

**Iran pipe**  
VRP

Iran Pipe five-layer pipes  
[www.bistbasparco.com](http://www.bistbasparco.com)

# Iran pipe

VRP



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## Iran Pipe five-layer pipes

Five-layer pipes consist of two layers of polymer, two layers of glue, and one layer of aluminum so that the inner and outer layers are glued to the middle made-of-aluminum layer.

### 1. Polymer layers:

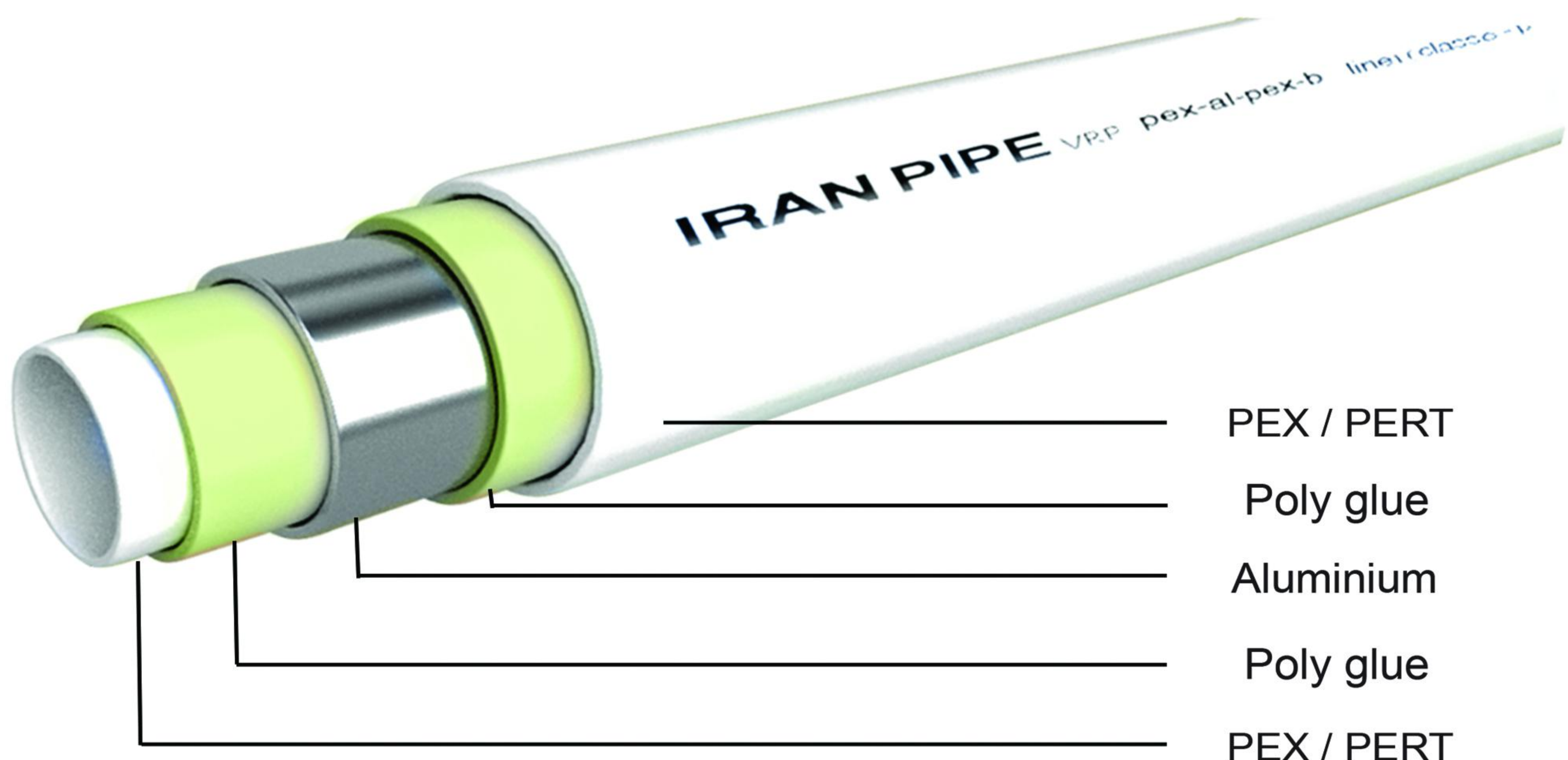
The polymer used in Iran Pipe five-layer pipes is a special type of polyethylene, which some its unique properties include resistance to corrosion, sediment, high-temperature tolerance, and very high ability to keep the drinking water healthy.

### 2. Glue layers:

The glue used in producing pipes is also one of the best glues in this industry and plays an essential role in creating the integration, incorporation, and resistance of pipes as much as possible, and on the other hand, control the longitudinal expansion of pipes.

### 3. Aluminum layers:

The aluminum used in the production of pipes is 8111-8011 alloy and has the maximum thickness according to the standard table. It should be noted that if there is any possible grease on aluminum foils, special materials are used to clean them, which creates a much more stable fusion and so a much better-quality pipe than the products of other companies.





## Technical specifications of five-layer pipes

external diameter of pipe (mm)	wall thickness (mm)	aluminum thickness (mm)	inner diameter (mm)	weight per meter (g)	total weight of ring (kg)	ring area (m)	minimum bend radius with conduit bender (mm)	minimum bend radius with spring (mm)	minimum bend radius with conduit bender (mm)	Compression failure(bar)
16	2	0/20+0/02	12	112	21/400	200	80	64	56	95
20	2/25	0/25+0/02	15/5	141	22/720	150	100	80	76	70
25	2/5	0/28+0/02	20	212	22/240	100	125	100	85	65
32	3	0/35+0/05	26	320	25/530	75	160	128	126	62

**The minimum allowable bend radius for five-layer pipes in sizes 16, 20, 25, and 32 according to the standard is 60, 50, 40, and 40 bar, respectively.**

- The maximum allowable operating temperature for Iran Pipe five-layer pipes is 95°C and the pipes can tolerate this heat for a long time.

