



PRESSURIZED STEEL BOILER WITH REVERSED FLAME

OUTPUT RANGE

from 64 to 291 kW

WORKING TEMPERATURE

minimum return temperature higher than 50°C

OPERATION WITH

gas or oil fired pressure jet burners

MODELS

64	76	93	105	116
140	163	186	233	291

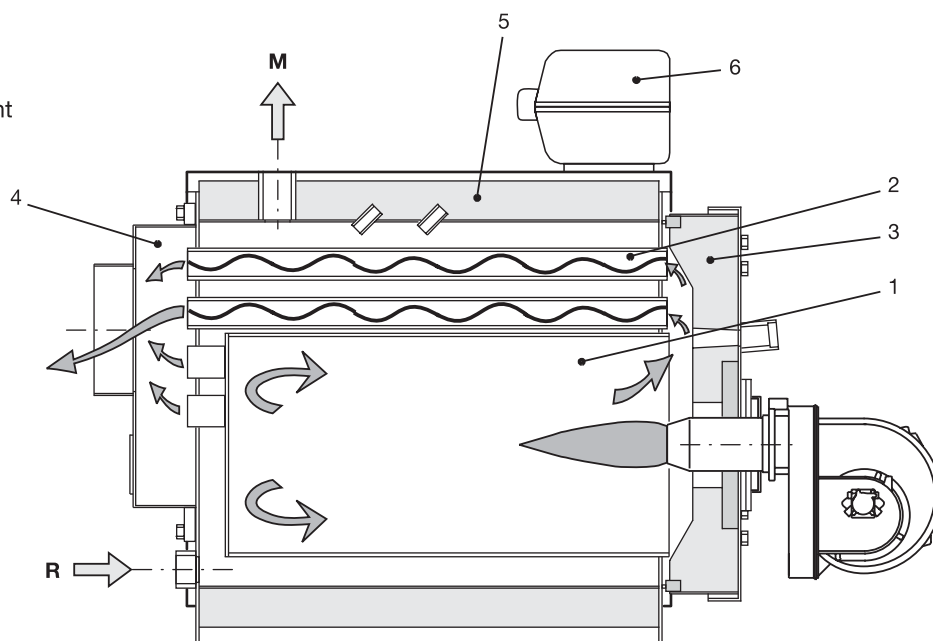
EFFICIENCY CLASS
according to Dir. 92/42/EC



Decentralization of tube bundle for high resistance to the condensate

MAIN COMPONENTS

1. Furnace
2. Smoke pipes with smoke diverters
3. Door with flame control warning light
4. Smoke chamber
5. Body insulation
6. Panel board



TECHNICAL DATA

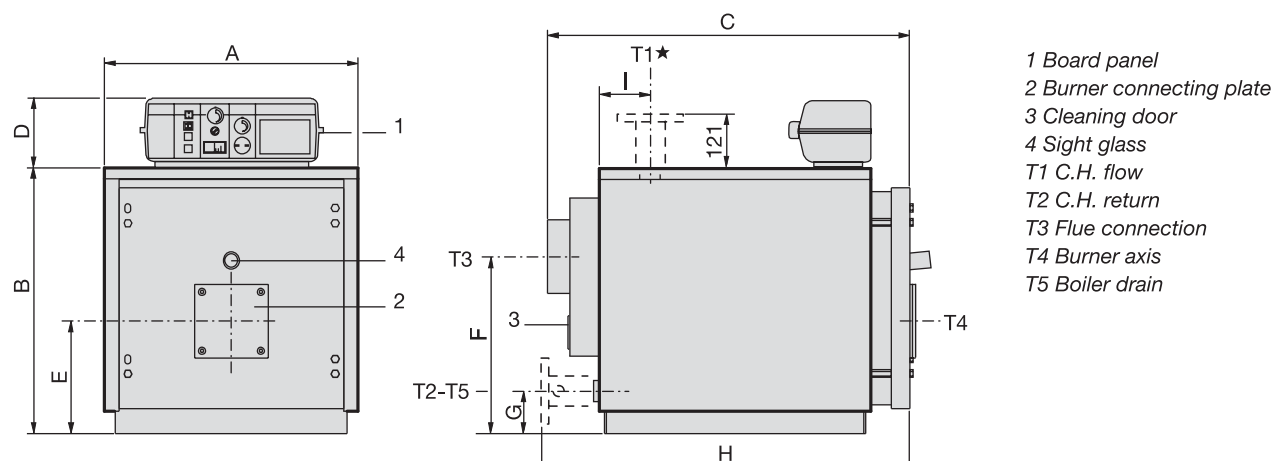
SKD		64	76	93	105	116	140	163	186	233	291
NOMINAL OUTPUT	<i>kW</i>	64	76	93	105	116	140	163	186	233	291
NOMINAL INPUT	<i>kW</i>	71	84	102	115	128	155	180	206	258	322
WATER EFFICIENCY AT NOMINAL LOAD	%	90,1	90,4	91,1	91,3	90,6	90,3	90,5	90,3	90,3	90,4
BOILER CAPACITY	<i>l</i>	86	86	86	126	126	126	151	151	203	247
WATER PRESSURE DROPS*	<i>m w.c.</i>	0,10	0,13	0,16	0,10	0,10	0,14	0,20	0,25	0,22	0,30
FLUE GAS PRESSURE DROP	<i>mm w.c.</i>	1,5	1,8	2,5	3	3	5	8	14	18	22
MAXIMUM BOILER WORKING PRESSURE**	<i>bar</i>	6	6	6	6	6	6	6	6	6	6
WEIGHT	<i>kg</i>	195	195	195	280	280	280	318	318	420	480

*Pressure drops corresponding to a thermal variation of 15K. **On request, available up to 10 bar.

PRODUCT PLUS VALUES

- **COMPACT DIMENSIONS**
simplifies the transport and the positioning in boiler house
- **THERMAL EXCHANGE OPTIMISATION**
by driven water passage into the boiler
- **TUBE BUNDLE POSITIONING**
decentralized upwards, above the furnace, with drastic reduction of the possible condensation
- **SMOKE PIPES OF HIGH THICKNESS**
with anti-condensing effect
- **TURBULATORS**
for the thermal exchange optimisation into the smoke pipes
- **BOTTOM OF THE FURNACE**
reinforced with U profiles for greater mechanical resistance
- **INTERNAL DOOR INSULATION**
in light refractory concrete
- **FRONT DOOR**
with self-centering locking
- **EXTERNAL CASING**
inclusive of 60 mm rock wool insulation
- **PANEL BOARD**
suitable for electronic control

DIMENSIONS SKD 64÷291



SKD	Nominal output kW	Nominal input kW	Boiler capacity l	Water pressure drops(**) m w.c.	Flue gas pressure drop mm w.c.	Maximum boiler working pressure bar	Weight kg	CONNECTIONS			
								T1 - T2 ISO 7/1 UNI 2278 PN16	T3 Øe mm	T4 Øi mm	T5 Øi ISO 7/1
64	64	71	86	0,10	1,5	6	212	Rp 1½	200	130	Rp ¾
76	76	84	86	0,13	1,8	6	212	Rp 1½	200	130	Rp ¾
93	93	102	86	0,16	2,5	6	212	Rp 1½	200	130	Rp ¾
105	105	115	126	0,10	3	6	309	Rp 2	200	180	Rp ¾
116	116	128	126	0,10	3	6	309	Rp 2	200	180	Rp ¾
140	140	155	126	0,14	5	6	309	Rp 2	200	180	Rp ¾
163	163	180	151	0,20	8	6	349	Rp 2	200	180	Rp ¾
186	186	206	151	0,25	14	6	349	Rp 2	200	180	Rp ¾
233	233	258	203	0,22	18	6	485	DN 65*	250	180	Rp ¾
291	291	322	247	0,30	22	6	555	DN 65*	250	180	Rp ¾

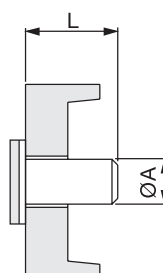
SKD	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I mm
64	690	722	990	190	305	480	115	--	147
76	690	722	990	190	305	480	115	--	147
93	690	722	990	190	305	480	115	--	147
105	760	812	1205	190	350	500	130	--	157
116	760	812	1205	190	350	500	130	--	157
140	760	812	1205	190	350	500	130	--	157
163	760	812	1385	190	350	500	130	--	157
186	760	812	1385	190	350	500	130	--	258
233	860	937	1437	190	421	580	165	1482	258
291	860	937	1687	190	421	580	165	1732	258

(*) In the SKD 233 and SKD 291 models, connections T1 and T2 are flanged.

(**) Pressure drops corresponding to a thermal variation of 15K.

BURNER HEAD TUBE DIMENSIONS

BOILER TYPE	øA mm	L mm
SKD 64÷93	130	150
SKD 105÷140	180	170
SKD 163÷186	180	170
SKD 233÷291	180	170



TECHNICAL DATA

ELECTRICAL, HYDRAULIC, INSTALLATION DIAGRAMS AND CONTROLLERS can be unloaded from the web site www.schusterboilers.com at the page of the product

Gas fired		SKD 64	SKD 76	SKD 93	SKD 105	SKD 116
Nominal output	<i>kW</i>	64,0	76,0	93,0	105,0	116,0
Nominal input	<i>kW</i>	71,0	84,0	102,0	115,0	128,0
Water efficiency at full load (100%)	%	90,1	90,4	91,1	91,3	90,6
Water efficiency at part load (30%)	%	85,4	85,6	85,9	86	86,1
Efficiency class (ex dir. 92/42 CEE)		1	1	1	1	1
Combustion efficiency at nominal load (100%)	%	90,6	91	91,6	91,8	91,1
Casing heat losses (80°-60°C)	%	0,5	0,5	0,5	0,5	0,4
Chimney losses with burner on	%	9,3	8,9	8,3	8,1	8,9
Chimney losses with burner off	%	0,2	0,2	0,2	0,2	0,2
Net flue gas temperature tf-ta	°C	187,0	180,4	169,2	167,3	182,3
CO ₂ content	%	9,5	9,6	9,7	9,8	9,8
Flue gas mass flow rate	<i>kg/h</i>	109,0	128,5	154,7	172,9	192,4

Gas fired		SKD 140	SKD 163	SKD 186	SKD 233	SKD 291
Nominal output	<i>kW</i>	140,0	163,0	186,0	233,0	291,0
Nominal input	<i>kW</i>	155,0	180,0	206,0	258,0	322,0
Water efficiency at full load (100%)	%	90,3	90,5	90,2	90,3	90,3
Water efficiency at part load (30%)	%	86,4	86,6	86,8	87,1	87,3
Efficiency class (ex dir. 92/42 CEE)		1	1	1	1	1
Combustion efficiency at nominal load (100%)	%	90,8	91,2	91	91	90,8
Casing heat losses (80°-60°C)	%	0,5	0,6	0,7	0,7	0,5
Chimney losses with burner on	%	9,1	8,7	8,9	8,9	9,1
Chimney losses with burner off	%	0,2	0,2	0,2	0,2	0,2
Net flue gas temperature tf-ta	°C	187,9	179,5	184,2	183,2	187,0
CO ₂ content	%	9,8	9,8	9,8	9,8	9,8
Flue gas mass flow rate	<i>kg/h</i>	233,0	270,6	309,6	387,8	484,0

Oil fire		SKD 64	SKD 76	SKD 93	SKD 105	SKD 116
Nominal output	<i>kW</i>	64,0	76,0	93,0	105,0	116,0
Nominal input	<i>kW</i>	71,0	84,0	102,0	115,0	128,0
Water efficiency at full load (100%)	%	90,1	90,4	91,1	91,3	90,6
Water efficiency at part load (30%)	%	85,4	85,6	85,9	86	86,1
Efficiency class (ex dir. 92/42 CEE)		1	1	1	1	1
Combustion efficiency at nominal load (100%)	%	90,6	91	91,6	91,7	91,1
Casing heat losses (80°-60°C)	%	0,5	0,5	0,4	0,4	0,4
Chimney losses with burner on	%	9,3	8,9	8,3	8,2	8,9
Chimney losses with burner off	%	0,2	0,2	0,2	0,2	0,2
Net flue gas temperature tf-ta	°C	200,0	193,0	181,0	179,0	195,0
CO ₂ content	%	12,4	12,5	12,6	12,7	12,8
Flue gas mass flow rate	<i>kg/h</i>	111,4	131,6	158,6	177,4	196

Oil fire		SKD 140	SKD 163	SKD 186	SKD 233	SKD 291
Potenza termica utile nominale	<i>kW</i>	140,0	163,0	186,0	233,0	291,0
Potenza termica del focolare	<i>kW</i>	155,0	180,0	206,0	258,0	322,0
Rendimento termico utile a carico nominale (100%)	%	90,3	90,5	90,2	90,3	90,3
Rendimento termico utile richiesto a 1 stella (30%)	%	86,4	86,6	86,8	87,1	87,3
Numero di stelle (secondo ex dir. 92/42 CEE)		1	1	1	1	1
Rendimento di combustione a carico nominale (100%)	%	90,8	91,2	91	91	90,8
Perdite al mantello (80°-60°C)	%	0,5	0,6	0,7	0,7	0,5
Perdite al camino con bruciatore acceso	%	9,1	8,7	8,9	8,9	9,1
Perdite al camino con bruciatore spento	%	0,2	0,2	0,2	0,2	0,2
Temperatura dei fumi tf-ta	°C	201,0	192,0	197,0	196,0	200,0
Tenore di CO ₂	%	12,8	12,8	12,8	12,8	12,8
Portata massica fumi	<i>kg/h</i>	237,4	275,6	315,4	395,1	493,1



PRESSURIZED STEEL BOILER WITH REVERSED FLAME

OUTPUT RANGE

from 340 to 7000 kW

WORKING TEMPERATURE

minimum return temperature 55°C

OPERATION WITH

gas or oil fired pressure jet burners

MODELS

340	420	510	630	760	870	970	1100	1320	1570	1850
2200	2650	3000	3500	4000	4500	5000	5500	6000	6500	7000

EFFICIENCY CLASS
according to Dir. 92/42/EC

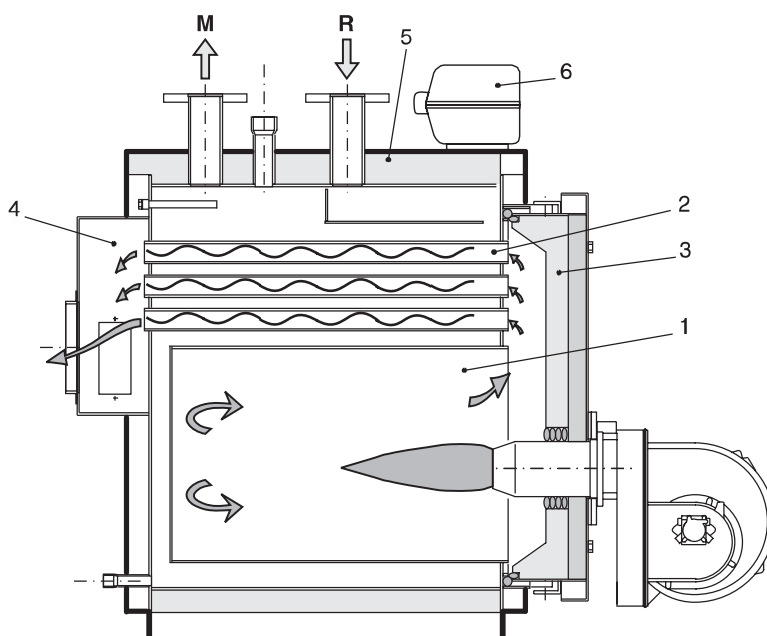
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CERTIFICATION IN OUTPUT RANGE

(in the order, it's possible to request a specific output within the certified range)

MAIN COMPONENTS

1. Furnace
2. Smoke pipes with smoke diverters
3. Door with flame control warning light
4. Smoke chamber
5. Body insulation
6. Panel board



