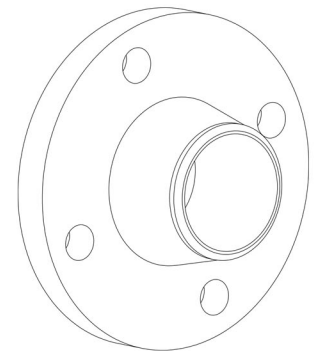
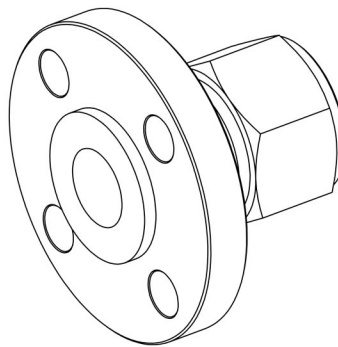
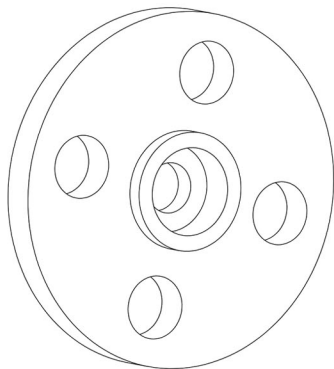
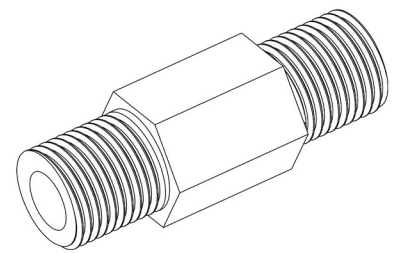
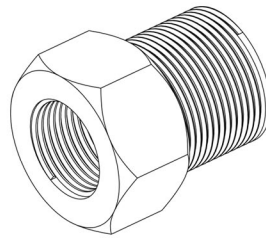
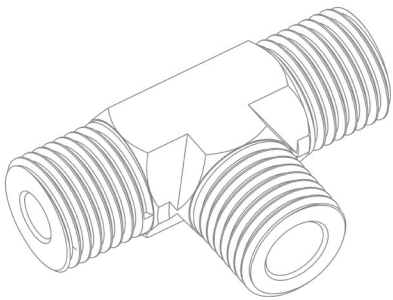
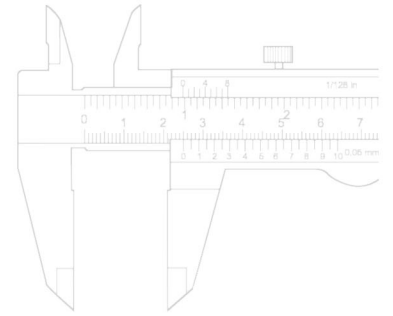
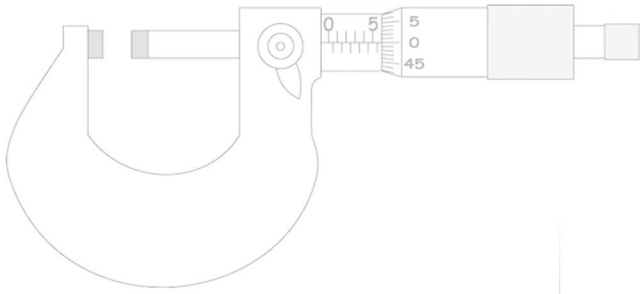


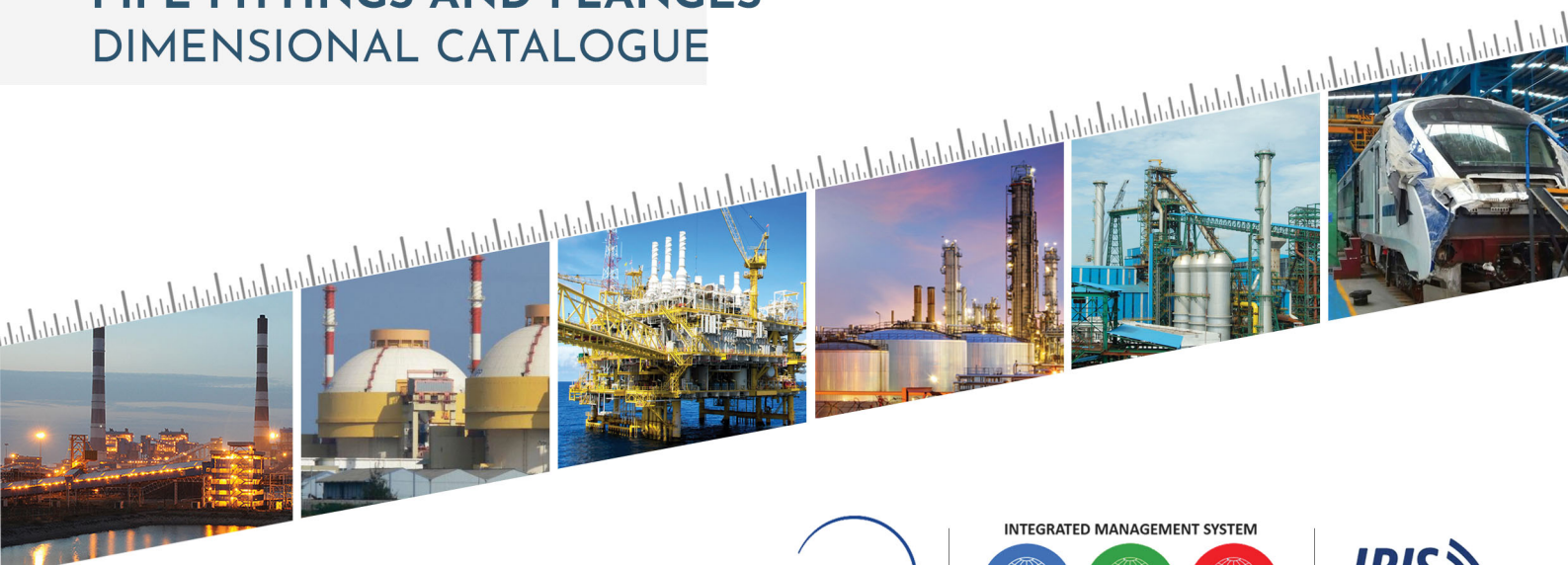


HP VALVES & FITTINGS INDIA PVT. LTD.

Instrumentation Valves & Fittings and Sealant Injection Grease Fittings



PIPE FITTINGS AND FLANGES DIMENSIONAL CATALOGUE



AN IMS CERTIFIED COMPANY

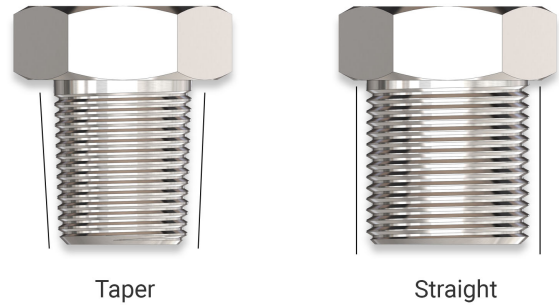


SL. NO.	ITEM DETAILS	MODEL NO.	PAGE NO.
1	INSTALLATION PROCEDURE	NA	3 TO 4
2	MAIN PRODUCTS LIST - PIPE FITTINGS	NA	5
3	MALE TEE	HPPMT	6
4	FEMALE TEE - HEX	HPPFTH	
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7	MALE BRANCH TEE	HPPMBT	8
8	FEMALE BRANCH TEE	HPPFBT	
9	90° MALE ELBOW	HPPME	9
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12	45° MALE ELBOW	HPP45ME	
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25	MALE ADAPTOR	HPPMA	16
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28	REDUCER SWAGE NIPPLE - TH	HPPRSNT	
29	BREATHER	HPPBR	18
30	HEX NIPPLE	HPPHN	
31	PIPE NIPPLE - PL x TH	HPPNPNT	19
32	PIPE NIPPLE - PL x PL	HPPPNP	
33	PIPE NIPPLE - TH x TH	HPPNT	20
34	NUT & TAIL ADAPTOR - MALE	HPPMNTA	
35	NUT & TAIL ADAPTOR - FEMALE	HPPFNNTA	
36	WELDABLE MALE CONNECTOR	HPPWMC	
37	MAIN PRODUCTS LIST - FLANGES	NA	21
38	BLIND FLANGE	HPFLB	22 TO 24
39	THREADED FLANGE	HPFLT	25 TO 27
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43	PART NO. ORDERING SYSTEM	NA	36
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PIPE FITTINGS INSTALLATION PROCEDURE

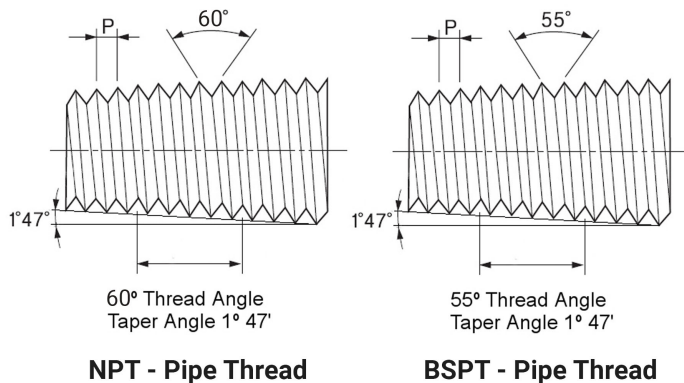
PIPE

Pipe, is a hollow elongated metallic structure used to carry fluids. Wall thickness of pipe is designated by a Schedule Number. The greater the wall thickness, the higher the schedule number and the higher the pressure rating of the pipe. The most common method of joining pipe with threads. There are in general only two primary types of thread, Straight Thread and Taper Thread



IDENTIFYING THREAD

ISO 7-1 Tapered Pipe Thread



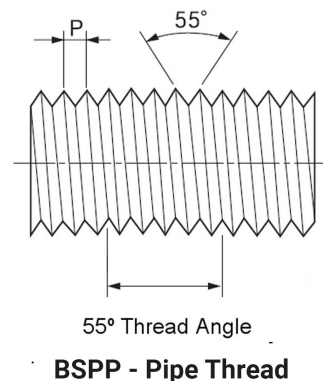
TAPERED THREAD

Tapered threads are the most common type of thread used in Pipe Fittings and Tube Fittings. As the name implies, they have a slight taper. When mated together and tightened, the threads compress and may form a seal with the application of thread sealant. The most widely used pipe taper threads are NPT and BSPT.

STRAIGHT THREAD

Straight Threads are used for joining purpose only. Sealing is accomplished by means of a gasket or O-Ring. As the name implies, they are Straight or parallel. The most widely used pipe parallel threads are BSPP, Metric and UNF.

ISO 228-1 Parallel Pipe Thread



PROCEDURE OF THREAD IDENTIFICATION

- Determine if the thread is tapered or straight (parallel).
- Measure the thread diameter and thread pitch
- Determine the thread standard
- Identify the end connection

Threads can be inspected by using thread gauges (GO & NOGO), Thread Profile Gauges and Profile Projector. Inspection by using thread gauges (GO & NOGO) is the most simple and effective method of inspection.



THREAD INSPECTION

Types of Thread Gauges,

- Plug Gauge - For Female Threads
- Ring Gauge - For Male Threads

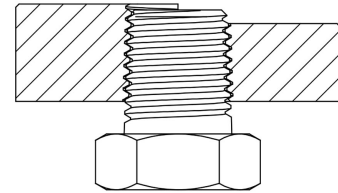
INSPECTION OF TAPER THREAD

FOR 2 STEP GAUGE

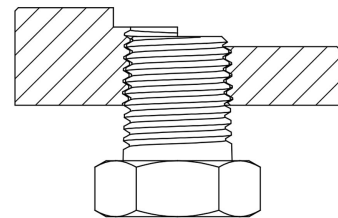
The Taper Thread can be inspected using 2 step & 3 step gauges. The initial thread level should be between the first and last step of the gauge.

FOR 3 STEP GAUGE

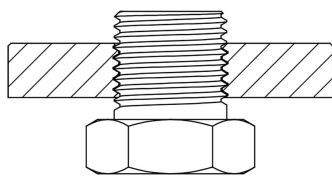
The initial thread level should be in line with the middle step of the gauge which is the nominal position.



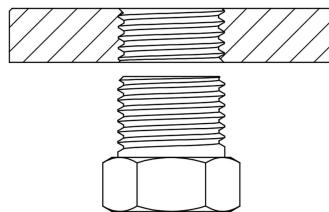
2 Step Ring Gauge



3 Step Ring Gauge



Ring Gauge - GO



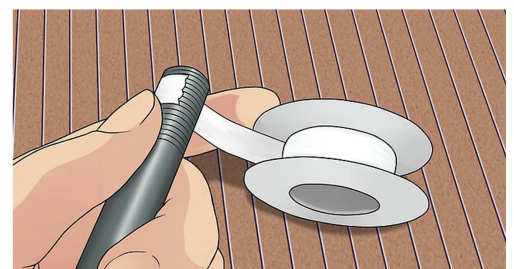
Ring Gauge - NOGO

INSPECTION OF STRAIGHT THREAD

There are separate GO and NO-GO Gauges. To inspect straight thread check using both GO and NO-GO Gauges. GO Gauge should mate fully and the NO-GO Gauge should not answer beyond one turn.

SEALING FOR TAPER THREAD

A sealant/lubricant is highly recommended. First, it enhances sealing by filling any gaps in the threads. Second, it reduces the potential for galling or seizing if the threads are forced together by over-tightening. If galling occurs, the threads are damaged and may not seal. This damage also prevents disassembly and reassembly. Recommended sealant/lubricants are graphite impregnated Teflon tape.



If using tape, wrap the tape in the thread direction so it does not come unwrapped during installation. Ensure, at a minimum, one complete wrap of the tape around the thread. Be sure the tapes does not overhang the first thread otherwise the tape could deteriorate and contaminate the fluid system.

PIPE FITTINGS

Technical Information



M.O.C : CS / AS / SS / DSS / SDSS / SASS / MONEL / HASTELLOY / INCONEL / TITANIUM / TANTALUM / BRASS / PTFE

End Connections : NPT / BSP / BSPT / METRIC / SW / BW

Size : 1/8" to 2"

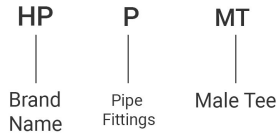
Pressure Rating : Upto 9000 psi

NOTE : All Fittings are available in both Round and Hex as per standard ASME B16.11

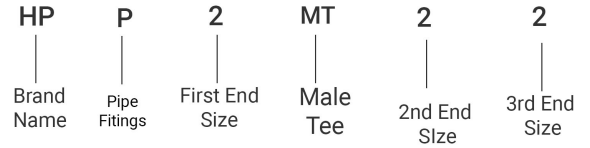
<p>MALE TEE</p> <p>HPPMT</p>	<p>MALE RUN TEE</p> <p>HPPMRT</p>	<p>FEMALE RUN TEE</p> <p>HPPFRT</p>	<p>MALE BRANCH TEE</p> <p>HPPMBT</p>	<p>FEMALE BRANCH TEE</p> <p>HPPFBT</p>
<p>HEX-TH</p> <p>HPPFTH</p>	<p>FEMALE TEE</p> <p>ROUND-TH</p> <p>HPPFTR</p>	<p>ROUND-SW</p> <p>HPPFTR</p>	<p>MALE ELBOW</p> <p>HPPME</p>	<p>45° MALE ELBOW</p> <p>HPP45ME</p>
<p>90° FEMALE ELBOW</p> <p>HPPFEH</p>	<p>90° FEMALE ELBOW</p> <p>HPPFER</p>	<p>45° FEMALE ELBOW</p> <p>HPP45FE</p>	<p>90° STREET ELBOW</p> <p>HPPSE</p>	<p>45° STREET ELBOW</p> <p>HPP45SE</p>
<p>FEMALE CROSS</p> <p>HEX-TH</p> <p>HPPCRFH</p>	<p>FEMALE CROSS</p> <p>ROUND-TH</p> <p>HPPCRFR</p>	<p>PIPE PLUG</p> <p>HPPPL</p>	<p>PIPE CAP</p> <p>HPPCA</p>	<p>BREATHER</p> <p>HPPBR</p>
<p>FULL COUPLING</p> <p>HEX-TH</p> <p>HPPFCOH</p>	<p>FULL COUPLING</p> <p>ROUND-TH</p> <p>HPPFCOR</p>	<p>FULL COUPLING</p> <p>ROUND-SW</p> <p>HPPFCOR</p>	<p>HALF COUPLING</p> <p>ROUND-TH</p> <p>HPPHCOR</p>	<p>HALF COUPLING</p> <p>ROUND-SW</p> <p>HPPHCOR</p>
<p>REDUCING COUPLING</p> <p>HPPFRC</p>	<p>REDUCING BUSHING</p> <p>HPPRB</p>	<p>PIPE UNION 3PC</p> <p>HEX-TH</p> <p>HPP3PU</p>	<p>PIPE UNION 3PC</p> <p>ROUND-SW</p> <p>HPP3PU</p>	<p>BULKHEAD UNION</p> <p>HEX-SW</p> <p>HPPBHU</p>
<p>BULKHEAD UNION</p> <p>ROUND-TH</p> <p>HPPBHU</p>	<p>HEX NIPPLE</p> <p>HPPHN</p>	<p>PIPE NIPPLE PL X TH</p> <p>HPPNPT</p>	<p>PIPE NIPPLE PL X PL</p> <p>HPPNP</p>	<p>PIPE NIPPLE TH X TH</p> <p>HPPNT</p>
<p>REDUCER SWAGE NIPPLE</p> <p>ROUND-BW</p> <p>HPPRSN</p>	<p>REDUCER SWAGE NIPPLE</p> <p>ROUND-TH</p> <p>HPPRSN</p>	<p>MALE ADAPTOR (REDUCER)</p> <p>HPPMA</p>	<p>FEMALE ADAPTOR (REDUCER)</p> <p>HPPFA</p>	<p>WELDABLE MALE CONNECTOR</p> <p>HPPWMC</p>
<p>NUT & TAIL ADAPTOR(MALE)</p> <p>HPPMNTA</p>	<p>NUT & TAIL ADAPTOR(FEMALE)</p> <p>HPPFNTA</p>			

MOC	CS / AS / SS / DSS / SDSS / SASS / MONEL / HASTELLOY / INCONEL / TITANIUM / TANTALUM / BRASS / PTFE	End Connection Type	THREADED / WELDED
Pressure	Upto 6000 psi. If Above 6000 psi Contact Factory	End Connection Size	NPT / BSPP / BSPT / METRIC / UNF / SW / BW

MODEL NO ORDERING SYSTEM



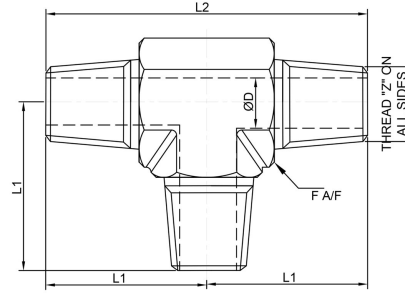
PART NO ORDERING SYSTEM



MALE TEE



MODEL NO
HPPMT



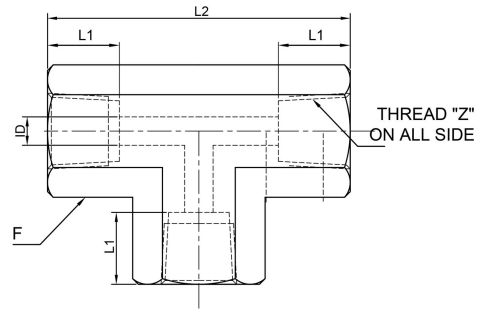
IMPERIAL RANGE

Part No.	Z* Size	Width across flat (mm)	D (mm)	L1 (mm)	L2 (mm)
		F			
HPP2MT2-2	1/8" NPT (M)	12	4.8	22.4	44.7
HPP4MT4-4	1/4" NPT (M)	14	7.1	26.7	53.3
HPP6MT6-6	3/8" NPT (M)	19	9.6	29.7	59.4
HPP16MT16-16	1/2" NPT (M)	22	11.9	36.8	73.7

FEMALE TEE



MODEL NO
HPPFT



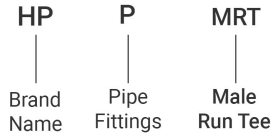
IMPERIAL RANGE

Part No.	Z* Size	Width across flat (mm)	ID (mm)	L1 (mm)	L2 (mm)
		F			
HPP2FT2-2	1/8" NPT (F)	14	6	10	45
HPP4FT4-4	1/4" NPT (F)	19	10	14	50
HPP6FT6-6	3/8" NPT (F)	22	14	14	55
HPP8FT8-8	1/2" NPT (F)	27	15	19	60
HPP12FT12-12	3/4" NPT (F)	32	21	19	70
HPP16FT16-16	1" NPT (F)	46	25	22	95

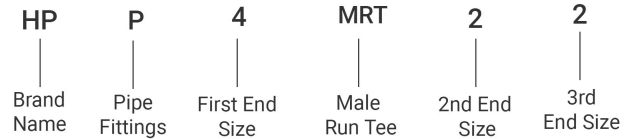
NOTE : 1. * Threads are available upon request. 2. Above dimensions are for reference and are subject to change. 3. Material standards are as per ASTM. 4. Dimension standards are as per ASME B16.11.

