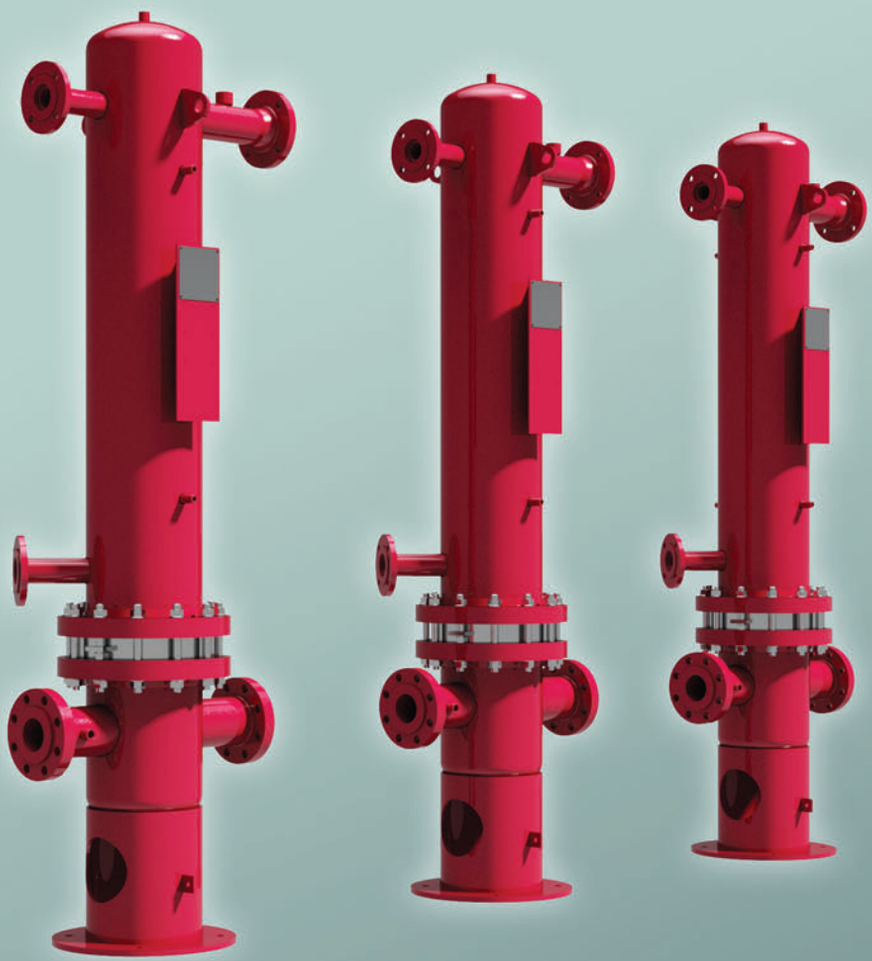
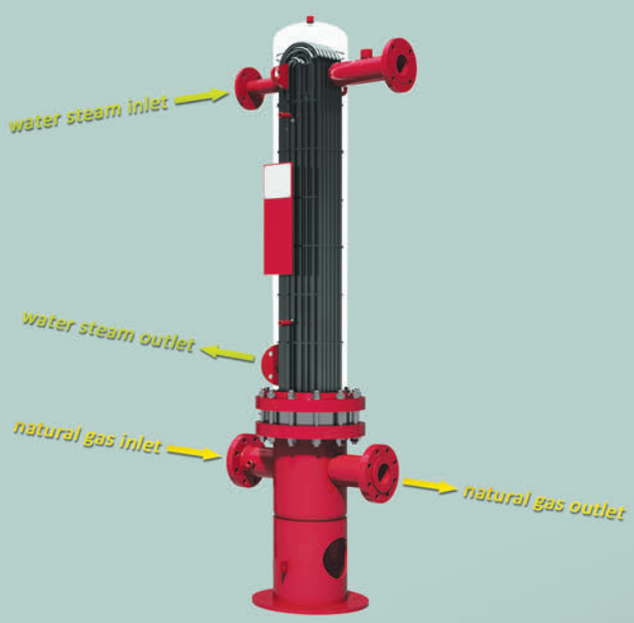
HEAT EXCHANGERS

