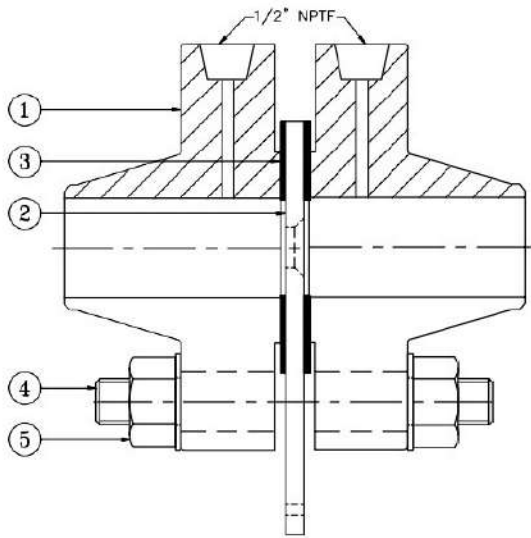


ORIFICE PLATE FLANGE ASSEMBLY PRESSURE TAPPINGS-1/2" NPTF

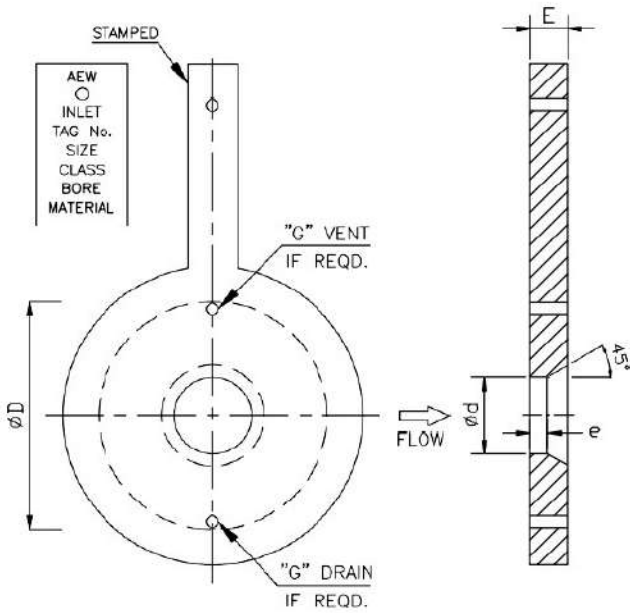


No.	Description	Qty.	Material		
1	Orifice Flange	2	ASTM A105	A182F316	A182F304
2	Orifice Plate	1	SS 316	SS 316	SS 304
3	Gasket	2	CAF	CAF	CAF
4	Stud	-	A193 Gr.B7	A193 Gr.B7	A193 Gr.B7
5	Nut	-	A194 CL.2H	A194 CL.2H	A194CL.2H

SPECIFICATIONS

- * 'ALPHA' make orifice Plate Flange Assemblies are manufactured according to ASME / BS / AGA standard.
- * Orifice Flanges cover complete range of sizes and pressurating up to 2500 class of ANSI B16.36 standard.
- * Flanges are available in various types such as WNRF, SORF, RJ
- * Various type of tapings available are Flange taps, Corner taps, D and D/2 taps, 2 —D and 8D taps
- * Orifice bore can be calculated as per ISO5167, BS1042, AGA
- * Orifice Flange material available as per ASTM A105, Alloy Steel A182 Gr.F1, F5, F9, F11, F22, ASTM A182 Gr.F 304, 304L, 316, 316L, 321 etc., ASTM A350 Gr. LF1, LF2, LF3
- * Orifice plate material available as per SS304 and SS316. Other material can be offered on request.
- * Stud & Nut material as per ASTM A193 Gr.B7 / ASTM A194 Class 2H. Other material can be offered on request.

ORIFICE PLATE

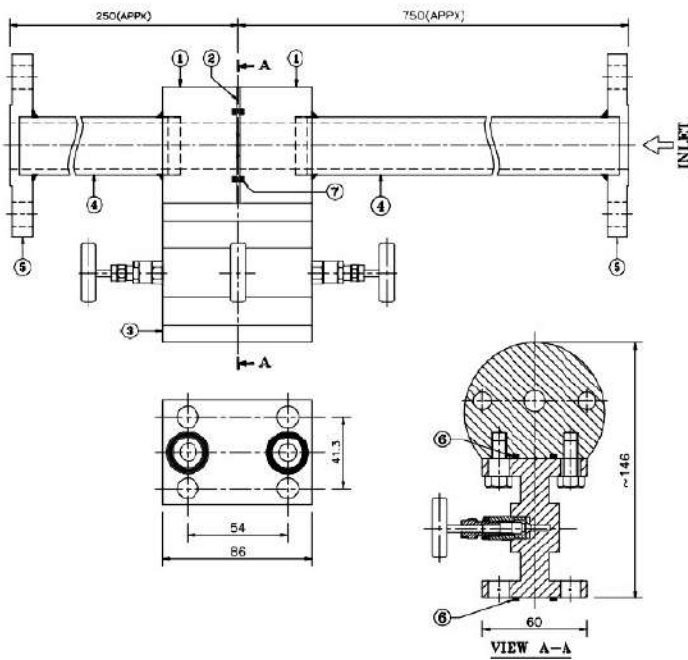


- d = Orifice Bore Diameter
- D = Pipe Inside Diameter
- E = Orifice Plate Thickness
- e = Orifice Throat Thickness
- G = Vent & Drain Hole Diameter

NOTES

1. 'Alpha' manufactures orifice plates from 1/2" to 48" in line size.
2. Standard MOC is SS316, SS304. Other material can be offered on request.
3. Restriction orifice plate can also be offered.

**INTEGRAL ORIFICE PLATE ASSEMBLY WITH METER-RUN
& H TYPE 3 VALVE MANIFOLD**

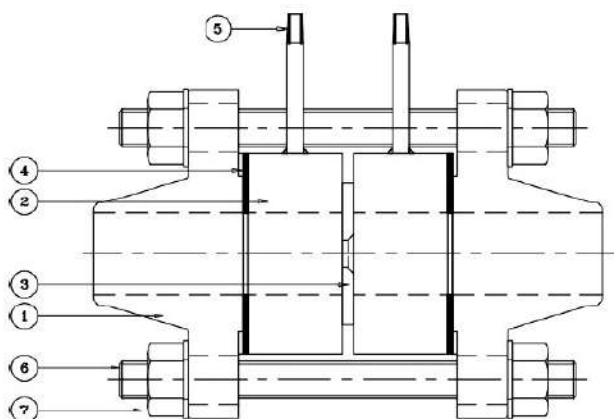


No.	Description	Qty.	MATERIAL		
1.	Orifice Block	02	SS 316	SS 304	CS
2.	Orifice Plate	01	SS 316	SS 304	SS316
3.	H-Type Three Valve Manifold	01	SS 316	SS 304	CS
4.	Seamless Pipe	02	SS 316	SS 304	CS
5.	FLANGES 150 # (B-16.5)	02	SS 316	SS 304	CS
6.	Gasket for Manifold	04	Teflon	Teflon	Teflon
7.	Gasket for Orifice Block	02	Teflon	Teflon	Teflon

NOTES

- 1) Class of flanges and pipe schedule will be selected on the basis of inlet pressure.
- 2) DP Transmitter to be mounted directly with 'H' type three valve manifold.

