

ESB

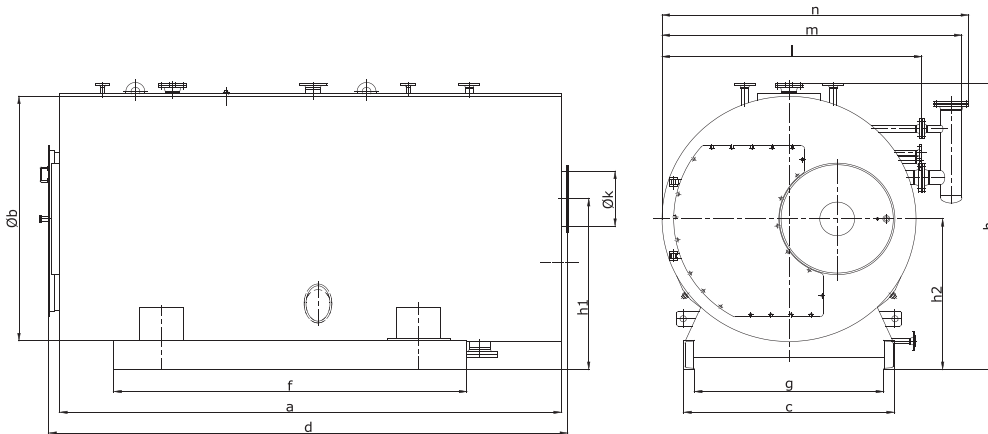
Liquid and Gas Fuel Fired, Three-Pass, High Pressure Steam Boiler



- * 1-30 t/h steam generation capacity
- * 6-16 bar operating pressure
- * Liquid and gas fired
- * Suitable for sudden steam intake with optimum water-steam volume ratio
- * Low furnace load to ensure burning is completed in furnace (< 1,3 MW/m³)
- * Complete burning and low NOx emission, thanks to thermal design
- * Wet-back design enables maximum benefit from heat transfer surface
- * Thanks to high density insulation material used in coating boiler body, radiation and standby losses are reduced
- * Up-to 91% boiler efficiency (Up-to 95.5% efficiency in economizer applications)
- * Easy assembly and interference with catwalk platform on the boiler
- * Optional water, air economizer, superheater use

ESB

Fluid and Gas Fueled, Three-Pass, High Pressure Steam Boiler

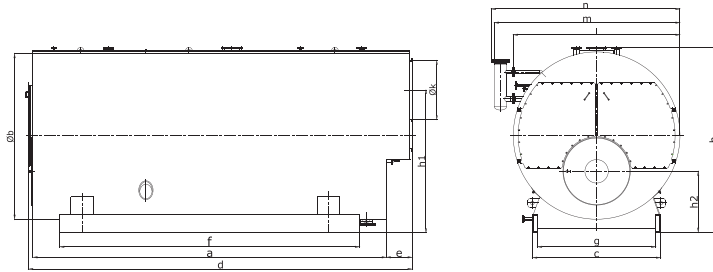


ESB 100 - ESB 300

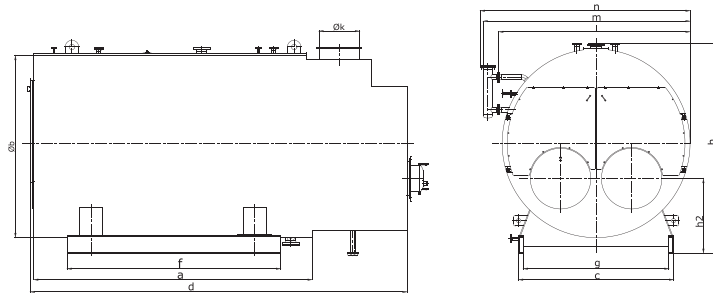
Technical Specifications	Unit	100	125	150	200	250	300
Capacity	kg/h	1000	1.250	1.500	2.000	2.500	3.000
Capacity	kW	655	818	982	1.309	1.637	1.964
Fuel Consumption (Natural Gas)	[Nm ³ /h]	76	96	115	153	191	229
Water Volume	m ³	1,67	2,04	2,52	3,07	4,02	4,27
a	mm	2.730	2.985	3.340	3.490	3.930	3.930
Øb	mm	1.556	1.622	1.682	1.820	1.924	2.008
c	mm	1.240	1.300	1.350	1.500	1.570	1.670
d	mm	2.916	3.171	3.526	3.676	4.114	4.116
f	mm	1.870	2.125	2.270	2.370	2.810	2.800
g	mm	1.090	1.150	1.200	1.350	1.400	1.500
h	mm	1.893	1.953	2.048	2.158	2.300	2.406
h1	mm	1.114	1.137	1.248	1.290	1.380	1.400
h2	mm	956	986	1.040	1.090	1.158	1.236
Øk	mm	250	250	300	350	350	400
l	mm	1.612	1.672	1.732	1.870	1.975	2.060
m	mm	1.930	1.990	2.050	2.189	2.293	2.380
n	mm	1.983	2.043	2.103	2.242	2.346	2.432
Counter-Pressure	mbar	4,8	4,8	4,8	4,8	4,8	4,8
Empty Weight	ton	3,4	3,7	4,3	5,2	6	6,7

