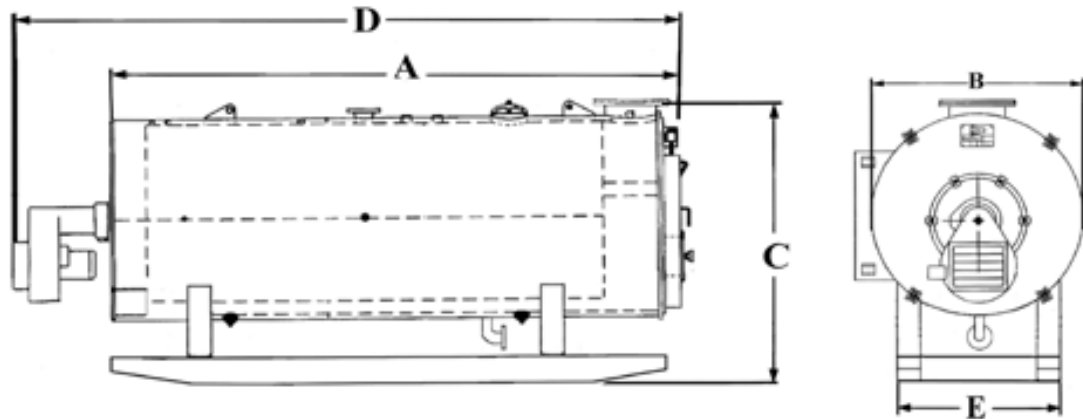


Steam Boiler Type SH3P15



Type	Capacity Kg/hr	Burner consumption		Feed water pump	(A) mm	(B) mm	(C) mm	(D) mm	(E) mm
		Light oil	Natural gas						
SH3P15	150	8	8.5	300	1450	1300	1700	1500	750

**** Technical Data General:**

Type	: Steam-horizontal, fire tube, 3-pass boiler.
Model	: SH ₃ P 15.
Capacity	: 150 Kg/hr – 9BHP – 105 K.W.
Thermal Eff.	: 85 %.
Max. Boiler Output	: 150 Kg/hr. at 80° FW
Oil consumption	: 10 Kg/hr.
Type of Fuel	: Light oil (Solar), Natural gas, Mazout
Working Pressure	: 10 bar.
Testing Pressure	: 16 bar.
Duration of Operation	: Continuous.
Weight	: 1150 Kg.

Inside Specifications:

First Pass	: Fire tube.	
	: No. of Tubes	: One.
	: Area of Heat Transfer	: 1.17 m ²
Second Pass	: Smoke pipes.	
	: No. of Tubes	: 19.
	: Area of Heat Transfer	: 2.4 m ²
Third Pass	: Smoke pipes.	
	: No. of Tubes	: 18.
	: Area of Transfer	: 2.3 m ² .

Outside Specifications:

Water Inlet	: 25 mm.
Steam Outlet	: 25 mm.
Draining	: 38 mm.
Safety Valve	: 2 x 25 mm.

i.e. All dimensions mentored are subject for change without prior notice

Glass Level Indicator	: 2 x 34 cm.
Burner Opening	: 25 cm.
Stack Opening	: 21 cm.
Air Vent Opening	: 38 mm.
Sensors and Gauges	: 2 x pressure stators, 1 x pressure gauge, 1 x temperature gauge, 1 x water level floater.
Insulation	: 70mm thickness of rock-wall, density 70 Kg/m ³ covered by stainless-steel sheets.
Front & Rear Doors	: Insulation of 50 mm of ceramic, density 280 Kg/m ³ , sealing of 32 mm amient ropes.
Manhole & Hand Holes	: 25 mm of lead & grease sealing.
Base Frame	: Steel-section I-beam sections distributing weights over largest area could be used.

**** Standard Accessories:**

1. Burner:

Type	: Riello or equivalent
Model	: G 10 / FS 20 / RLS 28.
Power Consumption	: 54 -120 KW
Oil Consumption	: 4.5 -10 Kg/hr
Gas Consumption	: 8.1 - 22 Nm ³ /h.

2. Pump:

Type	: Grundfoss or equivalent
Model	: CR 3-27
Discharge	: 2 m ³ /hr
Head	: 170 M
Temp	: 120 °C

3. Level Control (Floater):

Type	: Mc Donnell and Miller / Bestobell Mobrey or equivalent
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4. Glass Level Indicator:

Type	: Klinger / Bonneti or equivalent
Testing Pressure	: 25 Bar

5. Inlet, Outlet and Air Vent Valves:

Type	: Varimex or equivalent Globe-Steam-Flanged Piston Valves.
Testing Pressure	: 16 Bar.

6. Blow-Down Valve:

Type	: Varimex or equivalent
Testing Pressure	: 16 Bar.

7. Safety Valves :

Type	: Varimex or equivalent
Testing Pressure	: 16 Bar.

8. Pressure Stators:

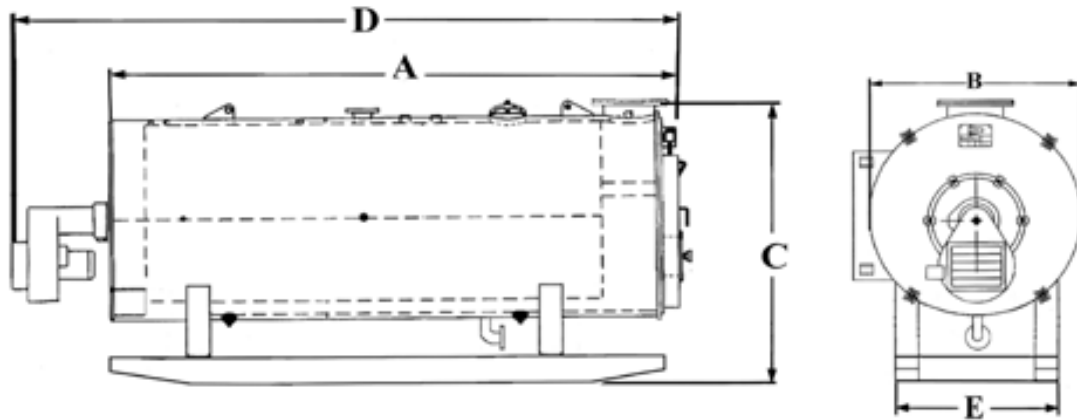
Type	: Honey-Well or equivalent
Testing Pressure	: 5 – 20 Bar.

9. Pressure & Temperature Gauges:

Type	: 6 Inches Dial or equivalent
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Steam Boiler Type SH3P28



Type	Capacity Kg/hr	Burner consumption		Feed water pump	(A) mm	(B) mm	(C) mm	(D) mm	(E) mm
		Light oil	Natural gas						
SH3P28	280	15	16	500	1600	1500	1950	2000	750

**** Technical Data General:**

Type	: Steam-horizontal, fire tube, 3-pass boiler.
Model	: SH ₃ P 28.
Capacity	: 280 Kg/hr – 17 BHP – 165 K.W.
Thermal Eff.	: 85 %.
Max. Boiler Output	: 280 Kg/hr. at 80° FW
Oil consumption	: 15 Kg/hr.
Type of Fuel	: Light oil (Solar), Natural gas, Mazout
Working Pressure	: 10 bar.
Testing Pressure	: 16 bar.
Duration of Operation	: Continuos.
Weight	: 1500 Kg.

Inside Specifications:

First Pass	: Fire tube.	
	: No. of Tubes	: One.
	: Area of Heat Transfer	: 1.5 m ² .
Second Pass	: Smoke pipes.	
	: No. of Tubes	: 19.
	: Area of Heat Transfer	: 3.2 m ² .
Third Pass	: Smoke pipes.	
	: No. of Tubes	: 18.
	: Area of Transfer	: 3 m ² .