shell & tube type



DELTA ENGINEERING

Natural Gas &
Water Treatment



MAIN FEATURES

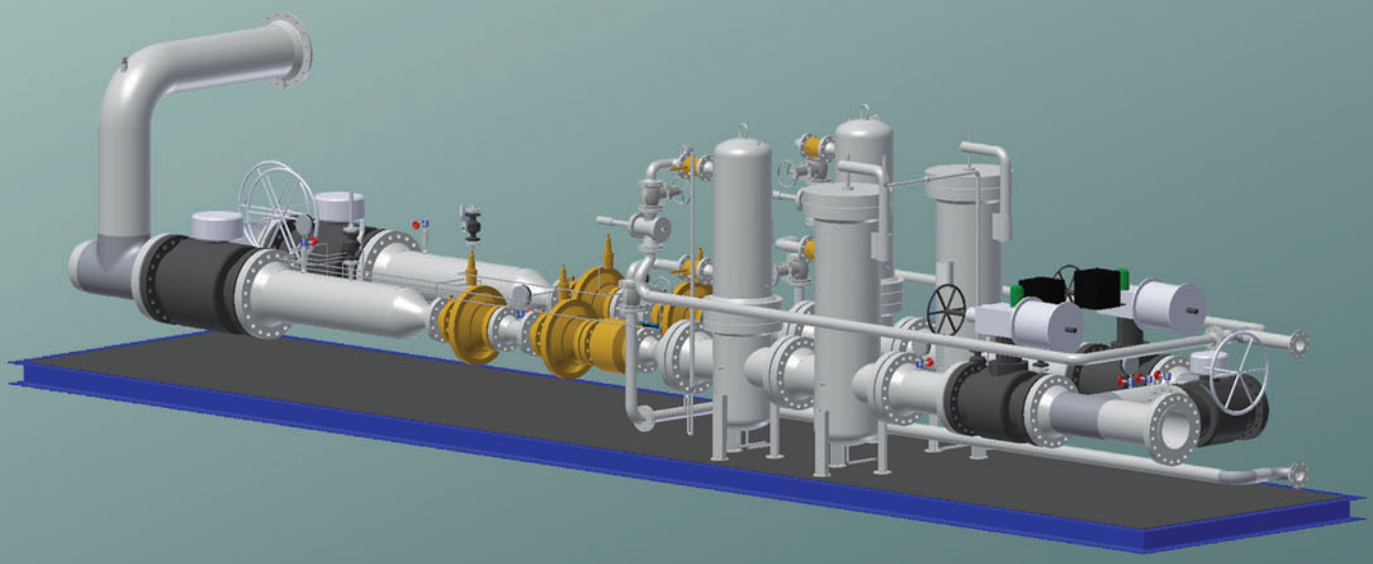
- Heating Fluid > hot and superheated water, steam
- Maximum working pressure > according to design code
- Maximum working temperature > 100°C
  (up to 250°C for superheated water and steam)
- Gas nozzle connection ANSI 300/600
- Water nozzle connection PN16, ANSI 150/300/600
- Screwed connection for condensate drain
- Screwed connection for relief valve on top shell side

OPERATION

Gas flowing at heat exchanger inlet is deflected by a separator, Gas passes through the tube plate and flows along the tube bundle. Here, thermal exchange with the thermal carrier fluid occurs. As a result, gas reaches outlet at an adequately increased temperature.
Then thermal carrier fluid (water or steam) enters the upper part and flows out into lower part of exchanger through appropriate outlets.
The fluid meets a set of diaphragms inside the shell, which are positioned to prolong its path and thus encourage thermal exchange with gas.

