

filter

Sample connection

Date: 2025.05.10

Prepared for: PA6578 REV03

COMMENTED

PAP

PETRO ARTAN PART

PETRO ARTAN PART

Unit 1, No. 102, Karimkhan Zand BLVD, Tehran – Iran

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Website Address : www.PetroartanPart.com

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Revision: 03

Technical Offer For Sample Connection

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02	2025.04.18	I.F.A	H.Sheikh Shoaie	M.Khedri	M.Mahmoudi Asl
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Rev.	Date	Description	Prepared	Checked	Approved

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		Technical Offer	 ADISH Southern Adish Condensate Refinery Company	
		Sample Connection		
		Project: Southern Adish Gas Condensate Refinery		
		MR No.: SACR-DE-GEN-PI-MRQ-5541-03		
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1. Introduction

Petro Artan Part Company is a knowledge-based manufacturing company that has 4 integrated factories and 460 experienced personnel. Relying on the knowledge of its technical managers and personnel and R&D technical team, this company produces the following items for use in the oil, gas, refining, petrochemical, power plant and steel industries of the country.

Types of high pressure and precision instrument connections (Tube & Pipe Fitting)

Types of strainers (strainers)

Types of filtration systems (Separation & Filtration System) and filter elements (Filter Elements)

✓ Types of sampling systems (Sample Connection & Sample Cooler & Sample Point)

Types of light tanks such as (Condensate Pot, Piping Pot)

Types of flanges

All kinds of instrumentation valves and piping (Valves)

It should be noted that the use of Petro Artan Part Company in the extraordinary items is present in the vendor list of the prestigious lists such as MOP and NPC and they perform various services that provide the services of many industries of the country.

For information about some of these projects, refer to the satisfaction tab on this site.

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1.1. Overview

Petro Artan Part Co. conducted different and successful projects during the years. Some of the Main products are listed below:

Heat Exchanger

Strainer

Cyclone

✓ **Sample connection**

Tank

Coalescer

Reactor

Vessel

Mesh Pad Demister

Separator's

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2. Glossary

Buyer:

In this proposal, the project client that owns and operates the project is Southern Adish Gas Condensate Refinery.

Seller:

In this proposal, the company that is responsible to procure the subject equipment through the official contract with Buyer is **Petro Artan Part Co.**

Third Party Inspector/Authorized Inspection Agency:

Independent inspection bodies who are responsible for inspection of equipment in accordance with the subject materials of this specification.

Language:

All required documents will be provided in English.

3. Item List

Tag No.	Sampling Type	Accessories	QTY.
SC-D-501-003	TYPE D	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-D-505-002	TYPE D	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-D-505-003	TYPE D	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-D-505-004	TYPE D	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-D-509-001	TYPE D	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1

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NEW TAG TO BE ADDED.

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SC-D-509-002	TYPE D		
SC-D-530-002	TYPE D	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-D-530-003	TYPE D	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-D-523-001	TYPE D	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-D-523-002	TYPE D	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-D-523-003	TYPE D	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
TOTAL QUANTITY TYPE D			11
525-SE-001	TYPE E	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
525-SE-002	TYPE E	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
525-SE-003	TYPE E	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-E-509-002B	TYPE E	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-E-509-005B	TYPE E	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
TOTAL QUANTITY TYPE E			5
SC-F-501-001	TYPE F	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-F-501-002	TYPE F	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-F-501-005	TYPE F	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-F-501-006	TYPE F	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-F-501-007	TYPE F	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-F-509-001	TYPE F	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1

SC-F-509-003	TYPE F	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-F-509-004	TYPE F	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-F-509-005	TYPE F	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
TOTAL QUANTITY TYPE F			9
SC-12-517-001	TYPE 12	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-12-517-002	TYPE 12	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-12-517-004	TYPE 12	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-12-517-006	TYPE 12	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-12-517-008	TYPE 12	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-12-517-010	TYPE 12	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-12-517-012	TYPE 12	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-12-517-014	TYPE 12	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-12-517-015	TYPE 12	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-12-517-016	TYPE 12	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-12-517-020	TYPE 12	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-12-517-022	TYPE 12	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-12-517-023	TYPE 12	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-12-517-029	TYPE 12	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1

SC-12-517-033	TYPE 12	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-12-517-035	TYPE 12	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
TOTAL QUANTITY TYPE 12			16
SC-14-517-003	TYPE 14	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-14-517-005	TYPE 14	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-14-517-009	TYPE 14	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-14-517-011	TYPE 14	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-14-517-013	TYPE 14	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-14-517-021	TYPE 14	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-14-517-025	TYPE 14	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-14-517-030	TYPE 14	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-14-517-031	TYPE 14	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
TOTAL QUANTITY TYPE 14			9
SC-17-517-026	TYPE 17	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
SC-17-517-027	TYPE 17	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
TOTAL QUANTITY TYPE 17			2
SC-20-517-024	TYPE 20	VALVE, FITTING, TUBING, HOSE AND QUICK CINNECTION, SKID	1
TOTAL QUANTITY TYPE 20			1

4. Scope of Supply

Referring to the subject inquiry, our scope of work involves the design, fabrication, and delivery of 52 sets of **Sample Connection** in compliance with the Technical Specifications and documents provided.

This scope of supply is as per clauses **3** of Material Requisition for Sample connection Document Numbers SACR- DE-GEN-PI-MRQ-5541-03.

4.1. Exclusions

4.2. Deviations

Please see attachment 1

4.3. Codes and Standards

Spec No. and Description
ASME/ANSI B 31.8: Gas Transmission and Distribution Piping System
ASME B16.5 for size up to 24"
ASME B16.47 series "B" for size over 24"
NACE MR0175 / ISO 15156-1

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4.4. Commissioning & pre-commissioning Spare Parts

Commissioning spare parts are not required.

4.5. Two Years Spare Parts

Two years spare parts as per below specification is included in our scope of supply.

Sample Bottle : 100% for each tag.

5. Scope of Work

PAP is responsible for the design works, supply of materials, fabrication, shop assembling, shop inspection and tests, guarantee, painting, packing, transportation and satisfactory operation of the entire unit to the extent of the PAP supply.

The PAP have overall responsibility for the coordination with his Sub-Vendor, and for the proper execution of any accessory item assembly, testing, delivery and any other service defined herein.

This scope of work is as per clauses 4 of Material Requisition for **Sample Connection** Document number SACR- DE-GEN-PI-MRQ-5541-03 exactly which includes the below main items:

Items	Required by CLIENT	Proposed by Vendor (Note 4)	Remarks
1. Engineering Design and Documentation	(X)	(X)	
2. Manufacturing and Assembling	()	(X)	
3. PIM (pre-inspection meeting)	()	(X)	
4. Procurement	()	(X)	
5. Process, mechanical guarantee	()	(X)	

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6. Inspection and Testing at shop	()	(X)	
7. Painting at shop (Included rust prevention for storage)	()	(X)	
8. Packing, Protection, Marking and Color Coding	()	(X)	
9. Shipping and Transportation (Included unload to export port) according to Delivery Conditions	()	(X)	
10. Certification (Included Test Report)	()	(X)	
11. Training of Owner's Personnel (If applicable)	()	(X)	
12. Documentation as per the requirements of this specification	()	(X)	
13. Rust prevention for storage	()	(X)	
14. Spare part	()	(X)	
15. Guarantee	()	(X)	
16. Others specified in this Requisition	()	(X)	

6. Documentations

Our documentation will be prepared and will be submitted in accordance with the standard specifications. Regarding demister products, we provide the customers with technical documents including general arrangement drawing, ITP/QCP and if necessary manufacturing procedures.

All documentations and drawings will be performed as per [clause 6](#) of MRs "Documents shall be submitted by vendor" as minimum.

