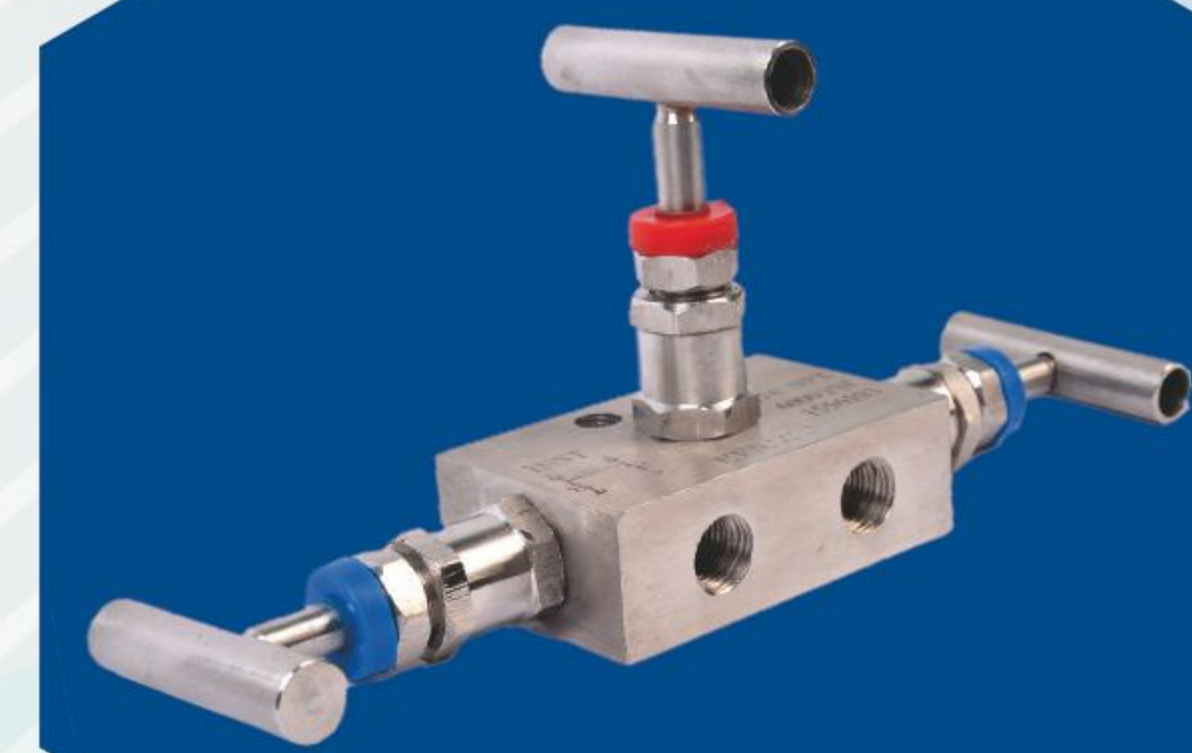




## Equipment Fara Sanat Arman Co.

Manufacturer of Instrumentation and Measuring Equipment for Oil and Gas Industries

- Member of Knowledge Enterprises
- Member of Isfahan Science and Technology Town
- Member of National Iranian oil Company approved vendor list (AVL)



# ACCURATE SOLUTION

**Factory:** Unit No 9, Esfahan Science and Technology Town,  
Esfahan University of Technology Blvd, Esfahan, IRAN  
Tel: +98 313 393 1161-2

**Main Office:** Unit No 5, Second Floor, Kia Complex,  
Saadatabad Street, Esfahan, IRAN  
Tel : +98 313 66 44 734-5 , +98 313 66 44 642-3  
Fax: +98 313 664 1968

[WWW.EFSACO.COM](http://WWW.EFSACO.COM), [INFO@EFSACO.COM](mailto:INFO@EFSACO.COM)





**Sheath Type**

**Liquid Filled Type Thermometer**

- ▶ Dial: 75, 100, 125, 150 mm
- ▶ Range: -30 ~ 600 °C
- ▶ Acc: 1%, 1.6 %, 2 %F.S
- ▶ Wetted part : STS304, STS316, .....



**Liquid Filled**

**Liquid Filled Type Thermometer**

- ▶ Dial: 75, 100, 125, 150 mm
- ▶ Range: -30 ~ 600 °C
- ▶ Acc: 1%, 1.6 %, 2 %F.S
- ▶ Wetted part : STS304, STS316, .....



**Back Connection**

**Bimetal Thermometer**

- ▶ Dial: 70, 100, 125, 150 mm
- ▶ Range: -30 ~ 600 °C
- ▶ Acc: 1%, 1.6 %, 2%F.S
- ▶ Wetted part : STS304, STS316, .....



**Bottom Connection**

**Angle Type Special Thermometer**

- ▶ Dial: 75, 100, 125, 150 mm
- ▶ Range: -30 ~ 600 °C
- ▶ Acc: 1%, 1.6 %, 2%F.S
- ▶ Wetted part : STS304, STS316, .....



**Every Angle Type**

**Angle Type Special Thermometer**

- ▶ Dial: 100, 125, 150 mm
- ▶ Range: -30 ~ 600 °C
- ▶ Acc: 1%, 1.6 %, 2%F.S
- ▶ Wetted part : STS304, STS316, .....



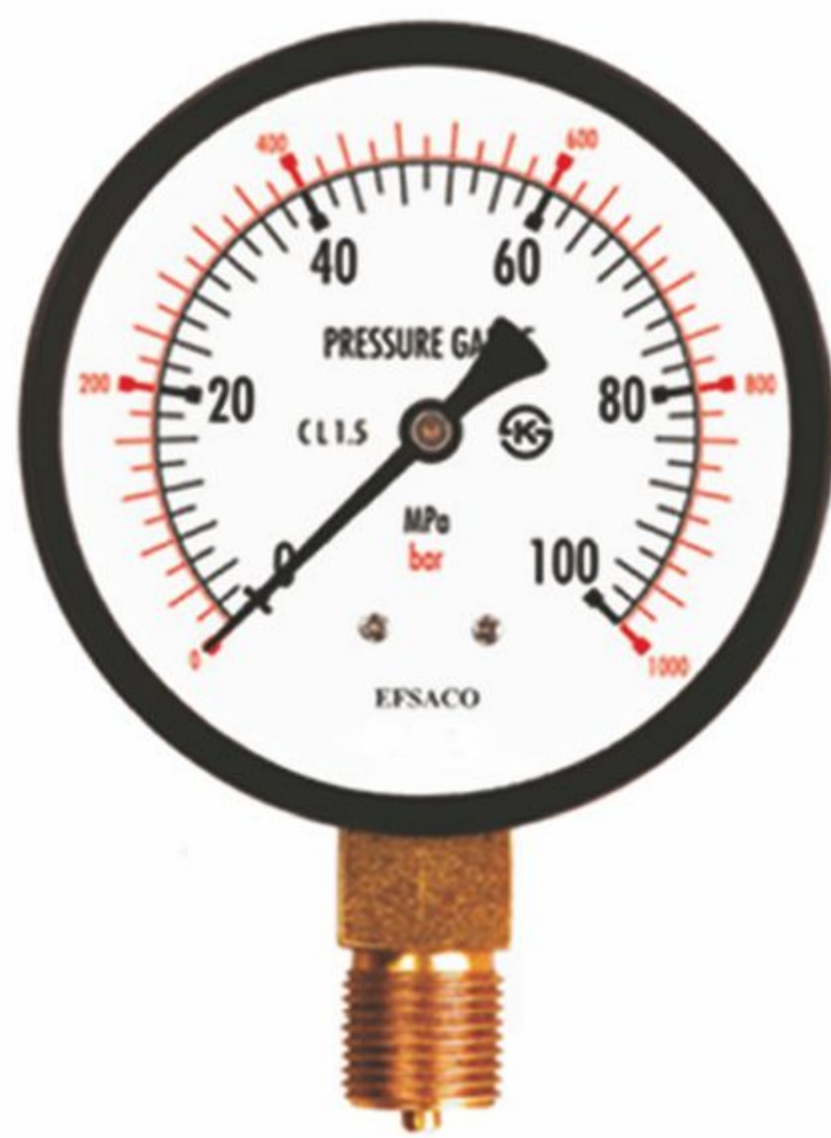


## Pressure Gauge

3000 series

Equipment Fara Sanat Arman Co.

[www.efsaco.com](http://www.efsaco.com)



### EFS - SS3010 Series

#### General Pressure Gauge

- ▶ Dial: 40, 50, 60, 75, 100, 150, 200 mm
- ▶ Range: 0~ 1000 bar
- ▶ Acc: 1%, 1.6%, 2.5%, 4% F.S
- ▶ Wetted part: Brass, Monel, Inconel, Hastelloy



### EFS - SS3020 Series

#### Special Pressure Gauge

- ▶ Dial: 40, 50, 60, 75, 100, 150, 200 mm
- ▶ Range: 0~ 1000 bar
- ▶ Acc: 1%, 1.6%, 2.5%, 4% F.S
- ▶ Wetted part: STS304, STS316, Monel, Inconel, Hastelloy



### EFS - SF3020 Series

#### Solid Front Safety Pressure Gauge

- ▶ Dial: 63, 100, 150 mm
- ▶ Range: 0~ 1000 bar
- ▶ Acc: 1%, 1.6%, 2.5%, 4% F.S
- ▶ Wetted part: STS304, STS316, Monel, Inconel, Hastelloy



### EFS - SS3070 Series

#### Liquid Filled Pressure Gauge (DIN)

- ▶ Dial: 63, 80, 100, 160 mm
- ▶ Range: -1~20, -1~0, 0~ 1000 bar
- ▶ Acc: 1, 1.5 %F.S
- ▶ Wetted part: STS304, STS316, Monel, Inconel, Hastelloy





**EFS-SS3065 Series**

**Pressure Gauge with Electric Contact**

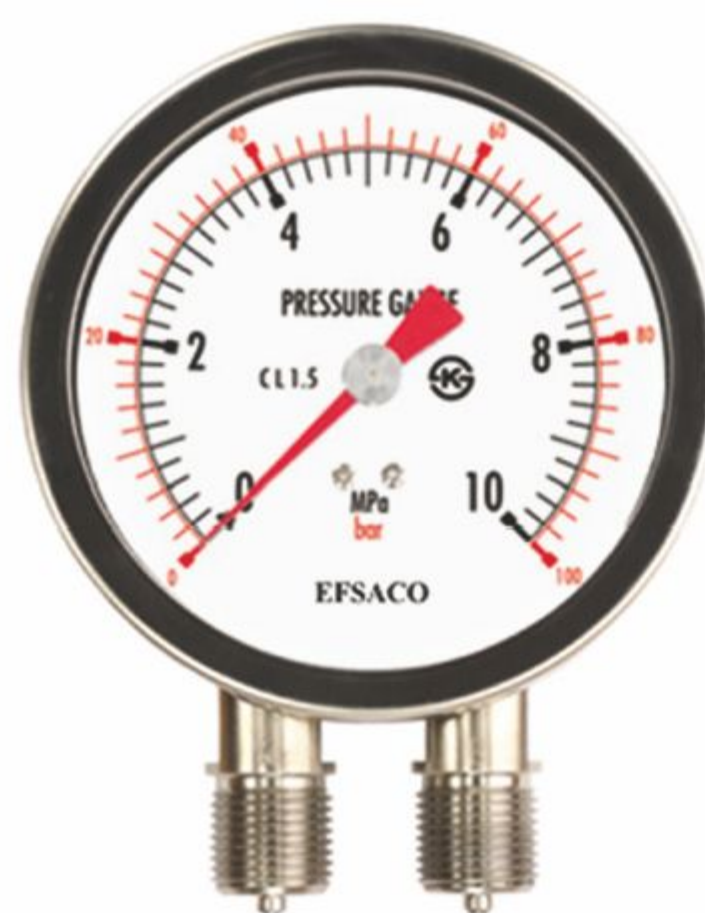
- ▶ Dial: 100, 150 mm
- ▶ Range: -1~0, -1~ 20, 0~1000 bar
- ▶ Acc: 1%, 1.6%, 2.5%, 4% F.S
- ▶ Wetted part: STS304, STS316, Monel, Inconel, Hastelloy



**EFS-SS3080 Series**

**Receiver Gauge**

- ▶ Dial: 100, 150 mm
- ▶ Range: 0~ 100%
- ▶ Acc: 1%, 1.6%, 2.5%, 4% F.S
- ▶ Wetted part: STS304, STS316, Monel, Inconel, Hastelloy