### Advantages of Iran Pipe five-layer pipes

- The use of advanced PEX-PERT polymer
- Pressure tolerance at high temperatures continuously
- Resistant to corrosion and rot
- High flexibility during implementation, and fast installation
- Ability to be used in underfloor heating systems due to the advantage of heat transfer
- Minimal roughness of the inner surface and inability to deposit salts inside the pipes, so creating a minimum pressure loss in the piping system

### Five-layer VRP fittings

Keeping our development, we have started to produce various types of five-layer fittings made of brass ingots with 58% copper, which are malleable. These fittings through their quality O-rings provide complete and long-time durability and sealing in difficult conditions. These fittings are produced and marketed in 2 types:



## 1. VRP press fittings

For this type, the steel ring available on the fitting is pressed on the pipe using a press jaw of the same size.



Technical specifications of five-layer coupling fittings

brass MS58 nickel	Body plating
brass MS58	split ring
brass MS58	coupling nut
EPDM	O-ring

## 2. VRP coupling fittings

For this type, just by tightening the nut available on the fitting, the brass ring inside it is fastened on the pipe



Technical specifications of five-layer press fittings

brass MS58 nickel	Body plating
تفلون نسوز ضد اسید P.T.F.E	nickel
فولاد ضد زنگ (304)	plastic ring
EPDM	steel ring
NBR	O-ring

## How to join Iran Pipe five-layer pipes with VRP fittings

Regarding the different connection methods in press and coupling fittings, each fitting has a special method to be installed, and both types of fittings have the same initial steps. First, cut the pipe with scissors or a ring cutter to the required size, then widen slightly inside of the pipe with a caliber tool, and finally, concise the inner wall of the pipe using the blades at the end of the caliber in rotation. This is very important because, before calibration, the wall of the pipe is sharp and may tear the rubber O-ring of the fitting during installation, which can prevent sealing and cause leakage.

## 1. VRP press fittings

After finishing the steps described on the previous page, insert the pipe into the press fitting. To ensure that the pipe is fully inserted into the steel ring, you can use the hole at the end of the steel ring. Then, the steel ring is pressed on the pipe using a (hydraulic) electric press machine or manual press with a jaw of the same size as the pipe and the fitting.



## 2. VRP coupling fittings

For the coupling type, after finishing the initial steps, first, pass the fitting nut through the pipe and then insert the special ring into the nozzle. After that, enter the pipe into the fitting and tighten the nut with an open-end wrench or an adjustable wrench.



**Note:** Before starting the pressing of the press fittings, by removing the steel ring, make sure that there is a rubber O-ring on the fittings. Lack of rubber O-ring causes problems in sealing the press area.



## Advantages of Iran Pipe five-layer pipes and VRP fittings

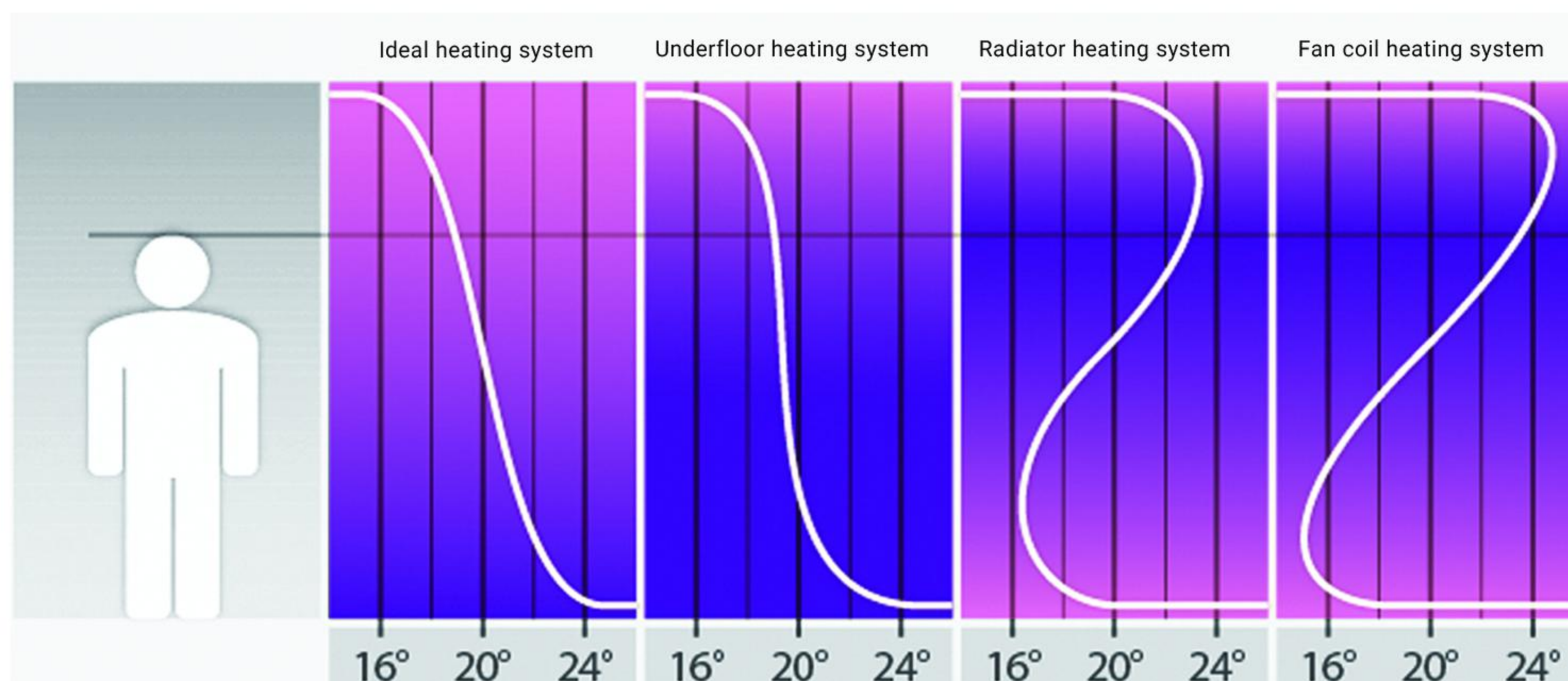
These pipes have the same advantages as the polymer pipes (which were mentioned in the section of the single-layer pipes) and in addition, incorporating metal and polymer has created other advantages for the pipes, including:

1. Faster and easier installation because of malleability.
2. Use in underfloor heating systems because of the very high capability to transfer heat through the wall.
3. High heat tolerance, even continuously.

## Underfloor heating system using Iran Pipe five-layer pipes

Year after year, heating buildings in the cold seasons was a concern. A variety of companies around the world have tried to offer new and different methods to heat buildings.

The underfloor heating system is one of the most up-to-date and modern ways of heating buildings. As you know, using the usual methods, most of the heat generated is trapped near the roof of the building while this method creates more heat on the floor, which is pleasant. In this method, hot water enters the five-layer pipes through the collector (Manifold), and since the pipes are spread in a regular network on the floor of the building, it causes the heat in the pipes to transfer to the surface.

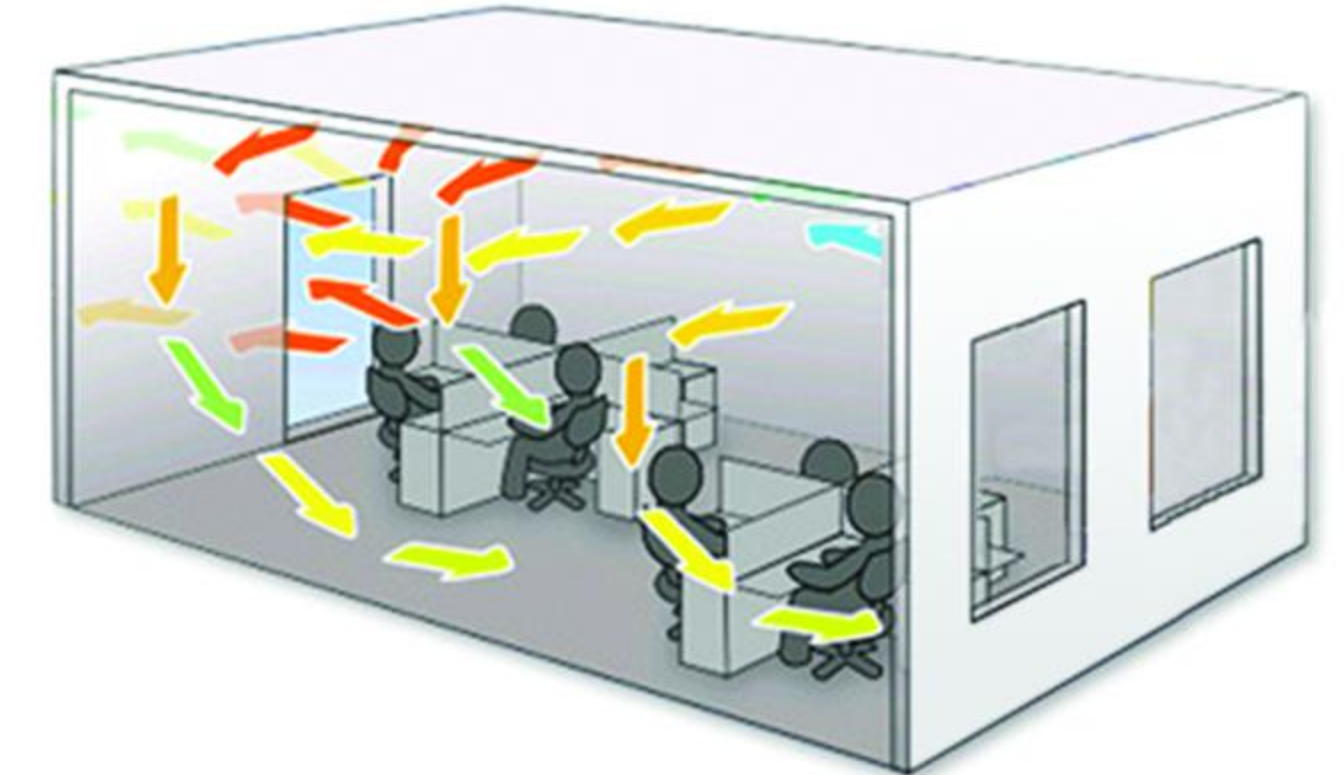


**Using Iran Pipe five-layer pipes and fittings to create a floor heating system will bring you rest and comfort in the cold seasons of the year.**

## Why should we use the Iran Pipe underfloor heating system?

### 1. Pleasant and uniform heat flow

When using the radiator, the heat distribution occurs inappropriately. But in the underfloor heating system, because of the proper and uniform distribution of heat and the creation of relative humidity, we will have a pleasant environment.



### 2. More beautiful architecture

It is difficult to choose a place to install radiators so as not to damage the beauty of the interior decor of buildings while the underfloor heating system with the lack of radiators has solved the problem.



### 3. Clean walls

All heating systems of buildings cause the curtains and walls to be black with dirt. It is only the underfloor heating system by which there is no continuous need to clean the walls and curtains.