MOC	CS / AS / SS / DSS / SDSS / SASS / MONEL / HASTELLOY / INCONEL / TITANIUM / TANTALUM / BRASS / PTFE	End Connection Type	THREADED / WELDED
Pressure	Upto 6000 psi. If Above 6000 psi Contact Factory	End Connection Size	NPT / BSPP / BSPT / METRIC / UNF / SW / BW

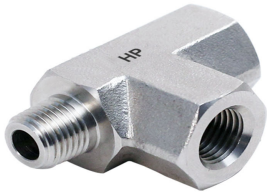
MODEL NO ORDERING SYSTEM



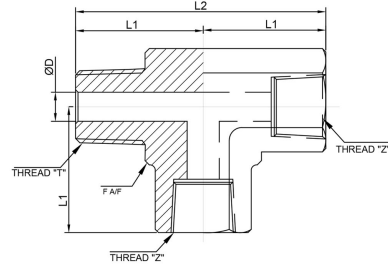
PART NO ORDERING SYSTEM



MALE RUN TEE



MODEL NO HPPMRT



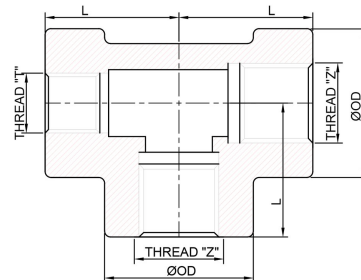
IMPERIAL RANGE

Part No.	Z* Size	T* (Run Side)	Width across flat (mm)	D (mm)	L1 (mm)	L2 (mm)
			F			
HPP2MRT2-2	1/8" NPT (F)	1/8" NPT (M)	14	4.8	24	48
HPP4MRT4-4	1/4" NPT (F)	1/4" NPT (M)	16	7.1	29	58
HPP6MRT6-6	3/8" NPT (F)	3/8" NPT (M)	22	9.6	34.5	69
HPP8MRT8-8	1/2" NPT (F)	1/2" NPT (M)	27	11.9	37	74
HPP12MRT12-12	3/4" NPT (F)	3/4" NPT (M)	36	15	46.5	93
HPP16MRT16-16	1" NPT (F)	1" NPT (M)	46	20	48.8	97.6

FEMALE RUN TEE



MODEL NO HPPFRT



IMPERIAL RANGE

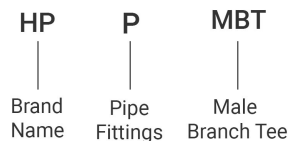
Part No.	Z* Size	T* (Run Side)	OD (mm)	L (mm)
HPP2FRT4-4	1/4" NPT (F)	1/8" NPT (F)	33.2	28.4
HPP4FRT6-6	3/8" NPT (F)	1/4" NPT (F)	38.1	33.2
HPP6FRT8-8	1/2" NPT (F)	3/8" NPT (F)	45.9	38.1
HPP8FRT12-12	3/4" NPT (F)	1/2" NPT (F)	55.6	44.45
HPP12FRT16-16	1" NPT (F)	3/4" NPT (F)	61.9	50.8

NOTE: 1. * Threads are available upon request. 2. Above dimensions are only for reference and are subject to change. 3. Material standards are as per ASTM. 4. Dimension standards are as per ASME B16.11.

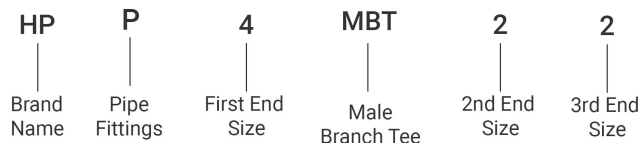


MOC	CS / AS / SS / DSS / SDSS / SASS / MONEL / HASTELLOY / INCONEL / TITANIUM / TANTALUM / BRASS / PTFE	End Connection Type	THREADED / WELDED
Pressure	Upto 6000 psi. If Above 6000 psi Contact Factory	End Connection Size	NPT / BSPP / BSPT / METRIC / UNF / SW / BW

MODEL NO ORDERING SYSTEM



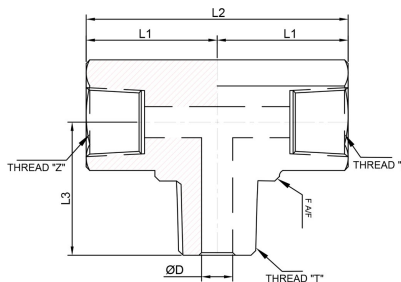
PART NO ORDERING SYSTEM



MALE BRANCH TEE



MODEL NO HPPMBT



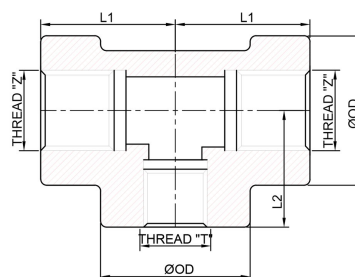
IMPERIAL RANGE

Part No.	Z* Size	T* (Branch Side)	Width across flat (mm)	D (mm)	L1 (mm)	L2 (mm)	L3 (mm)
			F				
HPP2MBT2-2	1/8" NPT (F)	1/8" NPT (M)	14	4.8	26.4	52.8	22.1
HPP4MBT4-4	1/4" NPT (F)	1/4" NPT (M)	16	7.1	29.7	59.4	29.7
HPP6MBT6-6	3/8" NPT (F)	3/8" NPT (M)	22	9.6	36.1	72.1	32
HPP8MBT8-8	1/2" NPT (F)	1/2" NPT (M)	27	11.9	37	79.2	35.5
HPP12MBT12-12	3/4" NPT (F)	3/4" NPT (M)	36	15	46.5	93	39.6
HPP16MBT16-16	1" NPT (F)	1" NPT (M)	46	20	48.8	97.6	48.8

FEMALE BRANCH TEE



MODEL NO HPPFBT



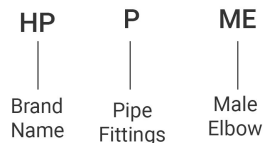
IMPERIAL RANGE

Part No.	Z* Size	T* (Branch Side)	OD (mm)	L1 (mm)	L2 (mm)
HPP4FBT4-2	1/4" BSP (F)	1/8" BSP (F)	33.3	28.4	24.6
HPP6FBT6-4	3/8" BSP (F)	1/4" BSP (F)	38.1	33.2	28.4
HPP8FBT8-6	1/2" BSP (F)	3/8" BSP (F)	45.9	38.1	33.2
HPP12FBT12-8	3/4" BSP (F)	1/2" BSP (F)	55.6	44.5	38.1
HPP16FBT16-12	1" BSP (F)	3/4" BSP (F)	61.9	50.8	44.45

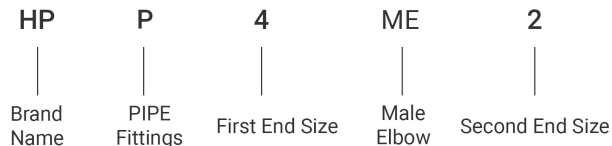
NOTE : 1. * Threads are available upon request. 2. Above dimensions are only for reference and are subject to change. 3. Material standards are as per ASTM. 4. Dimension standards are as per ASME B16.11.

MOC	CS / AS / SS / DSS / SDSS / SASS / MONEL / HASTELLOY / INCONEL / TITANIUM / TANTALUM / BRASS / PTFE	End Connection Type	THREADED / WELDED
Pressure	Upto 6000 psi. If Above 6000 psi Contact Factory	End Connection Size	NPT / BSPP / BSPT / METRIC / UNF / SW / BW

MODEL NO ORDERING SYSTEM



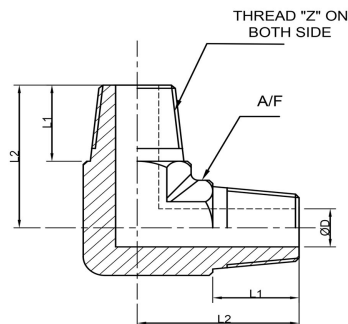
PART NO ORDERING SYSTEM



90° MALE ELBOW



**MODEL NO
HPPME**



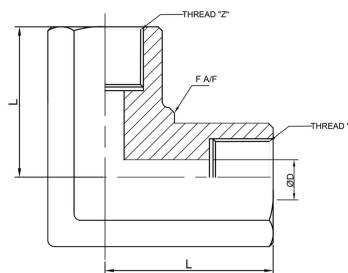
IMPERIAL RANGE

Part No.	T* Size	Z* Size	Width across flat (mm)	D (mm)	L1 (mm)	L2 (mm)
			F			
HPP2ME2	1/8" THREAD	1/8" THREAD	15	4	10	22.4
HPP4ME4	1/4" THREAD	1/4" THREAD	15	7	14	26.7
HPP6ME6	3/8" THREAD	3/8" THREAD	19	8	14	29.7
HPP8ME8	1/2" THREAD	1/2" THREAD	22	10	19	36.8
HPP12ME12	3/4" THREAD	3/4" THREAD	27	15	19	38.8
HPP16ME16	1" THREAD	1" THREAD	35	20	22	45.2

90° FEMALE ELBOW



**MODEL NO
HPPFEH**



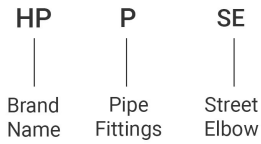
IMPERIAL RANGE

Part No.	Z* Size	Width across flat (mm)	L (mm)	D (mm)
		F		
HPP2FE2	1/8" THREAD	14	26.4	4.8
HPP4FE4	1/4" THREAD	19	29.7	7.1
HPP6FE6	3/8" THREAD	22	36.1	9
HPP8FE8	1/2" THREAD	27	39.6	11.9
HPP12FE12	3/4" THREAD	33	48.8	15.7
HPP16FE16	1" THREAD	45	48.5	22.4

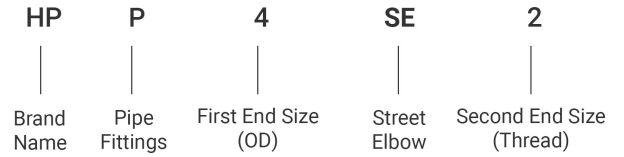
NOTE : 1. * Threads are available upon request. 3. Material standards are as per ASTM.
2. Above dimensions are only for reference and are subject to change. 4. Dimension standards are as per ASME B16.11.

MOC	CS / AS / SS / DSS / SDSS / SASS / MONEL / HASTELLOY / INCONEL / TITANIUM / TANTALUM / BRASS / PTFE	End Connection Type	THREADED / WELDED
Pressure	Upto 6000 psi. If Above 6000 psi Contact Factory	End Connection Size	NPT / BSPP / BSPT / METRIC / UNF / SW / BW

MODEL NO ORDERING SYSTEM



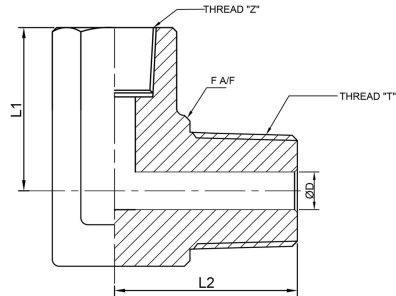
PART NO ORDERING SYSTEM



90* STREET ELBOW



**MODEL NO
HPPSE**



IMPERIAL RANGE

Part No.	Z* Size	Width across flat (mm)	T	D (mm)	L1 (mm)	L2 (mm)
		F				
HPP2SE2	1/8" THREAD	14	1/8" THREAD	4.8	26.4	22.1
HPP4SE4	1/4" THREAD	19	1/4" THREAD	7.1	29.7	29.7
HPP6SE6	3/8" THREAD	22	3/8" THREAD	9	36.1	32
HPP8SE8	1/2" THREAD	27	1/2" THREAD	11.9	39.6	39.6
HPP12SE12	3/4" THREAD	33	3/4" THREAD	15.7	48.8	42.4
HPP16SE16	1" THREAD	45	1" THREAD	22.4	48.5	49.3

45* MALE ELBOW



**MODEL NO
HPP45ME**

45* FEAMLE ELBOW



**MODEL NO
HPP45FE**

45* STREET ELBOW



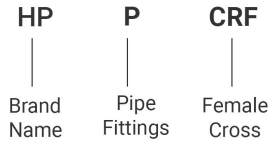
**MODEL NO
HPP45SE**

NOTE : 1. * Threads are available upon request. 2. Above dimensions are only for reference and are subject to change. 3. Material standards are as per ASTM. 4. Dimension standards are as per ASME B16.11.

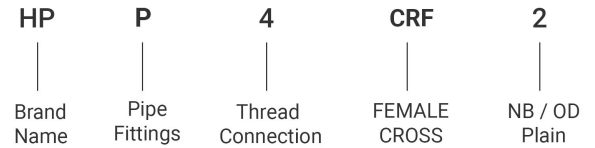


MOC	CS / AS / SS / DSS / SDSS / SASS / MONEL / HASTELLOY / INCONEL / TITANIUM / TANTALUM / BRASS / PTFE	End Connection Type	THREADED / WELDED
Pressure	Upto 6000 psi. If Above 6000 psi Contact Factory	End Connection Size	NPT / BSPP / BSPT / METRIC / UNF / SW / BW

MODEL NO ORDERING SYSTEM



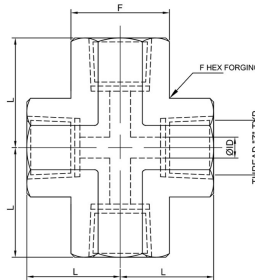
PART NO ORDERING SYSTEM



**FEMALE CROSS
HEX.TH**



**MODEL NO
HPPCRFH**



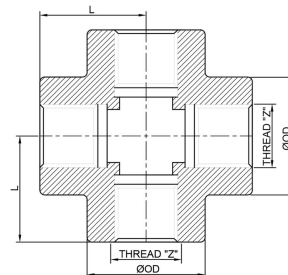
IMPERIAL RANGE

Part No.	Z* Size (TH)	Width across flat (mm)	ID (mm)	L (mm)
		F		
HPP2CRFH2	1/8" NPT (F)	14	8.6	26.4
HPP4CRFH4	1/4" NPT (F)	20	11.4	29.7
HPP6CRFH6	3/8" NPT (F)	23	15	36.1
HPP8CRFH8	1/2" NPT (F)	27	18.5	39.6
HPP12CRFH12	3/4" NPT (F)	32	23.9	48.8
HPP16CRFH16	1" NPT (F)	45	29.7	48.5

**FEMALE CROSS
ROUND TH**



**MODEL NO
HPPCRFR**



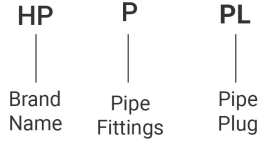
IMPERIAL RANGE

Part No.	Z* Size (TH)	P* Size	OD (mm)	L (mm)
HPP2CRFR2	1/8" NPT (F)	1/8" NPT (F)	25.4	24.6
HPP4CRFR2	1/4" NPT (F)	1/8" NPT (F)	33.2	28.4
HPP6CRFR4	3/8" NPT (F)	1/4" NPT (F)	38.1	33.2
HPP8CRFR6	1/2" NPT (F)	3/8" NPT (F)	45.9	38.1
HPP12CRFR8	3/4" NPT (F)	1/2" NPT (F)	55.6	44.45
HPP16CRFR12	1" NPT (F)	3/4" NPT (F)	61.9	50.8

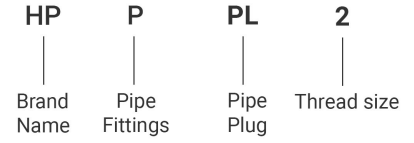
1. * Threads are available upon request. 2. Above dimensions are only for reference and are subject to change. 3. Material standards are as per ASTM. 4. Dimension standards are as per ASME B16.11.

MOC	CS / AS / SS / DSS / SDSS / SASS / MONEL / HASTELLOY / INCONEL / TITANIUM / TANTALUM / BRASS / PTFE	End Connection Type	THREADED / WELDED
Pressure	Upto 6000 psi. If Above 6000 psi Contact Factory	End Connection Size	NPT / BSPP / BSPT / METRIC / UNF / SW / BW

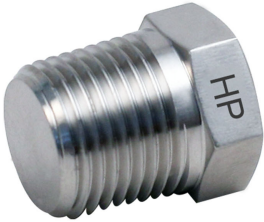
MODEL NO ORDERING SYSTEM



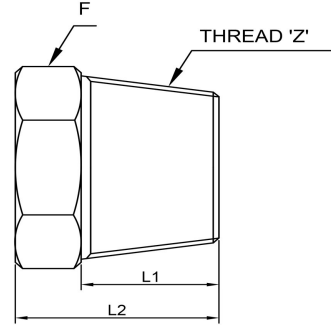
PART NO ORDERING SYSTEM



PIPE PLUG



**MODEL NO
HPPPL**



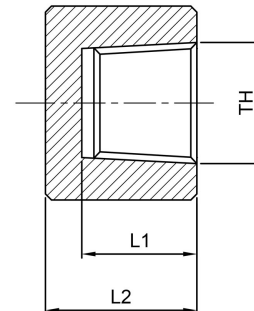
IMPERIAL RANGE

Part No.	Z* Size	Width across flat (mm)	L1 (mm)	L2 (mm)
		F		
HP2PPL	1/8" NPT (M)	12.7	10	16
HP4PPL	1/4" NPT (M)	19	14	21
HP6PPL	3/8" NPT (M)	19	14	21
HP8PPL	1/2" NPT (M)	22	19	27
HP12PPL	3/4" NPT (M)	27	19	28
HP16PPL	1" NPT (M)	36	22	34
HP20PPL	1-1/4" NPT (M)	46	22	37
HP24PPL	1-1/2" NPT (M)	50	22	41
HP32PPL	2" NPT (M)	65	25	45

PIPE CAP



**MODEL NO
HPPCA**



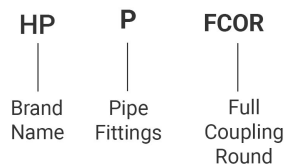
IMPERIAL RANGE

Part No.	Z* Size (TH)	Width across flat (mm)	L1 (mm)	L2 (mm)
		F		
HP2PCA	1/8" NPT (M)	22	10	17
HP4PCA	1/4" NPT (M)	25	14	27
HP6PCA	3/8" NPT (M)	32	14	27
HP8PCA	1/2" NPT (M)	38	16	33
HP12PCA	3/4" NPT (M)	44	19	38
HP16PCA	1" NPT (M)	57	22	43

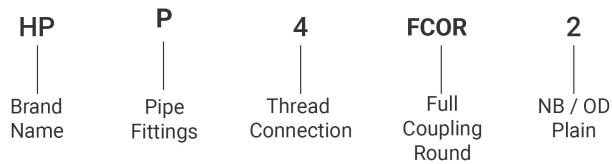
NOTE : 1. * Threads are available upon request. 2. Above dimensions are only for reference and are subject to change. 3. Material standards are as per ASTM. 4. Dimension standards are as per ASME B16.11.