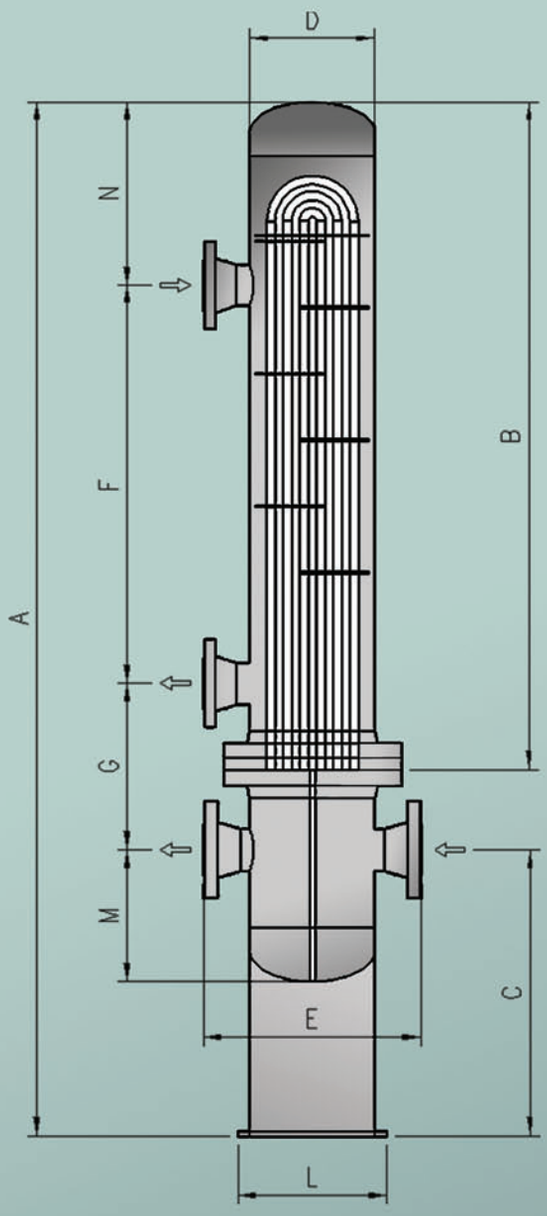
PRM Station (Pressure, Reduction & Metering Station)

In the gas pressure reduction process, temperature drops considerably due to“Joule-Thomson” effect. This fall in gas temperature, can damage equipment due to formation of dangerous ice crystals produced by water vapor in the gas. In first stage station in particular, gas must be heated before pressure is reduced, since high pressure changes are usually involved. One of the best established methods of heating gas in reduction station is to use heat exchangers employing hot water or steam as their thermal carrier fluid.

