

SERVICE: Hydrocarbons, Make-up Hydrogen, Fuel Gas Nitrogen, Flare (to 750°F)	CLASS: AA PAGE 1 OF 4
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RATING: CLASS 150 FACING: RF MATERIAL: CARBON STEEL	CORROSION ALLOWANCE: .125 INCHES PRESSURE LIMIT: PER ANSI B16.5 TEMPERATURE LIMIT: -20°F TO 600°F
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ITEM	SIZE	DESCRIPTION	NTSI	REV
VALVES --GATE --GLOBE CHECK		1. Gate, Globe, and Check 12 CR Trim with Graphitic Packing (non Asbestos) unless otherwise specified. 2. Ball valves shall have 316SS trim and RTFE seats and seals, valve shall be firesafe design. 3. Orbit valves shall have manufacturer's standard trim and packing.		
	1 3/4" 1-1/2"	Class 800# Stl SW ANVIL #821-3-1		
	1/2" 1-1/2"	Class 800# Stl SW x Scrd ANVIL #821-5-1		
	3/4" 1-1/2"	Class 300# Stl RF ANVIL #321-4-1		
	3/4" 1-1/2"	Class 150# Stl RF ANVIL #121-4-1	V1	
	2" and 3"	Class 300# Stl RF PACIFIC #350-1	V2	
	2" 12"	Class 150# Stl RF PACIFIC #150-11 V4	V2	
	14" 24"	Class 150# Stl RF PACIFIC #150-1		

		- Gear Operated		
	3/4" 1-1/2"	Class 800# Stl SW ANVIL #830-3-1		
	2" and 3"	Class 300# Stl RF PACIFIC #360-1		
	2" 4"	Class 150# Stl RF PACIFIC #160-11 V4		
	1 3/4" 1-1/2"	Class 800# Stl Hor Lft SW ANVIL #847-3-1		
	2" and 3"	Class 300# Stl Swing RF PACIFIC #380-1		
	2" 24"	Class 150# Stl Swing RF PACIFIC #180-11 V4		
		(FOR NITROGEN SERVICE)		
	3/4" 2"	j3000# Stl Scrd w/302SS Circle Seal		
		spring & Buna-N-Seal #249-8PP series		
		Mccanna S303-CS-F-S6		
REFINING & MARKETING			UNIT DIESEL HDS	
			REV 0	

..BALL	3/4" 1-1/2"	300# Stl (Temp Limit 300°F Max)	
	3/4 " 1 -1/2"	300# Stl SW	Mccanna S302/3-CS-F-S61
	2" and 3"	SW x Scrd	V1
	2"- 6"	300# Stl RF RF	Mccanna S301-CS-F-S6
		150# Stl	Mccanna S151-CS-F-S6 V4

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ITEM	SIZE	DESCRIPTION	NTS	REV
--ORBIT PIPE NIPPLES FITTINGS	1' - 1-1/2' 2" and 3' 4' - 8 "	(Temp Limit 400°F Max) 600# Stl SW (Full Port) Orbit #1463 300# Stl RF (Full Port) Orbit # 150# Stl RF (Full Port) Orbit #1123 V1 - Use for vents drains and instrument connections where a threaded outlet is required. V2 - Use against flanged equipment nozzles. V3 - Use only where indicated on P&ID V4 - Use 2" and 3' 150 ' Class valves for nitrogen service. Smls Stl ASTM A106 Gr B	I V3 F2	
	3/4" 1-1/2' XS 2" Only XS 3' - 24' STD WT. Smls Stl ASTM A106 Gr B 1/2" - 1-1/2" TBE 3" Long, SCH 160 TBE 6" Long, SCH 160 TOE 3" Long, SCH 160 TOE 6" Long, SCH 160 PBE 3" Long, XS PBE 6" Long, XS 3/4 " 1-1/2" 3000# Stl SW ASTM A105 Cap 90° Elbow 45° Elbow Tee sockolet Elbolet Coupling Union (GJ, Integral Seat) Cap, Scrd Thredolet Elbolet, Scrd Plug, Round Head Solid Stl, Scrd			
REFINING & MARKETING		UNIT DIESEL HDS	REV 0	

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ITEM	SIZE	DESCRIPTION	NTS	REV
	2" Only 3" 24"	Smls Stl Buttwelding ASTM A234 Gr WPB XS STD WT Cap 90° LR Elbow 90° SR Elbow 45° Elbow Tee Weldolet, ASTM A105 Cone Reducer Ecc Reducer Elbolet, ASTM A105 Cone Swage BBE, XS BLE/TSE, SCH 160 TLE/BSE, SCH 160 TBE, SCH 160 Ecc Swage BBE, XS BLE/TSE, SCH 160 TLE/BSE, SCH 160 TBE, SCH 160	F1 L2 L2	
	1/2" 1-1/2"	F1 - Use only for temperature connection F2 - Use only for unvalved vent and drains.		
	1/2"- 1-1/2"			
BRANCH CONNECTIONS		Refer to Para 6.6 Branch Connections		
PIPE INSTR. CONNECTIONS		Primary Instr Conn's to Piping Temperature Conn's-----1-1/2'' Flgd Pressure Conn's-----3/4'' SW Orifice Tap Conn's-----1/2'' Scrd Secondary Piping S-1		
CONNECTIONS		Vessel & Exchanger Instrument Conn's Table I.		
FLANGES	3/4" 1-1/2" 2" Only 3" 24" 3/4" 24"	150# Stl RF ASTM A105 SW (XS Bore) WN (XS Bore) WN (Std Wt Bore) Blind		

REFINING & MARKETING	UNIT	REV 0
	DIESEL HDS	

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ITEM	SIZE	DESCRIPTION	NTS	REV
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ORIFICE FLANGES	3/4"- 1-1/2" 2" Only 3" Only 3/4" - 3" 2" - 2 1/2"	300# Stl RF ASTM A105 SW (XS Bore) WN (XS Bore) WN (Std Wt Bore) Blind ----- 300#Stl RF ASTM A105 w/ 1/2" Scrd Taps Slip-on L1 - Use only against 300# flanges and valves. L2 - Use 2" & 3" 150 " Class flanges for Nitrogen service only.	L1	
GASKETS	3/4" - 24" 3/4" - 3" 2" - 24"	Spiral Wound 316SS w/Flexite Fiber, 1/8" thk centering ring, Flexitallic style CG For 150# Flanges For 300# Flanges For 300# Orifice Flanges		
BOLTS	3/4" - 24" 3/4" - 3" 2" - 24"	Stud Bolts ASTM A193 Gr B7 w/2 Hvy Hex Nuts ASTM A194 Gr 2H For 150# Flanges For 300# Flanges For 300# Orifice Flanges		
TUBING	1/4" - 1/2" O.D	Smls 316SS Fully Annealed ASTM A269 Gr TP316 0.035" Wall Thickness		
TUBING FITTINGS	1/4" - 1 1/2"	316SS Compression Type Female Connector Male Connector Female NPT Elbow Male NPT Elbow Tee Union		
REFINING & MARKETING			UNIT	REV 0
			DIESEL HDS	