- General arrangement drawing
- As built drawing
- Inspection and test procedure

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- Final data book
- Material certificate
- Name plate drawing
- Progress report
- Packing list

7. Technical and Fabrication Data

Technical data and material specifications of the goods, which are stated in our scope of supply, are in accordance with ASME and the technical specification and documents.

The required raw material will be procured brand new unused according to international standards and mill test certificates will be submitted as per EN10204-3.1. In this regard, our sub- vendor list is attached in appendix D. Some parts of fabrication activities are described as bellow:

7.1. Welding

Welding will be done according to the confirmed WPS's and PQR's by qualified and certified welders and column, GMAW, GTAW and SMAW processes in accordance with applicable standards.

7.2. Rolling

Roll bending will be done by our four Rollers roller, 3.2-meter breadth rolling machine at our site. The capacity of above-mentioned machine is up to 50-mm thickness at 3.2 meter width.

7.3. Hydrostatic Test

Hydrostatic test will be done in accordance with applicable standard and project specification.

8. Inspection Procedure

Inspection procedure shall be performed in accordance with the requirements of specifications of Inspection which will be submitted prior to manufacturing (such as PQR), by considering the

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Regulations for quality control inspection procedures.

9. Sand Blast and Painting

External surfaces of the vessels are sand blasted and painted as per client's painting specification.

Doc. No: **Not Specify**

10. Packing

Packing of the goods will be done according to professional standards and in a safe manner in order to prevent damage during transport.

11. Delivery

Delivery of the goods, which are stated in our scope of supply, will be in accordance with the following conditions:

11.1. Place of Delivery:

Manufacturing site is PETRO ARTAN PART factory located at SAFADASHT Iran. Delivery of the goods will be Ex-works.

11.2. Time of Delivery:

Within 6 months after placement of the official order and receiving the down payment considering 14 days for client's approval on technical documents.

12. Guarantee

Vendor will guarantee the operation of the equipment to the specified design conditions. Vendor will warrant the engineering, materials and workmanship of the equipment for a period of 12 months after successful start-up or eighteen (18) months after shipping whichever comes earlier. Under this warranty, all materials, parts, and assemblies found to be defective during the guarantee period shall be replaced by Vendor. Vendor shall also, if required, supply the services of an

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experienced engineer to supervise the necessary repairs and replacements.

13. Quality Control/ Quality Assurance

Petro Artan Part Company is committed to providing goods and services which are fit for their intended purpose and confirm to the requirements of the company organization and its clients.

To satisfy these commitments, the company has established quality control procedures as applicable to the nature of the goods and services provided by the company.

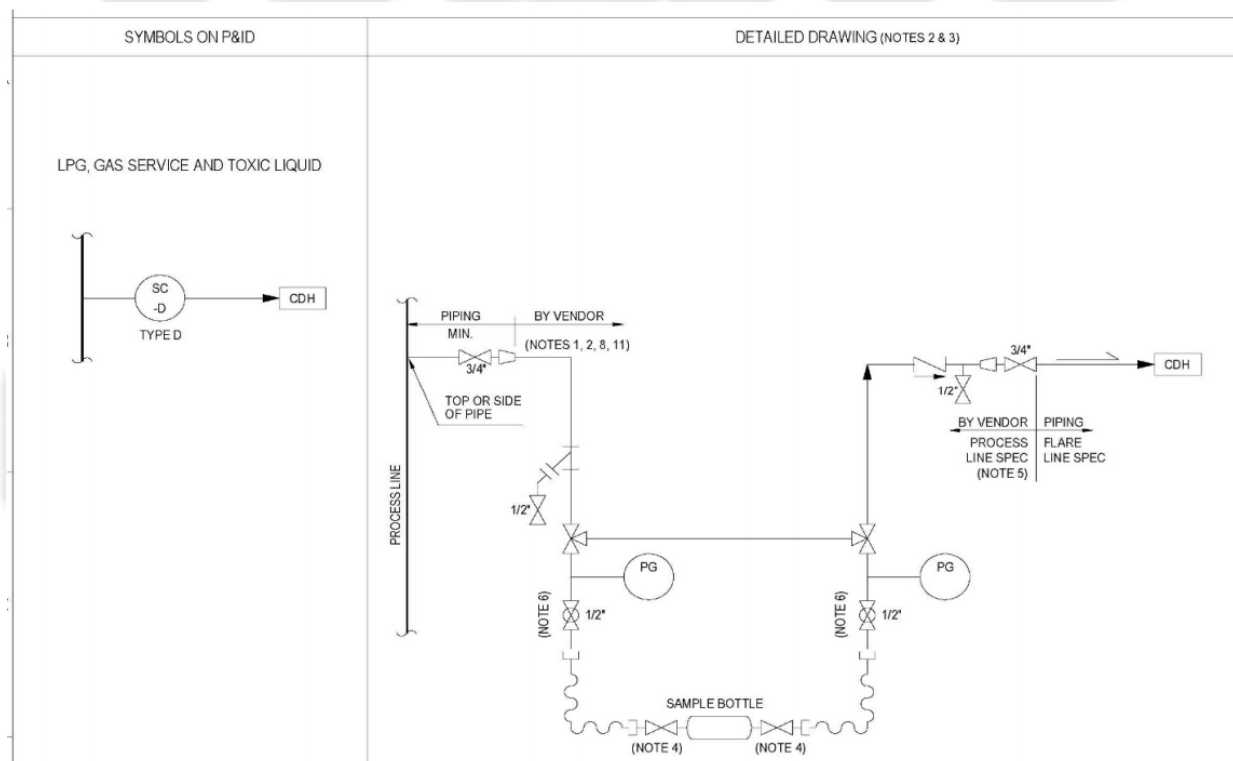
Directors and departmental heads are required to ensure that all employees are fully apprised of all necessary procedures, work instructions and technical data to enable them to perform their specific tasks in a systematic and effectively controlled manner which is readily capable of being monitored for conformity.

NACE and all the materials fully comply with the requirements of SACR-DE-GEN-PI-SPC-0029 and NACE MR0175/ISO 15156 respectively.

