ heat pumps and geysers.

Pipe and fittings by Heliroma

GHP+ PLUMBING · WHICH PIPE SIZE WHERE

The right diameter for every point in the house.

Sizes, wall and inside diameters from the HELIROMA HELIKLIMA multilayer datasheet; the uses are our planning guide. We size every job from the drawings - number of bathrooms, fittings, pump and pressure.

PIPE	TYPICAL USE	WALL	INSIDE	FLOW	WATER HELD
16 mm	**Single points** Basin, WC cistern, bidet spray, kitchen tap - short drops from the manifold.	2 mm wall	12 mm inside	10 L/min at 1.5 m/s	0.11 L held per metre
20 mm	**One bathroom** Shower mixer, washing machine, a bathroom branch; heat pump flow and return on home split units.	2 mm wall	16 mm inside	18 L/min at 1.5 m/s	0.20 L held per metre
25 mm	**Big showers and two bathrooms** Rain and ceiling showers, bath fillers, a line feeding two bathrooms, manifold feeds.	2.5 mm wall	20 mm inside	28 L/min at 1.5 m/s	0.31 L held per metre
32 mm	**A flat or a floor** Main feed to a flat or a villa floor; tank outlet for a house.	3 mm wall	26 mm inside	48 L/min at 1.5 m/s	0.53 L held per metre
40 mm	**Small buildings** Risers in a guest house or small hotel; commercial heat pump flow and return.	4 mm wall	32 mm inside	72 L/min at 1.5 m/s	0.80 L held per metre
50 mm	**Hotels and hostels** Main risers and plant-room headers.	4.5 mm wall	41 mm inside	119 L/min at 1.5 m/s	1.32 L held per metre
63 mm	**Large plant** Hospital and hotel mains, central plant headers, return loops.	6 mm wall	51 mm inside	184 L/min at 1.5 m/s	2.04 L held per metre

GOOD PRACTICE

Manifold, not a chain

A home-run line to each bathroom keeps pressure and temperature even when two showers run together.

Size the hot line small

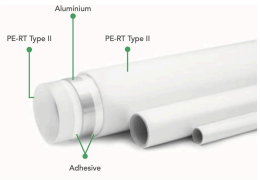
The smallest pipe that carries the flow holds the least cold water - hot arrives sooner and less is wasted.

Bigger for rain showers

A ceiling or rain shower draws far more than a hand shower - give it 25 mm and a pressure pump.

Add a return loop

On long runs and larger houses, a small loop with a circulator keeps hot water at every tap.



Multilayer pipe, 16-63 mm
Coils up to 32 mm for long runs with no joints in the wall.

Brass manifolds
One line to every bathroom.

Brass press fittings
Elbows, tees and adaptors.

Flow shown at 1.5 m/s, a common design speed for quiet supply lines. Water held per metre is the cold water that must run off before hot arrives. Planning guide only - final sizes depend on pressure, pipe length and how many points run at once.

GHP+ PLUMBING · HOW IT COMPARES

PE-RT / AL / PE-RT: best or equal-best on every line.

	GHP+ PE-RT / AL / PE-RT	PEX / AL / PEX	CPVC	GI (galvanised iron)
Plastic layers	✓ PE-RT type II - performs as made, no cross-linking step	× PEX - needs a cross-linking step; quality depends on how well it is cross-linked	× Chlorinated PVC, rigid	× Steel with a zinc coat
Joints	✓ Pressed brass, inspection window; pressure-test straight away	= Press fittings	× Solvent cement - wait for it to cure before testing	× Threaded with tape or hemp - leak-prone
Installing	✓ Flexible: uncoils and bends easily by hand or tool, then holds its shape	× Holds its shape, but a stiffer pipe to uncoil and bend (typical)	× Rigid - a fitting at every turn	× Rigid - heavy, a fitting at every turn
Expansion (mm/m.°C)	✓ 0.026 - the aluminium core holds it	= about the same - aluminium core	× about 0.06-0.07 (typical)	× about 0.012 - but rusts
Oxygen barrier	✓ Yes - laser-welded aluminium	= Yes - aluminium	× No	× Rusts on the inside
Inside wall over the years	✓ 0.007 mm smooth - no scale, no corrosion	= Smooth	= Smooth	× Rust and scale narrow the bore
Cold and knocks	✓ Tough; works from -40 °C, laid down to -10 °C	= Tough	× Brittle in the cold; cracks on impact	= Tough
Hot water rating	✓ 70 °C at 10 bar; 95 °C short-term; 80 bar burst	= Similar rating	× Pressure rating falls as temperature rises (typical)	× Hot water speeds up corrosion
End of life	✓ PE-RT is a thermoplastic - 100 % recyclable	× Cross-linked PEX cannot be re-melted	× Limited recycling	= Recyclable
Best or equal-best	**9 of 9**	**6 of 9**	**1 of 9**	**2 of 9**

Why PE-RT/AL/PE-RT over PEX/AL/PEX

- PE-RT type II needs no cross-linking - consistent quality straight from the extruder
- More flexible - quicker to uncoil, bend and fix on site
- A thermoplastic: 100 % recyclable at end of life

