INSTALLATION
AND SERVICING

Totaleco and Totaleco TURBO

CONDENSATION-TYPE RE-CLAIMER
FOR BOILERS OPERATING WITH NATURAL GAS OR DOMESTIC OIL.

MANUFACTURER

Guillot Industrie

124 Route de Fleurville
FR - 01190 PONT DE VAUX

WARNINGS

Transport and Storage

- Store in a closed area above 0°C (risk of freezing).
- Do not stack.
- Storage relative humidity between 5 and 95%.

Compliance with European Directives

Totaleco Turbo complies with:

- the low voltage directive **2014/35/UE.**
  This appliance should not be used by mentally or physically challenged individuals, children or unskilled and inexperienced individuals, unless they have previously been supervised or instructed in the use of the appliance by somebody responsible for their safety.
  Children must be supervised to ensure that they do not tamper with the appliance.

- the electromagnetic compatibility directive **2014/30/UE.**

- the machinery directive **2006/42/EC.**

- the pressure equipment directive **2014/68/UE.**

Installation and maintenance regulatory conditions

Installation and maintenance operations must be performed by a qualified professional, as per the current building codes, regulatory texts and accepted practice applicable in the country of installation:

IMPORTANT:
Totaleco Turbo appliances are classified as non accessible to the public (closed electrical operating area).
Prior to performing any work on the Totaleco Turbo appliance, please make sure that the mains power supply is off.

Operational restrictions

Min./max. ambient temperature:	-20 °C / 40 °C
Relative humidity:	5 to 95%
Ingress protection rating:	IP 20

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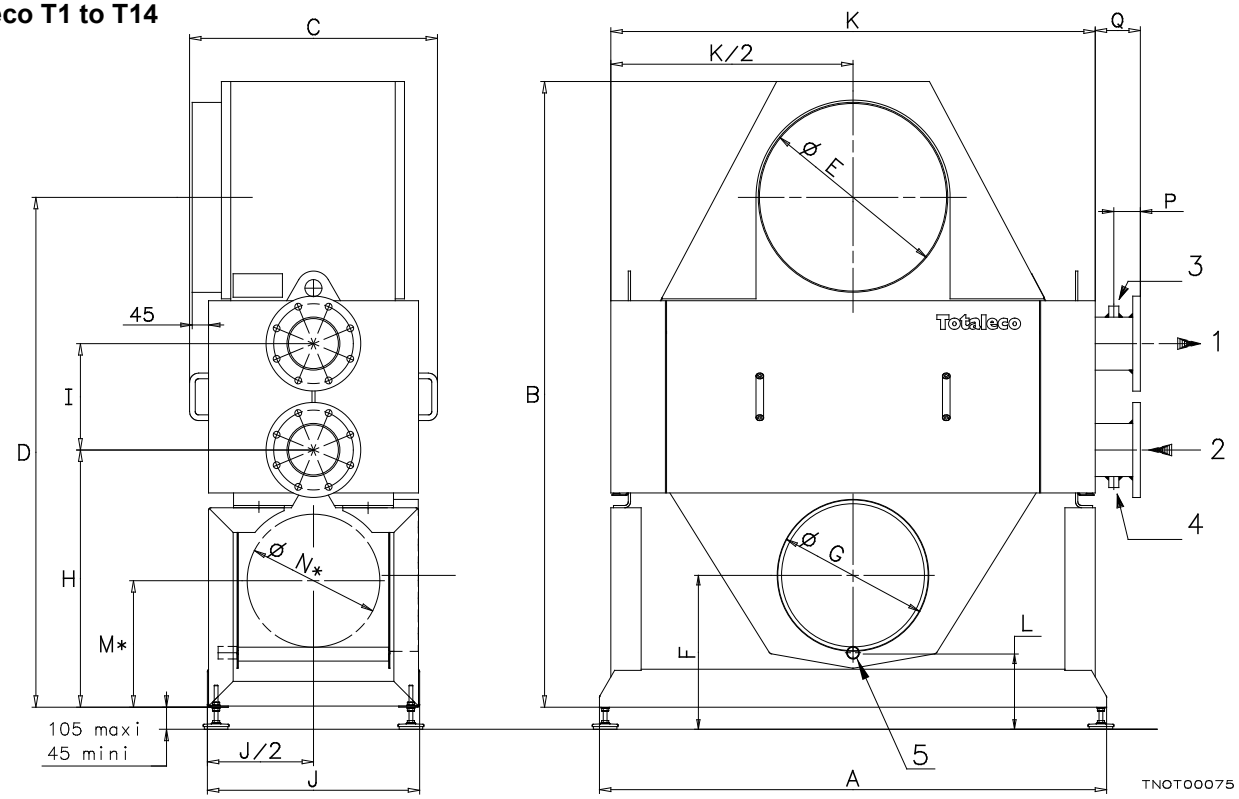
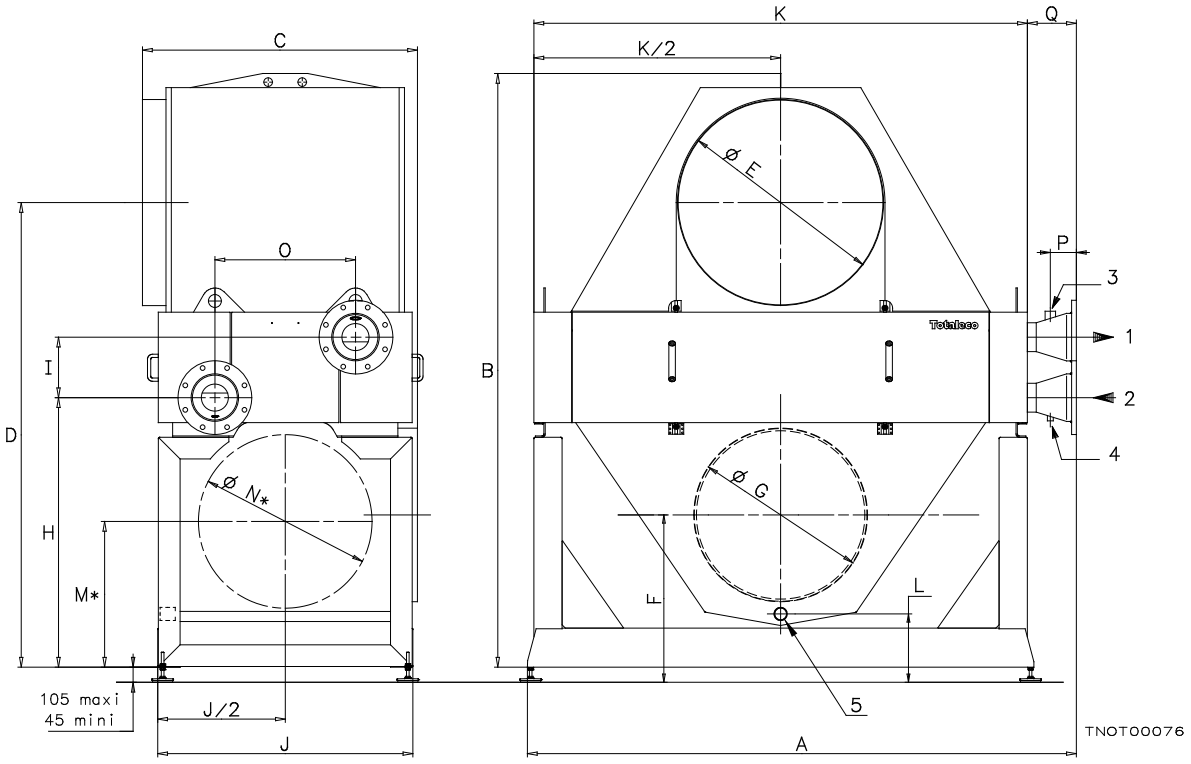
1. Dimensional characteristics

1.1. Dimensions Single stage re-claimer

Totaleco T1 to T14



Totaleco T18 to T56



1 – Water outlet 2 – Water inlet 3 – Sleeve valve 4 – Sleeve drains 5 – Evacuation of condensates

Totaleco														
Model			**T1**	**T2**	**T3**	**T4**	**T7**	**T10**	**T14**	**T18**	**T24**	**T32**	**T42**	**T56**
Ø outlet/inlet	1,2	DN**	65	65	65	100	100	125	125	150	200	200	200	200
Ø Sleeve valve	3	‘’	½’’	½’’	½’’	½’’	½’’	½’’	½’’	1’’	1’’	1’’	1’’1/4	1’’1/4
Ø Sleeve drains	4	‘’	½’’	½’’	½’’	½’’	½’’	½’’	½’’	½’’	½’’	½’’	½’’	½’’
Ø Evacuation of condensates	5	mm	32	32	32	32	32	32	32	32	63	63	63	63
A, width ***		mm	770	965	1245	989	1310	1427	1577	1795	2080	2290	2500	2530
B, height		mm	995	1080	1175	1400	1505	1650	1850	1790	2140	2370	2570	2740
C, depth		mm	538	538	538	538	538	650	706	712	820	931	1043	1267
D		mm	840	900	970	1170	1250	1345	1345	1450	1695	1875	2025	2145
E, inlet smoke		mm	200	250	300	350	400	500	500	550	650	750	850	950
F		mm	215	250	270	300	330	350	350	415	535	615	690	705
G, outlet smoke		mm	200	200	250	300	350	400	400	450	550	650	700	800
H		mm	413	448	493	567	622	680	680	784	945	1075	1175	1245
I		mm	224	224	224	306	306	280	280	252	279	279	279	279
J		mm	448	448	448	448	448	560	616	672	728	840	952	1176
K		mm	621	816	1096	840	1161	1278	1428	1602	1824	2034	2244	2274
L		mm	108	123	138	143	146	143	143	162	228	220	245	245
M*		mm	203	228	259	292	340	343	337	382	506	553	611	682
N*		mm	180	180	200	250	250	350	350	400	500	600	700	800
O		mm	-	-	-	-	-	-	-	205	340	374	424	648
P		mm	70	70	70	70	70	70	70	80	100	100	100	100
Q***		mm	119	119	119	119	119	119	119	163	226	226	226	226