### 4. Safety and health

A warm, dry floor prevents the growth and proliferation of fungi and microscopic organisms that cause a variety of skin and respiratory diseases. However, the air humidity properly maintained makes the skin fresh, reduces the number of dust particles, so the problems such as asthma, allergic coughs, and seasonal diseases including rheumatism are minimized.



### 5. Energy saving

Iran Pipe underfloor heating system heats the objects and residents of the building instead of heating the air. Solar energy, lower water temperature, reduced heat loss and other reasons make the energy consumption in Iran Pipe underfloor heating system between 30% to 50% less than other heating methods.





### pipe PERT-AL-PERT (Type2)

code	size	pack
50500	16	200
50501	20	150
50502	25	100
50503	32	75



### pipe PEX-AL-PEX

code	size	pack
50400	16	200
50401	20	150
50402	25	100
50403	32	75



### pipe foam

code	size	pack
50100	16	100
50101	20	100
50102	25	100
50103	32	100



### sheet insulation

code	size	pack
33122	10 MM	50
33126	20 MM	25
33128	25 MM	25
33130	32 MM	25



### Press female straight fitting

code	size	pack
40410	16 × 1/2	240
40412	20 × 1/2	240
40414	20 × 3/4	128
40418	25 × 3/4	96
40420	25 × 1	64
40422	32 × 1	64



### press straight fitting

code	size	pack
30110	16×16	240
30112	20×20	160
30114	25×25	96
30116	32×32	64



### Press male straight fitting

code	size	pack
40210	16 × 1/2	240
40212	20 × 1/2	240
40214	20 × 3/4	128
40216	25 × 1/2	120
40218	25 × 3/4	96
40220	25 × 1	80
40222	32 × 1	80



### Press straight reducing bushing

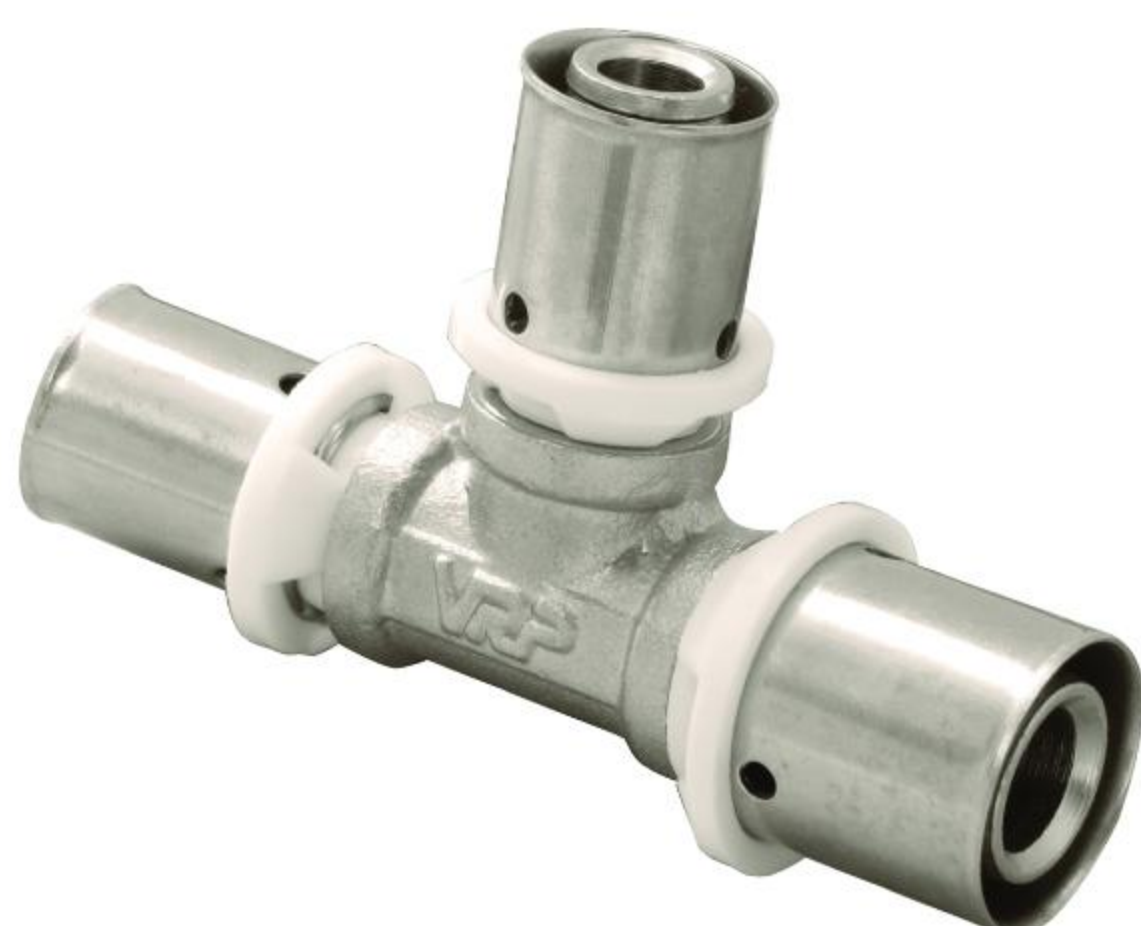
code	size	pack
30210	20×16	192
30212	25×16	128
30214	25×20	96
30216	32×20	96
30218	32×25	64





## press converter tee

code	size	pack
30740	16×20×16	96
30742	20×16×16	96
30744	20×16×20	80
30746	20×20×16	80
30748	25×16×16	80
30749	25×16×20	48
30750	25×16×25	48
30752	25×20×20	48
30754	25×20×25	48
30755	25×25×16	48
30756	25×25×20	48
30757	32×16×25	32
30758	32×16×32	32
30760	32×20×32	32
30762	32×25×25	32
30764	32×25×32	32