Outside Specifications:

Water Inlet	: 25mm.
Steam Outlet	: 25 mm.
Draining	: 20 mm.
Safety Valve	: 2 x 20 mm.

i.e. All dimensions mentored are subject for change without prior notice

Glass Level Indicator	: 2 x 34 cm.
Burner Opening	: 25 cm.
Stack Opening	: 320 mm.
Air Vent Opening	: 15 mm.
Sensors and Gauges	: 2 x pressure stators, 1 x pressure gauge, 1 x temperature gauge, 1 x water level floater.
Insulation	: 70mm thickness of rock-wall, density 70 Kg/m ³ covered by stainless-steel sheets.
Front & Rear Doors	: Insulation of 50 mm of ceramic, density 280 Kg/m ³ , sealing of 32 mm amient ropes.
Manhole & Hand Holes	: 25 mm of lead & grease sealing.
Base Frame	: Steel-section I-beam sections distributing weights over largest area could be used.

**** Standard Accessories:**

1. Burner:

Type	: Riello or equivalent
Model	: G 20 / FS 20 / RLS 28
Power Consumption	: 100 - 325 KW
Oil Consumption	: 8 - 28 Kg/hr
Gas Consumption	: 10 – 32.5 Nm ³ /h.

2. Pump:

Type	: Grundfoss or equivalent
Model	: CR 1-19
Discharge	: 1 m ³ /hr
Head	: 130 M
Temp	: 120 °C

3. Level Control (Floater):

Type	: Mc Donnell and Miller / Bestobell Mobrey or equivalent
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4. Glass Level Indicator:

Type	: Klinger /Bonneti or equivalent
Testing Pressure	: 25 Bar

5. Inlet, Outlet and Air Vent Valves:

Type	: Varimex or equivalent Globe-Steam-Flanged Piston Valves.
Testing Pressure	: 16 Bar.

6. Blow-Down Valve:

Type	: Varimex or equivalent
Testing Pressure	: 16 Bar.

7. Safety Valves :

Type	: Varimex or equivalent
Testing Pressure	: 16 Bar.

8. Pressure Stators:

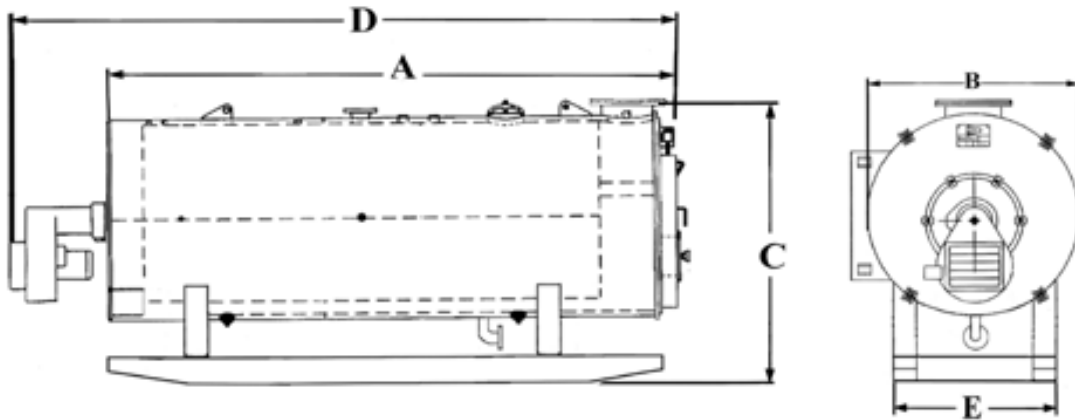
Type	: Honey-Well or equivalent
Testing Pressure	: 5 – 20 Bar.

9. Pressure & Temperature Gauges:

Type	: 6 Inches Dial or equivalent
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Steam Boiler Type SH3P60



Type	Capacity Kg/hr	Burner consumption		Feed water pump	(A) mm	(B) mm	(C) mm	(D) mm	(E) mm
		Light oil	Natural gas						
SH3P60	600	30	32	800	2100	1400	1950	2750	750

**** Technical Data General:**

Type	: Steam-horizontal, fire tube, 3-pass boiler.
Model	: SH ₃ P 60.
Capacity	: 600 Kg/hr – 35BHP – 350 K.W.
Thermal Eff.	: 85 %.
Max. Boiler Output	: 600 Kg/hr. at 80° FW.
Oil consump.	: 34 Kg/hr.
Type of Fuel	: Light oil (Solar), Natural gas, Mazout.
Working Pressure	: 10 bar.
Testing Pressure	: 16 bar
Duration of Operation	: Continuos.
Weight	: 1750 Kg.

Inside Specifications:

First Pass	: Fire tube.	
	: No. of Tubes	: One.
	: Area of Heat Transfer	: 2.6 m ² .
Second Pass	: Smoke pipes.	
	: No. of Tubes	: 20.
	: Area of Heat Transfer	: 6 m ²
Third Pass	: Smoke pipes.	
	: No. of Tubes	: 18.
	: Area of Transfer	: 5.69 m ² .

Outside Specifications:

Water Inlet	: 25 mm.
Steam Outlet	: 38 mm.
Draining	: 25 mm.
Safety Valve	: 2 x 25 mm.

i.e. All dimensions mentored are subject for change without prior notice

Glass Level Indicator	: 2 x 34 cm.
Burner Opening	: 25 cm.
Stack Opening	: 320 mm.
Air Vent Opening	: 25 mm.
Sensors and Gauges	: 2 x pressure stators, 1 x pressure gauge, 1 x temperature gauge, 1 x water level floater.
Insulation	: 70mm thickness of rock-wall, density 70 Kg/m ³ covered by stainless-steel sheets.
Front & Rear Doors	: Insulation of 50 mm of ceramic, density 280 Kg/m ³ , sealing of 32 mm amient ropes.
Manhole & Hand Holes	: 25 mm of lead & grease sealing.
Base Frame	: Steel-section I-beam sections distributing weights over largest area could be used.

**** Standard Accessories:**

1. Burner:

Type	: Riello or equivalent
Model	: RL 38 / RS 38 / RLS 38
Power Consumption	: 116 - 442 KW
Oil Consumption	: 10 – 37 Kg/hr
Gas Consumption	: 12 – 44 Nm ³ /h.

2. Pump:

Type	: Grundfoss. or equivalent
Model	: CR 3-27.
Discharge	: 2 m ³ /hr.
Head	: 170 M.
Temp	: 120 °C.

3. Level Control (Floater):

Type	: Mc Donnell and Miller / Bestobell Mobrey or equivalent
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4. Glass Level Indicator:

Type	: Klinger /Bonneti or equivalent
Testing Pressure	: 25 Bar.

5. Inlet, Outlet and Air Vent Valves:

Type	: Varimex or equivalent Globe-Steam-Flanged Piston Valves.
Testing Pressure	: 16 Bar.

6. Blow-Down Valve:

Type	: Varimex or equivalent
Testing Pressure	: 16 Bar.

7. Safety Valves:

Type	: Varimex or equivalent
Testing Pressure	: 16 Bar.