Why multilayer over CPVC

- No solvent glue, no fumes, no curing wait before the pressure test
- Bends instead of a fitting at every corner - fewer joints, fewer leak points
- Does not turn brittle in a cold winter or crack when knocked

Why multilayer over GI

- Never rusts - clean water, no brown first flush
- The bore stays full size; no scale build-up
- Light: a coil carried by one person, no threading on site

RATED FOR HOT WATER - HELIROMA HELIKLIMA DATASHEET

70 °C · 10 bar	80 °C · 10 bar	95 °C	80 bar	-40 °C	16-110 mm
hot and cold water	heating, closed circuit	short-term peak	burst pressure	minimum operating	sizes

A PRESSED JOINT IN FOUR STEPS

1 Cut
Square, with a pipe cutter.

2 Calibrate
Round and chamfer the end so the O-rings are not damaged.

3 Insert and check
Push the pipe home - the window in the steel sleeve shows it is fully in.

4 Press
One press with the jaw - the joint is made, ready for the pressure test.

GHP+ multilayer figures from the HELIROMA HELIKLIMA datasheet. Figures for PEX/AL/PEX, CPVC and GI are typical values for those materials, for comparison only; individual brands vary. ✓ best, = equal-best, × weaker.

GHP+ PLUMBING · INSULATED PIPE

Insulated pipe: hot stays hot, cold stays dry.

The same five-layer multilayer pipe, factory-sleeved in grey polyethylene foam (6 or 10 mm) and a red or blue film.

Hot water arrives hotter
Less heat lost on the way, so the heat pump works less and the tap runs hot sooner.

No sweating cold lines
Insulation keeps cold pipes above dew point - no drips in false ceilings or damp in walls.

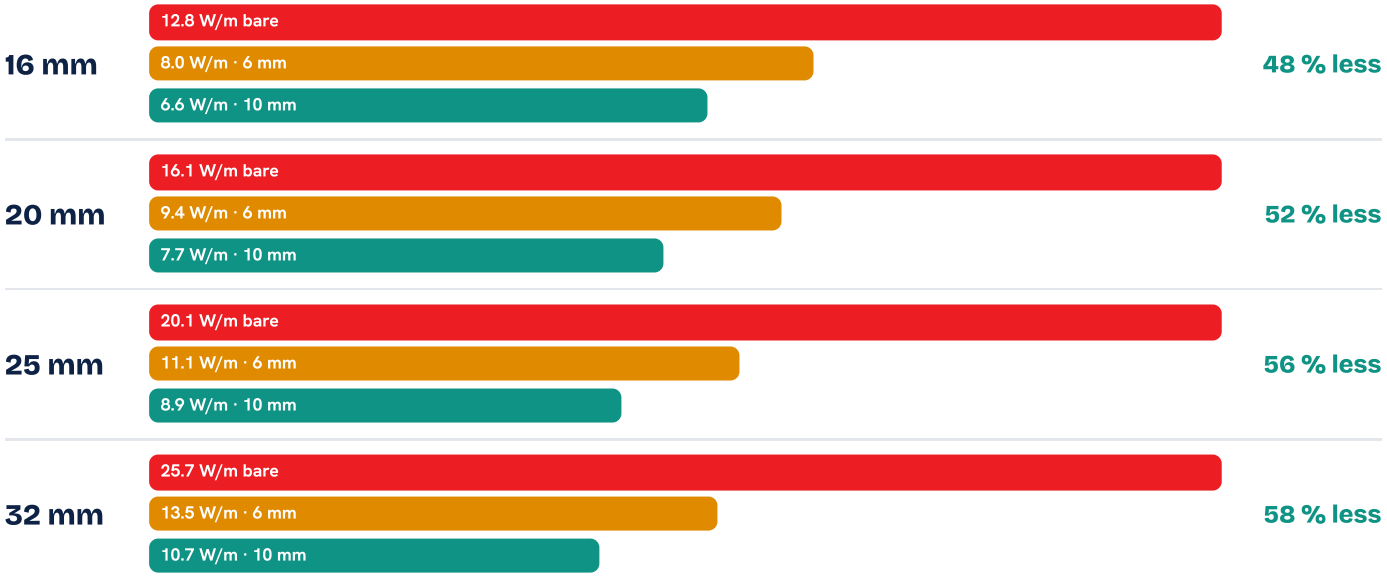
Red and blue
Hot and cold told apart at a glance - before plaster and years later during repairs.

Factory-sleeved
PE foam (λ 0.037 W/m.K) and a UV-protected film applied in the factory - no site lagging, no gaps.

Quieter
The sleeve damps vibration and flow noise where pipes pass through walls.

Protected in the wall
Room for the pipe to expand in the chase, and a buffer against plaster and cement.