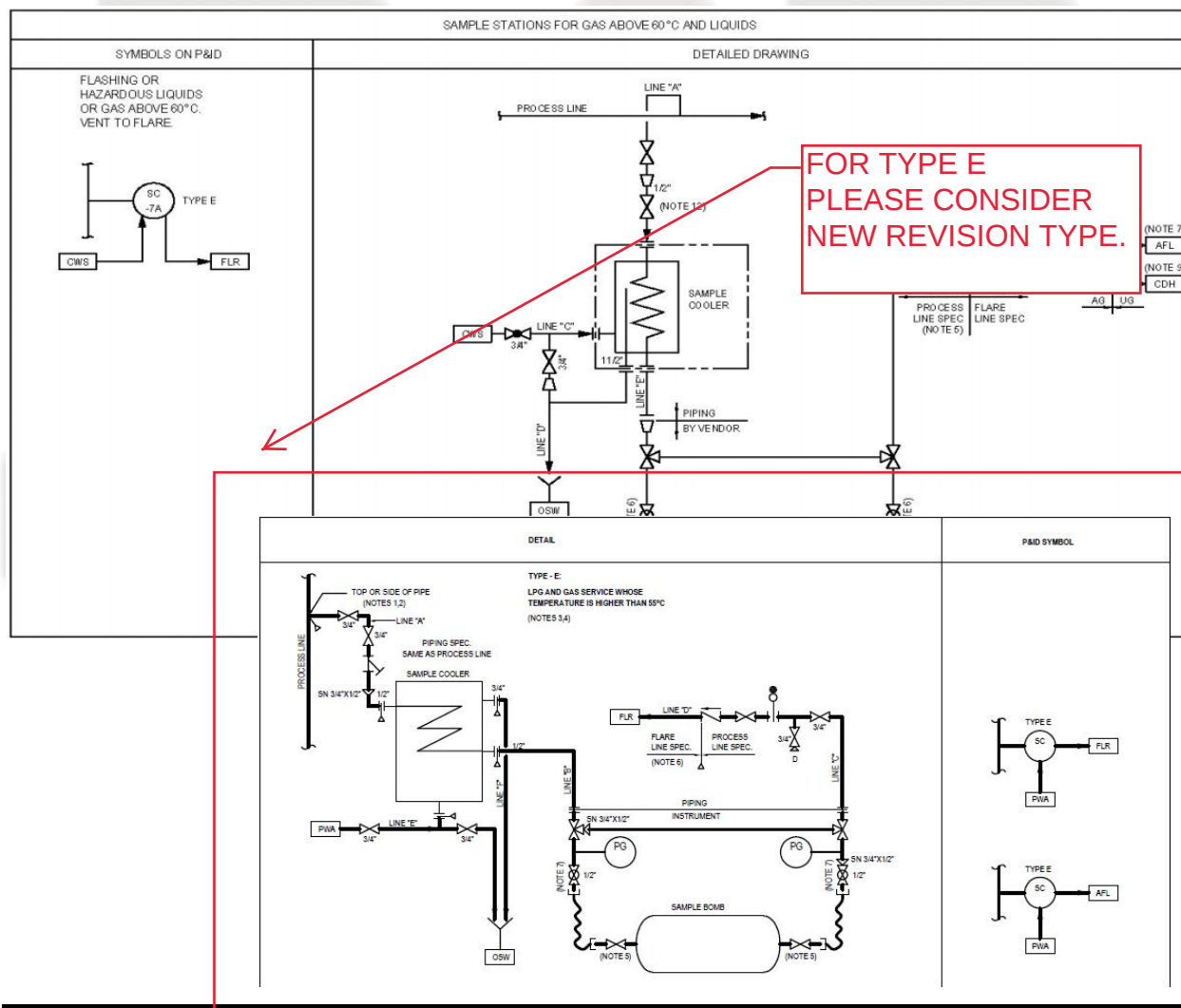
14. Appendices

14.1. Appendix A: P & ID

TYPE :D



TYPE :E

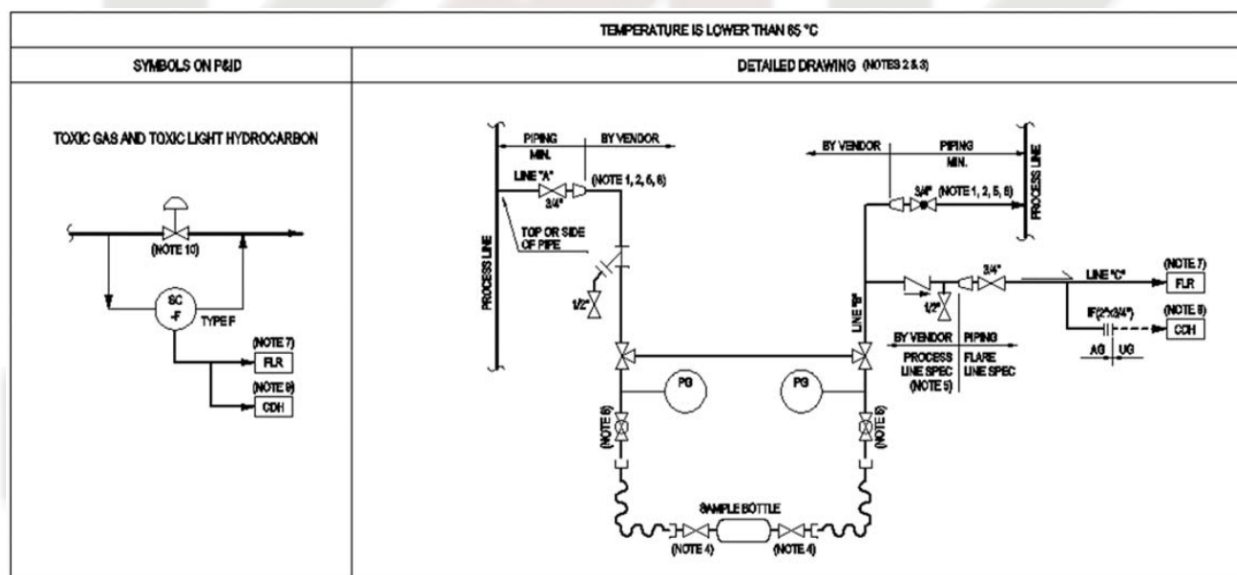


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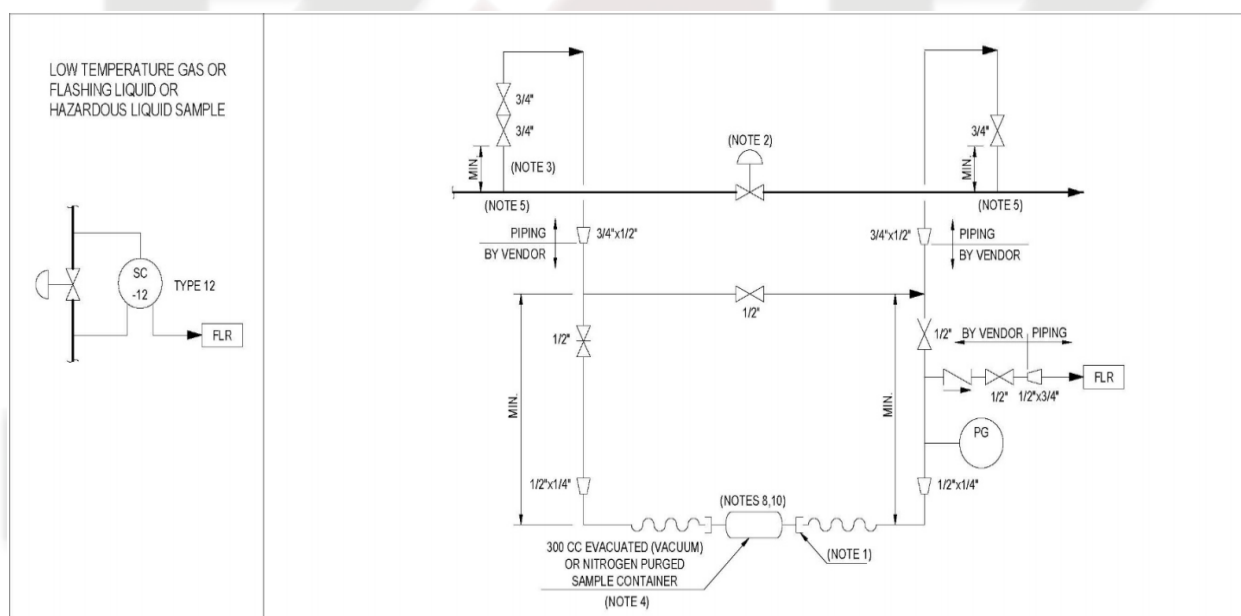
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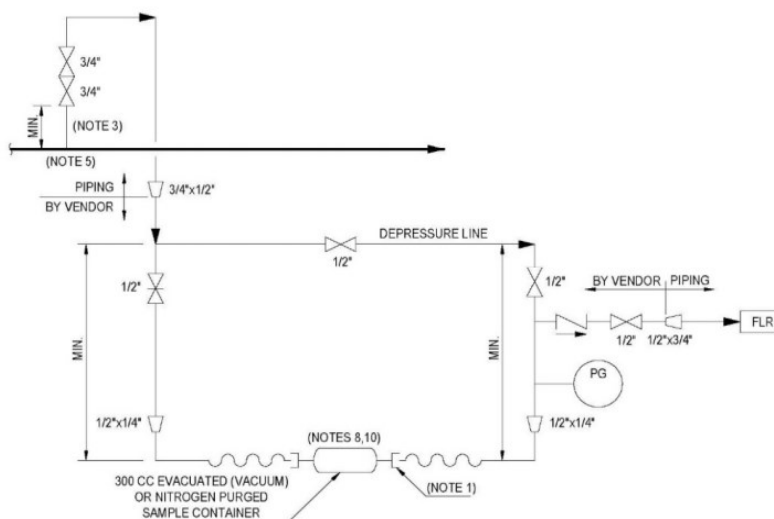
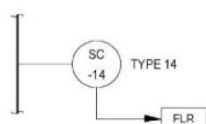


