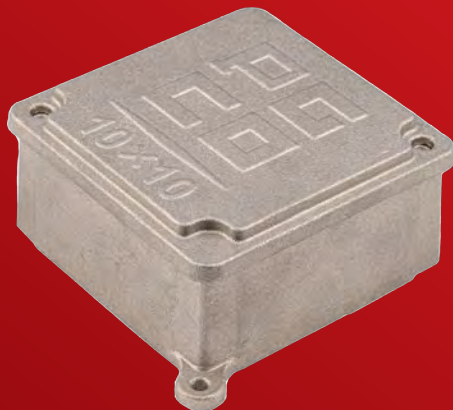


Manufacturer of  
Conduit Pipe  
& Fittings  
Cable Tray  
& Ladder



Petrogerayesh Kooshavarzan is a subsidiary company of Petrogerayesh Holding, which was founded by employing young Iranian engineers and skilled experts in the industry in 2016.

## Emersion

## Manufacturing

By using advanced European devices and in sync with the world standards, it started producing electrical steel pipes and related fittings.

In the first development phase, the company considered manufacturing the hot dip galvanization bath, up to 2-inch industrial pipes and profiles, and expansion of the production line for cable trays and ladders in its agenda.

## Development

## Mission

This company selected the slogan "Safety is a Choice" to reduce incidents and promote a culture of safety in industrial and construction projects. The company defined the full safety and promotion of this culture within its mission.

In 2019, it started exporting to the countries of Iraq and Afghanistan, which with the extensive efforts of the commercial team and the round-the-clock efforts of the production staff in the year 2022 exports to more than 11 countries in the region Is.

## Exports

## Why Petrogerayesh?

- 1 Guaranteed price and quality
- 2 Guaranteed product return
- 3 Responsible sales staff with an honest consultation to make you satisfied
- 4 Obtaining the authenticate certificates, membership in the Electricity Syndicate of Galvanization and Mass Construction Association of Iran













The simple answer to this question is that this operation makes metals resistant to corrosion. When the galvanization process is not done on the metal surface, oxidation or corrosion occurs in metals in contact with oxygen and hydrogen elements in the environment (humidity), causing the worn-out and destruction of metals. As the manufacturer and exporter of Galvanized pipes and profiles and a member of the National Greenhouse Association and Galvanization Industries, Petrogerayesh Company tries to follow standards on pure zinc ingots and continuous control and supervision over galvanization phases to maximize the shelf life of products and satisfy customers more than before.

## Hot Dip Galvanization

Hot dip galvanization in molten zinc is one of the processes divided into the following phases:

- ▶ Preparation
- ▶ Immersion into the molten bath
- ▶ Quality control and inspection

### Preparation

#### Degreasing

In this phase, an alkali solution such as caustic soda ( $\text{NaOH}$ ) is used at 70–90°C temperature to remove greases from the surface of pieces caused by manufacturing steps, including rolling, welding, cutting, transporting, and depot products.

#### Pickling

The oxide crusts remaining from the production and degreasing phases are cleaned using acid in this step. Chloric acid is usually used in this step, or sulfuric acid at 100°C temperature may be used. The concentration of acid varies between 10 and 20 volume percent depending on the amount of oxide crusts existing on the surface of the pieces.

#### Washing

The products are washed thoroughly in a bath after the degreasing and pickling phases.

#### Fluxing

In this phase, products are immersed in an ammonium chloride tub. This solution creates a thin and smooth coating on the metal surface that leads to adhesion and better coating of zinc metal.





## Immersion in molten bath

The melting point of zinc is around 420°C, and the molten temperature reaches up to 460°C to reduce viscosity and increase covering power. The considered products are then immersed in the molten zinc bath and are with drawn from the bath after a certain time. The coating rate varies depending on the duration when the product is immersed in the molten zinc bath.

## Immersion in molten bath

After the products' temperature is decreased to ambient temperature, the residuum remaining from the previous phase on the piece is removed through manual or electrical polishing. The galvanization quality, galvanized coating thickness (according to ASTM A123 Standard), and mechanical-dimensional controls of pieces are tested, and possible defects are corrected based on the guideline. If the defects are not correctable based on the standard requirements, the piece is rejected in the quality control phase and must repeat the galvanization steps.

Ultimately, pieces are packed and stored based on the customers' orders after obtaining quality control approval.