8. Pressure Stators:

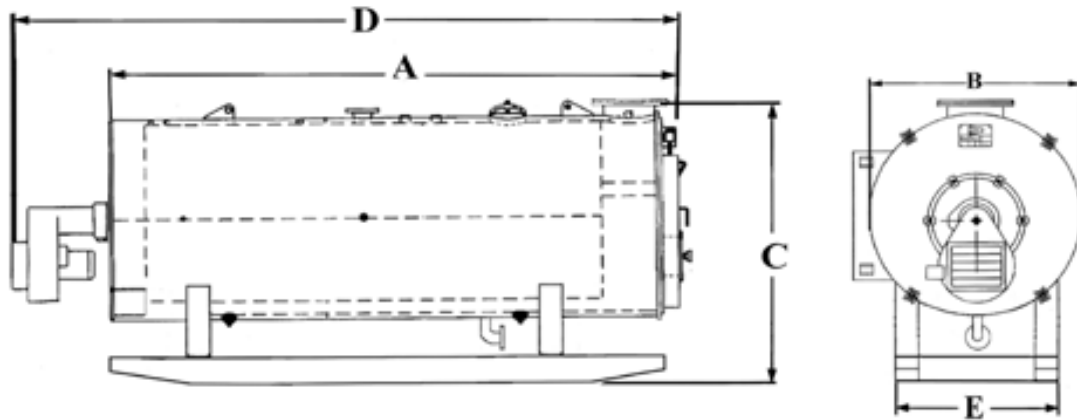
Type	: Honey-Well. or equivalent
Testing Pressure	: 5 – 20 Bar.

9. Pressure & Temperature Gauges:

Type	: 6 Inches Dial or equivalent
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Steam Boiler Type SH3P80



Type	Capacity Kg/hr	Burner consumption		Feed water pump	(A) mm	(B) mm	(C) mm	(D) mm	(E) mm
		Light oil	Natural gas						
SH3P80	800	40	43	1000	2600	1650	2100	3000	950

**** Technical Data General:**

Type	: Steam-horizontal, fire tube, 3-pass boiler.
Model	: SH ₃ P 80.
Capacity	: 800 Kg/hr - 55BHP – 520 K.W.
Thermal Eff.	: 85 %.
Max. Boiler Output	: 800 Kg/hr. at 80° FW
Oil consumption	: 48Kg/hr.
Type of Fuel	: Light oil (Solar), Natural gas, Mazout.
Working Pressure	: 10 bar
Testing Pressure	: 16 bar.
Duration of Operation	: Continuos.
Weight	: 3200 Kg.

Inside Specifications:

First Pass	: Fire tube.	
	: No. of Tubes	: One.
	: Area of Heat Transfer	: 3.8 m ² .
Second Pass	: Smoke pipes.	
	: No. of Tubes	: 30.
	: Area of Heat Transfer	: 10.2 m ² .
	: Smoke pipes.	
	: No. of Tubes	: 28.
	: Area of Transfer	: 9.5 m ²

Outside Specifications:

Water Inlet	: 25 mm.
Steam Outlet	: 50 mm.
Draining	: 25 mm.
Safety Valve	: 2 x 25 mm.

i.e. All dimensions mentored are subject for change without prior notice

Glass Level Indicator	: 2 x 34 cm.
Burner Opening	: 25 cm.
Stack Opening	: 42 cm.
Air Vent Opening	: 25 mm.
Sensors and Gauges	: 2 x pressure stators, 1 x pressure gauge, 1 x temperature gauge, 1 x water level floater.
Insulation	: 70mm thickness of rock-wall, density 70 Kg/m ³ covered by stainless-steel sheets.
Front & Rear Doors	: Insulation of 50 mm of ceramic, density 280 Kg/m ³ , sealing of 32 mm amient ropes.
Manhole & Hand Holes	: 25 mm of lead & grease sealing.
Base Frame	: Steel-section I-beam sections distributing weights over largest area could be used.

**** Standard Accessories:**

1. Burner:

Type	: Riello or equivalent
Model	: RL 50 / RS 50 / RLS 50
Power Consumption	: 145 – 581 KW
Oil Consumption	: 12 – 49 Kg/hr
Gas Consumption	: 14.5 – 58 Nm ³ /h.

2. Pump:

Type	: Grundfoss or equivalent
Model	: CR 3-27
Discharge	: 2 m ³ /hr
Head	: 170 M
Temp	: 120 °C

3. Level Control (Floater):

Type	: Mc Donnell and Miller / Bestobell Mobrey or equivalent
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4. Glass Level Indicator:

Type	: Klinger /Bonneti or equivalent
Testing Pressure	: 25 Bar

5. Inlet, Outlet and Air Vent Valves:

Type	: Varimex or equivalent Globe-Steam-Flanged Piston Valves.
Testing Pressure	: 16 Bar.

6. Blow-Down Valve:

Type	: Varimex or equivalent
Testing Pressure	: 16 Bar.

7. Safety Valves :

Type	: Varimex or equivalent
Testing Pressure	: 16 Bar.

8. Pressure Stators:

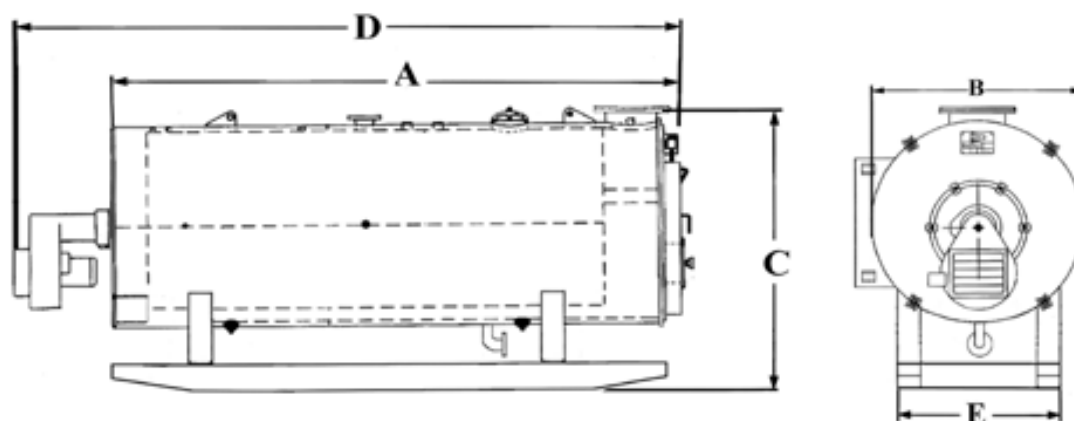
Type	: Honey-Well or equivalent
Testing Pressure	: 5 – 20 Bar.

9. Pressure & Temperature Gauges:

Type	: 6 Inches Dial or equivalent
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Steam Boiler Type SH3P110



Type	Capacity Kg/hr	Burner consumption		Feed water pump	(A) mm	(B) mm	(C) mm	(D) mm	(E) mm
		Light oil	Natural gas						
SH3P110	1100	60	65	1200	3100	1650	2100	3500	950

**** Technical Data General:**

Type	: Steam-horizontal, fire tube, 3-pass boiler.
Model	: SH3 P 110.
Capacity	: 1100 Kg/hr – 75 BHP – 716 K.W.
Thermal Eff.	: 85 %.
Max. Boiler Output	: 1100 Kg/hr. at 80° FW
Oil consumption	: 69 Kg/hr.
Type of Fuel	: Light oil (Solar), Natural gas, Mazout.
Working Pressure	: 10 bar
Testing Pressure	: 16 bar.
Duration of Operation	: Continuos.
Weight	: 3700 Kg.