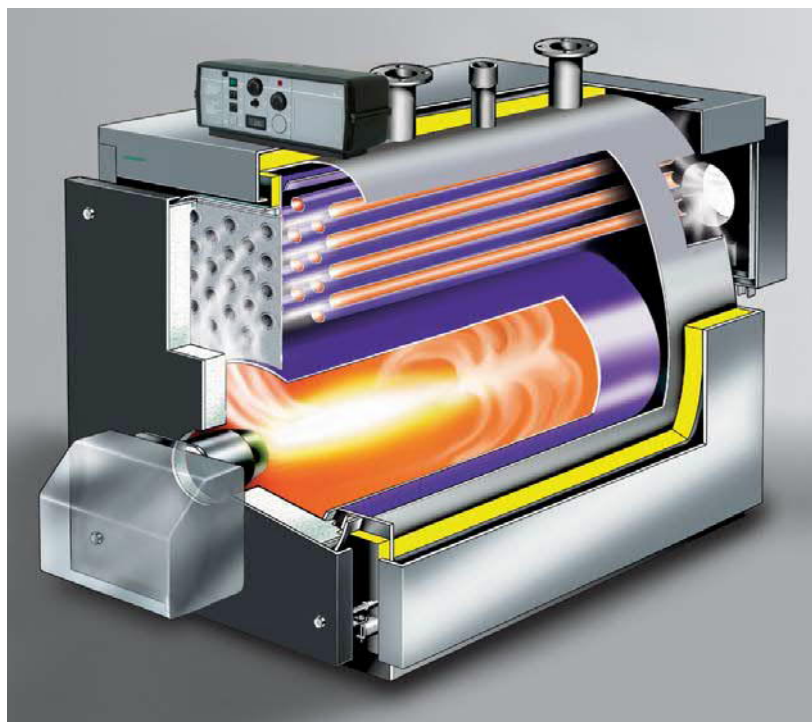
TECHNICAL DATA

Model	Heat output min/max <i>kW</i>	Heat input min/max <i>kW</i>	Boiler capacity <i>l</i>	Water side pressure drops <i>m w.c.</i>	Flue gas pressure drops <i>mm w.c.</i>	Max. boiler operating pressure <i>bar</i>	Combustion chamber <i>m³</i>	Weight <i>kg</i>
SKD 340	255÷340	277÷371	298	0,16÷0,28	17÷34	6	0,226	629
SKD 420	315÷420	342÷459	398	0,09÷0,17	16÷29	6	0,288	849
SKD 510	385÷510	418÷557	462	0,14÷0,25	24÷43	6	0,337	972
SKD 630	480÷630	520÷688	565	0,21÷0,38	32÷55	6	0,416	1102
SKD 760	580÷760	630÷830	671	0,15÷0,26	29÷51	6	0,513	1372
SKD 870	660÷870	715÷950	753	0,19÷0,33	33÷ 57	6	0,584	1482
SKD 970	750÷970	815÷1060	836	0,24÷0,41	29÷ 49	6	0,656	1588
SKD 1100	860÷1100	935÷1200	1040	0,18÷0,30	32÷52	6	0,748	1821
SKD 1320	1000÷1320	1087÷1442	1242	0,20÷0,35	38÷67	6	0,869	2030
SKD 1570	1200÷1570	1304÷1715	1418	0,19÷0,33	35÷60	6	1,087	2780
SKD 1850	1400÷1850	1520÷2020	1617	0,26÷0,45	42÷73	6	1,303	3280
SKD 2200	1700÷2200	1845÷2400	2086	0,21÷0,34	39÷65	6	1,650	4145
SKD 2650	2000÷2650	2170÷2890	2324	0,28÷0,48	43÷76	6	1,866	4465
SKD 3000	2300÷3000	2492÷3280	2667	0,36÷0,62	35÷60	6	2,313	5110
SKD 3500	2700÷3500	2930÷3825	4142	0,54÷0,84	47÷74	6	2,601	6700
SKD 4000	3200÷4000	3478÷4371	4455	0,54÷0,85	60÷80	6	3,126	7500
SKD 4500	3420÷4500	3638,3÷4838,7	6012	0,70÷0,85	51÷88	6	4,151	7750
SKD 5000	3800÷5000	4064,2÷5421,8	6012	0,80÷1,05	65÷110	6	4,151	7750
SKD 5500	4180÷5500	4446,8÷5914	7058	0,95÷1,15	60÷100	6	4,838	9300
SKD 6000	4870÷6000	4877÷6506,2	7058	1,00÷1,35	68÷120	6	4,838	9300
SKD 6500	4940÷6500	5255,3÷6989,2	7909	1,05÷1,50	61÷105	6	6,832	12600
SKD 7000	5320÷7000	5689,8÷7590,5	7909	1,10÷1,75	69÷120	6	6,832	12600

Pressure drops corresponding to a thermal variation of 15K.

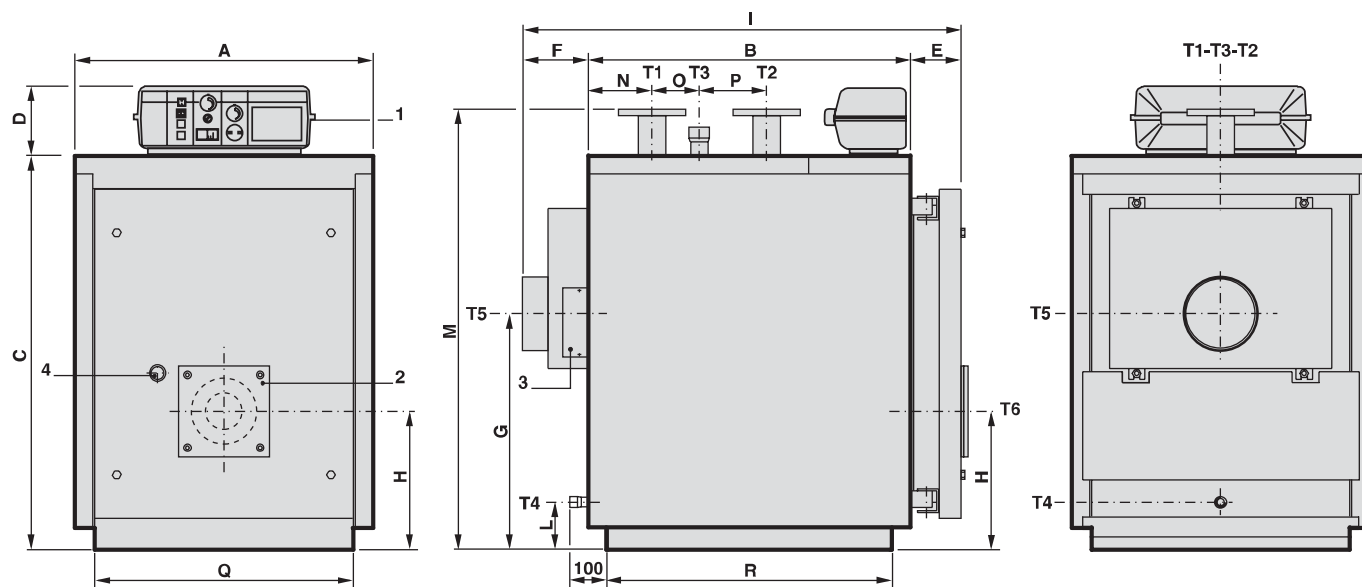
On special order the boilers from model SKD 1100 to SKD 7000 can be manufactured for a max. working pressure up to 10 bar.

PRODUCT PLUS VALUES



- **FLEXIBILITY OF USE**
- **THERMAL EXCHANGE OPTIMISATION**
by driven water passage into the boiler
- **THE ELLIPTIC SHELL SHAPE (up to 970 kW)**
has interesting advantages:
 - smaller dimensions (for easier transport and positioning)
 - smoke pipes positioning above the furnace with drastic reduction of the possible condensation
- **SMOKE PIPES OF HIGH THICKNESS**
with anti-condensing effect
- **TURBOLATORS**
for the thermal exchange optimisation into the smoke pipes
- **CYLINDRICAL FLOATING FURNACE**
anti thermo-mechanic stress from 760 kW
- **BOTTOM OF THE FURNACE WITH DISSIPATION PLATES**
for greater performance and greater mechanical resistance
- **FRONT DOOR**
with self centering locking
- **INTERNAL DOOR INSULATION**
in light refractory concrete
- **EXTERNAL CASING**
inclusive of 80 mm rock wool insulation
- **THERMOSTATIC OR ELECTRONIC CONTROL PANELS**
- **FACILITATED TRANSPORT**
thanks to the upper hooks and strong base plates

DIMENSIONS SKD 340÷970



- 1 Panel board
 2 Burner connection flange
 3 Smoke chamber cleaning door
 4 Flame control warning light

- T1 Heating flow
 T2 Heating return
 T3 Expansion vessel connection
 T4 Boiler drain

- T5 Chimney connection
 T6 Burner connection

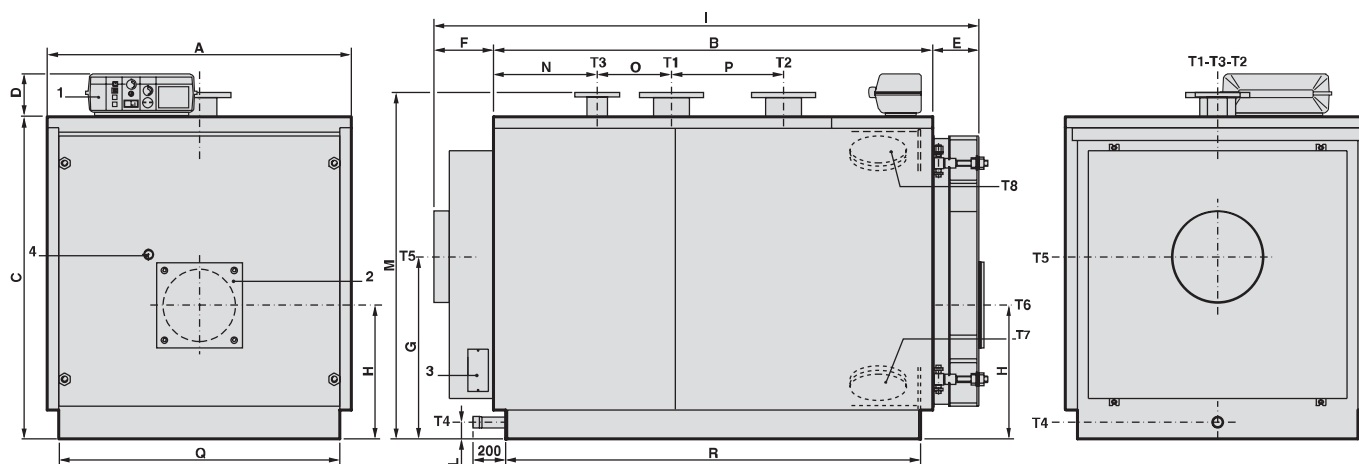
SKD	Nominal output	Nominal input	Boiler capacity	Water pressure drops(*)	Flue gas pressure drop	Maximum boiler working pressure	Weight	CONNECTIONS				
	kW	kW	I	m w.c.	mm w.c.	bar	kg	T1 T2	T3 ISO 7/1 UNI2278 PN16	T4 ISO 7/1	T5 Øi	T6 Ø
								UNI2278 PN16	UNI2278 PN16	ISO 7/1	mm	mm
340	255÷340	277÷371	298	0,16÷0,28	17÷34	6	629	DN 80	Rp 2	Rp ¾	250	220
420	315÷420	342÷459	398	0,09÷0,17	16÷29	6	796	DN 100	Rp 2	Rp ¾	250	220
510	385÷510	418÷557	462	0,14÷0,25	24÷43	6	919	DN 100	Rp 2	Rp ¾	250	220
630	480÷630	520÷688	565	0,21÷0,38	32÷55	6	1049	DN 100	Rp 2	Rp ¾	300	220
760	580÷760	630÷830	671	0,15÷0,26	29÷51	6	1341	DN 125	DN 65	Rp 1¼	350	270
870	660÷870	715÷950	753	0,19÷0,33	33÷57	6	1447	DN 125	DN 65	Rp 1¼	350	270
970	750÷970	815÷1060	836	0,24÷0,41	29÷49	6	1553	DN 125	DN 65	Rp 1¼	350	270

SKD	A	B	C	D	E	F	G	H	I	L	M*	N	O	P	Q*	R*
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
340	860	1210	1182	190	139	190	708	400	1541	130	1310	215	340	250	750	1112
420	890	1275	1352	190	139	190	748	440	1606	125	1485	255	285	315	780	1177
510	890	1470	1352	190	139	190	748	440	1801	125	1485	255	480	315	780	1372
630	890	1780	1352	190	139	190	748	440	2113	125	1485	255	790	315	780	1682
760	1122	1605	1432	190	195	190	765	480	1989	125	1540	298	435	440	1020	1504
870	1122	1800	1432	190	195	190	765	480	2184	125	1540	298	630	440	1020	1699
970	1122	1995	1432	190	195	190	765	480	2379	125	1540	298	825	440	1020	1894

(*) Minimum dimensions for boiler room access.

(**) Pressure drops corresponding to a thermal variation of 15K.

DIMENSIONS SKD 1100÷2650



- 1 Panel board
- 2 Burner connection flange
- 3 Smoke chamber cleaning door
- 4 Flame control warning light

- T1 Heating flow
- T2 Heating return
- T3 Expansion vessel connection
- T4 Boiler drain

- T5 Chimney connection
- T6 Burner connection
- T7 Boiler air bleed
- T8 Inspection door

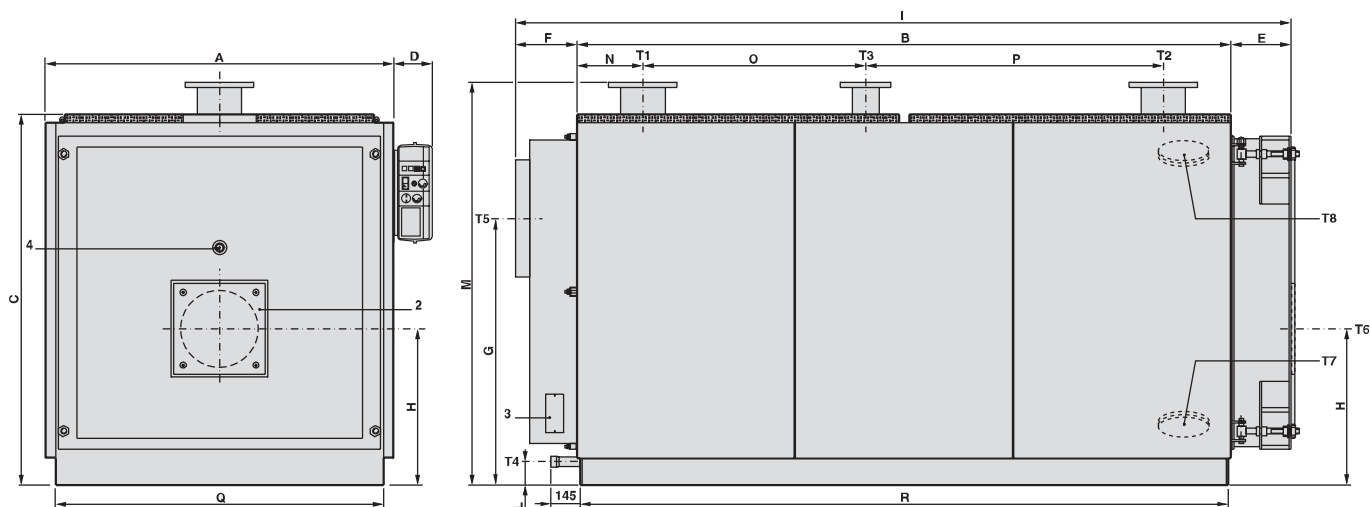
SKD	Nominal output	Nominal input	Boiler capacity	Water pressure drops(**)	Flue gas pressure drop	Maximum boiler working pressure	Weight	CONNECTIONS				
	kW	kW	l	m w.c.	mm w.c.	bar	kg	T1 T2	T3	T4	T5 Øi	T6 Ø
								UNI2278PN16	UNI2278PN16	ISO 7/1	mm	mm
1100	860÷1100	935÷1200	1040	0,18÷0,30	32÷52	6	1821	DN 150	DN 80	Rp 1½	400	320
1320	1000÷1320	1087÷1442	1242	0,20÷0,35	38÷67	6	2030	DN 150	DN 80	Rp 1½	400	320
1570	1200÷1570	1304÷1715	1418	0,19÷0,33	35÷60	6	2780	DN 175	DN 100	Rp 1½	450	320
1850	1400÷1850	1520÷2020	1617	0,26÷0,45	42÷73	6	3280	DN 175	DN 100	Rp 1½	450	320
2200	1700÷2200	1845÷2400	2086	0,21÷0,34	39÷65	6	4145	DN 200	DN 125	Rp 1½	520	380
2650	2000÷2650	2170÷2890	2324	0,28÷0,48	43÷76	6	4465	DN 200	DN 125	Rp 1½	520	380

SKD	A	B	C	D	E	F	G	H	I	L	M*	N	O	P	Q*	R*
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
1100	1352	1952	1432	190	207	187	810	595	2346	180	1540	461	330	500	1250	1846
1320	1352	2292	1432	190	207	187	810	595	2686	180	1540	461	670	500	1250	2186
1570	1462	2282	1542	190	227	272	880	640	2781	75	1650	561	510	550	1360	2176
1850	1462	2652	1542	190	227	272	880	640	3151	75	1650	561	880	550	1360	2546
2200	1622	2692	1702	190	259	274	950	690	3225	75	1810	661	670	700	1520	2590
2650	1622	3014	1702	190	258	273	950	690	3545	75	1810	662	990	700	1520	2910

(*) Minimum dimensions for boiler room access. (**) Pressure drops corresponding to a thermal variation of 15K.

On special order the boilers from model SKD 1100 to SKD 7000 can be manufactured for a max. working pressure up to 10 bar.