**Please Click to watch the hot galvanizing process video.**

 [Watch Video](#)

## SPECIFICATION OF HDG CONDUIT ACCORDING TO DIN49020

QUANTITY PER BUNDLE	WEIGHT(Kg) 3 METER	THICKNESS (mm)	WEIGHT(Kg) 3 METER	THICKNESS (mm)	OD (mm)	SIZE
19	1.65	1.2	1.50	1.0	20.4	PG 13.5
19	1.85	1.2	1.65	1.0	22.5	PG 16
14	2.40	1.2	2.10	1.0	28.3	PG 21
10	3.30	1.5	3.00	1.2	37.0	PG 29
5	4.50	1.5	3.70	1.2	47.0	PG 36
4	5.50	1.5	4.90	1.2	59.3	PG 48

The above values may differ by up to 5% compared to the manufactured product

## SPECIFICATION OF HDG CONDUIT ACCORDING TO BS31

WEIGHT(Kg) 6 METER	THICKNESS(mm) (HEAVY CONDUIT)	WEIGHT(Kg) 6 METER	THICKNESS(mm) (LIGHT CONDUIT)	OD	SIZE (INCH)
8.0	2.5	6.4	2.0	21.3	1/2
10.2	2.5	8.2	2.0	26.7	3/4
12.8	2.5	10.3	2.0	33.4	1
16.3	2.5	13.2	2.0	42.2	1-1/4
18.5	2.5	15.0	2.0	48.3	1-1/2
23.0	2.5	18.4	2.0	60.3	2
29.0	2.5	23.0	2.0	73-75	2-1/2
41.5	3.0	34.2	2.5	88.9	3
62.0	3.5	53.0	3.0	114.3	4

The above values may differ by up to 5% compared to the manufactured product

## SPECIFICATION OF HDG EXPLOSION-PROOF CONDUIT

HEAVY		LIGHT		OD	SIZE (INCH)
WEIGHT(Kg) 6 METER	THICKNESS (mm)	WEIGHT(Kg) 6 METER	THICKNESS (mm)		
9.0	2.7	8.2	2.5	21.3	1/2
11.5	2.8	10.5	2.5	26.7	3/4
17.0	3.3	13.0	2.5	33.4	1
23.0	3.5	18.5	2.8	42.2	1-1/4
27.0	3.6	21.0	2.8	48.3	1-1/2
36.5	3.9	26.5	2.8	60.3	2
56.5	5.0	36.0	3.2	73.0	2-1/2
74.5	5.4	48.0	3.5	88.9	3
106.0	6.0	71.0	4.0	114.3	4

The above values may differ by up to 5% compared to the manufactured product





Galvanization Type:  
Hot dip galvanized

Coating Thickness:  
55 to 85  $\mu\text{m}$   
ASTM A123

Sheet Alloy:  
St12/St14/St37/St52

Coupling

Length:  
3000mm to 6000mm

Thread Type:  
PG/NPT





Light hot galvanized pipe is the exclusive product of Petrogerayesh Company and is appropriate to be used in areas not exposed to direct humidity. Compared to the hot deep galvanized pipes, this product is more cost-effective with a higher resistance against corrosion and rust rather than the cold galvanized pipes.

These pipes are made of high-quality galvanized sheets with a special 12-18 micron galvanized coating inside and outside the pipe. The less welding spot remains on the pipe after the welding process, and the welding spot is recovered by the zinc.

## SPECIFICATION OF FABRIC GALVANIZED CONDUIT ACCORDING TO DIN49020

QUANTITY PER BUNDLE	WEIGHT(kg) 3 METER WITH COUPLING	THICKNESS (mm)	OD (mm)	SIZE
19	1.55	1	20.4	PG 13.5
19	1.7	1	22.5	PG 16
14	2.1	1	28.3	PG 21

The above values may differ by up to 5% compared to the manufactured product





Cold galvanized pipes are inherently less resistant to humidity compared to other types of pipes, and their economic aspect is only considered. The external surface of these pipes is galvanized, and their internal wall is prone to corrosion and rust. The width of the galvanization coating of these pipes equals 5–8 microns.

