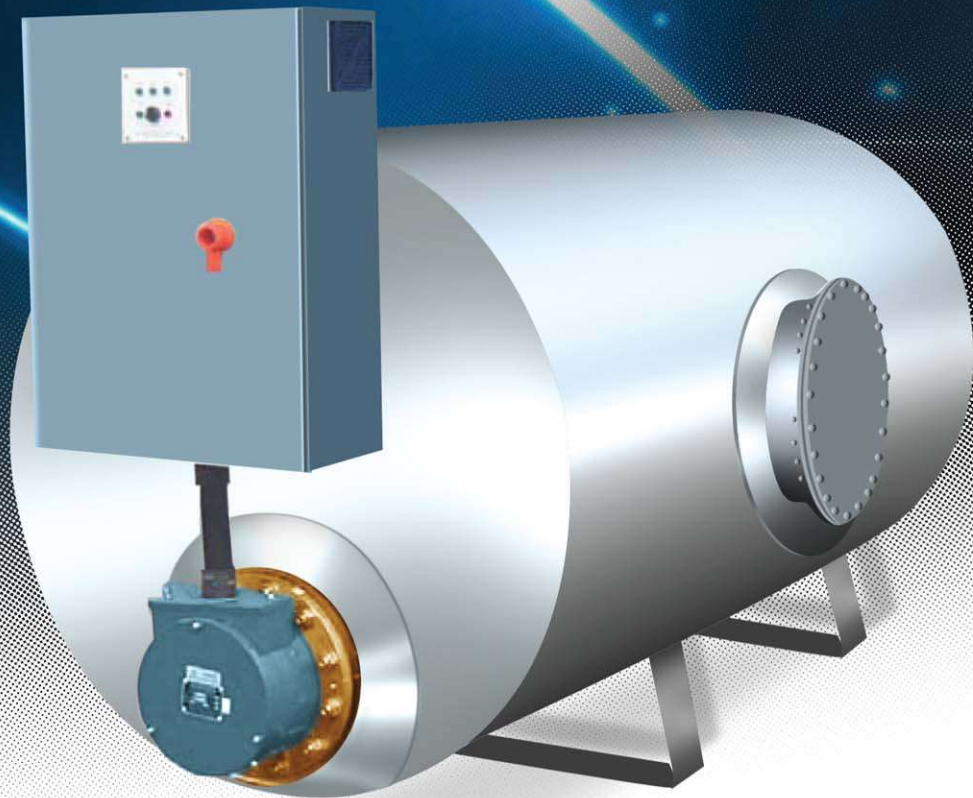




ESCO Engineering Private Limited



HOT WATER
CALORIFIER



ESCO Engineering Private Limited

Storage Calorifiers

ESCO designs and manufactures a unique range of storage / non-storage calorifiers, indirect cylinder and buffer vessels, suitable for both vented and unvented applications.

Vessels are designed to the latest American / British standards, the pressure equipment directive and building regulations, utilizing a variety of materials, pressures and primary mediums.

To compliment Stand-alone units, ESCO has the experience and infrastructure to offer a total package solution comprising with all components as per relevant Standards / Regulations.

- Manufacturing Standard : BS. 853 Part 1 and Part 2 / PD 5500 / DIN 4750.
- System Standard : BS 6700
- Vented and Unvented Applications
- Primary : Heat-Exchanger Type (U-tube / Coil Assly / Electrical)
- System Compatible Booster System with Ancillary Equipments

■ Control Panel :

Control Panels as standard are manufactured in Epoxy coated mild steel, to IP 55 standards. Panels have door-interlocked isolators, indicator lamps and Audio-Visual Alarm etc. Tailor made Panels can be designed and supplied on demand.

■ Insulation :

50 mm thick Fibre glass mattress mineral wool bed secured to the Shell encased in Galvanized Sheet followed by painting.

■ Ancillary Equipments :

- Pressure Relief Valve
- Pressure Gauge
- Thermometer
- Drain Valves
- Safety Valve
- High limit Valve
- Manual Vent Valve
- Sacrificial Anode
- Anti Vacuum Valve

■ Material of Construction :

- Carbon Steel as per Boiler quality to BS. 1501 - 151/161-430A
- Galvanized Shells are recommended for Hard Water areas. Carbon Steel Shell Hot dip / Spray Galvanized after Manufacture and Hydro-testing.
- Austenitic Stainless Steel Shells in AISI 316L or 304L
- Copper Lined Copper Sprayed Steel Shells are best for the Economy as well as Corrosion resistance, where pressure & temperature rating is high.
- Solid Copper Shells as per BS. 2870-C106.