DIMENSIONS SKD 3000÷4000



- 1 Panel board
- 2 Burner fixing plate
- 3 Smoke chamber cleaning door
- 4 Sight glass

- T1 C.H. flow
- T2 C.H. return
- T3 Expansion vessel connection
- T4 Boiler drain

- T5 Flue socket
- T6 Burner connection
- T7 Sludge drain
- T8 Inspection door

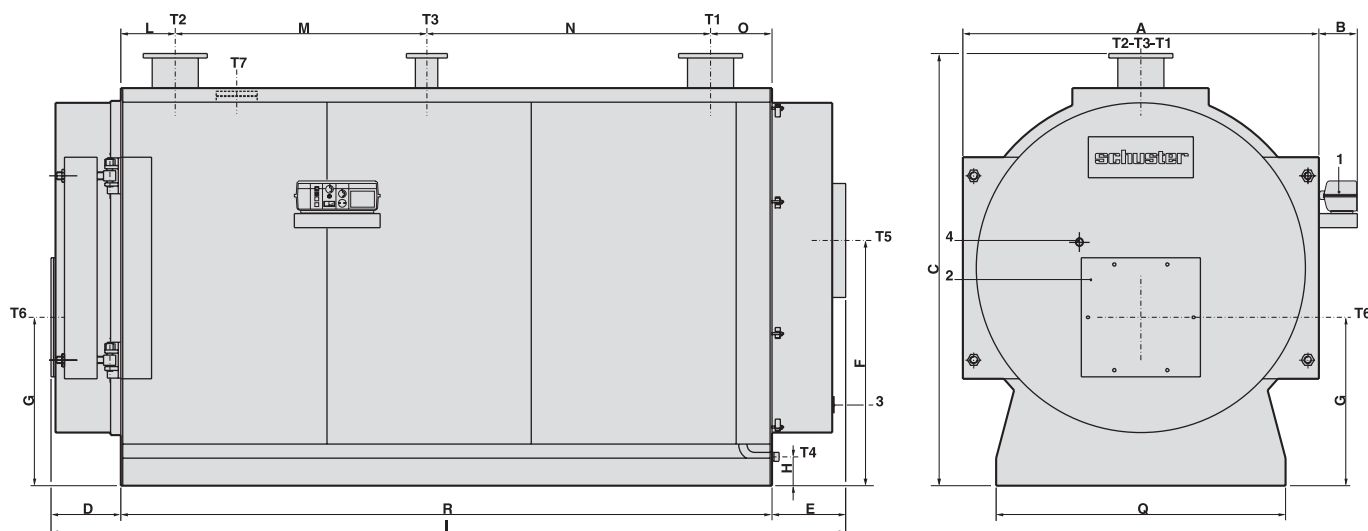
SKD	Nominal output kW	Nominal input kW	Boiler capacity l	Water pressure drops(**) m w.c.	Flue gas pressure drop mm w.c.	Maximum boiler working pressure bar	Weight kg	CONNECTIONS				
								T1 T2	T3	T4	T5 Øi	T6 Ø
								UNI2278 PN16	UNI2278 PN16	ISO 7/1	mm	mm
3000	2300÷3000	2492÷3280	2667	0,36÷0,62	35÷60	6	5110	DN 200	DN 125	Rp 1½	570	380
3500	2700÷3500	2930÷3825	4142	0,54÷0,84	47÷74	6	6700	DN 200	DN 125	Rp 1½	620	400
4000	3040÷4000	3297÷4371	4455	0,54÷0,85	60÷80	6	7500	DN 250	DN 125	Rp 1½	620	400

SKD	A	B	C	D	E	F	G	H	I	L	M*	N	O	P	Q*	R*
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
3000	1720	3230	1830	190	295	310	1315	772	3835	115	1990	325	1100	1470	1620	3200
3500	1970	3194	2090	190	325	360	1535	915	3879	144	2271	377	1060	1420	1870	3164
4000	1970	3594	2090	190	325	360	1535	915	4279	144	2271	777	1060	1420	1870	3564

(*) Minimum dimensions for boiler room access. (**) Pressure drops corresponding to a thermal variation of 15K.

On special order the boilers from model SKD 1100 to SKD 7000 can be manufactured for a max. working pressure up to 10 bar.

DIMENSIONS SKD 4500÷7000



1 Panel board

2 Burner connection flange

3 Smoke chamber cleaning door

4 Flame control warning light

T1 Heating flow

T2 Heating return

T3 Expansion vessel connection

T4 Boiler drain

T5 Chimney connection

T6 Burner connection

T7 Inspection door

SKD	Nominal output	Nominal input	Boiler capacity	Water pressure drops(**)	Flue gas pressure drop	Maximum boiler working pressure	Weight	CONNECTIONS					
	kW	kW	l	m w.c.	mm w.c.	bar	kg	T1 T2	T3	T4	T5 Øi	T6 Ø	T7 Ø
								UNI 2278 PN16	UNI 2278 PN16	ISO 7/1	mm	mm	mm
4500	3420÷4500	3638,3÷4838,7	6012	0,70÷0,85	51÷88	6	8310	DN 250	DN 125	Rp 1½	660	500	133
5000	3800÷5000	4064,2÷5421,8	6012	0,80÷1,05	65÷110	6	8310	DN 250	DN 125	Rp 1½	660	500	133
5500	4180÷5500	4446,8÷5914	7058	0,95÷1,15	60÷100	6	9300	DN 250	DN 125	Rp 1½	660	500	133
6000	4560÷6000	4877÷6506,2	7058	1,00÷1,35	68÷120	6	9300	DN 250	DN 125	Rp 1½	660	500	133
6500	4940÷6500	5255,3÷6989,2	7909	1,05÷1,50	61÷105	6	12600	DN 250	DN 125	Rp 1½	720	500	133
7000	5320÷7000	5689,8÷7590,5	7909	1,10÷1,75	69÷120	6	12600	DN 250	DN 125	Rp 1½	720	500	133

SKD	A	B	C*	D	E	F	G	H	I	L	M	N	O	Q*	R*
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
4500	2088	226	2533	417	445	1437	987	170	4682	320	1475	1665	360	1700	3820
5000	2088	226	2533	417	445	1437	987	170	4682	320	1475	1665	360	1700	3820
5500	2214	240	2653	437	465	1550	1007	167	4872	320	1475	1815	360	1700	3970
6000	2214	240	2653	437	465	1550	1007	167	4872	320	1475	1815	360	1700	3970
6500	2380	240	2860	509	595	1650	1100	224	5484	325	2920	670	465	1850	4380
7000	2380	240	2860	509	595	1650	1100	224	5484	325	2920	670	465	1850	4380

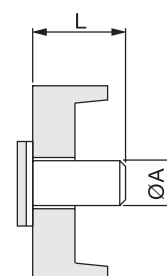
(*) Minimum dimensions for boiler room access. (**) Pressure drops corresponding to a thermal variation of 15K.

On special order the boilers from model SKD 1100 to SKD 7000 can be manufactured for a max. working pressure up to 10 bar.

BURNER HEAD TUBE DIMENSIONS

BOILER TYPE	øA mm	L mm
SKD 340÷630	220	250
SKD 760÷970	270	270
SKD 1100÷1320	320	300
SKD 1570÷1850	320	320
SKD 2200÷2650	380	350

BOILER TYPE	øA mm	L mm
SKD 3000	380	400
SKD 3500÷4000	400	400
SKD 4500÷6000	500	520
SKD 6500÷7000	500	630



TECHNICAL DATA

ELECTRICAL, HYDRAULIC, INSTALLATION DIAGRAMS AND CONTROLLERS can be unloaded from the web site www.schusterboilers.com at the page of the product

Oil fired		SKD 340	SKD 420	SKD 510	SKD 630	SKD 760	SKD 870	SKD 970	SKD 1100
Nominal heat output	kW	255÷340	315÷420	385÷510	480÷630	580÷760	660÷870	750÷970	860÷1100
Thermal output of furnace	kW	277÷371	342÷459	418÷557	520÷688	630÷830	715÷950	815÷1060	935÷1200
Heat efficiency at nominal load (100%)	%	92÷91,6	92,1÷91,5	92,1÷91,5	92,3÷91,5	92÷91,5	91,5÷91,5	92÷91,5	91,9÷91,6
Heat efficiency at 30% load	%	93,6÷93,6	93,9÷93,9	93,9÷93,9	93,9÷93,9	93,9÷93,9	93,9÷93,9	93,9÷93,9	93,9÷93,9
Combustion efficiency at nominal load (100%)	%	92,8÷92,5	92,7÷92,4	92,7÷92,4	92,6÷92	92,3÷92,1	92,1÷92,1	92,5÷91,9	92,3÷92
Heat loss at casing (min.-max.)	%	0,8÷0,8	0,6÷0,9	0,6÷0,9	0,3÷0,4	0,2÷0,5	0,5÷0,5	0,4÷0,4	0,4÷0,3
Heat loss at chimney with burner on (min.-max.)	%	7,1÷7,4	7,2÷7,5	7,3÷7,5	7,3÷7,9	7,6÷7,8	7,8÷7,8	7,4÷8	7,6÷7,9
Heat loss at chimney with burner off (min.-max.)	%	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2
Flue gas temperature tf-ta (min.-max.)	°C	156÷164	158÷166	160÷165	162÷175	168÷173	158÷172	164÷177	167÷175
CO ₂ content	%	12,8÷12,8	12,8÷12,8	12,8÷12,8	12,8÷12,8	12,8÷12,8	12,8÷12,8	12,8÷12,8	12,8÷12,8
Flue gas mass flow rate (min.-max)	kg/h	424÷568	523÷702	640÷852	796÷1053	964÷1271	1094÷1454	1248÷1632	1431÷1837

Oil fired		SKD 1320	SKD 1570	SKD 1850	SKD 2200	SKD 2650	SKD 3000	SKD 3500	SKD 4000
Nominal heat output	kW	1000÷1320	1200÷1570	1400÷1850	1700÷2200	2000÷2650	2300÷3000	2700÷3500	3040÷4000
Thermal output of furnace	kW	1087÷1442	1304÷1715	1520÷2020	1845÷2400	2170÷2890	2492÷3280	2930÷3825	3297÷4371
Heat efficiency at nominal load (100%)	%	92÷91,5	92÷91,5	92,1÷91,5	92,1÷91,6	92,1÷91,7	92,3÷91,4	92,1÷91,4	92,2÷91,5
Heat efficiency at 30% load	%	93,9÷93,9	93,9÷93,9	93,9÷93,9	93,9÷93,9	93,9÷93,9	93,9÷93,9	93,9÷93,9	93,9÷93,9
Combustion efficiency at nominal load (100%)	%	92,2÷91,8	92,2÷91,9	92,4÷91,8	92,4÷91,9	92,4÷92	92,4÷91,7	92,4÷91,7	92,4÷91,8
Heat loss at casing (min.-max.)	%	0,2÷0,2	0,2÷0,3	0,3÷0,3	0,3÷0,3	0,3÷0,3	0,1÷0,3	0,3÷0,3	0,2÷0,3
Heat loss at chimney with burner on (min.-max.)	%	7,7÷8,1	7,7÷8	7,5÷8,1	7,5÷8	7,5÷7,9	7,5÷8,2	7,5÷8,2	7,5÷8,1
Heat loss at chimney with burner off (min.-max.)	%	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2
Flue gas temperature tf-ta (min.-max.)	°C	170÷179	170÷177	165÷178	165÷176	165÷175	165÷180	165÷180	165÷179
CO ₂ content	%	12,8÷12,8	12,8÷12,8	12,8÷12,8	12,8÷12,8	12,8÷12,8	12,8÷12,8	12,8÷12,8	12,8÷12,8
Flue gas mass flow rate (min.-max)	kg/h	1664÷2208	1996÷2626	2327÷3093	2825÷3675	3322÷4425	3816÷5022	4486÷5861	5048÷6693

Oil fired		SKD 4500	SKD 5000	SKD 5500	SKD 6000	SKD 6500	SKD 7000
Nominal heat output	kW	3420÷4500	3800÷5000	4180÷5500	4560÷6000	4940÷6500	5320÷7000
Thermal output of furnace	kW	3638,3÷4838,7	4064,2÷5421,8	4446,8÷5914	4877÷6506,2	5255,3÷6989,2	5689,8÷7590,5
Heat efficiency at nominal load (100%)	%	94,0÷93,0	93,5÷92,22	94,0÷93,0	93,5÷92,22	94,0÷93,0	93,5÷92,22
Heat efficiency at 30% load	%	94,66÷93,65	94,15÷92,87	94,66÷93,65	94,15÷92,87	94,66÷93,65	94,15÷92,87
Combustion efficiency at nominal load (100%)	%	94,53÷93,48	94,07÷92,84	94,53÷93,48	94,07÷92,84	94,53÷93,48	94,07÷92,84
Heat loss at casing (min.-max.)	%	0,53÷0,48	0,57÷0,62	0,53÷0,48	0,57÷0,62	0,53÷0,48	0,57÷0,62
Heat loss at chimney with burner on (min.-max.)	%	5,47÷6,52	5,93÷7,16	5,47÷6,52	5,93÷7,16	5,47÷6,52	5,93÷7,16
Heat loss at chimney with burner off (min.-max.)	%	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2
Flue gas temperature tf-ta (min.-max.)	°C	120÷143	130÷157	120÷143	130÷157	120÷143	130÷157
CO ₂ content	%	12,8÷12,8	12,8÷12,8	12,8÷12,8	12,8÷12,8	12,8÷12,8	12,8÷12,8
Flue gas mass flow rate (min.-max)	kg/h	5571,4÷7409,6	6223,5÷8302,5	6809,4÷9056,1	7468,2÷9963,0	8047,5÷10702,7	8712,9÷11623,5

Gas fired		SKD 340	SKD 420	SKD 510	SKD 630	SKD 760	SKD 870	SKD 970	SKD 1100
Nominal heat output	kW	255÷340	315÷420	385÷510	480÷630	580÷760	660÷870	750÷970	860÷1100
Thermal output of furnace	kW	277÷371	342÷459	418÷557	520÷688	630÷830	715÷950	815÷1060	935÷1200
Heat efficiency at nominal load (100%)	%	92÷91,6	92,1÷91,5	92,1÷91,5	92,3÷91,5	92÷91,5	92,3÷91,5	92÷91,5	91,9÷91,6
Heat efficiency at 30% load	%	93,6÷93,6	93,9÷93,9	93,9÷93,9	93,9÷93,9	93,9÷93,9	93,9÷93,9	93,9÷93,9	93,9÷93,9
Combustion efficiency at nominal load (100%)	%	92,9÷92,5	92,8÷92,4	92,7÷92,4	92,6÷92	92,3÷92,1	92,8÷92,1	92,5÷91,9	91,4÷92
Heat loss at casing (min.-max.)	%	0,8÷0,8	0,7÷0,9	0,6÷0,9	0,3÷0,4	0,2÷0,5	0,5÷0,6	0,5÷0,4	0,4÷0,3
Heat loss at chimney with burner on (min.-max.)	%	7,1÷7,4	7,1÷7,5	7,2÷7,5	7,3÷7,9	7,6÷7,8	7,1÷7,8	7,4÷8	7,6÷7,9
Heat loss at chimney with burner off (min.-max.)	%	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2
Flue gas temperature tf-ta (min.-max.)	°C	145÷152	147÷154	149÷153	151÷163	156÷161	147÷160	152÷165	155÷163
CO ₂ content	%	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8
Flue gas mass flow rate (min.-max)	kg/h	416÷557	514÷689	628÷837	781÷1034	947÷1247	1074÷1428	1225÷1593	1405÷1803

Gas fired		SKD 1320	SKD 1570	SKD 1850	SKD 2200	SKD 2650	SKD 3000	SKD 3500	SKD 4000
Nominal heat output	kW	1000÷1320	1200÷1570	1400÷1850	1700÷2200	2000÷2650	2300÷3000	2700÷3500	3040÷4000
Thermal output of furnace	kW	1087÷1442	1304÷1715	1520÷2020	1845÷2400	2170÷2890	2492÷3280	2930÷3825	3297÷4371
Heat efficiency at nominal load (100%)	%	92÷91,5	92÷91,5	92,1÷91,5	92,1÷91,6	92,1÷91,7	92,3÷91,4	92,1÷91,4	92,2÷91,5
Heat efficiency at 30% load	%	93,9÷93,9	93,9÷93,9	93,9÷93,9	93,9÷93,9	93,9÷93,9	93,9÷93,9	93,9÷93,9	93,9÷93,9
Combustion efficiency at nominal load (100%)	%	92,2÷91,8	92,2÷91,9	92,4÷91,9	92,4÷91,9	92,4÷92	92,4÷91,8	92,4÷91,8	92,4÷91,8
Heat loss at casing (min.-max.)	%	0,2÷0,3	0,2÷0,4	0,3÷0,3	0,3÷0,3	0,3÷0,3	0,2÷0,3	0,3÷0,3	0,2÷0,3
Heat loss at chimney with burner on (min.-max.)	%	7,7÷8,1	7,7÷8	7,5÷8,1	7,5÷8	7,5÷7,9	7,5÷8,1	7,5÷8,1	7,5÷8,1
Heat loss at chimney with burner off (min.-max.)	%	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2
Flue gas temperature tf-ta (min.-max.)	°C	158÷166	158÷165	153÷166	153÷164	153÷163	153÷167	153÷167	153÷166
CO ₂ content	%	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8
Flue gas mass flow rate (min.-max)	kg/h	1633÷2167	1960÷2577	2284÷3036	2773÷3607	3261÷4344	3745÷4930	4404÷5754	4955÷6570