MOC	CS / AS / SS / DSS / SDSS / SASS / MONEL / HASTELLOY / INCONEL / TITANIUM / TANTALUM / BRASS / PTFE	End Connection Type	THREADED / WELDED
Pressure	Upto 6000 psi. If Above 6000 psi Contact Factory	End Connection Size	NPT / BSPP / BSPT / METRIC / UNF / SW / BW

MODEL NO ORDERING SYSTEM



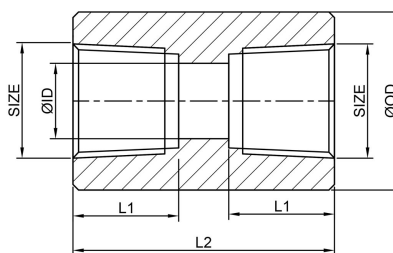
PART NO ORDERING SYSTEM



FULL COUPLING



MODEL NO
HPPFCOR



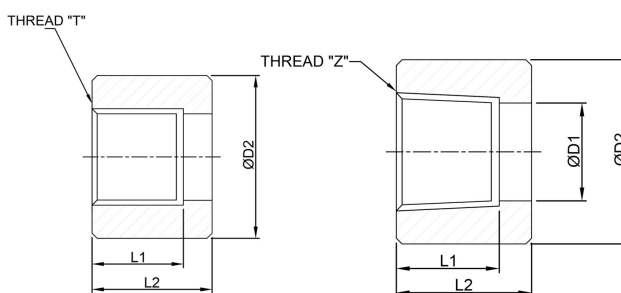
IMPERIAL RANGE

Part No.	Z* Size (TH)	OD (mm)	ID (mm)	L1 (mm)	L2 (mm)
HPP4FC4	1/4" NPT (F) X 1/4" NPT (F)	19	10	14	35
HPP6FC6	3/8" NPT (F) X 3/8" NPT (F)	22	12	14	38
HPP8FC8	1/2" NPT (F) X 1/2" NPT (F)	28	15.5	19	48
HPP12FC12	3/4" NPT (F) X 3/4" NPT (F)	35	20	19	51
HPP16FC16	1" NPT (F) X 1" NPT (F)	44	25	22	60

HALF COUPLING



MODEL NO
HPPHCOR



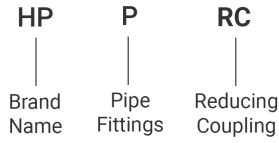
IMPERIAL RANGE

Part No.	Z* Size	T* Size	D2 (mm)	L1 (mm)	L2 (mm)
HPP4HC	1/4" NPT/BSPT (F)	1/4" BSP (F)	25	14	17.5
HPP6HC	3/8" NPT/BSPT (F)	3/8" BSP (F)	32	14	19
HPP8HC	1/2" NPT/BSPT (F)	1/2" BSP (F)	38	19	24
HPP12HC	3/4" NPT/BSPT (F)	3/4" BSP (F)	44	19	25.5
HPP16HC	1" NPT/BSPT (F)	1" BSP (F)	57	22	30

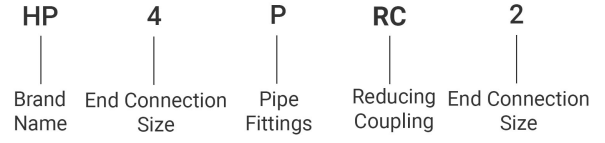
NOTE: 1. * Threads are available upon request. 2. Above dimensions are only for reference and are subject to change. 3. Material standards are as per ASTM. 4. Dimension standards are as per ASME B16.11.

MOC	CS / AS / SS / DSS / SDSS / SASS / MONEL / HASTELLOY / INCONEL / TITANIUM / TANTALUM / BRASS / PTFE	End Connection Type	THREADED / WELDED
Pressure	Upto 6000 psi. If Above 6000 psi Contact Factory	End Connection Size	NPT / BSPP / BSPT / METRIC / UNF / SW / BW

MODEL NO ORDERING SYSTEM



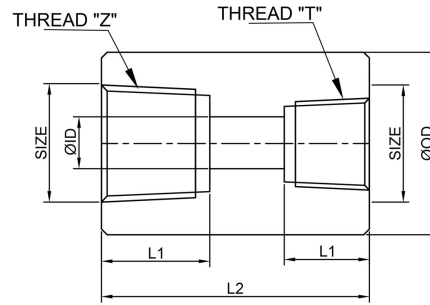
PART NO ORDERING SYSTEM



REDUCING COUPLING



MODEL NO HPPFC



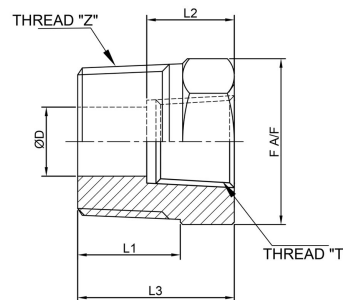
IMPERIAL RANGE

Part No.	Z* Size	T* Size	OD (mm)	ID (mm)	L1 (mm)	L2 (mm)
HPP4FRC2	1/4" NPT (F)	1/8" NPT (F)	19	4.7	14	35
HPP6FRC2	3/8" NPT (F)	1/8" NPT (F)	22	12	14	38
HPP6FRC4	3/8" NPT (F)	1/4" NPT (F)	22	12	14	38
HPP8FRC4	1/2" NPT (F)	1/4" NPT (F)	28	15.5	19	48
HPP8FRC6	1/2" NPT (F)	3/8" NPT (F)	28	15.5	19	48
HPP12FRC6	3/4" NPT (F)	3/8" NPT (F)	35	20	19	51
HPP12FRC8	3/4" NPT (F)	1/2" NPT (F)	35	20	19	51
HPP16FRC8	1" NPT (F)	1/2" NPT (F)	44	25	22	60
HPP16FRC12	1" NPT (F)	3/4" NPT (F)	44	25	22	60

REDUCING BUSHING



MODEL NO HPPRB



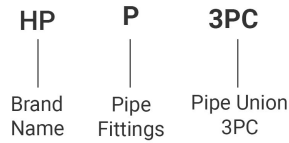
IMPERIAL RANGE

Part No.	Z* Size	T* Size	Width across flat (mm)	L1 (mm)	L2 (mm)	L3 (mm)	D (mm)
			F				
HPP8RB2	1/2" NPT (M)	1/8" NPT (F)	22	19	10	27	5
HPP8RB4	1/2" NPT (M)	1/4" NPT (F)	22	19	14	27	10
HPP8RB6	1/2" NPT (M)	3/8" NPT (F)	22	19	14	27	10
HPP8RB8	1/2" NPT (M)	1/2" NPT (F)	22	19	19	27	10
HPP12RB4	3/4" NPT (M)	1/4" NPT (F)	27	19	14	28	10
HPP8RB7	3/4" NPT (M)	3/8" NPT (F)	27	19	14	28	12
HPP12RB8	3/4" NPT (M)	1/2" NPT (F)	27	19	19	28	15
HPP16RB4	1" NPT (M)	1/4" NPT (F)	36	22	14	34	10
HPP16RB8	1" NPT (M)	1/2" NPT (F)	36	22	19	34	15
HPP16RB12	1" NPT (M)	3/4" NPT (F)	36	22	19	34	20
HPP20RB12	1-1/4" NPT (M)	3/4" NPT (F)	46	22	19	37	20
HPP20RB16	1-1/4" NPT (M)	1" NPT (F)	46	22	22	37	25
HPP24RB12	1-1/2" NPT (M)	3/4" NPT (F)	50	22	19	41	20
HPP24RB16	1-1/2" NPT (M)	1" NPT (F)	50	22	22	41	25

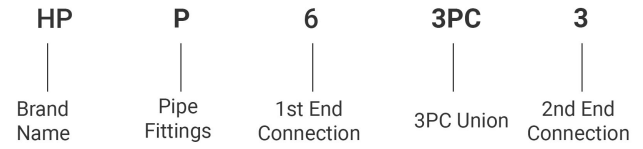
NOTE: 1. * Threads are available upon request. 2. Above dimensions are only for reference and are subject to change. 3. Material standards are as per ASTM. 4. Dimension standards are as per ASME B16.11.

MOC	CS / AS / SS / DSS / SDSS / SASS / MONEL / HASTELLOY / INCONEL / TITANIUM / TANTALUM / BRASS / PTFE	End Connection Type	THREADED / WELDED
Pressure	Upto 6000 psi. If Above 6000 psi Contact Factory	End Connection Size	NPT / BSPP / BSPT / METRIC / UNF / SW / BW

MODEL NO ORDERING SYSTEM



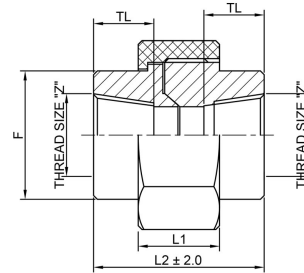
PART NO ORDERING SYSTEM



PIPE UNION 3PC (HEX.TH)



MODEL NO HPP3PUH



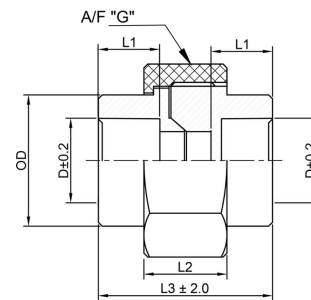
IMPERIAL RANGE

Part No.	Z*	Width across flat (mm)		TL (mm)	L1 (mm)	L2 (mm)
		F	G			
HPP6-3PU	3/8" NPT (F)	32	46	14	22	54
HPP8-3PU	1/2" NPT (F)	32	46	19	22	54
HPP12-3PU	3/4" NPT (F)	40	55	19	24	59
HPP16-3PU	1" NPT (F)	46	63.5	22	25	65

PIPE UNION 3PC (ROUND-SW)



MODEL NO HPP3PUR



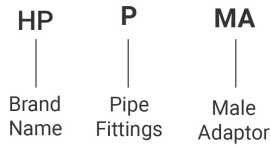
IMPERIAL RANGE

Part No.	Z*	Width across flat (mm)		OD (mm)	D (mm)	L1 (mm)	L2 (mm)	L3 (mm)
		G						
HPP6-3PU	3/8" NPT (F)	46		32	17.8	9.5	22	54
HPP8-3PU	1/2" NPT (F)	46		32	22	9.5	22	54
HPP12-3PU	3/4" NPT (F)	55		38	27	12.5	24	59
HPP16-3PU	1" NPT (F)	63.5		45	34	12.5	25	65

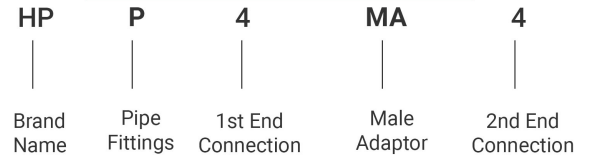
NOTE : 1. * Threads are available upon request. 2. Above dimensions are only for reference and are subject to change. 3. Material standards are as per ASTM. 4. Dimension standards are as per ASME B16.11.

MOC	CS / AS / SS / DSS / SDSS / SASS / MONEL / HASTELLOY / INCONEL / TITANIUM / TANTALUM / BRASS / PTFE	End Connection Type	THREADED / WELDED
Pressure	Upto 6000 psi. If Above 6000 psi Contact Factory	End Connection Size	NPT / BSPP / BSPT / METRIC / UNF / SW / BW

MODEL NO ORDERING SYSTEM



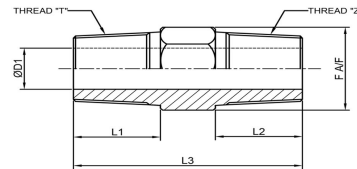
PART NO ORDERING SYSTEM



MALE ADAPTOR



**MODEL NO
HPPMA**



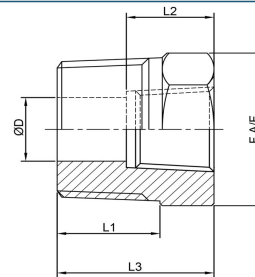
IMPERIAL RANGE

Part No.	Z* Size	Width across flat (mm)	T	D1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)
		F					
HPP4MA4	1/4" NPT/BSPT	19	1/4" NPT/BSPT	7	14	14	35
HPP4MA6	1/4" NPT/BSPT	19	3/8" NPT/BSPT	7	14	14	35
HPP4MA8	1/4" NPT/BSPT	22	1/2" NPT/BSPT	7	14	19	41
HPP4MA12	1/4" NPT/BSPT	27	3/4" NPT/BSPT	7	14	19	42
HPP4MA16	1/4" NPT/BSPT	36	1" NPT/BSPT	7	14	22	48
HPP6MA6	3/8" NPT/BSPT	19	3/8" NPT/BSPT	9	14	14	35
HPP6MA8	3/8" NPT/BSPT	22	1/2" NPT/BSPT	9	14	19	41
HPP6MA12	3/8" NPT/BSPT	37	3/4" NPT/BSPT	9	14	19	42
HPP6MA16	3/8" NPT/BSPT	36	1" NPT/BSPT	9	14	22	48
HPP8MA8	1/2" NPT/BSPT	22	1/2" NPT/BSPT	10	19	19	46
HPP8MA12	1/2" NPT/BSPT	27	3/4" NPT/BSPT	10	19	19	48
HPP8MA16	1/2" NPT/BSPT	36	1" NPT/BSPT	10	19	22	53
HPP12MA12	3/4" NPT/BSPT	27	3/4" NPT/BSPT	15	19	19	47
HPP12MA16	3/4" NPT/BSPT	36	1" NPT/BSPT	15	19	22	53
HPP16MA16	1" NPT/BSPT	36	1" NPT/BSPT	20	22	22	56

FEMALE ADAPTOR



**MODEL NO
HPPFA**



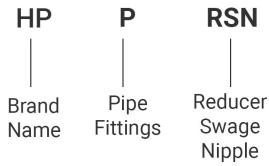
IMPERIAL RANGE

Part No.	Z* Size	T* Size	Width across flat (mm)	D (mm)	L1 (mm)	L2 (mm)	L3 (mm)
			F				
HPP8FA2	1/2" NPT (M)	1/8" NPT (F)	22	5	19	10	27
HPP8FA4	1/2" NPT (M)	1/4" NPT (F)	22	10	19	14	27
HPP8FA6	1/2" NPT (M)	3/8" NPT (F)	22	10	19	14	27
HPP8FA8	1/2" NPT (M)	1/2" NPT (F)	22	10	19	19	27
HPP12FA4	3/4" NPT (M)	1/4" NPT (F)	27	10	19	14	28
HPP12FA6	3/4" NPT (M)	3/8" NPT (F)	27	12	19	14	28
HPP12FA8	3/4" NPT (M)	1/2" NPT (F)	27	15	19	19	28
HPP16FA4	1" NPT (M)	1/4" NPT (F)	36	10	22	14	34
HPP16FA8	1" NPT (M)	1/2" NPT (F)	36	15	22	19	34
HPP16FA12	1" NPT (M)	3/4" NPT (F)	36	20	22	19	34
HPP20FA12	1-1/4" NPT (M)	3/4" NPT (F)	46	20	22	19	37
HPP20FA16	1-1/4" NPT (M)	1" NPT (F)	46	25	22	22	37
HPP24FA12	1-1/2" NPT (M)	3/4" NPT (F)	50	20	22	19	41
HPP24FA16	1-1/2" NPT (M)	1" NPT (F)	50	25	22	22	41

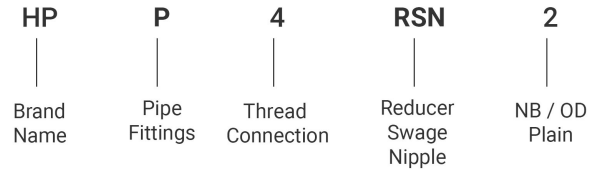
NOTE: 1. * Threads are available upon request. 2. Above dimensions are only for reference and are subject to change. 3. Material standards are as per ASTM. 4. Dimension standards are as per ASME B16.11.

MOC	CS / AS / SS / DSS / SDSS / SASS / MONEL / HASTELLOY / INCONEL / TITANIUM / TANTALUM / BRASS / PTFE	End Connection Type	THREADED / WELDED
Pressure	Upto 6000 psi. If Above 6000 psi Contact Factory	End Connection Size	NPT / BSPP / BSPT / METRIC / UNF / PLAIN OD

MODEL NO ORDERING SYSTEM



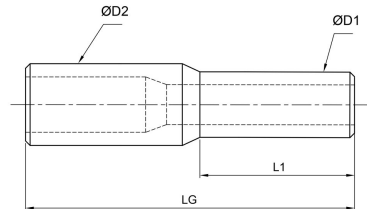
PART NO ORDERING SYSTEM



REDUCER SWAGE NIPPLE (ROUND-BW)



MODEL NO HPPRSNP



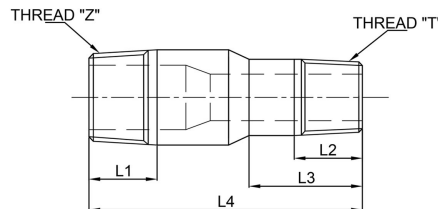
IMPERIAL RANGE

Part No.	Z* Size	D1 (mm)	D2 (mm)
HPP2RSN4	1/8" NB (PL) X 1/4" NB(PL)	10.3	13.7
HPP2RSN8	1/8" NB (PL) X 1/2" NB(PL)	10.3	21.3
HPP2RSN6	1/8" NB (PL) X 3/4" NB(PL)	10.3	26.7
HPP4RSN8	1/4" NB (PL) X 1/2" NB(PL)	13.7	21.3
HPP4RSN12	1/4" NB (PL) X 3/4" NB(PL)	13.7	26.7
HPP8RSN12	1/2" NB (PL) X 3/4" NB(PL)	21.3	26.7
HPP8RSN16	1/2" NB (PL) X 1" NB(PL)	21.3	33.4
HPP12RSN8	3/4" NB (PL) X 1/2" NB(PL)	21.3	26.7
HPP12RSN16	3/4" NB (PL) X 1" NB(PL)	26.7	33.4

REDUCER SWAGE NIPPLE (ROUND-TH)



MODEL NO HPPRSNT



IMPERIAL RANGE

Part No.	Z* Size	T (mm)	L1 (mm)	L2 (mm)
HPP4SRN2	1/4" NPT (M)	1/8" NPT (M)	19	10
HPP6SRN2	3/8" NPT (M)	1/8" NPT (M)	14	10
HPP6SRN4	3/8" NPT (M)	1/4" NPT (M)	14	14
HPP8SRN4	1/2" NPT (M)	1/4" NPT (M)	19	14
HPP8SRN6	1/2" NPT (M)	3/8" NPT (M)	19	14
HPP12SRN6	3/4" NPT (M)	3/8" NPT (M)	19	14
HPP12SRN8	3/4" NPT (M)	1/2" NPT (M)	19	19
HPP16SRN8	1" NPT (M)	1/2" NPT (M)	22	19
HPP16SRN12	1" NPT (M)	3/4" NPT (M)	22	19

NOTE : 1. * Threads are available upon request.

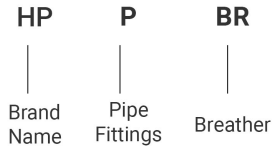
2. Above dimensions are only for reference and are subject to change.

3. Material standards are as per ASTM.

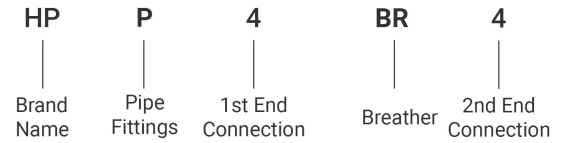
4. Dimension standards are as per ASME B16.11.