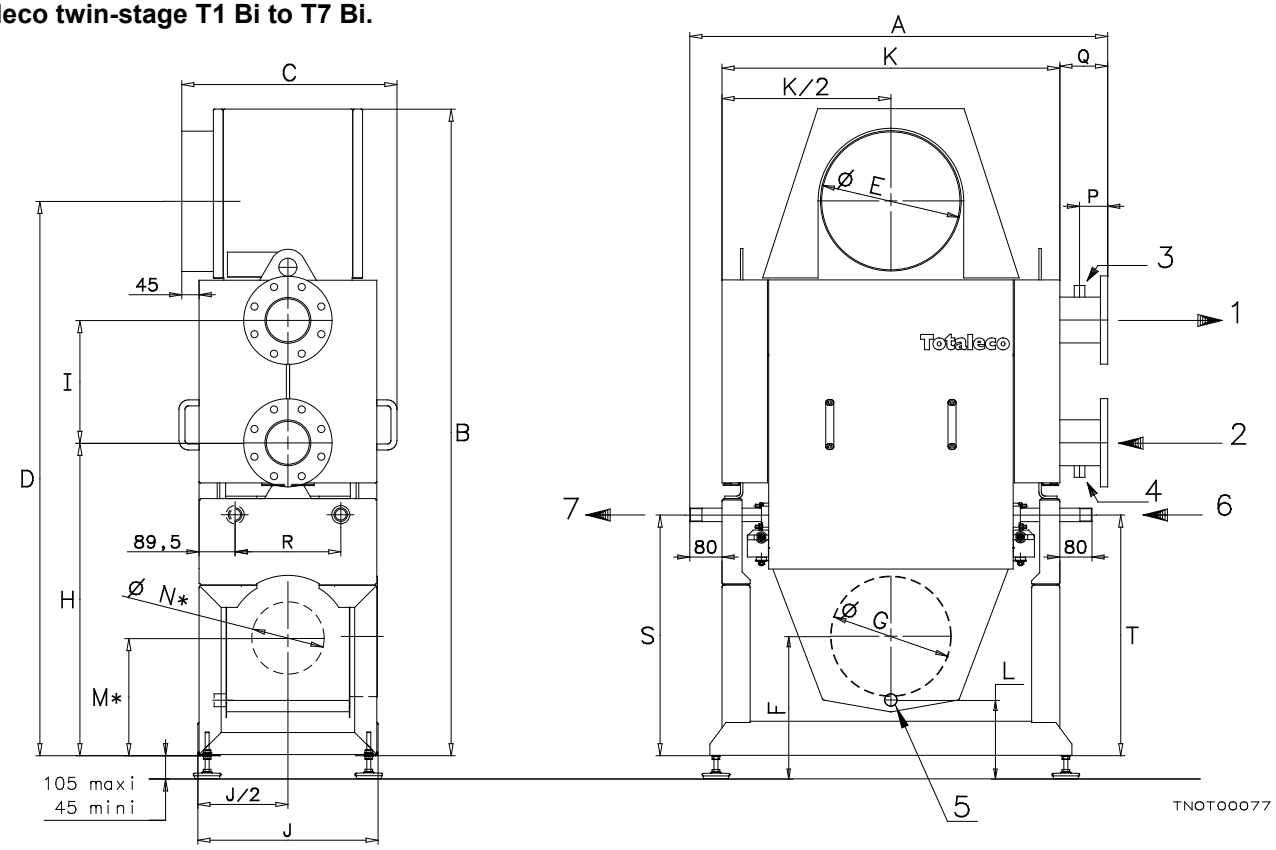
* Dimensions M and N are valid only for the the option ‘left smoke side’.

**- DN65 for Ø external tube 76,1 - DN100 for Ø external tube 114,3 - DN125 for Ø external tube 139,7,
- DN150 for Ø external tube 168,3 - DN200 for Ø external tube 219,1.

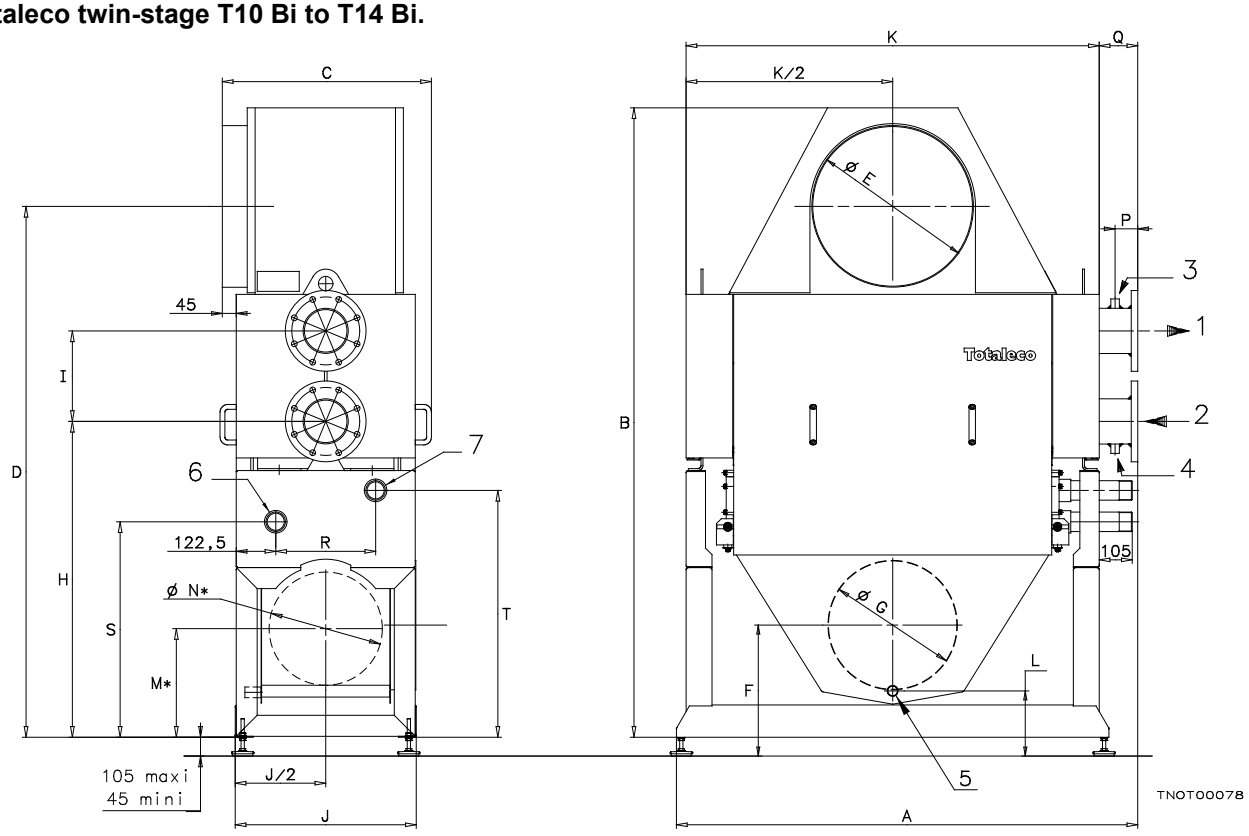
*** Increase dimensions A and Q by 74mm for the models T24 to T26 in stainless.

1.2. Dimensions Totaleco twin-stage Heating system/DHW

Totaleco twin-stage T1 Bi to T7 Bi.



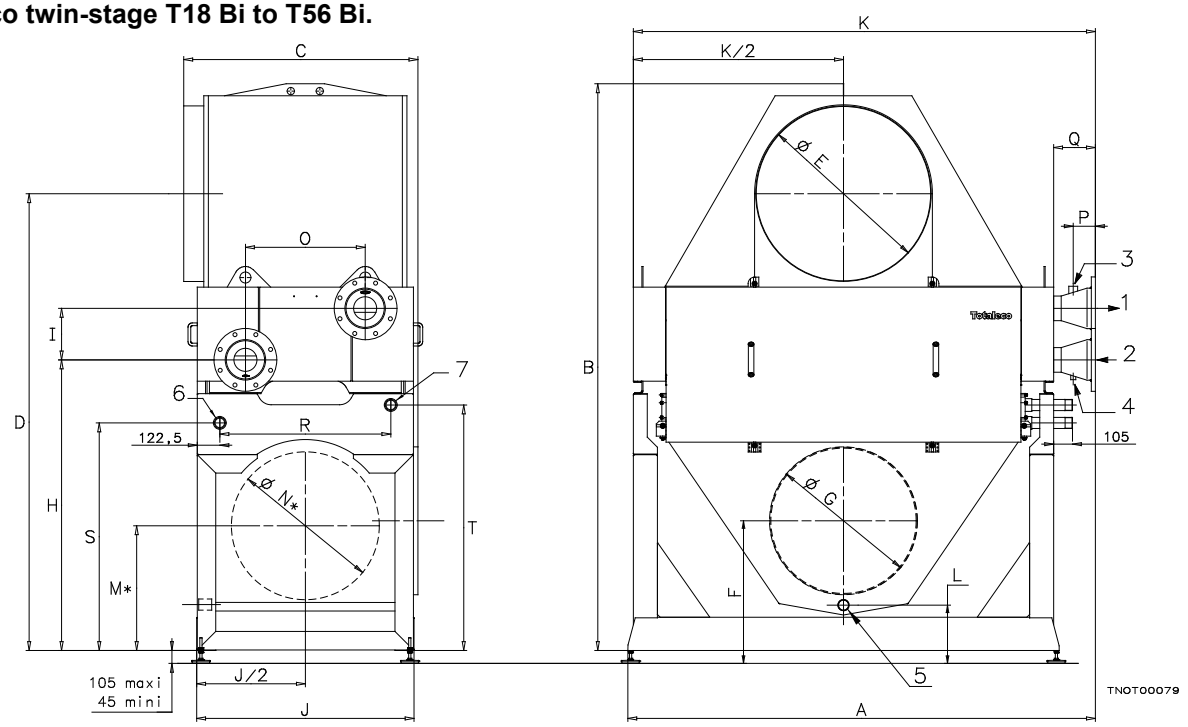
Totaleco twin-stage T10 Bi to T14 Bi.