Inside Specifications:

First Pass	: Fire tube.	
	: No. of Tubes	: One.
	: Area of Heat Transfer	: 4.5 m ² .
Second Pass	: Smoke pipes.	
	: No. of Tubes	: 30.
	: Area of Heat Transfer	: 12.9 m ² .
	: Smoke pipes.	
	: No. of Tubes	: 28.
	: Area of Transfer	: 12.1 m ²

Outside Specifications:

Water Inlet	: 32 mm.
Steam Outlet	: 50 mm.
Draining	: 32 mm.
Safety Valve	: 2 x 38 mm.

i.e. All dimensions mentored are subject for change without prior notice

Glass Level Indicator	: 2 x 34 cm.
Burner Opening	: 25 cm.
Stack Opening	: 420 mm.
Air Vent Opening	: 25 mm.
Sensors and Gauges	: 2 x pressure stators, 1 x pressure gauge, 1 x temperature gauge, 1 x water level floater.
Insulation	: 70mm thickness of rock-wall, density 70 Kg/m ³ covered by stainless-steel sheets.
Front & Rear Doors	: Insulation of 50 mm of ceramic, density 280 Kg/m ³ , sealing of 32 mm amient ropes.
Manhole & Hand Holes	: 25 mm of lead & grease sealing.
Base Frame	: Steel-section I-beam sections distributing weights over largest area could be used.

**** Standard Accessories:**

1. Burner:

Type	: Riello. or equivalent
Model	: RL 70 / RS 70 / RLS 70.
Power Consumption	: 232 – 814 KW
Oil Consumption	: 20 – 69 Kg/hr
Gas Consumption	: 23 – 81 Nm ³ /h.

2. Pump:

Type	: Grundfoss. or equivalent
Model	: CR3 –19.
Discharge	: 2m ³ /hr.
Head	: 110 M.
Temp	: 120 °C.

3. Level Control (Floater):

Type	: Mc Donnell and Miller / Bestobell Mobrey or equivalent
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4. Glass Level Indicator:

Type	: Klinger /Bonneti or equivalent
Testing Pressure	: 25 Bar.

5. Inlet, Outlet and Air Vent Valves:

Type	: Varimex or equivalent Globe-Steam-Flanged Piston Valves.
Testing Pressure	: 16 Bar.

6. Blow-Down Valve:

Type	: Varimex or equivalent
Testing Pressure	: 16 Bar.

7. Safety Valves :

Type	: Varimex or equivalent
Testing Pressure	: 16 Bar.

8. Pressure Stators:

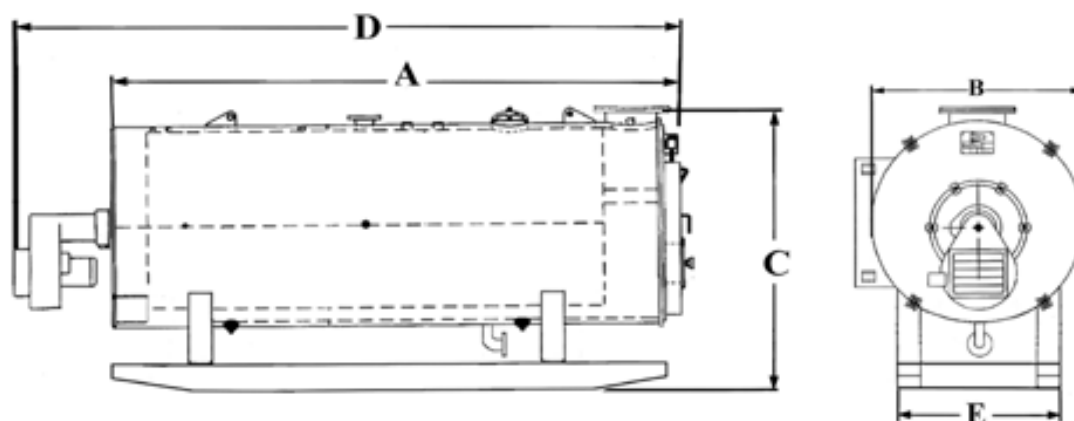
Type	: Honey-Well. or equivalent
Testing Pressure	: 5 – 20 Bar.

9. Pressure & Temperature Gauges:

Type	: 6 Inches Dial or equivalent
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Steam Boiler Type SH3P160



Type	Capacity Kg/hr	Burner consumption		Feed water pump	(A) mm	(B) mm	(C) mm	(D) mm	(E) mm
		Light oil	Natural gas						
SH3P160	1600	92	100	2000	3100	1900	2250	3500	1100

**** Technical Data General:**

Type	: Steam-horizontal, fire tube, 3-pass boiler.
Model	: SH ₃ P 160.
Capacity	: 1600 Kg/hr – 93 BHP – 1120 K.W.
Thermal Eff.	: 85 %.
Max. Boiler Output	: 1600 Kg/hr. at 80° FW
Oil consumption	: 69 Kg/hr.
Type of Fuel	: Light oil (Solar), Natural gas, Mazout
Working Pressure	: 10 bar.
Testing Pressure	: 16 bar.
Duration of Operation	: Continuos.
Weight	: 5000 Kg.

Inside Specifications:

First Pass	: Fire tube.	
	: No. of Tubes	: One.
	: Area of Heat Transfer	: 5.3 m ² .
Second Pass	: Smoke pipes.	
	: No. of Tubes	: 46.
	: Area of Heat Transfer	: 20 m ²
	: Smoke pipes.	
	: No. of Tubes	: 42.
	: Area of Transfer	: 18.5 m ²

Outside Specifications:

Water Inlet	: 38 mm.
Steam Outlet	: 75 mm.
Draining	: 38 mm.
Safety Valve	: 2 x 38 mm.

i.e. All dimensions mentored are subject for change without prior notice

Glass Level Indicator	: 2 x 34 cm.
Burner Opening	: 25 cm.
Stack Opening	: 420 mm.
Air Vent Opening	: 25 mm.
Sensors and Gauges	: 2 x pressure stators, 1 x pressure gauge, 1 x temperature gauge, 1 x water level floater.
Insulation	: 70mm thickness of rock-wall, density 70 Kg/m ³ covered by stainless-steel sheets.
Front & Rear Doors	: Insulation of 50 mm of ceramic, density 280 Kg/m ³ , sealing of 32 mm amient ropes.
Manhole & Hand Holes	: 25 mm of lead & grease sealing.
Base Frame	: Steel-section I-beam sections distributing weights over largest area could be used.

**** Standard Accessories:**

1. Burner:

Type	: Riello. or equivalent
Model	: RL100 / RS 100 / RLS 100.
Power Consumption	: 369 – 1163 KW
Oil Consumption	: 30 – 99 Kg/hr
Gas Consumption	: 35 – 116 Nm ³ /h.

2. Pump:

Type	: Grundfoss. or equivalent
Model	: CR3 –21
Discharge	: 3 m ³ /hr.
Head	: 105 M.
Temp	: 120 °C.

3. Level Control (Floater):

Type	: Mc Donnell and Miller / Bestobell Mobrey or equivalent
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4. Glass Level Indicator:

Type	: Klinger /Bonneti or equivalent
Testing Pressure	: 25 Bar.

5. Inlet, Outlet and Air Vent Valves:

Type	: Varimex or equivalent Globe-Steam-Flanged Piston Valves.
Testing Pressure	: 16 Bar.

6. Blow-Down Valve:

Type	: Varimex or equivalent
Testing Pressure	: 16 Bar.

7. Safety Valves :

Type	: Varimex or equivalent
Testing Pressure	: 16 Bar.