MOC	CS / AS / SS / DSS / SDSS / SASS / MONEL / HASTELLOY / INCONEL / TITANIUM / TANTALUM / BRASS / PTFE	End Connection Type	THREADED / WELDED
Pressure	Upto 6000 psi. If Above 6000 psi Contact Factory	End Connection Size	NPT / BSPP / BSPT / METRIC / UNF / SW / BW

MODEL NO ORDERING SYSTEM



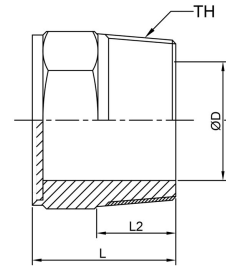
PART NO ORDERING SYSTEM



BREATHER



MODEL NO HPPBR

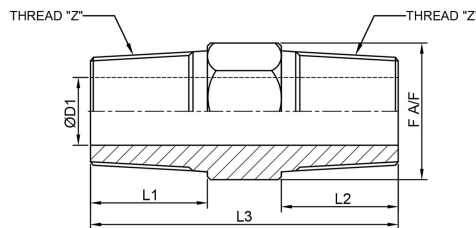


IMPERIAL RANGE

Part No.	Z* Size	Width across flat (mm)	T	D (mm)	L (mm)	L2 (mm)
		F				
HPP2BR2	1/8"	12.7	1/8"NPT(M)	4.7	16	10
HPP4BR4	1/4"	14	1/4"NPT(M)	7	21	14
HPP6BR6	3/8"	17	3/8"NPT(M)	10	22	14
HPP8BR8	1/2"	22	1/2"NPT(M)	12	28	19
HPP16BR16	1"	27	1"NPT(M)	18	31	19

HEX NIPPLE

MODEL NO HPPHN



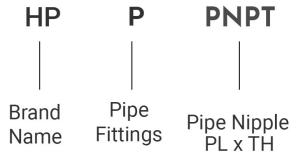
IMPERIAL RANGE

Part No.	Z* Size	Width across flat (mm)	D1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)
		F				
HPP2HN2	1/8" THREAD	14	7	10	14	30
HPP4HN4	1/4" THREAD	19	7	14	14	35
HPP6HN6	3/8" THREAD	19	9	14	14	35
HPP8HN8	1/2" THREAD	22	10	19	19	46
HPP12HN12	3/4" THREAD	27	15	19	19	47
HPP16HN16	1" THREAD	36	20	22	22	56

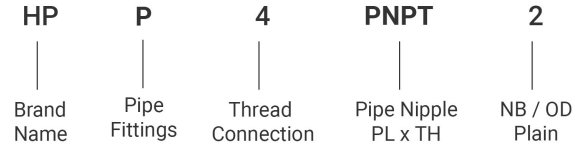
NOTE : 1. * Threads are available upon request. 2. Above dimensions are only for reference and are subject to change. 3. Material standards are as per ASTM. 4. Dimension standards are as per ASME B16.11.

MOC	CS / AS / SS / DSS / SDSS / SASS / MONEL / HASTELLOY / INCONEL / TITANIUM / TANTALUM / BRASS / PTFE	End Connection Type	THREADED / WELDED
Pressure	Upto 6000 psi. If Above 6000 psi Contact Factory	End Connection Size	NPT / BSPP / BSPT / METRIC / UNF / SW / BW

MODEL NO ORDERING SYSTEM



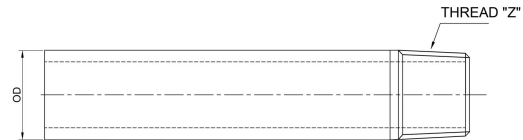
PART NO ORDERING SYSTEM



PIPE NIPPLE (PL x TH)



MODEL NO
HPPPNPT



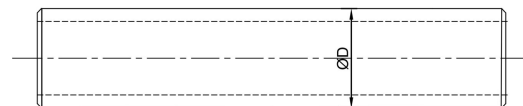
IMPERIAL RANGE

Part No.	Z* Size	OD (mm)
HPP2PNPT	1/8" BSPT (M)	10.3
HPP4PNPT	1/4" BSPT (M)	13.7
HPP6PNPT	3/8" BSPT (M)	17.1
HPP8PNPT	1/2" BSPT (M)	21.3
HPP12PNPT	3/4" BSPT (M)	26.7
HPP16PNPT	1" BSPT (M)	33.4

PIPE NIPPLE (PL x PL)



MODEL NO
HPPPNP



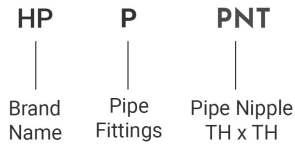
IMPERIAL RANGE

Part No.	Z* Size	OD (mm)
HPP2PNP2	1/8" NB (PL) X 1/8" NB (PL)	10.3
HPP4PNP4	1/4" NB (PL) X 1/4" NB (PL)	13.7
HPP6PNP6	3/8" NB (PL) X 3/8" NB (PL)	17.1
HPP8PNP8	1/2" NB (PL) X 1/2" NB (PL)	21.3
HPP12PNP12	3/4" NB (PL) X 3/4" NB (PL)	26.7
HPP16PNP16	1" NB (PL) X 1" NB (PL)	33.4
HPP32PNP32	2" NB (PL) X 2" NB (PL)	60.3

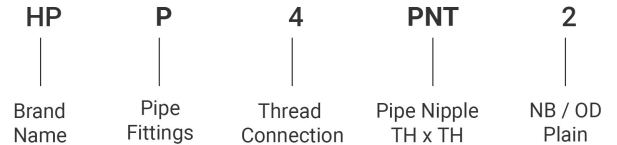
NOTE : 1. * Threads are available upon request. 2. Above dimensions are only for reference and are subject to change. 3. Material standards are as per ASTM. 4. Dimension standards are as per ASME B16.11.

MOC	CS / AS / SS / DSS / SDSS / SASS / MONEL / HASTELLOY / INCONEL / TITANIUM / TANTALUM / BRASS / PTFE	End Connection Type	THREADED / WELDED
Pressure	Upto 6000 psi. If Above 6000 psi Contact Factory	End Connection Size	NPT / BSPP / BSPT / METRIC / UNF / PLAIN OD

MODEL NO ORDERING SYSTEM



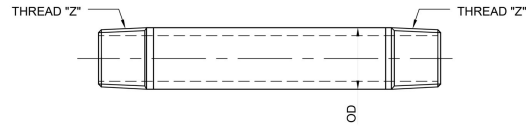
PART NO ORDERING SYSTEM



PIPE NIPPLE (TH xTH)



MODEL NO HPPPNT



IMPERIAL RANGE

Part No.	Z* Size	OD (mm)
HPP2PNT2	1/8" BSPT (M)	10.3
HPP4PNT4	1/4" BSPT (M)	13.7
HPP6PNT6	3/8" BSPT (M)	17.1
HPP8PNT8	1/2" BSPT (M)	21.3
HPP12PNT12	3/4" BSPT (M)	26.7
HPP16PNT16	1" BSPT (M)	33.4

NUT&TAIL ADAPTOR (MALE)



MODEL NO HPPMNTA

NUT&TAIL ADAPTOR (FEMALE)



MODEL NO HPPFNTA

WELDABLE MALE CONNECTOR



MODEL NO HPPWMC

NOTE : 1. * Threads are available upon request. 2. Above dimensions are only for reference and are subject to change. 3. Material standards are as per ASTM. 4. Dimension standards are as per ASME B16.11.

FLANGES

Technical Information

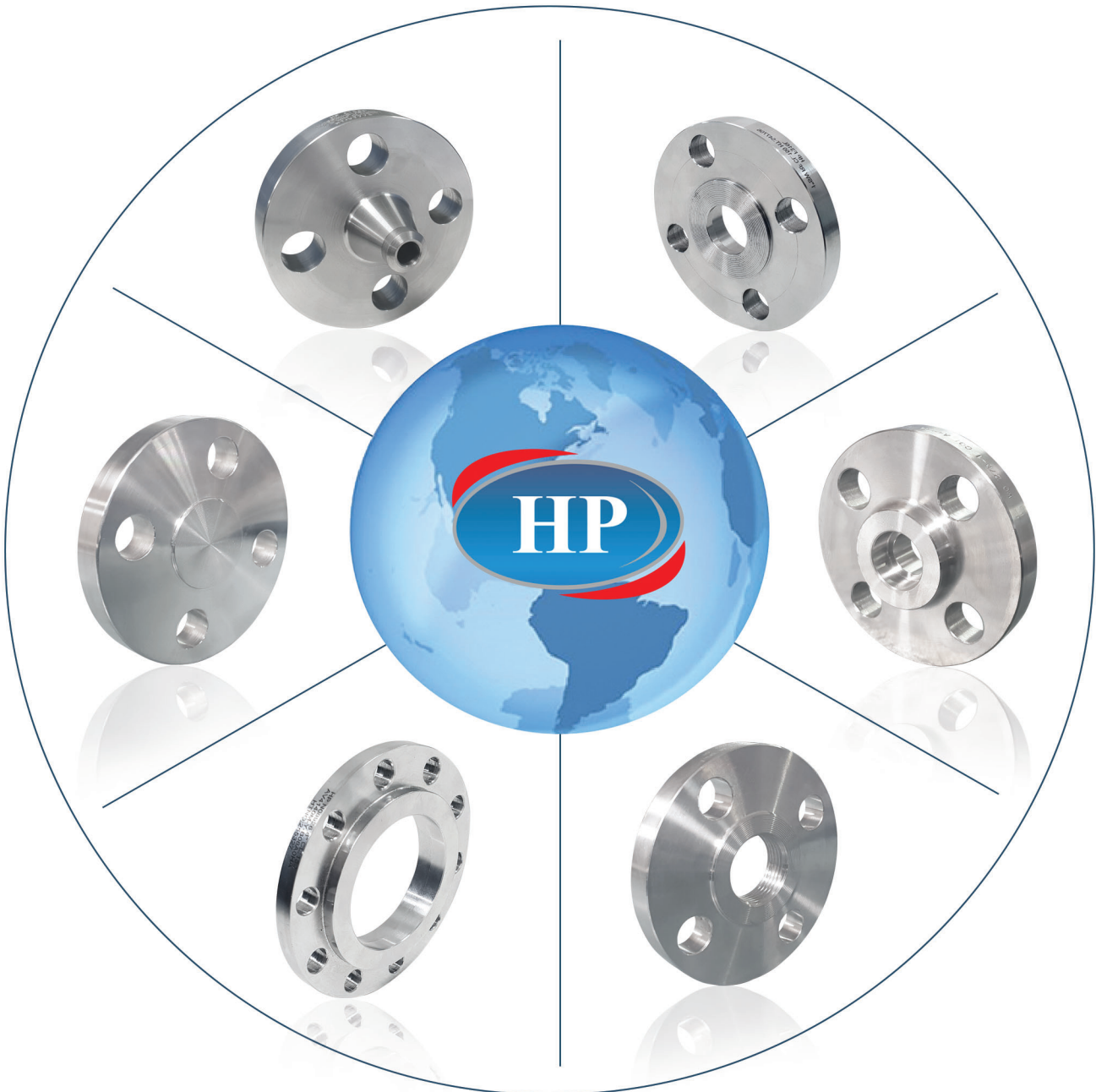


M.O.C : CS / AS / SS / DSS / SDSS / SASS / MONEL / HASTELLOY / INCONEL / TITANIUM / TANTALUM

PR. Rating : Class 150#, 300#, 600#, 900#, 1500# & 2500#

Size : 1/2" NB to 24" NB

End Connection : NPT / BSP / BSPT / UNF / METRIC / SW / BW / TUBE OD.

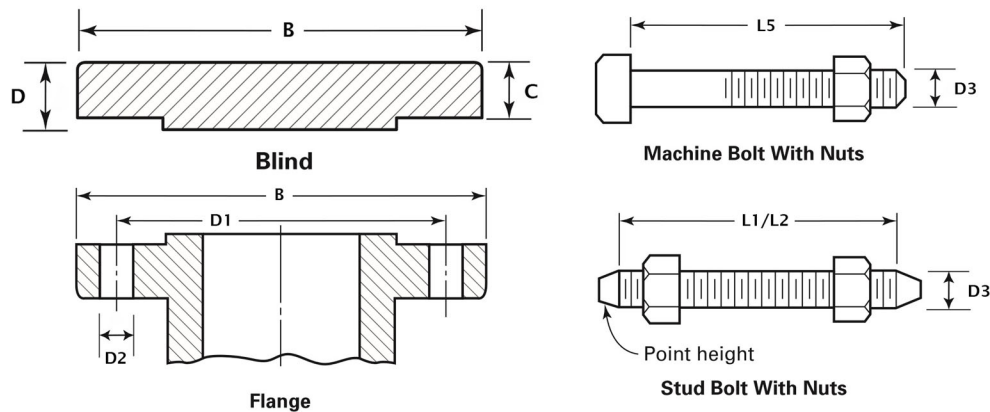


M.O.C : Stainless Steel / Carbon Steel / Alloy Steel / Nickel Alloy

Size : 1/2" NB to 24" NB

MODEL NO.

HPFLB



ACCESSORIES : 1. Washers for Stud & Bolt 2. Gaskets(PTFE, CAF, Spiral wound, Metal graphite, Rubber)

DENOTES	SPECIFICATION
A	Nominal Pipe Size, NPS
B	Outside Diameter of Flange
C	Minimum Thickness of Flange
D	Minimum Thickness Lap Joint
D1	Diameter of Bolt Circle
D2	Diameter of Bolt Holes

DENOTES	SPECIFICATION
D3	Diameter of Bolts
L1	Length of Stud Bolt 2-mm Raised Face
L2	Length of Stud Bolt 7-mm Raised Face
L3	Length of Stud Bolt Male & Female, Tongue & Groove
L4	Length of Stud Bolt Ring Joint
L5	Length of Machine Bolt 2-mm Raised Face

NOTE :

- The Length of the stud bolt does not include the height of the points
- The minimum thickness of these loose flanges, in sizes NPS 3 1/2 and smaller, is slightly greater than the thickness of flanges on fittings.
- The flange dimensions illustrated are for regularly furnished 2-mm raised face (except lapped) ; for requirements of other facings

CLASS	A	B	C	D	Drilling				Length of Bolts				
					D1	D2	D3	No. of Bolts	Stud Bolts				Machine Bolts
									L1	L2	L3	L4	
inches	mm	mm	mm	mm	inches	inches	nos.	mm	mm	mm	mm	mm	
150#	1/2	90	9.6	11.2	60.3	5/8	1/2	4	55	-	-	-	50
	3/4	100	11.2	12.7	69.9	5/8	1/2	4	65	-	-	-	50
	1	110	12.7	14.3	79.4	5/8	1/2	4	65	-	-	75	55
	1 1/4	115	14.3	15.9	88.9	5/8	1/2	4	70	-	-	85	55
	1 1/2	125	15.9	17.5	98.4	5/8	1/2	4	70	-	-	85	65
	2	150	17.5	19.1	120.7	3/4	5/8	4	85	-	-	95	70
	2 1/2	180	20.7	22.3	139.7	3/4	5/8	4	90	-	-	100	75
	3	190	22.3	23.9	152.4	3/4	5/8	4	90	-	-	100	75
	3 1/2	215	22.3	23.9	177.8	3/4	5/8	8	90	-	-	100	75
	4	230	22.3	23.9	190.5	3/4	5/8	8	90	-	-	100	75
	5	255	22.3	23.9	215.9	7/8	3/4	8	95	-	-	110	85
	6	280	23.9	25.4	241.3	7/8	3/4	8	100	-	-	115	85
	8	345	27	28.6	298.5	7/8	3/4	8	110	-	-	120	90
	10	405	28.6	30.2	362	1	7/8	12	115	-	-	125	100
	12	485	30.2	31.8	431.8	1	7/8	12	120	-	-	135	100
	14	535	33.4	35	476.3	1 1/8	1	12	135	-	-	145	115
16	595	35	36.6	539.8	1 1/8	1	16	135	-	-	145	115	
18	635	38.1	39.7	577.9	1 1/4	1 1/8	16	145	-	-	160	125	
20	700	41.3	42.9	635	1 1/4	1 1/8	20	160	-	-	170	140	
24	815	46.1	47.7	749.3	1 3/8	1 1/4	20	170	-	-	185	150	



CLASS	A	B	C	D	Drilling				Length of Bolts				
									Stud Bolts				Machine Bolts
					D1	D2	D3	No. of Bolts	L1	L2	L3	L4	
inches	mm	mm	mm	mm	inches	inches	nos.	mm	mm	mm	mm	mm	
300#	1/2	95	12.7	14.3	66.7	5/8	1/2	4	65	-	-	75	55
	3/4	115	14.3	15.9	82.6	3/4	5/8	4	75	-	-	90	65
	1	125	15.9	17.5	88.9	3/4	5/8	4	75	-	-	90	65
	1 1/4	135	17.5	19.1	98.4	3/4	5/8	4	85	-	-	95	70
	1 1/2	155	19.1	20.7	114.3	7/8	3/4	4	90	-	-	100	75
	2	165	20.7	22.3	127	3/4	5/8	8	90	-	-	100	75
	2 1/2	190	13.9	25.4	149.2	7/8	3/4	8	100	-	-	115	85
	3	210	27	28.6	168.3	7/8	3/4	8	110	-	-	120	90
	3 1/2	230	28.6	30.2	184.2	7/8	3/4	8	110	-	-	125	95
	4	255	30.2	31.8	200	7/8	3/4	8	115	-	-	125	95
	5	280	33.4	35	235	7/8	3/4	8	120	-	-	135	110
	6	320	35	36.6	269.9	7/8	3/4	12	120	-	-	140	110
	8	380	39.7	41.3	330.2	1	7/8	12	140	-	-	150	120
	10	445	46.1	47.7	387.4	1 1/8	1	16	160	-	-	170	140
	12	520	49.3	50.8	450.8	1 1/4	1 1/8	16	170	-	-	185	145
	14	585	52.4	54	514.4	1 1/4	1 1/8	20	180	-	-	190	160
16	650	55.6	57.2	571.5	1 3/8	1 1/4	20	190	-	-	205	165	
18	710	58.8	60.4	628.6	1 3/8	1 1/4	24	195	-	-	210	170	
20	775	62	63.5	685.8	1 3/8	1 1/4	24	205	-	-	220	185	
24	915	68.3	69.9	812.8	1 5/8	1 1/2	24	230	-	-	255	205	

400#	1/2	95	14.3	-	66.7	5/8	1/2	4	-	75	70	75	-
	3/4	115	15.9	-	82.6	3/4	5/8	4	-	90	85	90	-
	1	125	17.5	-	88.9	3/4	5/8	4	-	90	85	90	-
	1 1/4	135	20.7	-	98.4	3/4	5/8	4	-	95	90	95	-
	1 1/2	155	22.3	-	114.3	7/8	3/4	4	-	110	100	110	-
	2	165	25.4	-	127	3/4	5/8	8	-	110	100	110	-
	2 1/2	190	28.6	-	149.2	7/8	3/4	8	-	120	115	120	-
	3	210	31.8	-	168.3	7/8	3/4	8	-	125	120	125	-
	3 1/2	230	35	-	184.2	1	7/8	8	-	140	135	140	-
	4	255	35	-	200	1	7/8	8	-	140	135	140	-
	5	280	38.1	-	235	1	7/8	8	-	145	135	145	-
	6	320	41.3	-	296.9	1	7/8	12	-	150	145	150	-
	8	380	47.7	-	330	1 1/8	1	12	-	170	165	170	-
	10	445	54	-	387.4	1 1/4	1 1/8	16	-	190	185	190	-
	12	520	57.2	-	450.8	1 3/8	1 1/4	16	-	205	195	205	-
	14	585	60.4	-	514.4	1 3/8	1 1/4	20	-	210	205	210	-
16	650	63.5	-	571.5	1 1/2	1 3/8	20	-	220	215	220	-	
18	710	66.7	-	628.6	1 1/2	1 3/8	24	-	230	220	230	-	
20	775	69.9	-	685.8	1 5/8	1 1/2	24	-	240	235	250	-	
24	915	76.2	-	812.8	1 7/8	1 3/4	24	-	265	260	280	-	

600#	1/2	95	14.3	-	66.7	5/8	1/2	4	-	75	70	75	-
	3/4	115	15.9	-	82.6	3/4	5/8	4	-	90	85	90	-
	1	125	17.5	-	88.9	3/4	5/8	4	-	90	85	90	-
	1 1/4	135	20.7	-	98.4	3/4	5/8	4	-	95	90	95	-
	1 1/2	155	22.3	-	114.3	7/8	3/4	4	-	110	100	110	-
	2	165	25.4	-	127	3/4	5/8	8	-	110	100	110	-
	2 1/2	190	28.6	-	149.2	7/8	3/4	8	-	120	115	120	-
	3	210	31.8	-	168.3	7/8	3/4	8	-	125	120	125	-
	3 1/2	230	35	-	184.2	1	7/8	8	-	140	135	140	-
	4	275	38.1	-	215.9	1	7/8	8	-	145	140	145	-
	5	330	44.5	-	266.7	1 1/8	1	8	-	165	160	165	-
	6	355	47.7	-	292.1	1 1/8	1	12	-	170	165	170	-
	8	420	55.6	-	349.2	1 1/4	1 1/8	12	-	190	185	195	-
	10	510	63.5	-	431.8	1 3/8	1 1/4	16	-	215	210	215	-
	12	560	66.7	-	489	1 3/8	1 1/4	20	-	220	215	220	-
	14	605	69.9	-	527	1 1/2	1 3/8	20	-	235	230	235	-
16	685	76.2	-	603.2	1 5/8	1 1/2	20	-	255	250	255	-	
18	745	82.6	-	654	1 3/4	1 5/8	20	-	275	265	275	-	
20	815	88.9	-	723.9	1 3/4	1 5/8	24	-	285	280	290	-	
24	940	101.6	-	838.2	2	1 7/8	24	-	330	325	335	-	