1 – Water outlet 2 – Water inlet 3 – Sleeve valve 4 – Sleeve drains 5 – Evacuation of condensates

6 – Inlet DHW 7 – Outlet DHW

Totaleco twin-stage T18 Bi to T56 Bi.



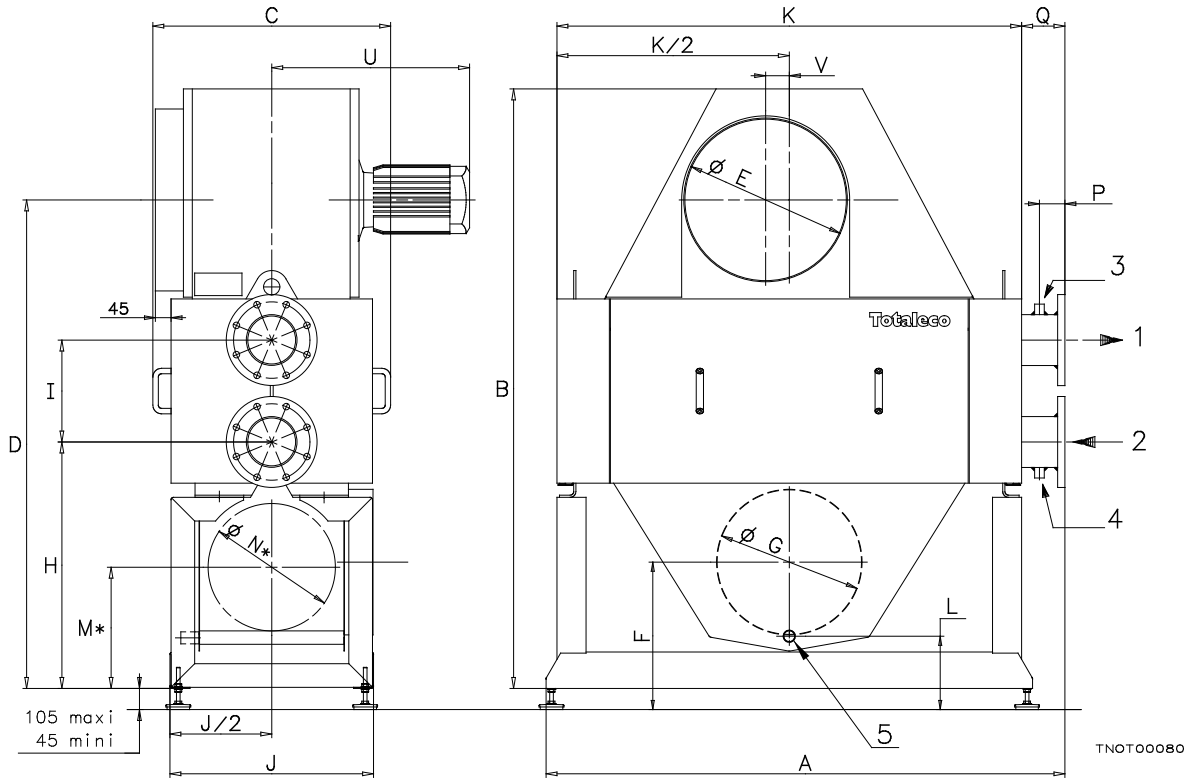
Totaleco twin-stage Heating system/DHW														
Model Twin			**T1**	**T2**	**T3**	**T4**	**T7**	**T10**	**T14**	**T18**	**T24**	**T32**	**T42**	**T56**
Ø outlet/inlet	1,2	DN**	65	65	65	100	100	125	125	150	200	200	200	200
Ø Sleeve valve	3	''	½''	½''	½''	½''	½''	½''	½''	1''	1''	1''	1''1/4	1''1/4
Ø Sleeve drains	4	''	½''	½''	½''	½''	½''	½''	½''	½''	½''	½''	½''	½''
Ø Evacuation of condensates	5	mm	32	32	32	32	32	32	32	32	63	63	63	63
Ø inlet/outlet DHW	6,7	F''	R 1''	R 1''	R 1''	R 1''	R 1''	R 2''	R 2''	R 2''	R 2''	R 2''	R 2''	R 2''
A, width * **		mm	820	1015	1295	1039	1360	1427	1577	1795	2080	2290	2500	2530
B, height		mm	1210	1295	1390	1615	1720	1950	1950	2090	2470	2700	2900	3070
C, depth		mm	538	538	538	538	538	650	706	712	820	931	1043	1267
D		mm	1055	1115	1185	1385	1465	1645	1645	1760	2025	2205	2355	2475
E, inlet smoke		mm	200	250	300	350	400	500	500	550	650	750	850	950
F		mm	215	250	270	300	330	350	350	415	535	615	690	705
G, outlet smoke		mm	200	200	250	300	350	400	400	450	550	650	700	800
H		mm	628	663	708	782	837	980	980	1084	1275	1405	1505	1575
I		mm	224	224	224	306	306	280	280	252	279	279	279	279
J		mm	448	448	448	448	448	560	616	672	728	840	952	1176
K		mm	621	816	1096	840	1161	1278	1428	1602	1824	2034	2244	2274
L		mm	108	123	138	143	146	143	143	162	228	220	245	245
M*		mm	203	228	259	292	340	343	337	382	506	553	611	682
N*		mm	180	180	200	250	250	350	350	400	500	600	700	800
O		mm	-	-	-	-	-	-	-	205	340	374	424	648
P		mm	70	70	70	70	70	70	70	80	100	100	100	100
Q* **		mm	119	119	119	119	119	119	119	163	226	226	226	226
R		mm	263	263	263	263	263	309	365	421	477	589	701	925
S		mm	468	503	548	603	658	670	670	780	935	1085	1185	1235
T		mm	468	503	548	603	658	767	767	857	1032	1162	1262	1332

* Dimensions M and N are valid only for the the option 'left smoke side'.

**- DN65 for Ø external tube 76,1 - DN100 for Ø external tube 114,3 - DN125 for Ø external tube 139,7,
- DN150 for Ø external tube 168,3 - DN200 for Ø external tube 219,1.

*** Increase dimensions A and Q by 74mm for the models T24 to T26 in stainless.

1.3. Dimensions Totaleco Turbo 3T to 10T



1 – Water outlet 2 – Water inlet 3 – Sleeve valve 4 – Sleeve drains 5 – Evacuation of condensates

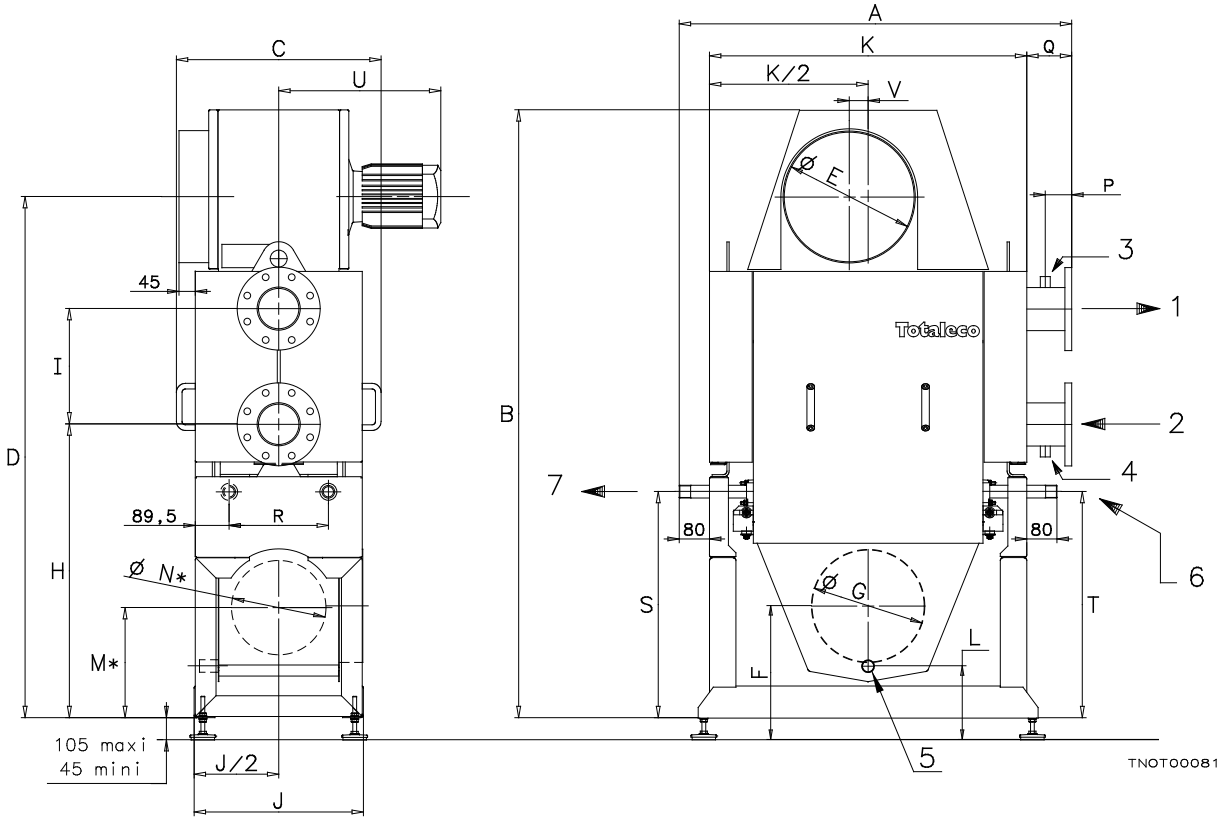
Totaleco Turbo						
Model			**3T**	**4T**	**7T**	**10T**
Ø outlet/inlet	1,2	DN**	65	100	100	125
Ø Sleeve valve	3	''	½''	½''	½''	½''
Ø Sleeve drains	4	''	½''	½''	½''	½''
Ø Evacuation of condensates	5	mm	32	32	32	32
A, width		mm	1245	989	1310	1427
B, height		mm	1245	1540	1675	1810
C, depth		mm	538	538	538	650
D		mm	1025	1250	1355	1450
E, inlet smoke		mm	250	350	400	450
F		mm	270	300	330	350
G, outlet smoke		mm	250	300	350	400
H		mm	493	567	622	680
I		mm	224	306	306	280
J		mm	448	448	448	560
K		mm	1096	840	1161	1278
L		mm	138	143	146	143
M*		mm	259	292	340	343
N*		mm	200	250	250	350
P		mm	70	70	70	70
Q		mm	119	119	119	119
U		mm	397	439	493	559
V		mm	35	50	50	65