8. Pressure Stators:

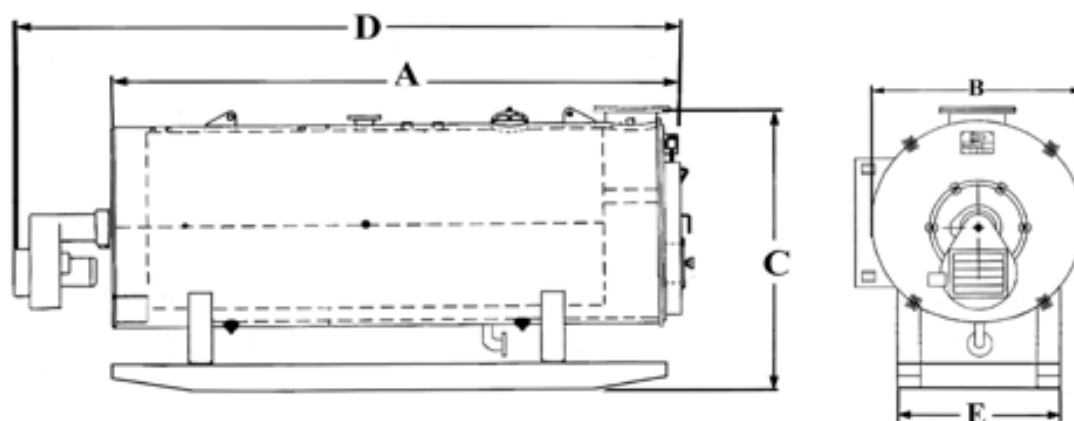
Type	: Honey-Well. or equivalent
Testing Pressure	: 5 – 20 Bar.

9. Pressure & Temperature Gauges:

Type	: 6 Inches Dial or equivalent
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Steam Boiler Type SH3P220



Type	Capacity Kg/hr	Burner consumption		Feed water pump	(A) mm	(B) mm	(C) mm	(D) mm	(E) mm
		Light oil	Natural gas						
SH3P220	2200	130	150	2400	3850	1850	2250	4250	1100

**** Technical Data General:**

Type	: Steam-horizontal, fire tube, 3-pass boiler.
Model	: SH ₃ P 220.
Capacity	: 2200 Kg/hr - 124BHP – 1530 K.W.
Thermal Eff.	: 86 %.
Max. Boiler Output	: 2200 Kg/hr. at 80° FW
Oil consumption	: 138 Kg/hr.
Type of Fuel	: Light oil (Solar), Natural gas, Mazout
Working Pressure	: 10 bar.
Testing Pressure	: 16 bar.
Duration of Operation	: Continuos.
Weight	: 6100 Kg.

Inside Specifications:

First Pass	: Fire tube.	
	: No. of Tubes	: One.
	: Area of Heat Transfer	: 7.2 m ² .
Second Pass	: Smoke pipes.	
	: No. of Tubes	: 46.
	: Area of Heat Transfer	: 25.9 m ²
	: Smoke pipes.	
	: No. of Tubes	: 42.
	: Area of Transfer	: 23.6 m ²

Outside Specifications:

Water Inlet	: 38 mm.
Steam Outlet	: 75 mm.
Draining	: 38 mm.
Safety Valve	: 2 x 38 mm.

i.e. All dimensions mentored are subject for change without prior notice

Glass Level Indicator	: 2 x 34 cm.
Burner Opening	: 25 cm.
Stack Opening	: 420mm.
Air Vent Opening	: 38 mm.
Sensors and Gauges	: 2 x pressure stators, 1 x pressure gauge, 1 x temperature gauge, 1 x water level floater.
Insulation	: 70mm thickness of rock-wall, density 70 Kg/m ³ covered by stainless-steel sheets.
Front & Rear Doors	: Insulation of 50 mm of ceramic, density 280 Kg/m ³ , sealing of 32 mm amient ropes.
Manhole & Hand Holes	: 25 mm of lead & grease sealing.
Base Frame	: Steel-section I-beam sections distributing weights over largest area could be used.

**** Standard Accessories:**

1. Burner:

Type	: Riello. or equivalent
Model	: RL130 / RS 190 / GI-EMME 1400.
Power Consumption	: 407 – 1540 KW
Oil Consumption	: 34 – 130 Kg/hr
Gas Consumption	: 41 – 154 Nm ³ /h.

2. Pump:

Type	: Grundfoss. or equivalent
Model	: CR3 –21
Discharge	: 3 m ³ /hr.
Head	: 105 M.
Temp	: 120 C.

3. Level Control (Floater):

Type	: Mc Donnell and Miller / Bestobell Mobrey or equivalent
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4. Glass Level Indicator:

Type	: Klinger /Bonneti or equivalent
Testing Pressure	: 25 Bar.

5. Inlet, Outlet and Air Vent Valves:

Type	: Varimex or equivalent Globe-Steam-Flanged Piston Valves.
Testing Pressure	: 16 Bar.

6. Blow-Down Valve:

Type	: Varimex or equivalent
Testing Pressure	: 16 Bar.

7. Safety Valves :

Type	: Varimex or equivalent
Testing Pressure	: 16 Bar.

8. Pressure Stators:

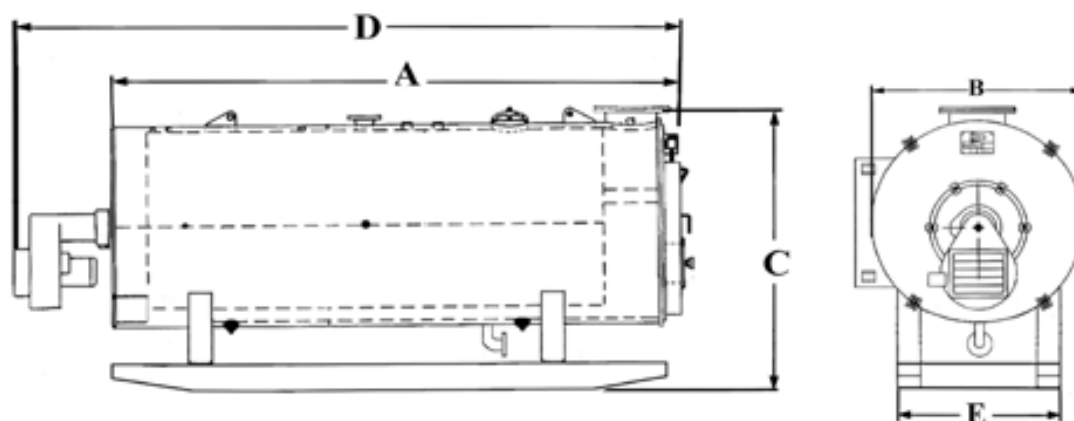
Type	: Honey-Well. or equivalent
Testing Pressure	: 5 – 20 Bar.

9. Pressure & Temperature Gauges:

Type	: 6 Inches Dial or equivalent
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Steam Boiler Type SH3P320



Type	Capacity Kg/hr	Burner consumption		Feed water pump	(A) mm	(B) mm	(C) mm	(D) mm	(E) mm
		Light oil	Natural gas						
SH3P320	3200	175	215	3600	4350	2150	2600	4750	1250

**** Technical Data General:**

Type	: Steam-horizontal, fire tube, 3-pass boiler.
Model	: SH ₃ P 320.
Capacity	: 3200 Kg/hr - 200BHP – 2100 K.W.
Thermal Eff.	: 86 %.
Max. Boiler Output	: 3200 Kg/hr. at 80° FW
Oil consumption	: 206 Kg/hr.
Type of Fuel	: Light oil (Solar), Natural gas, Mazout
Working Pressure	: 10 bar.
Testing Pressure	: 16 bar.
Duration of Operation	: Continuous.
Weight	: 9200 Kg.

