

Specification for CPV Hiline ZPUM Steel Pre-Insulated Pipe Systems

MANUFACTURE

Manufactured within an ISO 9001:2008 accredited environment and in accordance with BS EN 253 as supplied by:

CPV Ltd Tel: +44 (0)1794 322884 Fax: +44 (0)1794 322885
E-mail: sales@cpv.co.uk Web: www.cpv.co.uk
Woodington Road, East Wellow, Romsey, Hampshire, SO51 6DQ, UK

STANDARDS

CPV HILINE ZPUM is manufactured to EN253, EN 448, EN 488, EN489.

CARRIER PIPE

Seamless Pipe

Carrier pipe is a certified steel seamless pipe manufactured in compliance with standards for steel in accordance with EN-10216-2 steel grade P235GH, or DIN-1629 steel grade ST 37.0 or R-35: PN 84/H-74220

Seamed Pipe

Certified seamed / welded steel pipe in compliance with per EN 10217-2/A1 and EN 10217-5/A2 from steel P235GHgh, or EN10217-1 P235 TR1 or P235 TR2 or DIN-1626 steel St 37.0, or EN10255 (BS 1387).

If these pipes are to be used in the transmission of potable hot water, then seamless pipe is to be manufactured in compliance with EN-10216-2 steel grade P235GH, or DIN-1629 steel grade ST 37.0 or R-35: PN 84/H-74220 galvanised in accordance with EN 10240, EN 1461, EN 1179.

- Upper yield stress 235MPa;
- Tensile strength 348 - 480 MPa;
- Density 7850 kg/m³;
- Pressure rating 5 MPa

To increase the adhesion of rigid polyurethane foam (PUR) to steel pipe, the external surface of the steel pipe is shot blasted till it attains grade one cleanliness. Pipe ends are bevelled and ready to be welded.

Inspection Certificate: EN 10204 – 3.1b.

THERMAL (HEAT) INSULATION

Insulation is made of rigid polyurethane foam CFC free foam (PUR) homogenously filling the space between the pipes over the total length and in compliance with standard **BS-EN- 253**

Thermal conductivity coefficient	w/mK	0.024 - 0.029
Minimum core mass density	kg/ m³	60
Radial compression strength	MPa	0.30
Thermal resistance	°C	152

Higher performing insulation is available upon request

CASING PIPE

Casing pipe is made in compliance with standard **BS-EN 253** in high density polyethylene (PEHD):

- Density 950 kg/m³;
- Upper yield stress 19 MPa;
- Elongation at break at least 350%;
- Expected life at least 50 years

All outer casing pipe inner surfaces are corona treated during production ensuring optimum adhesion of the insulation to the casing pipe.

FINISHED PIPES

Continuous operating temperature 140 Deg C for 30 years
Maximum short peak operating temperatures 152 Deg C.

INSTALLATION

CPV Hiline ZPUM pre-insulated pipes can be installed both above ground and under ground and the installation shall be guided by the general principles and practices of EN13941 "Design and Installation of Pre-insulated Bonded Pipes for District Heating" and strictly in accordance with CPV's instructions.

SURVEILLANCE SYSTEM

CPV Hiline ZPUM can be equipped with any system for detecting moisture ingress, such as Nordic pulse system 2 copper detection wires 1.5mm² (One tinned for identification) 16SWG BS4109, or resistance system (BRANDES), or HDW system or client specified system.