* Dimensions M and N are valid only for the the option 'left smoke side'.

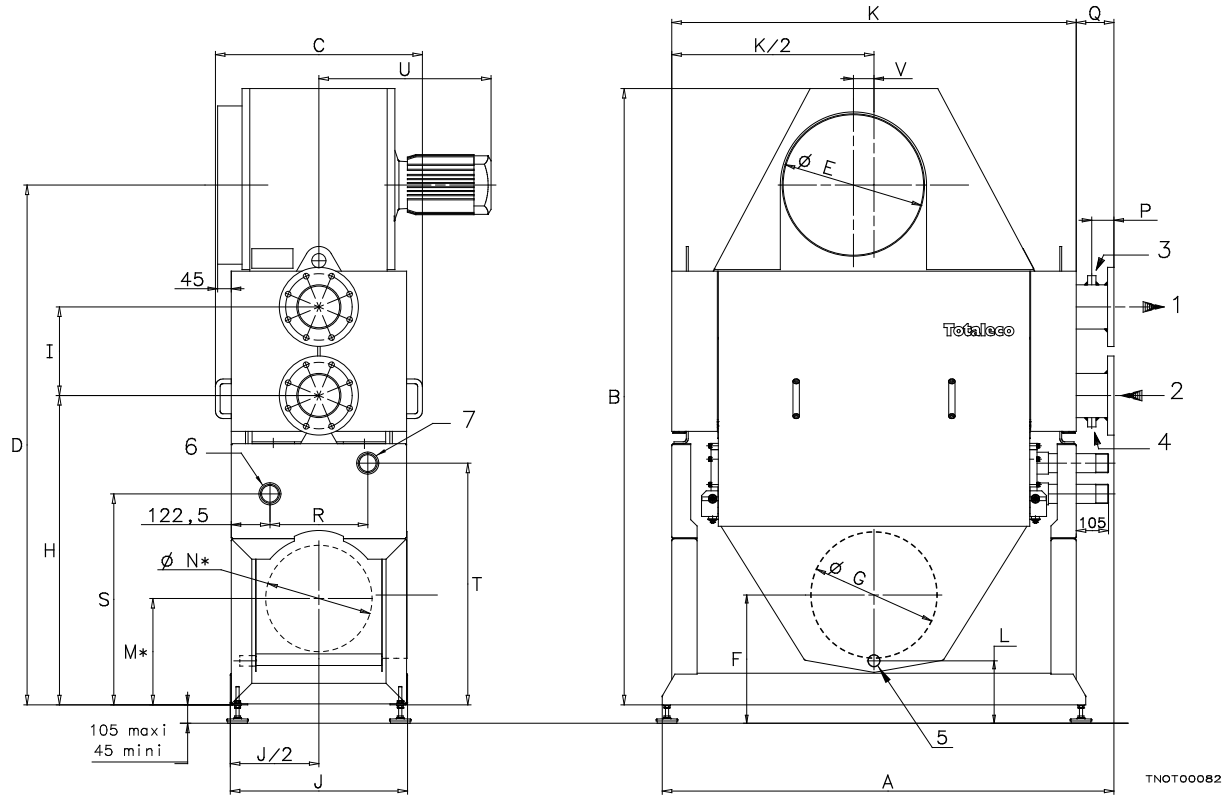
**- DN65 for Ø external tube 76,1 - DN100 for Ø external tube 114,3 - DN125 for Ø external tube 139,7,
- DN150 for Ø external tube 168,3 - DN200 for Ø external tube 219,1.

1.4. Dimensions Totaleco Turbo twin-stage 3T Bi to 10T Bi

Totaleco Turbo twin-stage 3T Bi to 7T Bi



Totaleco Turbo twin-stage 10T Bi



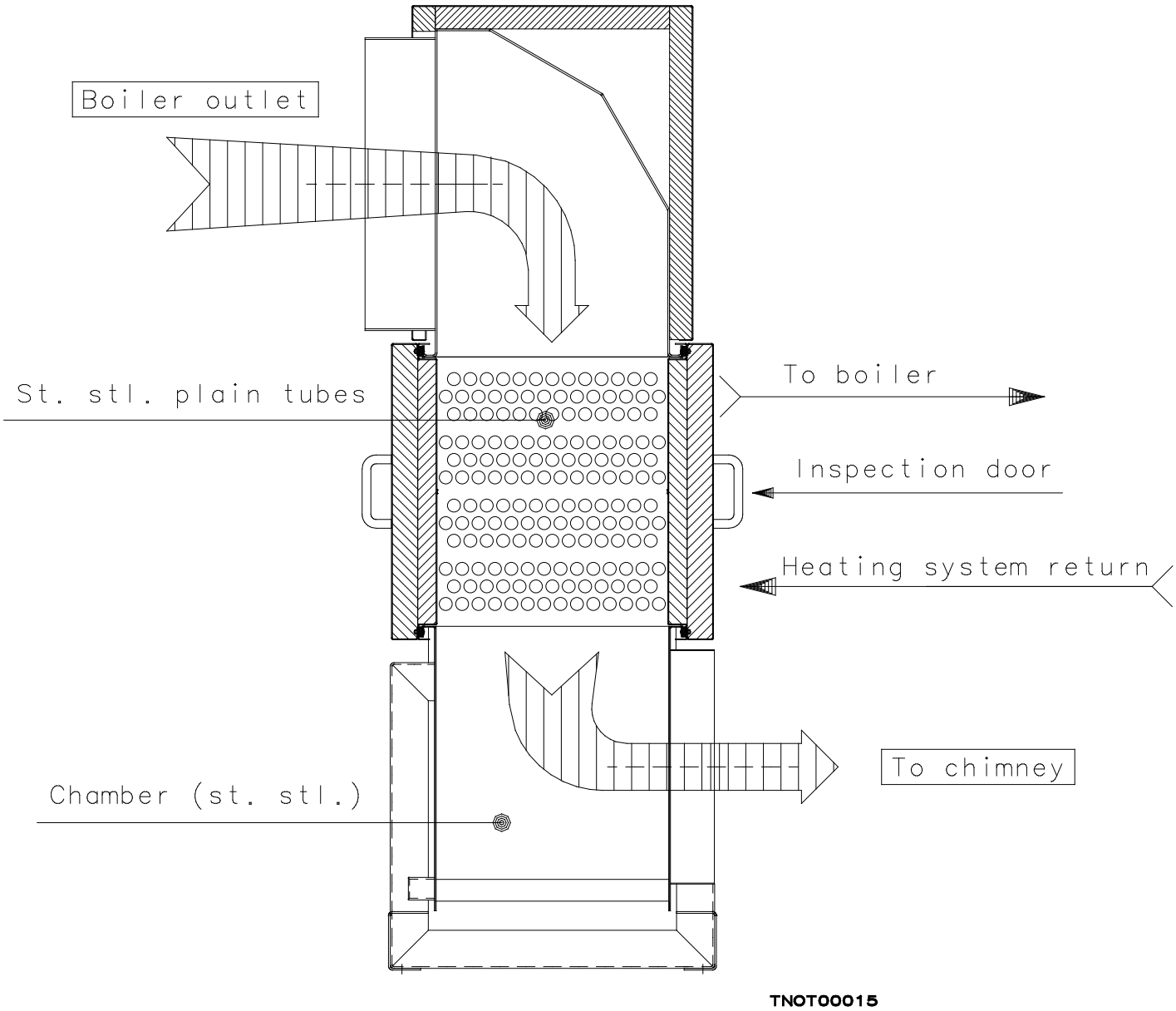
1 – Water outlet 2 – Water inlet 3 – Sleeve valve 4 – Sleeve drains 5 – Evacuation of condensates
6 – Inlet DHW 7 – Outlet DHW