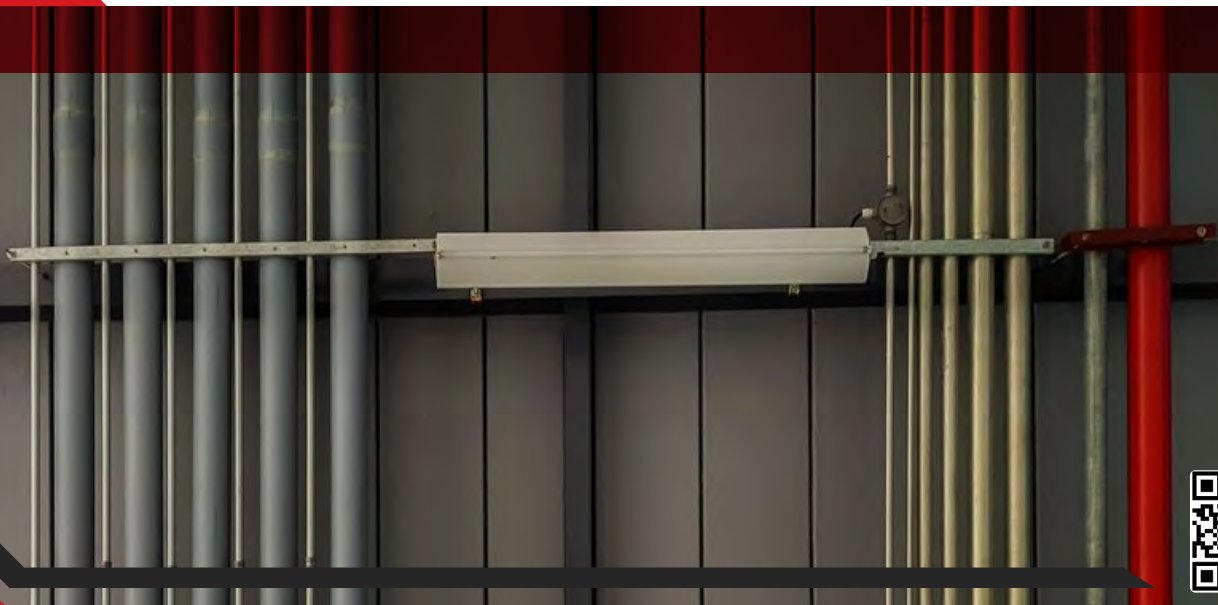
These pipes are divided into two first-class and second-class types in terms of construction quality and sheet thickness.

### SPECIFICATION OF ELECTRO GALVANIZED CONDUIT ACCORDING TO DIN49020

QUANTITY PER BUNDLE	WEIGHT(kg) 3 METER	THICKNESS (mm)		WEIGHT(kg) 3 METER	THICKNESS (mm)		OD (mm)	SIZE
20	1.3	0.9	GRADE 1	0.9	0.6	GRADE 2	20.4	PG 13.5
20	1.5	0.9		1	0.6		22.5	PG 16
10	1.9	0.9		1.3	0.6		28.3	PG 21
10	2.7	1		2.5	0.9		37	PG 29
5	3.5	1		3.3	0.9		47	PG 36
4	4.5	1		3.9	0.9	59.3	PG48	

The above values may differ by up to 5% compared to the manufactured product

The colored electric steel pipes of Petrogerayesh are made of light pipes with ST12 materials, which are colored using high-quality colors after cutting, threading, and degreasing operations based on two electrostatic and furnace techniques based on the NEC and IEC Standards.



**PETROGERAYESH**

**Safety is a choice**





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1. Standard, strong, and double-layered packaging.
2. PVC coating with high-quality materials manufactured in black, white, and gray colors.
3. The circular-formed metal pipe is made of a high-quality galvanized sheet with 0.3mm thickness.

SIZE			OD * ID (mm)	BENDING RADIUS (mm)±%1	WEIGHT (kg/m)s	REEL LENGTH (m)+%1
NOMINAL	INCH	METRIC				
4	1/8	-	4*8.3	30	0.06	50
6	1/4	10	6*10.3	35	0.08	25
9	-	-	9*13	40	0.11	25
11	5/16	12	11*15.5	43	0.13	25
13	3/8	16	13*17.5	50	0.16	25
16	1/2	20	16*20.6	60	0.20	25
21	3/4	25	20*25.6	70	0.30	25
25	1	-	26*31.4	80	0.39	25
29	-	32	29*35	95	0.44	25
36	1-1/4	40	36*43.8	115	0.72	25
42	1-1/2	-	42*50	130	0.82	25
48	2	50	48*56	140	0.93	25
52	2	-	52*60	165	1.00	10
63	2-1/2	63	62*70	190	1.40	10
75	3	75	76*85	230	1.77	10
80	3	-	80*90	245	1.87	5
100	4	105	100*110	290	2.16	5
125	5	-	125*135	-	-	5
150	6	-	150*160	-	-	5