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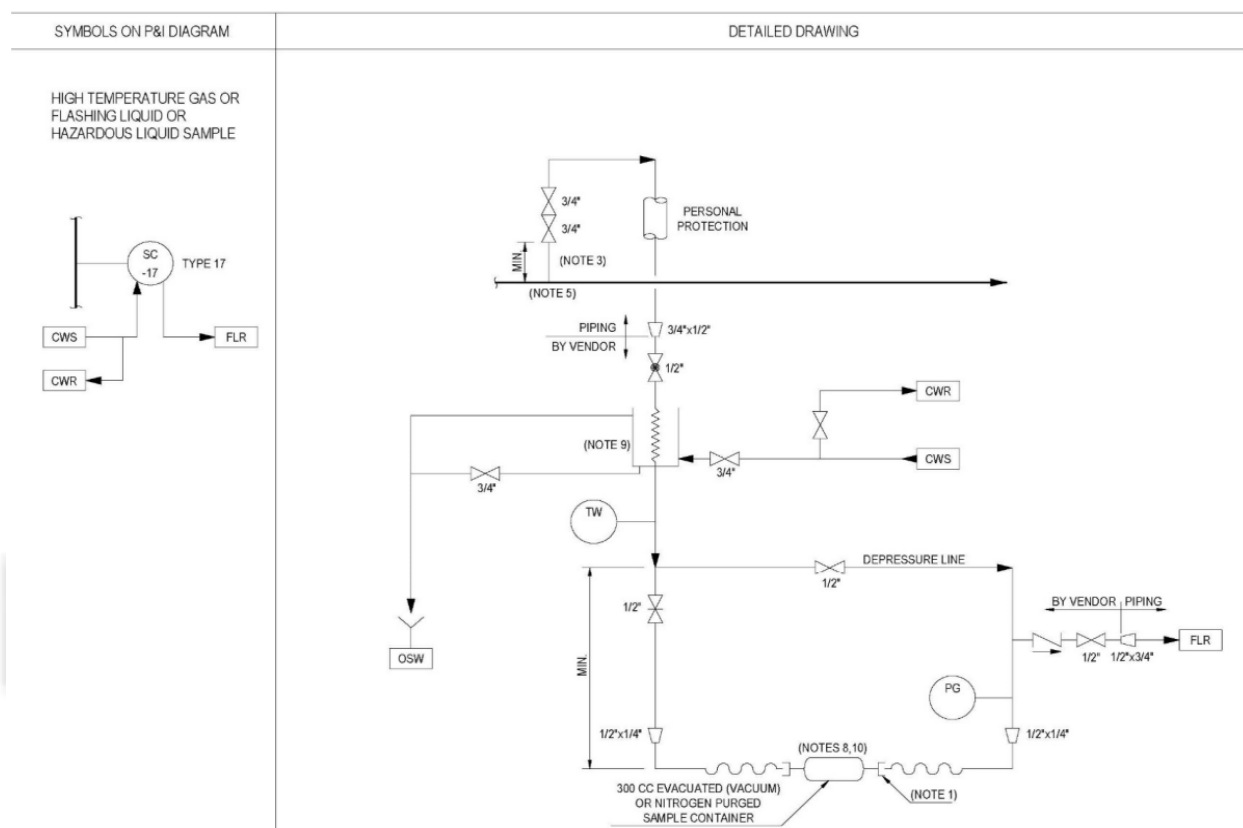


TYPE: 14

LOW TEMPERATURE GAS OR
FLASHING LIQUID OR
HAZARDOUS LIQUID SAMPLE

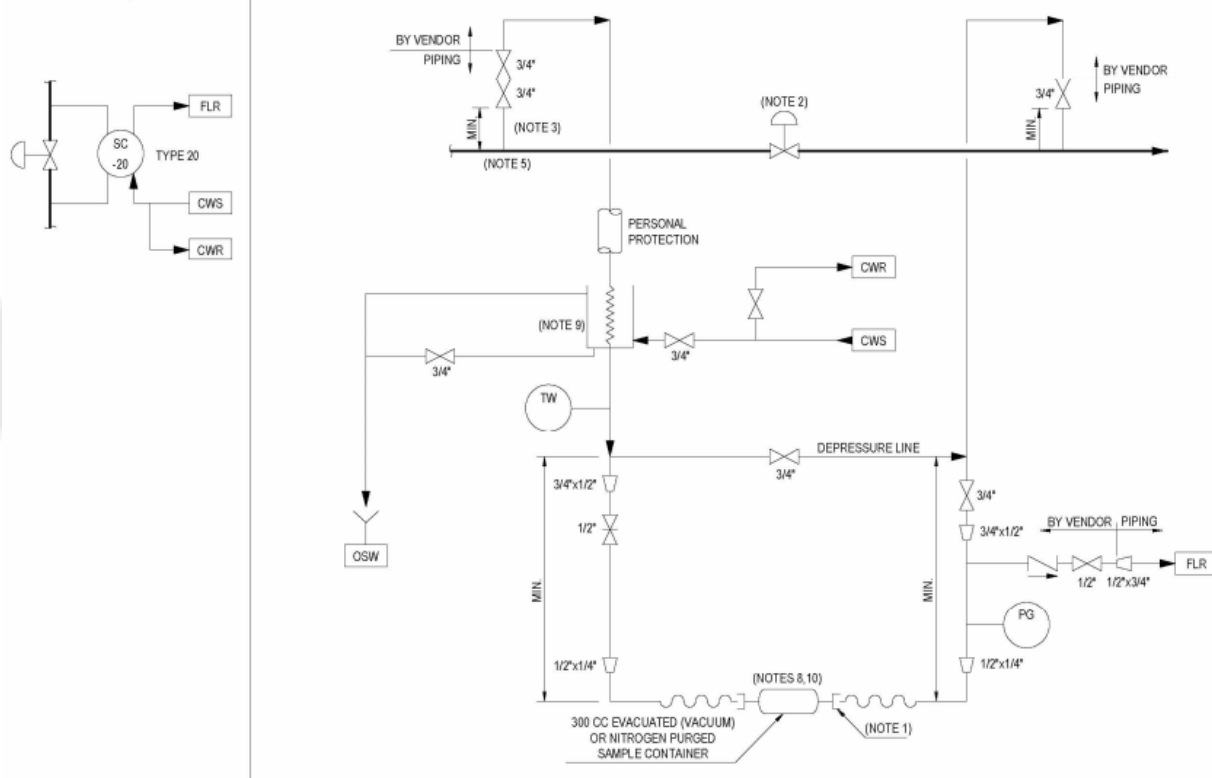


TYPE : 17



TYPE : 20

HIGH TEMPERATURE GAS OR
FLASHING LIQUID OR
HAZARDOUS LIQUID SAMPLE



Please check vendor's clarification sheet.