CARRIER RING ORIFICE PLATE ASSEMBLY

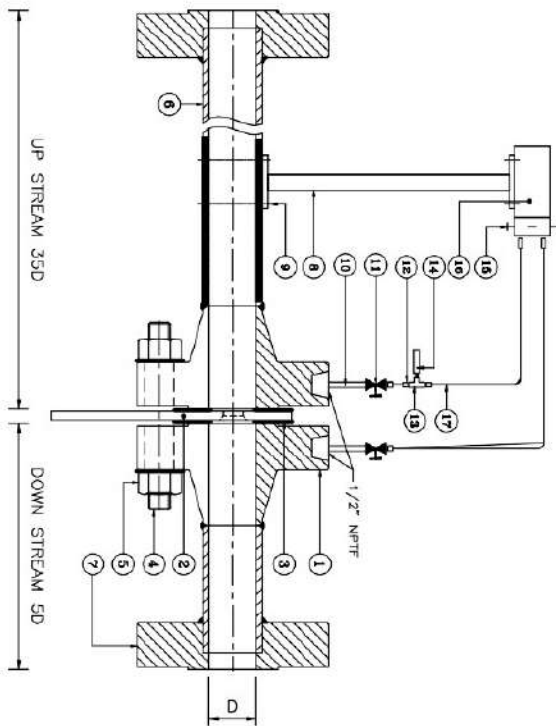


No.	Description	Qty.	Material		
1.	Flange WNRF	02	ASTMA105	SS 316	SS 304
2.	Orifice Block	02	ASTMA105	SS 316	SS 304
3.	Orifice Plate	01	SS316	SS 316	SS 304
4.	Gasket	02	CAF	CAF	CAF
5.	Nipple	02	CS	SS 316	SS 304
6.	Stud	-	A193Gr.B7	A193Gr. B7	A193Gr.B7
7.	Nut	-	A194CL2H	AT94 CL2H	A194CL2H

NOTE

Flange WNRF/SORF 150#, 300# & 600# ANSIB 16.5 can also be provided.

ORIFICE PLATE FLANGE ASSEMBLY - METER RUN WITH IMPLUSE TUBING & DP /PT INSTALLATION



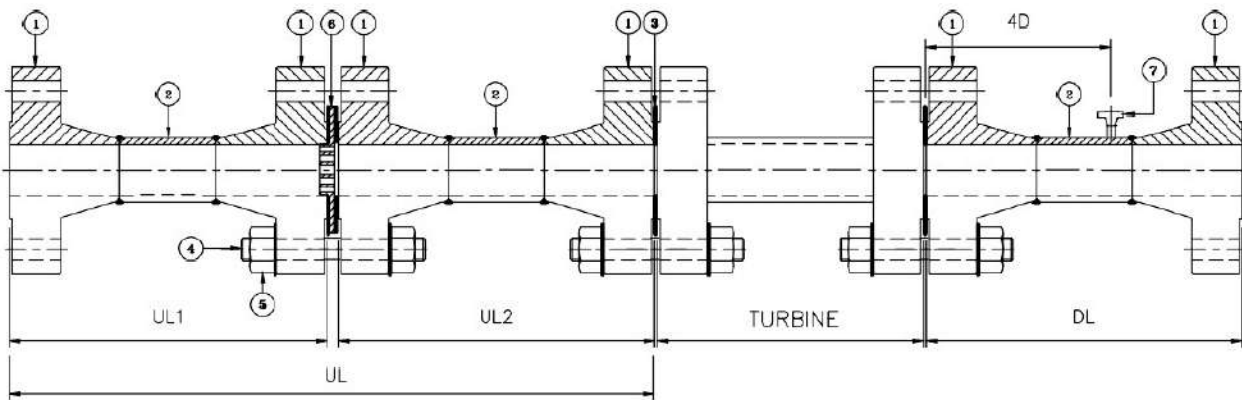
D = INSIDE DIA. OF THE SEAMLESS NB PIPE

SPECIFICATIONS

Pipe Size NB Sch. 40	Inside Dia D mm
2"	52.5
3"	77.9
4"	102.2

No.	Description	Qty.	Material
1	ORIFICE FLANGE	02	ASTM A-105
2	ORIFICE PLATE	01	SS316
3	GASKET	02	CAF
4	STUD	-	ASTM A-193 Gr.B7
5	NUT	-	ASTM A-194 2H
6	SEAMLESS PIPE	02	ASTM A-106
7	FLANGE (150 # - B16.5)	02	CS
8	STAND	01	M.S.
9	'U' BOLT	02	M.S.
10	NIPPLE 1/2" NPT-M	02	ASTM A-106
11	NEEDLE VALVE 1/2" NPT-F	02	SS 316
12	MALE CONNECTOR	06	SS 316
13	1/2" NPT-F EQUAL TEE	01	CS
14	PRESSURE TRANSMITER	01	-
15	THREE VALVE MANIFOLD	01	SS 316
16	DP TRANSMITER	01	-
17	1/2" ODTUBE SEAMLESS	-	SS 316

TURBINE METER BASED METERING SKID

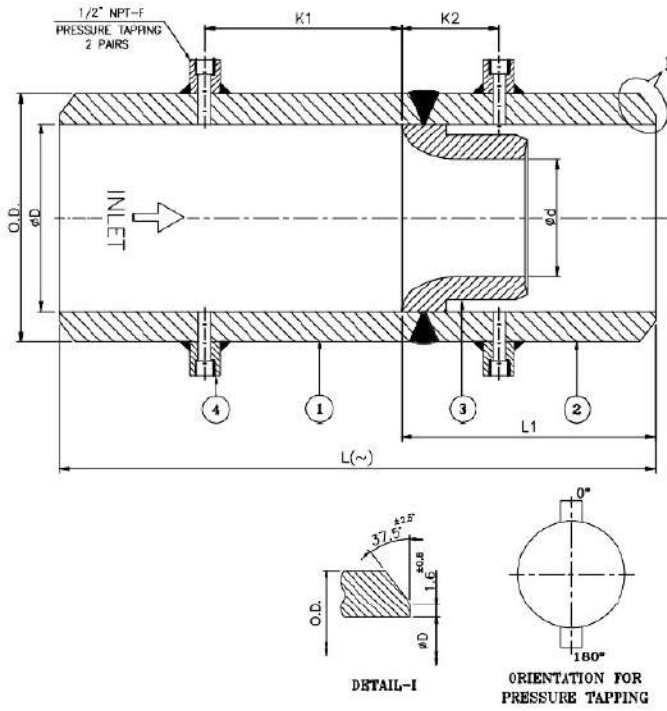


PROFILER

No.	Description	Qty.	Material
1	FLANGE, WNRF B16.5	08	ASTM A-105
2	SEAMLESS PIPE	03	A106 Gr.B
3	SPIRAL METALIC GASKET	06	CS
4	STUD	-	ASTM A-193 Gr.B7
5	NUT	-	ASTM A-194 2H
6	PROFILER	01	SS 316
7	WNRF FLANGE FOR RTD	01	ASTM A-105