CLASS	A	B	C	D	Drilling				Length of Bolts				
									Stud Bolts				Machine Bolts
					D1	D2	D3	No. of Bolts	L1	L2	L3	L4	
inches	mm	mm	mm	mm	inches	inches	nos.	mm	mm	mm	mm	mm	
900#	1/2	120	22.3	-	82.6	7/8	3/4	4	-	110	100	110	-
	3/4	130	25.4	-	88.9	7/8	3/4	4	-	115	110	115	-
	1	150	28.6	-	101.6	1	7/8	4	-	125	120	125	-
	1 1/4	160	28.6	-	111.1	1	7/8	4	-	125	120	125	-
	1 1/2	180	31.8	-	123.8	1 1/8	1	4	-	140	135	140	-
	2	215	38.1	-	165.1	1	7/8	8	-	145	140	145	-
	2 1/2	245	41.3	-	190.5	1 1/8	1	8	-	160	150	160	-
	3	240	38.1	-	190.5	1	7/8	8	-	145	140	145	-
	4	290	44.5	-	235	1 1/4	1 1/8	8	-	170	165	170	-
	5	350	50.8	-	279.4	1 3/8	1 1/4	8	-	190	185	190	-
	6	380	55.6	-	317.5	1 1/4	1 1/8	12	-	190	185	195	-
	8	470	63.5	-	393.7	1 1/2	1 3/8	12	-	220	215	220	-
	10	545	69.9	-	469.9	1 1/2	1 3/8	16	-	235	230	235	-
	12	610	79.4	-	533.4	1 1/2	1 3/8	20	-	255	250	255	-
	14	640	85.8	-	558.8	1 5/8	1 1/2	20	-	275	265	280	-
16	705	88.9	-	616	1 3/4	1 5/8	20	-	285	280	290	-	
18	785	101.6	-	685.8	2	1 7/8	20	-	325	320	335	-	
20	855	108	-	749.3	2 1/8	2	20	-	350	345	360	-	
24	1040	139.7	-	901.7	2 5/8	2 1/2	20	-	440	430	455	-	

1500#	1/2	120	22.3	-	82.6	7/8	3/4	4	-	110	100	110	-
	3/4	130	25.4	-	88.9	7/8	3/4	4	-	115	110	115	-
	1	150	28.6	-	101.6	1	7/8	4	-	125	120	125	-
	1 1/4	160	28.6	-	111.1	1	7/8	4	-	125	120	125	-
	1 1/2	180	31.8	-	123.8	1 1/8	1	4	-	140	135	140	-
	2	215	38.1	-	165.1	1	7/8	8	-	145	140	145	-
	2 1/2	245	41.3	-	190.5	1 1/8	1	8	-	160	150	160	-
	3	265	47.7	-	203.2	1 1/4	1 1/8	8	-	180	170	180	-
	4	310	54	-	241.3	1 3/8	1 1/4	8	-	195	190	195	-
	5	375	73.1	-	292.1	1 5/8	1 1/2	8	-	250	240	250	-
	6	395	82.6	-	317.5	1 1/2	1 3/8	12	-	260	255	265	-
	8	485	92.1	-	393.7	1 3/4	1 5/8	12	-	290	285	300	-
	10	585	108	-	482.6	2	1 7/8	12	-	335	330	345	-
	12	675	123.9	-	571.5	2 1/8	2	16	-	375	370	385	-
	14	750	133.4	-	635	2 3/8	2 1/4	16	-	405	400	425	-
16	825	146.1	-	704.8	2 5/8	2 1/2	16	-	445	440	470	-	
18	915	162	-	774.7	2 7/8	2 3/4	16	-	495	490	525	-	
20	985	177.8	-	831.8	3 1/8	3	16	-	540	535	565	-	
24	1170	203.2	-	990.6	3 5/8	3 1/2	16	-	615	610	650	-	

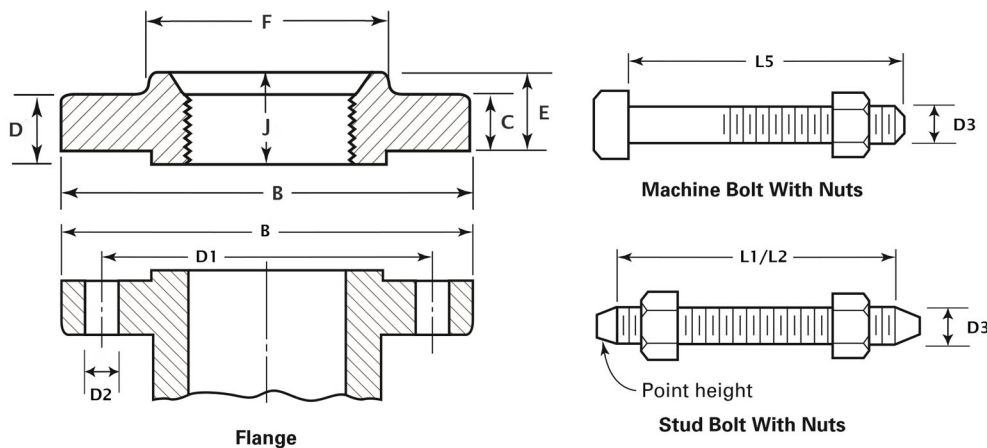
2500#	1/2	135	30.2	-	88.9	7/8	3/4	4	-	120	115	120	-
	3/4	140	31.8	-	95.2	7/8	3/4	4	-	125	120	125	-
	1	160	35	-	108	1	7/8	4	-	140	135	140	-
	1 1/4	185	38.1	-	130.2	1 1/8	1	4	-	150	145	150	-
	1 1/2	205	44.5	-	146	1 1/4	1 1/8	4	-	170	165	170	-
	2	235	50.9	-	171.4	1 1/8	1	8	-	180	170	180	-
	2 1/2	265	57.2	-	196.8	1 1/4	1 1/8	8	-	195	190	205	-
	3	305	66.7	-	228.6	1 3/8	1 1/4	8	-	220	215	230	-
	4	355	76.2	-	273	1 5/8	1 1/2	8	-	255	250	260	-
	5	420	92.1	-	323.8	1 7/8	1 3/4	8	-	300	290	310	-
	6	485	108	-	386.3	2 1/8	2	8	-	345	335	355	-
	8	550	127	-	438.2	2 1/8	2	12	-	380	375	395	-
10	675	165.1	-	539.8	2 5/8	2 1/2	12	-	490	485	510	-	
12	760	184.2	-	619.1	2 7/8	2 3/4	12	-	540	535	560	-	

M.O.C : Stainless Steel / Carbon Steel / Alloy Steel / Nickel Alloy

MODEL NO.

Size : 1/2" NB to 24" NB

HPFLT



ACCESSORIES : 1. Washers for Stud & Bolt 2. Gaskets (PTFE, CAF, Spiral wound, Metal graphite, Rubber)

DENOTES	SPECIFICATION
A	Nominal Pipe Size, NPS
B	Outside Diameter of Flange
C	Minimum Thickness of Flange
D	Minimum Thickness Lap Joint
E	Length Through Hub
F	Diameter of Hub
J	Minimum Thread Length Threaded
K	Minimum Counterbore Threaded Flange

DENOTES	SPECIFICATION
D1	Diameter of Bolt Circle
D2	Diameter of Bolt Holes
D3	Diameter of Bolts
L1	Length of Stud Bolt 2-mm Raised Face
L2	Length of Stud Bolt 7-mm Raised Face
L3	Length of Stud Bolt Male & Female, Tongue & Groove
L4	Length of Stud Bolt Ring Joint
L5	Length of Machine Bolt 2-mm Raised Face

NOTE :

- The Length of the stud bolt does not include the height of the points
- The minimum thickness of these loose flanges, in sizes NPS 3 1/2 and smaller, is slightly greater than the thickness of flanges on fittings.
- The flange dimensions illustrated are for regularly furnished 2-mm raised face (except lapped) ; for requirements of other facings
- Minimum Thread Length " T " - For thread of threaded flanges

CLASS	A	B	C	D	E	F	J	K	Drilling				Length of Bolts					
									D1	D2	D3	No. of Bolts	Stud Bolts				Machine Bolts	
													L1	L2	L3	L4		L5
inches	mm	mm	mm	mm	mm	mm	mm	mm	mm	inches	inches	nos.	mm	mm	mm	mm	mm	
150#	1/2	90	9.6	11.2	14	30	16	-	60.3	5/8	1/2	4	55	-	-	-	-	50
	3/4	100	11.2	12.7	14	38	16	-	69.9	5/8	1/2	4	65	-	-	-	-	50
	1	110	12.7	14.3	16	49	17	-	79.4	5/8	1/2	4	65	-	-	-	75	55
	1 1/4	115	14.3	15.9	19	59	21	-	88.9	5/8	1/2	4	70	-	-	-	85	55
	1 1/2	125	15.9	17.5	21	65	22	-	98.4	5/8	1/2	4	70	-	-	-	85	65
	2	150	17.5	19.1	24	78	25	-	120.7	3/4	5/8	4	85	-	-	-	95	70
	2 1/2	180	20.7	22.3	27	90	29	-	139.7	3/4	5/8	4	90	-	-	-	100	75
	3	190	22.3	23.9	29	108	30	-	152.4	3/4	5/8	4	90	-	-	-	100	75
	3 1/2	215	22.3	23.9	30	122	32	-	177.8	3/4	5/8	8	90	-	-	-	100	75
	4	230	22.3	23.9	32	135	33	-	190.5	3/4	5/8	8	90	-	-	-	100	75
	5	255	22.3	23.9	35	164	36	-	215.9	7/8	3/4	8	95	-	-	-	110	85
	6	280	23.9	25.4	38	192	40	-	241.3	7/8	3/4	8	100	-	-	-	115	85
	8	345	27	28.6	43	246	44	-	298.5	7/8	3/4	8	110	-	-	-	120	90
	10	405	28.6	30.2	48	305	49	-	362	1	7/8	12	115	-	-	-	125	100
	12	485	30.2	31.8	54	365	56	-	431.8	1	7/8	12	120	-	-	-	135	100
	14	535	33.4	35	56	400	57	-	476.3	1 1/8	1	12	135	-	-	-	145	115
16	595	35	36.6	62	457	64	-	539.8	1 1/8	1	16	135	-	-	-	145	115	
18	635	38.1	39.7	67	505	68	-	577.9	1 1/4	1 1/8	16	145	-	-	-	160	125	
20	700	41.3	42.9	71	559	73	-	635	1 1/4	1 1/8	20	160	-	-	-	170	140	
24	815	46.1	47.7	81	663	83	-	749.3	1 3/8	1 1/4	20	170	-	-	-	185	150	



CLASS	A	B	C	D	E	F	J	K	Drilling				Length of Bolts				
									D1	D2	D3	No. of Bolts	Stud Bolts				Machine Bolts
													L1	L2	L3	L4	L5
inches	mm	mm	mm	mm	mm	mm	mm	mm	mm	inches	inches	nos.	mm	mm	mm	mm	mm
300#	½	95	12.7	14.3	21	38	16	23.6	66.7	5/8	1/2	4	65	-	-	75	55
	¾	115	14.3	15.9	24	48	16	29	82.6	3/4	5/8	4	75	-	-	90	65
	1	125	15.9	17.5	25	54	18	35.8	88.9	3/4	5/8	4	75	-	-	90	65
	1¼	135	17.5	19.1	25	64	21	44.4	98.4	3/4	5/8	4	85	-	-	95	70
	1½	155	19.1	20.7	29	70	23	50.3	114.3	7/8	3/4	4	90	-	-	100	75
	2	165	20.7	22.3	32	84	29	63.5	127	3/4	5/8	8	90	-	-	100	75
	2½	190	23.9	25.4	37	100	32	76.2	149.2	7/8	3/4	8	100	-	-	115	85
	3	210	27	28.6	41	117	32	92.2	168.3	7/8	3/4	8	110	-	-	120	90
	3½	230	28.6	30.2	43	133	37	104.9	184.2	7/8	3/4	8	110	-	-	125	95
	4	255	30.2	31.8	46	146	37	117.6	200	7/8	3/4	8	115	-	-	125	95
	5	280	33.4	35	49	178	43	144.4	235	7/8	3/4	8	120	-	-	135	110
	6	320	35	36.6	51	206	47	171.4	269.9	7/8	3/4	12	120	-	-	140	110
	8	380	39.7	41.3	60	260	51	222.2	330.2	1	7/8	12	140	-	-	150	120
	10	445	46.1	47.7	65	321	56	276.2	387.4	1 1/8	1	16	160	-	-	170	140
	12	520	49.3	50.8	71	375	61	328.6	450.8	1 1/4	1 1/8	16	170	-	-	185	145
	14	585	52.4	54	75	425	64	360.4	514.4	1 1/4	1 1/8	20	180	-	-	190	160
	16	650	55.6	57.2	81	483	69	411.2	571.5	1 3/8	1 1/4	20	190	-	-	205	165
18	710	58.8	60.4	87	533	70	462	628.6	1 3/8	1 1/4	24	195	-	-	210	170	
20	775	62	63.5	94	587	74	512.8	685.8	1 3/8	1 1/4	24	205	-	-	220	185	
24	915	68.3	69.9	105	702	83	614.4	812.8	1 5/8	1 1/2	24	230	-	-	255	205	

400#	½	95	14.3	-	22	38	16	23.6	66.7	5/8	1/2	4	-	75	70	75	-
	¾	115	15.9	-	25	48	16	29	82.6	3/4	5/8	4	-	90	85	90	-
	1	125	17.5	-	27	54	18	35.8	88.9	3/4	5/8	4	-	90	85	90	-
	1¼	135	20.7	-	29	64	21	44.4	98.4	3/4	5/8	4	-	95	90	95	-
	1½	155	22.3	-	32	70	23	50.6	114.3	7/8	3/4	4	-	110	100	110	-
	2	165	25.4	-	37	84	29	63.5	127	3/4	5/8	8	-	110	100	110	-
	2½	190	28.6	-	41	100	32	76.2	149.2	7/8	3/4	8	-	120	115	120	-
	3	210	31.8	-	46	117	35	92.2	168.3	7/8	3/4	8	-	125	120	125	-
	3½	230	35	-	49	133	40	104.9	184.2	1	7/8	8	-	140	135	140	-
	4	255	35	-	51	146	37	117.6	200	1	7/8	8	-	140	135	140	-
	5	280	38.1	-	54	178	43	144.4	235	1	7/8	8	-	145	135	145	-
	6	320	41.3	-	57	206	46	171.4	296.9	1	7/8	12	-	150	145	150	-
	8	380	47.7	-	68	260	51	222.2	330	1 1/8	1	12	-	170	165	170	-
	10	445	54	-	73	321	56	276.2	387.4	1 1/4	1 1/8	16	-	190	185	190	-
	12	520	57.2	-	79	375	61	328.6	450.8	1 3/8	1 1/4	16	-	205	195	205	-
	14	585	60.4	-	84	425	64	360.4	514.4	1 3/8	1 1/4	20	-	210	205	210	-
	16	650	63.5	-	94	483	69	411.2	571.5	1 1/2	1 3/8	20	-	220	215	220	-
18	710	66.7	-	98	533	70	462	628.6	1 1/2	1 3/8	24	-	230	220	230	-	
20	775	69.9	-	102	587	74	512.8	685.8	1 5/8	1 1/2	24	-	240	235	250	-	
24	915	76.2	-	114	702	83	614.4	812.8	1 7/8	1 3/4	24	-	265	260	280	-	

600#	½	95	14.3	-	22	38	16	23.6	66.7	5/8	1/2	4	-	75	70	75	-
	¾	115	15.9	-	25	48	16	29	82.6	3/4	5/8	4	-	90	85	90	-
	1	125	17.5	-	27	54	18	35.8	88.9	3/4	5/8	4	-	90	85	90	-
	1¼	135	20.7	-	29	64	21	44.4	98.4	3/4	5/8	4	-	95	90	95	-
	1½	155	22.3	-	32	70	23	50.6	114.3	7/8	3/4	4	-	110	100	110	-
	2	165	25.4	-	37	84	29	63.5	127	3/4	5/8	8	-	110	100	110	-
	2½	190	28.6	-	41	100	32	76.2	149.2	7/8	3/4	8	-	120	115	120	-
	3	210	31.8	-	46	117	35	92.2	168.3	7/8	3/4	8	-	125	120	125	-
	3½	230	35	-	49	133	40	104.9	184.2	1	7/8	8	-	140	135	140	-
	4	275	38.1	-	54	152	42	117.6	215.9	1	7/8	8	-	145	140	145	-
	5	330	44.5	-	60	189	48	144.4	266.7	1 1/8	1	8	-	165	160	165	-
	6	355	47.7	-	67	222	51	171.4	292.1	1 1/8	1	12	-	170	165	170	-
	8	420	55.6	-	76	273	58	222.2	349.2	1 1/4	1 1/8	12	-	190	185	195	-
	10	510	63.5	-	86	343	66	276.2	431.8	1 3/8	1 1/4	16	-	215	210	215	-
	12	560	66.7	-	92	400	70	328.6	489	1 3/8	1 1/4	20	-	220	215	220	-
	14	605	69.9	-	94	432	74	360.4	527	1 1/2	1 3/8	20	-	235	230	235	-
	16	685	76.2	-	106	495	78	411.2	603.2	1 5/8	1 1/2	20	-	255	250	255	-
18	745	82.6	-	117	546	80	462	654	1 3/4	1 5/8	20	-	275	265	275	-	
20	815	88.9	-	127	610	83	512.8	723.9	1 3/4	1 5/8	24	-	285	280	290	-	
24	940	101.6	-	140	718	93	614.4	838.2	2	1 7/8	24	-	330	325	335	-	

THREADED FLANGE (as per ASME B16.5)

Technical Information



CLASS	A	B	C	D	E	F	J	K	Drilling				Length of Bolts				
									D1	D2	D3	No. of Bolts	Stud Bolts				Machine Bolts
													L1	L2	L3	L4	L5
inches	mm	mm	mm	mm	mm	mm	mm	mm	mm	inches	inches	nos.	mm	mm	mm	mm	mm
900#	1/2	120	22.3	-	32	38	23	23.6	82.6	7/8	3/4	4	-	110	100	110	-
	3/4	130	25.4	-	35	44	26	29	88.9	7/8	3/4	4	-	115	110	115	-
	1	150	28.6	-	41	52	29	35.8	101.6	1	7/8	4	-	125	120	125	-
	1 1/4	160	28.6	-	41	64	31	44.4	111.1	1	7/8	4	-	125	120	125	-
	1 1/2	180	31.8	-	44	70	32	50.6	123.8	1 1/8	1	4	-	140	135	140	-
	2	215	38.1	-	57	105	39	63.5	165.1	1	7/8	8	-	145	140	145	-
	2 1/2	245	41.3	-	64	124	48	76.2	190.5	1 1/8	1	8	-	160	150	160	-
	3	240	38.1	-	54	127	42	92.2	190.5	1	7/8	8	-	145	140	145	-
	4	290	44.5	-	70	159	48	117.6	235	1 1/4	1 1/8	8	-	170	165	170	-
	5	350	50.8	-	79	190	54	114.4	279.4	1 3/8	1 1/4	8	-	190	185	190	-
	6	380	55.6	-	86	235	58	171.4	317.5	1 1/4	1 1/8	12	-	190	185	195	-
	8	470	63.5	-	102	298	64	222.2	393.7	1 1/2	1 3/8	12	-	220	215	220	-
	10	545	69.9	-	108	368	72	276.2	469.9	1 1/2	1 3/8	16	-	235	230	235	-
	12	610	79.4	-	117	419	77	328.6	533.4	1 1/2	1 3/8	20	-	255	250	255	-
	14	640	85.8	-	130	451	83	360.4	558.8	1 5/8	1 1/2	20	-	275	265	280	-
	16	705	88.9	-	133	508	86	411.2	616	1 3/4	1 5/8	20	-	285	280	290	-
18	785	101.6	-	152	565	89	462	685.8	2	1 7/8	20	-	325	320	335	-	
20	855	108	-	159	622	93	512.8	749.3	2 1/8	2	20	-	350	345	360	-	
24	1040	139.7	-	203	749	102	614.4	901.7	2 5/8	2 1/2	20	-	440	430	455	-	