**EFS-SS3090 Series**

**Duplex Pressure Gauge**

- ▶ Dial: 100, 150 mm
- ▶ Range: 0~4, 0~35 bar
- ▶ Acc: 1%, 1.6%, 2.5%, 4% F.S
- ▶ Wetted part: Brass, STS316, Monel, Inconel, Hastelloy



**EFS-SS3055/6 Series**

**Diaphragm Type Low Pressure Gauge**

- ▶ Dial: 100, 150 mm
- ▶ Range: 0.02~0, 0~0.35 bar
- ▶ Acc: 1%, 1.6%, 2.5%, 4% F.S
- ▶ Diaphragm: STS304, STS316, Teflon, etc
- ▶ Wetted part: STS304, STS316, Monel, Inconel, Hastelloy



**EFS-SS3030 Series**

**Diaphragm Seal Type Pressure Gauge**

- ▶ Dial: 100, 150 mm
- ▶ Range: 0~ 350 bar
- ▶ Acc: 1 %F.S
- ▶ Wetted part: STS304, STS316, Monel, Inconel, Hastelloy





**EFS-Magnetic 2000 Series**

**Differential Pressure Gauge**

- ▶ Dial: 100 mm
- ▶ Range: -0.001 to -0.1 ~0.001 to 0.1 bar  
0 ~ 0.002 to 0.05 bar
- ▶ Acc: 2%, 3%, 4% F.S
- ▶ Wetted part: Aluminum, Monel, Inconel, Hastelloy



**EFS-Magnetic 3010 Series**

**Differential Pressure Gauge with Electric Contact**

- ▶ Dial: 80, 100, 150 mm
- ▶ Range: 0 ~ 0.5 to 10 bar
- ▶ Acc: 2%, 3%, 4% F.S
- ▶ Wetted part: Aluminum, STS316, Monel



**Differential Pressure Gauge**

**Diaphragm type**

- ▶ Dial: 100, 150 mm
- ▶ Max Static Pressure up to 400 bar
- ▶ Acc: 1%, 1.6%, 2.5% F.S
- ▶ Wetted part: STS, Monel, Inconel, Hastelloy



**EFS-Magnetic 3000 Series**

**Differential Pressure Gauge**

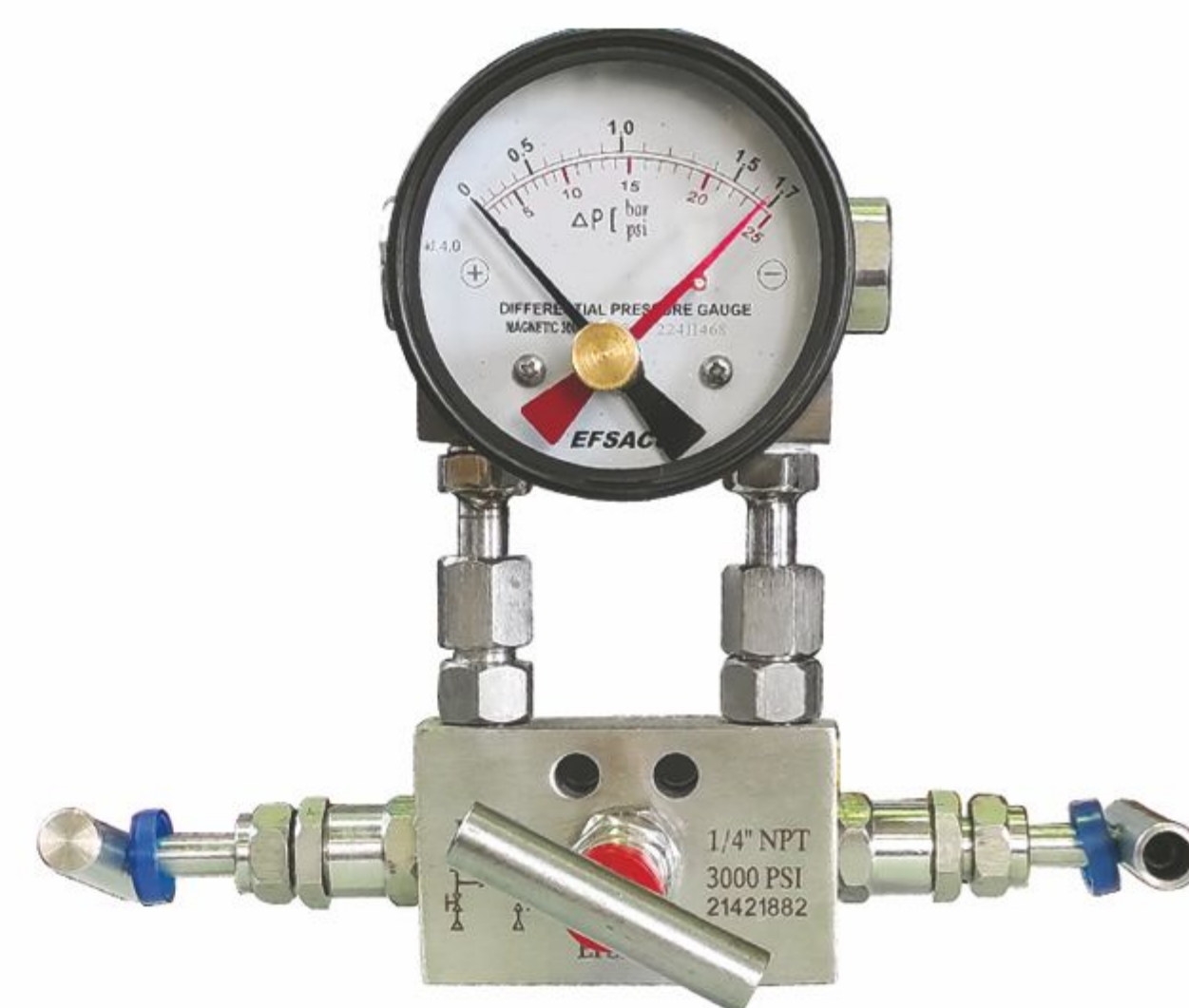
- ▶ Dial: 80, 100, 150 mm
- ▶ Range: 0 ~ 0.5 to 10 bar
- ▶ Acc: 2%, 3%, 4% F.S
- ▶ Wetted part: Aluminum, STS316, Monel



**EFS-Magnetic 4000 Series**

**Differential Pressure Gauge Sensing Element with Diaphragm**

- ▶ Dial: 80, 100, 150 mm
- ▶ Range: 0~0.5 to 10 bar
- ▶ Acc: 2%, 3%, 4% F.S
- ▶ Wetted part: STS316, Aluminum



**DPG+Manifold**

- ▶ Dial: 100, 150 mm
- ▶ Range: 0 ~ 0.5 to 10 bar
- ▶ Acc: 1.6%, 2.5% F.S
- ▶ Wetted part: STS316, Monel, Inconel, Hastelloy





# Pressure and Temperature Transmitter



### EFS-JPT3051P Series

#### Piezoresistive Silicon Gauge Pressure Transmitter

##### Specifications

- ▶ Range: 0-0.1 ~ 600 bar
- ▶ Acc: 0.05%, 0.075%, 0.1% F.S
- ▶ Operating Voltage: 12~36V
- ▶ Output signal: 4~20mA/ Hart
- ▶ Wetted part: STS304, STS316,Etc
- ▶ Type of Measurement: gage pressure/absolute pressure/negative pressure



### EFS-JPT3051DP Series

#### Piezoresistive Single Crystal Silicon Differential Pressure Transmitter

##### Specifications

- ▶ Range: 0-0.002 ~ 0-400 bar
- ▶ Acc: 0.075%, 0.1%, 0.2% F.S
- ▶ Operating Voltage: 12~36V DC
- ▶ Output signal: 4~20mA/ Hart
- ▶ Wetted part: STS304, STS316,Etc
- ▶ Type of Measurement: Liquid, gas pressure & differential pressure



### EFS-JTT644x Series

#### Digital Temperature Transmitter

##### Specifications

- ▶ Range: -200 ~ 1600 °C
- ▶ Acc: 0.1%, 0.2% F.S
- ▶ Operating Voltage: 10~40 V DC
- ▶ Output signal: 4~20mA/ Hart
- ▶ Wetted part: STS304, STS316,Etc
- ▶ Type of sensor: RTD, TC



### EFS-KITHP22

#### Pressure Transmitter

##### Specifications

- ▶ Range: Gauge Pressure: 0 ~ 0.2 to 450 bar
- ▶ Compound Pressure: -760 mHg ~ 0 to 30 bar
- ▶ Absolute Pressure: 0 ~ 1 to 30 bar
- ▶ Acc: 0.1%, 0.2%, 0.05% F.S
- ▶ Operating Voltage: 18 ~ 36V (STD.24V DC)
- ▶ Output signal: 4~20 mA DC, 0~5 (10) V, 1~5V
- ▶ Wetted part: STS316



### EFS-KITHP32

#### Pressure Transmitter

##### Specifications

- ▶ Range: Gauge Pressure: 0 ~ 0.2 to 450 bar
- ▶ Compound Pressure: -760 mHg~0 to 30 bar
- ▶ Absolute Pressure: 0 ~ 1 to 30 bar
- ▶ Acc: 0.1%, 0.2%, 0.05% F.S
- ▶ Operating Voltage: 18~36V (STD.24V DC)
- ▶ Output signal: 4~20mA DC, 0~5 (10) V, 1~5V
- ▶ Wetted part: STS316



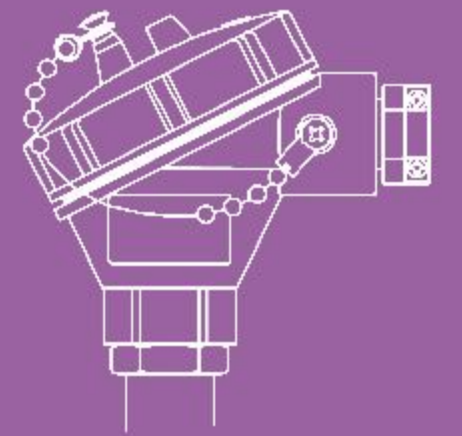
### EFS-KITHP42

#### Pressure Transmitter

##### Specifications

- ▶ Range: Gauge Pressure: 0 ~ 0.2 to 450 bar
- ▶ Compound Pressure: -760 mHg ~ 0 to 30 bar
- ▶ Absolute Pressure : 0 ~ 1 to 30 bar
- ▶ Acc: 0.1%, 0.2%, 0.05% F.S
- ▶ Operating Voltage: 18~36V (STD.24V DC)
- ▶ Output signal: 4~20mA DC, 0~5 (10) V, 1 ~ 5 V
- ▶ Wetted part: STS316





**EFS-SS5010 Series**

**Thermocouple**

**Features**

When the two dissimilar metal conductors are connected together to form a closed circuit and the two junctions are kept in different temperatures, the thermal electromotive force is generated in the circuit.



**EFS-SS5030 Series**

**Resistance Temperature Detectors**

**Features**

This is the typical resistance temperature detector using Mica or ceramic type RTD element



**EFS-SS5020 Series**

**Sheath Thermocouple**

**Features**

As this has a sheath which is composited with fine metal or heat-resisting steel, it has good properties for the electric-insulation and heat-resistance



**EFS-SS5040 Series**

**Sheath Resistance Temperature Detectors**

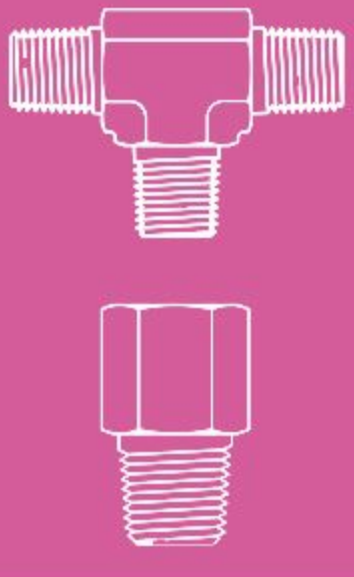
**Features**

This is the typical resistance temperature detector using Mica or ceramic type RTD element.  
As this has a sheath which is composited with fine metal or heat-resisting steel, it has good properties for the electric-insulation and heat-resistance.

**Applications**

- 1) Steel, nonferrous metals industry
  - Temperature measurement of smelting-furnace, High temperature furnace, Electric-heat furnace, constant heat furnace
  - Temperature measurement of heated metal
- 2) Electric power plant and Gas plant
  - Temperature measurement of pipe wall of furnace and boiler
  - Fluid temperature measurement of vapor, cooling-water, oil and etc.
- 3) Electronic industry Temperature measurement of electric motor, Trans electric power system and Electric insulating oil
  - Transistor integrated circuit
- 4) Ceramic industry
  - Temperature measurement of furnace in the manufacturing process of glass, ceramic, cement and etc.
- 5) Chemical industry
  - Temperature measurement of reactors and extruder molding machine, distiler and etc.
- 6) Shipbuilding industry
  - Temperature measurement of LPG/LNG tank inner wall and heat xchanger
- 7) Food industry
  - Temperature measurement in manufacturing processes of bread, liquor and others.