- D Inside dia. of the seamless NB Pipe
- UL Upstream Length
- DL Downstream Length

FLOW NOZZLE

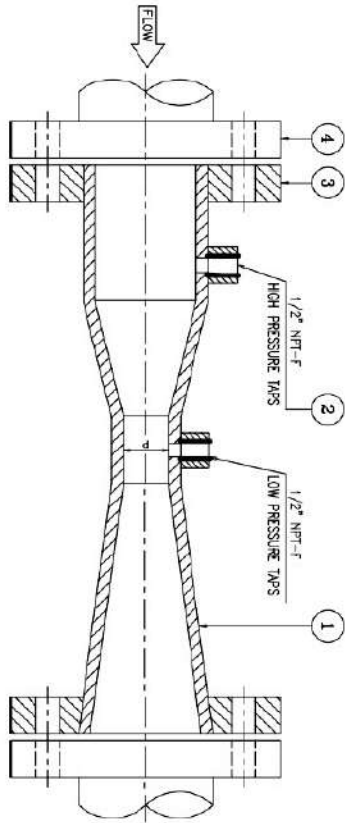


No.	Description	Qty.	Material
1	UP STREAM PIPE	01	A106 Gr.B
2	DOWN STREAM PIPE	01	A106 Gr.B
3	NOZZLE LONG RADIUS	01	SS 316
4	SOCKET	04	A 105

NOTES

- 1) IBR certificate form III-C will be furnished
- 2) One pair, pressure tapping will be provided with —" NPT-M plug.
- 3) Flow nozzles are as per ISO 5167 standard.
- 4) The long radius nozzle & the ISA 1932 nozzle can be provided.

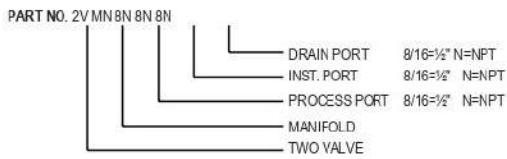
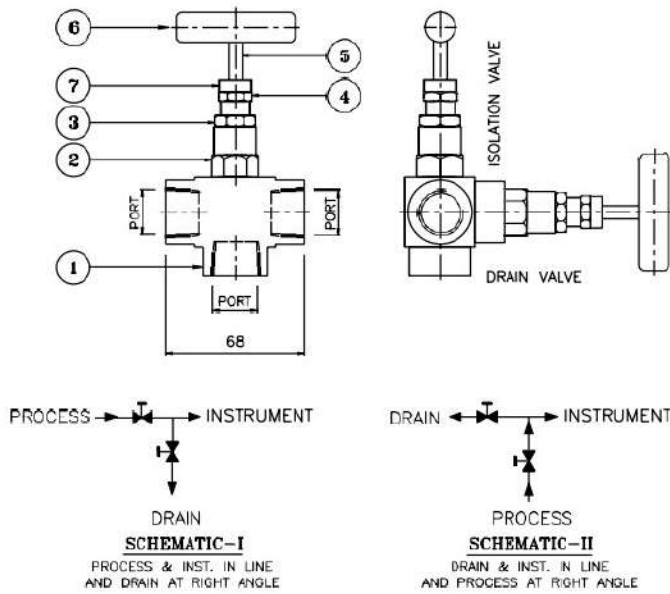
VENTURI



No.	Description	Qty.	MATERIAL
1.	VENTURI BODY	01	CS SS 304 SS 316
2.	SOCKET 1/2" NPT-F	02	CS SS 304 SS 316
3.	FLANGE	02	CS SS 304 SS 316
4.	COUNTER FLANGE	02	CS SS 304 SS 316

CLASSICAL VENTURI WITH WELDED SHEET FOR LINE SIZE 8" TO 48"

TWO VALVE (THREE WAY VALVE) MANIFOLD FOR PRESSURE INSTRUMENTS



No.	Description	Qty.	Material
1	BODY	01	CS SS 304 SS 316
2	GLAND BODY	02	CS SS 304 SS 304
3	CHECK NUT	02	CS SS 304 SS 304
4	GLAND NUT	02	CS SS 304 SS 316
5	SPINDLE	02	SS 304 SS 304 SS 304
6	HANDLE	02	SS SS SS
7	PROTECTING CAP	02	PLASTIC PLASTIC PLASTIC

1. GLAND SEAL Teflon used upto 200°C Temp. Graphitized Asbestos / Graphoil used above 200°C Temp.
2. FINISH C.S. - Zinc Plated, S.S. - Natural Finish
3. VALVE MANIFOLDS ARE TESTED AT 6000 PSIG

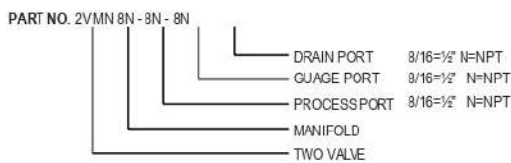
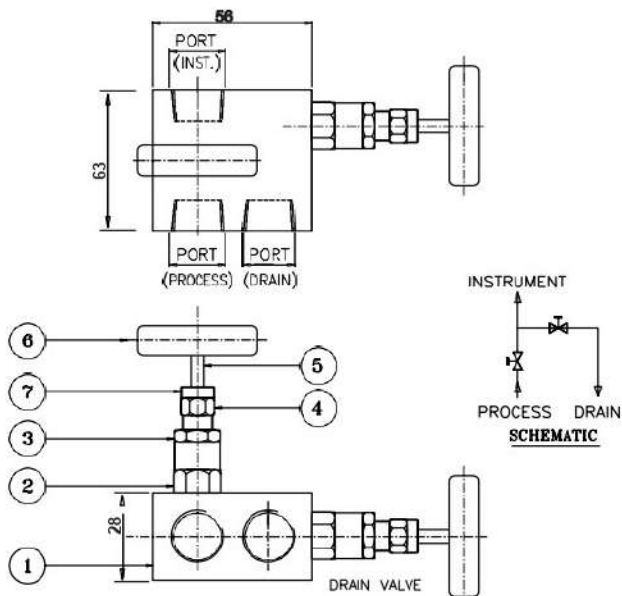
AVAILABLE PORT SIZES

- 1/2" NPT-8N, 1/2" BSP-8R
- 3/8" NPT-6N, 3/8" BSP-6R
- 1/4" NPT-4N, 1/4" BSP-4R
- 1/2" SOCKET WELD-8SW.
- 3/4" SOCKET WELD-12SW

PRESSURE RATING

Temperature	CS/SS 316
Room Temp.	6000 PSI
500 Deg. F.	4000 PSI
1000 Deg. F.	1500 PSI