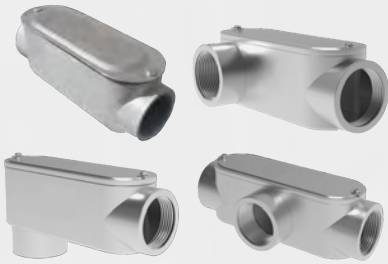
**Spit Connector**



**Bras Bosch**



**Coupler**



**Aluminum Conduit**



**Galvanized Can**



**Aluminum  
Distribution Box**



**Aluminum  
Closed Tee**



**Aluminum Closed  
Bend Pipe**



**Steel Bend Pipe**







**Rounded Cable  
Gland**



**Sealing  
Male-Female Gland**



**Double-Screw  
aluminum Gland**



**Insulated Fastener**



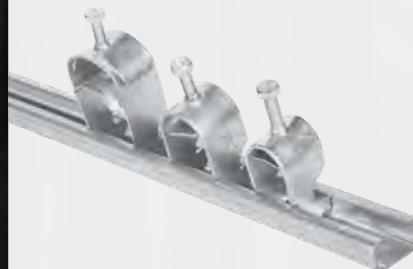
**Bracket Fastener**



**Fork Fastener**



**Male-Female  
Converter**



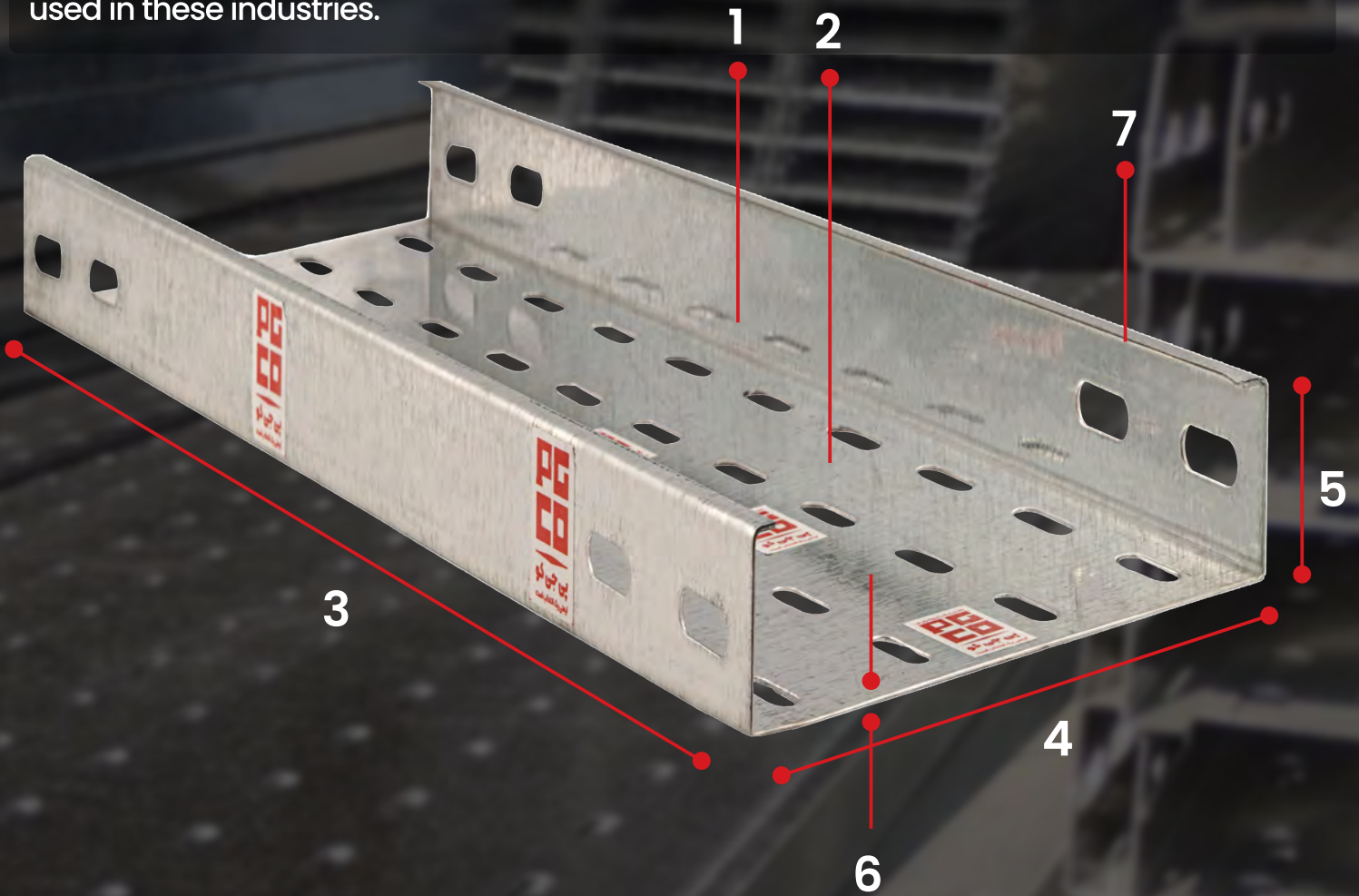
**Fork Fastener Rail**



**Aluminum  
Head Bushing**



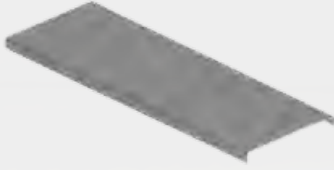
Cable trays of Petrogerayesh are manufactured in customized sizes and maps using full-automatic CNC machines with a high accuracy based on the latest global standards for different kinds of hot galvanization, fabric galvanization, Steel 304, and 316. Since high-quality sheets are used in the fabrication based on the technical map and quality control inspection, these products have become of popular and are mostly used in these industries.



- 1-SHEET ALLOY: ST12/ST14/ST37/DX51D/DX53D/SS304/SS316
- 2-GALVANIZATION TYPE: HOT DIP GALVANIZED ACCORDING TO ASTM A123 /COATING THICKNESS: (up to 45  $\mu\text{m}$ )  