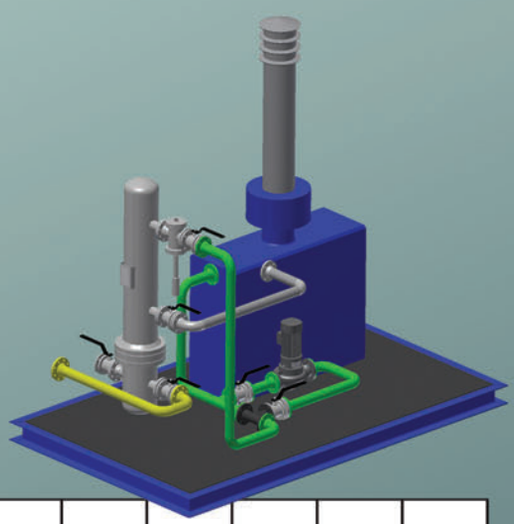


DELTA ENGINEERING

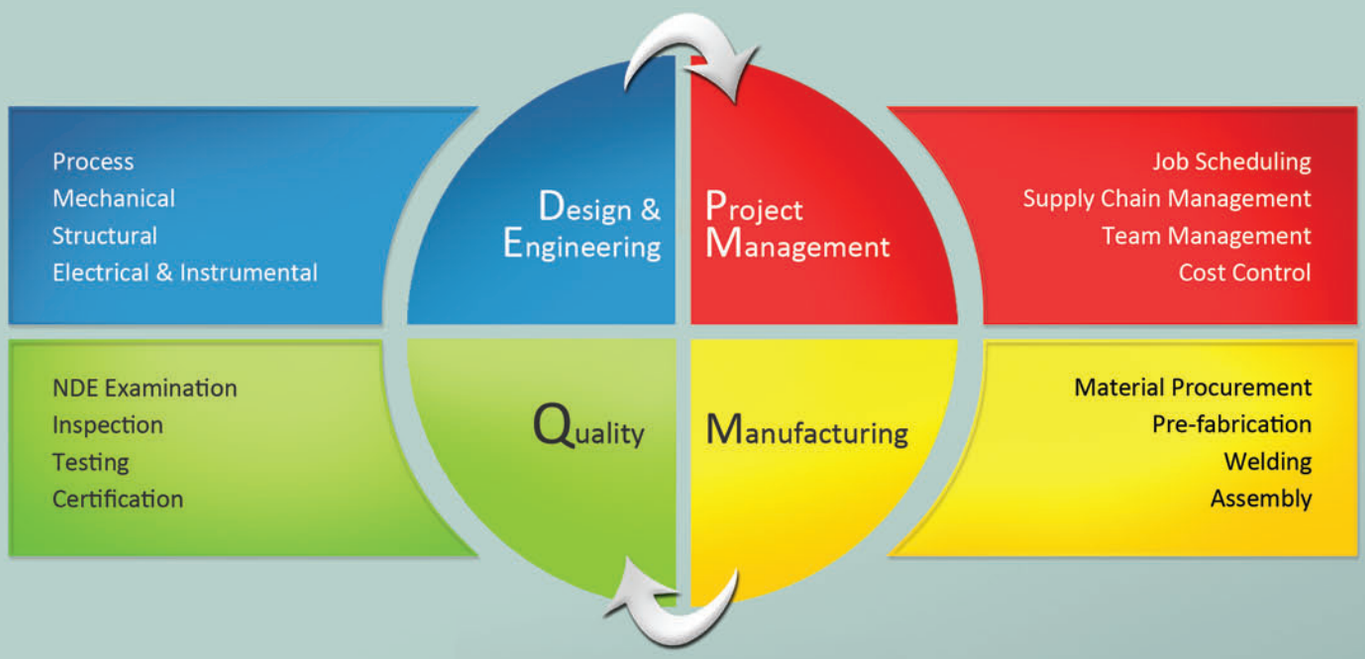
Natural Gas & Water Treatment



Type	Heating Surface (sqm)	Weight kg	Volume (lt)	
			Shell Side	Tube Side
HE-0,5	0,516	86	4,5	13,5
HE-1	0,995	260	10	21
HE-2	2,283	260	24	34
HE-3	4,353	350	48	57
HE-4	6,746	555	68	77
HE-5	11,441	850	127	128
HE-6	21,356	1800	210	250
HE-7	31,900	2500	450	370



Type	Nozzles Tube Side DN				Drain DN	Nozzles Shell Side DN	A	B	C	D	E	F	G	L	M
HE-0,5	1”	1” 1/2	-	-	Rp1/2”	40/50	2242	-	800	Ø141,3	450	975	200	300	210
HE-1	1” 1/2	2”	2” 1/2	3”	Rp1/2”	50	2404	1374	800	Ø168,3	500	950	390	400	210
HE-2	2”	2” 1/2	3”	4”	Rp1/2”	50	2530	1530	800	Ø219,1	600	975	418	400	275
HE-3	3”	4”	5”	6”	Rp1/2”	65	2720	1640	800	Ø273	750	1100	460	425	370
HE-4	4”	5”	6”	8”	Rp1/2”	80	2780	1690	800	Ø323,8	800	1100	500	475	370
HE-5	4”	5”	6”	8”	Rp1/2”	100	3040	1785	900	Ø406,4	1000	1100	615	520	480
HE-6	6”	8”	10”	-	Rp1”	125	3325	1946	1000	Ø508	1100	1100	760	640	548
HE-7	8”	10”	12”	-	Rp1”	150	3550	2100	1000	Ø609,6	1200	1100	810	640	700



ISO 9001
BUREAU VERITAS
Certification

Total Area: 8.000 m2
Covered Area: 3.000 m2
Open Area: 5.000 m2
Capacity Crane: 20 tons

Total Area: 4.000 m2
Covered Area: 2.000 m2
Open Area: 2.000 m2
Capacity Crane: 50 tons


Headquarter & Workshop #1


Workshop #2

DELTA ENGINEERING

our Brands

COSMEC

ELFORCONTROLS
Actuator and Valves Automation

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