■ Manufacturing Features :

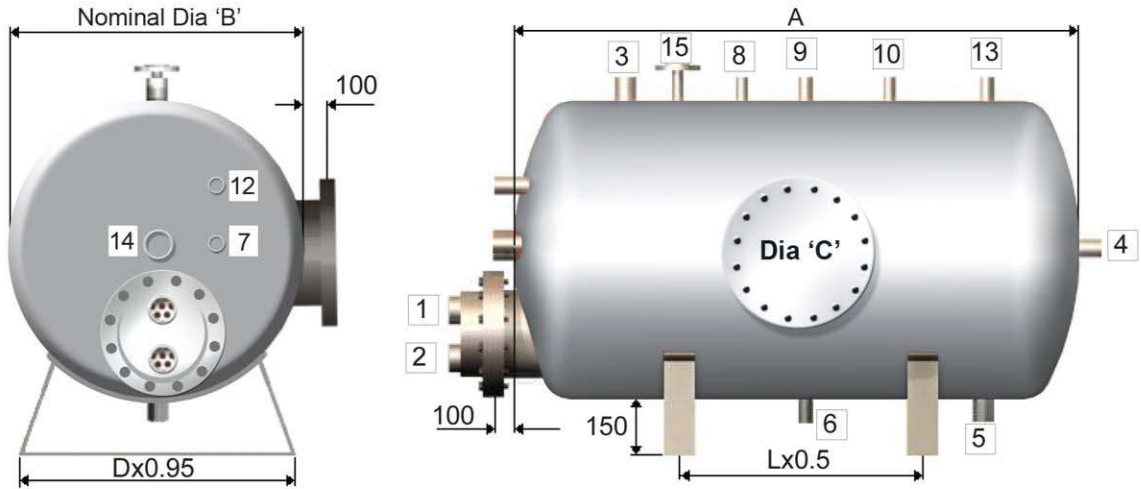
- Tubes are expanded into Tube Sheet by Electrically Operated Automatic Torque Control Expander to minimize un-uniform Stress development.
- After Expansion, Tubes mouth are Seal-welded by TIG-Argon process to ensure Leak-proof Joint.



Capacity	Dimensions (mm)		
Litres	A	B	C
440	1800	600	250
550	1700	675	250
700	1750	750	250
800	1950	750	250
900	2000	800	300
1000	1950	850	300
1200	2100	900	300
1350	2350	900	450
1500	1950	1050	450
1800	2300	1050	450
2000	2500	1050	450
2300	2400	1150	450
2500	2450	1200	450
3000	2900	1200	450
3500	2700	1350	450
4000	3050	1350	450
4500	3400	1350	450
5000	3200	1450	450
6000	3800	1450	450
7000	3300	1680	450
8000	3700	1680	450
9000	4200	1680	450
10000	4600	1680	450
12500	5000	1830	450
15000	6000	1830	450

Connections

Ref	Description	Size	Ref	Description	Size
1	Primary Inlet	Varies	9	Safety Valve	Varies
2	Primary Outlet	Varies	10	Pressure Gauge	3/8"
3	Secondary Flow	Varies	11	Vent (Optional)	Varies
4	Secondary Return	Varies	12	High Limit Thermostat (Optional)	1"
5	Cold Feed	Varies	13	Anti-Vacuum Valve (Optional)	Varies
6	Drain	Varies	14	Immersion Heater (Optional)	Varies
7	Control Thermostat	1"	15	Bursting Disc (If Specified)	Varies



Connections

Ref	Description	Size	Ref	Description	Size
1	Primary Inlet	Varies	8	Thermometer	1/2"
2	Primary Outlet	Varies	9	Safety Valve	Varies
3	Secondary Flow	Varies	10	Pressure Gauge	3/8"
4	Secondary Return	Varies	11	Vent (Optional)	Varies
5	Cold Feed	Varies	12	Anti-Vacuum Valve (Optional)	Varies
6	Drain	Varies	13	Immersion Heater (Optional)	Varies
7	Control Thermostat	1"	14	High Limit Thermostat (Optional)	1"

Capacity	Dimensions (mm)		
	Litres	A	B
440	1800	600	250
550	1700	675	300
700	1750	750	300
800	1950	750	300
900	2000	800	330
1000	1950	850	330
1200	2100	900	345
1350	2350	900	345
1500	1950	1050	395
1800	2300	1050	395
2000	2500	1050	395
2300	2400	1150	410
2500	2450	1200	430
3000	2900	1200	430

Contd...