14.2. Appendix B: MTO

General Notes:

Purchaser's Notes:

- Material of all components should be specified
- Length of flexible hose should be specified
- Pressure Gauge specification should be added
- All tubing and fittings in ASTM A182 F316L
- Cabinet Dimensions and material should be added

Confirmed.

Confirmed.

-Pressure gauge datasheet is provided in Attachment1.

-Confirmed.

-Detailed DWG will be submitted after P.O.

Special Notes:

Following items should be added:

- 1-Flange for Inlet 3-way Ball Valve connection
- 2-Flange for Outlet connection
- 3- 3 way Ball Valve
- 4- 2 Way Ball Valve
- 5-Cylinder Relief Valve (Rupture disk)
- 6-Instrumentation Quick Couplings
- 7-Heavy Duty Cylinder Valve (Needle Valve)
- 8-Strainer Filter
- 9-Globe Valve
- 10-Personal Protection
- 11-Sample Water Cooler

1-Confirmed.

2-Confirmed.

3- For Types D, E, F is considered. However for other types please refer vendor's clarification document in attachment.2.

4- Confirmed

5-According to MTO, Cylinder's needle valves are equipped with rupture Disc.

6-Confirmed

7-Confirmed

8- For Types D, F is considered. However for others please check the vendor's clarification document in attachment.2.

9- As mentioned in vendor's clarification document in attachment.2, needle valve will be provided instead of pre sample cooler globe valve.

10- Confirmed. For 17 and 20 types pre sample cooler personnel protection is considered. However for type E please refer to vendor's clarification document in attachment.2.

11- Confirmed. For 17 and 20 types sample cooler is considered. However for type E please refer to vendor's clarification document in attachment.2.

TYPE D

Item	Description	Material	Size(inch)	Class	Connection	Qty
1	Inlet and Outlet Reducing Threaded Flange	A182 F316L	3/4" x 1/2"	#150 or #300	RF	2
2	Y Type Strainer with drain valve	A182 F316L	1/2"	#3000	OD	1
3	3 Way Ball Valve, Seat: PTFE, Trim: SS316L	A182 F316L	1/2"	#3000	OD	2
4	TEE	A182 F316L	1/2"	#3000	Female - OD	2
5	Pressure Gauge	As Per Attachment 1				2
6	2 Way Gauge Manifold	A182 F316L	1/2"	#3000	NPT F x M	2
7	Needle Valve with Repture Disc	A182 F316L	1/4"	#3000	NPT F x M	2
8	2 Way Ball Valve, Seat: PTFE, Trim: SS316L	A182 F316L	1/2"	#3000	OD	4
9	Quick Coupling	A182 F316L	1/2"	#3000		2
10	Sampling Cylinder	Body: A312 TP316L Cap : A403 WP316L	2"			1
11	Flexible Hose - L: 600 mm	Inner PTFE Outer SS 316L	1/2"	#3000		2
12	Check Valve, Poppet Type	A182 F316L	1/2"	#3000	OD	1

TYPE E

Item	Description	Material	Size(inch)	Class	Connection	Qty
1	Reducing Threaded Flange	A182 F316L	3/4" x 1/2"	#150 or #300	RF	2
2	3 Way Ball Valve, Seat: PTFE, Trim: SS316L	A182 F316L	1/2"	#3000	OD	2
3	Needle Valve with Rupture Disc	A182 F316L	1/4"	#3000	NPT F x M	2
4	2 Way Ball Valve, Seat: PTFE, Trim: SS316L	A182 F316L	1/2"	#3000	OD	3
5	Quick Coupling	A182 F316L	1/2"	#3000		2
6	Sampling Cylinder	Body: A312 TP316L Cap : A403 WP316L	2"			1
7	Flexible Hose - L: 600 mm	Inner PTFE Outer SS 316	1/2"	#3000		2
8	Check Valve, Poppet Type	A182 F316L	1/2"	#3000	OD	1

TYPE F

Item	Description	Material	Size(inch)	Class	Connection	Qty
1	Reducing Threaded Flange	A182 F316L	3/4" x 1/2"	#150 or #300	RF	3
2	Y Type Strainer with drain valve	A182 F316L	1/2"	#3000	OD	1
3	3 Way Ball Valve, Seat: PTFE, Trim: SS316L	A182 F316L	1/2"	#3000	OD	2
4	TEE	A182 F316L	1/2"	#3000	Female - OD	2
5	Pressure Gauge	As Per Attachment 1				2
6	2 Way Gauge Manifold	A182 F316L	1/2"	#3000	NPT F x M	2
7	Needle Valve with Rupture Disc	A182 F316L	1/4"	#3000	NPT F x M	2
8	2 Way Ball Valve, Seat: PTFE, Trim: SS316L	A182 F316L	1/2"	#3000	OD	4
9	Quick Coupling	A182 F316L	1/2"	#3000		2
10	Sampling Cylinder	Body: A312 TP316L Cap : A403 WP316L	2"			1
11	Flexible Hose - L: 600 mm	Inner PTFE Outer SS 316	1/2"	#3000		2
12	Check Valve, Poppet Type	A182 F316L	1/2"	#3000	OD	1

TYPE 12

Item	Description	Material	Size (inch)	Class	Connection	Qty
1	Reducing Threaded Flange	A182 F316L	3/4" x 1/2"	#150 or #300	RF	2
2	TEE	A182 F316L	1/2"	#3000	Female - OD	1
3	Pressure Gauge	As Per Attachment 1				1
4	2 Way Gauge Manifold	A182 F316L	1/2"	#3000	NPT F x M	1
5	Needle Valve with Rupture Disc	A182 F316L	1/4"	#3000	NPT F x M	2
6	2 Way Ball Valve, Seat: PTFE, Trim: SS316L	A182 F316L	1/2"	#3000	OD	4
7	Quick Coupling	A182 F316L	1/4"	#3000		2
8	Sampling Cylinder	Body: A312 TP316L Cap : A403 WP316L	2"			1
9	Flexible Hose - L: 600 mm	Inner PTFE Outer SS 316	1/4"	#3000		2
10	Check Valve, Poppet Type	A182 F316L	1/2"	#3000	OD	1

TYPE 14

Item	Description	Material	Size (inch)	Class	Connection	Qty
1	Reducing Threaded Flange	A182 F316L	3/4" x 1/2"	#150 or #300	RF	2
2	TEE	A182 F316L	1/2"	#3000	Female - OD	1
3	Pressure Gauge	As Per Attachment 1				1
4	2 Way Gauge Manifold	A182 F316L	1/2"	#3000	NPT F x M	1
5	Needle Valve with Rupture Disc	A182 F316L	1/4"	#3000	NPT F x M	2
6	2 Way Ball Valve, Seat: PTFE, Trim: SS316L	A182 F316L	1/2"	#3000	OD	4
7	Quick Coupling	A182 F316L	1/4"	#3000		2
8	Sampling Cylinder	Body: A312 TP316L Cap : A403 WP316L	2"			1
9	Flexible Hose - L: 600 mm	Inner PTFE Outer SS 316	1/4"	#3000		2
10	Check Valve, Poppet Type	A182 F316L	1/2"	#3000	OD	1

TYPE 17

Item	Description	Material	Size(inch)	Class	Connection	Qty
1	Reducing Threaded Flange	A182 F316L	3/4" x 1/2"	#150 or #300	RF	2
2	Needle Valve	A182 F316L	1/2"	#3000	OD	1
3	Sample Cooler	A106 Gr.B	6"			
4	2 Way Ball Valve, Seat: PTFE, Trim: SS316L	A182 F316L	3/4"	#3000	OD	3
5	Threaded Flange	A182 F316L	3/4"	#150 or #300	RF	3
6	Thermowell Pot, L=200 mm	Body: A312 TP316L Cap : A403 WP316L				
7	Thermowell	As Per Attachment 1				1
8	Thermometer	As Per Attachment 1				1
9	TEE	A182 F316L	1/2"	#3000	Female - OD	1
10	Pressure Gauge	As per attached Datasheet				1