TWO VALVE (THREE WAY VALVE) MANIFOLD FOR PRESSURE INSTRUMENTS



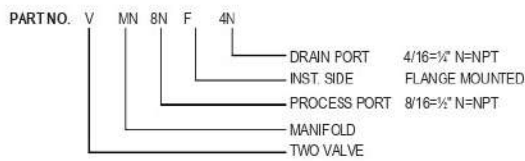
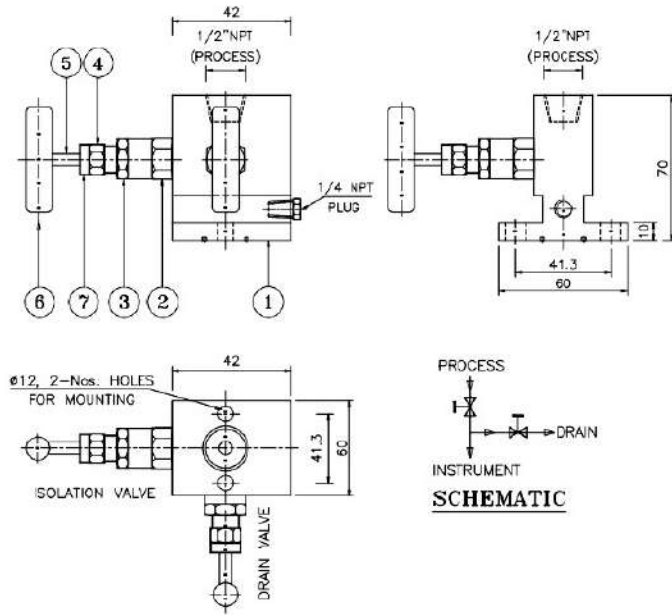
No.	Description	Qty.	Material
1	BODY	01	CS SS 304 SS 316
2	GLAND BODY	02	CS SS 304 SS 316
3	CHECK NUT	02	CS SS 304 SS 304
4	GLAND NUT	02	CS SS 304 SS 304
5	SPINDLE	02	SS 304 SS 304 SS 316
6	HANDLE	02	SS SS SS
7	PROTECTING CAP	02	PLASTIC PLASTIC PLASTIC

1. GLAND SEAL TEFLON USED UPTO 200°C TEMP.
GRAPHATIZED ASBESTOSE / GRAPHOIL USED ABOVE 200°C TEMP.
2. FINISH C.S. - ZINC PLATED, S.S. - NATURAL FINISH
3. VALVE MANIFOLDS ARE TESTED AT 6000 PSIG
4. MALE NPT PLUGS FOR DRAIN PORT CAN BE PROVIDED AT EXTRA COST.

PRESSURE RATING

Temperature	CS/SS 316
Room Temp.	6000 PSI
500 Deg. F.	4000 PSI
1000 Deg. F.	1500 PSI

TWO VALVE MANIFOLD "T"-TYPE INTEGRAL MOUNTING



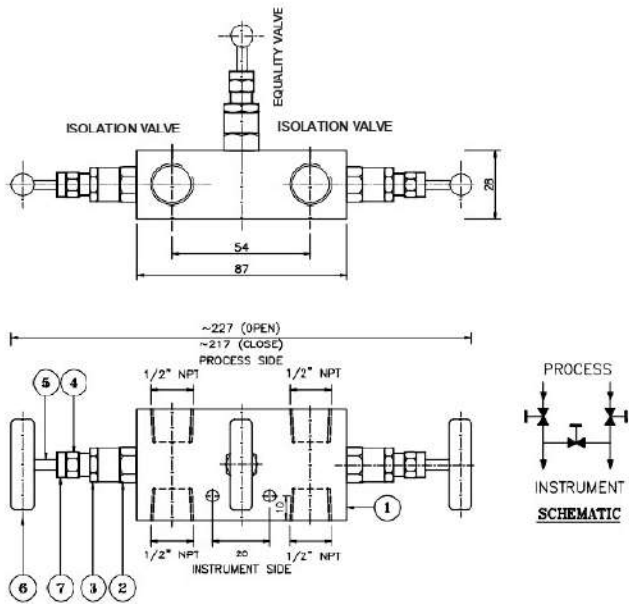
No.	Description	Qty.	Material		
1	BODY	01	CS	SS 304	SS 316
2	GLAND BODY	02	CS	SS 304	SS 316
3	CHECK NUT	02	CS	SS 304	SS 304
4	GLAND NUT	02	CS	SS 304	SS 304
5	SPINDLE	02	SS 304	SS 304	SS 316
6	HANDLE	02	SS	SS	SS
7	PROTECTING CAP	02	PLASTIC	PLASTIC	PLASTIC

- GLAND SEAL: TEFLON USED UP TO 200°C TEMP. GRAPHITIZED ASBESTOSE / GRAPHOIL USED ABOVE 200°C TEMP.
- FINISH: C.S. - ZINC PLATED, S.S. - NATURAL FINISH
- VALVE MANIFOLDS ARE TESTED AT 6000 PSIG

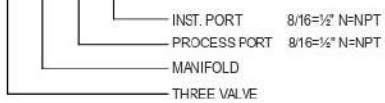
PRESSURE RATING

Temperature	CS/SS 316
Room Temp.	6000 PSI
500 Deg. F.	4000 PSI
1000 Deg. F.	1500 PSI

THREE VALVE MANIFOLD (SEPARATELY MOUNTED TYPE)



PART NO. 3V MN 8N - 8N



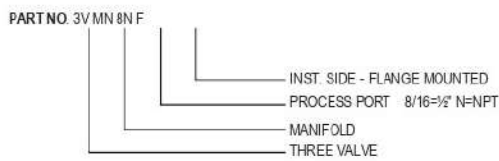
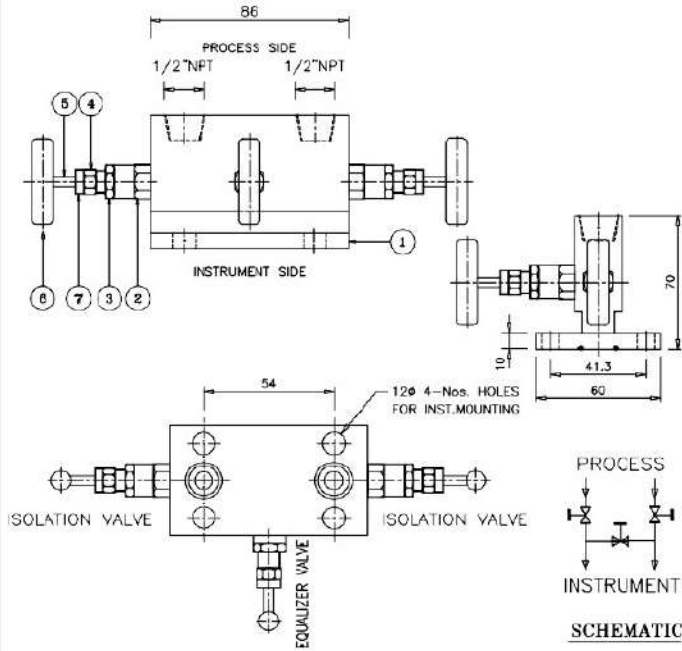
No.	Description	Qty.	Material		
1	BODY	01	CS	SS 304	SS 316
2	GLAND BODY	03	CS	SS 304	SS 316
3	CHECK NUT	03	CS	SS 304	SS 304
4	GLAND NUT	03	CS	SS 304	SS 304
5	SPINDLE	03	SS 304	SS 304	SS 316
6	HANDLE	03	SS	SS	SS
7	PROTECTING CAP	03	PLASTIC	PLASTIC	PLASTIC