Capacity	Dimensions (mm)		
Litres	A	B	C
3500	2700	1350	475
4000	3050	1350	475
4500	3400	1350	475
5000	3200	1450	500
6000	3800	1450	475
7000	3300	1650	475
8000	3700	1650	475
9000	4200	1650	475
10000	4600	1650	475
12500	5000	1850	550
15000	6000	1850	550

Non-Storage Calorifiers

ESCO offer a unique ranged of non-storage calorifiers for Chemical process plant, Food and Hospital industries. Non storage calorifiers offer a durable, economical for heating solutions and also designed to withstand high pressure and high temperature.

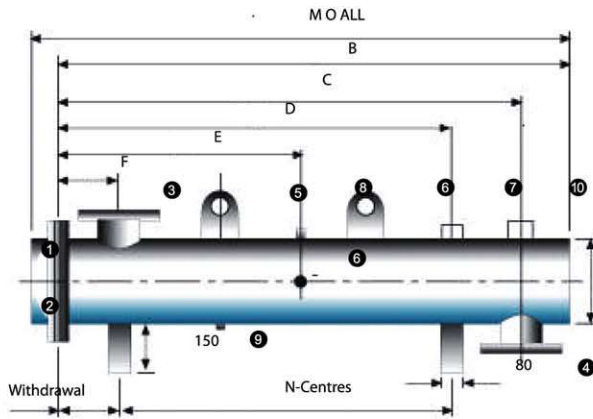
Non storage calorifiers are generally offered U-Tube batteries. These system are manufactured and designed in accordance with BS:853 part 1 or Part 2 with working pressure 20 Bars and Temperature up to 300 deg. C.

■ Design Standard

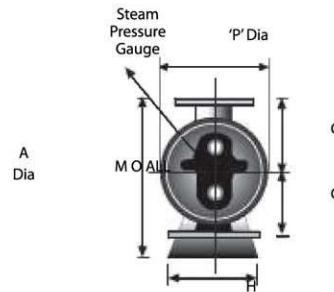
- Manufacturing Standard : BS. 853 Part 1 and Part 2/PD 5500
- TEMA Codes (Type C, B, R)
- ASME Codes

■ Material of Constructions :

- Shell : Mild Steel / Stainless Steel / Copper
- Tubes : Copper / Stainless Steel / Cupronickel



Units shown with Cast Iron chests, Carton steel chest fitted when required by temperature and pressure requirements.



Unit Reference	Nominal Dimensions (mm)																Dry Wgt. Kg
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	
100/09	114	915	775	580	440	125	160	115	365	900	200	970	405	190	315	678	42
100/12	114	1220	1075	850	625	125	160	115	365	1200	200	1270	705	190	315	678	48
100/15	114	1525	1375	1150	625	125	160	115	365	1500	200	1605	1005	190	315	678	54
150/09	168	915	775	600	425	125	185	170	420	900	200	1005	400	248	420	838	50
150/12	168	1220	1075	850	485	125	186	170	420	1200	200	1305	705	248	420	838	60
150/15	168	1525	1375	1150	545	125	185	170	420	1500	200	1605	1005	248	420	838	70
200/09	219	915	775	650	465	135	210	215	470	900	150	1050	405	330	600	1070	82
200/12	219	1220	1075	850	520	135	210	215	470	1200	200	1325	675	330	600	1070	97
200/15	219	1525	1375	1150	560	135	210	215	470	1500	200	1625	975	330	600	1070	112
250/09	273	915	725	600	430	200	236	275	525	900	150	1045	340	395	625	1150	120
250/12	273	1220	1025	800	625	200	236	275	525	1200	200	1345	595	395	625	1150	137
250/15	273	1525	1325	1100	625	200	235	275	525	1500	200	1645	895	395	625	1150	154
250/18	273	1830	1625	1400	745	200	235	275	525	1800	200	1945	1195	395	625	1150	171
300/09	325	915	725	610	440	200	262	325	575	900	150	1065	340	445	765	1340	205
300/12	323	1220	1025	825	500	200	262	325	575	1200	150	1365	650	445	765	1340	205
300/15	323	1525	1325	1100	600	200	262	325	575	1500	200	1660	900	445	765	1340	327
300/18	323	1830	1625	1400	600	200	262	325	575	1800	200	265	1200	445	765	1340	271
380/12	406	1220	1025	800	575	225	330	390	680	1200	150	1370	600	920	846	1525	281
380/15	406	1525	1325	1105	575	225	330	390	680	1500	200	1670	850	520	846	1525	330
380/18	406	1830	1625	1400	735	225	330	390	680	1800	200	1995	1150	520	846	1525	355

To improve the quality of our products, we reserve the right to alter or change dimensions and / or specifications without prior notice.

OTHER PRODUCTS

Non IBR / IBR Boiler

T. F. Heater

Hot Water Generator

Pressure Vessels

Reactors

Incinerator

An ISO 9001 (2008) Certified Company



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