Gas fired		SKD 4500	SKD 5000	SKD 5500	SKD 6000	SKD 6500	SKD 7000
Nominal heat output	kW	3420÷4500	3800÷5000	4180÷5500	4560÷6000	4940÷6500	5320÷7000
Thermal output of furnace	kW	3638,3÷4838,7	4064,2÷5421,8	4446,8÷5914	4877÷6506,2	5255,3÷6989,2	5689,8÷7590,5
Heat efficiency at nominal load (100%)	%	94,0÷93,0	93,5÷92,22	94,0÷93,0	93,5÷92,22	94,0÷93,0	93,5÷92,22
Heat efficiency at 30% load	%	94,66÷93,65	94,15÷92,87	94,66÷93,65	94,15÷92,87	94,66÷93,65	94,15÷92,87
Combustion efficiency at nominal load (100%)	%	94,54÷93,51	94,05÷92,83	94,54÷93,46	94,05÷92,83	94,54÷93,46	94,05÷92,83
Heat loss at casing (min.-max.)	%	0,54÷0,51	0,55÷0,61	0,54÷0,46	0,55÷0,61	0,54÷0,46	0,55÷0,61
Heat loss at chimney with burner on (min.-max.)	%	5,46÷6,49	5,95÷7,17	5,46÷6,54	5,95÷7,17	5,46÷6,54	5,95÷7,17
Heat loss at chimney with burner off (min.-max.)	%	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2
Flue gas temperature tf-ta (min.-max.)	°C	112÷133	122÷147	112÷134	122÷147	112÷134	122÷147
CO ₂ content	%	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8
Flue gas mass flow rate (min.-max)	kg/h	5468,9÷7273,3	6109,0÷8149,8	6684,2÷8889,5	7330,8÷9779,7	7899,5÷10505,8	8552,6÷11409,7



PRESSURIZED CARBON STEEL BOILER WITH REVERSED FLAME FURNACE

OUTPUT RANGE

from 80 to 6100 kW

OPERATION TEMPERATURE

minimum return temperature 55°C

SUPPLY

Natural Gas or LPG fed pressure jet burners

MODELS

80	120	160	200	250	300	370	450	560	680	780	870	1000	1180
1400	1650	2000	2350	2700	3100	3500	3900	4400	4800	5200	5700	6100	-

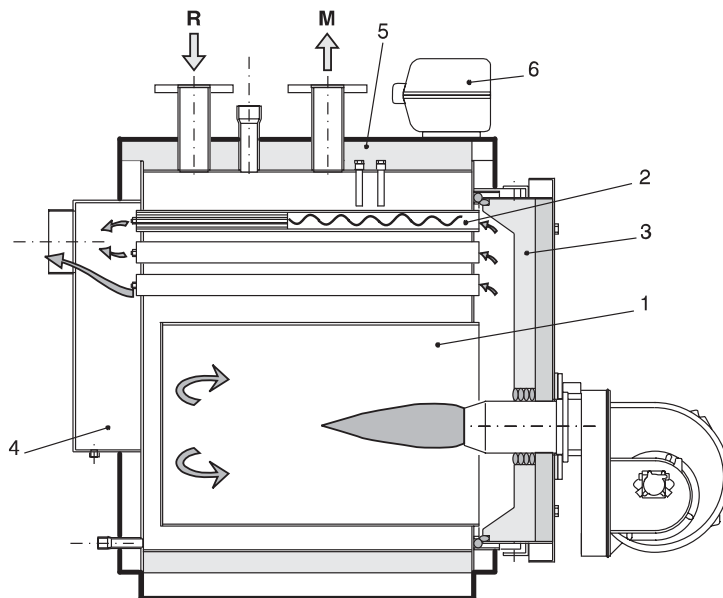
ENERGETIC CLASS
according to Dir. 92/42/EC

★★★★CE

Certified in OUTPUT RANGE
Special patented smoke pipes with aluminium profiles – Floating furnace

MAIN COMPONENTS

1. Furnace
2. Special smoke pipes EASY STREAM PIPE con turbolatori
3. Door with flame control warning light
4. Smoke chamber
5. Body insulation
6. Panel board

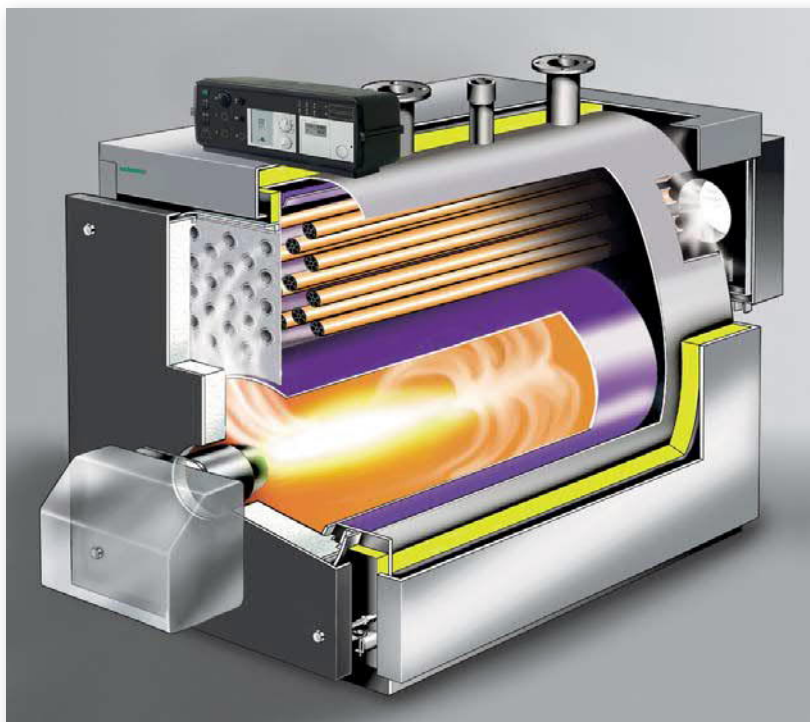


TECHNICAL DATA

MODEL	Heat output min/max <i>kW</i>	Heat input min/max <i>kW</i>	Boiler capacity <i>l</i>	Water side pressure drops <i>m w.c.</i>	Flue gas pressure drops <i>mm w.c.</i>	Max. boiler operating pressure <i>bar</i>	Weight <i>kg</i>
DDS 80	60÷80	63,3÷85,2	86	0,08÷0,15	3,8÷6,8	6	221
DDS 120	90÷120	94,6÷127,4	126	0,06÷0,11	6,1÷10,8	6	325
DDS 160	120÷160	125,8÷169,4	151	0,11÷0,20	8,9÷15,8	6	366
DDS 200	150÷200	157÷211,3	203	0,10÷0,17	11,1÷19,7	6	505
DDS 250	187,5÷250	195,8÷263,6	247	0,12÷0,22	13,3÷23,6	6	583
DDS 300	225÷300	234,6÷315,8	298	0,12÷0,22	15,9÷ 28,4	6	665
DDS 370	277,5÷370	288,8÷388,7	398	0,08÷0,14	18,1÷ 32,2	6	845
DDS 450	337,5÷450	351÷472,4	462	0,11÷0,20	20,2÷35,8	6	986
DDS 560	420÷560	436,8÷587,9	565	0,17÷0,30	23,7÷42,1	6	1119
DDS 680	510÷680	530,4÷713,9	671	0,12÷0,21	27,8÷49,4	6	1435
DDS 780	585÷780	608,4÷818,9	753	0,15÷0,27	30,7÷54,4	6	1557
DDS 870	652,5÷870	678,6÷913,4	836	0,19÷0,33	33÷58,6	6	1656
DDS 1000	750÷1000	780÷1049,8	1040	0,11÷0,19	35,9÷63,9	6	1970
DDS 1180	885÷1180	920,4÷1238,8	1242	0,15÷0,26	38,6÷68,6	6	2175
DDS 1400	1050÷1400	1092÷1469,8	1418	0,15÷0,26	42,1÷74,9	6	2975
DDS 1650	1237,5÷1650	1287÷1732,3	1617	0,20÷0,36	45,5÷80,9	6	3465
DDS 2000	1500÷2000	1560÷2099,7	2086	0,16÷0,38	40,5÷72	6	4390
DDS 2350	1762,5÷2350	1833÷2467,1	2324	0,21÷0,38	43,2÷76,9	6	4700
DDS 2700	2025÷2700	2106÷2834,6	2667	0,28÷0,50	45,6÷81	6	5370
DDS 3100	2325÷3100	2418,1÷3254,5	4142	0,37÷0,66	43,3÷76,9	6	6990
DDS 3500	2625÷3500	2730,1÷3674,5	4455	0,37÷0,65	50,4÷89,5	6	7790
DDS 3900	2925÷3900	3042,1÷4094,4	6012	0,28÷0,50	44,4÷78,6	6	8630
DDS 4400	3300÷4400	3432,1÷4619,3	6012	0,35÷0,63	56,6÷100,5	6	8630
DDS 4800	3600÷4800	3744,1÷5039,3	7058	0,42÷0,75	50,5÷92,2	6	9675
DDS 5200	3900÷5200	4056,1÷5459,2	7058	0,50÷0,88	59,3÷105,4	6	9675
DDS 5700	4275÷5700	4446,1÷5984,1	7909	0,59÷1,05	49,5÷90,5	6	13060
DDS 6100	4575÷6100	4758,1÷6404,1	7909	0,68÷1,21	56,7÷100,7	6	13060

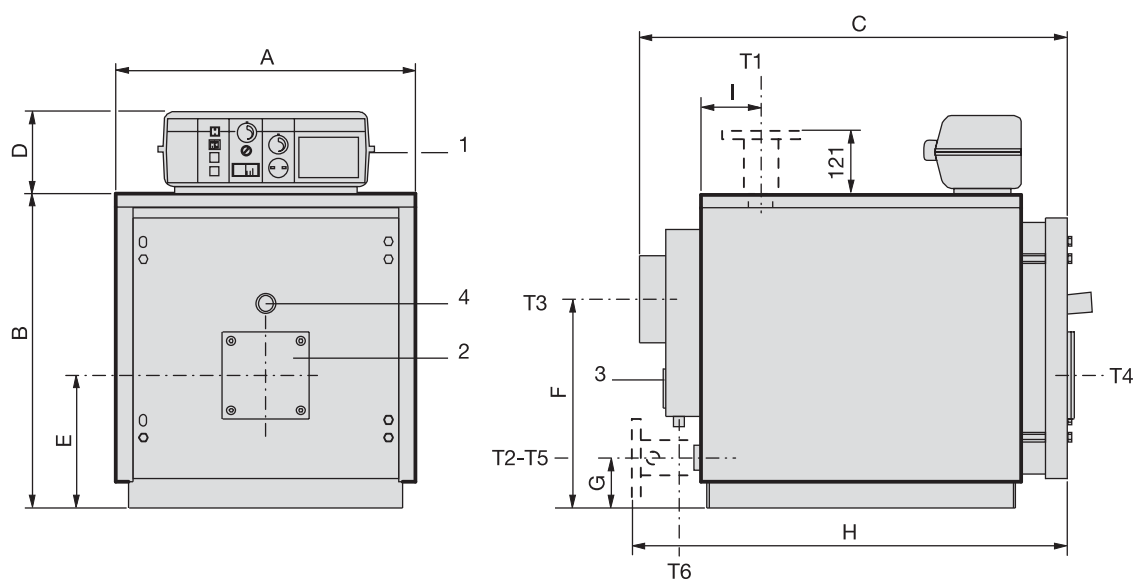
On special order the boilers from model SKD 1000 to SKD 6100 can be manufactured for a max. working pressure up to 10 bar.

PRODUCT PLUS VALUES



- **CERTIFICATION IN OUTPUT RANGE**
- **OUTER SHELL OF ELLIPTIC SHAPE**
(up to the model 870 kW) that creates the following advantages:
 - small dimensions in width
 - positioning of most of the tube bundle above the furnace, with drastic reduction of the possible formation of condensate
- **FLOATING FURNACE** from model 680 and on, in order to reduce the mechanical stress due to the different dilatations of the furnace, smoke pipes and outer shell.
- **FURNACE BOTTOM** with heat recovering plates welded on the water side for efficiency increase and as stiffeners of the bottom it self.
- **MULTI-FIN, PATENTED, BIMETALLIC PIPES**
with high efficiency
- **OPTIMIZATION OF THE HEAT EXCHANGE**
thanks to:
 - special helical turbulators in the front part of the smoke pipes
 - guided water way inside the boiler
- **FRONT DOOR**
with self-centring closing, adjustable in vertical / axial and transversal way, with bolts separated from the hinges to avoid mechanical stresses
- **INTERNAL DOOR INSULATION**
in recyclable super light concrete
- **OUTER PROTECTING CASING**
in steel sheet panels, with insulating mattress in mineral wool protected with anti-tearing fabric foil, rounded directly on the boiler body. Thickness of 50 – 60 – 80 100 mm according to the output.
- **SMOKE CHAMBER**
with condensate drain connection
- **BOARD PANEL**
thermostatic type (std) or electronic type (optional)
- **EASY HANDLING**
thanks to the upper hooks and strong base longitudinal members
- **AVAILABLE IN LOOSEN PARTS VERSION**
to be assembled in the boiler house (up to 870 kW).

DIMENSIONS DDS 80÷250



- 1 Panel board
 2 Burner connection flange
 3 Smoke chamber cleaning door
 4 Flame control warning light

- T1 Heating flow
 T2 Heating return
 T3 Chimney connection
 T4 Burner connection

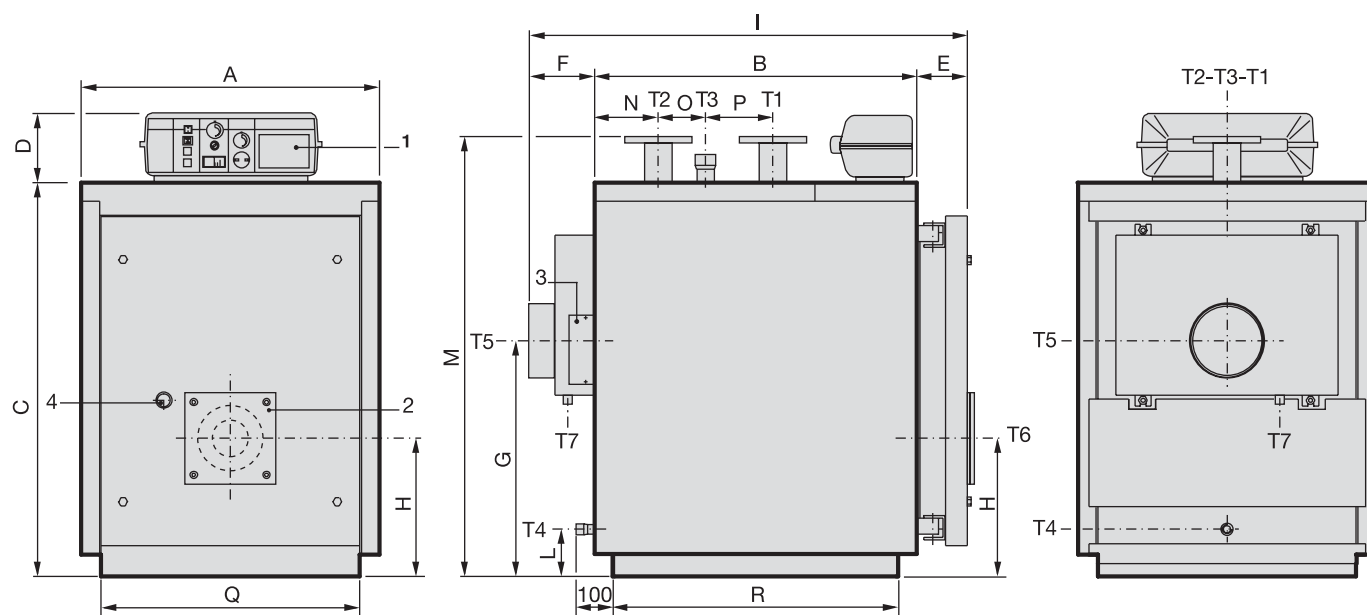
- T5 Boiler drain
 T6 Condensation drain

DDS	Nominal output	Nominal input	Boiler capacity	Water pressure drops(**)	Flue gas pressure drop	Maximum boiler working pressure	Weight	CONNECTIONS				
								T1 T2	T3 Øe	T4 Øi	T5	T6 Øe
	kW	kW	l	m w.c.	mm w.c.	bar	kg	UNI 228 UNI 2278 PN16	mm	mm	UNI 228	mm
80	60÷80	63,3÷85,2	86	0,08÷0,15	3,8÷6,8	6	221	G 1½	200	130	G ¾	40
120	90÷120	94,6÷127,4	126	0,06÷0,11	6,1÷10,8	6	325	G 2	200	180	G ¾	40
160	120÷160	125,8÷169,4	151	0,11÷0,20	8,9÷15,8	6	366	G 2	200	180	G ¾	40
200	150÷200	157÷211,3	203	0,10÷0,17	11,1÷19,7	6	505	DN 65	250	180	G ¾	40
250	187,5÷250	195,8÷263,6	247	0,12÷0,22	13,3÷23,6	6	583	DN 65	250	180	G ¾	40

DDS	A	B	C	D	E	F	G	H	I
	mm	mm	mm	mm	mm	mm	mm	mm	mm
80	690	722	995	190	305	480	115	--	147
120	760	812	1210	190	350	500	130	--	157
160	760	812	1390	190	350	500	130	--	157
200	860	937	1442	190	421	580	165	1487	258
250	860	937	1692	190	421	580	165	1737	258

(*) In the TRISTAR 200 2S and TRISTAR 250 2S models, connections T1 and T2 are flanged. (**) Pressure drops corresponding to a thermal variation of 15K.