Inside Specifications:

First Pass	: Fire tube.	
	: No. of Tubes	: One.
	: Area of Heat Transfer	: 9 m ² .
Second Pass	: Smoke pipes.	
	: No. of Tubes	: 46.
	: Area of Heat Transfer	: 42.5 m ²
	: Smoke pipes.	
	: No. of Tubes	: 38.
	: Area of Transfer	: 35 m ²

Outside Specifications:

Water Inlet	: 50 mm.
Steam Outlet	: 100 mm.
Draining	: 38 mm.
Safety Valve	: 2 x 38 mm.

i.e. All dimensions mentored are subject for change without prior notice

Glass Level Indicator	: 2 x 34 cm.
Burner Opening	: 25 cm.
Stack Opening	: 63 cm.
Air Vent Opening	: 38 mm.
Sensors and Gauges	: 2 x pressure stators, 1 x pressure gauge, 1 x temperature gauge, 1 x water level floater.
Insulation	: 70mm thickness of rock-wall, density 70 Kg/m ³ covered by stainless-steel sheets.
Front & Rear Doors	: Insulation of 50 mm of ceramic, density 280 Kg/m ³ , sealing of 32 mm amient ropes.
Manhole & Hand Holes	: 25 mm of lead & grease sealing.
Base Frame	: Steel-section I-beam sections distributing weights over largest area could be used.

**** Standard Accessories:**

1. Burner:

Type	: Riello. or equivalent
Model	: RL 190 / RS 190 / GI-EMME 2000
Power Consumption	: 581– 2325 KW
Oil Consumption	: 49 – 197 Kg/hr
Gas Consumption	: 58 – 232.5 Nm ³ /h.

2. Pump:

Type	: Grundfoss. or equivalent
Model	: CR3 –21
Discharge	: 3 m ³ /hr.
Head	: 105 M.
Temp	: 120 °C.

3. Level Control (Floater):

Type	: Mc Donnell and Miller / Bestobell Mobrey or equivalent
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4. Glass Level Indicator:

Type	: Klinger /Bonneti or equivalent
Testing Pressure	: 25 Bar.

5. Inlet, Outlet and Air Vent Valves:

Type	: Varimex or equivalent Globe-Steam-Flanged Piston Valves.
Testing Pressure	: 16 Bar.

6. Blow-Down Valve:

Type	: Varimex or equivalent
Testing Pressure	: 16 Bar.

7. Safety Valves :

Type	: Varimex or equivalent
Testing Pressure	: 16 Bar.

8. Pressure Stators:

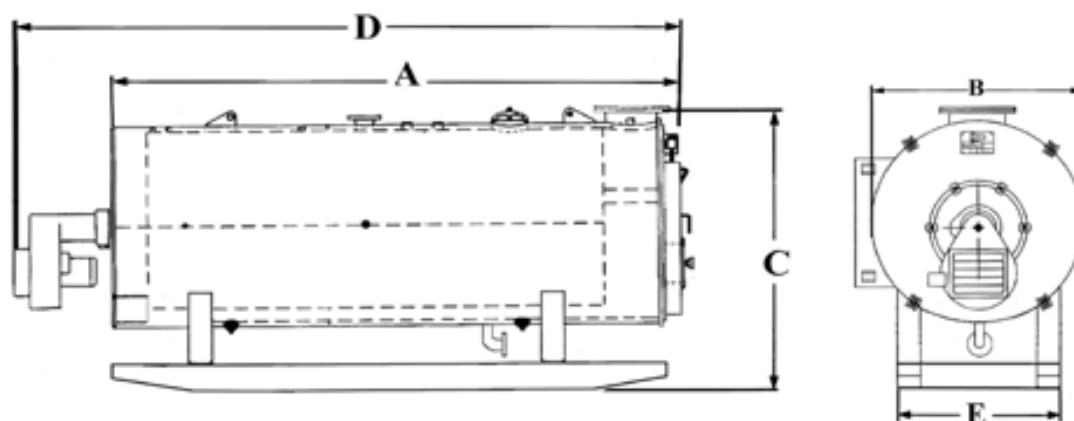
Type	: Honey-Well. or equivalent
Testing Pressure	: 5 – 20 Bar.

9. Pressure & Temperature Gauges:

Type	: 6 Inches Dial or equivalent
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Steam Boiler Type SH3P420



Type	Capacity Kg/hr	Burner consumption		Feed water pump	(A) mm	(B) mm	(C) mm	(D) mm	(E) mm
		Light oil	Natural gas						
SH3P420	4200	275	345	5000	5600	2150	2600	6000	1250

**** Technical Data General:**

Type	: Steam-horizontal, fire tube, 3-pass boiler.
Model	: SH3 P 420.
Capacity	: 4200 Kg/hr – 260 BHP – 2930 K.W.
Thermal Eff.	: 86 %.
Max. Boiler Output	: 4200 Kg/hr. at 80° FW
Oil consumption	: 276 Kg/hr.
Type of Fuel	: Light oil (Solar), Natural gas, Mazout
Working Pressure	: 10 bar.
Testing Pressure	: 16 bar.
Duration of Operation	: Continuos.
Weight	: 12600 Kg.

Inside Specifications:

First Pass	: Fire tube.	
	: No. of Tubes	: One.
Second Pass	: Area of Heat Transfer	: 12.2 m ² .
	: Smoke pipes.	
	: No. of Tubes	: 46.
	: Area of Heat Transfer	: 59.7 m ²
	: Smoke pipes.	
	: No. of Tubes	: 38.
	: Area of Transfer	: 49.3 m ²

Outside Specifications:

Water Inlet	: 50 mm.
Steam Outlet	: 100 mm.
Draining	: 50 mm.
Safety Valve	: 2 x 50 mm.

Glass Level Indicator	: 2 x 34 cm.
Burner Opening	: 32 cm.
Stack Opening	: 630 mm.
Air Vent Opening	: 25 mm.
Sensors and Gauges	: 2 x pressure stators, 1 x pressure gauge, 1 x temperature gauge, 1 x water level floater.
Insulation	: 100 mm thickness of Rock wool, density 80 Kg/m ³ covered by stainless-steel sheets (304 mirror).
Front & Rear Doors	: Insulation of 50 mm of ceramic, density 280 Kg/m ³ , sealing of 32 mm amient ropes.
Manhole & Hand Holes	: 25 mm of lead & grease sealing.
Base Frame	: Steel-section I-beam sections distributing weights over largest area could be used.

**** Standard Accessories:**

1. Burner:

Type	: Riello. or equivalent
Model	: P300 P-G / GAS9 P-M / GI-EMME 3000
Power Consumption	: 872 – 3488 KW
Oil Consumption	: 74 – 296 Kg/hr
Gas Consumption	: 87 – 349 Nm ³ /h.

2. Pump:

Type	: Grundfoss. or equivalent
Model	: CR 10-18.
Discharge	: 8 m ³ /hr.
Head	: 170 M.
Temp	: 120 °C.

3. Level Control (Floater):

Type	: Mc Donnell and Miller / Bestobell Mobrey or equivalent
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4. Glass Level Indicator:

Type	: Klinger /Bonneti or equivalent
Testing Pressure	: 25 Bar.

5. Inlet, Outlet and Air Vent Valves:

Type	: Varimex or equivalent Globe-Steam-Flanged Piston Valves.
Testing Pressure	: 16 Bar.

6. Blow-Down Valve:

Type	: Varimex or equivalent
Testing Pressure	: 16 Bar.

7. Safety Valves :

Type	: Varimex or equivalent
Testing Pressure	: 16 Bar.