1500#	1/2	120	22.3	-	32	38	23	23.6	82.6	7/8	3/4	4	-	110	100	110	-
	3/4	130	25.4	-	35	44	26	29	88.9	7/8	3/4	4	-	115	110	115	-
	1	150	28.6	-	41	52	29	35.8	101.6	1	7/8	4	-	125	120	125	-
	1 1/4	160	28.6	-	41	64	31	44.4	111.1	1	7/8	4	-	125	120	125	-
	1 1/2	180	31.8	-	44	70	32	50.6	123.8	1 1/8	1	4	-	140	135	140	-
	2	215	38.1	-	57	105	39	63.5	165.1	1	7/8	8	-	145	140	145	-
	2 1/2	245	41.3	-	64	124	48	76.2	190.5	1 1/8	1	8	-	160	150	160	-
	3	265	47.7	-	-	133	-	-	203.2	1 1/4	1 1/8	8	-	180	170	180	-
	4	310	54	-	-	162	-	-	241.3	1 3/8	1 1/4	8	-	195	190	195	-
	5	375	73.1	-	-	197	-	-	292.1	1 5/8	1 1/2	8	-	250	240	250	-
	6	395	82.6	-	-	229	-	-	317.5	1 1/2	1 3/8	12	-	260	255	265	-
	8	485	92.1	-	-	292	-	-	393.7	1 3/4	1 5/8	12	-	290	285	300	-
	10	585	108	-	-	368	-	-	482.6	2	1 7/8	12	-	335	330	345	-
	12	675	123.9	-	-	451	-	-	571.5	2 1/8	2	16	-	375	370	385	-
	14	750	133.4	-	-	495	-	-	635	2 3/8	2 1/4	16	-	405	400	425	-
	16	825	146.1	-	-	552	-	-	704.8	2 5/8	2 1/2	16	-	445	440	470	-
18	915	162	-	-	597	-	-	774.7	2 7/8	2 3/4	16	-	495	490	525	-	
20	985	177.8	-	-	641	-	-	831.8	3 1/8	3	16	-	540	535	565	-	
24	1170	203.2	-	-	762	-	-	990.6	3 5/8	3 1/2	16	-	615	610	650	-	

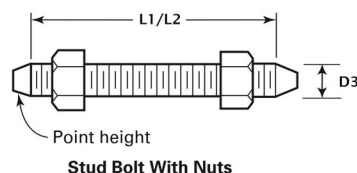
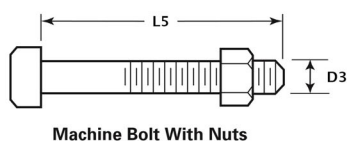
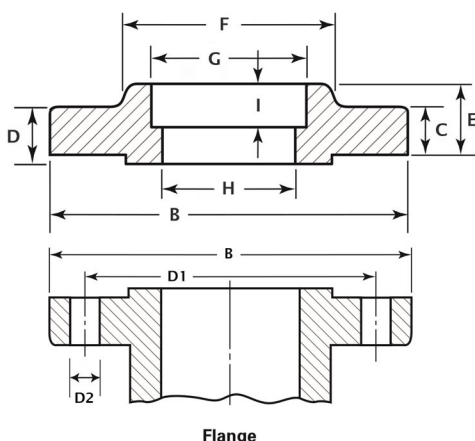
2500#	1/2	135	30.2	-	40	43	29	23.6	88.9	7/8	3/4	4	-	120	115	120	-
	3/4	140	31.8	-	43	51	32	29	95.2	7/8	3/4	4	-	125	120	125	-
	1	160	35	-	48	57	35	35.8	108	1	7/8	4	-	140	135	140	-
	1 1/4	185	38.1	-	52	73	39	44.4	130.2	1 1/8	1	4	-	150	145	150	-
	1 1/2	205	44.5	-	60	79	45	50.6	146	1 1/4	1 1/8	4	-	170	165	170	-
	2	235	50.9	-	70	95	51	63.5	171.4	1 1/8	1	8	-	180	170	180	-
	2 1/2	265	57.2	-	79	114	58	76.2	196.8	1 1/4	1 1/8	8	-	195	190	205	-
	3	305	66.7	-	-	133	-	-	228.6	1 3/8	1 1/4	8	-	220	215	230	-
	4	355	76.2	-	-	165	-	-	273	1 5/8	1 1/2	8	-	255	250	260	-
	5	420	92.1	-	-	203	-	-	323.8	1 7/8	1 3/4	8	-	300	290	310	-
	6	485	108	-	-	235	-	-	386.3	2 1/8	2	8	-	345	335	355	-
	8	550	127	-	-	305	-	-	438.2	2 1/8	2	12	-	380	375	395	-
10	675	165.1	-	-	375	-	-	539.8	2 5/8	2 1/2	12	-	490	485	510	-	
12	760	184.2	-	-	441	-	-	619.1	2 7/8	2 3/4	12	-	540	535	560	-	

M.O.C : Stainless Steel / Carbon Steel / Alloy Steel / Nickel Alloy

Size : 1/2" NB to 24" NB

MODEL NO.

HPFLSW



ACCESSORIES : 1. Washers for Stud & Bolt 2. Gaskets(PTFE, CAF, Spiral wound, Metal graphite, Rubber)

DENOTES	SPECIFICATION
A	Nominal Pipe Size, NPS
B	Outside Diameter of Flange
C	Minimum Thickness of Flange
D	Minimum Thickness Lap Joint
E	Length Through Hub
F	Diameter of Hub
G	Minimum Bore Diameter
H	Bore Diameter
I	Depth of Socket OD

DENOTES	SPECIFICATION
D1	Diameter of Bolt Circle
D2	Diameter of Bolt Holes
D3	Diameter of Bolts
L1	Length of Stud Bolt 2-mm Raised Face
L2	Length of Stud Bolt 7-mm Raised Face
L3	Length of Stud Bolt Male & Female, Tongue & Groove
L4	Length of Stud Bolt Ring Joint
L5	Length of Machine Bolt 2-mm Raised Face

NOTE :

- * - To be specified by the Purchaser
- The Length of the stud bolt does not include the height of the points
- The minimum thickness of these loose flanges, in sizes NPS 3 1/2 and smaller, is slightly greater than the thickness of flanges on fittings.
- The flange dimensions illustrated are for regularly furnished 2-mm raised face (except lapped) ; for requirements of other facings
- Dimensions in Bore Dia " G " correspond to the inside diameters of pipe as given in ASME B36.10M for standard wall pipe. Thickness of standard wall is the same as Schedule 40 in sizes NPS 10 and smaller. These bore sizes are furnished unless otherwise specified by the Purchaser.
- As per standard, Socketweld flange NPS should be 1/2 to 3 Only.

CLASS	A	B	C	D	E	F	G	H	I	Drilling				Length of Bolts					
										D1	D2	D3	No. of Bolts	Stud Bolts				Machine Bolts	
														L1	L2	L3	L4		L5
inches	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	inches	inches	nos.	mm	mm	mm	mm	mm	
150#	1/2	90	9.6	11.2	14	30	22.2	15.8	10	60.3	5/8	1/2	4	55	-	-	-	-	50
	3/4	100	11.2	12.7	14	38	27.7	20.9	11	69.9	5/8	1/2	4	65	-	-	-	-	50
	1	110	12.7	14.3	16	49	34.5	26.6	13	79.4	5/8	1/2	4	65	-	-	-	75	55
	1 1/4	115	14.3	15.9	19	59	43.2	35.1	14	88.9	5/8	1/2	4	70	-	-	-	85	55
	1 1/2	125	15.9	17.5	21	65	49.5	40.9	16	98.4	5/8	1/2	4	70	-	-	-	85	65
	2	150	17.5	19.1	24	78	61.9	52.5	17	120.7	3/4	5/8	4	85	-	-	-	95	70
	2 1/2	180	20.7	22.3	27	90	74.6	62.7	19	139.7	3/4	5/8	4	90	-	-	-	100	75
3	190	22.3	23.9	29	108	90.7	77.9	21	152.4	3/4	5/8	4	90	-	-	-	100	75	



CLASS	A	B	C	D	E	F	G	H	I	Drilling				Length of Bolts				
										D1	D2	D3	No. of Bolts	Stud Bolts				Machine Bolts
														L1	L2	L3	L4	
inches	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	inches	inches	nos.	mm	mm	mm	mm	mm
300#	1/2	95	12.7	14.3	21	38	22.2	15.8	10	66.7	5/8	1/2	4	65	-	-	75	55
	3/4	115	14.3	15.9	24	48	27.7	20.9	11	82.6	3/4	5/8	4	75	-	-	90	65
	1	125	15.9	17.5	25	54	34.5	26.6	13	88.9	3/4	5/8	4	75	-	-	90	65
	1 1/4	135	17.5	19.1	25	64	43.2	35.1	14	98.4	3/4	5/8	4	85	-	-	95	70
	1 1/2	155	19.1	20.7	29	70	49.5	40.9	16	114.3	7/8	3/4	4	90	-	-	100	75
	2	165	20.7	22.3	32	84	61.9	52.5	17	127	3/4	5/8	8	90	-	-	100	75
	2 1/2	190	23.9	25.4	37	100	74.6	62.7	19	149.2	7/8	3/4	8	100	-	-	115	85
3	210	27	28.6	41	117	90.7	77.9	21	168.3	7/8	3/4	8	110	-	-	120	90	

400#	1/2	95	14.3	-	22	38	22.2	*	10	66.7	5/8	1/2	4	-	75	70	75	-
	3/4	115	15.9	-	25	48	27.7	*	11	82.6	3/4	5/8	4	-	90	85	90	-
	1	125	17.5	-	27	54	34.5	*	13	88.9	3/4	5/8	4	-	90	85	90	-
	1 1/4	135	20.7	-	29	64	43.2	*	14	98.4	3/4	5/8	4	-	95	90	95	-
	1 1/2	155	22.3	-	32	70	49.5	*	16	114.3	7/8	3/4	4	-	110	100	110	-
	2	165	25.4	-	37	84	61.9	*	17	127	3/4	5/8	8	-	110	100	110	-
	2 1/2	190	28.6	-	41	100	74.6	*	19	149.2	7/8	3/4	8	-	120	115	120	-
3	210	31.8	-	46	117	90.7	*	21	168.3	7/8	3/4	8	-	125	120	125	-	

600#	1/2	95	14.3	-	22	38	22.2	*	10	66.7	5/8	1/2	4	-	75	70	75	-
	3/4	115	15.9	-	25	48	27.7	*	11	82.6	3/4	5/8	4	-	90	85	90	-
	1	125	17.5	-	27	54	34.5	*	13	88.9	3/4	5/8	4	-	90	85	90	-
	1 1/4	135	20.7	-	29	64	43.2	*	14	98.4	3/4	5/8	4	-	95	90	95	-
	1 1/2	155	22.3	-	32	70	49.5	*	16	114.3	7/8	3/4	4	-	110	100	110	-
	2	165	25.4	-	37	84	61.9	*	17	127	3/4	5/8	8	-	110	100	110	-
	2 1/2	190	28.6	-	41	100	74.6	*	19	149.2	7/8	3/4	8	-	120	115	120	-
3	210	31.8	-	46	117	90.7	*	21	168.3	7/8	3/4	8	-	125	120	125	-	

900#	1/2	120	22.3	-	32	38	22.2	*	10	82.6	7/8	3/4	4	-	110	100	110	-
	3/4	130	25.4	-	35	44	27.7	*	11	88.9	7/8	3/4	4	-	115	110	115	-
	1	150	28.6	-	41	52	34.5	*	13	101.6	1	7/8	4	-	125	120	125	-
	1 1/4	160	28.6	-	41	64	43.2	*	14	111.1	1	7/8	4	-	125	120	125	-
	1 1/2	180	31.8	-	44	70	49.5	*	16	123.8	1 1/8	1	4	-	140	135	140	-
	2	215	38.1	-	57	105	61.9	*	17	165.1	1	7/8	8	-	145	140	145	-
	2 1/2	245	41.3	-	64	124	74.6	*	19	190.5	1 1/8	1	8	-	160	150	160	-
3	240	38.1	-	-	127	90.7	*	-	190.5	1	7/8	8	-	145	140	145	-	

1500#	1/2	120	22.3	-	32	38	22.2	*	10	82.6	7/8	3/4	4	-	110	100	110	-
	3/4	130	25.4	-	35	44	27.7	*	11	88.9	7/8	3/4	4	-	115	110	115	-
	1	150	28.6	-	41	52	34.5	*	13	101.6	1	7/8	4	-	125	120	125	-
	1 1/4	160	28.6	-	41	64	43.2	*	14	111.1	1	7/8	4	-	125	120	125	-
	1 1/2	180	31.8	-	44	70	49.5	*	16	123.8	1 1/8	1	4	-	140	135	140	-
	2	215	38.1	-	57	105	61.9	*	17	165.1	1	7/8	8	-	145	140	145	-
	2 1/2	245	41.3	-	64	124	74.6	*	19	190.5	1 1/8	1	8	-	160	150	160	-
3	265	47.7	-	-	133	-	*	-	203.2	1 1/4	1 1/8	8	-	180	170	180	-	

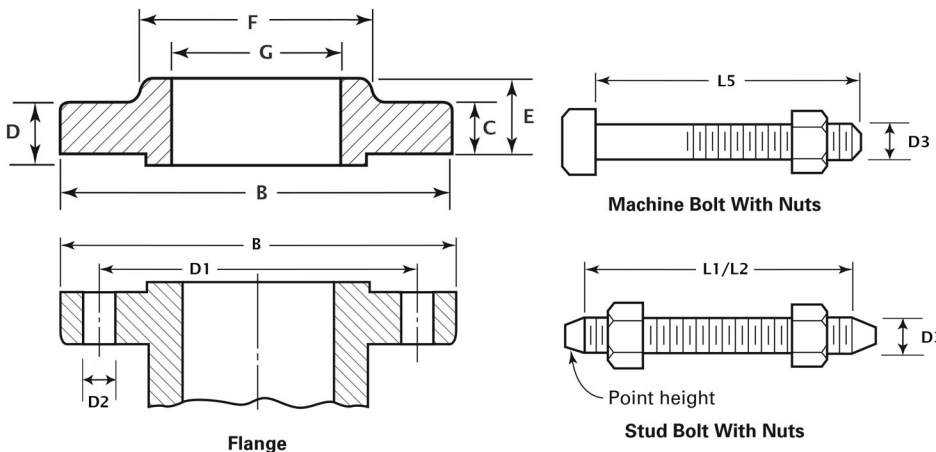
2500#	1/2	135	30.2	-	-	43	-	-	-	88.9	7/8	3/4	4	-	120	115	120	-
	3/4	140	31.8	-	-	51	-	-	-	95.2	7/8	3/4	4	-	125	120	125	-
	1	160	35	-	-	57	-	-	-	108	1	7/8	4	-	140	135	140	-
	1 1/4	185	38.1	-	-	73	-	-	-	130.2	1 1/8	1	4	-	150	145	150	-
	1 1/2	205	44.5	-	-	79	-	-	-	146	1 1/4	1 1/8	4	-	170	165	170	-
	2	235	50.9	-	-	95	-	-	-	171.4	1 1/8	1	8	-	180	170	180	-
	2 1/2	265	57.2	-	-	114	-	-	-	196.8	1 1/4	1 1/8	8	-	195	190	205	-
3	305	66.7	-	-	133	-	-	-	228.6	1 3/8	1 1/4	8	-	220	215	230	-	

M.O.C : Stainless Steel / Carbon Steel / Alloy Steel / Nickel Alloy

Size : 1/2" NB to 24" NB

MODEL NO.

HPFLSO



ACCESSORIES : 1. Washers for Stud & Bolt 2. Gaskets(PTFE, CAF, Spiral wound, Metal graphite, Rubber)

DENOTES	SPECIFICATION
A	Nominal Pipe Size, NPS
B	Outside Diameter of Flange
C	Minimum Thickness of Flange
D	Minimum Thickness Lap Joint
E	Length Through Hub
F	Diameter of Hub
G	Minimum Bore Diameter
D1	Diameter of Bolt Circle

DENOTES	SPECIFICATION
D2	Diameter of Bolt Holes
D3	Diameter of Bolts
L1	Length of Stud Bolt 2-mm Raised Face
L2	Length of Stud Bolt 7-mm Raised Face
L3	Length of Stud Bolt Male & Female, Tongue & Groove
L4	Length of Stud Bolt Ring Joint
L5	Length of Machine Bolt 2-mm Raised Face

NOTE :

- The Length of the stud bolt does not include the height of the points
- The minimum thickness of these loose flanges, in sizes NPS 3 1/2 and smaller, is slightly greater than the thickness of flanges on fittings.
- The flange dimensions illustrated are for regularly furnished 2-mm raised face (except lapped) ; for requirements of other facings
- Dimensions in Bore Dia " G " correspond to the inside diameters of pipe as given in ASME B36.10M for standard wall pipe. Thickness of standard wall is the same as Schedule 40 in sizes NPS 10 and smaller. These bore sizes are furnished unless otherwise specified by the Purchaser.

CLASS	A	B	C	D	E	F	G	Drilling				Length of Bolts				
								Stud Bolts				Machine Bolts				
								D1	D2	D3	No. of Bolts		L1	L2	L3	L4
inches	mm	mm	mm	mm	mm	mm	mm	mm	inches	inches	nos.	mm	mm	mm	mm	mm
150#	1/2	90	9.6	11.2	14	30	22.2	60.3	5/8	1/2	4	55	-	-	-	50
	3/4	100	11.2	12.7	14	38	27.7	69.9	5/8	1/2	4	65	-	-	-	50
	1	110	12.7	14.3	16	49	34.5	79.4	5/8	1/2	4	65	-	-	75	55
	1 1/4	115	14.3	15.9	19	59	43.2	88.9	5/8	1/2	4	70	-	-	85	55
	1 1/2	125	15.9	17.5	21	65	49.5	98.4	5/8	1/2	4	70	-	-	85	65
	2	150	17.5	19.1	24	78	61.9	120.7	3/4	5/8	4	85	-	-	95	70
	2 1/2	180	20.7	22.3	27	90	74.6	139.7	3/4	5/8	4	90	-	-	100	75
	3	190	22.3	23.9	29	108	90.7	152.4	3/4	5/8	4	90	-	-	100	75
	3 1/2	215	22.3	23.9	30	122	103.4	177.8	3/4	5/8	8	90	-	-	100	75
	4	230	22.3	23.9	32	135	116.1	190.5	3/4	5/8	8	90	-	-	100	75
	5	255	22.3	23.9	35	164	143.8	215.9	7/8	3/4	8	95	-	-	110	85
	6	280	23.9	25.4	38	192	170.7	241.3	7/8	3/4	8	100	-	-	115	85
	8	345	27	28.6	43	246	221.5	298.5	7/8	3/4	8	110	-	-	120	90
	10	405	28.6	30.2	48	305	276.2	362	1	7/8	12	115	-	-	125	100
	12	485	30.2	31.8	54	365	327	431.8	1	7/8	12	120	-	-	135	100
	14	535	33.4	35	56	400	359.2	476.3	1 1/8	1	12	135	-	-	145	115
	16	595	35	36.6	62	457	410.5	539.8	1 1/8	1	16	135	-	-	145	115
18	635	38.1	39.7	67	505	461.8	577.9	1 1/4	1 1/8	16	145	-	-	160	125	
20	700	41.3	42.9	71	559	513.1	635	1 1/4	1 1/8	20	160	-	-	170	140	
24	815	46.1	47.7	81	663	616	749.3	1 3/8	1 1/4	20	170	-	-	185	150	

SLIP-ON FLANGE (as per ASME B16.5)