Totaleco twin-stage Turbo						
Model			**3T Bi**	**4T Bi**	**7T Bi**	**10T Bi**
Ø outlet/inlet	1,2	DN**	65	100	100	125
Ø Sleeve valve	3	‘’	½’’	½’’	½’’	½’’
Ø Sleeve drains	4	‘’	½’’	½’’	½’’	½’’
Ø Evacuation of condensates	5	mm	32	32	32	32
Ø Enter/exit DHW	6,7	‘’	R 1’’	R 1’’	R 1’’	R 2’’
A, width		mm	1295	1039	1360	1427
B, height		mm	1460	1755	1890	2110
C, depth		mm	538	538	538	654
D		mm	1240	1445	1570	1750
E, inlet smoke		mm	250	350	400	450
F		mm	270	300	330	350
G, outlet smoke		mm	250	300	350	400
H		mm	708	782	837	980
I		mm	224	306	306	280
J		mm	448	448	448	560
K		mm	1096	840	1161	1278
L		mm	138	143	146	143
M*		mm	259	292	340	343
N*		mm	200	250	250	350
P		mm	70	70	70	70
Q		mm	119	119	119	119
R		mm	263	263	263	309
S		mm	548	603	658	670
T		mm	548	603	658	767
U		mm	397	439	493	559
V		mm	35	50	50	65

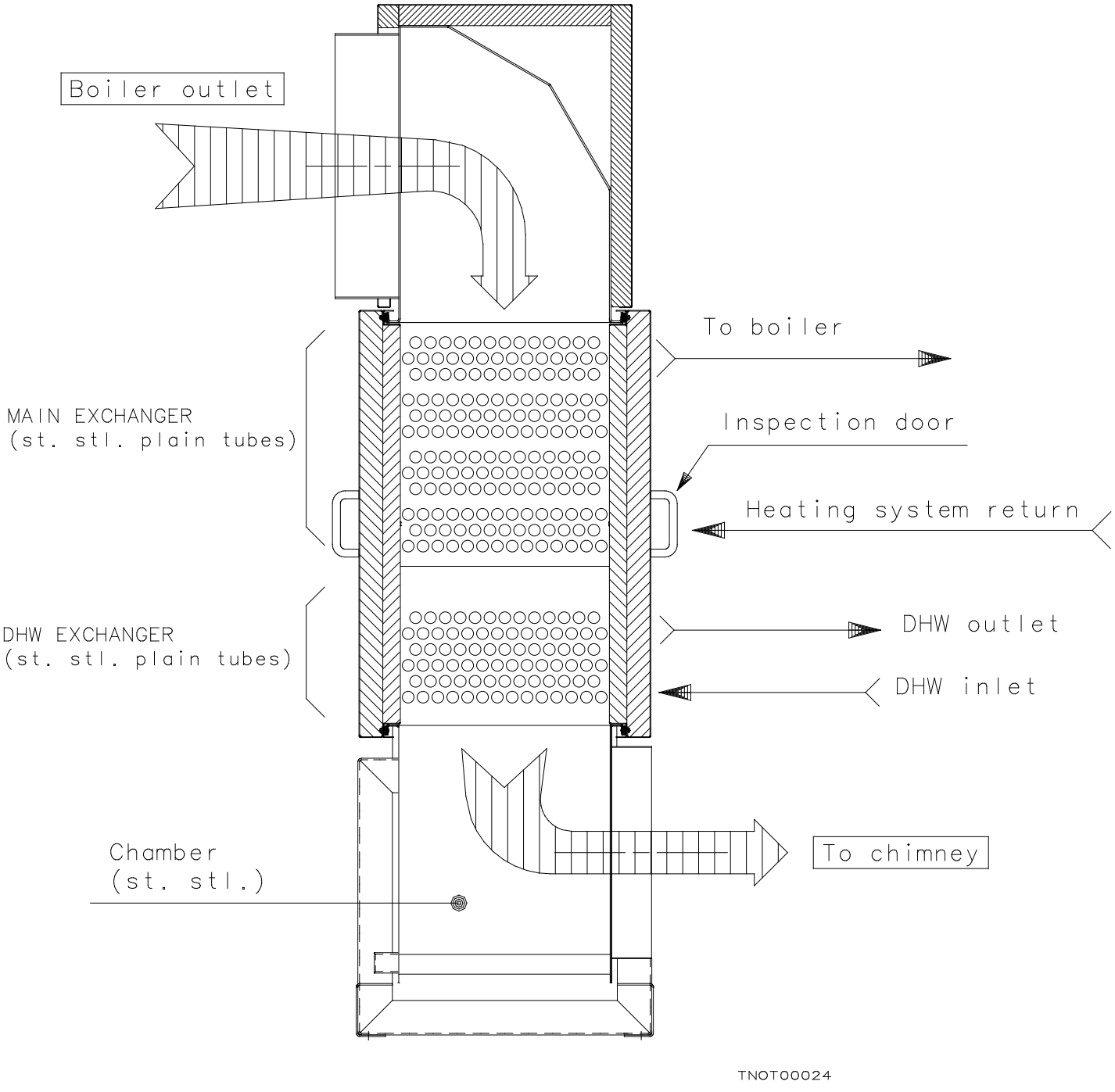
* Dimensions M and N are valid only for the the option ‘left smoke side’.

**- DN65 for Ø external tube 76,1 - DN100 for Ø external tube 114,3 - DN125 for Ø external tube 139,7,
- DN150 for Ø external tube 168,3 - DN200 for Ø external tube 219,1.

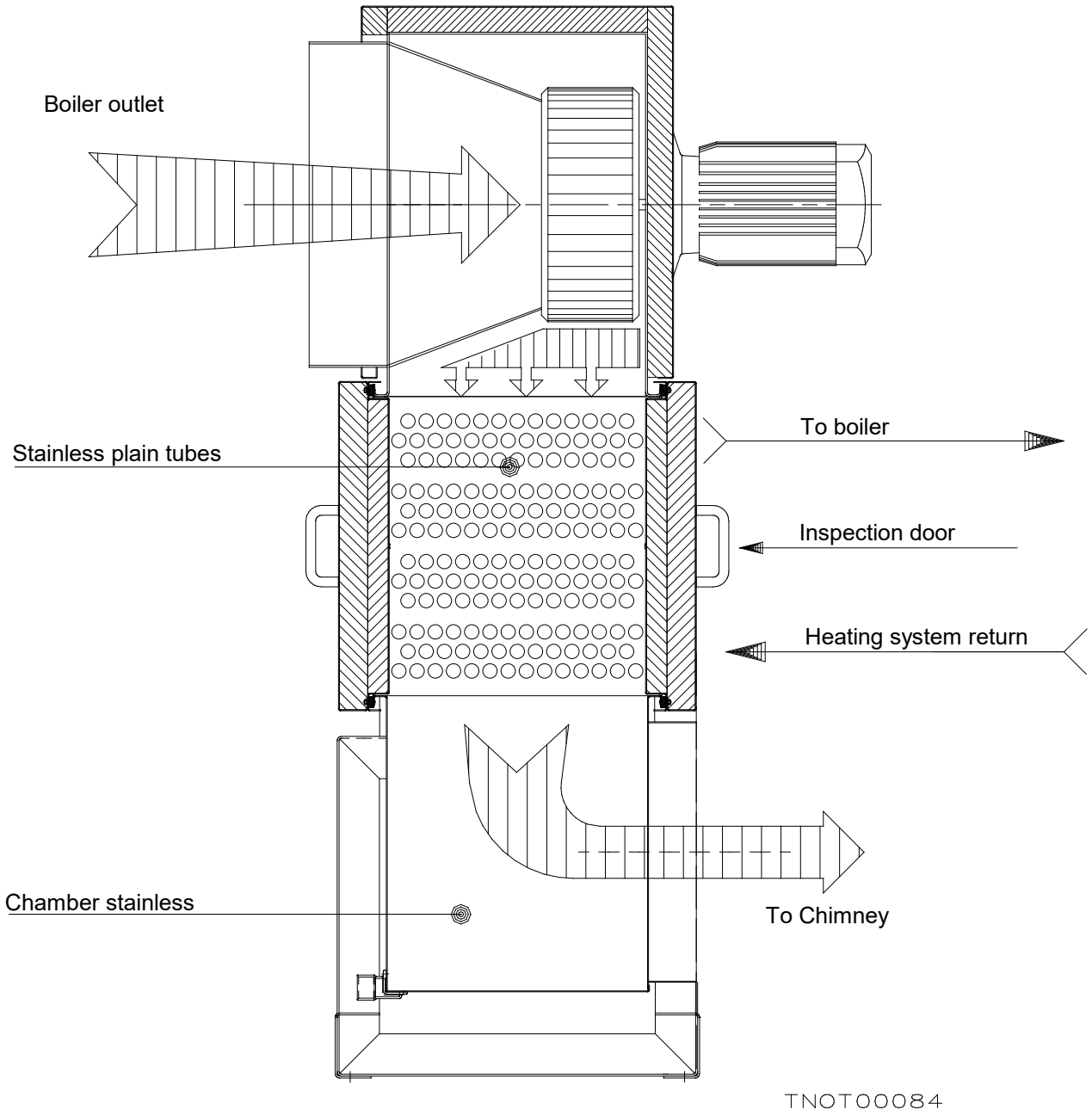
1.5. Functional diagram Totaleco single stage



1.6. Functional diagram of twin-stage re-claimer



1.7. Functional diagram of re-claimer Totaleco Turbo



2. Technical characteristics

2.1. Technical characteristics of Totaleco single-stage

Totaleco														
Model			**T1**	**T2**	**T3**	**T4**	**T7**	**T10**	**T14**	**T18**	**T24**	**T32**	**T42**	**T56**
Operating pressure		bar	6 or 8 bar following version					6, 8 or 10 bar following version						
Power boiler **Min**		kW	95	150	230	350	540	815	1240	1630	2150	2800	3700	4900
Max			170	260	400	620	940	1430	1630	2150	2800	3700	4900	6470
Water flow rate **Min**		m^3/h	3	4	6	8	12	19	25	33	42	56	74	97
Max			7	11	17	26	36	60	80	104	136	180	237	313
Tare weight		kg	135	160	190	205	250	335	396	510	660	825	1015	1250
Volume of water		l	22	27	34	40	51	86	107	130	163	227	290	375