HEAT LOST PER METRE OF HOT LINE (WATER 55 °C, ROOM 25 °C)



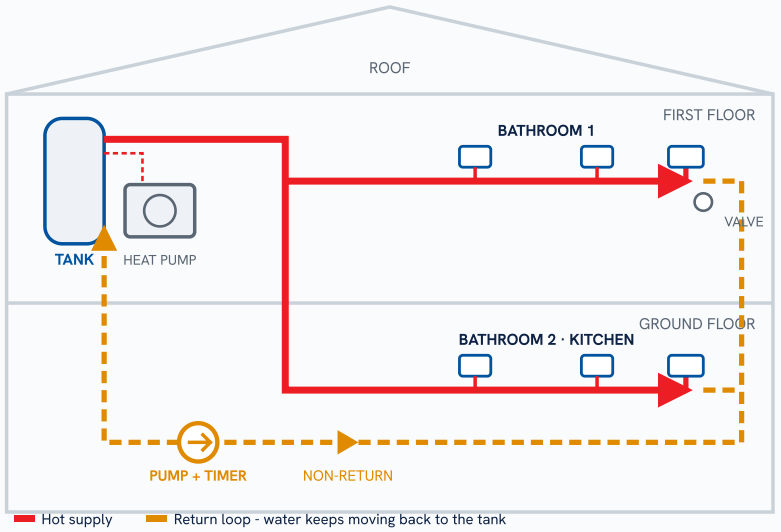
WHERE TO USE INSULATED PIPE

- Every hot line from the tank to the bathrooms
- Heat pump flow and return, between the unit and the tank
- Cold lines in false ceilings and near AC ducts, where they would sweat
- Exposed runs on terraces and shafts - the film is UV-protected
- Chilled-water lines from a GHP+ monoblock in summer

Worked from U = 2π / [ln(Do/Dp)/λ + 2/(h·Do)], with foam λ 0.037 W/m.K from the HELIROMA insulated datasheet and still-air h = 8.52 W/m^{2}K; the pipe wall itself is ignored. A 20 m hot line held hot for 16 hours a day loses about 5.1 kWh bare and 2.5 kWh with 10 mm insulation.

GHP+ PLUMBING · TAP-TO-TAP RECIRCULATION

Hot water at every tap, the moment you open it.



HOW IT IS DESIGNED

Return line
16 or 20 mm, insulated, from the last tap back to the tank's return connection.

Pump
A small hot-water circulator with a non-return valve, on a timer or thermostat.

Balancing
A valve on each branch so every bathroom gets its share of the flow.

Temperature
Tank at 55-60 °C, return at 50 °C or more.

WITHOUT A LOOP - COLD WATER POURED AWAY BEFORE HOT ARRIVES (20 MM LINE)

5 m	10 m	15 m	25 m
1.0 L poured away · 10 s wait at 6 L/min	2.0 L poured away · 20 s wait at 6 L/min	3.0 L poured away · 30 s wait at 6 L/min	5.0 L poured away · 50 s wait at 6 L/min

Benefits

- ✓ Hot water at every tap within seconds - even the far bathroom
- ✓ No cold water run to waste - about 2 L every time on a 10 m line
- ✓ Hotels: guests get hot water at the first turn, every room, every floor
- ✓ Works with any tank and heat pump; one small pump does the whole house
- ✓ Mixers and thermostatic valves get steady hot water, so temperatures stay even

Things to plan for

- ! A second pipe to lay and lag - plan it before plaster
- ! The loop loses heat all the time it runs - insulate it and run the pump on a timer or thermostat
- ! A small pump uses some power and needs a yearly check
- ! A loop left lukewarm can breed bacteria - keep the return at 50 °C or more
- ! An oversized pump is noisy and wears the pipe - size it to the loop

What the loop costs to keep hot

A 40 m loop of 20 mm pipe with 10 mm insulation loses about 308 W. Run 6 hours a day on a timer, that is 1.8 kWh of heat - about 0.44 units with a GHP+ heat pump, roughly ₹4 a day at ₹8 a unit. Bare pipe would lose about twice as much; running 24 hours, four times as much.

Water held per metre and heat loss from the pipe pages above (20 mm HELIKLIMA, 16 mm inside; 7.7 W/m with 10 mm insulation at 55 °C in a 25 °C room). Diagram is schematic - we draw the loop for your house from the plans.

adani Solar Panasonic

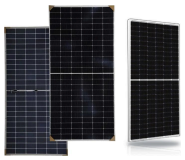
INDIA · JAPAN

Rooftop solar power plants

ROOFTOP SOLAR POWER PLANT

Make your own power on your own roof.

Solar panels turn daylight into electricity; an inverter turns it into the power your house uses. Whatever you do not use by day goes to the grid and comes back to you as a credit.



Solar panels on the roof structure

Inverter

Battery storage, where back-up is needed

THREE KINDS OF PLANT

On-grid

Panels + grid inverter, connected to the power company through a net meter.

+ Lowest cost - no batteries
+ Exported units credited on the bill
- Switches off in a power cut, for line safety

Hybrid

Grid-connected, with a battery bank that keeps chosen circuits running.

+ Net metering and back-up together
+ Lights, fans and Wi-Fi run through a cut
- Batteries add cost and need replacing in time

Off-grid

Panels and batteries only, with no grid connection.

+ Power where the grid is weak or absent
+ Farmhouses, pump sets, remote sites
- Sized for the worst season; largest battery bank

WHAT IT DOES FOR YOU

Lower power bills
The roof makes much of the power the house uses by day.

