

Description:

The Pyrot rotating firebox is specially suited to automatically burn all dry to damp wood fuels (chips, sawdust shavings, pellets, briquettes, forestry wood shavings).

Max. water contents $w = 35-40\%$, corresponds to wood dampness of $u = 54-66\%$.

The Pyrot rotating firebox stands out through the highest degree of efficiency in all load ranges and automatic operations (automatic de-ashing, automatic ignition).

The Pyrot series of fireboxes is fully in the EN 303-5 range for fireboxes for solid fuels up to 300 kW and is completely quality certified (type license certificate number 0111 9804002).

The sizes outside of the EN 303-5 dimensions (Pyrot-400 and Pyrot 540) are manufactured in the same way and with the same measures of quality assurance and are type certified (license no. 02-221-715X).

The boiler consists of:

FEED WORM WITH SEALING LAYER:

The feed worm transports the fuel diagonally downwards into the furnace. The feed worm is made of chrome nickel steel in the area of the fire bricks. On the transport tube are the mountings for the flash fire sensors and for the thermic extinguisher valve. Above the worm the dose container with light barrier for level determination according to in TRD 414 required fuel sealing. Drive is with maintenance free spur wheel back-gear motor and chain drive in dust proof chain protective cover.

Inlet flange: 220 x 220 mm

Accessory: extinguisher valve with dirt pan, extinguishing water container with mounting.

FIRE BLOCK WITH FEED GRATE AND IGNITION BLOWER:

Fuel is automatically ignited with an electric hot air blower.

De-gassing takes place on the worm feed. The ashing falls into the ash pan below (de-ashing worm drive optional). The fire block is coated with fire proof isolation and burnt refractory concrete elements.

Accessory: drive motor, 3 ash pans (2 in the fire block, 1 in reserve), ignition blower

BOILER WITH ROTATION COMBUSTION CHAMBER:

Fuel fumes rising from the fire block are captured by the secondary air created by the rotation blower and completely burnt in the round combustion chamber. Through the horizontal shell-and-tube exchanger the heating energy of the fuel is transferred to the boiler water. The boiler is well isolated, the sheathing is well designed and easily accessed through the top side door.

At the back of the boiler there is the oil burner flange (boiler in burner mode has a max. of 75 % efficiency). Locks with isolated blanking cover with sight glass.

EXHAUST BLOWER:

Special blower for wood burning operation, very low noise, motor built massively, spring mounted, heat resistant with heat dissipating hub. Blower housing infinitely rotatable at the intake fitting, exhaust nozzle round. Assembly and exhaust collector possible on top or at the back.

ACCESSORIES:

Mating flange: Flow and return incl. screws and seals,

Cleaning tools: scratcher, scraper to clean the combustion chamber; cleaning brushes with flexible steel handles D 39 mm, D 165 mm

Performance data:

Commercial designation	Pyrot-100	Pyrot-150	Pyrot-220	Pyrot-300	Pyrot-400	Pyrot-540
art.-no.	KRT-100-A	KRT-150-A	KRT-220-A	KRT-300-A	KRT-400-A	KRT-540-A
Minimum nominal heat output, wood chippings B1, pressed wood C acc. EN 303-5 [kW] ¹⁾	25	40	60	80	100	140
Maximum nominal heat output, wood chippings B1, pressed wood C acc. EN 303-5 [kW]	100	150	220	300	400	540
Boiler efficiency [%]	90-92	90-92	90-92	90-92	90-92	90-92
Setting range boiler temperature [°C]	70-95	70-95	70-95	70-95	70-95	70-95
Minimum adjustable back flow temperature [°C]	60	60	60	60	60	60
Total electrical connections [kW] ²⁾	1,07	1,07	1,25	2,0	2,38	2,03
Electrical performance of ignition [kW]	1,6	1,6	1,6	1,6	1,6	1,6
Nominal output exhaust/rotation blower [kW]	0,55/0,12	0,55/0,12	0,55/0,12	0,75/0,12	1,1/0,12	1,1/0,12
Nominal output feed worm /feed grate [kW]	0,37/0,03	0,37/0,03	0,55/0,03	1,1/0,03	1,1/0,06	0,75/0,06
El. power consumption at min. nominal heat output [kW]	0,28	0,355	0,369	0,434	0,480	0,460
El. power consumption at max. nominal heat output [kW]	0,85	1,032	1,108	1,521	1,868	1,753
Max. permissible water contents in fuel. [%] ³⁾	35-40	35-40	35-40	35-40	35-40	35-40
Exhaust mass flow at maximal nominal heat output (O ₂ 8% / W15%) [g/s]	63,7	95,6	140,2	191,2	254,9	344,1
Exhaust gas temperature at max. nominal output [°C]	175-180	175-180	175-180	175-180	175-180	175-180
Exhaust gas temperature at min. nominal output [°C]	95-110	95-110	95-110	95-110	95-110	95-110
Chimney: Required draught [Pa] ⁴⁾	+0	+0	+0	+0	+0	+0
Chimney: Max. negative pressure [Pa] ⁴⁾	-10	-10	-10	-10	-10	-10
Upstream resistance at max. nominal output ΔT 20°C [mbar]	0,7	1,4	1,2	2,2	2,6	4,6

1) Water contents W less than 25 %, higher water contents reduces maximum nominal heat output.

2) all current consumers, however without ignition

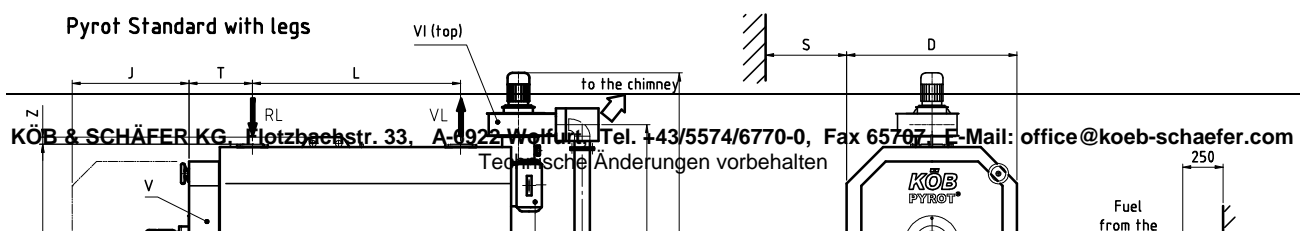
3) for detailed information see manual for usable fuels

4) Install the draught limiter

Heat related / weights:

Pyrot [art.-no.]	KRT-100-A	KRT-150-A	KRT-220-A	KRT-300-A	KRT-400-A	KRT-540-A
Test pressure [bar]	6,0	6,0	6,0	6,0	6,0	6,0
Maximum operation pressure [bar]	3,0	3,0	3,0	3,0	3,0	3,0
Water contents [l]	373	418	783	917	1221	1408
Contents on heating glass side [l]	325	374	744	883	1340	1613
Heating surface [m ²]	8,28	10,78	16,04	20,72	28,76	39,36
Weight of fireclay rotation combustion chamber [kg]	272	335	412	432	683	765
Weight of fireblock [kg]	341	412	493	569	723	794
Total boiler weight 1) [kg]	1895	2200	3080	3560	4600	5940
Weight of feed worm [kg]	124	124	132	136	139	152
Contents of ash pan primary firing [l]	52	63	90	90	120	120
Displacement rod [art.-no.]	KRT-VS-100	KRT-VS-150	KRT-VS-220	KRT-VS-300	KRT-VS-400	KRT-VS-540
Displacement rod pieces per set	18	23	37	43	58	76
Weight per set	66,6	85,1	136,9	159,1	214,6	281,2
De-ashing in ash pan [art.-no.]	KRT-ES-100	KRT-ES-150	KRT-ES-220	KRT-ES-300	KRT-ES-400	KRT-ES-540
Contents ash pan [Liter]	220	240	360	380	600	700
Complete de-ashing weight 2)[kg]	300	320	340	360	380	400