## press tee

code	size	pack
30710	16×16×16	128
30712	20×20×20	80
30714	25×25×25	32
30716	32×32×32	24



## press wall tee 90°

code	size	pack
31510	16×1/2×16	96
31512	16×1/2×20	64
31514	20×1/2×20	64
31516	20×1/2×16	64



## press wall elbow

code	size	pack
31610	16 × 1/2	160
31614	20 × 1/2	112
31618	25 × 3/4	80
31622	32 × 1	48



## Press elbow 90°

code	size	pack
30510	16 × 16	192
30512	20 × 20	112
30514	25 × 25	64
30516	32 × 32	32



## press female plate elbow

code	size	pack
30910	16 × 1/2	96
30914	20 × 1/2	80



## Press male elbow 90°

code	size	pack
40520	25×1"	64
40522	32×1"	56



## press reducing elbow

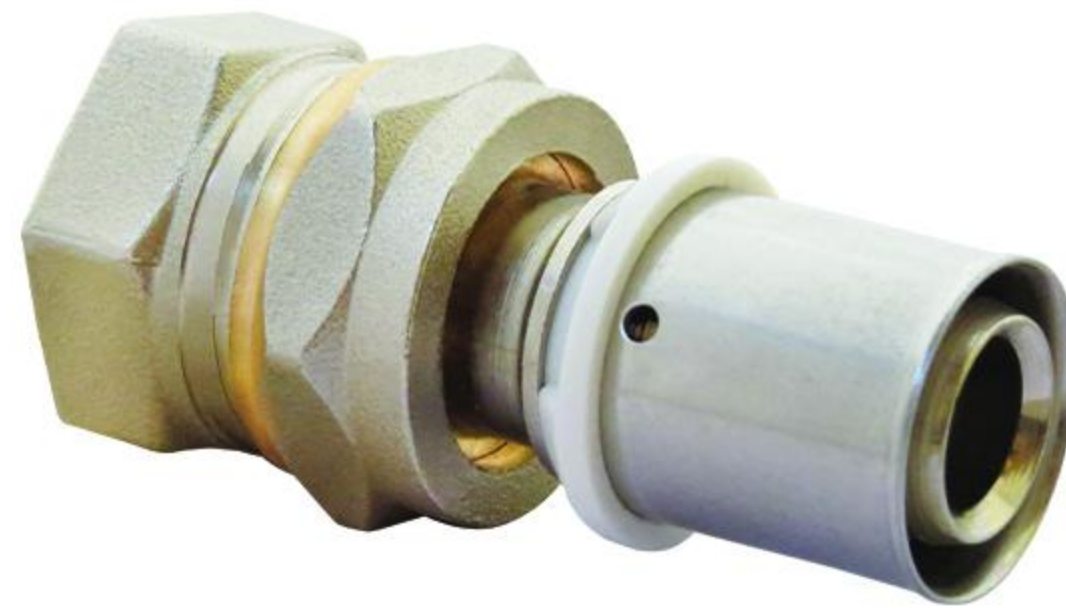
code	size	pack
40610	16×1/2	192
40612	20×1/2	160
40614	20×3/4	96
40618	25×3/4	64
40620	25×1	64
40622	32×1	32





### press pipe union

code	size	pack
40810	16 × 1/2	به زودی
40816	20 × 1/2	به زودی
40820	25 × 3/4	32
40824	32 × 1	24



### coupling male elbow 90°

code	size	pack
70518	25 × 3/4	40
70520	25 × 1	32
70522	32 × 1	24



### press plug

pack	size	code
31910	16mm	400
31912	20mm	288
31914	25mm	160
31916	32mm	-



### coupling elbow 90°

code	size	pack
70410	16 × 16	88
70412	20 × 20	56
70414	25 × 25	32
70416	32 × 32	16



### coupling male adapter

code	size	pack
60208	16×1/2	120
60210	20×1/2	100
60215	20×3/4	80
60212	25×3/4	64
60220	25×1	48
60218	32×1	40



### coupling tee

code	size	pack
70710	16×16×16	60
70712	20×20×20	40
70714	25×25×25	16
70716	32×32×32	12



### coupling female adapter

code	size	pack
60108	16×1/2	144
60110	20×1/2	120
60112	20×3/4	96
60114	25×3/4	64
60118	32×1	32



### coupling wall elbow

code	size	pack
71610	16 × 1/2	60
71614	20 × 1/2	40
71618	25×3/4	40



### simple coupling bushing

code	size	pack
70110	16×16	112
70112	20×20	80
70114	25×25	40
70116	32×32	24



### coupling reducing elbow

code	size	pack
70610	16×1/2	80
70612	20×1/2	64
70618	25 × 3/4	32
70620	25 × 1	32
70622	32×1	20