1. GLAND SEAL Teflon used upto 200°C Temp. Graphitized Asbestos / Graphoil used above 200°C Temp.
2. FINISH C.S.- Zinc Plated, S.S.- Natural Finish
3. VALVE MANIFOLDS ARE TESTED AT 6000 PSIG

PRESSURE RATING

Temperature	CS/SS 316
Room Temp.	6000 PSI
500Deg.F.	4000 PSI
1000Deg.F	1500 PSI

THREE VALVE MANIFOLD, "T"-TYPE INTEGRAL



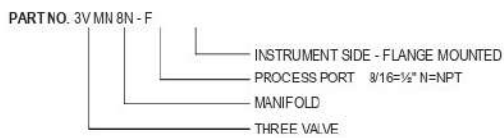
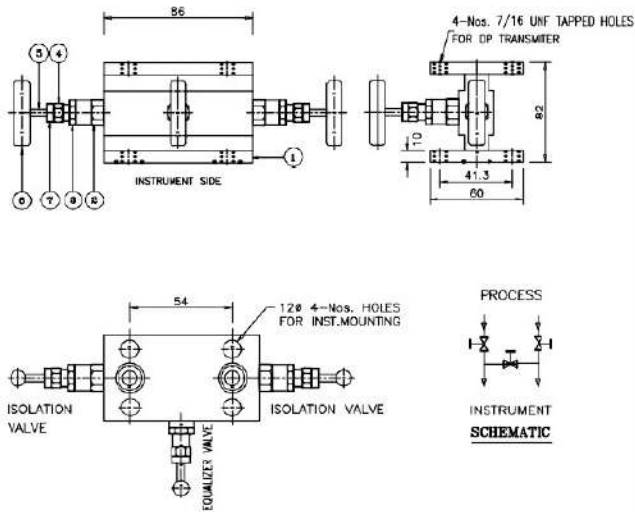
No.	Description	Qty.	CS	SS 304	SS 316
1	BODY	01	CS	SS 304	SS 316
2	GLAND BODY	03	CS	SS 304	SS 316
3	CHECK NUT	03	CS	SS 304	SS 304
4	GLAND NUT	03	CS	SS 304	SS 304
5	SPINDLE	03	SS 304	SS 304	SS 316
6	HANDLE	03	SS	SS	SS
7	PROTECTING CAP	03	PLASTIC	PLASTIC	PLASTIC

- GLAND SEAL: TEFLON USED UP TO 200°C TEMP. GRAPHATIZED ASBESTOSE / GRAPHOIL USED ABOVE 200°C TEMP.
- FINISH: C.S. - ZINC PLATED, S.S. - NATURAL FINISH
- VALVE MANIFOLDS ARE TESTED AT 6000 PSIG

PRESSURE RATING

Temperature	CS/SS 316
Room Temp.	6000 PSI
500 Deg. F.	4000 PSI
1000 Deg. F.	1500 PSI

THREE VALVE MANIFOLD, "H" - TYPE INTEGRAL



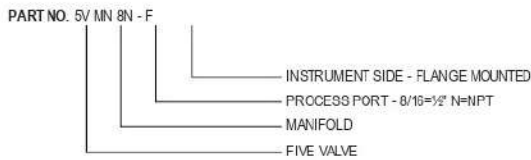
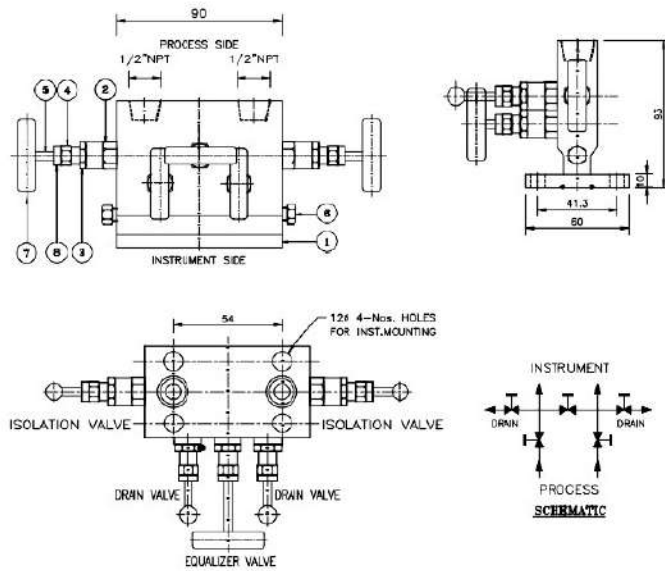
No.	Description	Qty.	Material		
1	BODY	01	CS	SS 304	SS 316
2	GLAND BODY	03	CS	SS 304	SS 316
3	CHECK NUT	03	CS	SS 304	SS 304
4	GLAND NUT	03	CS	SS 304	SS 304
5	SPINDLE	03	SS 304	SS 304	SS 316
6	HANDLE	03	SS	SS	SS
7	PROTECTING CAP	03	PLASTIC	PLASTIC	PLASTIC

1. GLAND SEAL Teflon used up to 200°C Temp. Graphitized Asbestos / Graphol used above 200°C Temp.
2. FINISH C.S.- Zinc Plated, S.S.- Natural Finish
3. VALVE MANIFOLDS ARE TESTED AT 6000 PSIG

PRESSURE RATING

Temperature	CS/SS 316
Room Temp.	6000 PSI
500 Deg. F.	4000 PSI
1000 Deg. F	1500 PSI

