Ammonia

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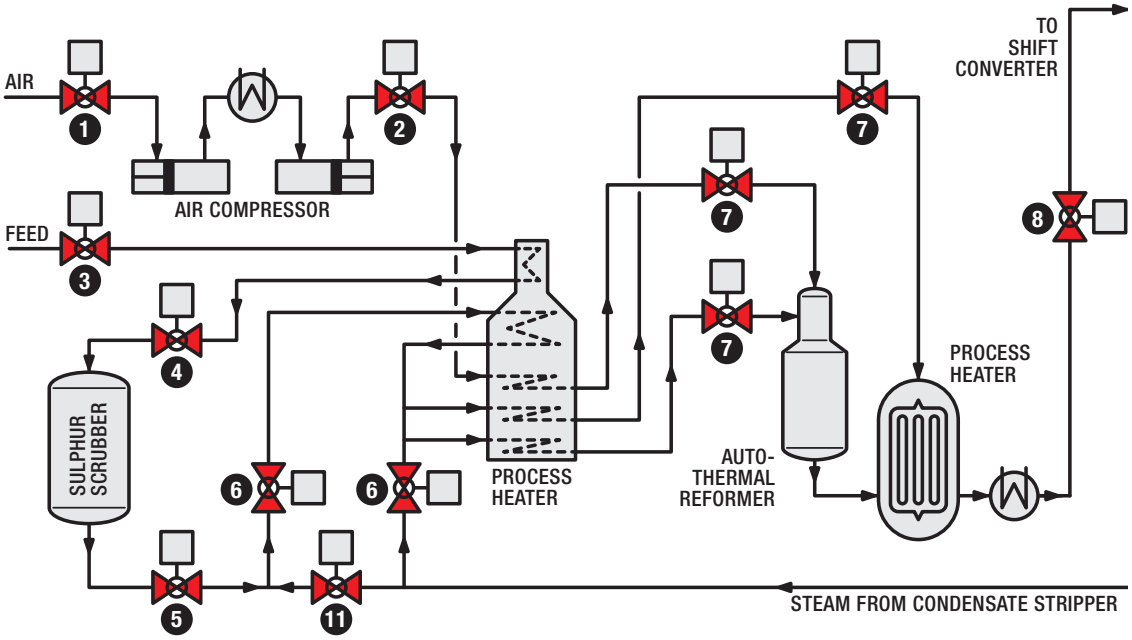
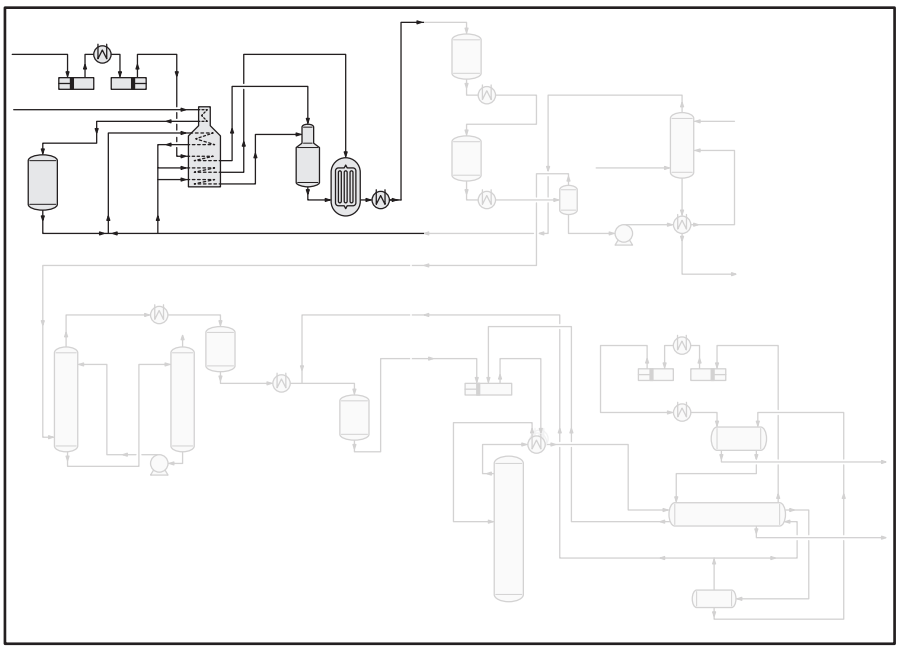
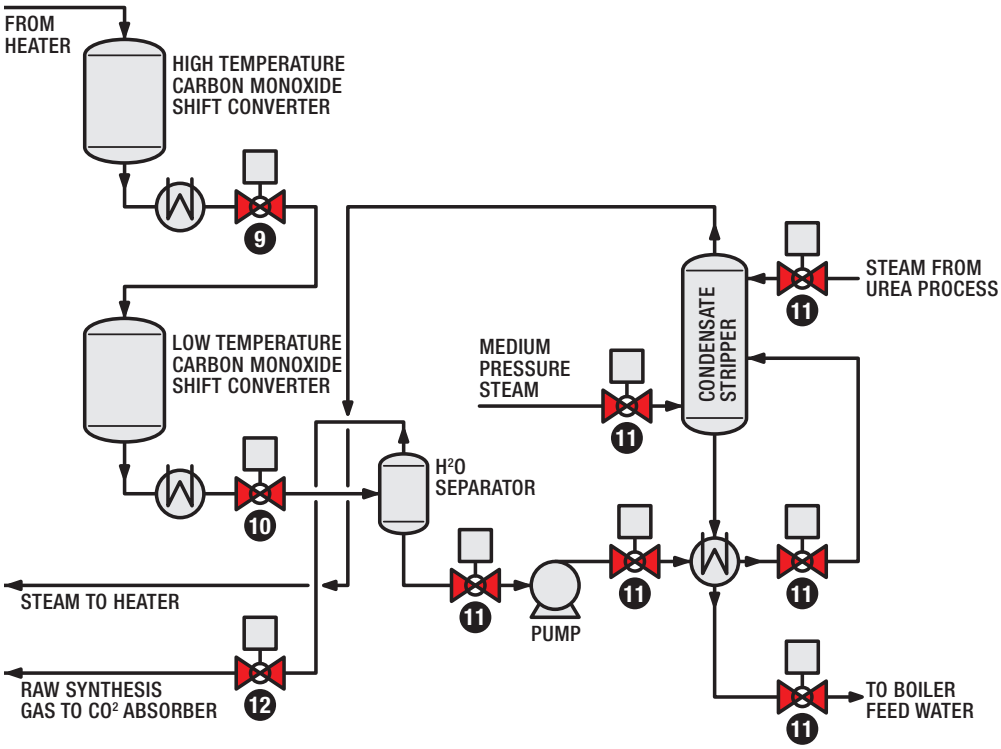
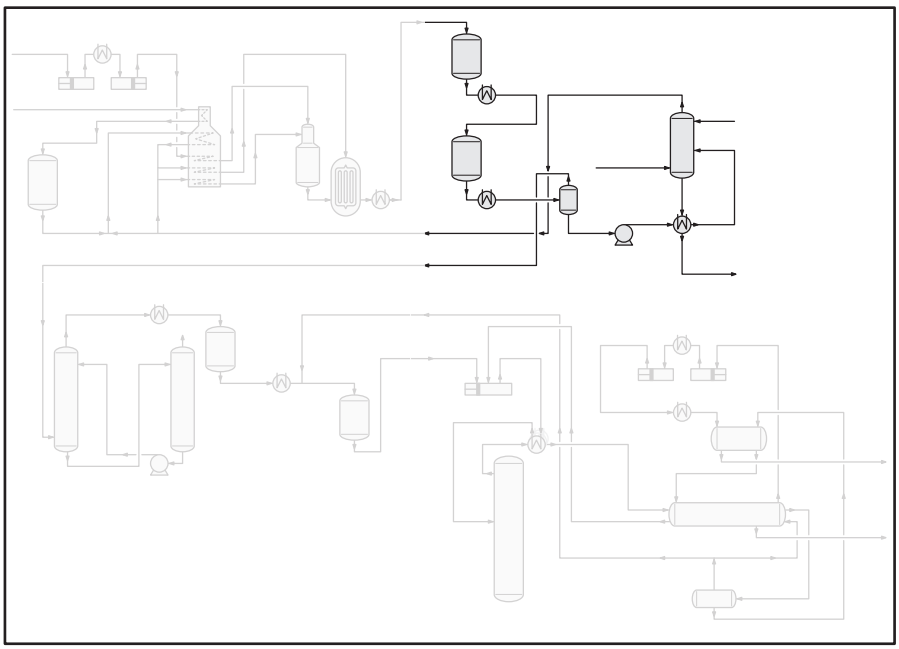
Valve Number	Valve Description	Design Temperature Range		Design Pressure Range		Pipe Size		Recommended Valve [1]						
		deg F	deg C	psig	bar g	in	dn	C-Series	T-Series	G-Series	ISOLATOR 2.0	iRSVP	Watson Series	FlexStream®
1	Fresh Air	50 – 150	10 – 65	100	6.9	4 – 8	100 – 200				•			
2	Compressed Air	100 – 200	38 – 93	500	34.8	4 – 8	100 – 200				•			
3	Fresh Methane Feed	50 – 100	10 – 38	100	6.9	3 – 6	75 – 150				•			
4	Heated Methane	300 – 400	150 – 200	300	20.6	3 – 6	75 – 150				•			
5	De-Sulphurized Methane	300 – 400	150 – 200	300	20.6	4 – 8	100 – 200				•			