### coupling female plate elbow

code	size	pack
70910	16×1/2	48
70914	20×1/2	48



### coupling wall tee 90

code	size	pack
71510	16×1/2×16	32
71514	20×1/2×20	-



### coupling wall tee 180°

code	size	pack
71710	16×1/2×16	56
71714	20×1/2×20	32



### coupling female plate tee

code	size	pack
71310	16×1/2×16	40
71314	20×1/2×20	32



### coupling male elbow valve

code	size	pack
45454	25 × 1	24
45456	32 × 1	-



### collector valve

code	size	pack
45022	16 × 1/2	48
45024	20 × 1/2	48
45044	25 × 3/4	32



### reducing elbow

code	size	pack
20610	1/2	88
20612	3/4	56
20614	1	32



### male-female threaded adapter

code	size	pack
20210	1/2 × 3/4	120
20212	1 × 3/4	80



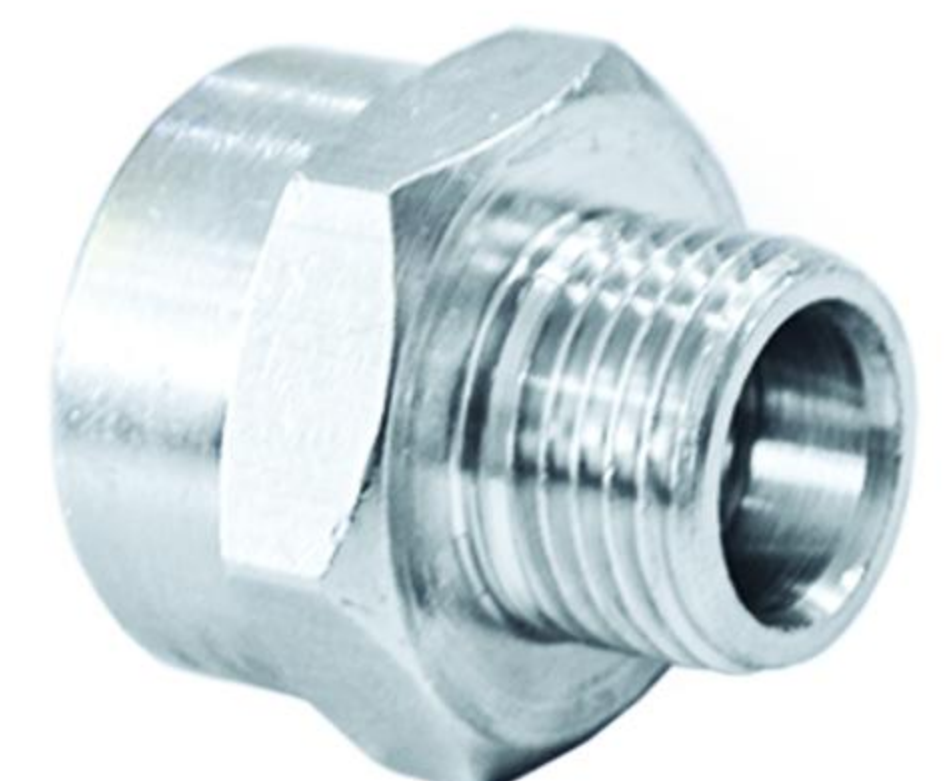
### bleed reducing elbow

code	size	pack
20116	تویچ 1/2 × روپیچ 1"	56



### manifold box (with base and clip)

code	size	pack
20406	رو پیچ 3/4 × 1/2 تو پیچ	120
20408	رو پیچ 1/2 × 3/4 تو پیچ	240
20410	رو پیچ 1 × 3/4 تو پیچ	80
20412	رو پیچ 1/2 × 1 تو پیچ	144
20450	رو پیچ 3/4 × 1 تو پیچ	132
20452	رو پیچ 1 × 1 1/4 تو پیچ	80
20454	رو پیچ 3/4 × 1 1/4 تو پیچ	80
20456	رو پیچ 1 × 1 1/2 تو پیچ	64
20458	رو پیچ 1 1/4 × 1 1/2 تو پیچ	64
20460	رو پیچ 1 × 2 تو پیچ	32
20462	رو پیچ 1 1/4 × 2 تو پیچ	32
20464	رو پیچ 1 1/2 × 2 تو پیچ	28





### Brass collector 3/4

code	size	pack
22512	3/4x1/2 2b	5
22513	3/4x1/2 3b	5
22514	3/4x1/2 4b	5
22515	3/4x1/2 5b	5



### brass collector 1/2 1

code	size	pack
22564	1 1/2x1/2 4b	3
22565	1 1/2x1/2 5b	3
22566	1 1/2x1/2 6b	3
22567	1 1/2x1/2 7b	3
22568	1 1/2x1/2 8b	3
22569	1 1/2x1/2 9b	3
22570	1 1/2x1/2 10b	3
22571	1 1/2x1/2 11b	3
22572	1 1/2x1/2 12b	3
22573	1 1/2x3/4 3b	3
22574	1 1/2x3/4 4b	3
22575	1 1/2x3/4 5b	3
22576	1 1/2x3/4 6b	3
22577	1 1/2x3/4 7b	3
22578	1 1/2x3/4 8b	3
22579	1 1/2x3/4 9b	3
22580	1 1/2x3/4 10b	3
22581	1 1/2x3/4 11b	3
22582	1 1/2x3/4 12b	3



### brass collector 1

code	size	pack
22522	1x1/2 2b	5
22523	1x1/2 3b	5
22524	1x1/2 4b	5
22525	1x1/2 5b	5
22526	1x1/2 6b	5
22527	1x1/2 7b	5
22528	1x1/2 8b	5
22529	1x1/2 9b	5
22530	1x1/2 10b	5
22531	1x1/2 11b	5
22532	1x1/2 12b	5
22533	1x3/4 3b	5
22534	1x3/4 4b	5
22535	1x3/4 5b	5
22536	1x3/4 6b	5



