



HI-TECH PPR MINI CATALOGUE



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CHANGE IS IN YOUR HANDS!

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D12A4N HI-TECH SERIES



CHANGE IS IN YOUR HANDS!

CHANGE BEGINS WITH THE TECHNOLOGY OF DIZAYN!

Dizayn Group puts its new product series on the market that will bring radical changes to the sector and also change the rules. HI-TECH, developed as a new product series of Dizayn at the end of long-time R&D (research & development) activities, consists of pipe and fittings made from Polypropylene Random Copolymer raw material and resistant both to chemical materials and also to high pressure.

Thanks to its production technology, aesthetic form and excellent technical specifications, Dizayn HI-TECH Series create a difference in the sector.

HI-TECH pipe and fittings, produced with high technology and conforming the standards, have a totally different visuality with their exceptionally smart and aesthetic design. Specially designed inner structure decreases the friction coefficient and provides energy save.

After welding, the problem of constriction is never faced. Special metal parts used in the products are totally environmental friendly so that they do not impair the quality of drinking water. Resistance of the metal with high German standards is better than the other metals.

Conic structure in the welding area of the fitting enables more stable junction. Therefore, any clinkers resulting from the employee fault are totally avoided.

Thanks to the geometry of HI-TECH pipe and fittings, the welding time in socket welding is considerably decreased and labour is minimized. This also enables a resistance to 32 bar pressure (in 20°C).



1

Technology and Aesthetic Together

Dizayn HI-TECH series is a product range that brings technology and aesthetic together as a result of long-term studies of our R&D team and enables the water to be carried correctly, securely and economically through the indoor fresh water systems. The high conformity of PPR pipes and fittings along with their technical differences, makes the installer enjoy his business more and presents healthy instalment eliminating aesthetic concerns to its user by its visual structure.



2



Attractive Colours for Modern Plumbing

All products of HI-TECH PPR series have more colours such as golden, silver and ivory apart from white, grey, green.



3 1 Day is 48 Hours with Dizayn HI-TECH Series

It is the right time to forget everything about plumbing!

With Dizayn HI-TECH Series our craftsmen will be able to weld double than with the available products under normal conditions in a day. We know that time is so important for our plumbers. With the heating time savings of Dizayn HI-TECH series you will be one step ahead of everyone. For plumbers using Dizayn HI-TECH series one day is 48 hour from now on!

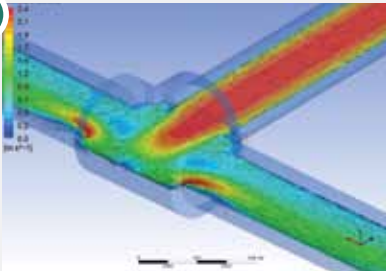
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Welding is More Clear Thanks to Dizayn HI-TECH Series

With Dizayn HI-TECH pipe there is not any more nasty appearance of plastic waste which welding tool causes during melting process. That nasty appearance of waste material in the junction area of pipe and fitting is not wished. Material melted with special design of Dizayn HI-TECH pipe does not shed out of welding tool, squeezes between the pipe and fitting and long living welding is acquired.

5



With Dizayn HI-TECH Series Your Plumbing Runs Easily

In Dizayn HI-TECH fittings, local loss coefficients are lower than 30%. Water passing through the fitting leaves the fitting with minimum loss thanks to easy passage presented through the Dizayn HI-TECH fittings. Each fitting is designed after testing with liquid analysis through computer program. Total loss in fittings composes the large percentage of total pressure loss in plumbing. Fresh water and central heating systems, established with Dizayn HI-TECH fittings, run with minimum energy.

6



Thanks to Dizayn HI-TECH Series No More Cracking Pipes

It is inevitable for PPR pipes to be cracked due to the impact in cold weather. Dizayn HI-TECH PPR pipe absorbs impact force, provides 30% more impact endurance than the regular pipes via its design.

7



Metal Fittings of Dizayn HI-TECH Series Do Not Leak

In metal fittings leakage of water between the plastic and metal is a big problem. In the production of metal fittings in Dizayn HI-TECH Series, classic techniques are not used. In metal fittings of Dizayn HI-TECH Series, a developed high technology named as HIGH PRESSURE INJECTION is used. This product, protected with three European patents, is not designed to run as two separate parts consisted of metal and plastic, rather as one piece. And now, metal and plastic are not two separate parts; on the contrary it is a unique material. DIZAYN ENDS THE PROBLEM OF LEAKING.

8



Involvement of 'Heavy Metals' in Metal Used in Metal Fittings to Water is Prevented

In the standard of German DIN 50930-6 (EN 12502) published in 2004, since covering on brass material involves heavy metals, it is forbidden to use such coverings for carriage of drinking water. As it is known that heavy metals are 'CARCINOGEN'. DIN standards stipulate that brass material should be used in MS63 alloy and without nickel plating.