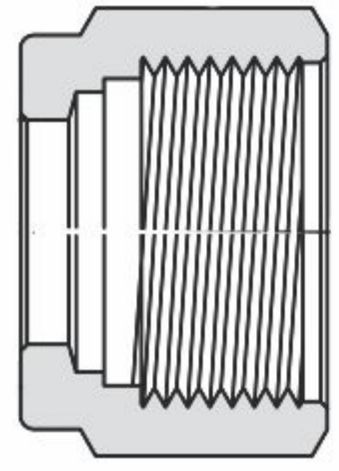




## Pipe Fitting

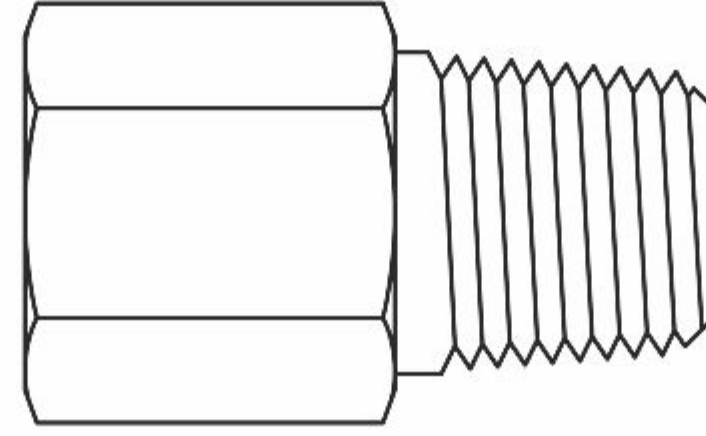
Equipment Fara Sanat Arman Co.

[www.efsaco.com](http://www.efsaco.com)