8. Pressure Stators:

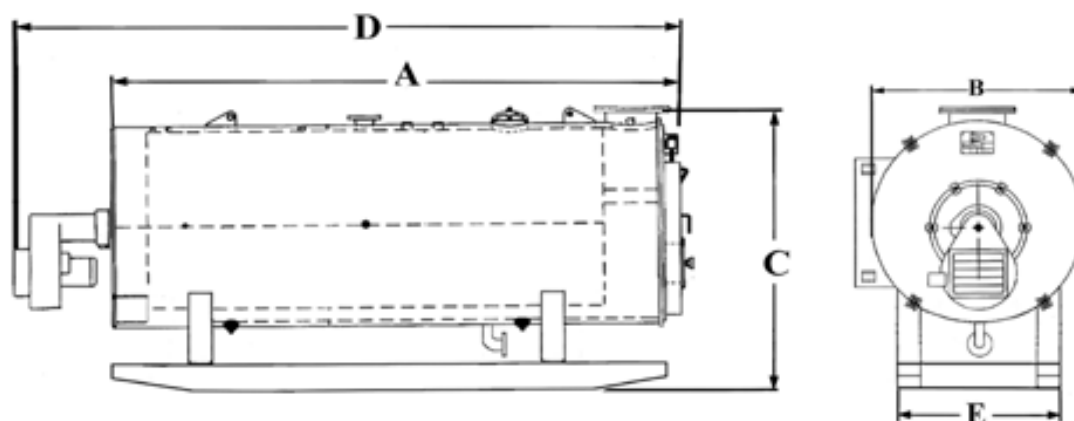
Type	: Honey-Well. or equivalent
Testing Pressure	: 5 – 20 Bar.

9. Pressure & Temperature Gauges:

Type	: 6 Inches Dial or equivalent
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Steam Boiler Type SH3P500



Type	Capacity Kg/hr	Burner consumption		Feed water pump	(A) mm	(B) mm	(C) mm	(D) mm	(E) mm
		Light oil	Natural gas						
SH3P500	5000	344	430	6000	6700	2800	2600	6700	1250

**** Technical Data General:**

Type	: Steam-horizontal, fire tube, 3-pass boiler.
Model	: SH3 P 500.
Capacity	: 5000 Kg/hr – 310 BHP – 3500 K.W.
Thermal Eff.	: 86 %.
Max. Boiler Output	: 5000 Kg/hr. at 80° FW
Oil consumption	: 341 Kg/hr.
Type of Fuel	: Light oil (Solar), Natural gas, Mazout
Working Pressure	: 10 bar.
Testing Pressure	: 16 bar.
Duration of Operation	: Continuous.
Weight	: 14900 Kg.

Inside Specifications:

First Pass	: Fire tube.	
	: No. of Tubes	: One.
	: Area of Heat Transfer	: 16.5 m ² .
Second Pass	: Smoke pipes.	
	: No. of Tubes	: 52.
	: Area of Heat Transfer	: 71.8 m ²
	: Smoke pipes.	
	: No. of Tubes	: 46.
	: Area of Transfer	: 63.55 m ²

Outside Specifications:

Water Inlet	: 50 mm.
Steam Outlet	: 125 mm.
Draining	: 50 mm.
Safety Valve	: 2 x 63 mm.

i.e. All dimensions mentored are subject for change without prior notice

Glass Level Indicator	: 2 x 34 cm.
Burner Opening	: 36 cm.
Stack Opening	: 630 mm.
Air Vent Opening	: 25 mm.
Sensors and Gauges	: 2 x pressure stators, 1 x pressure gauge, 1 x temperature gauge, 1 x water level floater.
Insulation	: 100mm thickness of glass-wall, density 24 Kg/m ³ covered by stainless-steel sheets.
Front & Rear Doors	: Insulation of 50 mm of ceramic, density 280 Kg/m ³ , sealing of 32 mm amient ropes.
Manhole & Hand Holes	: 25 mm of lead & grease sealing.
Base Frame	: Steel-section I-beam sections distributing weights over largest area could be used.

**** Standard Accessories:**

1. Burner:

Type	: Riello. or equivalent
Model	: P300 P-G / GAS10 P-M / GI-EMME 4500
Power Consumption	: 1163 – 4650 KW
Oil Consumption	: 99 – 394 Kg/hr
Gas Consumption	: 116 – 465 Nm ³ /h.

2. Pump:

Type	: Grundfoss. or equivalent
Model	: CR 10-170.
Discharge	: 8 m ³ /hr.
Head	: 170 M.
Temp	: 120 °C.

3. Level Control (Floater):

Type	: Mc Donnell and Miller / Bestobell Mobrey or equivalent
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4. Glass Level Indicator:

Type	: Klinger /Bonneti or equivalent
Testing Pressure	: 25 Bar.

5. Inlet, Outlet and Air Vent Valves:

Type	: Varimex or equivalent Globe-Steam-Flanged Piston Valves.
Testing Pressure	: 16 Bar.

6. Blow-Down Valve:

Type	: Varimex or equivalent
Testing Pressure	: 16 Bar.

7. Safety Valves :

Type	: Varimex or equivalent
Testing Pressure	: 16 Bar.

8. Pressure Stators:

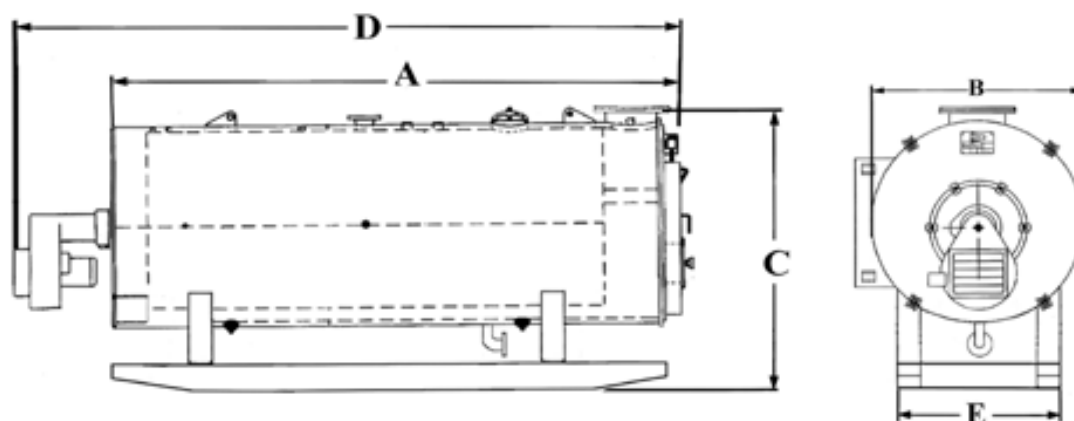
Type	: Honey-Well. or equivalent
Testing Pressure	: 5 – 20 Bar.

9. Pressure & Temperature Gauges:

Type	: 6 Inches Dial or equivalent
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Steam Boiler Type SH3P600



Type	Capacity Kg/hr	Burner consumption		Feed water pump	(A) mm	(B) mm	(C) mm	(D) mm	(E) mm
		Light oil	Natural gas						
SH3P600	6500	412	518	7000	7300	3800	2800	6800	1400

**** Technical Data General:**

Type	: Steam-horizontal, fire tube, 3-pass boiler.
Model	: SH3 P 600.
Capacity	: 6500 Kg/hr – 450 BHP – 4300 K.W.
Thermal Eff.	: 86 %.
Max. Boiler Output	: 6500 Kg/hr. at 80° FW.
Oil consumption	: 420 Kg/hr.
Type of Fuel	: Light oil (Solar), Natural gas, Mazout.
Working Pressure	: 10 bar.
Testing Pressure	: 16 bar.
Duration of Operation	: Continuos.
Weight	: 19100 Kg.