1) without feed worm, without water, without fuel 2) In addition to total boiler weight



Connection/dimensions:

Pyrot [art.-no]	KRT-100-A	KRT-150-A	KRT-220-A	KRT-300-A	KRT-400-A	KRT-540-A
Connection						
1 Feed	R 2" IG	R 2" IG	DN 80 PN 6	DN 80 PN 6	DN100 PN6	DN100 PN6
2 Back flow	R 2" IG	R 2" IG	DN 80 PN6	DN 80 PN6	DN100 PN6	DN100 PN6
3 Boiler VL-sensor	R 1/2" IG	R 1/2" IG	R 1/2" IG	R 1/2" IG	R 1/2" IG	R 1/2" IG
4 Safety temperature limiter	R 1/2" IG	R 1/2" IG	R 1/2" IG	R 1/2" IG	R 1/2" IG	R 1/2" IG
5 Therm. drain fuse (sensor)	R 1/2" IG	R 1/2" IG	R 1/2" IG	R 1/2" IG	R 1/2" IG	R 1/2" IG
6 Safety heat exchanger-	2 x R1/2"AG	2 x R1/2"AG	2 x R1/2"AG	2 x R1/2"AG	4 x R1/2"AG	4 x R1/2"AG
7 Extinguisher water connection	R 3/4" AG	R 3/4" AG	R 3/4" AG	R 3/4" AG	R 3/4" AG	R 3/4" AG
8 Emptying tap	R 1" IG	R 1" IG	R 1" IG	R 1" IG	R 1" IG	R 1" IG
9 Boiler RL-sensor	R 1/2" IG	R 1/2" IG	R 1/2" IG	R 1/2" IG	R 1/2" IG	R 1/2" IG
Dimension						
A [mm]	2194	2444	2444	2816	2853	3083
B [mm]	3000	3268	3268	3698	3837	4067
C [mm]	870	870	1150	1150	1390	1390
D [mm]	1050	1050	1330	1330	1570	1570
E [mm]	1765	1765	2024	2024	2262	2332
F [mm]	2193	2193	2470	2568	2816	2886
G [mm]	673	673	673	673	673	750
H [mm]	512	562	562	632	730	798
J [mm]	680	680	960	960	1140	1140
K [mm]	1891	1908	2168	2182	2457	2527
L [mm]	1291	1541	1525	1875	1800	2030
M [mm]	1520	1520	1770	1770	1879	1949
N [mm]	700	700	700	700	700	742
O [mm]	200	250	250	300	350	350
P [mm]	793	943	943	1217	1006	1100
Q [mm]	341	341	341	341	392	392
R [mm]	250	250	250	250	250	250
S [mm]	600	600	800	800	970	970
T [mm]	398	398	406	406	466	466
U [mm]	1570	1570	2050	2050	2460	2460
V [mm]	1093	1093	1179	1179	1219	1297
W [mm]	303	303	316	316	319	319
X [mm]	245	261	261	277	359	362
Y [mm]	320	370	370	440	480	548
Z [mm]	60	60	60	60	275 (1)	275 (1)
a [mm]	170	170	190	190	190	190
b [mm]	143	143	159	159	159	159
c	4 x M8	4 x M8	4 x M10	4 x M10	4 x M10	4 x M10
d [mm]	448	450	513	787	456	551
e [mm]	593	593	680	680	800	800
f [mm]	426	426	426	426	426	426
Components, doors, covers						
I	Feed worm left or right (marked right)					
II	Drive feed grate (below feed worm left or right)					
III	Maintenance cover of fire block					
IV	Ash door of grate ash (2 pieces)					
V	Boiler door with rotation blower					
VI	Exhaust blower, assembly possible above or at the back, 360° rotatable					
VII	Cleaning cover exhaust gas collector					
VIII	Flange for flip box burner; normal edition: cover with sight glass					
IX	Maintenance cover for ash socket container					
X	Ash door socket container					
XI	Automatic ignition (price see accessories 5100-1)					

1) Pyrot 400/540 with removable attachments