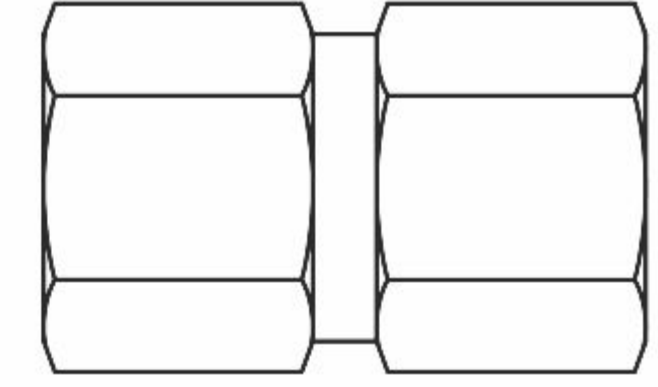
**EFS-PFN Series**

Nut



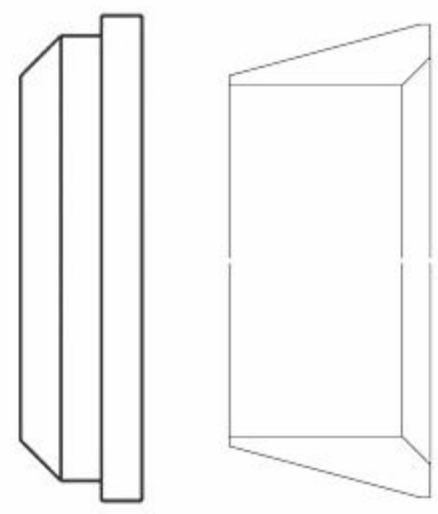
**EFS-PFA Series**

Adapter



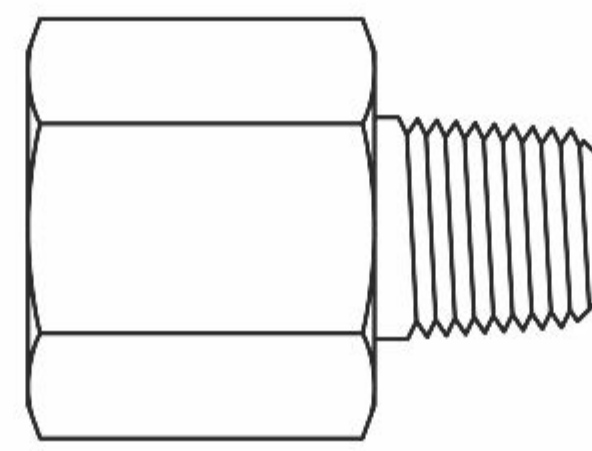
**EFS-PFHRC Series**

Hex Reducing Coupling



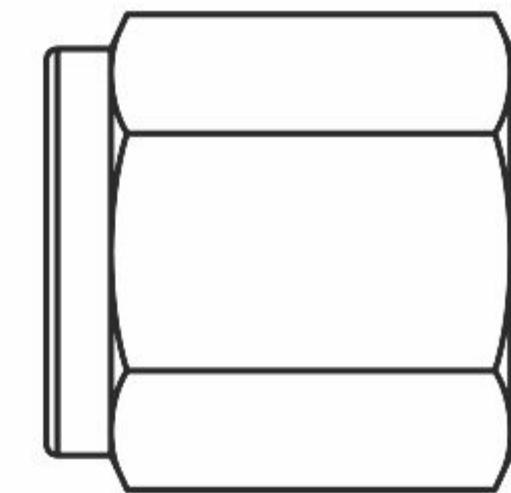
**EFS-PFF Series**

Back Ferrule & Front Ferrule



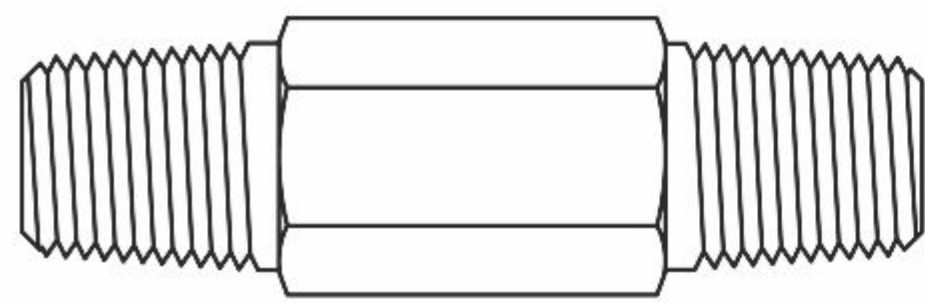
**EFS-PFRA Series**

Reducing Adapter



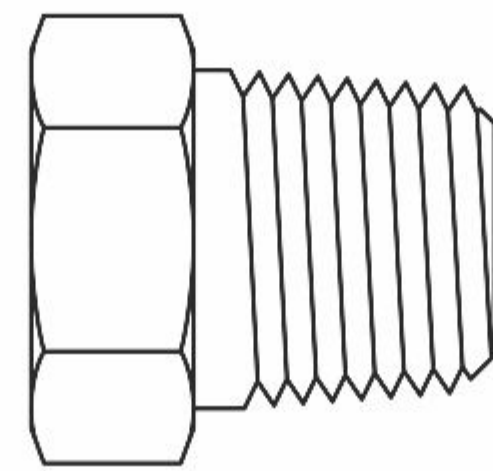
**EFS-PFPC Series**

Pipe Cap



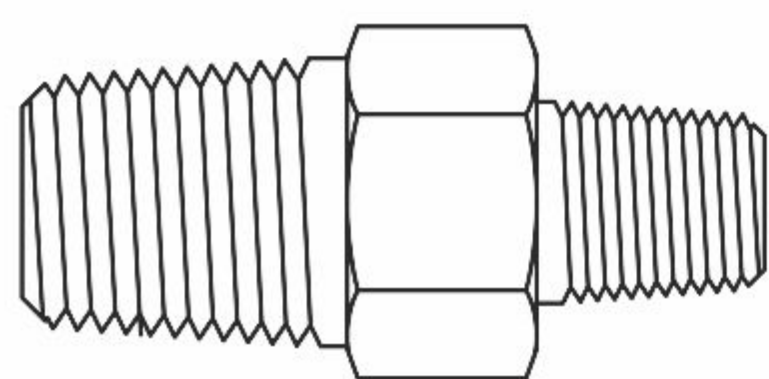
**EFS-PFHLN Series**

Hex Long Nipple



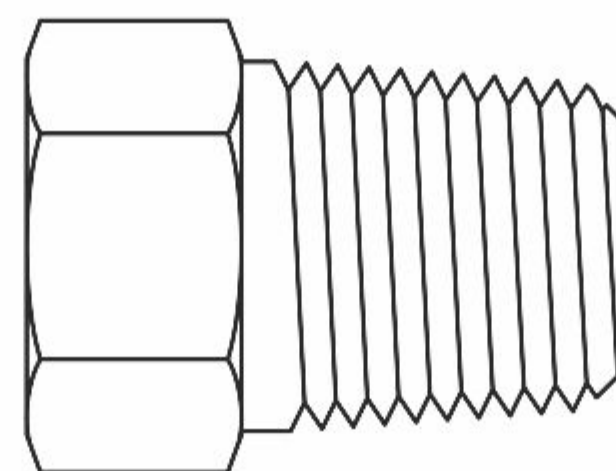
**EFS-PFRB Series**

Reducing Bushing



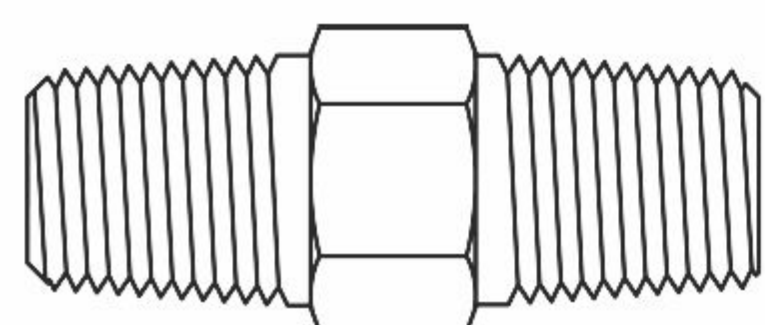
**EFS-PFHRN Series**

Hex Reducing Nipple



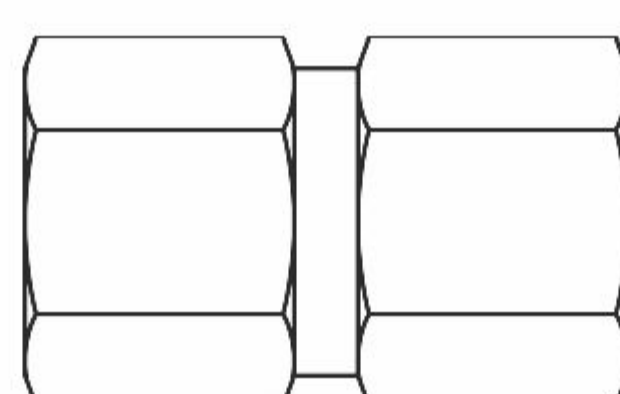
**EFS-PFPP Series**

Pipe Plug



**EFS-PFHN Series**

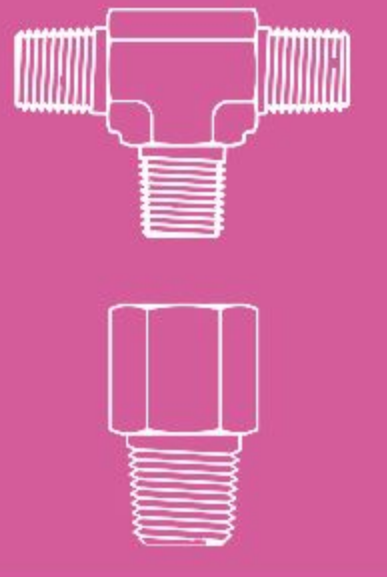
Hex Nipple



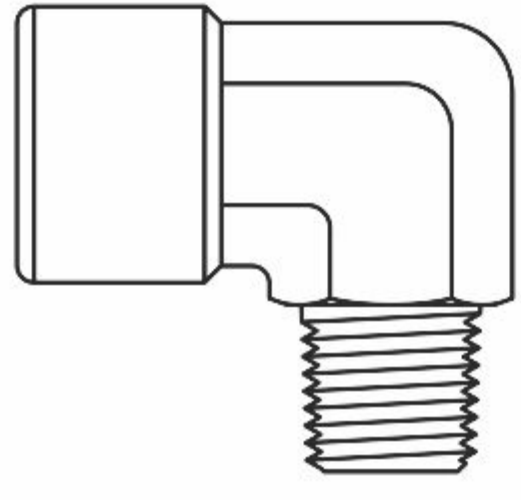
**EFS-PFHC Series**

Hex Coupling



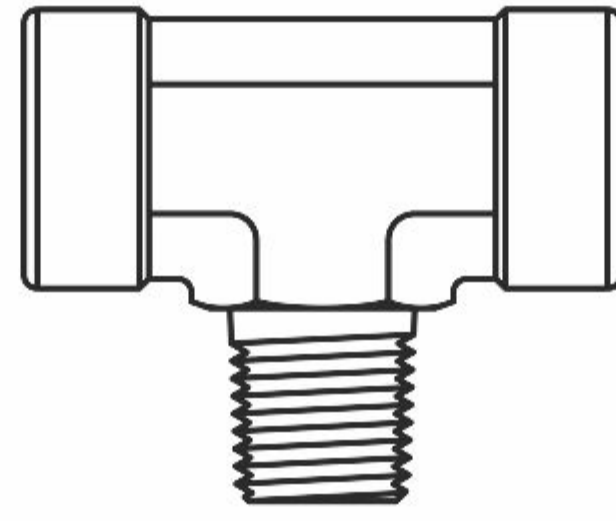


## Pipe Fitting



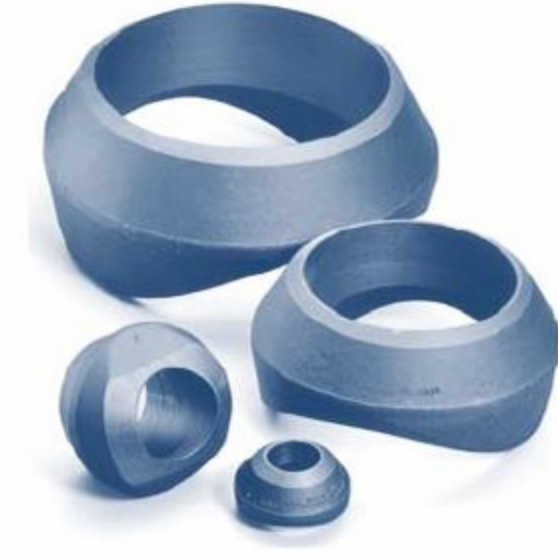
**EFS-PFSE Series**

Street Elbow



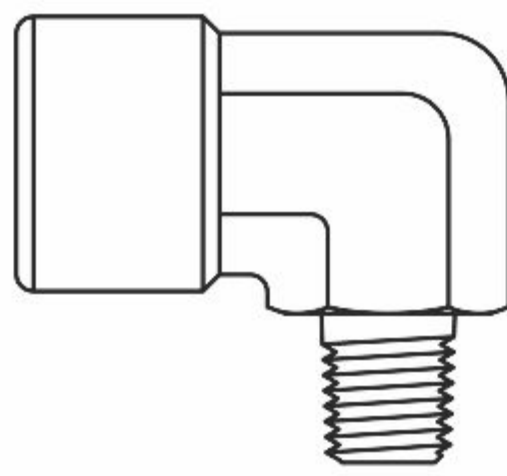
**EFS-PFMBT Series**

Male Branch Tee