DIMENSIONS DDS 300÷560



- 1 Panel board
2 Burner connection flange
3 Smoke chamber cleaning door
4 Flame control warning light

- T1 Heating flow
T2 Heating return
T3 Expansion vessel connection
T4 Boiler drain

- T5 Chimney connection
T6 Burner connection
T7 Condensation drain

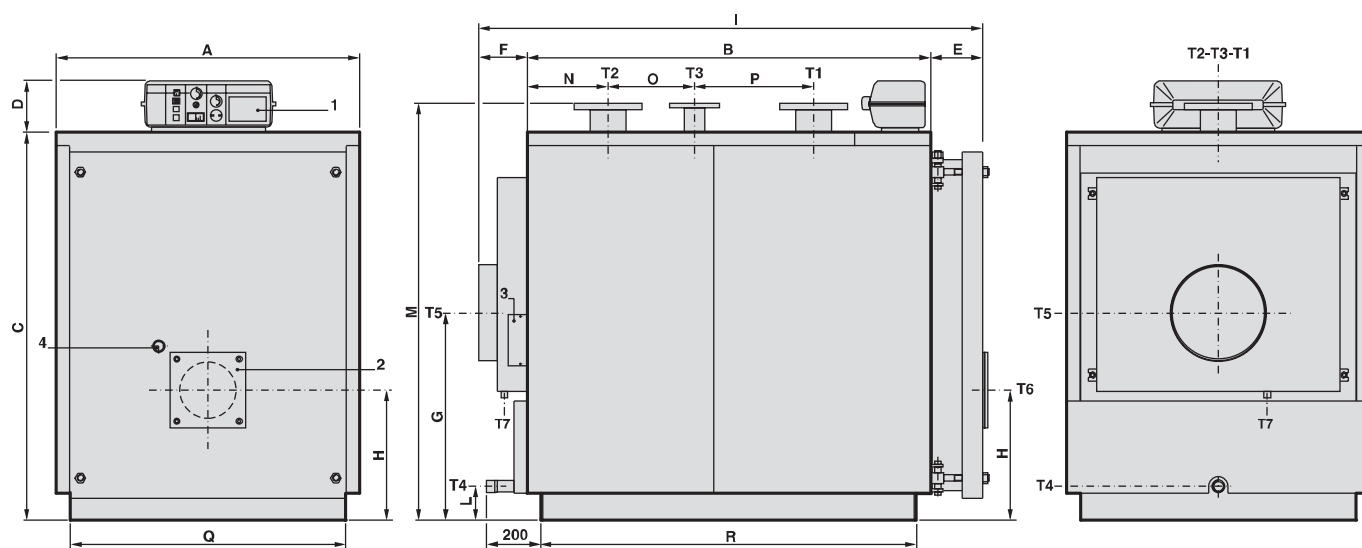
DDS	Nominal output kW	Nominal input kW	Boiler capacity l	Water pressure drops(**) m w.c.	Flue gas pressure drop mm w.c.	Maximum boiler working pressure bar	Weight kg	CONNECTIONS					
								T1 T2	T3	T4	T5 Øi	T6 Ø	T7 Øe
								UNI2278 PN16	UNI228	UNI228	mm	mm	mm
300	225÷300	234,6÷315,8	298	0,12÷0,22	15,9÷28,4	6	665	DN 80	G 2	G ¾	250	220	40
370	277,5÷370	288,8÷388,7	398	0,08÷0,14	18,1÷32,2	6	845	DN 100	G 2	G ¾	250	220	40
450	337,5÷450	351÷472,4	462	0,11÷0,20	20,2÷35,8	6	986	DN 100	G 2	G ¾	250	220	40
560	420÷560	436,8÷587,9	565	0,17÷0,30	23,7÷42,1	6	1119	DN 100	G 2	G ¾	300	220	40

DDS	A	B	C	D	E	F	G	H	I	L	M*	N	O	P	Q*	R*
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
300	860	1210	1182	190	140	191	708	400	1541	130	1310	215	340	250	750	1112
370	890	1275	1352	190	140	191	748	440	1606	125	1485	255	285	315	780	1177
450	890	1470	1352	190	140	191	748	440	1801	125	1485	255	480	315	780	1372
560	890	1780	1352	190	141	192	748	440	2113	125	1485	255	790	315	780	1684

(*) Minimum dimensions for boiler room access.

(**) Pressure drops corresponding to a thermal variation of 15K.

DIMENSIONS DDS 680÷870



1 Panel board

2 Burner connection flange

3 Smoke chamber cleaning door

4 Flame control warning light

T1 Heating flow

T2 Heating return

T3 Expansion vessel connection

T4 Boiler drain

T5 Chimney connection

T6 Burner connection

T7 Condensation drain

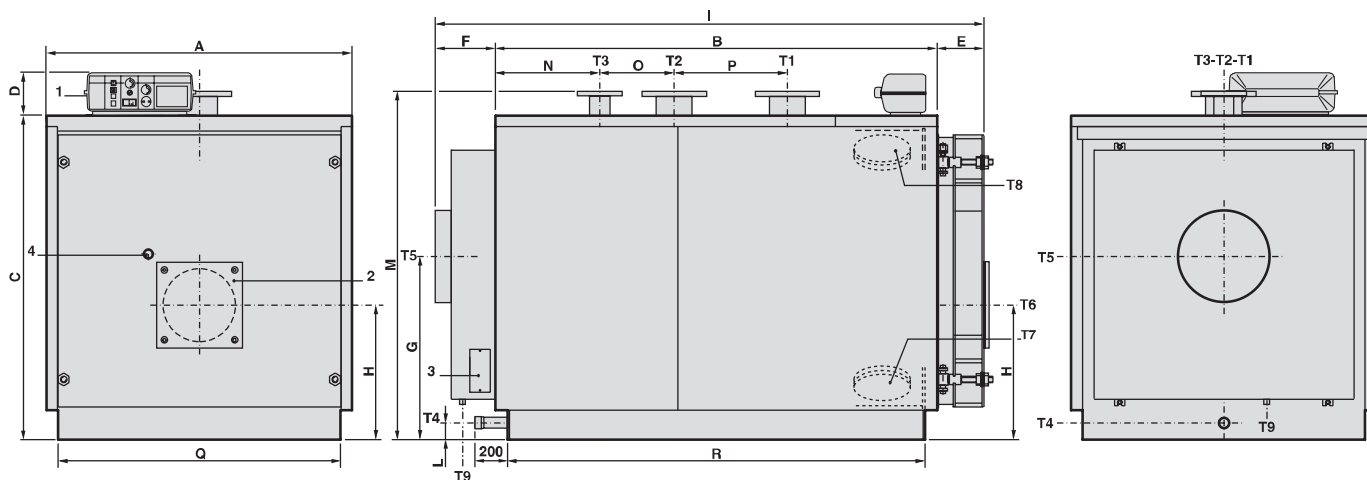
DDS	Nominal output	Nominal input	Boiler capacity	Water pressure drops(**)	Flue gas pressure drop	Maximum boiler working pressure	Weight	CONNECTIONS					
	kW	kW	I	m w.c.	mm w.c.	bar	kg	T1 T2	T3	T4	T5 Øi	T6 Ø	T7 Øe
								UNI2278 PN16	UNI2278 PN16	UNI228	mm	mm	mm
680	510÷680	530,4÷713,9	671	0,12÷0,21	27,8÷49,4	6	1435	DN 125	DN 65	G 1¼	350	270	40
780	585÷780	608,4÷818,9	753	0,15÷0,27	30,7÷54,5	6	1557	DN 125	DN 65	G 1¼	350	270	40
870	652,5÷870	678,6÷913,4	836	0,19÷0,33	33÷58,6	6	1656	DN 125	DN 65	G 1¼	350	270	40

DDS	A	B	C	D	E	F	G	H	I	L	M*	N	O	P	Q*	R*
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
680	1122	1605	1432	190	195	190	765	480	1989	125	1540	298	435	440	1020	1504
780	1122	1800	1432	190	195	190	765	480	2184	125	1540	298	630	440	1020	1699
870	1122	1995	1432	190	195	190	765	480	2379	125	1540	298	825	440	1020	1894

(*) Minimum dimensions for boiler room access.

(**) Pressure drops corresponding to a thermal variation of 15K.

DIMENSIONS DDS 1000÷2350



- 1 Panel board
- 2 Burner connection flange
- 3 Smoke chamber cleaning door
- 4 Flame sight glass

- T1 Heating flow
- T2 Heating return
- T3 Expansion vessel connection
- T4 Boiler drain

- T5 Chimney connection
- T6 Burner connection
- T7 Boiler air bleed
- T8 Inspection door

- T9 Condensation drain

DDS	Nominal output	Nominal input	Boiler capacity	Water pressure drops(**)	Flue gas pressure drop	Maximum boiler working pressure	Weight	CONNECTIONS					
	kW	kW	I	m w.c.	mm w.c.	bar	kg	T1 T2	T3	T4	T5 Øi	T6 Ø	T9 Øe
								UNI2278PN16	UNI2278PN16	UNI228	mm	mm	mm
1000	750÷1000	780÷1049,8	1040	0,11÷0,19	35,9÷63,9	6	1970	DN 150	DN 80	G 1½	400	320	40
1180	885÷1180	920,4÷1238,8	1242	0,15÷0,26	38,6÷68,6	6	2175	DN 150	DN 80	G 1½	400	320	40
1400	1050÷1400	1092÷1469,8	1418	0,15÷0,26	42,1÷74,9	6	2975	DN 175	DN 100	G 1½	450	320	40
1650	1237,5÷1650	1287÷1732,3	1617	0,20÷0,36	45,5÷80,9	6	3465	DN 175	DN 100	G 1½	450	320	40
2000	1500÷2000	1560÷2099,7	2086	0,16÷0,28	40,5÷72	6	4390	DN 200	DN 125	G 1½	520	380	40
2350	1762,5÷2350	1833÷2467,1	2324	0,21÷0,38	43,2÷76,9	6	4700	DN 200	DN 125	G 1½	520	380	40

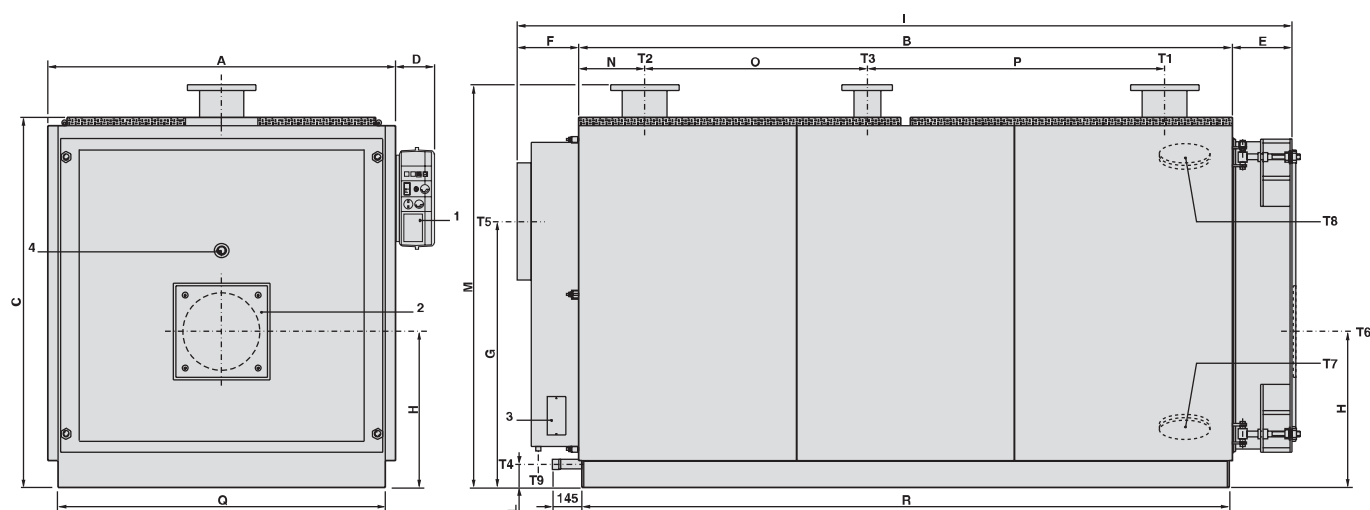
DDS	A	B	C	D	E	F	G	H	I	L	M*	N	O	P	Q*	R*
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
1000	1352	1952	1432	190	207	187	810	595	2346	180	1540	461	330	500	1250	1846
1180	1352	2292	1432	190	207	187	810	595	2686	180	1540	461	670	500	1250	2186
1400	1462	2282	1542	190	227	272	880	640	2781	75	1650	561	510	550	1360	2176
1650	1462	2652	1542	190	227	272	880	640	3151	75	1650	561	880	550	1360	2546
2000	1622	2692	1702	190	259	274	950	690	3225	75	1810	661	670	700	1520	2590
2350	1622	3014	1702	190	258	273	950	690	3545	75	1810	662	990	700	1520	2910

(*) Minimum dimensions for boiler room access.

(**) Pressure drops corresponding to a thermal variation of 15K.

On special order the boilers from model SKD 1000 to SKD 6100 can be manufactured for a max. working pressure up to 10 bar.

DIMENSIONS DDS 2700÷3500



- 1 Panel board
- 2 Burner connection flange
- 3 Smoke chamber cleaning door
- 4 Flame sight glass

- T1 Heating flow
- T2 Heating return
- T3 Expansion vessel connection
- T4 Boiler drain

- T5 Chimney connection
- T6 Burner connection
- T7 Boiler air bleed
- T8 Inspection door

- T9 Condensation drain

DDS	Nominal output	Nominal input	Boiler capacity	Water pressure drops(**)	Flue gas pressure drop	Maximum boiler working pressure	Weight	CONNECTIONS				
	kW	kW	I	m w.c.	mm w.c.	bar	kg	T1 T2	T3	T4	T5 Øi	T6 Ø
								UNI2278 PN16	UNI2278 PN16	UNI228	mm	mm
2700	2025÷2700	2106÷2834,6	2667	0,28÷0,50	45,6÷81	6	5370	DN 200	DN 125	G 1½	570	380
3100	2325÷3100	2418,1÷3254,5	4142	0,37÷0,66	43,3÷76,9	6	6990	DN 200	DN 125	G 1½	620	400
3500	2625÷3500	2730,1÷3674,5	4455	0,37÷0,65	50,4÷89,5	6	7790	DN 250	DN 125	G 1½	620	400

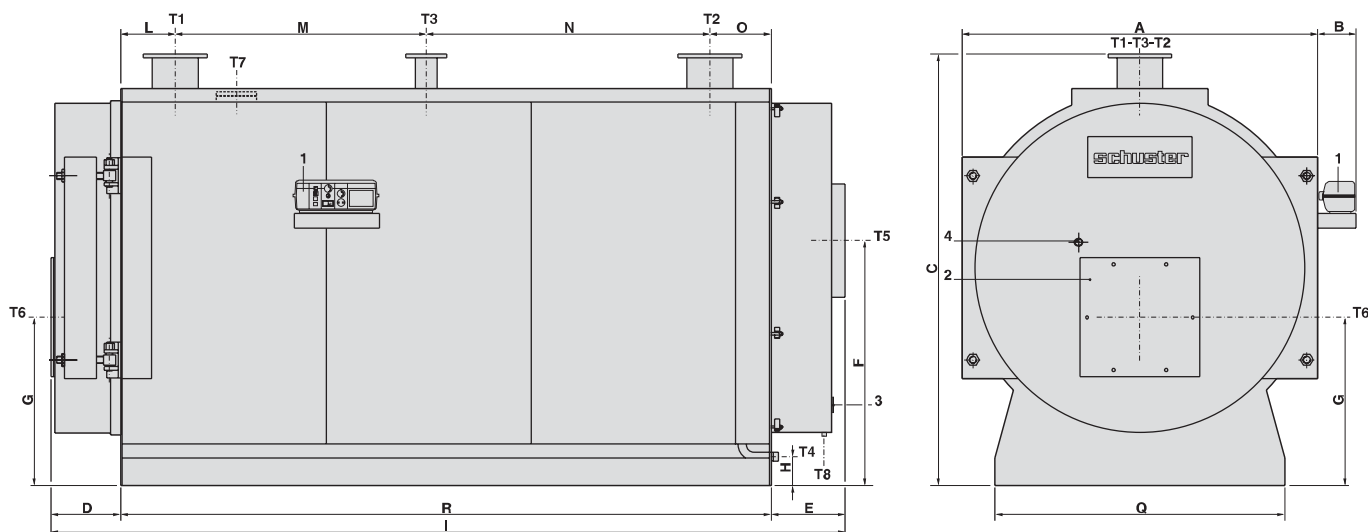
DDS	A	B	C	D	E	F	G	H	I	L	M*	N	O	P	Q*	R*
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
2700	1720	3230	1830	190	295	310	1315	772	3835	115	1990	325	1100	1470	1620	3200
3100	1970	3194	2090	190	325	360	1535	915	3879	144	2271	377	1060	1420	1870	3164
3500	1970	3594	2090	190	325	360	1535	915	4279	144	2271	777	1060	1420	1870	3564

(*) Minimum dimensions for boiler room access.