Table of the pressure losses

Totaleco														
Model			**T1**	**T2**	**T3**	**T4**	**T7**	**T10**	**T14**	**T18**	**T24**	**T32**	**T42**	**T56**
Power boiler		kW	130	200	300	465	710	1080	1430	1870	2440	3230	4260	5630
Smoke circuit losses	1	daPa	3	3	3	17	17	17	17	17	17	18	18	18
Water circuit losses	1	mCE	0,25	0,50	1,00	0,75	1,40	1,60	1,70	1,75	1,80	1,82	1,87	1,87
Water flow rate		m^3/h	6,5	10	15	20	30	45	52	59	66	79	93	120

1 : Load losses for min. values in nominal conditions:

- Smoke temperature.....220°C
- Excess air.....20%
- Load rate.....…….100%
- Clean exchanger

2.2. Technical characteristics Totaleco twin-stage

Totaleco twin-stage														
Model			**1 Bi**	**2 Bi**	**3 Bi**	**4 Bi**	**7 Bi**	**10 Bi**	**14 Bi**	**18 Bi**	**24 Bi**	**32 Bi**	**42 Bi**	**56 Bi**
Operating pressure heating system stage		bar	6 or 8 bar following version					6, 8 or 10 bar following version						
Operating pressure DHW stage		bar	6											
Power boiler **Min**		kW	95	150	230	350	540	815	1240	1630	2150	2800	3700	4900
Max			170	260	400	620	940	1430	1630	2150	2800	3700	4900	6470
Water flow rate **Min**		m^3/h	3	4	6	8	12	19	25	33	42	56	74	97
Max			7	11	17	26	36	60	80	104	136	180	237	313
Tare weight		kg	175	205	243	250	304	455	535	680	870	1100	1350	1675
Volume of water heating system stage		l	22	27	34	40	51	86	107	130	163	227	290	375
Volume of water DHW stage		l	4	6	8,5	6	9	28	36	46	60	78	103	135

Table of pressure losses

Totaleco														
Model			**1 Bi**	**2 Bi**	**3 Bi**	**4 Bi**	**7 Bi**	**10 Bi**	**14 Bi**	**18 Bi**	**24 Bi**	**32 Bi**	**42 Bi**	**56 Bi**
Power boiler		kW	130	200	300	465	710	1080	1430	1870	2440	3230	4260	5630
Smoke circuit losses	1	daPa	4	4	4	21	21	24	24	24	25	25	25	26
Water circuit losses	1	mCE	0,25	0,50	1,00	0,75	1,40	1,60	1,70	1,75	1,80	1,82	1,87	1,87
Water flow rate		m^3/h	6,5	10	15	20	30	45	52	59	66	79	93	120
DHW circuit losses	1	mCE	3	3	3	3	3	3	1,7	2,5	2,3	2,8	3,6	4,7
DHW flow rate		m^3/h	3,4	3,4	3,4	3,4	3,4	6,8	13,6	13,6	13,6	13,6	13,6	13,6

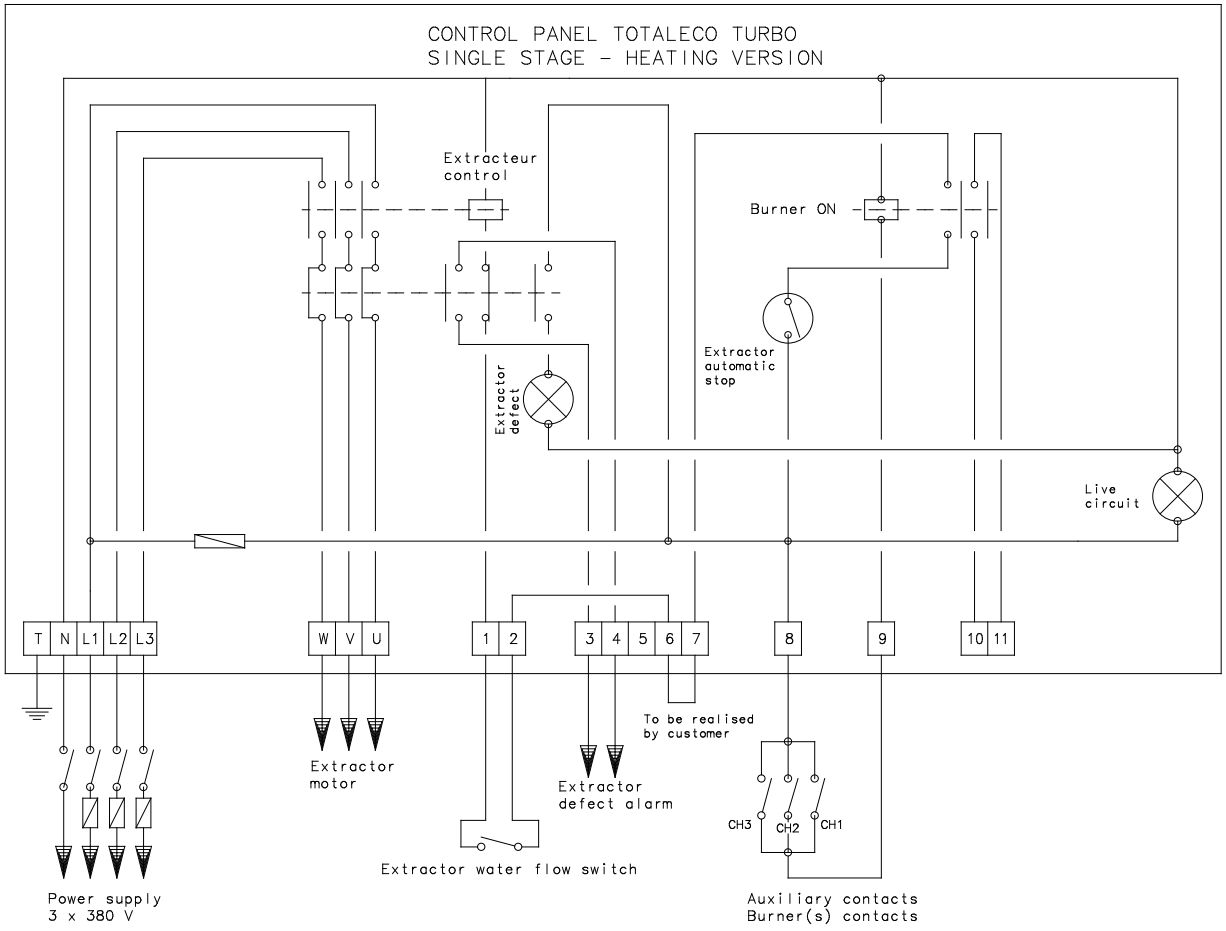
1 : Load losses for min. values in nominal conditions:

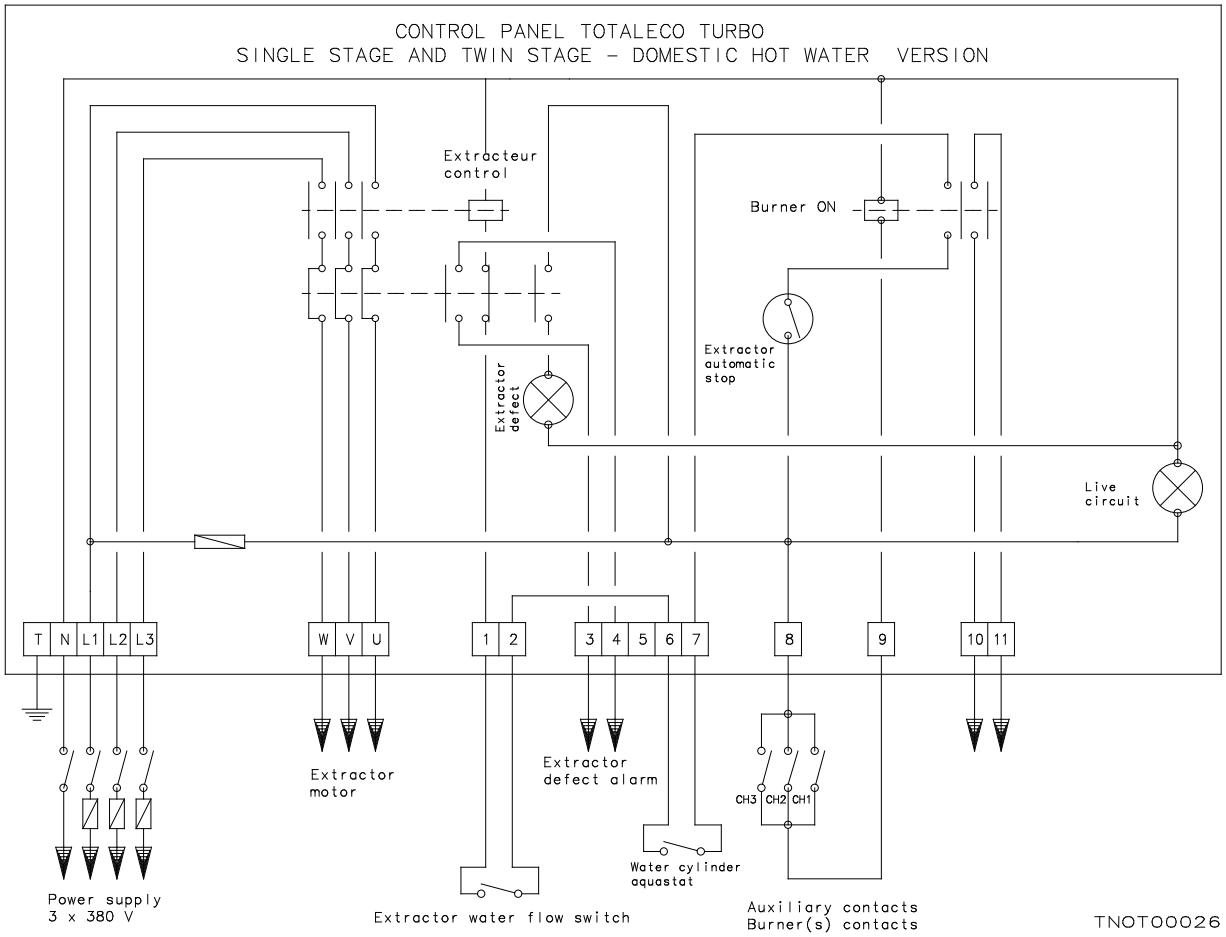
- Smoke temperature.....220°C
- Excess air.....20%
- Load rate.....……100%
- Clean exchanger

