

21 September 2021

PLASTIC PIPING SYSTEMS: OPTIMISING PRODUCT USE ON SITE TO BENEFIT THE CIRCULAR ECONOMY

Optimising product use on site can have significant benefits. By minimising material usage and waste on-site and ensuring correct design (including right amount of material delivered) and right first-time installation (avoiding re-visits to replace/repair) it can make a valuable contribution to the circular economy.

In the construction industry, there are many ways in which plastic piping systems contribute to optimising a product's use during site installation.

One of the most efficient methods is to fabricate as much as possible offsite prior to taking the product on to site. By doing this, less assembly or fabrication work is required in often less than ideal working conditions, quality control can be assured as the work has been done under factory controlled conditions, and all the correct quality and performance checks have already been carried out. Any waste materials generated can be collected under clean factory conditions and reused. No matter how many items are required, repeatability at the same high standard is assured.

If we look at bathroom pods, which are fully functioning bathrooms designed and built off site, these are an increasingly popular choice for hotels and apartment blocks. Bathroom pods built in a factory environment benefit from high quality control and optimisation of materials use. Modular housing takes off site construction to its limits – modular buildings are constructed off-site and are then brought to site in flat-packed panels, ready to build. Plastic piping systems support modular and offsite construction by providing solutions for plumbing and soil and waste.

Pre-fabricating plastic manholes, drainage inspection chambers and chamber manifold systems means you start on site with an immediate advantage: properly constructed units with minimal waste or offcuts, and a 'right first time' result.

Plastic pipes have the advantage that they can be supplied to site in coils which can then be cut to the right length. There is an increasing trend towards longer coil lengths for polyethylene pipes for gas and water supply. Hot and cold water pipes for plumbing installations and plastic piping systems for district heating systems are also increasingly supplied to site in coils.

Supplying pipes to site in coils reduces waste and time spent in making joints as longer lengths reduce loss through offcuts and reduce the amount of fittings required for joining. By supplying larger coils, packaging waste is also reduced and coils can be moved from site to site as required. These flexible plastic coils can also be used in curves and bends, again without the need for joints or fittings and their inherent flexibility can reduce overall excavation/installation time. These coils can be used in trenchless technology and sliplining techniques, significantly reducing labour and time through less excavation and lower traffic disruption.

Correct design and installation are essential for a successful construction project and by using offsite construction to create value engineering, the exact material and product required can be supplied and installed correctly first time. This means time, cost and material savings as well as benefitting the circular economy.

More information about how to maximise product efficiencies within the circular economy is on the BPF Pipes Group website at: <https://www.bfppipesgroup.com>