(**) Pressure drops corresponding to a thermal variation of 15K.

On special order the boilers from model SKD 1000 to SKD 6100 can be manufactured for a max. working pressure up to 10 bar.

DIMENSIONS DDS 3900÷6100



- 1 Panel board
- 2 Burner connection flange
- 3 Smoke chamber cleaning door
- 4 Flame sight glass

- T1 Heating flow
- T2 Heating return
- T3 Expansion vessel connection
- T4 Boiler drain

- T5 Chimney connection
- T6 Burner connection
- T7 Inspection door
- T8 Condensation drain

DDS	Nominal output kW	Nominal input kW	Boiler capacity l	Water pressure drops(**) m w.c.	Flue gas pressure drop mm w.c.	Maximum boiler working pressure bar	Weight kg	CONNECTIONS						
								T1 T2	T3	T4	T5 Øi	T6 Ø	T7 Ø	T8 Øe
								UNI2278 PN16	UNI2278 PN16	ISO 7/1	mm	mm	mm	mm
3900	2925÷3900	3042,1÷4094,4	6012	0,28÷0,50	44,4÷78,6	6	8630	DN 250	DN 125	Rp 1½	660	500	133	40
4400	3300÷4400	3432,1÷4619,3	6012	0,35÷0,63	56,6÷100,5	6	8630	DN 250	DN 125	Rp 1½	660	500	133	40
4800	3600÷4800	3744,1÷5039,3	7058	0,42÷0,75	50,5÷92,2	6	9675	DN 250	DN 125	Rp 1½	660	500	133	40
5200	3900÷5200	4056,1÷5459,2	7058	0,50÷0,88	59,3÷105,4	6	9675	DN 250	DN 125	Rp 1½	660	500	133	40
5700	4275÷5700	4446,1÷5984,1	7909	0,59÷1,05	49,5÷90,5	6	13060	DN 250	DN 125	Rp 1½	720	500	133	40
6100	4575÷6100	4758,1÷6404,1	7909	0,68÷1,21	56,7÷100,7	6	13060	DN 250	DN 125	Rp 1½	720	500	133	40

DDS	A	B	C*	D	E	F	G	H	I	L	M	N	O	Q*	R*
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
3900	2088	226	2533	417	485	1437	987	170	4738	323	1475	1665	363	1700	3826
4400	2088	226	2533	417	485	1437	987	170	4738	323	1475	1665	363	1700	3826
4800	2214	240	2653	437	515	1550	1007	167	4928	323	1475	1815	363	1700	3976
5200	2214	240	2653	437	515	1550	1007	167	4928	323	1475	1815	363	1700	3976
5700	2380	240	2860	509	595	1650	1100	224	5484	325	2920	670	465	1850	4380
6100	2380	240	2860	509	595	1650	1100	224	5484	325	2920	670	465	1850	4380

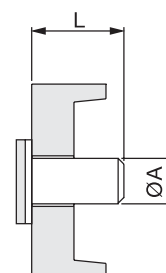
(*) Minimum dimensions for boiler room access. (**) Pressure drops corresponding to a thermal variation of 15K.

On special order the boilers from model SKD 1000 to SKD 6100 can be manufactured for a max. working pressure up to 10 bar.

BURNER HEAD TUBE DIMENSIONS

BOILER TYPE	øA mm	L mm
DDS 80	130	150
DDS 120÷250	180	170
DDS 300÷560	220	250
DDS 680÷870	270	270
DDS 1000÷1180	320	300
DDS 1400÷1650	320	320

BOILER TYPE	øA mm	L mm
DDS 2000÷2350	380	350
DDS 2700	380	400
DDS 3100÷3500	400	400
DDS 3900÷5200	500	250
DDS 5700÷6100	500	630



TECHNICAL DATA

ELECTRICAL, HYDRAULIC, INSTALLATION DIAGRAMS AND CONTROLLERS can be unloaded from the web site www.schusterboilers.com at the page of the product

Gas-fired		DDS 80	DDS 120	DDS 160	DDS 200	DDS 250	DDS 300	DDS 370
Nominal heat output	kW	60÷80	90÷120	120÷160	150÷200	187,5÷250	225÷300	277,5÷370
Thermal output of furnace	kW	63,3÷85,2	94,6÷127,4	125,8÷169,4	157÷211,3	195,8÷263,6	234,6÷315,8	288,8÷388,7
Heat efficiency at nominal load (100%)	%	94,7÷93,8	95,1÷94,2	95,4÷94,5	95,5÷94,6	95,7÷94,8	95,9÷95	96,1÷95,2
Heat efficiency at 30% load	%	94,9÷94,0	95,3÷94,4	95,6÷94,7	95,7÷94,8	95,9÷95	96,1÷95,2	96,3÷95,4
Combustion efficiency at nominal load (100%)	%	95,4÷94,6	95,7÷94,9	95,9÷95,1	96,1÷95,2	96,2÷95,4	96,4÷95,5	96,3÷95,4
Heat loss at casing (min.-max.)	%	0,6÷0,7	0,6÷0,6	0,5÷0,6	0,5÷0,6	0,5÷0,6	0,5÷0,5	0,2÷0,2
Heat loss at chimney with burner on (min.-max.)	%	4,6÷5,4	4,3÷5,1	4,1÷4,9	3,9÷4,8	3,7÷4,6	3,6÷4,5	3,7÷4,6
Heat loss at chimney with burner off (min.-max.)	%	0,1÷0,1	0,1÷0,1	0,1÷0,1	0,1÷0,1	0,1÷0,1	0,1÷0,1	0,1÷0,1
Flue gas temperature tf-ta (min.-max.)	°C	94,9÷111,7	88,6÷105,7	84,4÷101,5	80,8÷97,9	77,2÷94,3	74,5÷91,9	76,6÷94,9
CO ₂ content	%	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8
Flue gas mass flow rate (min.-max)	kg/h	95÷128	142÷191	189÷255	236÷318	294÷396	353÷475	434÷584

Gas-fired		DDS 450	DDS 560	DDS 680	DDS 780	DDS 870	DDS 1000	DDS 1180
Nominal heat output	kW	337,5÷450	420÷560	510÷680	585÷780	652,5÷870	750÷1000	885÷1180
Thermal output of furnace	kW	351÷472,4	436,8÷587,9	530,4÷713,9	608,4÷818,9	678,6÷913,4	780÷1049,8	920,4÷1238,8
Heat efficiency at nominal load (100%)	%	96,1÷95,2	96,1÷95,2	96,1÷95,2	96,1÷95,2	96,1÷95,2	96,1÷95,2	96,1÷95,2
Heat efficiency at 30% load	%	96,3÷95,4	96,3÷95,4	96,3÷95,4	96,3÷95,4	96,3÷95,4	96,3÷95,4	96,3÷95,4
Combustion efficiency at nominal load (100%)	%	96,3÷95,5	96,3÷95,5	96,3÷95,5	96,3÷95,5	96,3÷95,5	96,3÷95,5	96,3÷95,5
Heat loss at casing (min.-max.)	%	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2
Heat loss at chimney with burner on (min.-max.)	%	3,7÷4,5	3,7÷4,5	3,7÷4,5	3,7÷4,5	3,7÷4,5	3,7÷4,5	3,7÷4,5
Heat loss at chimney with burner off (min.-max.)	%	0,1÷0,1	0,1÷0,1	0,1÷0,1	0,1÷0,1	0,1÷0,1	0,1÷0,1	0,1÷0,1
Flue gas temperature tf-ta (min.-max.)	°C	75,4÷93,4	75,4÷93,4	75,4÷93,4	75,4÷93,4	75,4÷93,4	75,4÷93,4	75,4÷93,4
CO ₂ content	%	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8
Flue gas mass flow rate (min.-max)	kg/h	528÷710	657÷884	797÷1073	914÷1231	1020,1÷1372,9	1172÷1578	1383÷1862

Gas-fired		DDS 1400	DDS 1650	DDS 2000	DDS 2350	DDS 2700	DDS 3100	DDS 3500
Nominal heat output	kW	1050÷1400	1237,5÷1650	1500÷2000	1762,5÷2350	2025÷2700	2325÷3100	2625÷3500
Thermal output of furnace	kW	1092÷1469,8	1287÷1732,3	1560÷2099,7	1833÷2467,1	2106÷2834,6	2418,1÷3254,5	2730,1÷3674,5
Heat efficiency at nominal load (100%)	%	96,1÷95,2	96,1÷95,2	96,1÷95,2	96,1÷95,2	96,1÷95,2	96,1÷95,2	96,1÷95,2
Heat efficiency at 30% load	%	96,3÷95,4	96,3÷95,4	96,3÷95,4	96,3÷95,4	96,3÷95,4	96,3÷95,4	96,3÷95,4
Combustion efficiency at nominal load (100%)	%	96,3÷95,5	96,3÷95,5	96,3÷95,5	96,3÷95,5	96,3÷95,5	96,3÷95,5	96,3÷95,5
Heat loss at casing (min.-max.)	%	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2
Heat loss at chimney with burner on (min.-max.)	%	3,7÷4,5	3,7÷4,5	3,7÷4,5	3,7÷4,5	3,7÷4,5	3,7÷4,5	3,7÷4,5
Heat loss at chimney with burner off (min.-max.)	%	0,1÷0,1	0,1÷0,1	0,1÷0,1	0,1÷0,1	0,1÷0,1	0,1÷0,1	0,1÷0,1
Flue gas temperature tf-ta (min.-max.)	°C	75,4÷93,4	75,4÷93,4	75,4÷93,4	75,4÷93,4	75,4÷93,4	75,4÷93,4	75,4÷93,4
CO ₂ content	%	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8
Flue gas mass flow rate (min.-max)	kg/h	1641÷22095	1935÷2609	2345÷3156	2755÷3708	3166÷4261	3635÷4892	4104÷5523

Gas-fired		DDS 3900	DDS 4400	DDS 4800	DDS 5200	DDS 5700	DDS 6100
Nominal heat output	kW	2925÷3900	3300÷4400	3600÷4800	3900÷5200	4275÷5700	4575÷6100
Thermal output of furnace	kW	3042,1÷4094,4	3432,1÷4619,3	3744,1÷5039,3	4056,1÷5459,2	4446,1÷5984,1	4758,1÷6404,1
Heat efficiency at nominal load (100%)	%	96,1÷95,2	96,1÷95,2	96,1÷95,2	96,1÷95,2	96,1÷95,2	96,1÷95,2
Heat efficiency at 30% load	%	96,3÷95,4	96,3÷95,4	96,3÷95,4	96,3÷95,4	96,3÷95,4	96,3÷95,4
Combustion efficiency at nominal load (100%)	%	96,3÷95,5	96,3÷95,5	96,3÷95,5	96,3÷95,5	96,3÷95,5	96,3÷95,5
Heat loss at casing (min.-max.)	%	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2	0,2÷0,2
Heat loss at chimney with burner on (min.-max.)	%	3,7÷4,5	3,7÷4,5	3,7÷4,5	3,7÷4,5	3,7÷4,5	3,7÷4,5
Heat loss at chimney with burner off (min.-max.)	%	0,1÷0,1	0,1÷0,1	0,1÷0,1	0,1÷0,1	0,1÷0,1	0,1÷0,1
Flue gas temperature tf-ta (min.-max.)	°C	75,4÷93,4	75,4÷93,4	75,4÷93,4	75,4÷93,4	75,4÷93,4	75,4÷93,4
CO ₂ content	%	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8
Flue gas mass flow rate (min.-max)	kg/h	4573÷6154	5159÷6943	5628÷7575	6097÷8206	6683÷8995	7152÷9626



PRESSURIZED CARBON STEEL BOILER WITH THREE REAL SMOKE PASS

OUTPUT RANGE

from 65 to 3000 kW

OPERATION TEMPERATURE

minimum return temperature 50°C

SUPPLY

Natural Gas or LPG fed pressure jet, two stage or modulating burners
The models 2300 - 2650 - 3000 can be fed also with light oil

MODELS

65 ^{2S}	85 ^{2S}	110 ^{2S}	150 ^{2S}	185 ^{2S}	225 ^{2S}	300 ^{2S}	380 ^{2S}	500 ^{2S}	630 ^{2S}
730 ^{2S}	840 ^{2S}	1100 ^{2S}	1320 ^{2S}	1600 ^{2S}	1900 ^{2S}	-	2300	2650	3000

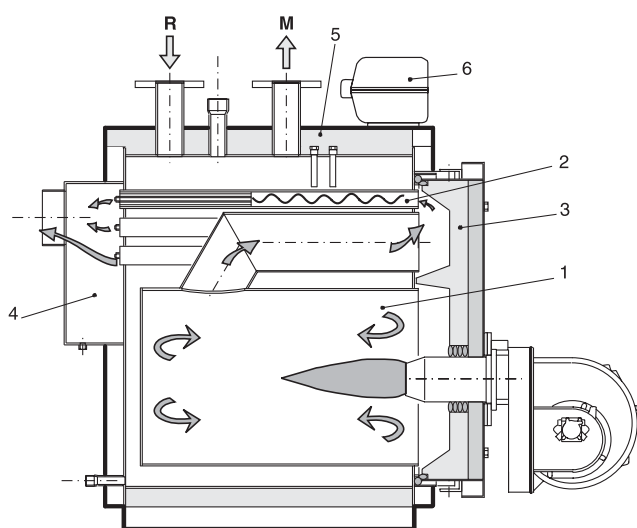
ENERGETIC CLASS
according to Dir. 92/42/EC

★★★★CE

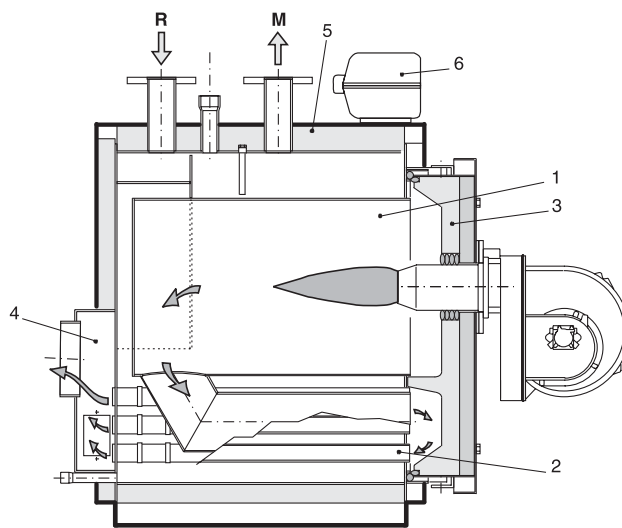
Certified in OUTPUT RANGE
Special patented smoke pipes with aluminium profiles – Floating furnace

MAIN COMPONENTS

Mod. 65÷1900



Mod. 2300÷3000



1. Furnace

2. Smoke pipes with
smoke diverters3. Door with flame
sight glass

4. Smoke chamber

5. Body insulation

6. Panel board

TECHNICAL DATA

MODEL	Heat output min/max	Heat input min/max	Efficiency at full load (100%)	Efficiency at part load (30%)	Boiler capacity	Water side pressure drops	Flue gas pressure drops	Max. boiler operating pressure	Flue gas temperature	Combustion chamber	Weight
	<i>kW</i>	<i>kW</i>	<i>%</i>	<i>%</i>	<i>l</i>	<i>m w.c.</i>	<i>mm w.c.</i>	<i>bar</i>	<i>°C</i>	<i>m³</i>	<i>kg</i>
DST 65	55÷65	58,2÷69,2	94,4÷93,9	94,6÷94,1	131	0,04÷0,06	4,6÷6,4	6	85÷100	0,060	315
DST 85	72÷85	76,1÷90,3	94,6÷94,1	94,8÷94,3	187	0,05÷0,07	5,4÷7,5	6	84÷99	0,088	355
DST 110	93÷109	98,1÷115,6	94,8÷94,3	95÷94,5	204	0,06÷0,08	7÷9,7	6	83÷98	0,130	435
DST 150	127÷150	133,6÷158,6	95÷94,5	95,2÷94,5	270	0,08÷0,10	11,2÷15,6	6	82÷97	0,139	515
DST 185	157÷185	164,9÷195,3	95,2÷94,7	95,2÷94,7	285	0,10÷0,18	14÷19,4	6	80÷95	0,155	580
DST 225	191÷225	200,2÷237,1	95,4÷94,9	95,4÷94,9	322	0,17÷0,20	16,6÷23,1	6	76÷91	0,176	640
DST 300	255÷300	265,9÷314,4	95,9÷95,4	95,6÷95,1	408	0,22÷0,35	20,5÷28,4	6	75÷90	0,239	840
DST 380	323÷380	336,8÷398,3	95,9÷95,4	96,1÷95,6	475	0,32÷0,53	23,6÷32,7	6	75÷90	0,280	935
DST 500	425÷500	443,1÷524,1	95,9÷95,4	96,1÷95,6	656	0,10÷0,15	27,3÷37,8	6	75÷90	0,389	1260
DST 630	535÷630	557,8÷660,3	95,9÷95,4	96,1÷95,6	737	0,16÷0,23	33,5÷46,5	6	75÷90	0,443	1375
DST 730	620÷730	646,5÷765,2	95,9÷95,4	96,1÷95,6	807	0,23÷0,33	37,5÷52	6	75÷90	0,498	1510
DST 840	714÷840	744,5÷880,5	95,9÷95,4	96,1÷95,6	932	0,35÷0,52	41,4÷57,3	6	75÷90	0,542	1650
DST 1100	935÷1100	974,9÷1153	95,9÷95,4	96,1÷95,6	1580	0,15÷0,21	48,8÷67,5	6	75÷90	0,753	2530
DST 1320	1122÷1320	1169,9÷1383,6	95,9÷95,4	96,1÷95,6	1791	0,21÷0,30	53,7÷74,3	6	75÷90	0,889	3065
DST 1600	1360÷1600	1418,1÷1677,1	95,9÷95,4	96,1÷95,6	2297	0,20÷0,28	58,9÷81,6	6	75÷90	1,116	4005
DST 1900	1615÷1900	1684÷1991,5	95,9÷95,4	96,1÷95,6	2496	0,27÷0,39	63,6÷88,1	6	75÷90	1,261	4230
DST 2300	1725÷2300	1798,7÷2410,8	95,9÷95,4	96,1÷95,6	2875	0,20÷0,35	45÷80	6	75÷90	1,558	5350
DST 2650	1987,5÷2650	2072,4÷2777,7	95,9÷95,4	96,1÷95,6	4320	0,19÷0,33	41,3÷73,5	6	75÷90	1,796	7070
DST 3000	2250÷3000	2346,1÷3144,5	95,9÷95,4	96,1÷95,6	4817	0,26÷0,45	50,6÷90	6	75÷90	2,037	7600

On special order the boilers from model DST 1100 to DST 3000 can be manufactured for a max. working pressure up to 10 bar.