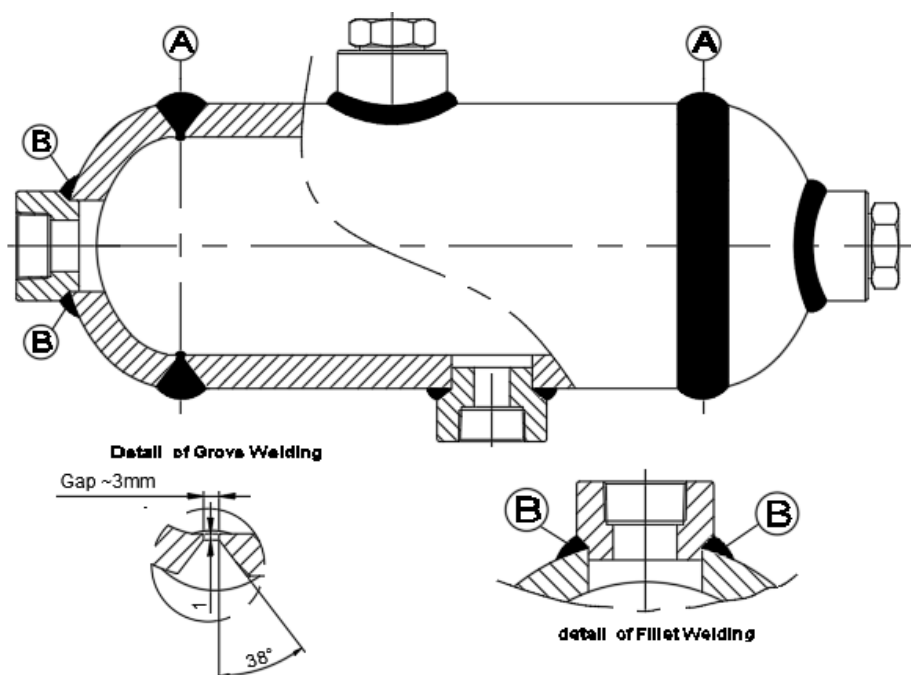


11	2 Way Gauge Manifold	A182 F316L	1/2"	#3000	NPT F x M	1
12	Needle Valve with Rupture Disc	A182 F316L	1/4"	#3000	NPT F x M	2
13	2 Way Ball Valve, Seat: PTFE, Trim: SS316L	A182 F316L	1/2"	#3000	OD	3
14	Quick Coupling	A182 F316L	1/2"	#3000		2
15	Sampling Cylinder	Body: A312 TP316L Cap : A403 WP316L	2"			1
16	Flexible Hose - L: 600 mm	Inner PTFE Outer SS 316	1/4"	#3000		2
17	Check Valve, Poppet Type	A182 F316L	1/2"	#3000	OD	1
18	Personnel Protection					

TYPE 20

Item	Description	Material	Size(inch)	Class	Connection	Qty
1	Reducing Threaded Flange	A182 F316L	3/4" x 1/2"	#150 or #300	RF	3
2	Needle Valve	A182 F316L	1/2"	#3000	OD	1
3	Sample Cooler	A106 Gr.B	6"			
4	2 Way Ball Valve, Seat: PTFE, Trim: SS316L	A182 F316L	3/4"	#3000	OD	5
5	Threaded Flange	A182 F316L	3/4"	#150 or #300	RF	3
6	Thermowell Pot, L=200 mm	Body: A312 TP316L Cap : A403 WP316L				
7	Thermowell	As Per Attachment 1				1
8	Thermometer	As Per Attachment 1				1
9	TEE	A182 F316L	1/2"	#3000	Female - OD	1
10	Pressure Gauge	As per attached Datasheet				1

11	2 Way Gauge Manifold	A182 F316L	1/2"	#3000	NPT F x M	1
12	Needle Valve with Rupture Disc	A182 F316L	1/4"	#3000	NPT F x M	2
13	2 Way Ball Valve, Seat: PTFE, Trim: SS316L	A182 F316L	1/2"	#3000	OD	2
14	Quick Coupling	A182 F316L	1/4"	#3000		2
15	Sampling Cylinder	Body: A312 TP316L Cap : A403 WP316L	2"			1
16	Flexible Hose - L: 600 mm	Inner PTFE Outer SS 316	1/4"	#3000		2
17	Check Valve, Poppet Type	A182 F316L	1/2"	#3000	OD	1
18	Personnel Protection					



NDE				
Weld Symbol	SCH	V.T	P.T	RT
A	V-Groove WELD	100%	-	10%
B	PJP+FILLET WELD	100%	10%	-

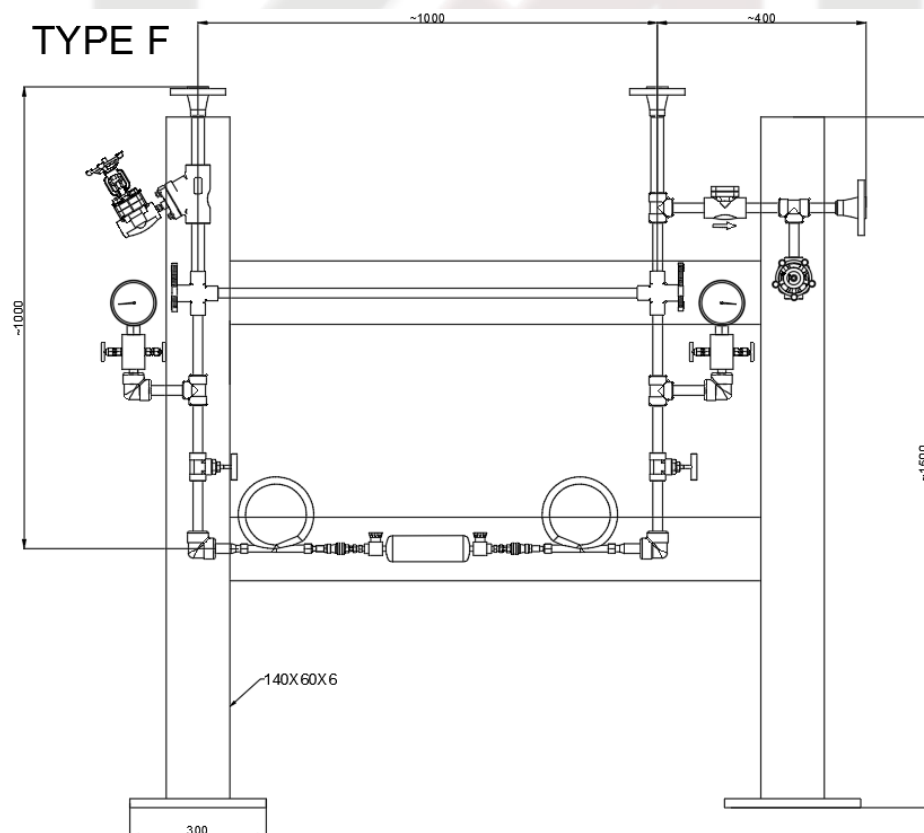
Welding Data						
Weld Symbol	BACKING	PNO./GROUP NO./ FNO.	PROCESS	SFA SPECIFICATION	AWS CLASSIFICATION	POSITION
A	NO	8/ 1/6&5	GTAW+SMAW	A5.9 & A5.4	ER316L/E316L	1G
B	NO	8/ 1/ 6	GTAW	A5.9	ER316L/316L	2F