FABRIC GALVANIZED SHEET/COATING THICKNESS: (up to 8  $\mu\text{m}$ )
- 3-LENGTH:1000 mm to 3000 mm
- 4-Width: 50 mm to 1000 mm
- 5-Height: 20 mm to 200 mm
- 6-Thickness: 0.4 mm to 2.5 mm
- 7-Type Of Wall Bends: 2/4/6



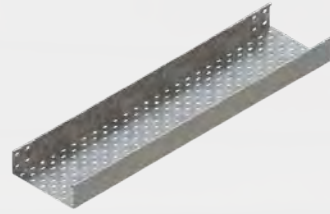




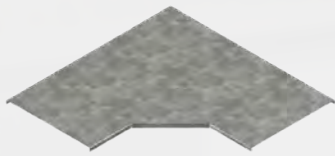
Cover for Cable  
Tray & Ladder



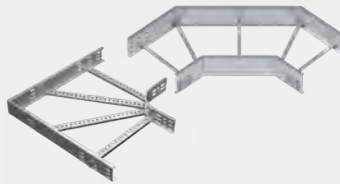
Cable Ladder



Cable Tray



Cover for L-Type Horizontal Bend  
90° for Cable Tray & Ladder



L-Type Horizontal Bend  
90° for Cable Ladder



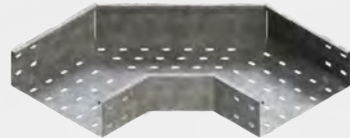
L-Type Horizontal Bend  
90° for Cable Tray



Cover for C-Type Horizontal Bend  
90° for Cable Tray & Ladder



C-Type Horizontal Bend 90°  
for Cable Ladder



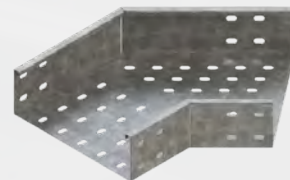
C-Type Horizontal Bend 90°  
for Cable Tray



Cover for Horizontal Bend 45°  
for Cable Tray & Ladder

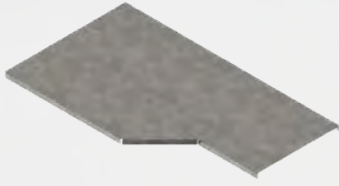


Horizontal Bend 45° for  
Cable Ladder

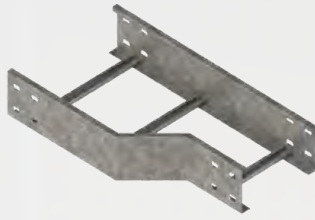


Horizontal Bend 45°  
for Cable Tray

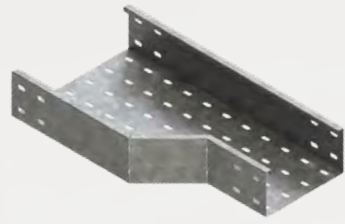




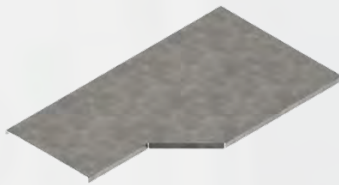
Cover for Right Reducer  
for Cable Tray & Ladder