PRODUCT PLUS VALUES

■ UTILISATION FLEXIBILITY

thanks to the certification in ranged output

■ REDUCED NO_x EMISSIONS: < 100 mg/kWh

thanks to the reduction of the specific thermal load

■ ELLIPTIC SHAPE OF THE OUTER SHELL

(up to mod. 870 kW): reduced width making easier access through the doors

■ OTTIMIZZAZIONE SCAMBIO TERMICO

through driven and braked run of the water within the boiler

■ SMOKE PIPES EASY STREAM PIPE Ø 1"1/2

■ FLOATING CYLINDRICAL FURNACE

without thermomechanical stresses from 500 kW to 3000 kW

■ FURNACE BOTTOM

with stiffening and heat dissipating plates

■ FRONT DOOR

with self centering closing system

■ INSIDE DOOR INSULATION

in special ceramic fibre up to 300 kW and in refractory concrete over 300 kW

■ HELICOIDAL STEEL TURBOLATORS

■ BOILER BODY INSULATION

with a 80 mm thick tearing resistant mineral wool mattress up to 85 kW e 100 mm over 85 kW

■ CONTROL PANEL BOARD

of thermomechanical or electronic type

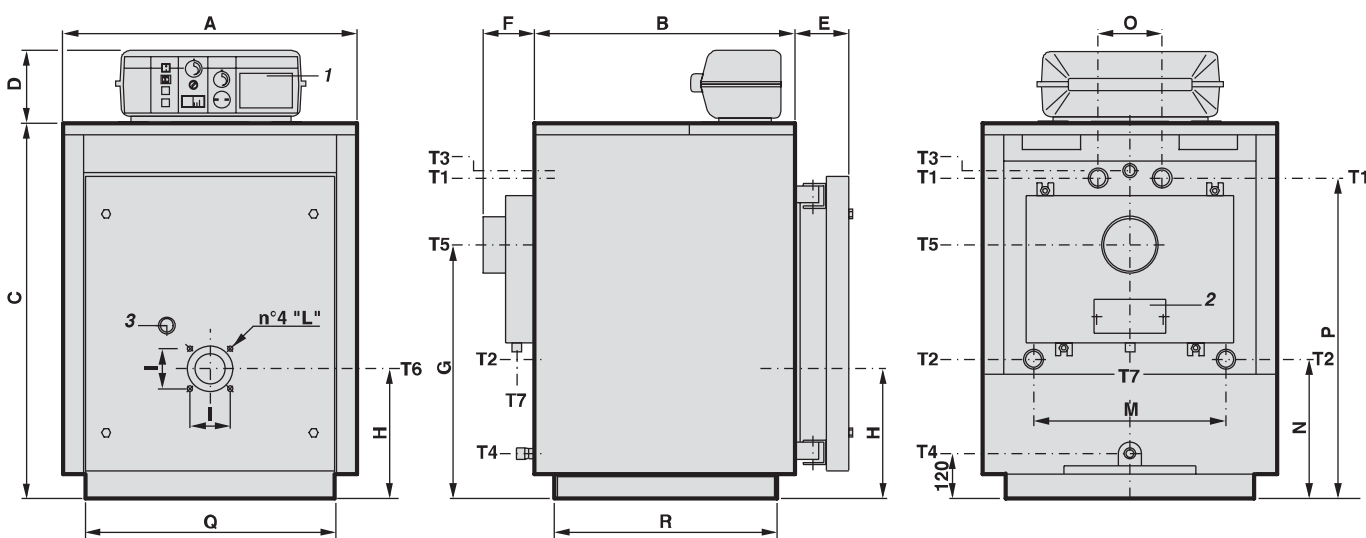
■ POSSIBLE INSTALLATION

of one/two/three stage or modulating oil or gas pressure jet burners

■ EASY HANDLING

thanks to the upper hooks and the strong I profiles of the base

DIMENSIONS DST 65÷85



1 Panel board

2 Smoke chamber cleaning door

3 Flame sight glass

T1 Central Heating flow

T2 Central Heating return

T3 Expansion vessel connection

T4 Boiler drain

T5 Chimney connection

T6 Burner connection

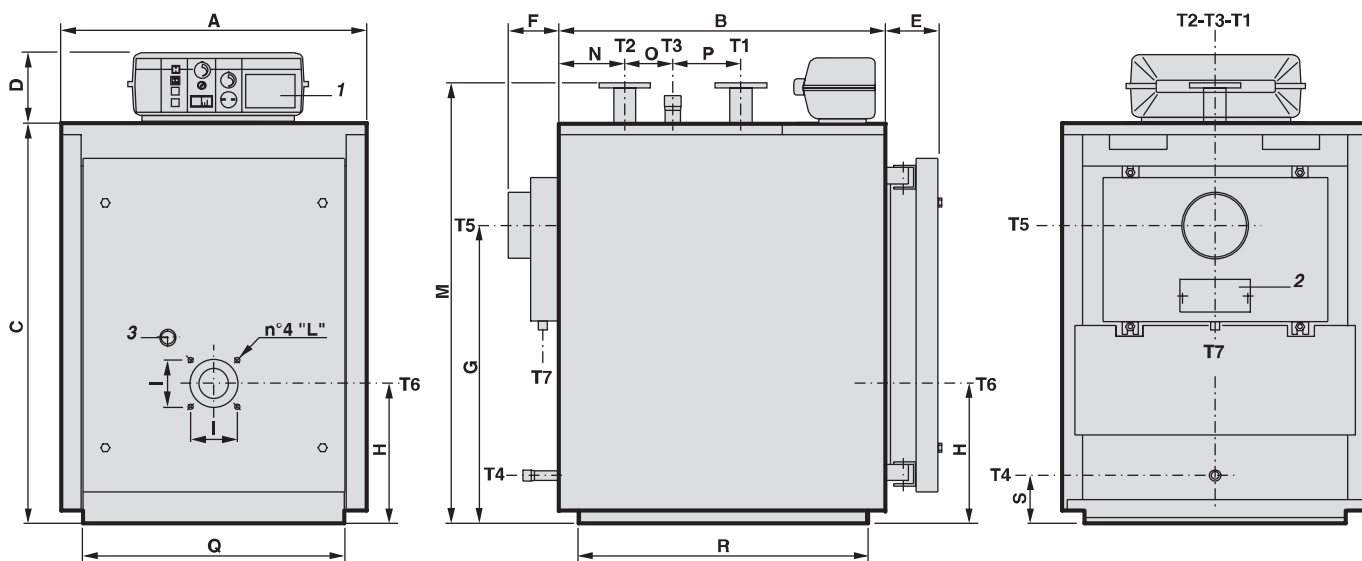
T7 Condensation drain

DST	Nominal output kW	Nominal input kW	Boiler capacity l	Water pressure drops(**) m w.c.	Flue gas pressure drop mm w.c.	Maximum boiler working pressure bar	Weight kg	CONNECTIONS					
								T1 T2	T3	T4	T5 Øi	T6 Ø	T7 Øe
								ISO 7/1	ISO 7/1	ISO 7/1	mm	mm	mm
65	55÷65	58,2÷69,2	131	0,04÷0,06	4,6÷6,4	6	315	Rp 1½	Rp 1	Rp ¾	150	132	40
85	72÷85	76,1÷90,3	187	0,05÷0,07	5,4÷7,5	6	355	Rp 1½	Rp 1	Rp ¾	150	132	40

DST	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q*	R*
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
65	740	690	950	190	140	145	660	345	120	M8	470	310	190	846	660	590
85	740	950	950	190	140	145	660	345	120	M8	470	310	190	846	660	850

(*) Minimum dimensions for boiler room access. (**) Pressure drops corresponding to a thermal drop of 15K.

DIMENSIONS DST 110÷380



- 1 Panel board
 2 Smoke chamber cleaning door
 3 Flame sight glass
 T1 Central Heating flow

- T2 Central Heating return
 T3 Expansion vessel connection
 T4 Boiler drain
 T5 Chimney connection

- T6 Burner connection
 T7 Condensation drain

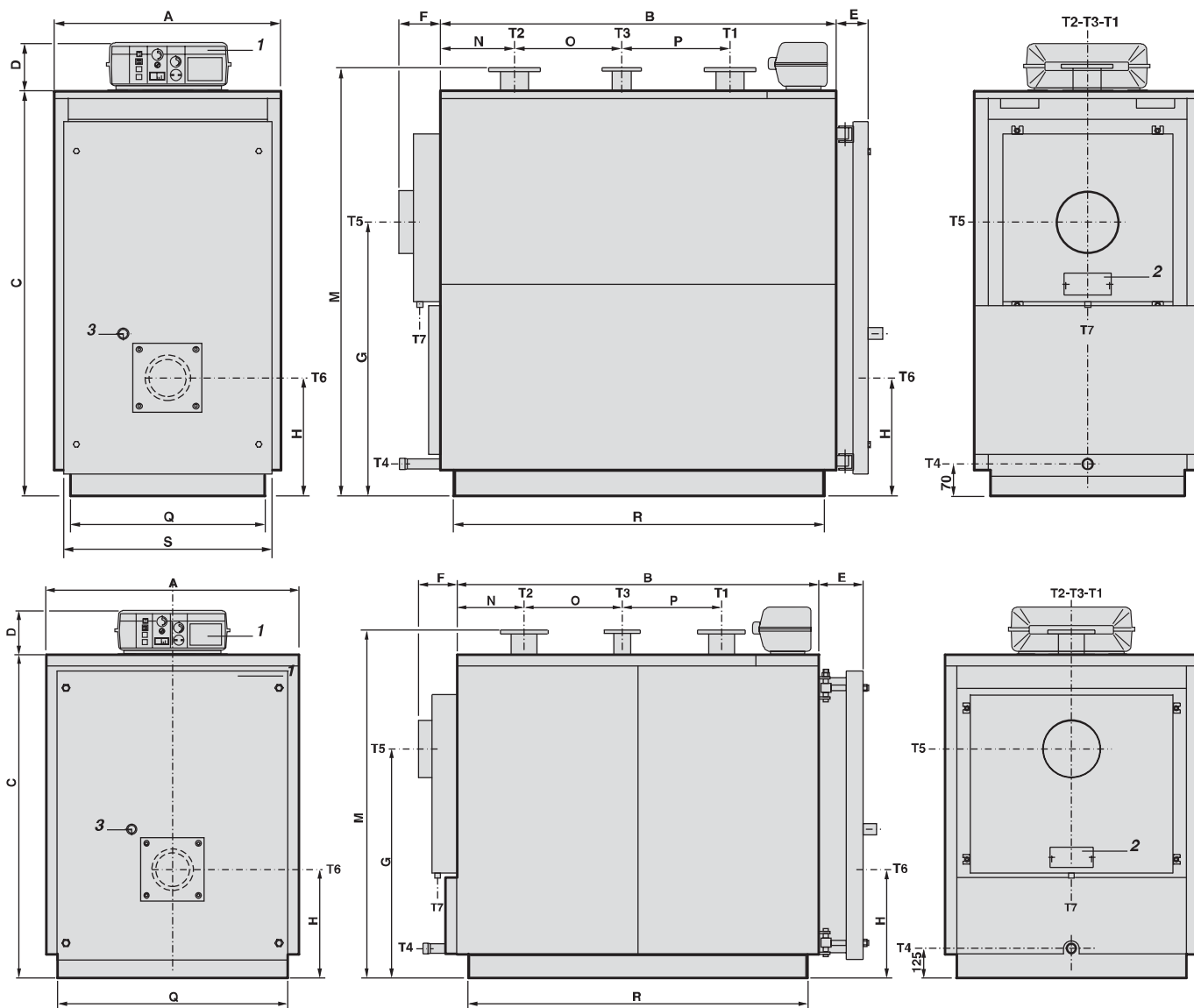
DST	Nominal output kW	Nominal input kW	Boiler capacity l	Water pressure drops(**) m w.c.	Flue gas pressure drop mm w.c.	Maximum boiler working pressure bar	Weight kg	CONNECTIONS					
								T1 T2	T3	T4	T5 Øi	T6 Ø	T7 Øe
								UNI 2278 PN16	ISO 7/1	ISO 7/1	mm	mm	mm
110	93÷109	98,1÷115,6	204	0,06÷0,08	7÷9,7	6	435	DN 50	Rp 1½	Rp ¾	180	132	40
150	127÷150	133,6÷158,6	270	0,08÷0,10	11,2÷15,6	6	515	DN 50	Rp 1½	Rp ¾	180	132	40
185	157÷185	164,9÷195,3	285	0,10÷0,18	14÷19,4	6	580	DN 65	Rp 1½	Rp ¾	180	180	40
225	191÷225	200,2÷237,1	322	0,17÷0,20	16,6÷23,1	6	640	DN 65	Rp 1½	Rp ¾	180	180	40
300	255÷300	265,9÷314,4	408	0,22÷0,35	20,5÷28,4	6	840	DN 80	Rp 2	Rp ¾	225	180	40
380	323÷380	336,8÷398,3	475	0,32÷0,53	23,6÷32,7	6	935	DN 80	Rp 2	Rp ¾	225	180	40

DST	A	B	C	D	E	F	G	H	I	L	M*	N	O	P	Q*	R*	S
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
110	820	885	1082	190	140	145	748	380	120	M 8	1210	175	130	185	710	786	130
150	820	1145	1082	190	140	145	748	380	120	M 8	1210	175	390	185	710	1046	130
185	860	1080	1182	190	140	145	828	400	--	--	1310	215	210	250	750	981	130
225	860	1210	1182	190	140	145	828	400	--	--	1310	215	340	250	750	1111	130
300	890	1275	1352	190	140	145	928	440	--	--	1485	255	285	315	780	1177	125
380	890	1470	1352	190	140	145	928	440	--	--	1485	255	480	315	780	1372	125

(*) Minimum dimensions for boiler room access.

(**) Pressure drops corresponding to a thermal drop of 15K.