FIVE VALVE MANIFOLD, "T" - TYPE INTEGRAL



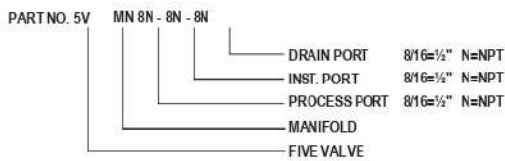
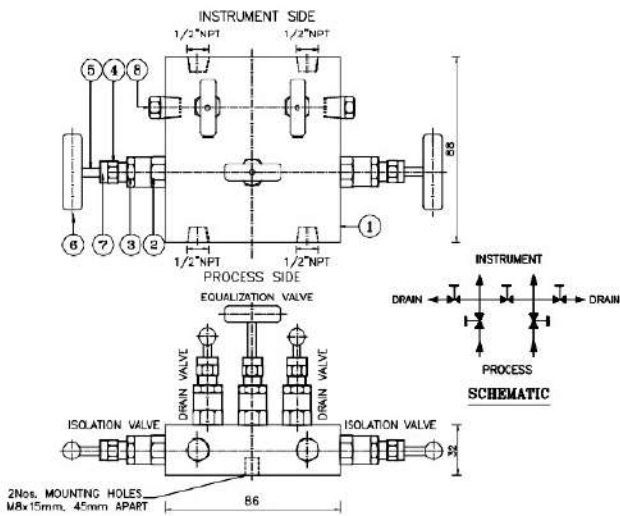
No.	Description	Qty.	Material		
1	BODY	01	CS	SS 304	SS 316
2	GLAND BODY	05	CS	SS 304	SS 316
3	CHECK NUT	05	CS	SS 304	SS 304
4	GLAND NUT	05	CS	SS 304	SS 304
5	SPINDLE	05	SS 304	SS 304	SS 316
6	1/4\" NPT PLUG	02	CS	SS 304	SS 316
6	HANDLE	05	SS	SS	SS
8	PROTECTING CAP	05		PLASTIC PLASTIC	PLASTIC

1. GLAND SEAL Teflon used upto 200°C Temp. Graphitized Asbestos / Graphoil used above 200°C Temp.
2. FINISH C.S. - Zinc Plated. S.S. - Natural Finish
3. VALVE MANIFOLDS ARE TESTED AT 6000 PSIG

PRESSURE RATING

Temperature	CS/SS 316
Room Temp.	6000 PSI
500 Deg. F.	4000 PSI
1000 Deg. F.	1500 PSI

FIVE VALVE MANIFOLD SEPARATELY MOUNTED TYPE



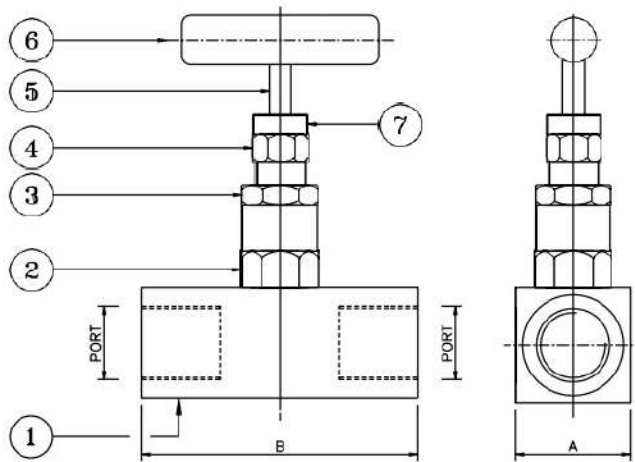
No.	Description	Qty.		Material	
1	BODY	01	CS	SS 304	SS 316
2	GLAND BODY	05	CS	SS 304	SS 316
3	CHECK NUT	05	CS	SS 304	SS 304
4	GLAND NUT	05	CS	SS 304	SS 304
5	SPINDLE	05	SS 304	SS 304	SS 316
6	HANDLE	05	SS	SS	SS
7	PROTECTING CAP	05	PLASTIC	PLASTIC	PLASTIC
8	DRAIN PLUG	02	CS	SS304	SS316

1. GLAND SEAL Teflon used up to 200°C Temp. Graphitized Asbestos / Graphol used above 200°C Temp.
2. FINISH C.S. - Zinc Plated S.S. - Natural Finish
3. VALVE MANIFOLDS ARE TESTED AT 6000 PSIG

PRESSURE RATING

Temperature	CS/SS 316
Room Temp.	6000 PSI
500 Deg. F.	4000 PSI
1000 Deg. F.	1500 PSI

NEEDLE VALVE



PART NO. NV - 8N (FOR 1/2" NPT NEEDLE VALVE)

8/16=1/2" N=NPT
NEEDLE VALVE

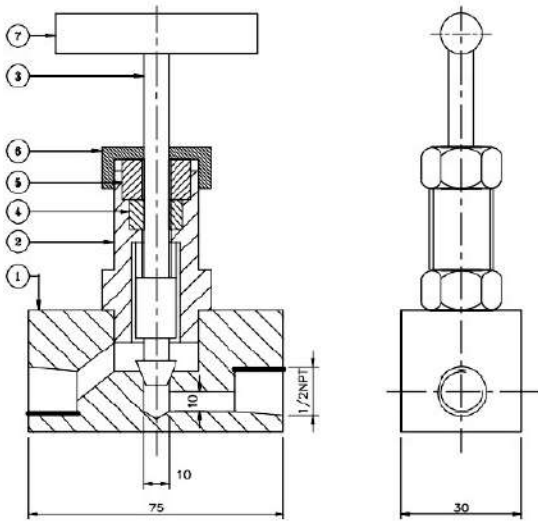
1. GLAND SEAL Teflon used upto 200°C Temp. Graphitized Asbestos / Graphoil used above 200°C Temp.
2. FINISH C.S. - Zinc Plated, S.S. - Natural Finish
3. VALVE MANIFOLDS ARE TESTED AT 6000 PSIG

No.	Description	Qty.		Material
1	BODY	01	CS	SS 304 SS 316
2	GLAND BODY	01	CS	SS 304 SS 316
3	CHECK NUT	01	CS	SS 304 SS 304
4	GLAND NUT	01	CS	SS 304 SS 304
5	SPINDLE	01	SS 304	SS 304 SS 316
6	HANDLE	01	SS	SS
7	PROTECTING CAP	01	PLASTIC	PLASTIC PLASTIC

PORT	A	B	PART NO.
1/8" NPT	25	46	NV 2N
1/4" NPT	25	46	NV 4N
3/8" NPT	25	56	NV 6N
1/2" NPT	28/30	63	NV 8N
3/4" NPT	38	80	NV 12N
1" NPT	46	88	NV 16N

BSP & DOUBLE FERRULES OD TUBE CONNECTION CAN ALSO BE PROVIDED

SHUT OFF VALVE. (GLOBE VALVE)



PART NO. SOV - 8N
 PORT SIZE : 8/16=1/2" N=NPT
 SHUT OFF VALVE

No.	Description	Qty.	Material		
1	BODY	01	CS	SS 316	SS 304
2	GLAND BODY	01	CS	SS 316	SS 304
3	SPINDLE	01	SS 316	SS 316	SS 316
4	GLAND SEAL	01	TEFLON	TEFLON	TEFLON
5	GLAND RETAINER	01	CS	SS304	SS304
6	GLAND NUT	01	CS	SS 304	SS 304
7	HANDLE	01	CS	CS	CS