Technical Information



CLASS	A	B	C	D	E	F	G	Drilling				Length of Bolts				Machine Bolts
								D1	D2	D3	No. of Bolts	Stud Bolts				
												mm	inches	inches	nos.	L1 mm
inches	mm	mm	mm	mm	mm	mm	mm	mm	inches	inches	nos.	mm	mm	mm	mm	mm
300#	1/2	95	12.7	14.3	21	38	22.2	66.7	5/8	1/2	4	65	-	-	75	55
	3/4	115	14.3	15.9	24	48	27.7	82.6	3/4	5/8	4	75	-	-	90	65
	1	125	15.9	17.5	25	54	34.5	88.9	3/4	5/8	4	75	-	-	90	65
	1 1/4	135	17.5	19.1	25	64	43.2	98.4	3/4	5/8	4	85	-	-	95	70
	1 1/2	155	19.1	20.7	29	70	49.5	114.3	7/8	3/4	4	90	-	-	100	75
	2	165	20.7	22.3	32	84	61.9	127	3/4	5/8	8	90	-	-	100	75
	2 1/2	190	23.9	25.4	37	100	74.6	149.2	7/8	3/4	8	100	-	-	115	85
	3	210	27	28.6	41	117	90.7	168.3	7/8	3/4	8	110	-	-	120	90
	3 1/2	230	28.6	30.2	43	133	103.4	184.2	7/8	3/4	8	110	-	-	125	95
	4	255	30.2	31.8	46	146	116.1	200	7/8	3/4	8	115	-	-	125	95
	5	280	33.4	35	49	178	143.8	235	7/8	3/4	8	120	-	-	135	110
	6	320	35	36.6	51	206	170.7	269.9	7/8	3/4	12	120	-	-	140	110
	8	380	39.7	41.3	60	260	221.5	330.2	1	7/8	12	140	-	-	150	120
	10	445	46.1	47.7	65	321	276.2	387.4	1 1/8	1	16	160	-	-	170	140
	12	520	49.3	50.8	71	375	327	450.8	1 1/4	1 1/8	16	170	-	-	185	145
	14	585	52.4	54	75	425	359.2	514.4	1 1/4	1 1/8	20	180	-	-	190	160
16	650	55.6	57.2	81	483	410.5	571.5	1 3/8	1 1/4	20	190	-	-	205	165	
18	710	58.8	60.4	87	533	461.8	628.6	1 3/8	1 1/4	24	195	-	-	210	170	
20	775	62	63.5	94	587	513.1	685.8	1 3/8	1 1/4	24	205	-	-	220	185	
24	915	68.3	69.9	105	702	616	812.8	1 5/8	1 1/2	24	230	-	-	255	205	

400#	1/2	95	14.3	-	22	38	22.2	66.7	5/8	1/2	4	-	75	70	75	-
	3/4	115	15.9	-	25	48	27.7	82.6	3/4	5/8	4	-	90	85	90	-
	1	125	17.5	-	27	54	34.5	88.9	3/4	5/8	4	-	90	85	90	-
	1 1/4	135	20.7	-	29	64	43.2	98.4	3/4	5/8	4	-	95	90	95	-
	1 1/2	155	22.3	-	32	70	49.5	114.3	7/8	3/4	4	-	110	100	110	-
	2	165	25.4	-	37	84	61.9	127	3/4	5/8	8	-	110	100	110	-
	2 1/2	190	28.6	-	41	100	74.6	149.2	7/8	3/4	8	-	120	115	120	-
	3	210	31.8	-	46	117	90.7	168.3	7/8	3/4	8	-	125	120	125	-
	3 1/2	230	35	-	49	133	103.4	184.2	1	7/8	8	-	140	135	140	-
	4	255	35	-	51	146	116.1	200	1	7/8	8	-	140	135	140	-
	5	280	38.1	-	54	178	143.8	235	1	7/8	8	-	145	135	145	-
	6	320	41.3	-	57	206	170.7	296.9	1	7/8	12	-	150	145	150	-
	8	380	47.7	-	68	260	221.5	330	1 1/8	1	12	-	170	165	170	-
	10	445	54	-	73	321	276.2	387.4	1 1/4	1 1/8	16	-	190	185	190	-
	12	520	57.2	-	79	375	327	450.8	1 3/8	1 1/4	16	-	205	195	205	-
	14	585	60.4	-	84	425	359.2	514.4	1 3/8	1 1/4	20	-	210	205	210	-
16	650	63.5	-	94	483	410.5	571.5	1 1/2	1 3/8	20	-	220	215	220	-	
18	710	66.7	-	98	533	461.8	628.6	1 1/2	1 3/8	24	-	230	220	230	-	
20	775	69.9	-	102	587	513.1	685.8	1 5/8	1 1/2	24	-	240	235	250	-	
24	915	76.2	-	114	702	616	812.8	1 7/8	1 3/4	24	-	265	260	280	-	

600#	1/2	95	14.3	-	22	38	22.2	66.7	5/8	1/2	4	-	75	70	75	-
	3/4	115	15.9	-	25	48	27.7	82.6	3/4	5/8	4	-	90	85	90	-
	1	125	17.5	-	27	54	34.5	88.9	3/4	5/8	4	-	90	85	90	-
	1 1/4	135	20.7	-	29	64	43.2	98.4	3/4	5/8	4	-	95	90	95	-
	1 1/2	155	22.3	-	32	70	49.5	114.3	7/8	3/4	4	-	110	100	110	-
	2	165	25.4	-	37	84	61.9	127	3/4	5/8	8	-	110	100	110	-
	2 1/2	190	28.6	-	41	100	74.6	149.2	7/8	3/4	8	-	120	115	120	-
	3	210	31.8	-	46	117	90.7	168.3	7/8	3/4	8	-	125	120	125	-
	3 1/2	230	35	-	49	133	103.4	184.2	1	7/8	8	-	140	135	140	-
	4	275	38.1	-	54	152	116.1	215.9	1	7/8	8	-	145	140	145	-
	5	330	44.5	-	60	189	143.8	266.7	1 1/8	1	8	-	165	160	165	-
	6	355	47.7	-	67	222	170.7	292.1	1 1/8	1	12	-	170	165	170	-
	8	420	55.6	-	76	273	221.5	349.2	1 1/4	1 1/8	12	-	190	185	195	-
	10	510	63.5	-	86	343	276.2	431.8	1 3/8	1 1/4	16	-	215	210	215	-
	12	560	66.7	-	92	400	327	489	1 3/8	1 1/4	20	-	220	215	220	-
	14	605	69.9	-	94	432	359.2	527	1 1/2	1 3/8	20	-	235	230	235	-
16	685	76.2	-	106	495	410.5	603.2	1 5/8	1 1/2	20	-	255	250	255	-	
18	745	82.6	-	117	546	461.8	654	1 3/4	1 5/8	20	-	275	265	275	-	
20	815	88.9	-	127	610	513.1	723.9	1 3/4	1 5/8	24	-	285	280	290	-	
24	940	101.6	-	140	718	616	838.2	2	1 7/8	24	-	330	325	335	-	



CLASS	A	B	C	D	E	F	G	Drilling				Length of Bolts				
								D1	D2	D3	No. of Bolts	Stud Bolts				Machine Bolts
												L1	L2	L3	L4	
inches	mm	mm	mm	mm	mm	mm	mm	mm	inches	inches	nos.	mm	mm	mm	mm	mm
900#	1/2	120	22.3	-	32	38	22.2	82.6	7/8	3/4	4	-	110	100	110	-
	3/4	130	25.4	-	35	44	27.7	88.9	7/8	3/4	4	-	115	110	115	-
	1	150	28.6	-	41	52	34.5	101.6	1	7/8	4	-	125	120	125	-
	1 1/4	160	28.6	-	41	64	43.2	111.1	1	7/8	4	-	125	120	125	-
	1 1/2	180	31.8	-	44	70	49.5	123.8	1 1/8	1	4	-	140	135	140	-
	2	215	38.1	-	57	105	61.9	165.1	1	7/8	8	-	145	140	145	-
	2 1/2	245	41.3	-	64	124	74.6	190.5	1 1/8	1	8	-	160	150	160	-
	3	240	38.1	-	54	127	90.7	190.5	1	7/8	8	-	145	140	145	-
	4	290	44.5	-	70	159	116.1	235	1 1/4	1 1/8	8	-	170	165	170	-
	5	350	50.8	-	79	190	143.8	279.4	1 3/8	1 1/4	8	-	190	185	190	-
	6	380	55.6	-	86	235	170.7	317.5	1 1/4	1 1/8	12	-	190	185	195	-
	8	470	63.5	-	102	298	221.5	393.7	1 1/2	1 3/8	12	-	220	215	220	-
	10	545	69.9	-	108	368	276.2	469.9	1 1/2	1 3/8	16	-	235	230	235	-
	12	610	79.4	-	117	419	327	533.4	1 1/2	1 3/8	20	-	255	250	255	-
	14	640	85.8	-	130	451	359.2	558.8	1 5/8	1 1/2	20	-	275	265	280	-
	16	705	88.9	-	133	508	410.5	616	1 3/4	1 5/8	20	-	285	280	290	-
18	785	101.6	-	152	565	461.8	685.8	2	1 7/8	20	-	325	320	335	-	
20	855	108	-	159	622	513.1	749.3	2 1/8	2	20	-	350	345	360	-	
24	1040	139.7	-	203	749	616	901.7	2 5/8	2 1/2	20	-	440	430	455	-	

1500#	1/2	120	22.3	-	32	38	22.2	82.6	7/8	3/4	4	-	110	100	110	-
	3/4	130	25.4	-	35	44	27.7	88.9	7/8	3/4	4	-	115	110	115	-
	1	150	28.6	-	41	52	34.5	101.6	1	7/8	4	-	125	120	125	-
	1 1/4	160	28.6	-	41	64	43.2	111.1	1	7/8	4	-	125	120	125	-
	1 1/2	180	31.8	-	44	70	49.5	123.8	1 1/8	1	4	-	140	135	140	-
	2	215	38.1	-	57	105	61.9	165.1	1	7/8	8	-	145	140	145	-
	2 1/2	245	41.3	-	64	124	74.6	190.5	1 1/8	1	8	-	160	150	160	-
	3	265	47.7	-	-	133	-	203.2	1 1/4	1 1/8	8	-	180	170	180	-
	4	310	54	-	-	162	-	241.3	1 3/8	1 1/4	8	-	195	190	195	-
	5	375	73.1	-	-	197	-	292.1	1 5/8	1 1/2	8	-	250	240	250	-
	6	395	82.6	-	-	229	-	317.5	1 1/2	1 3/8	12	-	260	255	265	-
	8	485	92.1	-	-	292	-	393.7	1 3/4	1 5/8	12	-	290	285	300	-
	10	585	108	-	-	368	-	482.6	2	1 7/8	12	-	335	330	345	-
	12	675	123.9	-	-	451	-	571.5	2 1/8	2	16	-	375	370	385	-
	14	750	133.4	-	-	495	-	635	2 3/8	2 1/4	16	-	405	400	425	-
	16	825	146.1	-	-	552	-	704.8	2 5/8	2 1/2	16	-	445	440	470	-
18	915	162	-	-	597	-	774.7	2 7/8	2 3/4	16	-	495	490	525	-	
20	985	177.8	-	-	641	-	831.8	3 1/8	3	16	-	540	535	565	-	
24	1170	203.2	-	-	762	-	990.6	3 5/8	3 1/2	16	-	615	610	650	-	

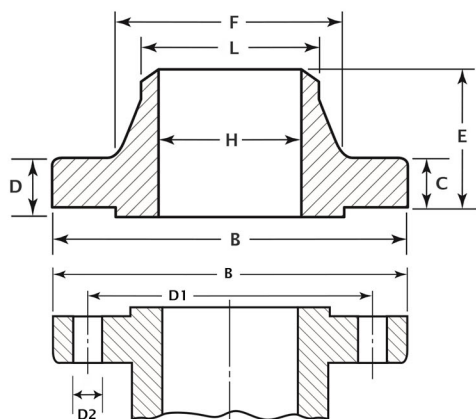
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	3/4	140	31.8	-	-	51	-	95.2	7/8	3/4	4	-	125	120	125	-
	1	160	35	-	-	57	-	108	1	7/8	4	-	140	135	140	-
	1 1/4	185	38.1	-	-	73	-	130.2	1 1/8	1	4	-	150	145	150	-
	1 1/2	205	44.5	-	-	79	-	146	1 1/4	1 1/8	4	-	170	165	170	-
	2	235	50.9	-	-	95	-	171.4	1 1/8	1	8	-	180	170	180	-
	2 1/2	265	57.2	-	-	114	-	196.8	1 1/4	1 1/8	8	-	195	190	205	-
	3	305	66.7	-	-	133	-	228.6	1 3/8	1 1/4	8	-	220	215	230	-
	4	355	76.2	-	-	165	-	273	1 5/8	1 1/2	8	-	255	250	260	-
	5	420	92.1	-	-	203	-	323.8	1 7/8	1 3/4	8	-	300	290	310	-
	6	485	108	-	-	235	-	386.3	2 1/8	2	8	-	345	335	355	-
	8	550	127	-	-	305	-	438.2	2 1/8	2	12	-	380	375	395	-
10	675	165.1	-	-	375	-	539.8	2 5/8	2 1/2	12	-	490	485	510	-	
12	760	184.2	-	-	441	-	619.1	2 7/8	2 3/4	12	-	540	535	560	-	

M.O.C : Stainless Steel / Carbon Steel / Alloy Steel / Nickel Alloy

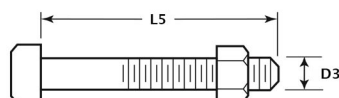
Size : 1/2" NB to 24" NB

MODEL NO.

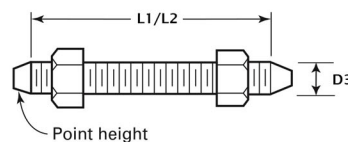
HPFLWN



Flange



Machine Bolt With Nuts



Stud Bolt With Nuts



ACCESSORIES : 1. Washers for Stud & Bolt 2. Gaskets(PTFE, CAF, Spiral wound, Metal graphite, Rubber)

DENOTES	SPECIFICATION
A	Nominal Pipe Size, NPS
B	Outside Diameter of Flange
C	Minimum Thickness of Flange
D	Minimum Thickness Lap Joint
E	Length Through Hub
F	Diameter of Hub
H	Bore Diameter
L	Hub Diameter Beginning of Chamfer Welding Neck

DENOTES	SPECIFICATION
D1	Diameter of Bolt Circle
D2	Diameter of Bolt Holes
D3	Diameter of Bolts
L1	Length of Stud Bolt 2-mm Raised Face
L2	Length of Stud Bolt 7-mm Raised Face
L3	Length of Stud Bolt Male & Female, Tongue & Groove
L4	Length of Stud Bolt Ring Joint
L5	Length of Machine Bolt 2-mm Raised Face

NOTE :

- * - To be specified by the Purchaser
- The Length of the stud bolt does not include the height of the points
- The minimum thickness of these loose flanges, in sizes NPS 3 1/2 and smaller, is slightly greater than the thickness of flanges on fittings.
- The flange dimensions illustrated are for regularly furnished 2-mm raised face (except lapped) ; for requirements of other facings
- Hub Diameter Beginning of Chamfer Welding Neck " L " - For welding end bevel
- Dimensions in Bore Dia " G " correspond to the inside diameters of pipe as given in ASME B36.10M for standard wall pipe. Thickness of standard wall is the same as Schedule 40 in sizes NPS 10 and smaller. These bore sizes are furnished unless otherwise specified by the Purchaser.

CLASS	A	B	C	D	E	F	H	L	Drilling				Length of Bolts					
									D1	D2	D3	No. of Bolts	Stud Bolts				Machine Bolts	
													L1	L2	L3	L4		L5
inches	mm	mm	mm	mm	mm	mm	mm	mm	mm	inches	inches	nos.	mm	mm	mm	mm	mm	mm
150#	1/2	90	9.6	11.2	46	30	15.8	21.3	60.3	5/8	1/2	4	55	-	-	-	-	50
	3/4	100	11.2	12.7	51	38	20.9	26.7	69.9	5/8	1/2	4	65	-	-	-	-	50
	1	110	12.7	14.3	54	49	26.6	33.4	79.4	5/8	1/2	4	65	-	-	75	55	
	1 1/4	115	14.3	15.9	56	59	35.1	42.2	88.9	5/8	1/2	4	70	-	-	85	55	
	1 1/2	125	15.9	17.5	60	65	40.9	48.3	98.4	5/8	1/2	4	70	-	-	85	65	
	2	150	17.5	19.1	62	78	52.5	60.3	120.7	3/4	5/8	4	85	-	-	95	70	
	2 1/2	180	20.7	22.3	68	90	62.7	73	139.7	3/4	5/8	4	90	-	-	100	75	
	3	190	22.3	23.9	68	108	77.9	88.9	152.4	3/4	5/8	4	90	-	-	100	75	
	3 1/2	215	22.3	23.9	70	122	90.1	101.6	177.8	3/4	5/8	8	90	-	-	100	75	
	4	230	22.3	23.9	75	135	102.3	114.3	190.5	3/4	5/8	8	90	-	-	100	75	
	5	255	22.3	23.9	87	164	128.2	141.3	215.9	7/8	3/4	8	95	-	-	110	85	
	6	280	23.9	25.4	87	192	154.1	168.3	241.3	7/8	3/4	8	100	-	-	115	85	
	8	345	27	28.6	100	246	202.7	219.1	298.5	7/8	3/4	8	110	-	-	120	90	
	10	405	28.6	30.2	100	305	254.6	273	362	1	7/8	12	115	-	-	125	100	
	12	485	30.2	31.8	113	365	304.8	323.8	431.8	1	7/8	12	120	-	-	135	100	
	14	535	33.4	35	125	400	*	355.6	476.3	1 1/8	1	12	135	-	-	145	115	
16	595	35	36.6	125	457	*	406.4	539.8	1 1/8	1	16	135	-	-	145	115		
18	635	38.1	39.7	138	505	*	457	577.9	1 1/4	1 1/8	16	145	-	-	160	125		
20	700	41.3	42.9	143	559	*	508	635	1 1/4	1 1/8	20	160	-	-	170	140		
24	815	46.1	47.7	151	663	*	610	749.3	1 3/8	1 1/4	20	170	-	-	185	150		



CLASS	A	B	C	D	E	F	H	L	Drilling				Length of Bolts				
									Stud Bolts			Machine Bolts					
									D1	D2	D3		No. of Bolts	L1	L2	L3	L4
inches	mm	mm	mm	mm	mm	mm	mm	mm	inches	inches	nos.	mm	mm	mm	mm	mm	
300#	1/2	95	12.7	14.3	51	38	15.8	21.3	66.7	5/8	1/2	4	65	-	-	75	55
	3/4	115	14.3	15.9	56	48	20.9	26.7	82.6	3/4	5/8	4	75	-	-	90	65
	1	125	15.9	17.5	60	54	26.6	33.4	88.9	3/4	5/8	4	75	-	-	90	65
	1 1/4	135	17.5	19.1	64	64	35.1	42.2	98.4	3/4	5/8	4	85	-	-	95	70
	1 1/2	155	19.1	20.7	67	70	40.9	48.3	114.3	7/8	3/4	4	90	-	-	100	75
	2	165	20.7	22.3	68	84	52.5	60.3	127	3/4	5/8	8	90	-	-	100	75
	2 1/2	190	23.9	25.4	75	100	62.7	73	149.2	7/8	3/4	8	100	-	-	115	85
	3	210	27	28.6	78	117	77.9	88.9	168.3	7/8	3/4	8	110	-	-	120	90
	3 1/2	230	28.6	30.2	79	133	90.1	101.6	184.2	7/8	3/4	8	110	-	-	125	95
	4	255	30.2	31.8	84	146	102.3	114.3	200	7/8	3/4	8	115	-	-	125	95
	5	280	33.4	35	97	178	128.2	141.3	235	7/8	3/4	8	120	-	-	135	110
	6	320	35	36.6	97	206	154.1	168.3	269.9	7/8	3/4	12	120	-	-	140	110
	8	380	39.7	41.3	110	260	202.7	219.1	330.2	1	7/8	12	140	-	-	150	120
	10	445	46.1	47.7	116	321	254.6	273	387.4	1 1/8	1	16	160	-	-	170	140
	12	520	49.3	50.8	129	375	304.8	323.8	450.8	1 1/4	1 1/8	16	170	-	-	185	145
	14	585	52.4	54	141	425	*	355.6	514.4	1 1/4	1 1/8	20	180	-	-	190	160
	16	650	55.6	57.2	144	483	*	406.4	571.5	1 3/8	1 1/4	20	190	-	-	205	165
	18	710	58.8	60.4	157	533	*	457	628.6	1 3/8	1 1/4	24	195	-	-	210	170
20	775	62	63.5	160	587	*	508	685.8	1 3/8	1 1/4	24	205	-	-	220	185	
24	915	68.3	69.9	167	702	*	610	812.8	1 5/8	1 1/2	24	230	-	-	255	205	