Right Reducer  
for Cable Ladder



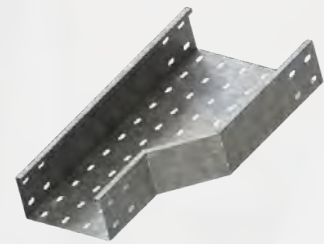
Right Reducer  
for Cable Tray



Cover for Left Reducer  
for Cable Tray & Ladder



Left Reducer  
for Cable Ladder



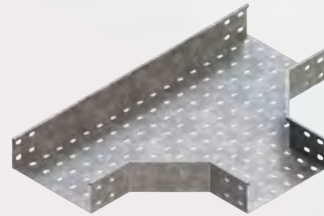
Left Reducer  
for Cable Tray



Cover for Tee  
for Cable Tray & Ladder



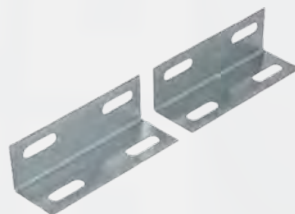
Tee for Cable Ladder



Tee for Cable Tray



Cable Tray Joint (U Type)



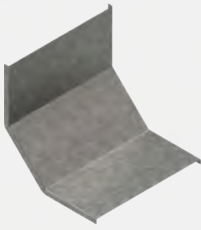
Straight Joint (L Type) for  
Cable Tray & Ladder



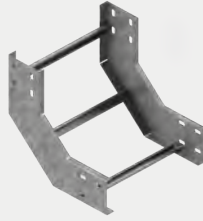
Divider for Cable Tray  
& Ladder



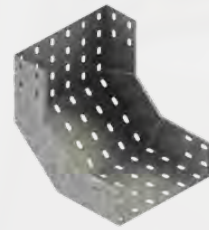




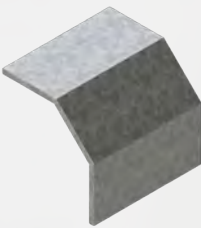
**Cover for Vertical Inside Riser 90° for Cable Tray & Ladder**



**Vertical Inside Riser 90° for Cable Ladder**



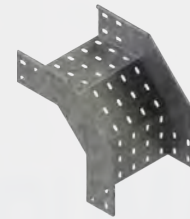
**Vertical Inside Riser 90° for Cable Tray**



**Cover for Vertical Outside Riser 90° for Cable Tray & Ladder**



**Vertical Outside Riser 90° for Cable Ladder**



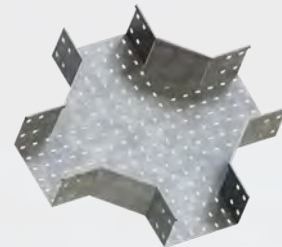
**Vertical Outside Riser 90° for Cable Tray**



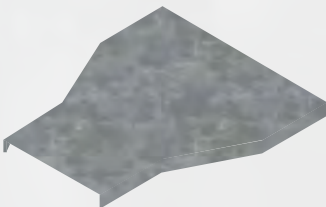
**Cover for Cross for Cable Tray & Ladder**



**Cross for Cable ladder**



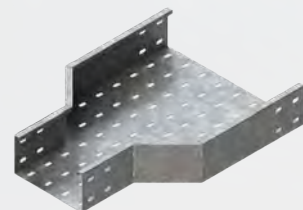
**Cross for Cable Tray**



**Cover for Symmetrical Reducer for Cable Tray & Ladder**



**Symmetrical Reducer for Cable Ladder**



**Symmetrical Reducer for Cable Tray**



Despite all the limitations and sanctions imposed on the different industries and steel industry of Iran, this country has become one of the largest steel manufacturers and exporters worldwide.

According to statistics published in 2020, Iran could manufacture 29 million tonnes of steel leading to the 10th world rank of Iran above Ukraine, Italy, France, and Mexico.

Regarding the steel production rate in Iran, Petrogerayesh could not only cover domestic needs but also export the production surplus. This case made this company one of the top exports of galvanized pipe profiles and steel pieces in the Region. Petrogerayesh Company now significantly exports galvanized pipes and profiles by exporting pipes to neighboring countries, including Oman, Iraq, Tajikistan, Uzbekistan, Armenia, Azerbaijan, and some East European countries.







# Safety Is a Choice