### brass collector 2

code	size	pack
23523	2x3/4 3b	2
23524	2x3/4 4b	2
23525	2x3/4 5b	2



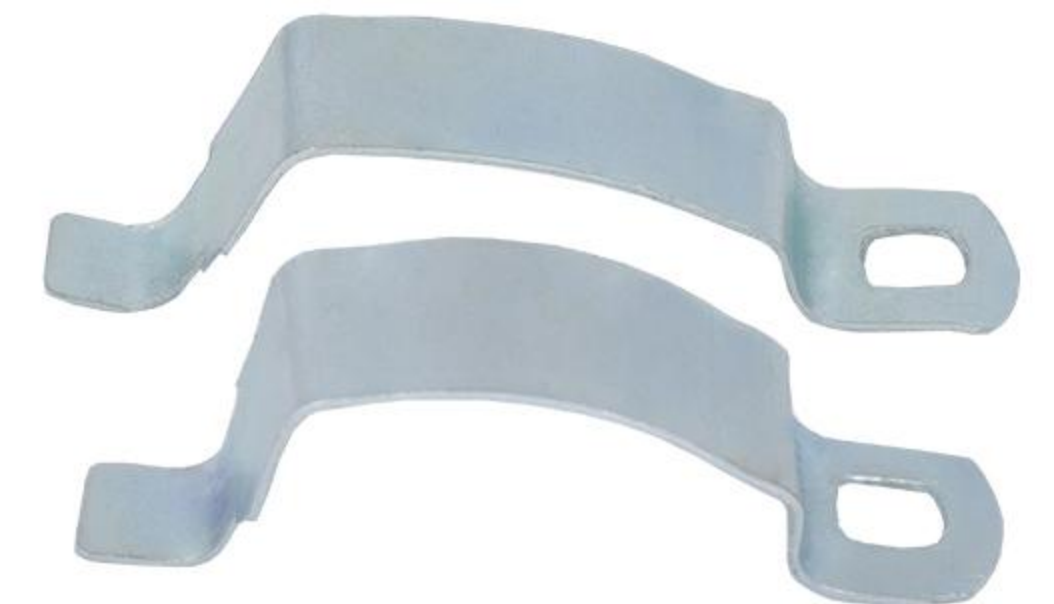
### brass collector 1 1/4

code	size	pack
22543	1 1/4x 1/2 3b	4
22544	1 1/4x 1/2 4b	4
22545	1 1/4x 1/2 5b	4
22546	1 1/4x 1/2 6b	4
22547	1 1/4x 1/2 7b	4
22548	1 1/4x 1/2 8b	4
22549	1 1/4x 1/2 9b	4
22550	1 1/4x 1/2 10b	4
22551	1 1/4x 1/2 11b	4
22552	1 1/4x 1/2 12b	4
22553	1 1/4x 3/4 3b	4
22554	1 1/4x 3/4 4b	4
22555	1 1/4x 3/4 5b	4
22556	1 1/4x 3/4 6b	4