400#	1/2	95	14.3	-	52	38	*	21.3	66.7	5/8	1/2	4	-	75	70	75	-
	3/4	115	15.9	-	57	48	*	26.7	82.6	3/4	5/8	4	-	90	85	90	-
	1	125	17.5	-	62	54	*	33.4	88.9	3/4	5/8	4	-	90	85	90	-
	1 1/4	135	20.7	-	67	64	*	42.2	98.4	3/4	5/8	4	-	95	90	95	-
	1 1/2	155	22.3	-	70	70	*	48.3	114.3	7/8	3/4	4	-	110	100	110	-
	2	165	25.4	-	73	84	*	60.3	127	3/4	5/8	8	-	110	100	110	-
	2 1/2	190	28.6	-	79	100	*	73	149.2	7/8	3/4	8	-	120	115	120	-
	3	210	31.8	-	83	117	*	88.9	168.3	7/8	3/4	8	-	125	120	125	-
	3 1/2	230	35	-	86	133	*	101.6	184.2	1	7/8	8	-	140	135	140	-
	4	255	35	-	89	146	*	114.3	200	1	7/8	8	-	140	135	140	-
	5	280	38.1	-	102	178	*	141.3	235	1	7/8	8	-	145	135	145	-
	6	320	41.3	-	103	206	*	168.3	296.9	1	7/8	12	-	150	145	150	-
	8	380	47.7	-	117	260	*	219.1	330	1 1/8	1	12	-	170	165	170	-
	10	445	54	-	124	321	*	273	387.4	1 1/4	1 1/8	16	-	190	185	190	-
	12	520	57.2	-	137	375	*	323.8	450.8	1 3/8	1 1/4	16	-	205	195	205	-
	14	585	60.4	-	149	425	*	355.6	514.4	1 3/8	1 1/4	20	-	210	205	210	-
	16	650	63.5	-	152	483	*	406.4	571.5	1 1/2	1 3/8	20	-	220	215	220	-
	18	710	66.7	-	165	533	*	457	628.6	1 1/2	1 3/8	24	-	230	220	230	-
20	775	69.9	-	168	587	*	508	685.8	1 5/8	1 1/2	24	-	240	235	250	-	
24	915	76.2	-	175	702	*	610	812.8	1 7/8	1 3/4	24	-	265	260	280	-	

600#	1/2	95	14.3	-	52	38	*	21.3	66.7	5/8	1/2	4	-	75	70	75	-
	3/4	115	15.9	-	57	48	*	26.7	82.6	3/4	5/8	4	-	90	85	90	-
	1	125	17.5	-	62	54	*	33.4	88.9	3/4	5/8	4	-	90	85	90	-
	1 1/4	135	20.7	-	67	64	*	42.2	98.4	3/4	5/8	4	-	95	90	95	-
	1 1/2	155	22.3	-	70	70	*	48.3	114.3	7/8	3/4	4	-	110	100	110	-
	2	165	25.4	-	73	84	*	60.3	127	3/4	5/8	8	-	110	100	110	-
	2 1/2	190	28.6	-	79	100	*	73	149.2	7/8	3/4	8	-	120	115	120	-
	3	210	31.8	-	83	117	*	88.9	168.3	7/8	3/4	8	-	125	120	125	-
	3 1/2	230	35	-	86	133	*	101.6	184.2	1	7/8	8	-	140	135	140	-
	4	275	38.1	-	102	152	*	114.3	215.9	1	7/8	8	-	145	140	145	-
	5	330	44.5	-	114	189	*	141.3	266.7	1 1/8	1	8	-	165	160	165	-
	6	355	47.7	-	117	222	*	168.3	292.1	1 1/8	1	12	-	170	165	170	-
	8	420	55.6	-	133	273	*	219.1	349.2	1 1/4	1 1/8	12	-	190	185	195	-
	10	510	63.5	-	152	343	*	273	431.8	1 3/8	1 1/4	16	-	215	210	215	-
	12	560	66.7	-	156	400	*	323.8	489	1 3/8	1 1/4	20	-	220	215	220	-
	14	605	69.9	-	165	432	*	355.6	527	1 1/2	1 3/8	20	-	235	230	235	-
	16	685	76.2	-	178	495	*	406.4	603.2	1 5/8	1 1/2	20	-	255	250	255	-
	18	745	82.6	-	184	546	*	457	654	1 3/4	1 5/8	20	-	275	265	275	-
20	815	88.9	-	190	610	*	508	723.9	1 3/4	1 5/8	24	-	285	280	290	-	
24	940	101.6	-	203	718	*	610	838.2	2	1 7/8	24	-	330	325	335	-	



CLASS	A	B	C	D	E	F	H	L	Drilling				Length of Bolts				
									D1	D2	D3	No. of Bolts	Stud Bolts				Machine Bolts
													L1	L2	L3	L4	L5
inches	mm	mm	mm	mm	mm	mm	mm	mm	inches	inches	nos.	mm	mm	mm	mm	mm	
900#	1/2	120	22.3	-	60	38	*	21.3	82.6	7/8	3/4	4	-	110	100	110	-
	3/4	130	25.4	-	70	44	*	26.7	88.9	7/8	3/4	4	-	115	110	115	-
	1	150	28.6	-	73	52	*	33.4	101.6	1	7/8	4	-	125	120	125	-
	1 1/4	160	28.6	-	73	64	*	42.2	111.1	1	7/8	4	-	125	120	125	-
	1 1/2	180	31.8	-	83	70	*	48.3	123.8	1 1/8	1	4	-	140	135	140	-
	2	215	38.1	-	102	105	*	60.3	165.1	1	7/8	8	-	145	140	145	-
	2 1/2	245	41.3	-	105	124	*	73	190.5	1 1/8	1	8	-	160	150	160	-
	3	240	38.1	-	102	127	*	88.9	190.5	1	7/8	8	-	145	140	145	-
	4	290	44.5	-	114	159	*	114.3	235	1 1/4	1 1/8	8	-	170	165	170	-
	5	350	50.8	-	127	190	*	141.3	279.4	1 3/8	1 1/4	8	-	190	185	190	-
	6	380	55.6	-	140	235	*	168.3	317.5	1 1/4	1 1/8	12	-	190	185	195	-
	8	470	63.5	-	162	298	*	219.1	393.7	1 1/2	1 3/8	12	-	220	215	220	-
	10	545	69.9	-	184	368	*	273	469.9	1 1/2	1 3/8	16	-	235	230	235	-
	12	610	79.4	-	200	419	*	323.8	533.4	1 1/2	1 3/8	20	-	255	250	255	-
	14	640	85.8	-	213	451	*	355.6	558.8	1 5/8	1 1/2	20	-	275	265	280	-
	16	705	88.9	-	216	508	*	406.4	616	1 3/4	1 5/8	20	-	285	280	290	-
18	785	101.6	-	229	565	*	457	685.8	2	1 7/8	20	-	325	320	335	-	
20	855	108	-	248	622	*	508	749.3	2 1/8	2	20	-	350	345	360	-	
24	1040	139.7	-	292	749	*	610	901.7	2 5/8	2 1/2	20	-	440	430	455	-	

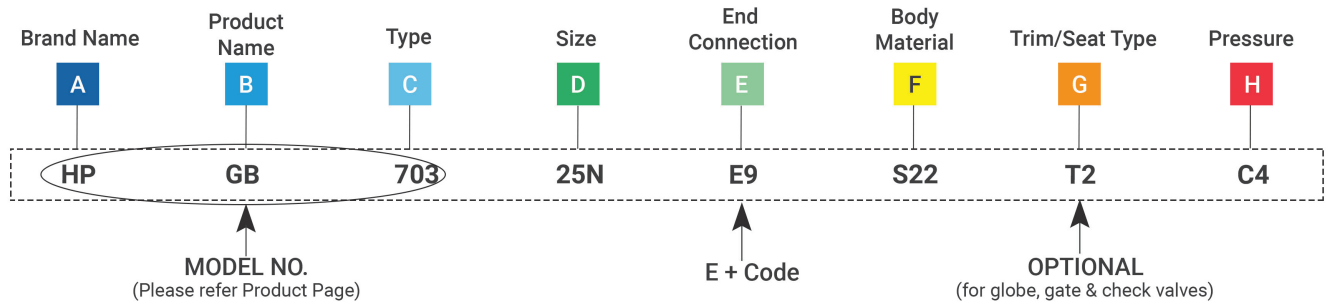
1500#	1/2	120	22.3	-	60	38	*	21.3	82.6	7/8	3/4	4	-	110	100	110	-
	3/4	130	25.4	-	70	44	*	26.7	88.9	7/8	3/4	4	-	115	110	115	-
	1	150	28.6	-	73	52	*	33.4	101.6	1	7/8	4	-	125	120	125	-
	1 1/4	160	28.6	-	73	64	*	42.2	111.1	1	7/8	4	-	125	120	125	-
	1 1/2	180	31.8	-	83	70	*	48.3	123.8	1 1/8	1	4	-	140	135	140	-
	2	215	38.1	-	102	105	*	60.3	165.1	1	7/8	8	-	145	140	145	-
	2 1/2	245	41.3	-	105	124	*	73	190.5	1 1/8	1	8	-	160	150	160	-
	3	265	47.7	-	117	133	*	88.9	203.2	1 1/4	1 1/8	8	-	180	170	180	-
	4	310	54	-	124	162	*	114.3	241.3	1 3/8	1 1/4	8	-	195	190	195	-
	5	375	73.1	-	156	197	*	141.3	292.1	1 5/8	1 1/2	8	-	250	240	250	-
	6	395	82.6	-	171	229	*	168.3	317.5	1 1/2	1 3/8	12	-	260	255	265	-
	8	485	92.1	-	213	292	*	219.1	393.7	1 3/4	1 5/8	12	-	290	285	300	-
	10	585	108	-	254	368	*	273	482.6	2	1 7/8	12	-	335	330	345	-
	12	675	123.9	-	283	451	*	323.8	571.5	2 1/8	2	16	-	375	370	385	-
	14	750	133.4	-	298	495	*	355.6	635	2 3/8	2 1/4	16	-	405	400	425	-
	16	825	146.1	-	311	552	*	406.4	704.8	2 5/8	2 1/2	16	-	445	440	470	-
18	915	162	-	327	597	*	457	774.7	2 7/8	2 3/4	16	-	495	490	525	-	
20	985	177.8	-	356	641	*	508	831.8	3 1/8	3	16	-	540	535	565	-	
24	1170	203.2	-	406	762	*	610	990.6	3 5/8	3 1/2	16	-	615	610	650	-	

2500#	1/2	135	30.2	-	73	43	*	21.3	88.9	7/8	3/4	4	-	120	115	120	-
	3/4	140	31.8	-	79	51	*	26.7	95.2	7/8	3/4	4	-	125	120	125	-
	1	160	35	-	89	57	*	33.4	108	1	7/8	4	-	140	135	140	-
	1 1/4	185	38.1	-	95	73	*	42.2	130.2	1 1/8	1	4	-	150	145	150	-
	1 1/2	205	44.5	-	111	79	*	48.3	146	1 1/4	1 1/8	4	-	170	165	170	-
	2	235	50.9	-	127	95	*	60.3	171.4	1 1/8	1	8	-	180	170	180	-
	2 1/2	265	57.2	-	143	114	*	73	196.8	1 1/4	1 1/8	8	-	195	190	205	-
	3	305	66.7	-	168	133	*	88.9	228.6	1 3/8	1 1/4	8	-	220	215	230	-
	4	355	76.2	-	190	165	*	114.3	273	1 5/8	1 1/2	8	-	255	250	260	-
	5	420	92.1	-	229	203	*	141.3	323.8	1 7/8	1 3/4	8	-	300	290	310	-
	6	485	108	-	273	235	*	168.3	386.3	2 1/8	2	8	-	345	335	355	-
	8	550	127	-	318	305	*	219.1	438.2	2 1/8	2	12	-	380	375	395	-
10	675	165.1	-	419	375	*	273	539.8	2 5/8	2 1/2	12	-	490	485	510	-	
12	760	184.2	-	464	441	*	323.8	619.1	2 7/8	2 3/4	12	-	540	535	560	-	



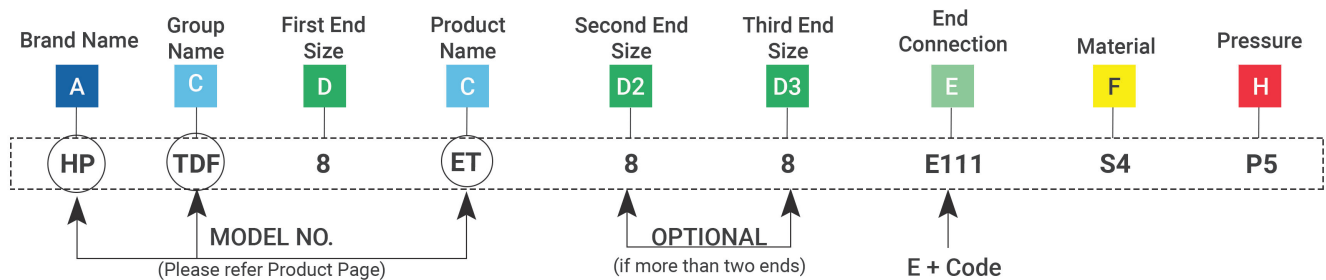
VALVES - PART NO. ORDERING SYSTEM

Example: Globe Valve (Forged Steel - OS & Y), 25NB SW, SS CF8M, Trim-2, Class 800#



FITTINGS - PART NO. ORDERING SYSTEM

Example: Equal Tee, 1/2"OD X 1/2"OD X 1/2"OD, SS316, 3000 psi



D	SIZE	
6m	6mm	INCH
8m	8mm	1 1/16"
10m	10mm	2 1/8"
12m	12mm	3 3/16"
16m	16mm	4 1/4"
18m	18mm	5 5/16"
20m	20mm	6 3/8"
25m	25mm	8 1/2"
28m	28mm	10 5/8"
METRIC		12 3/4"
M10	M10	14 7/8"
M12	M12	16 1"
M14	M14	20 1-1/4"
M16	M16	24 1-1/2"
M18	M18	26 1-5/8"
M20	M20	28 1-3/4"
NOMINAL BORE		32 2"
15N	15 NB	40 2-1/2"
20N	20 NB	48 3"
25N	25 NB	56 3-1/2"
32N	32 NB	64 4"
40N	40 NB	96 6"
50N	50 NB	- -
80N	80 NB	- -
100N	100 NB	- -
150N	150 NB	- -
200N	200 NB	- -
250N	250 NB	- -
300N	300 NB	- -

E	END CONN.
1	OD
2	NPT
3	BSPP
4	BSPT
5	UNF
6	METRIC
7	NB(PL) or NB
8	OD(PL)
9	SW
10	Tube Ends
11	Flanged Ends (Raised Face)
12	Flanged Ends (Ring Type Joint)
13	Flanged Ends (Flat Face)
14	Butt Weld Ends
15	Screwed Ends
16	Lugged Ends
17	Wafer Ends

G	SEAL TYPE
GL	Grafoil
PE	PTFE
PK	PEEK

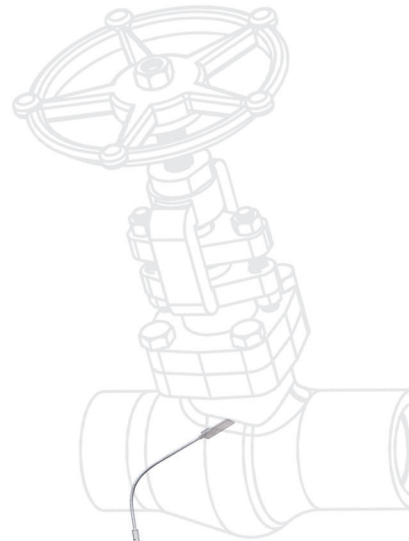
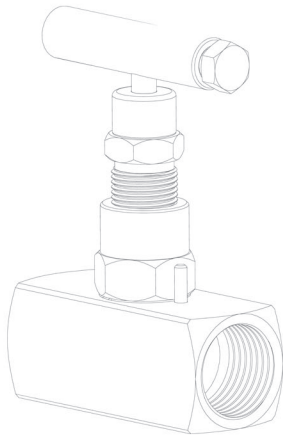
G	TRIM
T1	1
T2	2
T3	5
T4	8
T5	10
T6	12
T7	15
T8	16

F	BODY MATERIAL		
Carbon Steel		High Nickel Alloy Steel	
C1	ASTM A105	N1 Monel K400	
C2	ASTM A106	N2 Monel K500	
C3	ASTM A350 Gr.LF2	N3 Inconel 600	
C4	EN 1215	N4 Inconel 625	
C5	EN 4140	N5 Inconel 718	
C6	ASTM A216 Gr.WCB	N6 Inconel 750	
C7	ASTM A352 Gr. LCB	N7 Inconel 825	
C8	ASTM A216 Gr.WCC	N8 Hastelloy C276	
Stainless Steel		N9 ASTM A484 CU5MCuC	
S1	ASTM A182/A479/A312/A213/A269 Gr.304	N10 ASTM A494 CY40	
S2	ASTM A182/A479/A312/A213/A269 Gr.304L	N11 ASTM A494 M35-1	
S3	ASTM A182/A479/A312/A213 Gr.304H	Alloy Steel	
S4	ASTM A182/A479/A312/A213/A269 Gr.316	A1	ASTM A182 Gr.F11
S5	ASTM A182/A479/A312/A213/A269 Gr.316L	A2	ASTM A335 Gr.P11
S6	ASTM A182/A479/A312/A213/A269 Gr.316/316L	A3	ASTM A182 Gr.F22
S7	ASTM A182/A479/A312/A213 Gr.316H	A4	ASTM A335 Gr.P22
S8	ASTM A182 Gr.316Ti	A5	ASTM A182 Gr.F91
S9	ASTM A182/479 Gr.317	A6	ASTM A335 Gr.P91
S10	ASTM A182/479 Gr.321	A7	ASTM A182 Gr.F92
S11	ASTM A182 Gr. F347	A8	ASTM A335 Gr.P92
S12	ASTM A479 Gr.410	Other Material	
S13	ASTM A182 F44	MS	MS
S14	Duplex - F51	CU	Copper
S15	Super Duplex-F53	BR	Brass
S16	Super Duplex-F55	PE	PTFE
S17	Duplex - F60	TC	Tungsten Carbide
S18	ASTM A351 Gr.CF3	PE4	PTFE with SS304 Braided
S19	ASTM A351 Gr. CF3M	PE6	PTFE with SS316 Braided
S20	ASTM A351 CN7M	PP	Polypropylene
S21	ASTM A351 Gr.CF8	GI	Galvanized
S22	ASTM A351 Gr.CF8M	CP	CPVC
S23	ASTM A351 Gr. CF8C	UP	UPVC
S24	ASTM A351 Gr. CF10	PL	Plastic
S25	ASTM A995 Gr.1B (CD4MCuN)	AL	Aluminium
S26	ASTM A995 Gr. 4A	-	-
S27	ASTM A995 Gr. 5A	-	-
S28	ASTM CK3MCuN	-	-

H	PRESSURE
PSI (Bar)	
P1	150 (10)
P2	210 (15)
P3	1000 (70)
P4	2000 (140)
P5	3000 (200)
P6	6000 (400)
P7	9000 (630)
P8	10000 (700)
P9	15000 (1055)
P10	20000 (1400)
P11	30000 (2110)
P12	40000 (2800)
Class Rating	
C1	150
C2	300
C3	600
C4	800
C5	900
C6	1500
C7	2500
C8	2500SPL
C9	3000
C10	3000SPL
C11	4500
Schedule	
SC1	10
SC2	20
SC3	40
SC4	80
SC5	160
SC6	XXS

Note : Above ordering system doesn't include Sealant Injection Grease Fittings

CLIENT LOCATIONS ACROSS THE WORLD



HP VALVES & FITTINGS INDIA PRIVATE LIMITED

Instrumentation Valves & Fittings and Sealant Injection Grease Fittings

OFFICE cum FACTORY (UNIT-2) :

SP-133, 2nd Avenue, 3rd Street, SIDCO Industrial Estate, Ambattur, Chennai - 600 058. Tamil Nadu, India.

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Email: sales@hpvalvesindia.com | Website: www.hpvalvesindia.com

Roc(CIN): U29120TN2008PTC067808 | GST No: 33AACCH0510P1ZU | IEC No: 408028777

HP-DC/2021/R-01 Dt: 15/03/2021

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