2.3. Electrical characteristics Totaleco Turbo

Totaleco Turbo						
Model			**3T et 3T Bi**	**4T et 4T Bi**	**7T et 7T Bi**	**10T et 10T Bi**
Tension		V	230-400V tri 50Hz			
Power		kW	0,25	0,75	1,50	3,00
Nominal intensity	230 V tri	A	1,4	3	5,9	10,9
	400 V tri	A	0,8	1,7	3,4	6,4
ID/IN			3,5	6,6	7	7,6

2.4. Electrical diagrams Totaleco Turbo





3. Installation

3.1. Handling

The two lifting rings on the top of the appliance are used for handling operations. According to slinging rules, a spreader must be used.

The unit can also be handled and moved by the base, using a pallet truck or stacker.

Remove the wood blocks under the base installed for transport purposes.

Install the 4 legs located in the lower smoke chamber.

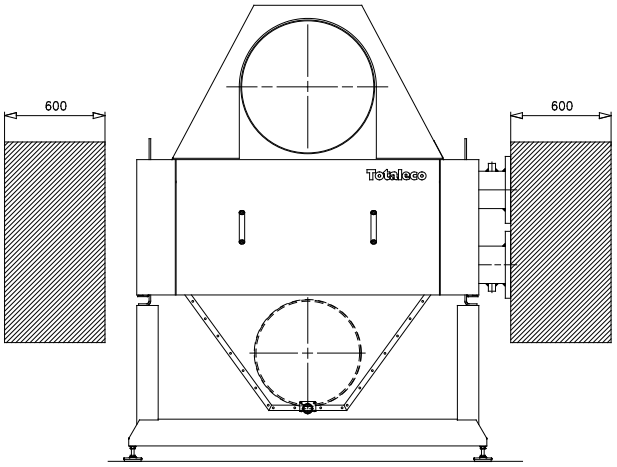
3.2. Layout

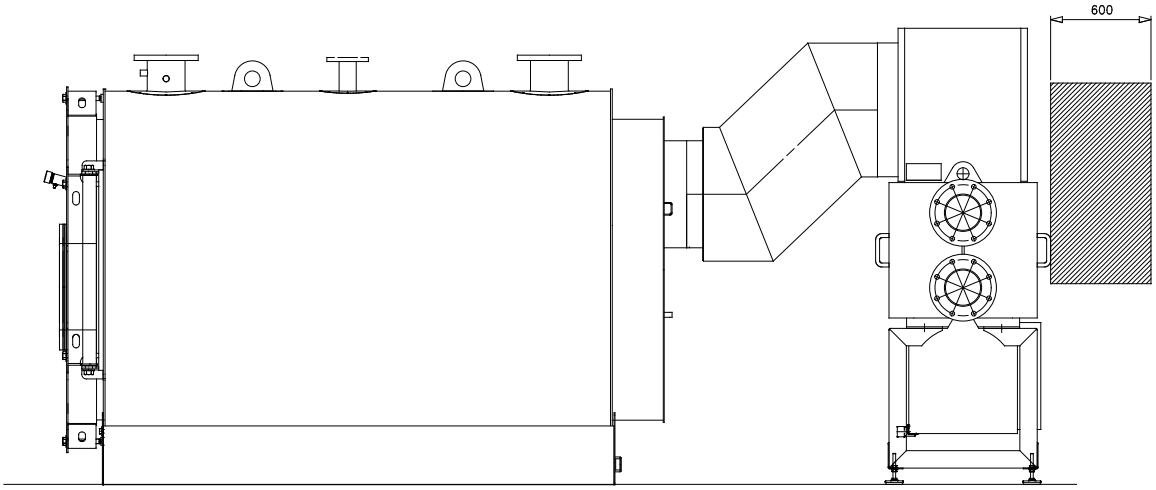
Accessibility: provide sufficient clearance to allow comfortable easy access when working on the Totaleco and Totaleco Turbo re-claimers.

Note: To ensure comfortable servicing and work on the re-claimers, provide an area free of any piping of 0.60 m around the re-claimer (see diagram).

Height adjustment: if the Totaleco re-claimer is mounted behind a GUILLOT/YGNIS boiler, the height is adjusted by means of the adapter between the boiler and the re-claimer.

If the Totaleco re-claimer is mounted behind any other boiler, fit the appropriate adapter applying a medium adjustment on the re-claimer base legs.





3.3. Smoke connections

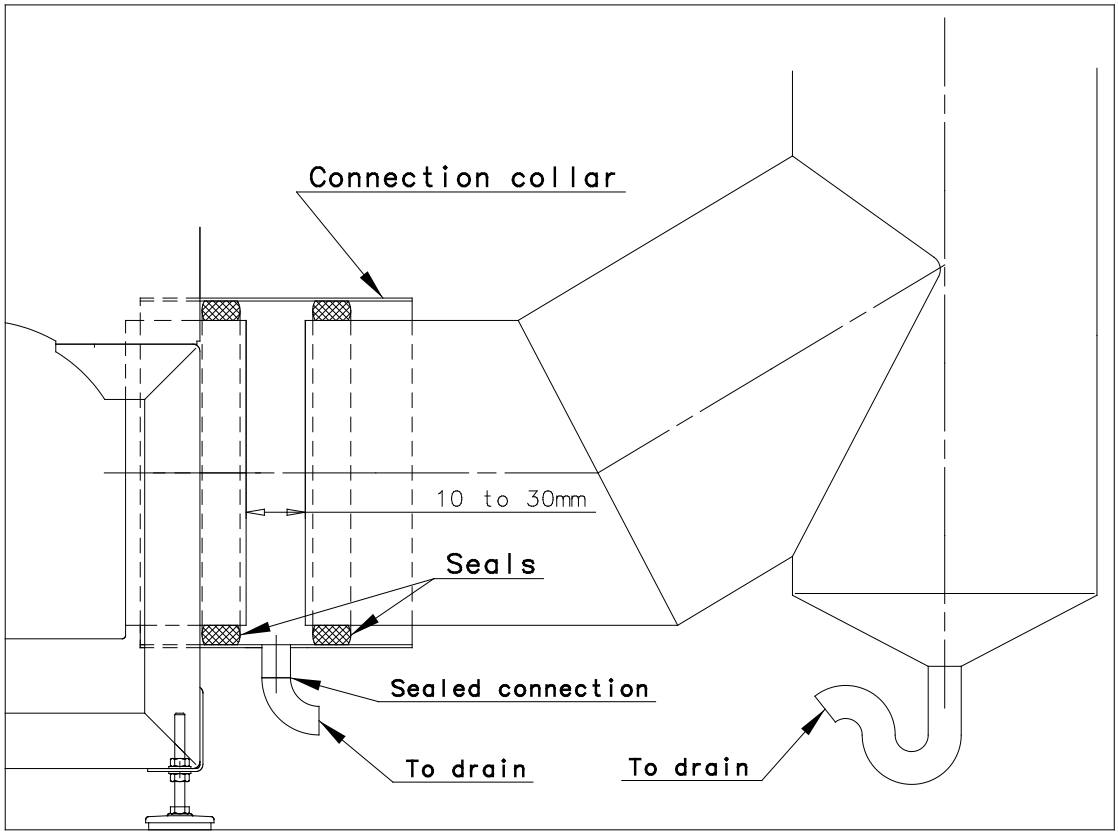
Check that the smoke duct and the flue have a vacuum pressure, are watertight and are provided with low points for evacuation of the condensates.

Check that the duct is local legislation approved and is not equipped with a draft inhibitor.

When commissioning, the installer should check that the smoke connections are tight, in particular at the boiler outlet and at the Totaleco inlet where the combustion gases are pressurized.

The smoke outlet nozzle should not support the weight of any external component (chimney, etc.) under any circumstances.

Installation of smoke outlet collar



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3.4. Electrical connection of Totaleco Turbo

The electrical installation must comply with EC standards governing wiring, and in particular as regards earthing.
A THREE-PHASE 400 V + Earth + Neutral switch box must be used.

A 5G 2.5 mm² power cable must be used.

This cable section is provided as a guideline only and does not release the installer from checking that it is in line with current national and local standards.
If a cable is damaged, it must be replaced by the manufacturer, the manufacturer's after sales service or a similarly qualified person in order to avoid any danger.

3.5. Hydraulic connection

Irrigation :
Check that the re-claimer is continuously irrigated in all cases. A safety valve must be mounted on the port provided for this purpose at the water circuit outlet. Check that the outlet is properly connected to the drain. A manually resettable thermostat limiting the temperature to 110°C is required. Check for the decantation chamber under the filter returns and an efficient degassing device at the high point.
The assembly of a flow controller is obligatory. It must ensure the good irrigation of the exchanger before the commissioning of the burner. For the values of the flows to ensure, see the chapter '2. Technical characteristics'
Filling of the circuit heating:
If the supply water is treated, be sure to take all the necessary precautions to prevent the treated water from becoming aggressive, resulting in possible corrosion in the installation.