Net metering
Units you do not use go to the grid and are credited on the bill.

Heat pump on sunshine
About 0.5 kW of panels covers a home GHP+ heat pump.

Cooler top floor
Panels shade the roof slab from the summer sun.

Low upkeep
No moving parts - rinse the panels with water every couple of weeks.

Long life
Panels typically carry 25-year performance warranties.

WHAT EACH SIZE GIVES - A WORKED EXAMPLE

3 kW
Home

Units a day	about 12
Units a month	about 360
Bill saved a month	₹2,880
Bill saved a year	₹34,560
Shadow-free roof	~240 sq ft
CO_2 avoided a year	~3.1 t

5 kW
Large home

Units a day	about 20
Units a month	about 600
Bill saved a month	₹4,800
Bill saved a year	₹57,600
Shadow-free roof	~400 sq ft
CO_2 avoided a year	~5.1 t

10 kW
Villa, shop

Units a day	about 40
Units a month	about 1,200
Bill saved a month	₹9,600
Bill saved a year	₹115,200
Shadow-free roof	~800 sq ft
CO_2 avoided a year	~10.2 t

25 kW
School, hotel, factory

Units a day	about 100
Units a month	about 3,000
Bill saved a month	₹24,000
Bill saved a year	₹288,000
Shadow-free roof	~2,000 sq ft
CO_2 avoided a year	~25.6 t

Up to ₹78,000

Central subsidy for homes under PM Surya Ghar: ₹30,000 a kW for the first 2 kW and ₹18,000 for the third kW, applied for on the national PM Surya Ghar portal. Homes with their own roof and an active power connection; we help with the application.

HOW WE DO IT

1. **Survey** - Roof, shade and your last 12 months of bills.
2. **Design** - Plant size, panel layout, structure and cable route.
3. **Install** - Structure, panels, inverter, earthing and protection.
4. **Net meter** - We guide the application with the power company.
5. **Monitor** - Generation on the inverter app; a yearly check.

Worked example, not a quotation: about 4 units a day for each kW of panels (a typical yearly average for Haryana - more in summer, less in winter and on hazy days), at ₹8 a unit, and about 0.7 kg of CO_2 a unit from the grid. Subsidy as published for the PM Surya Ghar scheme in 2026; terms are set by the government and can change - we check them when you apply.

GERMANY

Drainage channels for buildings, landscape and traffic

Polymer concrete

Every load class

Design gratings

POLYMER-CONCRETE CHANNEL DRAINS

Rainwater gone, from city streets to container yards.

Scan for datasheet

MEA (Germany) channel drains in polymer concrete, with gratings for every load.

BENEFITS FOR YOU

Dry driveways and parking
Rainwater is carried away as it falls.

Built for the load
A channel for every surface, from footpath to container yard.

Lasts outdoors
Polymer concrete resists frost and chemicals.

Looks finished
Steel, cast-iron and slot gratings to suit the design.

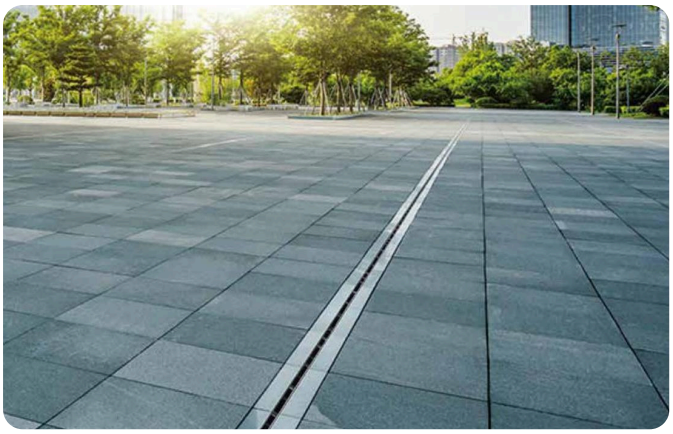
01 **Polymer concrete**
Strong, light and resistant to frost and chemicals.

02 **Every load class**
From A15 footpaths to F900 container yards.

03 **Design gratings**
Steel, cast-iron and slot gratings.

04 **Driveways to highways**
Homes, parking, city and traffic areas.

Drainage channels for buildings, landscape and traffic



MEA® TOPSLOT SLOT DRAIN

A drain you barely see.

TOPSLOT shows only a slim slot on the surface — the channel hides under the paving.

- **Almost invisible** — A narrow slot that blends into stone, tiles and pavers.
- **Self-cleaning flow** — Smooth polymer-concrete channel keeps water moving.
- **Up to class D400** — From footpaths to driveways and service roads.
- **Middle, side or double slot** — Choose the slot to suit the paving design.
- **For premium spaces** — Walkways, façades, schools, hospitals and housing communities.

Scan for datasheet

MEA® DESIGN GRATINGS

Drainage that is part of the design.

Cast-iron design gratings in classic patterns — for landscapes, plazas and premium homes.