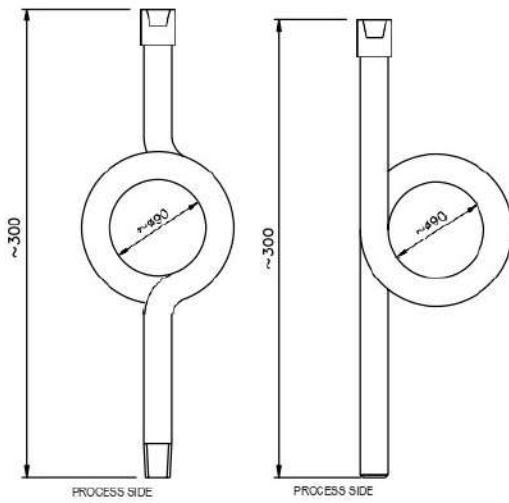
1. GLAND SEAL Teflon used up to 200°C Temp. Graphitized Asbestos / Graphol used above 200°C Temp.
2. FINISH C.S.- Zinc Plated, S.S.- Natural Finish
3. VALVE MANIFOLDS ARE TESTED AT 6000 PSIG

PRESSURE RATING

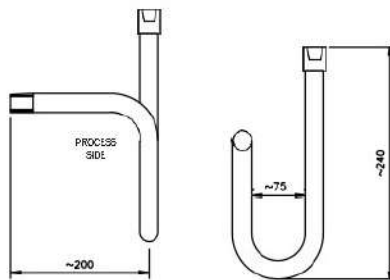
Temperature	CS/SS 316
Room Temp.	6000 PSI
500Deg. F.	4000 PSI
1000Deg. F.	1500 PSI

SYPHON FOR PRESSURE GAUGES

SYPHON CIRCULAR - SHAPED FOR VERTICAL TAPPING

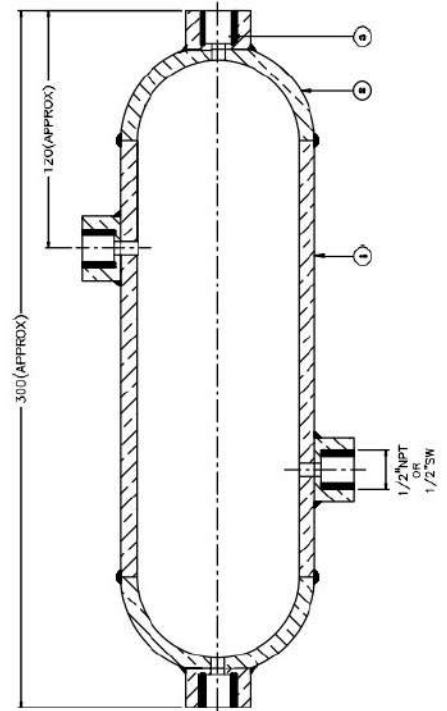


SYPHON CIRCULAR - SHAPED FOR HORIZONTAL TAPPING



PROCESS CONNECTION : 1/2" NPT, 1/2" BSP, 1/2" BW
 MATERIAL : A106, GR. B, A335P11, A335P22, SS304, SS316.
 ADJUSTABLE NUT ARRANGEMENT FOR MOUNTING GAUGE CAN BE PROVIDED.

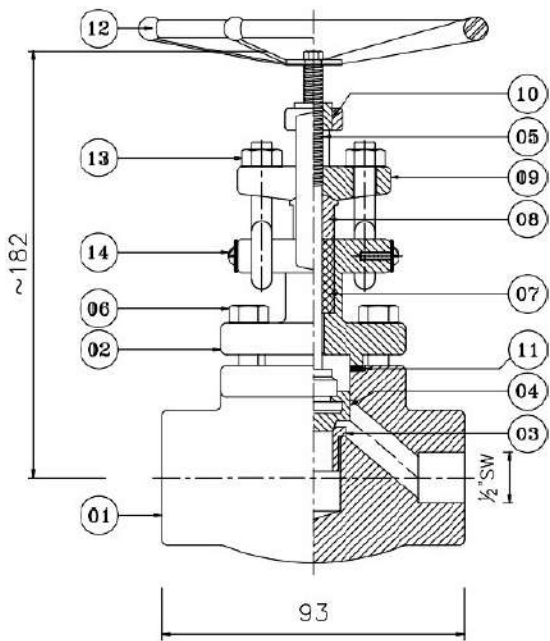
CONDENSATE POT



No.	Description	Qty.	Material
1	3" NB SEAMLESS PIPE	01	A 106
2	3" NB END CAP	02	A 234 Gr.WPB
3	1/2" (F) SOCKET	04	A 105

MATERIAL : A335P11, A335P22, SS304, SS316 can be provided.

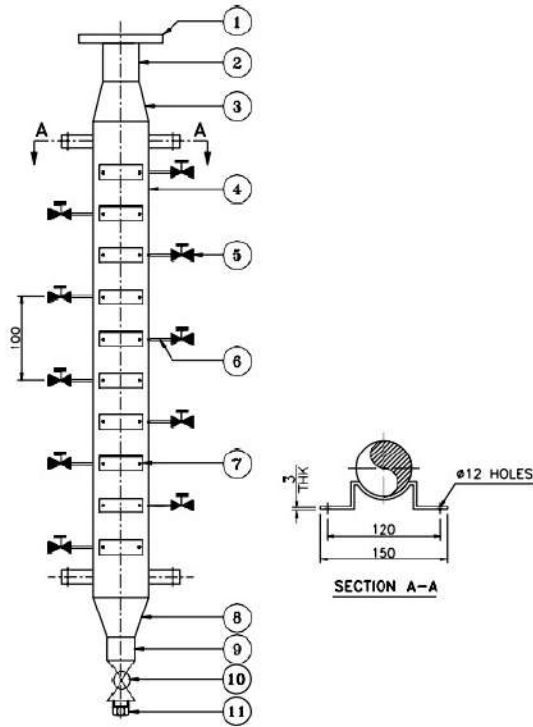
GLOBE VALVE - OS & Y TYPE



No.	Description	Qty.	Material			
1	BODY	01	A105	A182F22	A182F316	A182F304
2	BONNET	01	A105	A182F22	A182F316	A182F304
3	SEAT	01	SS 410	SS 410	SS 316	SS 304
4	LOOSE PLUG	01	SS 410	SS 410	SS 316	SS 304
5	SPINDLE	01	SS 410	SS 410	SS 316	SS 304
6	BOLT	04	HT	HT	HT	HT
7	GLAND PAKING	01	GRAPHOIL	GRAPHOIL	GRAPHOIL	GRAPHOIL
8	GLAND RETAINER	01	SS 410	SS 410	SS 316	SS 304
9	GLAND FLANGE	01	CS	CS	SS 316	SS 304
10	SPINDLE GUIDE	01	SS 304	SS 304	SS 304	SS 304
11	GASKET	01	METALLIC	METALLIC	METALLIC	METALLIC
12	HAND WHEEL	01	MS	MS	MS	MS
13	EYEBOLT WITH NUT	02	HT	HT	HT	HT

HT = High Tensile

AIR HEADER (10 CONNECTIONS)