6	De-Sulphurized Methane-Steam Mix	850	450	400	27.6	6 – 10	150 – 250				•			
7	Heater Outlet Mix Reformer	1000	540	600 – 750	41.4	6 – 10	150 – 250		•					
8	Reformer Outlet Heat Exchanger	800	427	600 – 750	41.4 – 51.7	8 – 12	200 – 300		•		•			
9	CO Shift Converter Intermediate	800	427	600 – 750	41.4 – 51.7	8 – 12	200 – 300		•		•			
10	CO Shift Converter Outlet	450	230	600 – 750	41.4 – 51.7	8 – 12	200 – 300				•			
11	Process Steam	500 – 1000	260 – 540	1000–1500	70 – 103.4	1 – 8	25 – 200				•	•		
12	Raw Synthesis Gas	450	230	450	31.0	10 – 14	150 – 300				•			
13	Carbon Dioxide Stripper Intermediate	100 – 200	38 – 93	800	55.1	12 – 18	300 – 460		•					
14	Carbon Dioxide Absorber Intermediate	200 – 300	93 – 150	800	55.1	12 – 18	300 – 460		•					
15	Carbon Dioxide Absorber Outlet	200-300	93 – 150	800	55.1	12 – 18	300 – 460		•					
16	Methanator	1200	650	450	31.0	16 – 24	410 – 610		•					
17	Dryer Inlet	100	38	450	31.0	16 – 24	410 – 610		•					
18	Fresh Synthesis Gas	100 – 200	38 – 93	550	37.9	20 – 28	510 – 710		•					
19	Synthesis Compressor Gas	600	315	600	41.4	20 – 28	510 – 710		•					
20	Ammonia Converter / Rectifier Column Intermediate	800	427	3000	206.8	10 – 14	250 – 360		•					
21	Ammonia Converter / Rectifier Column	800	427	3000	206.8	10 – 14	250 – 360		•					
22	Recycle Synthesis Gas	100 – 200	38 – 93	2700	186.2	8 – 12	200 – 300		•					
23	Refrigeration Exchanger	-50 – 50	-45 – 10	2700	186.2	8 – 14	200 – 360		•					
24	Refrigeration Compressor Inlet	-50 – 50	-45 – 10	3000	206.8	6 – 10	150 – 250		•					
25	Refrigeration Compressor Outlet	-50 – 50	-45 – 10	3200	220.6	4 – 8	100 – 200		•					
26	Ammonia Condenser / Separator	-50 – 50	-45 – 10	200 – 300	13.8 – 20.7	4 – 8	100 – 200				•			