- **Eight patterns** — Anise, Regular Joe, Sunset, Argo, Locust, Janist, Wave and Oblio.
- **Wheelchair friendly** — ADA compliant, designed for wheelchair users.
- **Natural rust or KTL coat** — Weathered look or anti-rust finish.
- **Classes A15 to D400** — From garden paths to driveways.
- **Polymer-concrete channel** — Strong, light and long-lasting underneath.

Scan for datasheet

MEA® LINE / GARD

Neat drains for home driveways and gardens.

MEALINE and MEAGARD: easy-to-fit channels for houses, gardens and landscaping.

- **Car-proof** — MEAGARD takes the weight of a car — up to class C250.
- **Little digging** — Low heights of 75-150 mm.
- **Tongue and groove** — Quick, precise installation.
- **Grating choices** — Galvanised, ductile cast iron or stainless steel.
- **Full accessories** — End caps and outlet connectors.

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MEAGARD II

Home and garden areas that drain in one line.

MEAGARD II polymer concrete drainage channels for home and garden areas.

- **Polymer concrete body** — Robust, weatherproof and frost-resistant.
- **Up to load class B 125** — Cars and light, slow traffic.
- **100 mm clear width** — With covering grating included.
- **Grating choice** — Galvanised steel, stainless steel or cast iron.

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EN 13564
Standard

Two flaps

Pipe or floor slab

DN 50 to DN 200

STAUFIX

When the sewer rises, your floor stays dry.

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The KESSEL Staufix backwater valve closes automatically when the sewer backs up — so dirty water cannot come up through basement drains.

TECHNICAL DATA

NOMINAL SIZES DN 100, 125, 150, 200	INSTALLATION exposed pipe or floor slab
COVER tileable or black cover plate	STANDARD EN 13564

01 Two flaps
One closes automatically on backflow; the second is a manual emergency closure.

02 EN 13564
European standard for backwater valves.

03 Tool-free maintenance
Lockable cover closes with one hand.

04 Pipe or floor slab
For an exposed drain pipe or set into the floor.

05 DN 50 to DN 200
For faecal-free drain lines: floor drains, basins, washing machines.

- Floor-slab version tested and certified radon-proof
- Installation kit with a vertically adjustable upper section

Odour trap | Rodent stop | Foam stop | Retrofittable

MULTISTOP

Drain dried out? No smell, no pests.

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KESSEL Multistop is an odour trap insert for drains that dry out often — it also stops rodents and foam.

- **Odour trap** — Ideal for drains that often dry out.
- **Rodent stop** — Keeps rats and pests out of the drain.
- **Foam stop** — Holds back foam rising up the pipe.
- **Retrofittable** — Fits installed KESSEL System 100, 125 and 200 drains.
- **Made in Germany** — Polymer insert by KESSEL.

BENEFITS FOR YOU

No sewer smell
The odour trap works even when the drain dries out.

No rats or cockroaches
The rodent stop keeps pests in the pipe.

No foam in the room
Foam rising up the pipe is held back.

No breaking the floor
Fits into KESSEL drains already installed.

WITHOUT
Basement, terrace and utility drains that dry out and let sewer smell and pests in.

WITH KESSEL MULTISTOP
A simple insert keeps smell, pests and foam out of the room.

K 3 (EN 1253-1) Load class | Level-entry shower | One floor slope | Removable grate

SHOWER CHANNELS

A walk-in shower with a single clean line.

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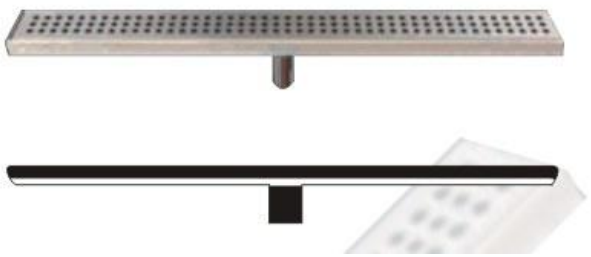
KESSEL shower channels drain the whole floor through one slim line — so the shower can be level with the bathroom floor.

- **Level-entry shower** — No step, no tray — easy for children and elders.
- **One floor slope** — Simple tiling with a single, even fall to the channel.
- **Removable grate** — Lift out to clean the trap in seconds.
- **German engineering** — Made by KESSEL, drainage specialists.
- Complete set: factory-fitted waterproofing membrane, sound and settlement absorbers
- Megastop mechanical odour trap with water seal
- Finishes include stainless, black and brushed bronze

TECHNICAL DATA

MODEL **Linearis Infinity**	INSERT **AISI 316L stainless steel**
HEIGHT **60 mm with side outlet (90 mm version)**	LENGTHS **800 to 1,100 mm, extendable**
CORNERS **30°, 45° and 90° connectors**	LOAD CLASS **K 3 (EN 1253-1)**



SS SHOWER CHANNELS

Stainless shower channels, made to fit your tiles.

Nugreen shower channels and tile-grate drains for bathrooms in all types of tiled buildings.