ESB

Fluid and Gas Fueled, Three-Pass, High Pressure Steam Boiler



ESB 400 - ESB 3000



ESB-T 1800 - ESB-T 3000



Technical Specifications	Unit	400	500	600	700	850	1000	1200	1400	1500
Capacity	kg/h	4.000	5.000	6.000	7.000	8.500	10.000	12.000	14.000	15.000
Capacity	kW	2.619	3.273	3.928	4.583	5.565	6.547	7.856	9.165	9.820
Fuel Amount (Natural Gas)	[Nm ³ /h]	306	382	459	535	650	765	918	1.071	1.147
Water Volume	m ³	9,41	11,77	12,80	14,53	16,63	18,16	23,86	27,09	27,92
a	mm	4.635	5.000	5.072	5.411	5.479	5.833	6.483	6.633	6.874
Øb	mm	2.416	2.590	2.698	2.798	2.970	3.040	3.247	3.417	3.440
c	mm	2.000	2.000	2.050	2.050	2.360	2.400	2.400	2.700	2.700
d	mm	5.097	5.477	5.538	5.842	5.946	6.299	6.949	7.099	7.340
e	mm	380	380	380	380	380	380	380	380	380
f	mm	3.445	3.770	3.840	4.226	4.280	4.690	5.055	5.370	5.650
g	mm	1.800	1.800	1.850	1.850	2.160	2.200	2.200	2.500	2.500
h	mm	2.771	2.925	3.060	3.120	3.336	3.401	3.606	3.787	3.810
h1	mm	2.100	2.154	2.260	2.384	2.551	2.540	2.755	2.870	2.900
h2	mm	965	985	1.040	1.052	1.161	1.173	1.223	1.246	1.313
Øk	mm	450	550	600	600	700	750	800	900	900
l	mm	2.396	2.568	2.698	2.798	2.970	3.040	3.247	3.417	3.440
m	mm	2.690	2.856	2.987	3.086	3.347	3.417	3.624	3.786	3.810
n	mm	2.742	2.909	3.040	3.139	3.407	3.477	3.684	3.852	3.875
Counter-Pressure	mbar	4,8	4,8	4,8	4,8	4,8	6,5	6,5	6,5	6,5
Approximate Empty Weight	ton	9	10,6	11,8	13,6	15,5	18,4	22,2	25,4	26,8

Technical Specifications	Unit	1600	1800	-T 1800	2000	-T 2000	2500	-T 2500	3000	-T 3000	-T 3000
Capacity	kg/h	16.000	18.000	18.000	20.000	20.000	25.000	25.000	30.000	30.000	35.000
Capacity	kW	10.474	11.784	11.784	13.093	13.093	16.366	16.366	19.640	19.640	22.790
Fuel Amount (Natural Gas)	[Nm ³ /h]	1.224	1.376	1.376	1.529	1.529	1.912	1.912	2.294	2.294	2.676
Water Volume	m ³	29,58	34,32	27,23	33,31	32,27	38,77	38,80	40,78	46,39	53,78
a	mm	7.102	7.714	5.360	7.714	5.360	8.602	5.974	8.615	5.980	6.918
Øb	mm	3.500	3.544	3.970	3.574	4.003	3.774	4.227	3.947	4.418	4.950
c	mm	2.700	2.820	3.158	2.860	3.175	2.860	3.175	3.290	3.640	4.000
d	mm	7.568	8.180	7.240	8.180	7.240	9.068	8.025	9.078	8.000	8.725
e	mm	380	380	*	380	*	380	*	380	*	*
f	mm	5.840	6.200	3.950	6.200	3.950	7.340	4.640	7.340	4.640	5.000
g	mm	2.500	2.600	2.940	2.640	2.955	2.640	2.955	3.070	3.420	3.780
h	mm	3.870	3.944	4.377	3.986	4.425	4.184	4.644	4.431	4.900	5.412
h1	mm	2.950	3.023	*	3.074	*	3.241	*	3.465	*	*
h2	mm	1.282	1.296	1.465	1.350	1.525	1.382	1.561	1.540	1.747	1.798
Øk	mm	950	1.000	1.000	1.050	1.050	1.150	1.150	1.250	1.250	1.350
l	mm	3.500	3.545	4.041	3.575	4.075	3.775	4.304	3.945	4.495	4.838
m	mm	3.868	3.967	4.483	3.997	4.517	4.143	4.681	4.315	4.865	5.215
n	mm	3.935	4.033	4.547	4.063	4.583	4.210	4.747	4.380	4.930	5.270
Counter-Pressure	mbar	6,5	8,5	8,5	8,5	8,5	8,5	8,5	8,5	8,5	8,5
Approximate Empty Weight	ton	28,5	30,6	31,1	32,5	33,8	36,6	38,8	42,7	43,5	61,5