Inside Specifications:

First Pass	: Fire tube.	
	: No. of Tubes	: One.
	: Area of Heat Transfer	: 17.5 m ² .
Second Pass	: Smoke pipes.	
	: No. of Tubes	: 52.
	: Area of Heat Transfer	: 86.2 m ²
	: Smoke pipes.	
	: No. of Tubes	: 46.
	: Area of Transfer	: 76.26 m ²

Outside Specifications:

Water Inlet	: 63mm.
Steam Outlet	: 150 mm.
Draining	: 63 mm.
Safety Valve	: 2 x 63 mm.

i.e. All dimensions mentored are subject for change without prior notice

Glass Level Indicator	: 2 x 34 cm.
Burner Opening	: 36 cm.
Stack Opening	: 630 mm.
Air Vent Opening	: 25 mm.
Sensors and Gauges	: 2 x pressure stators, 1 x pressure gauge, 1 x temperature gauge, 1 x water level floater.
Insulation	: 100mm thickness of rock-wall, density 100 Kg/m ³ covered by stainless-steel sheets.
Front & Rear Doors	: Insulation of 50 mm of ceramic, density 280 Kg/m ³ , sealing of 32 mm amient ropes.
Manhole & Hand Holes	: 25 mm of lead & grease sealing.
Base Frame	: Steel-section I-beam sections distributing weights over largest area could be used.

**** Standard Accessories:**

1. Burner:

Type	: Riello. or equivalent
Model	: P450 P-G / GAS10 P-M / GI-EMME 4500
Power Consumption	: 1163 – 4650 KW
Oil Consumption	: 99 – 394 Kg/hr
Gas Consumption	: 116 – 465 Nm ³ /h.

2. Pump:

Type	: Grundfoss. or equivalent
Model	: CR 10-18.
Discharge	: 8 m ³ /hr.
Head	: 170 M.
Temp	: 120 °C.

3. Level Control (Floater):

Type	: Mc Donnell and Miller / Bestobell Mobrey or equivalent
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4. Glass Level Indicator:

Type	: Klinger /Bonneti or equivalent
Testing Pressure	: 25 Bar.

5. Inlet, Outlet and Air Vent Valves:

Type	: Varimex or equivalent Globe-Steam-Flanged Piston Valves.
Testing Pressure	: 16 Bar.

6. Blow-Down Valve:

Type	: Varimex or equivalent
Testing Pressure	: 16 Bar.

7. Safety Valves :

Type	: Varimex or equivalent
Testing Pressure	: 16 Bar.

8. Pressure Stators:

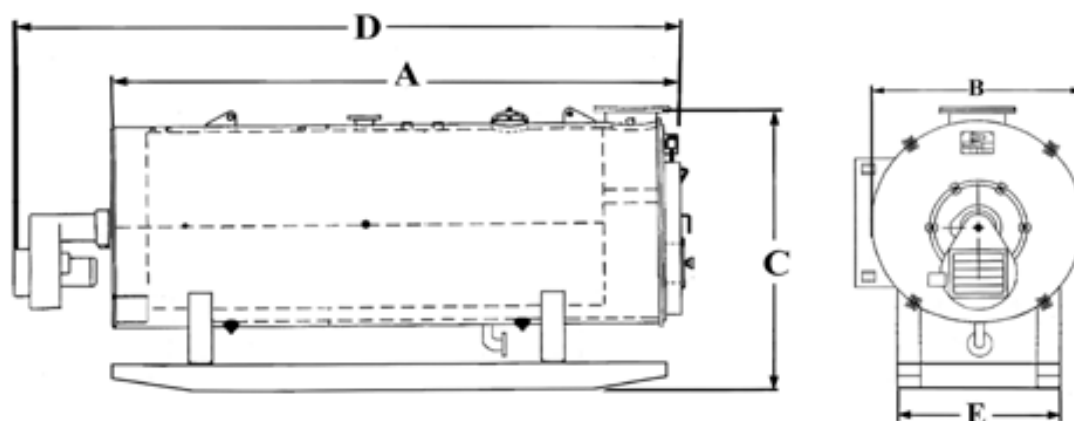
Type	: Honey-Well. or equivalent
Testing Pressure	: 5 – 20 Bar.

9. Pressure & Temperature Gauges:

Type	: 6 Inches Dial or equivalent
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Steam Boiler Type SH3P850



Type	Capacity Kg/hr	Burner consumption		Feed water pump	(A) mm	(B) mm	(C) mm	(D) mm	(E) mm
		Light oil	Natural gas						
SH3P850	8500	550	690	10000	7900	4300	2800	6800	1400

**** Technical Data General:**

Type	: Steam-horizontal, fire tube, 3-pass boiler.
Model	: SH ₃ P 850.
Capacity	: 8500 Kg/hr – 637 BHP – 6000 K.W.
Thermal Eff.	: 86 %.
Max. Boiler Output	: 8500 Kg/hr. at 80° FW.
Oil consumption	: 545 Kg/hr.
Type of Fuel	: Light oil (Solar), Natural gas, Mazout.
Working Pressure	: 10 bar.
Testing Pressure	: 16 bar.
Duration of Operation	: Continuous.
Weight	: 19850 Kg.

Inside Specifications:

First Pass	: Fire tube.	
	: No. of Tubes	: One.
	: Area of Heat Transfer	: 19 m ² .
Second Pass	: Smoke pipes.	
	: No. of Tubes	: 30.
	: Area of Heat Transfer	: 13 m ²
	: Smoke pipes.	
	: No. of Tubes	: 26.
	: Area of Transfer	: 10.3 m ²

Outside Specifications:

Water Inlet	: 38 mm.
Steam Outlet	: 50 mm.
Draining	: 38 mm.
Safety Valve	: 2 x 38 mm.
Glass Level Indicator	: 2 x 34 cm.
Burner Opening	: 25 cm.

Stack Opening	: 42 cm.
Air Vent Opening	: 38 mm.
Sensors and Gauges	: 2 x pressure stators, 1 x pressure gauge, 1 x temperature gauge, 1 x water level floater.
Insulation	: 70mm thickness of rock-wall, density 70 Kg/m ³ covered by stainless-steel sheets.
Front & Rear Doors	: Insulation of 50 mm of ceramic, density 280 Kg/m ³ , sealing of 32 mm amient ropes.
Manhole & Hand Holes	: 25 mm of lead & grease sealing.
Base Frame	: Steel-section I-beam sections distributing weights over largest area could be used.

**** Accessories over Boiler Body:**

1. Burner:

Type	: Riello.
Model	: P450 P-G / GAS10 P-M / GI-EMME 4500
Power Consumption	: 1163 – 4650 KW
Oil Consumption	: 99 – 394 Kg/hr
Gas Consumption	: 116 – 465 Nm ³ /h.

2. Pump:

Type	: Grundfoss.
Model	: CR 3-27.
Discharge	: 2 m ³ /hr.
Head	: 170 M.
Temp	: 120 °C.

3. Level Control (Floater):

Type	: Mc Donnell and Miller (US made) Bestobell Mobrey (English made).
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4. Glass Level Indicator:

Type	: Klinger /Bonneti (Austrian made). Or Equivalent.
Testing Pressure	: 25 Bar.

5. Inlet, Outlet and Air Vent Valves:

Type	: Varimex {Germany} (or Equivalent) Globe-Steam-Flanged Piston Valves.
Testing Pressure	: 16 Bar.

6. Blow-Down Valve:

Type	: Varimex {Germany} (or Equivalent).
Testing Pressure	: 16 Bar.

7. Safety Valves :

Type	: Varimex {Germany} (or Equivalent).
Testing Pressure	: 16 Bar.

8. Pressure Stators:

Type	: Honey-Well.
Testing Pressure	: 5 – 20 Bar.

9. Pressure & Temperature Gauges:

Type	: 6 Inches Dial (German made).
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