Appendix C: DWG

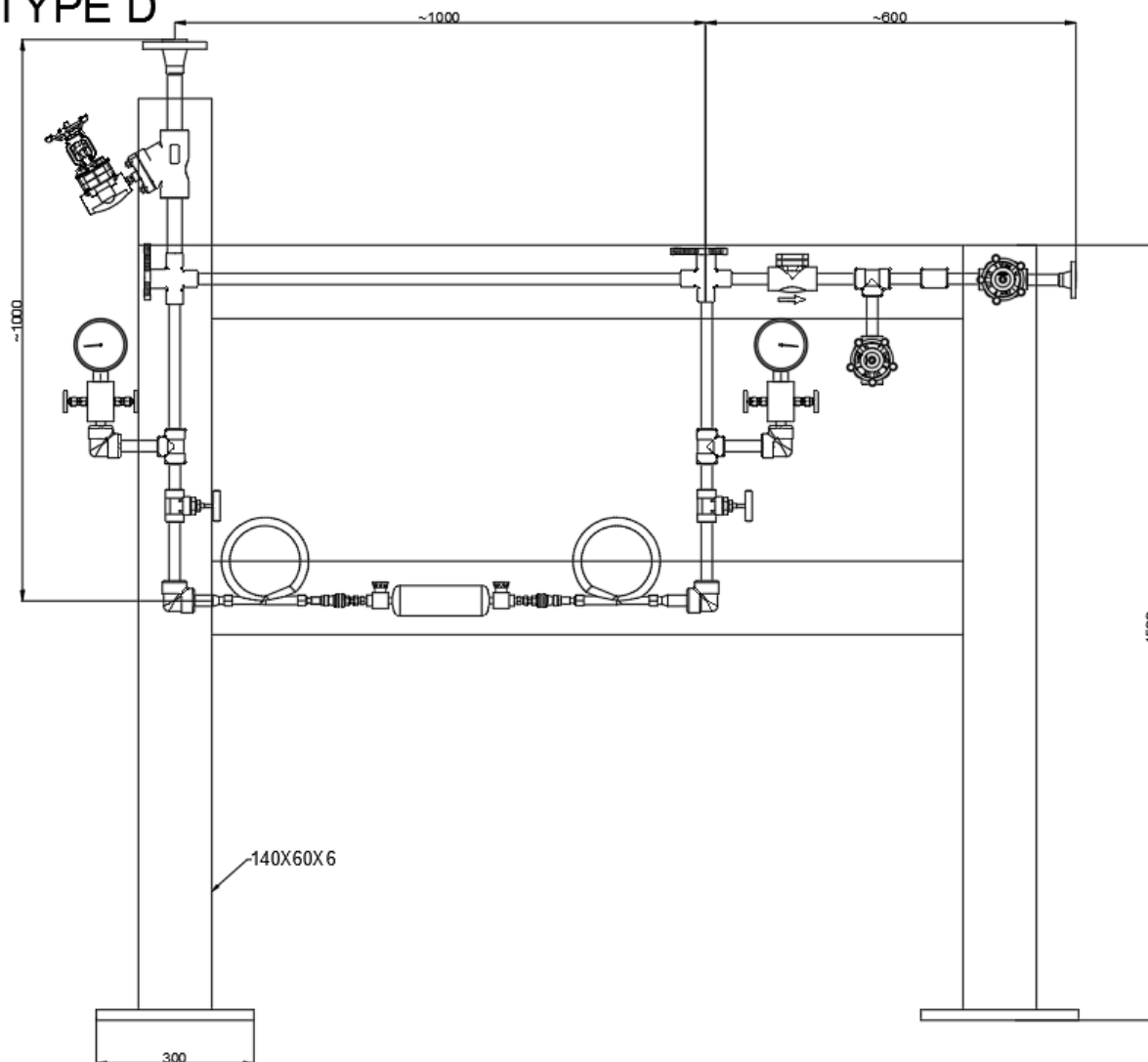
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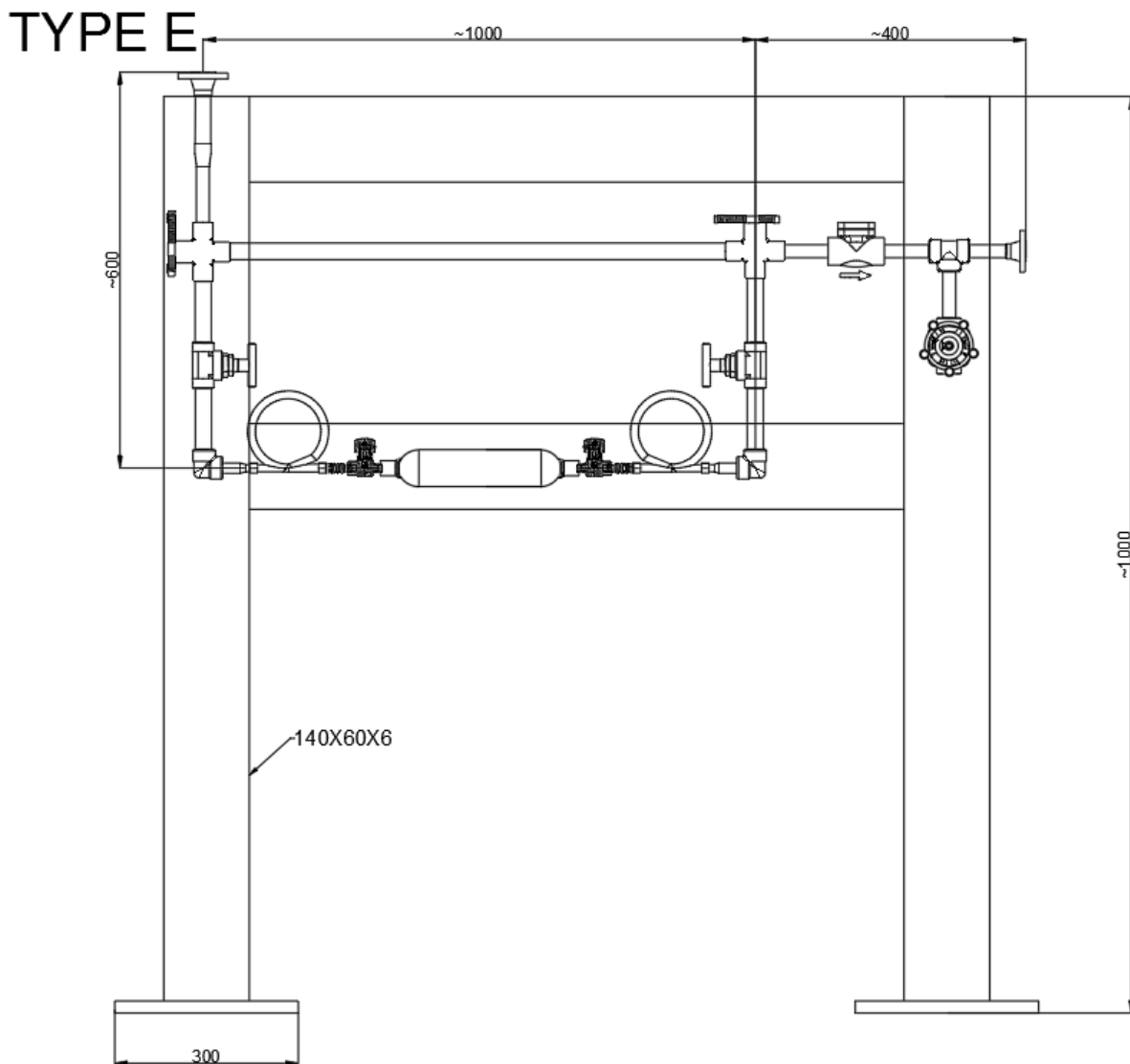
1-All Dimension are approximate.