27	Ammonia Final Recycle	-50 – 50	-45 – 10	400	27.6	4 – 8	100 – 200				•			
28	Ammonia Final Purge	-50 – 50	-45 – 10	400	27.6	4 – 8	100 – 200				•			
29	Ammonia Surge Drum Recycle	-50 – 50	-45 – 10	400	27.6	4 – 8	100 – 200				•			
30	Warm Ammonia	100 – 200	38 – 93	300	20.7	4 – 8	100 – 200				•			
31	Cold Ammonia	-50 – 100	-45 – 38	300	20.7	4 – 8	100 – 200				•			
	Heat Exchanger	300 – 1500	150 – 815	200 – 900	13.8 – 62.1	1/2 – 2	13 – 50					•		
	General Ball Valves	25 – 900	-4 – 480	25 – 600	1.7 – 41.4	1 – 3	25 – 75			•				

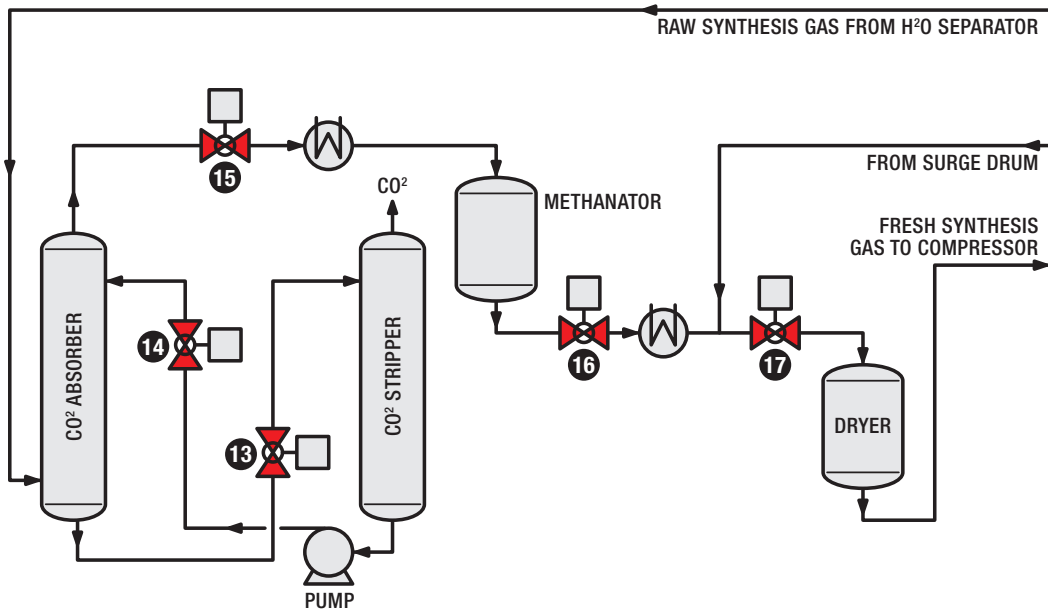
[1] Recommend ISOLATOR 2.0 or T-Series if size, pressure and temperature conditions are met.

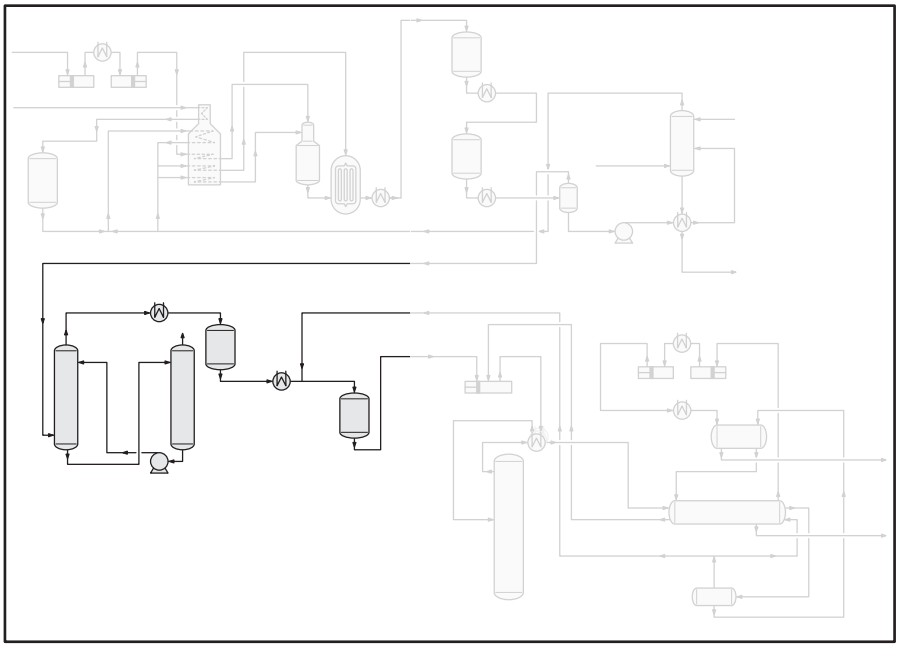












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