

**SERVICE:** Make-up Hydrogen {100 psia and above H2 partial pressure)

**CLASS:** BD  
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**RATING:** Class 300#  
**FACING:** RTJ  
**MATERIAL:** Carbon Steel

**CORROSION ALLOWANCE:** 0.125 Inch  
**PRESSURE LIMIT:** Per ANSI B16.5  
**TEMPERATURE LIMIT:** -20°F - 550°F

ITEM	SIZE	DESCRIPTION	NTSI	REV
VALVES --GATE --GLOBE --CHECK --ORBIT PIPE	3/4 <sup>11</sup> 1-1 /2 <sup>11</sup> 1/2 <sup>11</sup> 1-1 /2 <sup>11</sup> 3/4 <sup>11</sup> 1-1/2 <sup>11</sup> 2 <sup>11</sup> - 10 <sup>11</sup> 12 <sup>11</sup> - 24 <sup>11</sup>  - Gear Operated 3/4 <sup>11</sup> 1-1 /2 <sup>11</sup> 2"- 4 <sup>11</sup>  3/4 <sup>11</sup> 1-1 /2 <sup>11</sup> 2'- 24 <sup>11</sup>  1 11 1-1 /2 <sup>11</sup> 2 <sup>11</sup> 8 <sup>11</sup> 3"- 10 <sup>11</sup>	1. Gate, Globe and Check Stellite 12 Cr trim with Graphitic Packing (non asbestos) unless otherwise specified. 2. Orbit valves shall have manufacturer's standard trim and packing. Class 800 Stl SW ANVIL #821-3-1 Class 800 Stl SW x Scrd ANVIL #821-5-11 Class 300 Stl RTJ ANVIL #321-R-1 Class 300 Stl RTJ PACIFIC #350-1 Class 300 Stl RTJ PACIFIC #350-1  ANVIL #830-3-1 PACIFIC #360-1  Class 800 Stl SW Hor Lft ANVIL #847-3-1 Class 300 Stl swing RTJ PACIFIC #380-1  (Temp Limit 400°F Max) Class 600# Stl SW ORBIT #1463 (Full Port) Class 300# Stl Swing RTJ ORBIT #1263 (Full Port) 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. Smls Stl ASTM A106 Gr B 3/4 <sup>11</sup> 1-1/2 <sup>11</sup> Sch 160 211 Only XS Std Wt.	V1 V2 V3	

12"- 1611	Sch 40	1	
18" Only	XS		1
2011_ 24"	Sch 40	1	

<b>REFINING &amp; MARKETING</b>	UNIT DIESEL HDS	REV 1
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<b>SERVICE:</b> Make-up Hydrogen (100 psia and above H2 partial pressure)	<b>CLASS:</b> BD <b>PAGE 2 OF 3</b>
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ITEM	SIZE	DESCRIPTION	NTS	/REV
NIPPLES FITTINGS/ 2" Only 3" 10" 12" 24" 1/2"- 1-1/2" [S		Sch 160 Smls Stl ASTM A106 Gr B TBE 3" Long TBE 6" Long TOE 3" Long TOE 6" Long PBE 3" Long PBE 6" Long 6000# Stl SW ASTM A105 Cap 90° Elbow 45° Elbow Tee Sockolet Elbolet Coupling Union (GJ Integral Seat) Cap, Scrd Thredolet Elbolet, Scrd Plug, Round Solid Stl, Scrd Smls Stl Buttwelding ASTM A234 Gr WPB XS Std Wt Wall Thickness to match pipe Cap 90° LR Elbow 90° SR Elbow 45° Elbow Tee Weldolet, ASTM a105 Cone Reducer Ecc Reducer Elbolet, ASTM A105 ch 160 Cone Swage BBE BLE/TSE TLE/BSE TBE	F2	


<b>REFINING &amp; MARKETING</b>	<b>UNIT</b> DIESEL HOS	<b>REV</b> 0
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ITEM	SIZE	DESCRIPTION	NTS	REV
	1/2"- 1-1/2"	Sch 160 Ecc swage  BBE BLE/TSE TLE/BSE TBE  F1 - Use only for temperature connection F2 - Use only for unvalved vents or drains.		
<b>BRANCH CONNECTIONS</b>		Refer to Para 6.6 Branch Connections		
<b>PIPE INSTR. CONNECTIONS</b>		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-2		
<b>EQUIP. INSTR. CONNECTIONS</b>		Vessel & Exchanger Instrument Conn's Table I		
<b>FLANGE</b>	3/4"- 1-1/2" 2"- Only Jf- 10" 12" 24"	300# Stl RTJ ASTM A105  SW (Sch 160 Bore) WN (XS Bore) WN (Std Wt Bore)		

<b>ORIFICE FLANGES</b>	3/4" 24" - 2 1/2" 24"	<sup>WN</sup> (Bore to match pipe) Blind 300# Stl RTJ ASTM A105 w/\ 1/2" Scrd Taps Slip-on		
<b>GASKETS</b>	3/4" 24" - 2 1/2" 24"	Soft iron oval ring per ANSI B16.20, Parker style P-950 or equal. For 300# RTJ Flanges For 300# RTJ Orifice Flanges		
<b>BOLTS</b>	3/4"- 24"  2"- 24"	Stud Bolts ASTM A193 Gr B7 w/2 Hvy Hex Nuts ASTM A194 Gr 2H For 300# RTJ Flanges For 300# RTJ Orifice Flanges		
REFINING & MARKETING			<b>UNIT</b>  DIESE L HOS	<b>REV</b>  0



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