- **SS 304 / 316** — Pickle-passivated stainless steel.
- **Sloped channels** — Water runs to the outlet; nothing stands.
- **Flow 30 to 60 LPM** — Sized for shower flow.
- **400 to 1000 mm long** — Widths 70 and 100 mm.
- **Centre, end or side outlet** — Eight grating designs, plus tile-grate.

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STAINLESS FLOOR DRAINS

Hygienic floor drains in stainless steel.

ATT Inox floor drains for kitchens, bathrooms, basements and wash areas — wherever a hygienic stainless solution is needed.

- **AISI 304 or 316L** — Austenitic stainless steel.
- **Made to EN 1253** — European standard for floor drains.
- **Strainer and odour trap** — Strainer lifts out; trap keeps sewer smell back.
- **Square or round tops** — 150×150, 200×200 mm, Ø166 or Ø200 mm.
- **Outlets DN 50 to DN 110** — Vertical or horizontal.

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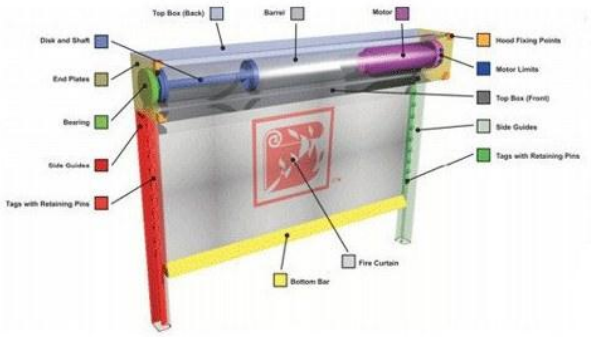

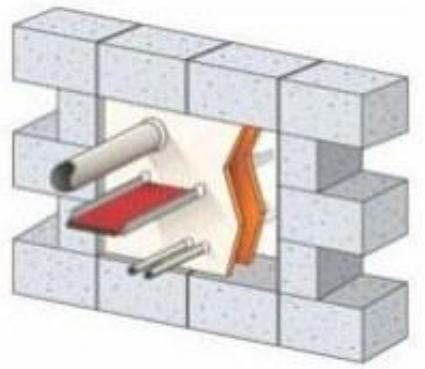

AUTOMATIC FIRE CURTAINS

A fire barrier that drops when needed.

Automatic fire curtains roll down to contain fire and smoke, linked to the building's fire alarm system.

- **Certified to BS 476 Part 22** — Single rollers up to 6 m wide.
- **No centre posts** — Wide openings in a single span.
- **Gravity fail-safe** — Closes even without mains power.
- **24 V battery backup** — In all control panels.
- **1 or 4 hour hatch curtains** — For serveries and hatchways.

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FIREX FB 250 CABLE FIRE BARRIER

Stop fire travelling along cable routes.

Firex FB 250 seals cable and service openings through walls, floors and control-panel floors.

- **Up to 4 hours rated** — 200 mm barrier; 100 mm gives 2 hours.
- **Mineral wool boards** — Coated with Firex intumescent coating, sealed with FBS Fireseal 73.
- **Halogen free, low smoke** — Non-toxic, asbestos free.
- **Easy to retrofit** — Pass new cables through and reseal.
- **Tested to UL 1479, IS 12458** — Does not reduce cable current rating.

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LUNOS

GERMANY

Room ventilation with heat recovery

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LUNOS EGO · VENTILATION WITH HEAT RECOVERY

Fresh air in, heat kept in.

One compact through-the-wall unit that supplies and extracts air with two fans, recovering the heat - for bathrooms, kitchens and utility rooms.

- **Heat recovery** — Up to 92 % with a ceramic heat exchanger.
- **Very low power** — 1.9 to 6.3 W.
- **Fits a 162 mm core** — Ideal for renovations; walls from 300 mm.
- **Two modes** — Heat recovery or 45 m^3/h exhaust.
- Ceramic regenerative heat exchanger with two EC fans
- DIBt approval; suits cellar rooms like laundries and cellar bathrooms

TECHNICAL DATA

AIR FLOW **5-20 m^3/h heat recovery, 45 m^3/h exhaust**	HEAT RECOVERY **up to 92 %**
POWER **1.9-6.3 W**	CORE HOLE **162 mm, wall min 300 mm**
SUPPLY **12 V DC SELV**	ENERGY CLASS **A**

92 %
heat recovery

1.9 W
from

162 mm
core hole

A
energy class

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LUNOS SILVENTO EC · EXHAUST FAN

Seven speeds, near-silent.

An EC exhaust fan for bathrooms, kitchens and utility rooms, with sensor boards that run it on demand.

- **Seven levels** — 15 to 100 m^3/h on the basic board.
- **Sensors** — Humidity, temperature, and VOC on Comfort+.
- **Low power** — 1.7 to 14.5 W.
- **Splash-proof** — IPX5, allowed in bathroom zones 1 and 2.
- Comfort boards sense humidity and temperature; Comfort+ adds VOC/CO_2
- Allowed in zones 1 and 2 of bathrooms (VDE 100)
- RGB LED shows filter change and diagnostics

TECHNICAL DATA

LEVELS **7 levels, 15 to 100 m^3/h (Cellar board up to 60)**	POWER **1.7-14.5 W**
SUPPLY **200-240 V AC**	PROTECTION **IPX5**
APPROVAL **DIBt Z-51.1-215**	

7
speed levels

100 m³/h
max

IPX5
splash-proof

DIBt
approved

SMARTCLEAN AUTO BIN S2 · ROBOT VACUUM AND MOP

Floors that clean themselves.