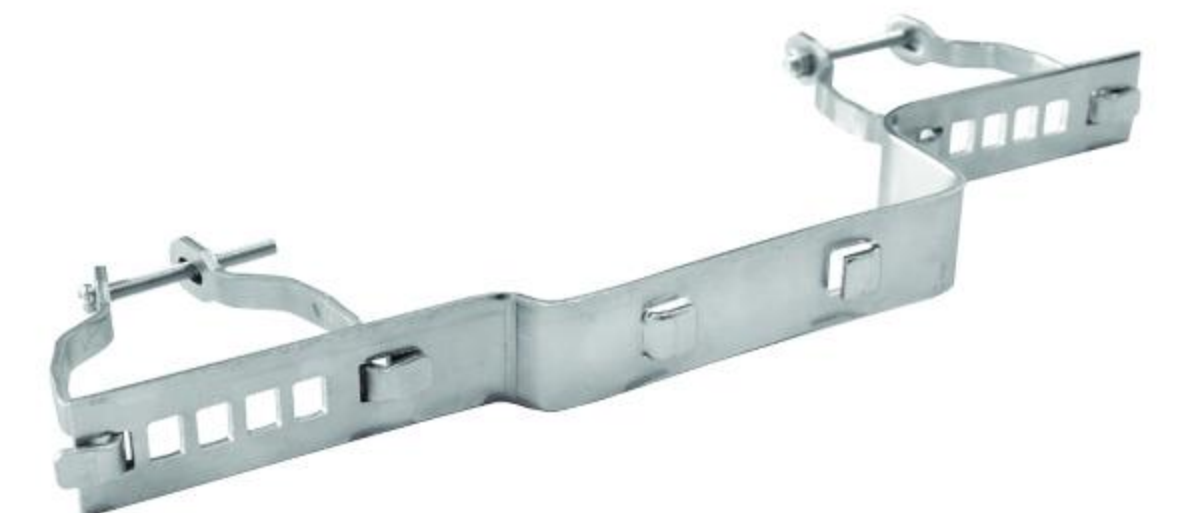
### brass collector

code	size	pack
25111	3/4	80
25113	1	80
25115	1 1/4	30



### collector base and clamp

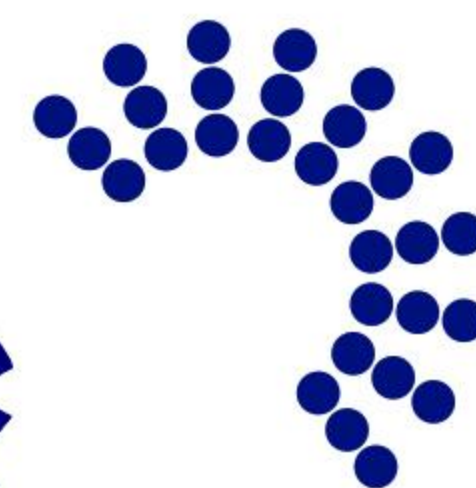
code	size	pack
25056	1 1/2_3/4	-



### collector base

code	size	pack
۲۵۰۵۰	-	۱۰۰

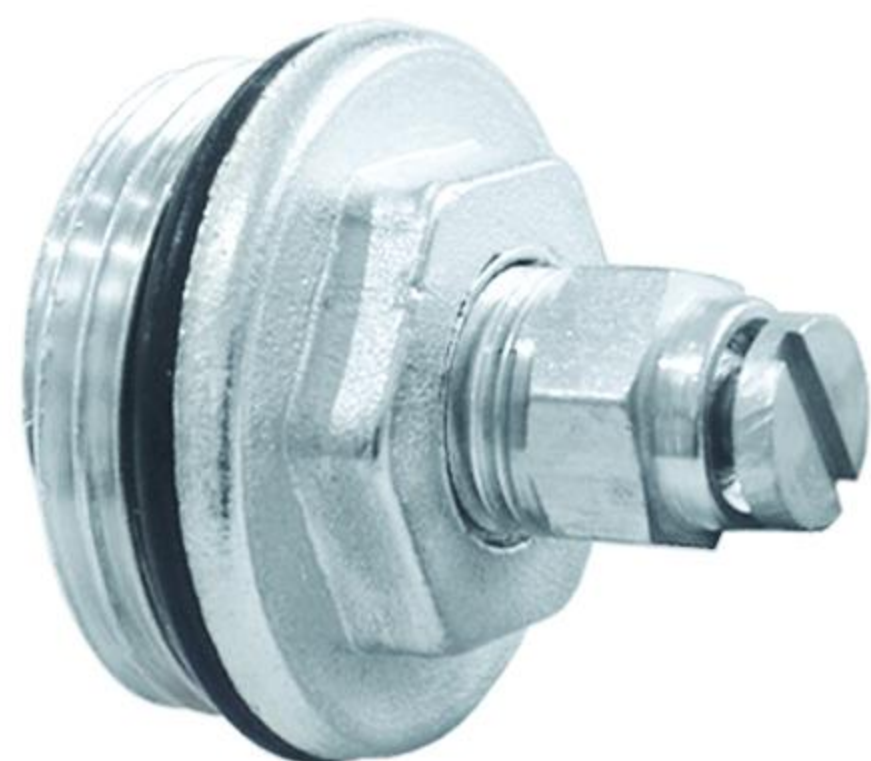




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### metal plug with bleed valve

code	size	pack
22608	3/4	180
22606	1	160
22607	1 1/4	88



### steel ring

code	size	pack
50110	16	800
50112	20	640
50114	25	240
50116	32	192



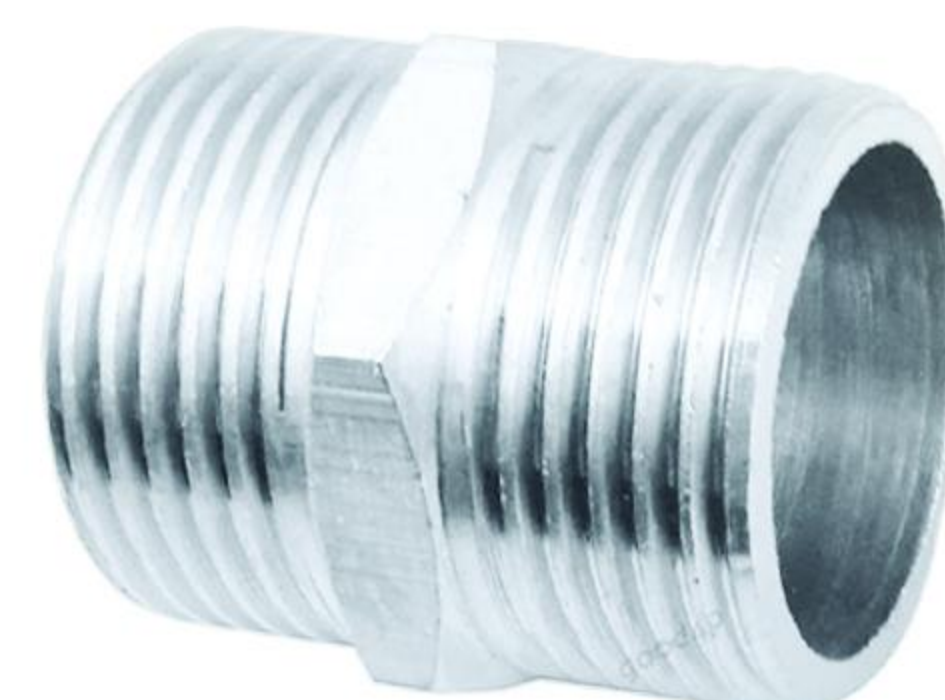
### bleed male plug

code	size	pack
22601	3/4	220
22600	1	200
22602	1 1/4	96



### pipe nipple

code	size	pack
20110	1/2	240
20112	3/4	144
20114	1	64



### Manifold male plug

code	size	pack
22591	3/4	220
22592	1	200
22594	1 1/4	96



### male-female threaded nipple

code	size	pack
20310	1/2	160
20312	3/4	80
20314	1	40



### manual bleed screw

code	size	pack
22610	1/8	400
22612	1/4	400



### coupling fitting ring

code	size	pack
601081	16	100
601101	20	50
601141	25	40
601181	32	30



### threaded plug

code	size	pack
22250	20	700
22252	25	450
22254	32	350



### coupling fitting ring

code	size	pack
601083	16	100
601103	20	100
601143	25	50
601183	32	50





### installeion bracket

code	size	pack
22310	63 تکى	25
22410	153 زوج	25
22411	280 زوج	25
22451	280 قوس دار	25
22412	500 رادياتورى	25
22452	زير پکيج	25



### collectors box (with base and clamp)

code	size	pack
25010	45 x 45	1
25012	45 x 65	1
25022	45 x 75	1
25016	45 x 85	1
25014	45 x 95	1



### plastic long plug

code	size	pack
22210	20 blue	130
22212	20 red	130
22214	25 blue	90
22216	25 red	90
22218	32 blue	60
22220	32 red	60



### single pipe clip

code	size	pack
22110	16	750
22112	20	800
22114	25	550
22116	32	300



### double pipe clip

code	size	pack
22150	16	300
22152	20	300
22154	25	200



### O-ring

code	size	pack
50210	16	100
50212	20	100
50214	25	100
50216	32	50



### barbieal pipe clip

code	size	pack
22160	16	2000