2-All Dimension are MM.

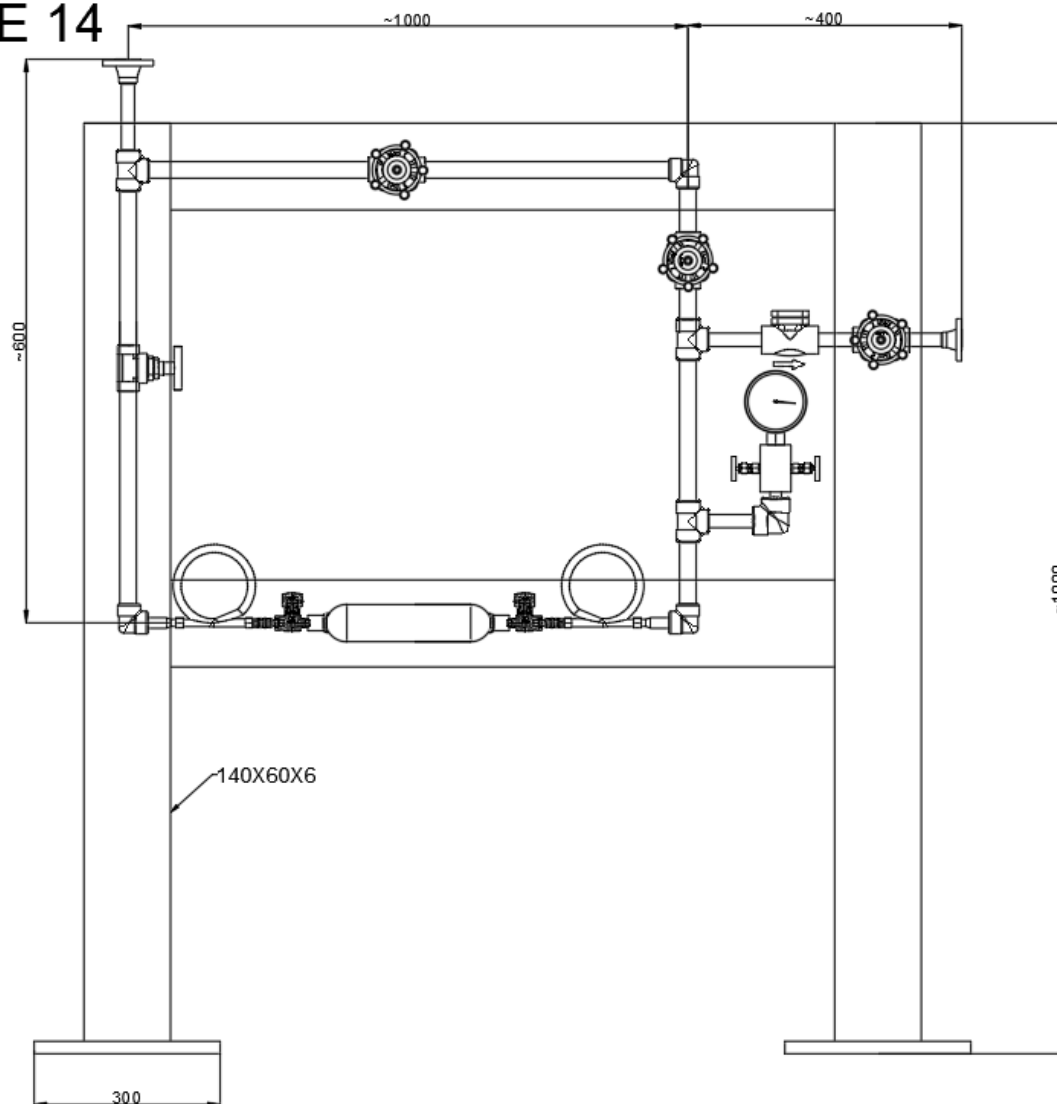


TYPE D

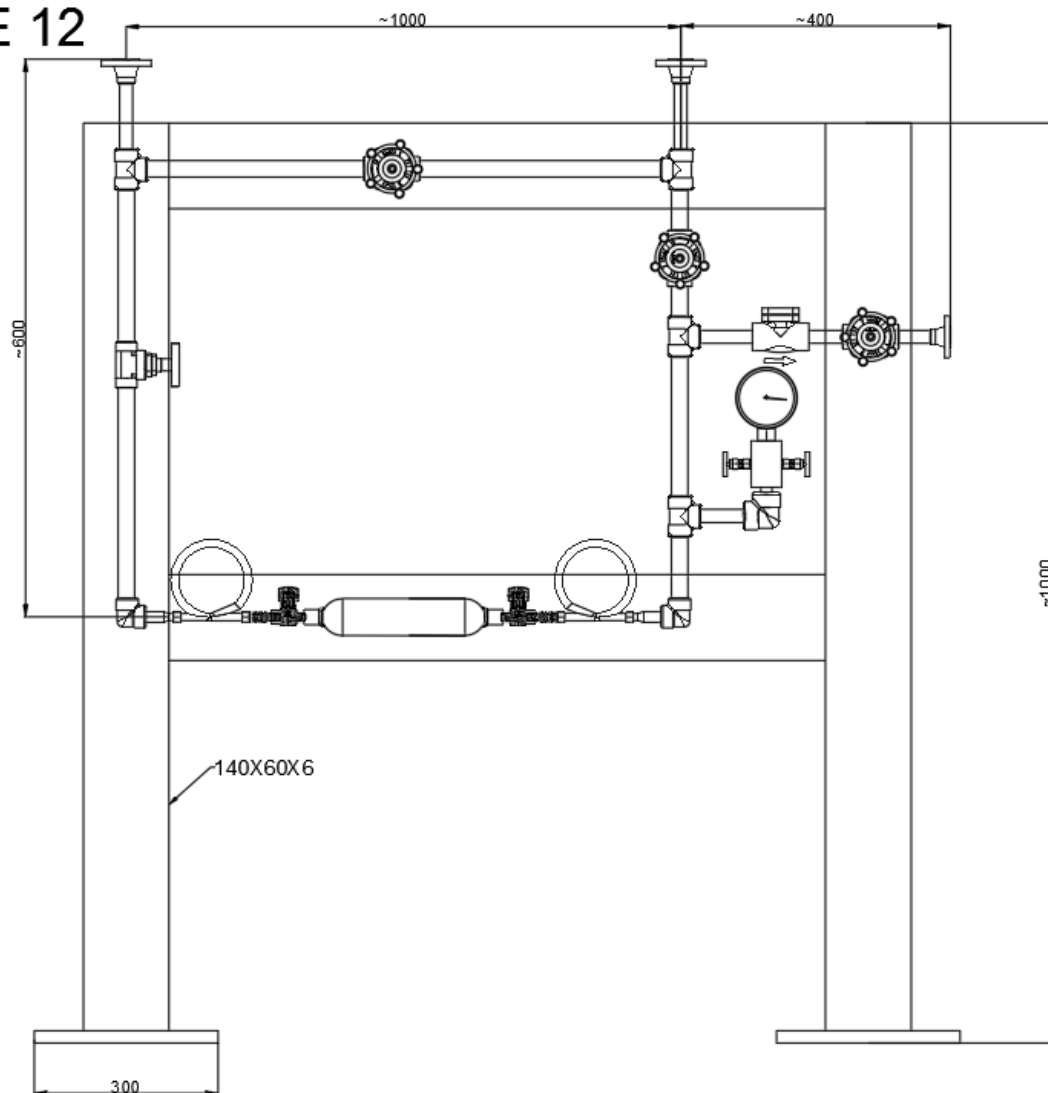




TYPE 14



TYPE 12



TYPE 17