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A robot that vacuums and mops in one pass and empties itself into its dock - weeks without touching the dust bin.

- **9000 Pa suction** — In Max mode, for dust and pet hair.
- **LiDAR 3.0** — Maps the home in about 5 minutes.
- **Up to 65 days** — Hands-free with the 4-litre dock bag.
- **Up to 5 hours** — Runtime on a 5,000 mAh battery.
- 3S mopping for tile, marble, wood and carpet
- Smart Life app; Alexa and Google Assistant voice control

9000 Pa
suction

LiDAR 3.0
navigation

65 days
hands-free

5 h
runtime

TECHNICAL DATA

SUCTION up to 9000 Pa	NAVIGATION AI LiDAR 3.0, maps in 5 minutes
BATTERY 5,000 mAh, up to 5 hours	AUTO-EMPTY 4 L bag, up to 65 days
WARRANTY 1 year comprehensive	

SmartClean robot cleaners

Vacuum and mop in one pass; app schedules, Alexa and Google Assistant.

Air purifiers

Room air purifiers for bedrooms and living rooms.

INAIR G20 · WALL-MOUNTED FRESH-AIR VENTILATOR

Filtered fresh air for a closed room.

Scan for datasheet

An ultra-thin wall unit that brings filtered outside air in and sends stale air out through a heat exchanger - for bedrooms, classrooms and offices.

- **Fresh air and exhaust** — 100 m^3/h designed exhaust air volume.
- **Heat exchange** — 60 to 70 % efficiency.
- **HEPA filter** — Stops particles as small as 0.1 µm.
- **Formaldehyde and TVOC** — Adsorbed and decomposed by the third filter layer.
- **Ultra-thin** — 100 mm deep; saves space on the wall.
- Four layers: washable pre-filter, HEPA (0.1 µm), formaldehyde adsorption, plasma at the outlet
- Ultra-thin wall unit for bedrooms, classrooms, offices and clinics

100 m³/h
exhaust air

60-70 %
heat exchange

HEPA
4-layer filtration

100 mm
thin

TECHNICAL DATA

AIR VOLUME 100 m^3/h	HEAT EXCHANGE 60 to 70 %
PM REMOVAL 99 % (design)	POWER 27 W + 300 W auxiliary heater
SIZE 380 x 100 x 680 mm	ROOM up to 50 m^2 - 5 adults or 10 students

Ceiling unit
Ducted fresh air to several rooms.

Vertical unit
Floor-standing fresh-air unit.

In-line fans
Silent in-line fans for exhaust and supply ducts.

WORKING WITH US

Tell us the stage. We will tell you what to decide now.

Send your plan on WhatsApp to 94666 00611. We reply with options and a time to visit, usually the same day.

Homeowners

Bring your plan or tell us the stage. We suggest what to decide now and what can wait.

Builders and PMCs

One supplier across pipes, pumps, bath and hot water, delivered to the site programme.

Architects and designers

Drawings, sizes and samples for specification, and working displays to show clients.

Plumbing contractors

Training on each system, press tools, and our team beside yours on site.

What to decide at each stage

Foundation	Drainage pipes under the slab, the underground tank and the backwater valve.
Brickwork	Cistern frames and mixer bodies, ventilation cores, points for the bathtub and steam room.
Before plaster	Hot and cold lines, manifolds, the hot-water return, the softener inlet, pump and header.
Roof slab	Space and load for tank, heat pump and solar; cable routes.
Tiling	Shower channels and linear drains set to the floor level; toilets and basins.
Finishing	Taps, showers, seats, heat pump and tank, filters and softener, fresh-air units.

What to send for a quotation

Site address and stage

Foundation, brickwork, plaster, tiling or finishing.

Drawings

Floor plans with bathrooms and kitchen marked — a phone photo is enough.

Floors and bathrooms

How many of each, and how many people live in the house.

Water source

Borewell or supply water, and whether scale is a problem today.

Prices are quoted separately and may change without prior notice with the market. Product images are for reference; the actual product may vary slightly. Brand names, logos and photographs belong to their owners.