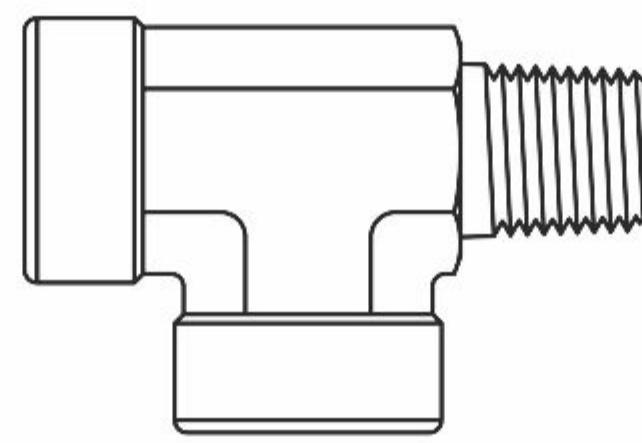
**EFS-OLW Series**

Weldolet



**EFS-PFRSE Series**

Reducing Street Elbow



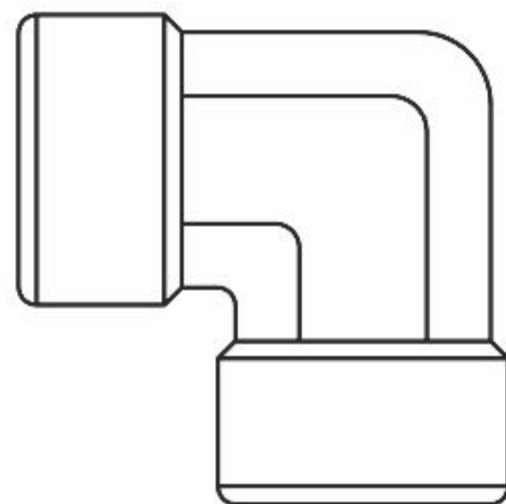
**EFS-PFST Series**

Street Tee



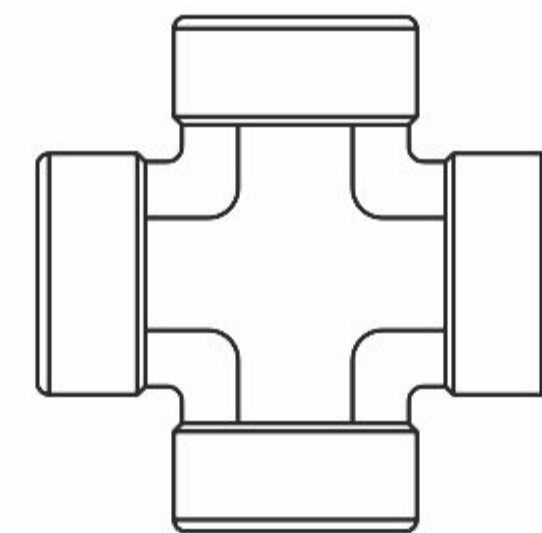
**EFS-OLS Series**

Sockolet



**EFS-PFFE Series**

Female Elbow



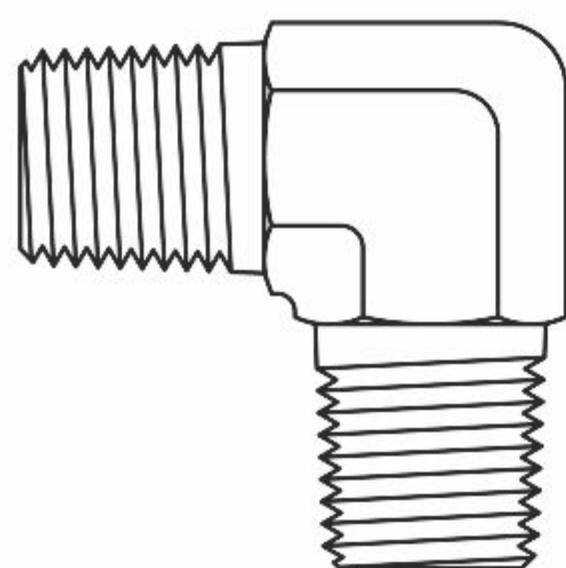
**EFS-PFC Series**

Cross



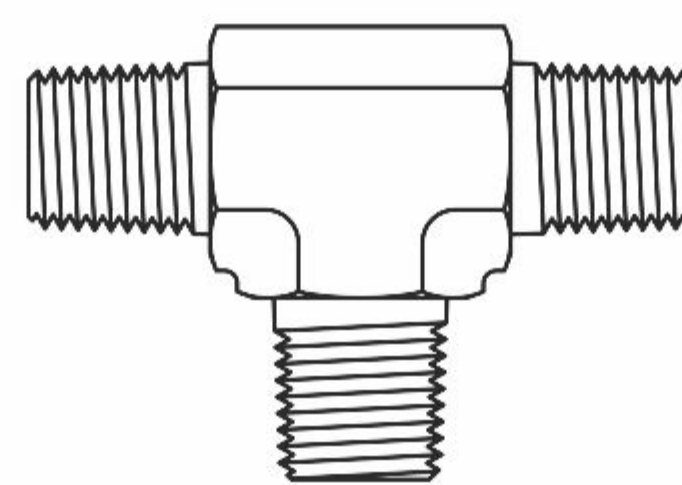
**EFS-OLT Series**

Threadolet



**EFS-PFME Series**

Male Elbow



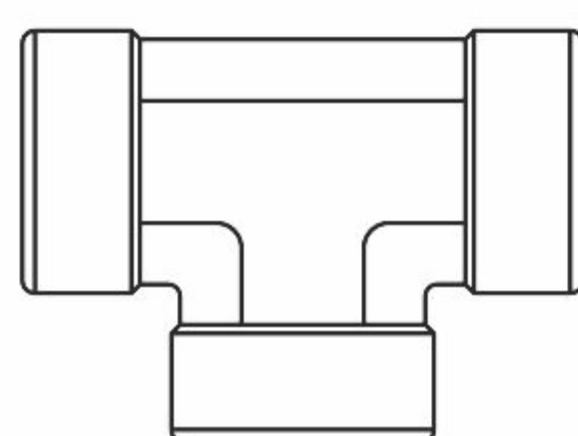
**EFS-PFMT Series**

Male Tee



**EFS-OLE Series**

Elbolet



**EFS-PFFT Series**

Female Tee



**EFS-OLL Series**

Latrolet





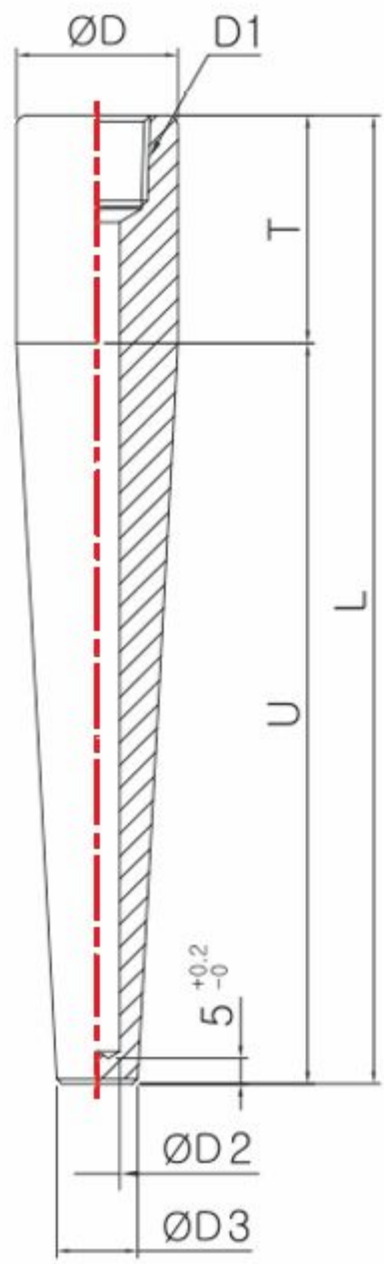
# Thermowell

# Equipment Fara Sanat Arman Co.

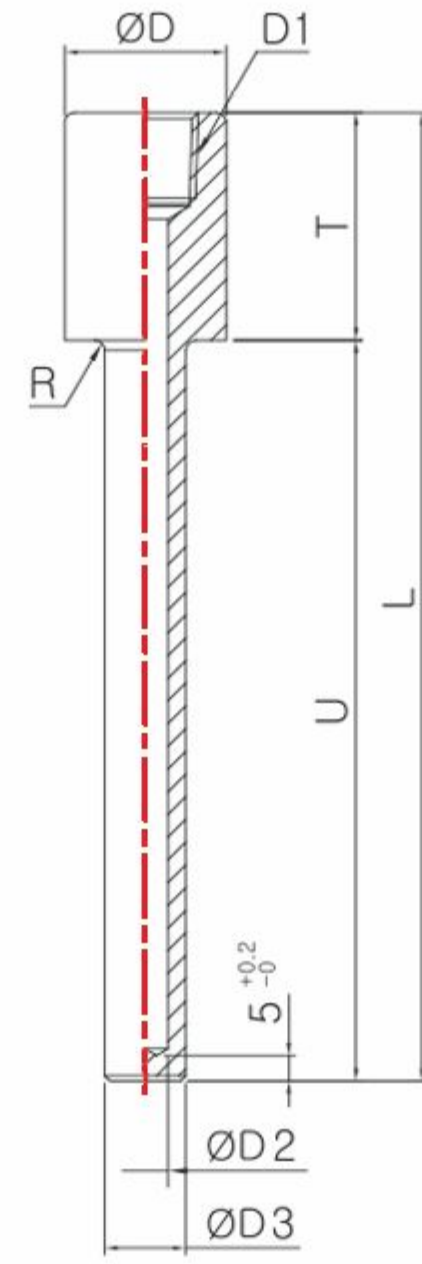
www.efsaco.com

## Drilled Bar Type

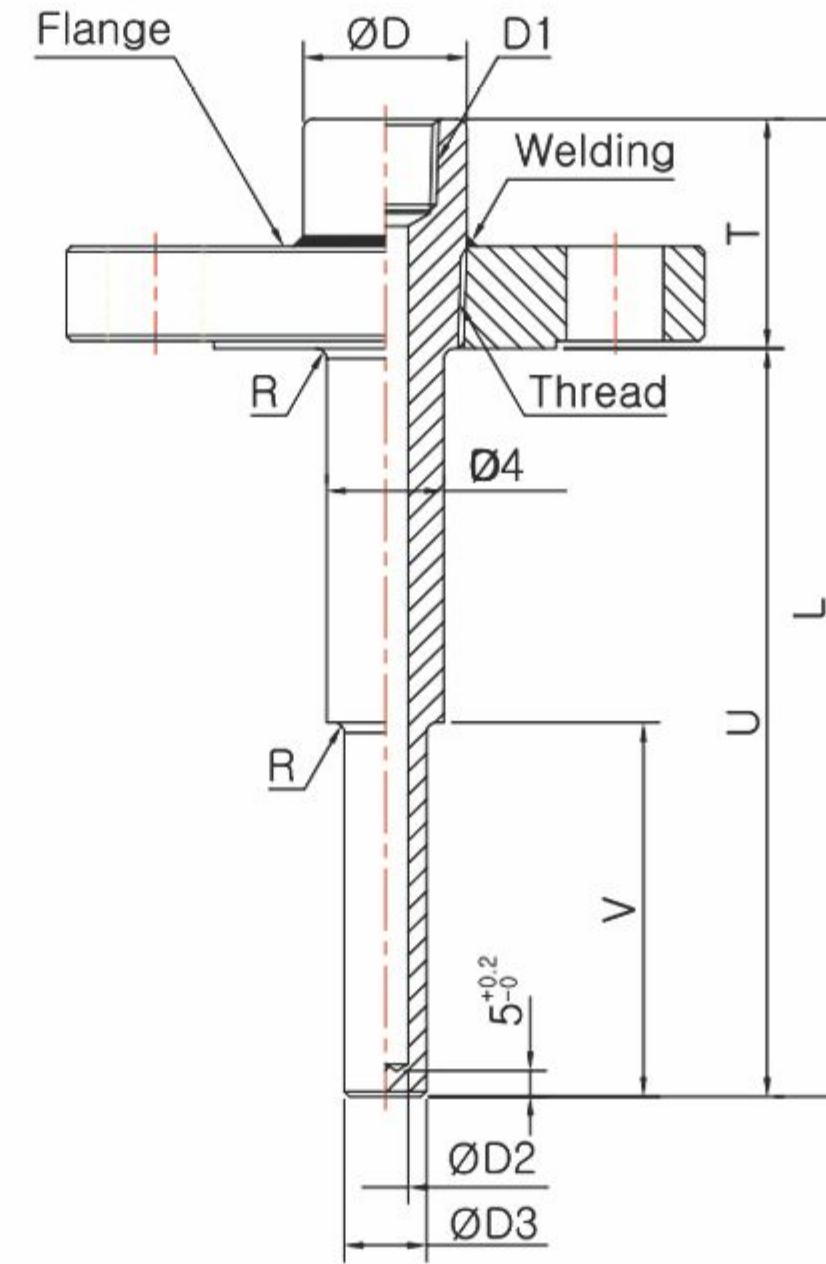
Model No. | EFS-SS5091A



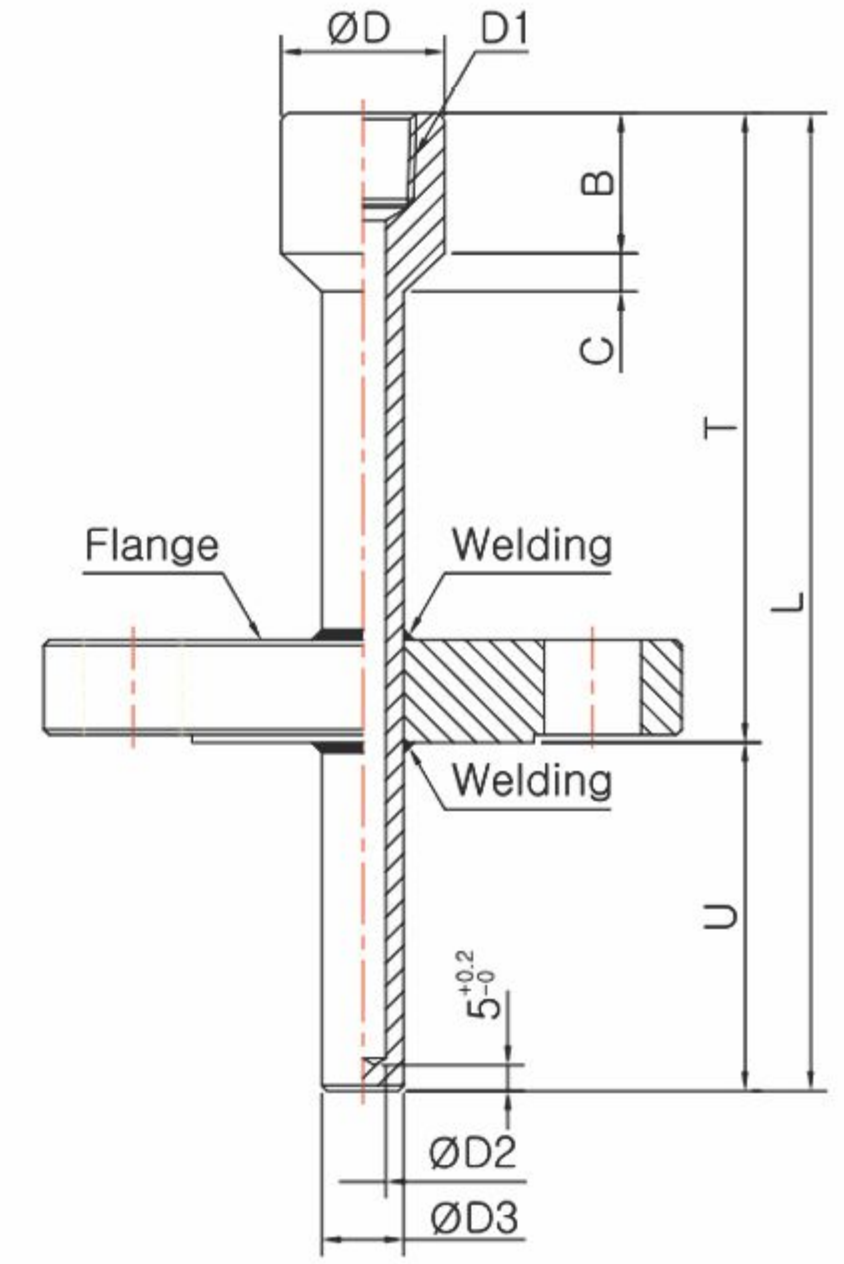
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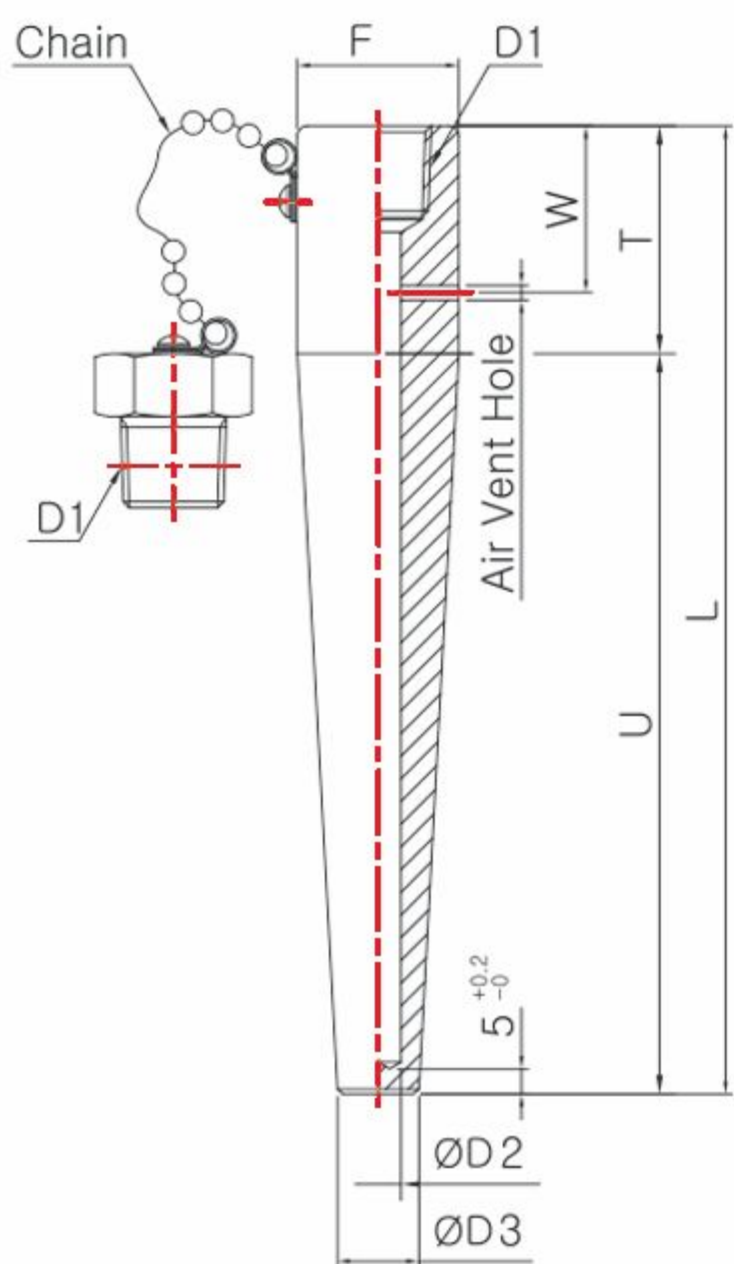
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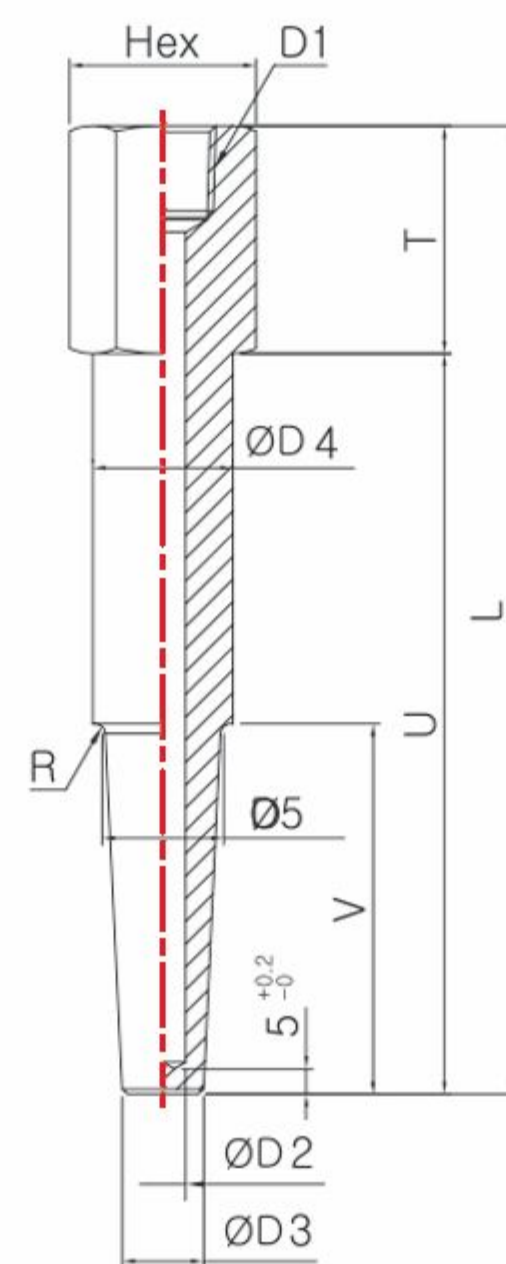
Model No. | EFS-SS5092C-1