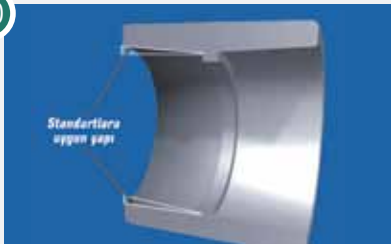
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Specified Torque of HI-TECH Metal Fittings is above the Standards.

Torque resistance is one of the most important specifications providing the junction quality between metal and plastic. In HI-TECH series torque resistances of all materials are significantly improved. For instance; rotation does not occur as a stripping of interface of metal and plastic but occurs with plastic deformation.

10



Fittings are Conic

The most important factor that guarantees the welding quality is the conicity of junction in plastic. So that interface pressure which guarantees a well welding is obtained and in junction areas more qualified welding is provided.

11



Perfect Trowel Coating Compliance with Dizayn HI-TECH Pipe

Thanks to the exterior surface with knurled geometry of HI-TECH pipes it is provided that pipe forms a wholeness with trowel coating. Therefore the risk of pipe's moving in the trowel coating is avoided. Also, with that knurled surface junction easiness is enabled and plumber can easily hold the pipe.



Registered Quality!

- Our firm has QAS, DVGW, KIWA, WRC, GHOST-R and EMI certificates.
- For these certificates authorized persons come to our firm and grant approval to our facility and laboratories.
- They test the products for one year and then document 50-years warranty. Hence forwards in every three months products are tested; if the result does not satisfy, the document is cancelled.
- The required samples for tests are supplied by the related laboratory from the market. The aim of that is to control the product put up for sale.

The Distinction of HI-TECH Oxy Plus!

- HI-TECH Oxy Plus Combi Pipe is a patented product of Dizayn.
- HI-TECH Oxy Plus Combi Pipe is conformed with the national and international quality standards (TS EN ISO 15874, DIN 8077, DIN 8078).
- With HI-TECH Oxy Plus Combi Pipe, oxygen permeability in central heating system is much more below than the value anticipated by DIN 4726.
- The pressure class of HI-TECH Oxy Plus Combi Pipe is PN 32.

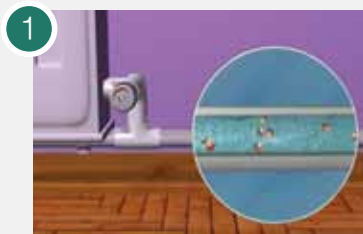


The Benefits of Our Differences to Practitioners

- HI-TECH Oxy Plus Combi Pipe abolishes the process of folio paring named as shaving and minimises the employee cost.
- In the application of HI-TECH Oxy Plus Combi Pipe, it is prevented to be diminished with the ease usage of even the shortest parts in plumbing.
- It is provided that there is not any folio on the surface of welding area in HI-TECH Oxy Plus Combi Pipe. The problems faced in welding are removed after preventing the reach of external diameter size to out of tolerance values due to the shaving.

	Intake oxygen to the system N_A (mg/day)	Allowed oxygen permeability of DIN 4726 Norm for the System N_A (mg/day)
HI-TECH Oxy Plus Central Heating Boliler Pipe	1,79	2,38
Regular Pipe with Aluminum Foil	4,91	2,38

Table 1: Values of oxygen permeability in heating plumbing



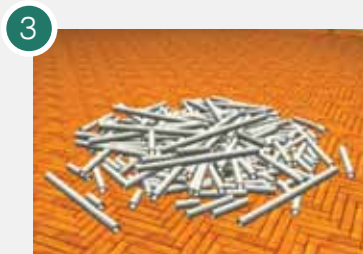
Dizayn HI-TECH Oxy Plus Combi Pipe does not Allow the Passage of Oxygen

Since the inner part entering the fitting of HI-TECH Oxy Plus Combi Pipe is foiled, the level of oxygen transmission is below the level 0,1 g / m³day as anticipated by DIN 4726 standards.



Dizayn HI-TECH Oxy Plus Combi Pipe does not Need to be Shaved

With its unique technology, Dizayn HI-TECH Oxy Plus Combi Pipe, in which aluminium folio is put in the centre of wall thickness removes the process of folio paring named as shaving. After the pipe is cut, with a simple face smoothing process the pipe will be wholly ready for welding.



Dizayn HI-TECH Oxy Plus Combi Pipe does not Diminish

Since even the shortest parts are used easily in the practices of HI-TECH Oxy Plus Combi Pipe, it does not diminish.