Every product in this catalogue

Huliot

ULTRA SILENT™ Drainage System 05
ACOUSTIC CLAMP™ 08
HT PRO™ Drainage Piping System 11
ClearBlack™ smart STP 11
LockSeal™ 12
UltraSeal™ waterproofing membrane 12

Heliroma

HELIKLIMA 08
KLIMAPRESS brass press fittings 08
HELIKLIMA INSULATED 10
HELIROMA PP-R 10

Grundfos

SCALA2 16
CM Booster with Pressure Tank 17
SCALA1 17
MAGNA3 18
MULTILIFT MSS 19
UNILIFT KP 19

FIMA

SLIDE 21
SO collection 22
SPILLO TECH 22
SPILLO STEEL 22
SPILLO UP 22

TOTO

NEOREST NX I 23
Wall-hung toilets + concealed tank & flush panel 24
Washbasins 24
ZA series 25
GA 25
GM 25
Z SELECTION 25

Geberit

Duofix frame + Sigma20 flush plate 26

Oyster

Freestanding bathtubs 27
Built-in bathtubs 27
Whirlpool bathtubs 28
Outdoor spa pools 28

Pentair

Sand filter 30

GHP+

Air-source heat pump + storage tank 33
Multilayer pipe 34

MEA

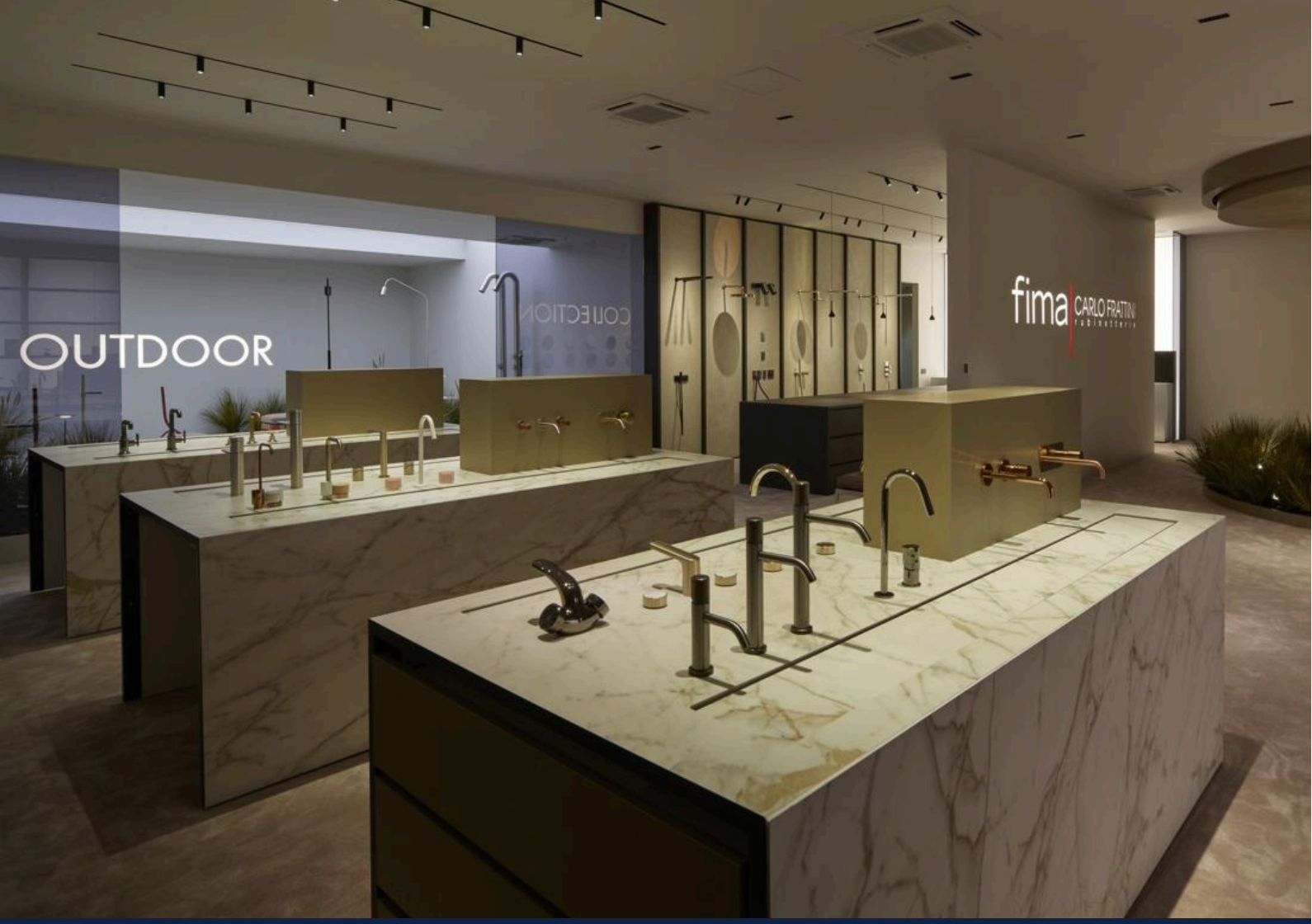
Polymer-concrete channel drains 44
MEA® TOPSLOT slot drain 45
MEA® DESIGN GRATINGS 45
MEA® LINE / GARD 45
MEAGARD II 45

KESSEL

STAUFIX 46
MULTISTOP 47
SHOWER CHANNELS 47

Nugreen

SS SHOWER CHANNELS 48
STAINLESS FLOOR DRAINS 48
AUTOMATIC FIRE CURTAINS 48
FIREX FB 250 CABLE FIRE BARRIER 48



VISIT US

See it working before you choose.

EXPERIENCE CENTRE

Energy World, Panipat

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SONIPAT

Modern Plumbing Solution (MPS)

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