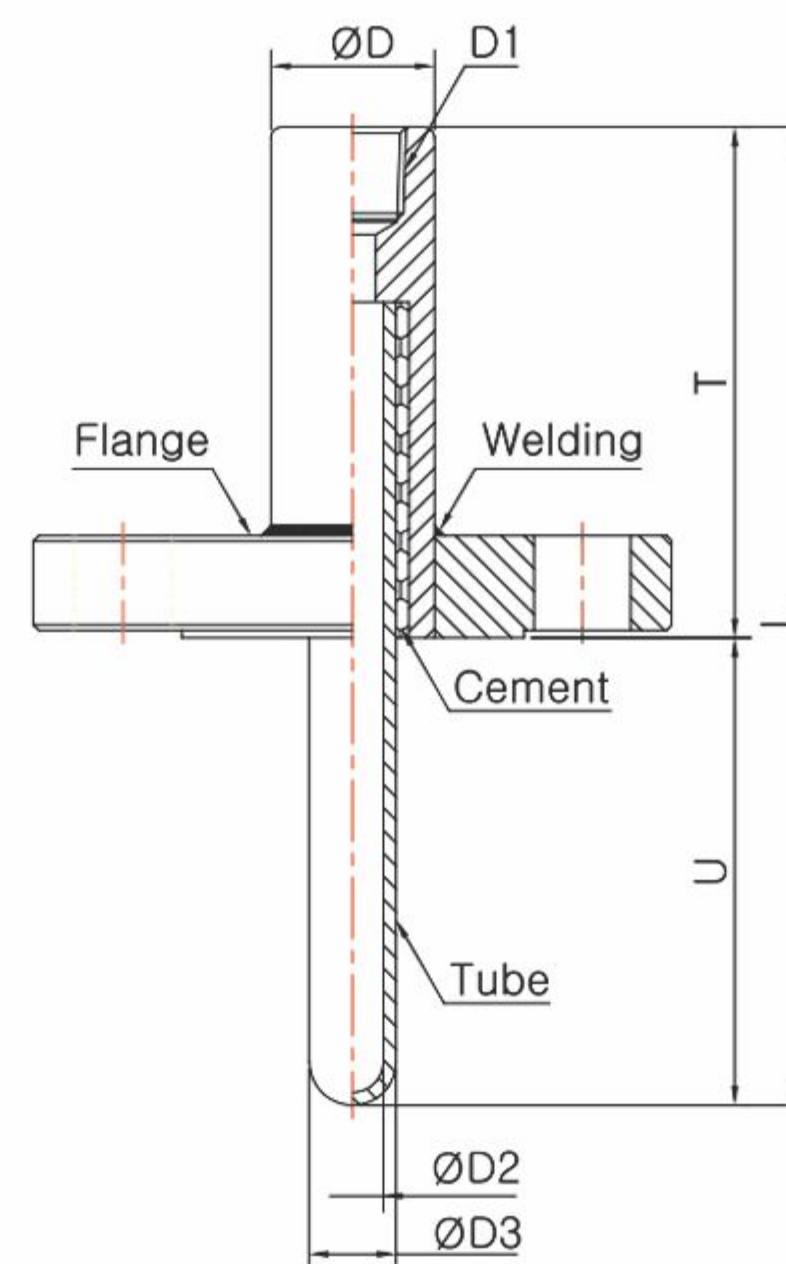
Model No. | EFS-SS5091A-4



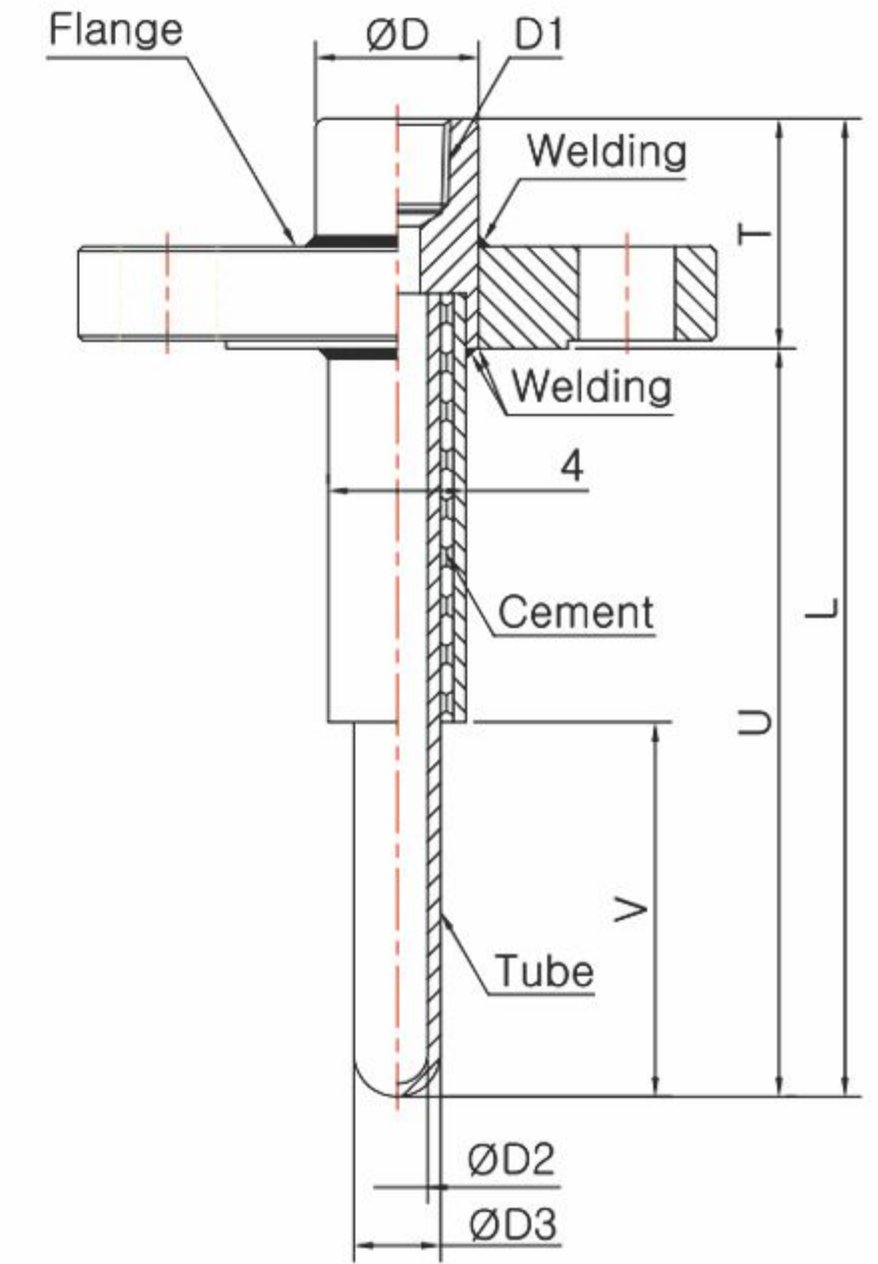
Model No. | EFS-SS5091A-5



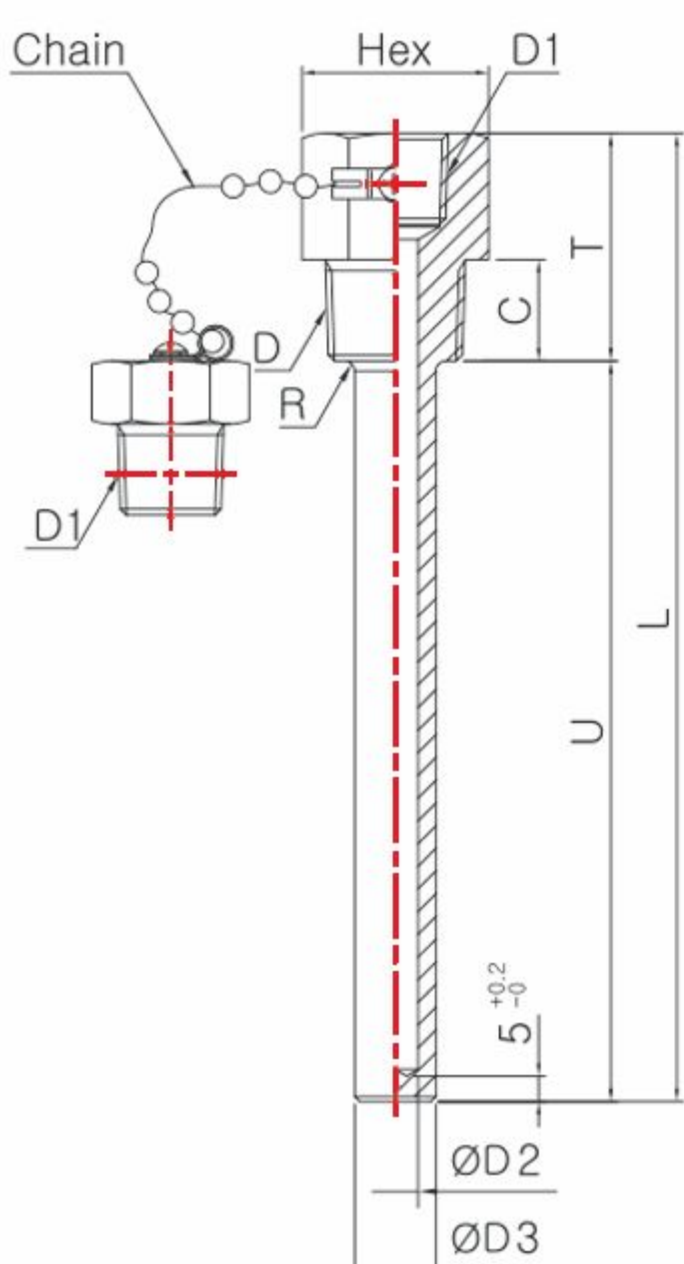
Model No. | EFS-SS5092D-1



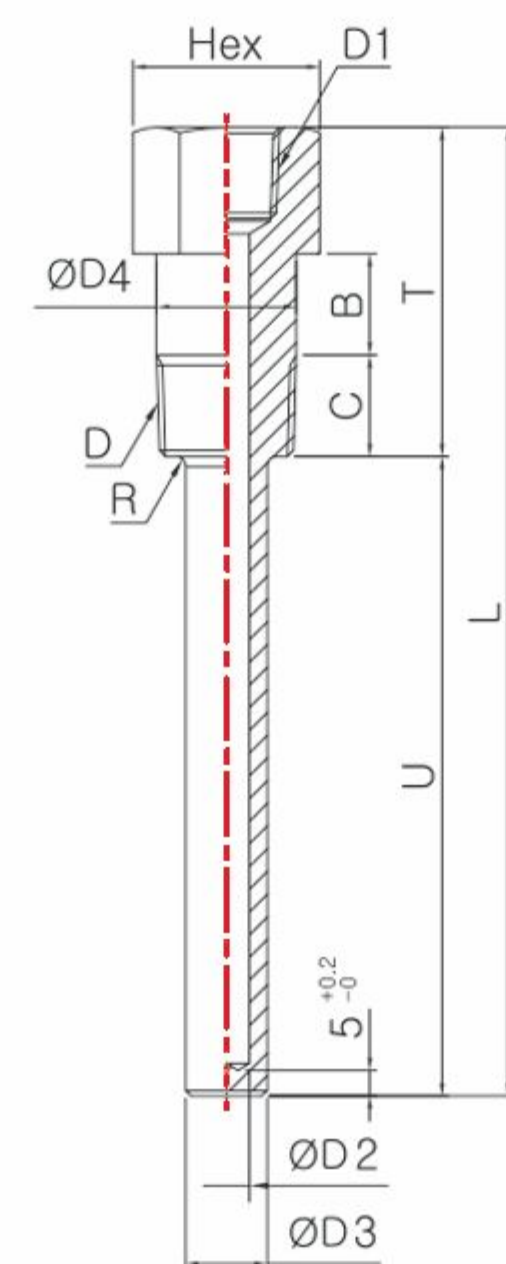
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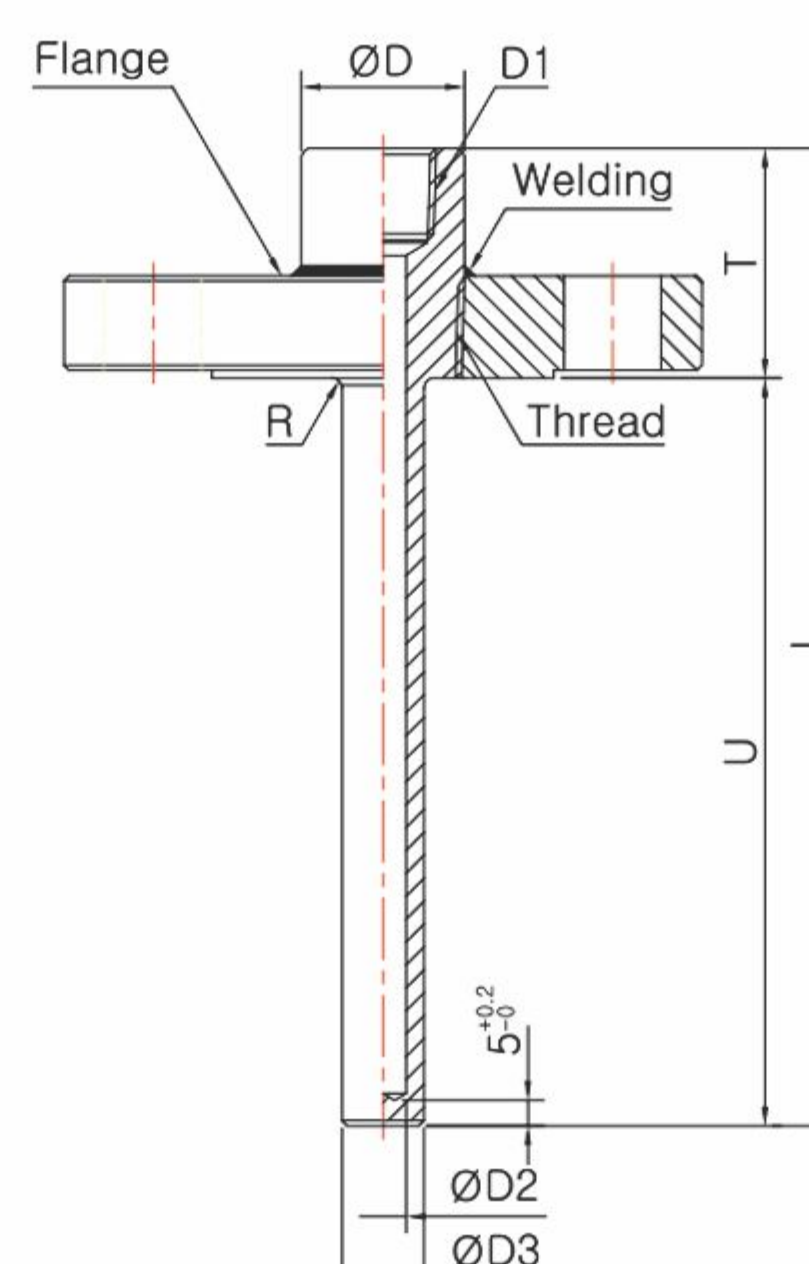
Model No. | EFS-SS5091C-1