4



Dizayn HI-TECH Oxy Plus Combi Pipe is Aesthetic

HI-TECH Oxy Plus Combi Pipe and fittings are produced in white. Since in other products available folio is near to the surface, the apparent colour is grey. Since this greyish colour does not comply with the colour of fittings, there is not any more aesthetic colour.

5



Dizayn HI-TECH Oxy Plus Combi Pipe Shows Resistance Against Elongation

Since the aluminium folio is at the centre of HI-TECH Oxy Plus Combi Pipe, there are equal layers on both sides of the folio and both layers show equal resistance against elongation.

6



With Dizayn HI-TECH Oxy Plus Combi Pipe Minimum Time and Maximum Work

With its technology which centres aluminium folio, Dizayn HI-TECH Oxy Plus Combi Pipe does not need shaving. Plumber uses face smoothing device and with a quick pipe face smoothing practice he prepares the pipe for welding without any great efforts and loss of time. So that the time of labour decreases in half and plumbing can be established with fewer employees and in less time.

7 Pressure Resistance with Dizayn HI-TECH Oxy Plus Combi Pipe is 32 bars/50 Years

One more quality is added to HI-TECH Oxy Plus Combi Pipe, which is equipped with great specifications. Aluminium folio at the centre of the pipe is welded continuous, it is hereby provided that it contributes to the pressure resistance of the pipe. Pressure resistance of the pipes which changes radically with the temperature will not change and pressure class can be increased to 32 bars.

8 1 Day is 48 Hours with Dizayn HI-TECH Oxy Plus Combi Pipe

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WELDING METHOD FOR HI-TECH OXY PLUS COMBI PIPES



1 Check whether the welding machine is heated up to 260 °C, the thermo went off and the screw plate is clean.



2 Cut the HI-TECH Oxy Plus Combi Pipe vertical to its axis using pipe scissors.



3 Place HI-TECH Oxy Plus Combi Pipe inside face smoothening apparatus. Do not forget that cutting face vertical to the axis is not always possible with scissors. Cutting face horizontal causes problems during the welding process. Face smoothening apparatus is an elegant, well-designed engineering product that solves this problem. Face smoothening apparatus should certainly be used.



WELDING METHOD FOR HI-TECH OXY PLUS COMBI PIPES

4



Smoothen the face using the face smoothing apparatus and make sure that a channel is opened in the part covered with folio. The face should be smoothened until the whole face surface touches the bottom of the face smoothening apparatus. Dizayn Group does not guarantee any installations made without using face smoothening apparatus.

5



HI-TECH Oxy Plus Combi Pipe hose face has been smoothened.

6



Push the HI-TECH Oxy Plus Combi Pipe and its fitting vertically towards the special welding screw plate at the same time. The special welding screw plate was designed to prevent possible mistakes by installation workers.

WELDING METHOD FOR HI-TECH OXY PLUS COMBI PIPES

7



After you see that the melted material comes through the holes on the special welding screw plate, remove the pipe and its fitting from the screw plate (when you look at the face removed from the screw plate, you will see that the aluminum foil in the middle is inside the plastic) Special welding screw plate should certainly be used while welding HI-TECH Oxy Plus Combi Pipes.

8



Our company guarantees installations made connecting Dizayn pipes with Dizayn fittings and complying with the defined rules.

9



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Important Note: Screw plates used for welding should comply with DVS2208-1



Welding is now easier with HI-TECH series!

- HI-TECH fittings are inserted into screw plate more gently and easily (Compared to your old experience, you will feel that the fitting is inserted into the screw plate more easily).
- HI-TECH fittings prevent the extra material from narrowing the water path while melting process as they enter the screw plate easily.
- The fact that HI-TECH fittings enter the screw plate quickly and easily ensure correct adjustment of the welding size and homogeneous heating. For fittings that do not enter the welding screw plate smoothly, the welding size cannot be set and it falls short, the mechanical features of the materials exposed to excessive heat get weaker.
- Heat transfer is spread not only on surfaces but also along the wall thickness when PPR pipes and fittings are heated for a long time on the welding screw plate. The parts other than the heated surfaces must remain cold so that the required pressure is achieved and ideal welding and connecting is carried out. Heating time for HI-TECH PPR pipes and fittings is short in accordance with ideal welding and connection.
- HI-TECH fittings save time and labour in welding processes as they enter the plate easily.
- High quality molecular association is achieved in the welding processes carried out using HI-TECH fittings.

Important Note: Sizes of PPR pipes and fittings cannot be subjected to measurement control by inserting pipes and fittings into the screw plate while the plate is cold (based on easy or difficult penetration). Pipes and fittings can be subjected to penetration control when the welding screw plate is 260 °C.



Dizayn Group is a Mir Holding company.

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