DIMENSIONS DST 500÷730 - 840



- 1 Panel board
2 Smoke chamber cleaning door
3 Flame sight glass
T1 Central Heating flow

- T2 Central Heating return
T3 Expansion vessel connection
T4 Boiler drain
T5 Chimney connection

- T6 Burner connection
T7 Condensation drain

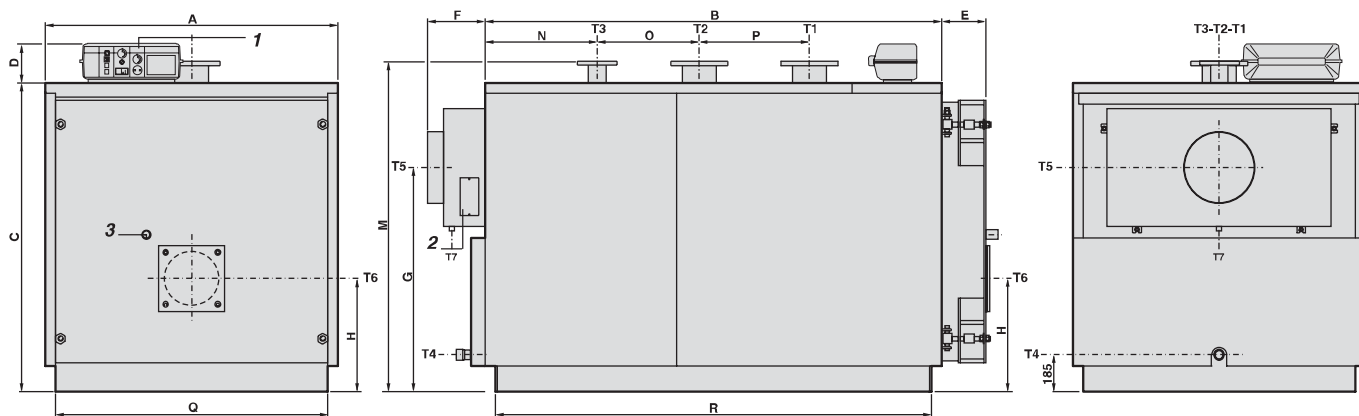
DST	Nominal output kW	Nominal input kW	Boiler capacity l	Water pressure drops(**) m w.c.	Flue gas pressure drop mm w.c.	Maximum boiler working pressure bar	Weight kg	CONNECTIONS					
								T1 T2	T3	T4	T5 Øi	T6 Ø	T7 Øe
								UNI 2278 PN16	UNI 2278 PN16	ISO 7/1	mm	mm	mm
500	425÷500	443,1÷524,1	656	0,10÷0,15	27,3÷37,8	6	1260	DN 100	DN 65	Rp 1	250	220	40
630	535÷630	557,8÷660,3	737	0,16÷0,23	33,5÷46,5	6	1375	DN 100	DN 65	Rp 1	250	220	40
730	620÷730	646,5÷765,2	807	0,23÷0,33	37,5÷52	6	1510	DN 100	DN 65	Rp 1	250	220	40
840	714÷840	744,5÷880,5	932	0,35÷0,52	41,4÷57,3	6	1650	DN 100	DN 65	Rp 1¼	250	270	40

DST	A	B	C	D	E	F	G	H	M*	N	O	P	Q*	R*	S*
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
500	920	1605	1645	190	135	195	1110	480	1735	298	435	440	790	1505	860
630	920	1800	1645	190	135	195	1110	480	1735	298	630	440	790	1790	860
730	920	1995	1645	190	135	195	1110	480	1735	298	825	440	790	1895	860
840	1122	2115	1432	190	195	195	1025	480	1540	298	945	440	1020	2014	--

(*) Minimum dimensions for boiler room access.

(**) Pressure drops corresponding to a thermal drop of 15K.

DIMENSIONS DST 1100÷1900



1 Panel board

2 Smoke chamber cleaning door

3 Flame sight glass

T1 Central Heating flow

T2 Central Heating return

T3 Expansion vessel connection

T4 Boiler drain

T5 Chimney connection

T6 Burner connection

T7 Condensation drain

DST	Nominal output kW	Nominal input kW	Boiler capacity l	Water pressure drops(**) m w.c.	Flue gas pressure drop mm w.c.	Maximum boiler working pressure bar	Weight kg	CONNECTIONS					
								T1 T2	T3	T4	T5 Øi	T6 Ø	T7 Øe
								UNI 2278 PN16	UNI 2278 PN16	ISO 7/1	mm	mm	mm
1100	935÷1100	974,9÷1153	1580	0,15÷0,21	48,8÷67,5	6	2530	DN 150	DN 80	Rp 1½	350	270	40
1320	1122÷1320	1169,9÷1383,6	1791	0,21÷0,30	53,7÷74,3	6	3065	DN 150	DN 80	Rp 1½	350	270	40
1600	1360÷1600	1418,1÷1677,1	2297	0,20÷0,28	58,9÷81,6	6	4005	DN 175	DN 100	Rp 1½	400	285	40
1900	1615÷1900	1684÷1991,5	2496	0,27÷0,39	63,6÷88,1	6	4230	DN 175	DN 100	Rp 1½	400	285	40

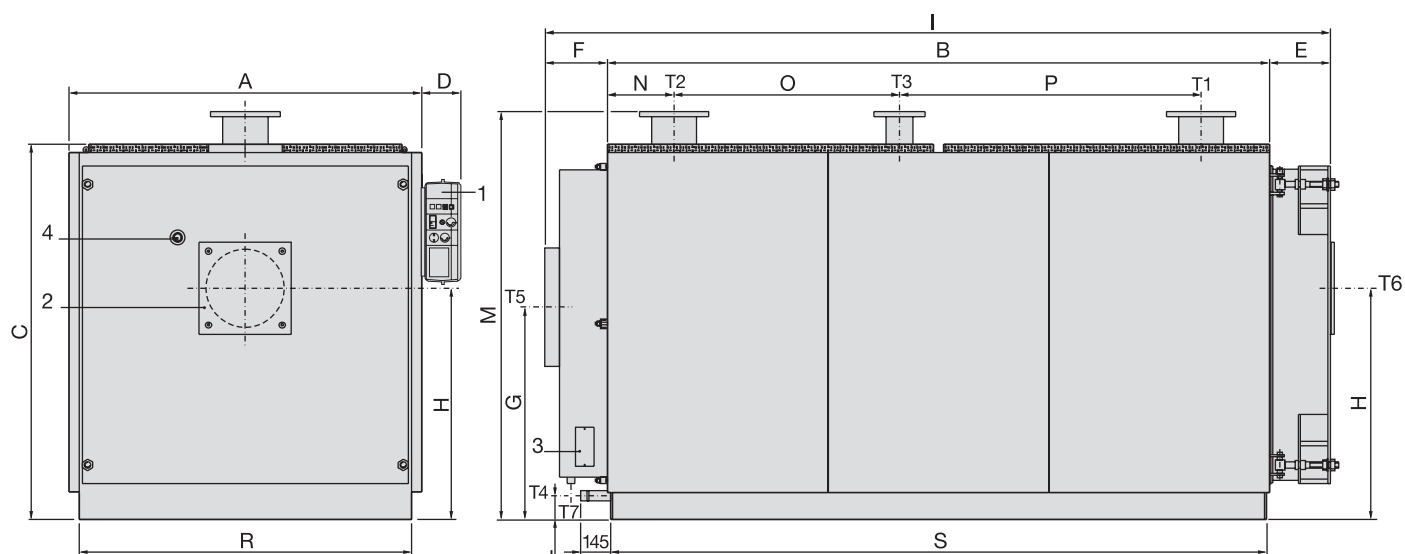
DST	A	B	C	D	E	F	G	H	M*	N	O	P	Q*	R*
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
1100	1462	2282	1542	190	230	290	1120	565	1650	561	510	550	1360	2176
1320	1462	2652	1542	190	230	290	1120	565	1650	561	880	550	1360	2546
1600	1622	2692	1702	190	260	290	1245	605	1810	661	670	700	1520	2590
1900	1622	3014	1702	190	260	290	1245	605	1810	662	990	700	1520	2910

(*) Minimum dimensions for boiler room access.

(**) Pressure drops corresponding to a thermal drop of 15K.

On special order the boilers from model DST 1100 to DST 3000 can be manufactured for a max. working pressure up to 10 bar.

DIMENSIONS DST 2300÷3000



- 1 Panel board
- 2 Burner connection flange
- 3 Smoke chamber cleaning door
- 4 Flame control warning light

- T1 Heating flow
- T2 Heating return
- T3 Expansion vessel connection
- T4 Boiler drain

- T5 Chimney connection
- T6 Burner connection
- T7 Condensation drain

DST	Nominal output kW	Nominal input kW	Boiler capacity l	Water pressure drops(**) m w.c.	Flue gas pressure drop mm w.c.	Maximum boiler working pressure bar	Weight kg	CONNECTIONS					
								T1 T2	T3	T4	T5 Øi	T6 Ø	T7 Øe
								UNI 2278 PN16	UNI 2278 PN16	ISO 7/1	mm	mm	mm
2300	1725÷2300	1798,7÷2410,8	2875	0,20÷0,35	45÷80	6	5350	DN 200	DN 125	Rp 1½	570	320	40
2650	1987,5÷2650	2072,4÷2777,7	4320	0,19÷0,33	41,3÷73,5	6	7070	DN 200	DN 125	Rp 1½	620	380	40
3000	2250÷3000	2346,1÷3144,5	4817	0,26÷0,45	50,6÷90	6	7600	DN 200	DN 125	Rp 1½	620	380	40

DST	A	B	C	D	E	F	G	H	I	L	M*	N	O	P	R*	S
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
2300	1720	3230	1830	190	295	310	1315	1225	3835	115	1990	325	1100	1470	1620	3200
2650	1970	3194	2090	190	325	360	1535	1450	3879	144	2271	377	1060	1420	1870	3164
3000	1970	3594	2090	190	325	360	1535	1450	4279	144	2271	777	1060	1420	1870	3564

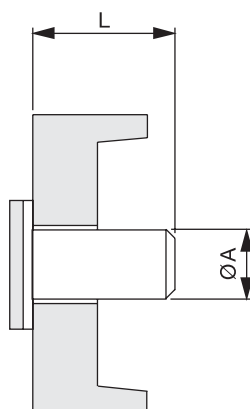
(*) Minimum dimensions for boiler room access.

(**) Pressure drops corresponding to a thermal drop of 15K.

On special order the boilers from model DST 1100 to DST 3000 can be manufactured for a max. working pressure up to 10 bar.

BURNER HEAD TUBE DIMENSIONS

BOILER TYPE	øA mm	L mm
DST 65÷85	132	180
DST 110÷150	132	180
DST 185÷225	180	180
DST 300÷380	180	200
DST 500÷730	220	230
DST 840	270	280
DST 1100÷1320	270	320
DST 1600÷1900	285	350
DST 2300	320	350
DST 2650÷3000	380	400



SPECIAL SMOKE PIPES (patented)

The pipes of the third smoke pass are decisive for the attainment of the **maximum efficiency**.

The new patented technology has allowed to insert special aluminium multi-fin structures inside the thick steel pipes. In this way are born the new “EASY STREAM Pipes” of 1 1/2” diameter.



TECHNICAL DATA

ELECTRICAL, HYDRAULIC, INSTALLATION DIAGRAMS AND CONTROLLERS can be unloaded from the web site www.schusterboilers.com at the page of the product

Gas-fired		DST 65	DST 85	DST 110	DST 150	DST 185
Nominal heat output	kW	55÷65	72÷85	93÷109	127÷150	157÷185
Nominal heat input	kW	58,2÷69,2	76,1÷90,3	98,1÷115,6	133,6÷158,6	164,9÷195,3
Heat efficiency at nominal load (100%)	%	94,4÷93,9	94,6÷94,1	94,8÷94,3	95÷94,5	95,2÷94,7
Heat efficiency at 30% load	%	94,6÷94,1	94,8÷94,3	95÷94,5	95,2÷94,7	95,4÷94,9
Number of stars (according to ex 92/42 EEC)		3	3	3	3	3
Combustion efficiency at nominal load (100%)	%	95,9÷95,1	95,9÷95,2	96÷95,2	96÷95,3	96,1÷95,4
Heat loss at casing (min.- max.)	%	1,4÷1,2	1,3÷1,1	1,2÷0,9	0,9÷0,7	0,8÷0,6
Heat loss at chimney with burner on (min.-max.)	%	4,1÷4,9	4,1÷4,8	4÷4,8	4÷4,7	3,9÷4,6
Heat loss at chimney with burner off (min.-max.)	%	0,1÷0,1	0,1÷0,1	0,1÷0,1	0,1÷0,1	0,1÷0,1
Flue gas temperature tf-ta (min.-max.)	°C	85÷100	84÷99	83÷98	82÷97	80÷95
CO ₂ content	%	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8
Flue gas mass flow rate (min.-max)	kg/h	87,6÷104	114,5÷135,8	147,5÷173,8	200,8÷238,5	247,8÷293,5

Gas-fired		DST 225	DST 300	DST 380	DST 500	DST 630
Nominal heat output	kW	191÷225	255÷300	323÷380	425÷500	535÷630
Nominal heat input	kW	200,2÷237,1	265,9÷314,4	336,8÷398,3	443,1÷524,1	557,8÷660,3
Heat efficiency at nominal load (100%)	%	95,4÷94,9	95,9÷95,4	95,9÷95,4	95,9÷95,4	95,9÷95,4
Heat efficiency at 30% load	%	95,6÷95,1	96,1÷95,6	96,1÷95,6	96,1÷95,6	96,1÷95,6
Number of stars (according to ex 92/42 EEC)		3	3	3	--	--
Combustion efficiency at nominal load (100%)	%	96,3÷95,6	96,3÷95,6	96,3÷95,6	96,3÷95,6	96,3÷95,6
Heat loss at casing (min.- max.)	%	0,9÷0,7	0,4÷0,2	0,4÷0,2	0,4÷0,2	0,4÷0,2
Heat loss at chimney with burner on (min.-max.)	%	3,7÷4,4	3,7÷4,4	3,7÷4,4	3,7÷4,4	3,7÷4,4
Heat loss at chimney with burner off (min.-max.)	%	0,1÷0,1	0,1÷0,1	0,1÷0,1	0,1÷0,1	0,1÷0,1
Flue gas temperature tf-ta (min.-max.)	°C	76÷91	75÷90	75÷90	75÷90	75÷90
CO ₂ content	%	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8
Flue gas mass flow rate (min.-max)	kg/h	300,9÷356,4	399,7÷472,7	506,3÷598,7	666,1÷787,8	838,5÷992,6

Gas-fired		DST 730	DST 840	DST 1100	DST 1320	DST 1600
Nominal heat output	kW	620÷730	714÷840	935÷1100	1122÷1320	1360÷1600
Nominal heat input	kW	646,5÷765,2	744,5÷880,5	974,9÷1153	1169,9÷1383,6	1418,1÷1677,1
Heat efficiency at nominal load (100%)	%	95,9÷95,4	95,9÷95,4	95,9÷95,4	95,9÷95,4	95,9÷95,4
Heat efficiency at 30% load	%	96,1÷95,6	96,1÷95,6	96,1÷95,6	96,1÷95,6	96,1÷95,6
Number of stars (according to ex 92/42 EEC)		--	--	--	--	--
Combustion efficiency at nominal load (100%)	%	96,3÷95,6	96,3÷95,6	96,3÷95,6	96,3÷95,6	96,3÷95,6
Heat loss at casing (min.- max.)	%	0,4÷0,2	0,4÷0,2	0,4÷0,2	0,4÷0,2	0,4÷0,2
Heat loss at chimney with burner on (min.-max.)	%	3,7÷4,4	3,7÷4,4	3,7÷4,4	3,7÷4,4	3,7÷4,4
Heat loss at chimney with burner off (min.-max.)	%	0,1÷0,1	0,1÷0,1	0,1÷0,1	0,1÷0,1	0,1÷0,1
Flue gas temperature tf-ta (min.-max.)	°C	75÷90	75÷90	75÷90	75÷90	75÷90
CO ₂ content	%	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8
Flue gas mass flow rate (min.-max)	kg/h	971,7÷1150,2	1119,1÷1323,5	1465,5÷1733,1	1758,6÷2079,7	2131,6÷2520,9

Gas-fired		DST 1900	DST 2300	DST 2650	DST 3000
Nominal heat output	kW	1615÷1900	1725÷2300	1987,5÷2650	2250÷3000
Nominal heat input	kW	1684÷1991,5	1798,7÷2410,8	2072,4÷2777,7	2346,1÷3144,5
Heat efficiency at nominal load (100%)	%	95,9÷95,4	95,9÷95,4	95,9÷95,4	95,9÷95,4
Heat efficiency at 30% load	%	96,1÷95,6	96,1÷95,6	96,1÷95,6	96,1÷95,6
Number of stars (according to ex 92/42 EEC)		--	--	--	--
Combustion efficiency at nominal load (100%)	%	96,3÷95,6	96,3÷95,6	96,3÷95,6	96,3÷95,6
Heat loss at casing (min.- max.)	%	0,4÷0,2	0,4÷0,2	0,4÷0,2	0,4÷0,2
Heat loss at chimney with burner on (min.-max.)	%	3,7÷4,4	3,7÷4,4	3,7÷4,4	3,7÷4,4
Heat loss at chimney with burner off (min.-max.)	%	0,1÷0,1	0,1÷0,1	0,1÷0,1	0,1÷0,1
Flue gas temperature tf-ta (min.-max.)	°C	75÷90	75÷90	75÷90	75÷90
CO ₂ content	%	9,8÷9,8	9,8÷9,8	9,8÷9,8	9,8÷9,8
Flue gas mass flow rate (min.-max)	kg/h	2531,3÷2993,5	2703,7÷3623,8	3115,1÷4175,2	3526,5÷4726,7