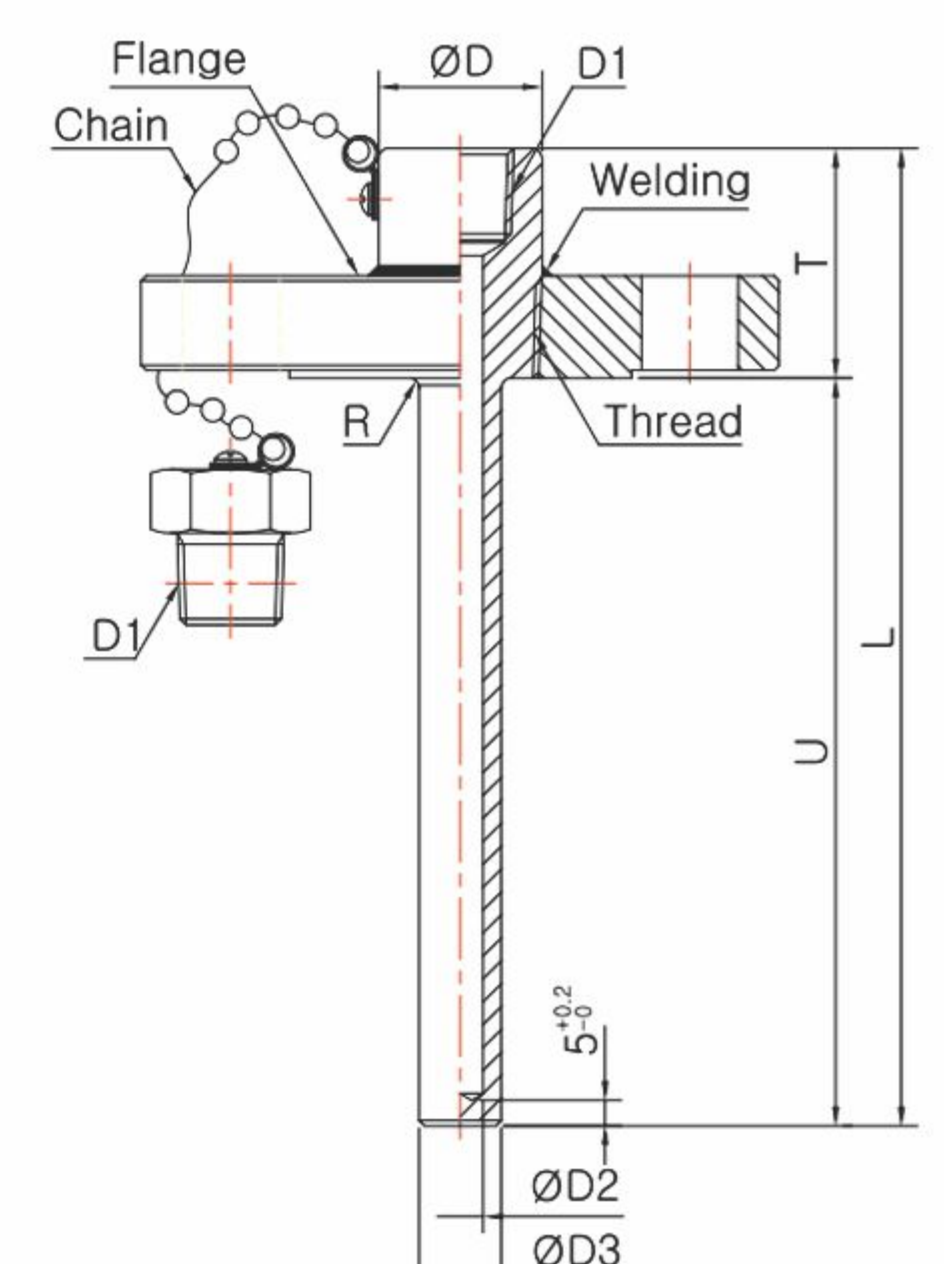
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Model No. | EFS-SS5092A



Model No. | EFS-SS5092A-1



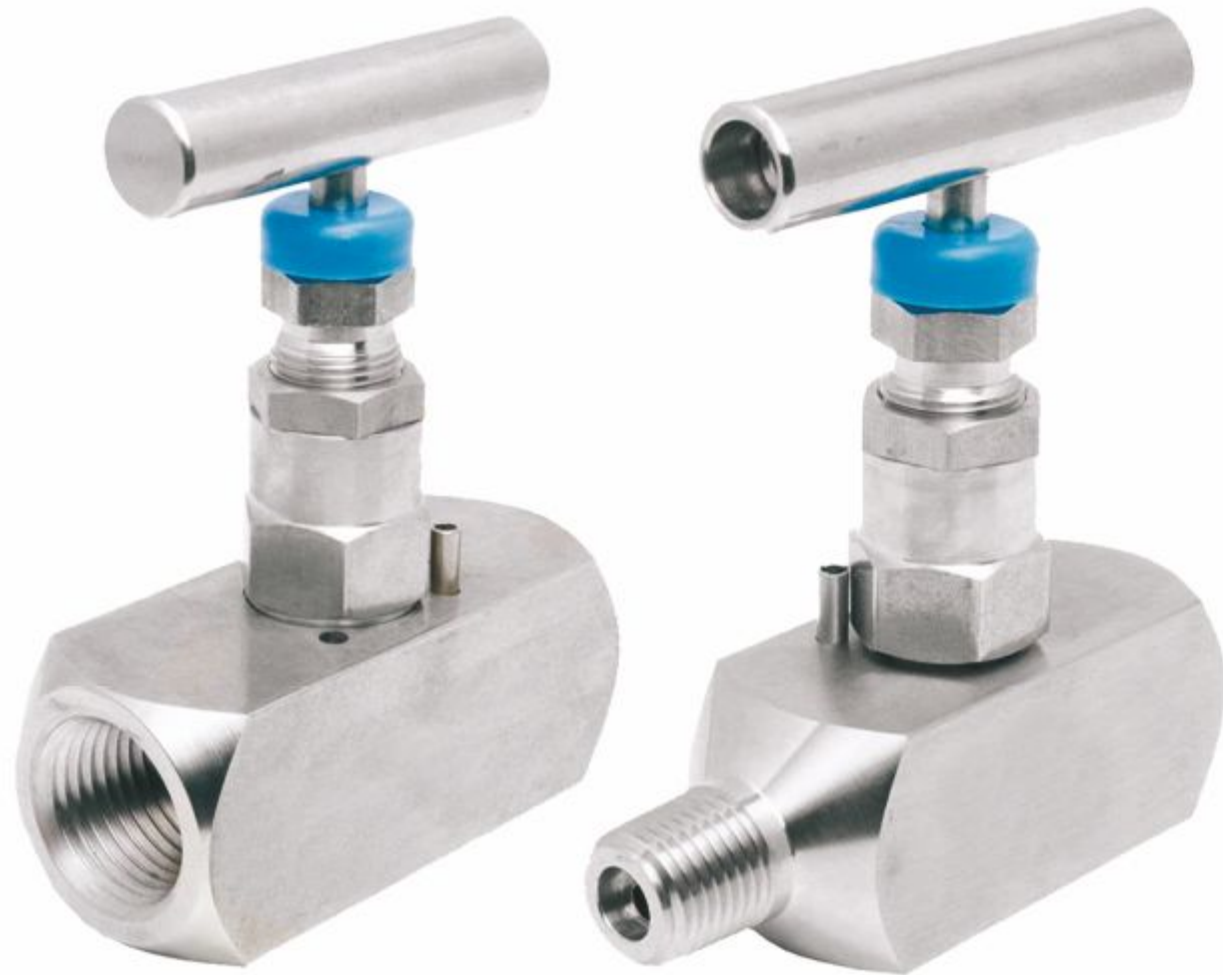




## Instrument Valve

Equipment Fara Sanat Arman Co.

[www.efsaco.com](http://www.efsaco.com)



**EFS-IVN Series**

**Needle Valve**

### Specifications

- ▶ Max Pressure: 3000, 6000, 10000 Psi
- ▶ Seat Type: Soft Seat, Hard Seat
- ▶ Packing: PTFE (for temp: -70 ~ 200 °C)  
Graphoil (for temp: 180 ~ 540°C)
- ▶ Material: STS304, STS316, Carbon Steel  
Monel, Hastelloy

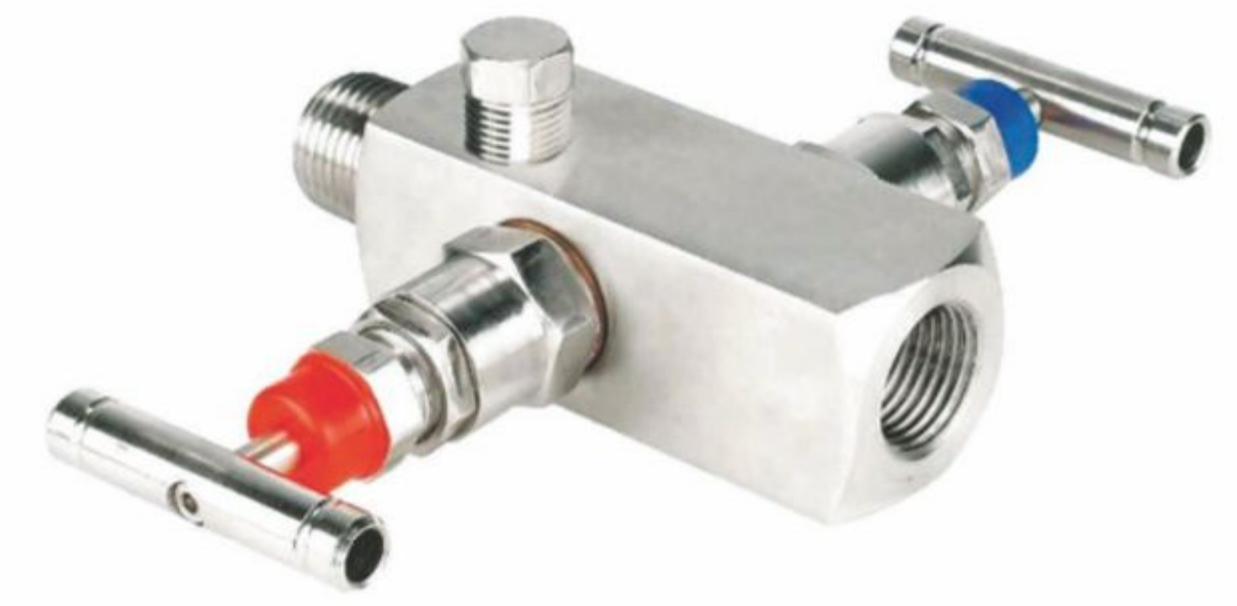


**EFS-IVNV Series**

**Needle Valve with steam vent**

### Specifications

- ▶ Max Pressure: 3000, 6000, 10000 Psi
- ▶ Seat Type: Soft Seat, Hard Seat
- ▶ Packing: PTFE (for temp: -70 ~ 200 °C)  
Graphoil (for temp: 180 ~ 540°C)
- ▶ Material: STS304, STS316, Carbon Steel  
Monel, Hastelloy