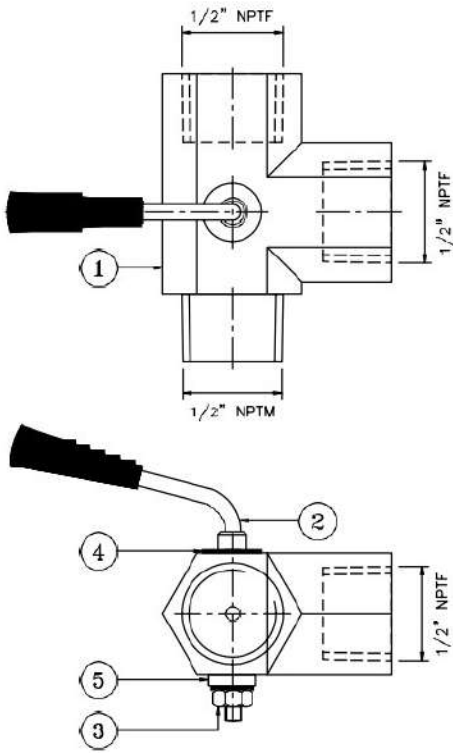
FINISH : C.S. - GALVANIZED, S.S. - NATURAL FINISH

A) HYDRO TEST : 20 KG/SQ. CM g (5MINUTES)

B) PNEUMATIC TEST : 10 KG/SQ.CM g (5 MINUTES)

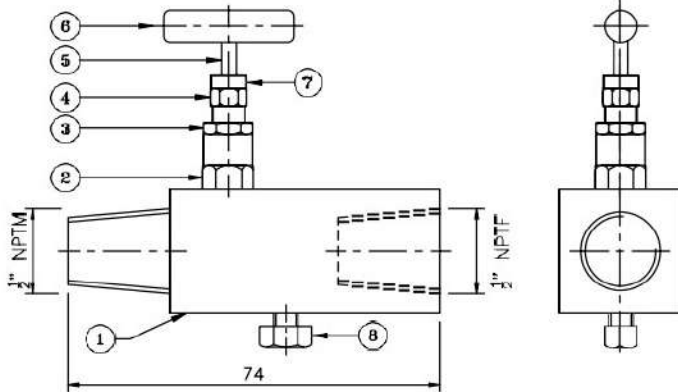
No.	Description	Qty.	Material
1	FLANGE 1"NB, 150#	01	CS SS304 SS316
2	NIPPLE 1" NB, SCH 40x4" LONG	01	CS SS304 SS316
3	REDUCER 2" x 1" SCH. 40	01	CS SS316 SS316
4	SEAMLESS PIPE 2"NB, SCH.40	01	CS SS304 SS316
5	NEEDLE VALVE 1/4" NPT-F	10	cs SS304 SS316
6	NIPPLE 1/4"NPT x 2"LONG	10	CS SS304 SS316
7	TAG PLATE	10	ACRYLIC ACRYLIC ACRYLIC
8	REDUCER 2" x 1/2" SCH.40	01	CS SS304 SS316
9	NIPPLE 1/2"NB x 1/2"NPT x 4" LONG	01	CS SS304 SS316
10	BALL VALVE 1/2"NPT-F	01	CS SS304 SS316
11	1/2"NPT PLUG	01	CS SS304 SS316

GAUGE COCK



No.	Description	Qty.	Material
1	BODY	01	SS316
2	SPINDLE	01	SS316
3	NUT WITH WASHER	01	SS316
4	SEAT	01	TEFLON

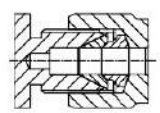
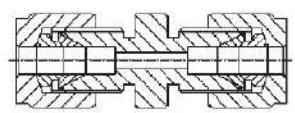
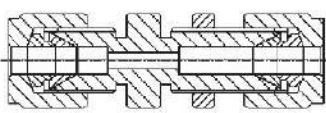
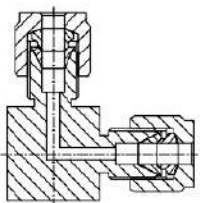
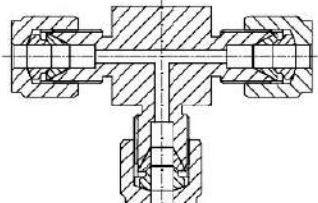
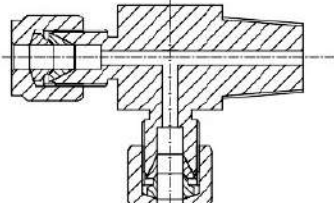
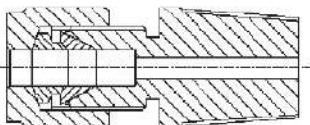
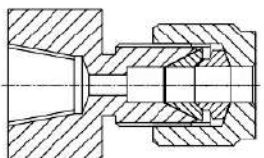
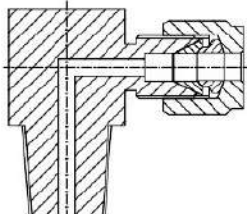
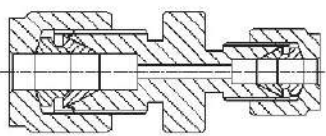
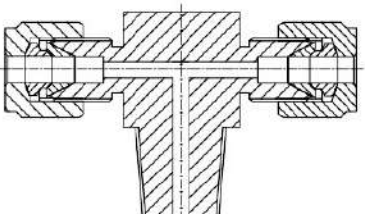
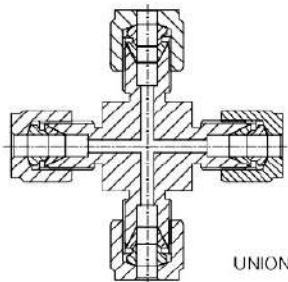
NEEDLE VALVE WITH DRAIN



No.	Description	Qty.	CS	SS304	SS316
1	BODY	01	CS	SS304	SS316
2	GLAND BODY	01	CS	SS304	SS316
3	CHECK NUT	01	CS	SS304	SS304
4	GLAND NUT	01	CS	SS304	SS304
5	SPINDLE	01	SS304	SS304	SS316
6	HANDLE	01	SS	SS	SS
7	PROTECTING CAP	01	PLASTIC	PLASTIC	PLASTIC
8	DRAIN PLUG	01	CS	SS304	SS304

- 1) GLAND SEAL : TEFLON USED UP TO 200°C TEMPERATURE, GRAPHATIZED ASBESTOSE / GRAPHOIL USED ABOVE 200°C TEMPERATURE.
- 2) FINISH : C.S. - ZINC PLATED
S.S. - NATURAL FINISH
- 3) VALVES ARE TESTED AT 4000 PSIG.

DOUBLE FERRULE COMPRESSION FITTINGS

 END CLOSURE	 UNION	 BULKHEAD UNION
 UNION ELBOW	 EQUAL TEE	 MALE RUN TEE
 MALE CONNECTOR	 FEMALE CONNECTOR	 MALE ELBOW
 REDUCING UNION	 MALE BRANCH TEE	 UNION CROSS