**EFS-IV2V Series**

**2 Valve Manifold**

### Specifications

- ▶ Max Pressure: 3000, 6000, 10000 Psi
- ▶ Seat Type: Soft Seat, Hard Seat
- ▶ Packing: PTFE (for temp : -70 ~ 200 °C)  
Graphoil (for temp: 180 ~ 540°C)
- ▶ Material: STS304, STS316, Carbon Steel  
Monel, Hastelloy

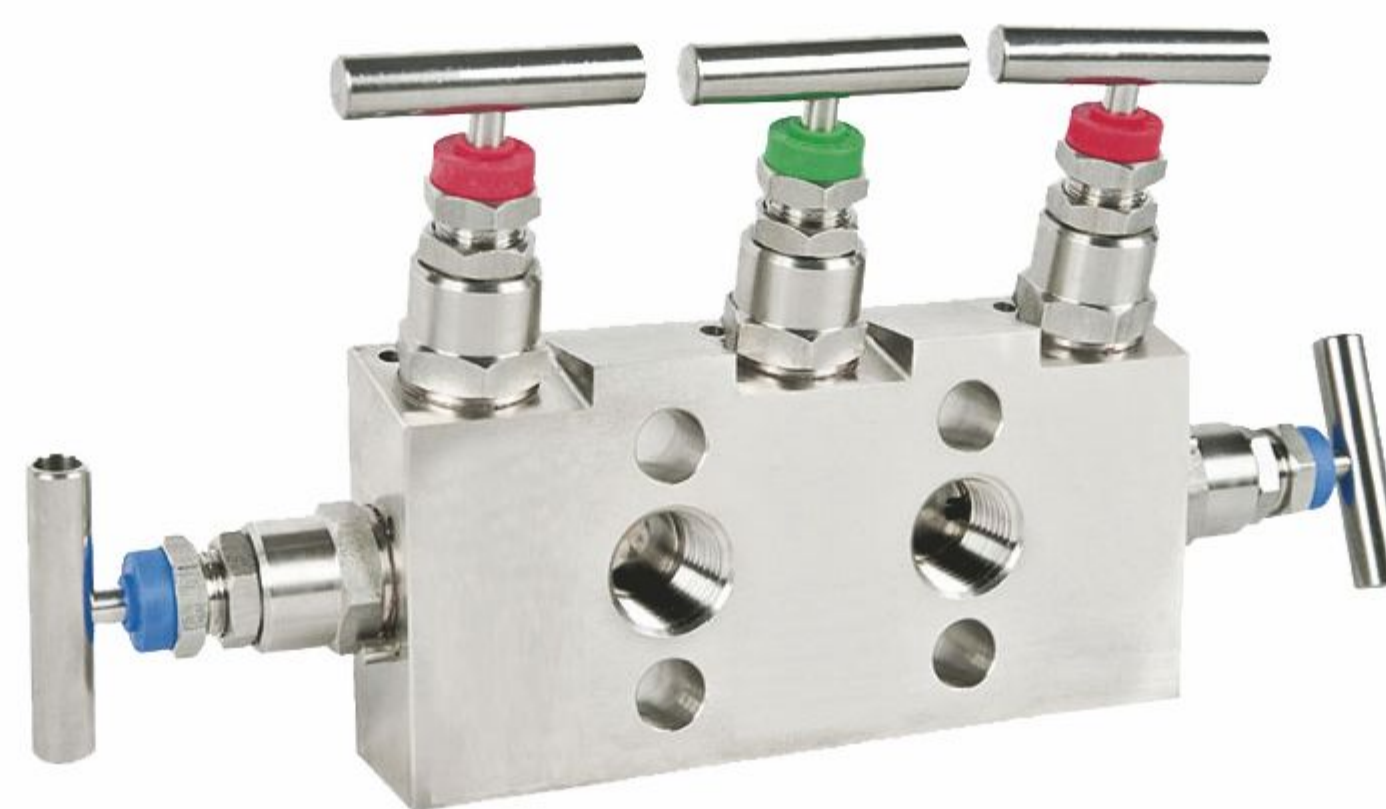


**EFS-IV3V Series**

**3 Valve Manifold**

### Specifications

- ▶ Max Pressure: 6000, 10000 Psi
- ▶ Seat Type: Soft Seat, Hard Seat
- ▶ Packing: PTFE (for temp: -70 ~ 200 °C)  
Graphoil (for temp: 180 ~ 540°C)
- ▶ Material: STS304, STS316  
Monel, Hastelloy



**EFS-IV5V Series**

**5 Valve Manifold**

### Specifications

- ▶ Max Pressure: 6000, 10000 Psi
- ▶ Seat Type: Soft Seat, Hard Seat
- ▶ Packing: PTFE (for temp: -70 ~ 200 °C)  
Graphoil (for temp: 180 ~ 540°C)
- ▶ Material: STS304, STS316  
Monel, Hastelloy



**EFS-IVBV Series**

**Ball Valve**

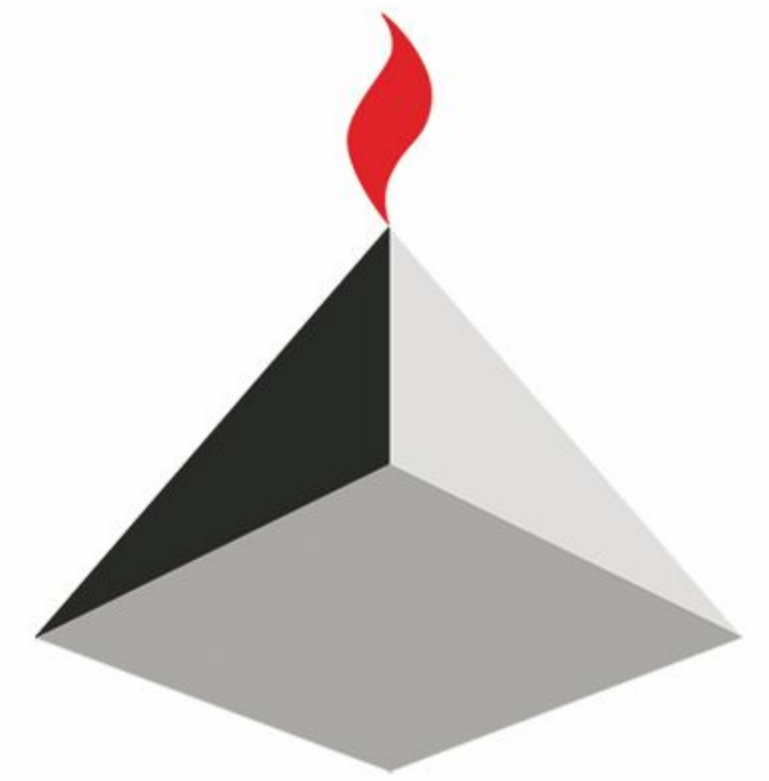
### Specifications

- ▶ Max Pressure: 3000, 6000, 10000 Psi
- ▶ Seal: PTFE
- ▶ Material: STS304, STS316  
Monel, Hastelloy



# تجهیزات فراصنعت آرمان

تولیدکننده تجهیزات اندازه گیری صنعت نفت، گاز و پتروشیمی  
عضو شرکت های دانش بنیان و شهرک علمی و تحقیقاتی اصفهان



**EFSACO**

## درباره ما

شرکت دانش بنیان تجهیزات فراصنعت آرمان در سال ۱۳۸۴ فعالیت خود را در زمینه سیستم های اندازه گیری و ابزار دقیق صنایع مرتبط با صنعت نفت و گاز آغاز نمود و در طی سالیان، تلاش خود را در راستای توسعه محصولات و افزایش تولید داخلی متمرکز نمود. به همین دلیل با استفاده از دانش و تکنولوژی روز دنیا مطابق با استانداردهای بین المللی و توانایی متخصصین مجرب داخلی، فعالیت های این شرکت در زمینه طراحی و تولید تجهیزات اندازه گیری و ابزار دقیق گسترش یافته است. به عنوان اولین گام موثر با بومی سازی دانش ساخت لوله بوردون، برای اولین بار در کشور به صورت یک فرآیند دانش بنیان موفق به تولید فشارسنج های لوله بوردون شد. در حال حاضر این شرکت با اتکا به توانایی متخصصین داخلی با گسترش محصولات خود در زمینه اندازه گیری بر اساس فناوری های کلیدی در صنعت ابزار دقیق و کنترل به تولید گستره ای از محصولات اساسی و ارائه خدمات به صنایع کشور می پردازد.

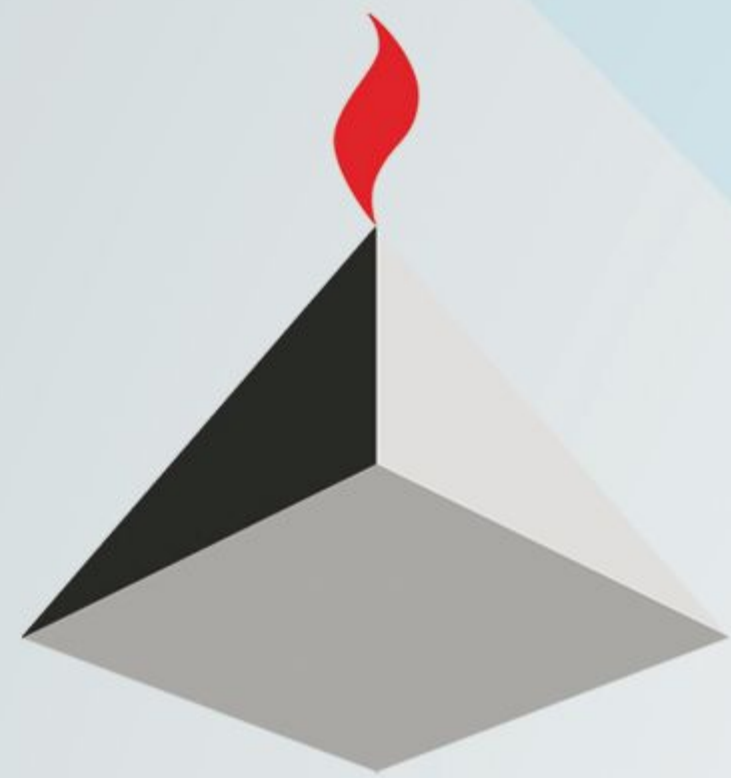
### محصولات تولیدی این شرکت شامل گروه های زیر می باشد:

- ◀ انواع فشارسنج لوله بوردون و دیافراگمی
- ◀ اختلاف فشارسنج های پیستونی و دیافراگمی
- ◀ دماسنج های بی متال، RTD و ترموکوپل های صنعتی
- ◀ شیرآلات منی فولدی و سوزنی و بال ولو کلاس بالا
- ◀ ترانسمیترهای ضد انفجار و معمولی فشار - دما - اختلاف فشار
- ◀ محصولات اندازه گیری و کنترل فشار صنایع کرایژونیک
- ◀ انواع اتصالات ابزار دقیق و تجهیزات جانبی

### برخی ویژگی های ما :

- ◀ بهره گیری از نخبگان صنعت و دانشگاه
- ◀ محصولات متنوع
- ◀ کیفیت بالای محصولات
- ◀ ساخت بر اساس استانداردهای بین المللی
- ◀ توانایی طراحی و مهندسی معکوس قطعات مورد نیاز صنعت
- ◀ خدمات پس از فروش بلند مدت
- ◀ قابل رقابت با برندهای مشابه خارجی
- ◀ مشاوره رایگان





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# تجهیزات فراصنعت آرمان

تولیدکننده تجهیزات اندازه گیری صنعت نفت، گاز و پتروشیمی

- عضو شرکت های دانش بنیان
- عضو شهرک علمی و تحقیقاتی اصفهان
- عضو شرکت های لیست بلند شرکت نفت



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