3.6. Evacuation of condensates

This device must be made of PVC tubing with minimum diameter of 32mm with no shutter valve. If a siphon is used, it should be accessible for inspection.

4. Commissioning

4.1. Checking to be carried out before the commissioning

Be sure that the combustion products in the exchanger are produced by combustion of natural gas or of domestic oil. **This product cannot operate with solid oil.**
An oil with low sulphur content will clog less the boiler and the condensing economizer.
Check the tightness of the combustion gases at the re-claimer inlet and outlet.
Check that the condensates flow correctly with the lowest water return temperatures.
Check that the temperatures of the smokes do not exceed 280°C (case of an un-cleaned oil fired boiler).

An approved installer should perform the various safety checks and verify that the re-claimer is operating correctly. The installer must also commission the installation.

The gas and ventilation installation must satisfy the requirements of local specifications. The electrical connections must satisfy the standards covering electrical installations (Totaleco Turbo only); in particular, the unit must be connected to ground.

4.2. Specifications relative to Totaleco twin-stage

To avoid distributing water at more than 60°C as specified by applicable local requirement; check that a safety device is in place, comprising:

- 3-way valve at exit of tank enabling by-pass of cold water to mixer tap,
- Safety valve,
- Flow regulator on the scavenge pump ensuring circulation between the tank and the condenser.

4.3. Specifications related to Totaleco Turbo

As concerns the irrigation system, check:

- That the isolating valves are properly installed on the re-claimer,
- That there is a bypass between the re-claimer inlet and outlet,
- That there is a flow regulator connected to the box to prevent possible exchanger irrigation malfunctions.

With respect to the smoke connection, the built-in extractor compensates for re-claimer load losses and places the 0 point at the re-claimer outlet. The connection at the part linking the flue to the Totaleco Turbo inlet should be provided, if possible, at the upper part of the flue (to optimize recovery of burnt gases).

5. Servicing

5.1. Warning

For any intervention on fiber components mineral artificial siliceous (ceramic fibers, glass wool, rockwool), the operator must carry an appropriate dress adapted and a respiratory protection mask to avoid any risk specific to these products.

5.2. Operation of maintenance

The maintenance and the cleaning of the recuperator must be carried out obligatorily by a qualified fitter:

- natural gas: once per annum.
- domestic fuel: twice a year at least

1. Removal and installation of doors

Fasteners mounted with screws M8 secure the front and rear doors. To access the fasteners, open the grey flaps on either side of the blue doors. The flaps swivel on a pin and are maintained in position by magnets.

For domestic oil, the door joints must be changed on all disassembly/ reassembly operation.

After reinstalling the doors, do not forget to close the flaps to ensure that the exchanger water boxes are properly insulated.

2. Removal and installation of smoke chambers

The position of the lower and upper smoke chambers can be inverted to obtain the following configurations:

- Water inlet/outlet to the left or right.
- Condenser smoke outlet boiler side or chimney side.

Note: Optionally, lower chambers are available with side smoke outlets.

To remove the upper chamber, start by removing the isolation chamber maintained by gravity on the smoke inlet chamber.

Then, remove the smoke inlet chamber secured by screws M8.

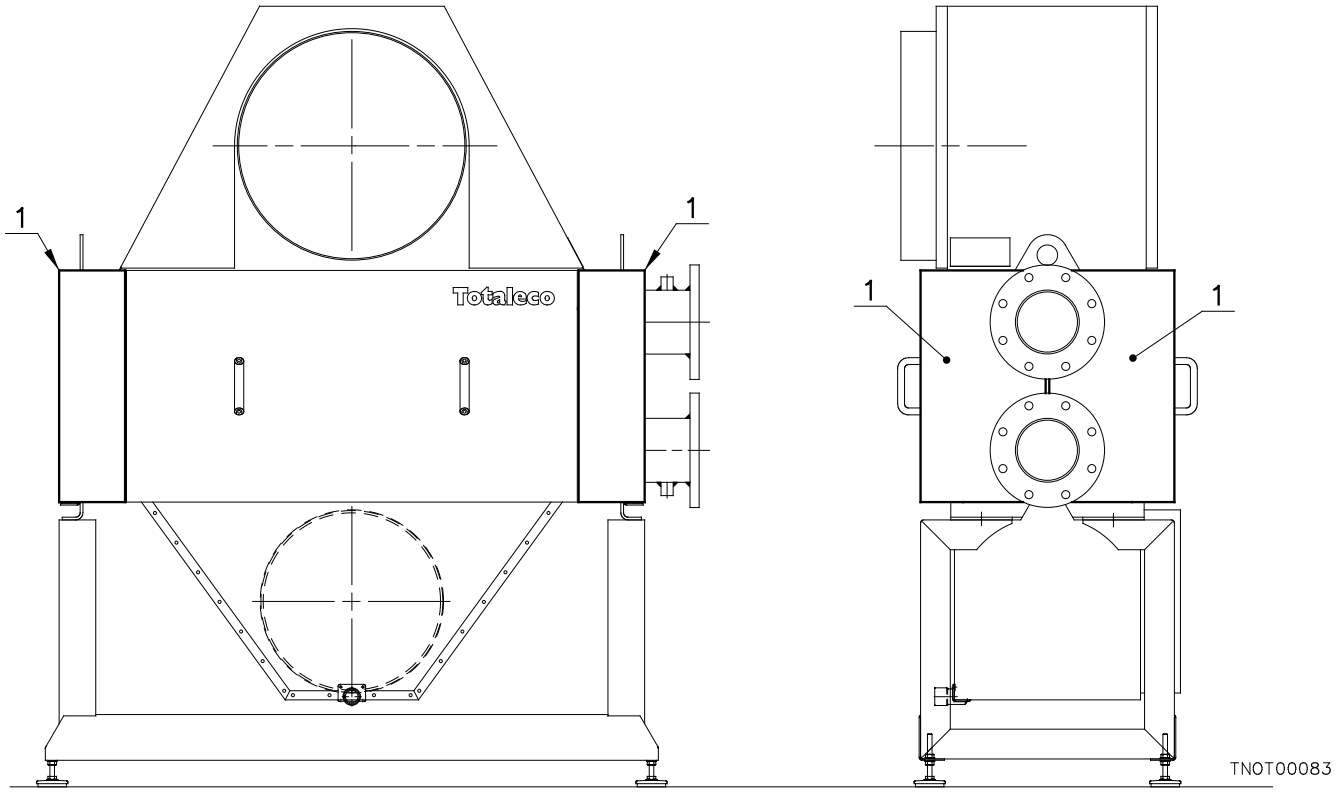
Screws type M8 also secure the lower chamber.

Caution: When cleaning the chambers, ensure the seal is properly positioned and check that it is in good condition.

3. Removal and installation of motor-turbine assembly from Totaleco turbo unit

After removing the installation cover maintained by gravity only, loosen the screws M8 securing the motor-turbine assembly to the upper chamber; then remove the assembly. During this operation, be careful with the seal; replace it if necessary.

Note : For servicing and maintenance work, be sure to provide an area free of any pipes of at least 0.60 m around the re-claimer.



6. Spare parts

Reference	Designation
070466	Motor seal Totaleco Turbo N°3 (3 T)
070467	Motor seal Totaleco Turbo N°4 (4 T)
070468	Motor seal Totaleco Turbo N°7 et 10 (7 T et 10 T)
070506	Doors seals Totaleco N°1 (TT130)
070510	Doors seals Totaleco N°2 (TT200)
070512	Doors seals Totaleco / Totaleco Turbo N°3 (TT300 / 3 T)
070514	Doors seals Totaleco / Totaleco Turbo N°4 (TT465 / 4 T)
070517	Doors seals Totaleco / Totaleco Turbo N°7 (TT710 / 7 T)
070507	Doors seals Totaleco / Totaleco Turbo N°10 (TT1080 / 10 T)
070508	Doors seals Totaleco N°14 (TT 1430)
070509	Doors seals Totaleco N°18 (TT 1870)
070511	Doors seals Totaleco N°24 (TT 2440)
070513	Doors seals Totaleco N°32 (TT 3230)
070515	Doors seals Totaleco N°42 (TT4260)
070516	Doors seals Totaleco N°56 (TT 5630)
070518	Doors seals Totaleco Bi twin stage N°1 (TT130 bi)
070522	Doors seals Totaleco Bi twin stage N°2 (TT200 bi)
070524	Doors seals Totaleco / Totaleco Turbo Bi twin stage N°3 (TT300 bi / 3 T bi)
070526	Doors seals Totaleco / Totaleco Turbo Bi twin stage N°4 (TT465 bi / 4 T bi)
070529	Doors seals Totaleco / Totaleco Turbo Bi twin stage N°7 (TT710 bi / 7 T bi)
070519	Doors seals Totaleco / Totaleco Turbo twin stage N°10 (TT1080 bi / 10 T bi)
070520	Doors seals Totaleco Bi twin stage N°14 (TT1430 bi)
070521	Doors seals Totaleco Bi twin stage N°18 (TT1870 bi)
070523	Doors seals Totaleco Bi twin stage N°24 (TT2440 bi)
070525	Doors seals Totaleco Bi twin stage N°32 (TT3230 bi)
070527	Doors seals Totaleco Bi twin stage N°42 (TT4260 bi)
070528	Doors seals Totaleco Bi twin stage N°56 (TT5630 bi)
070563	Tool for brushing Totaleco / Totaleco Turbo N° 1 to 18
070564	Tool for brushing Totaleco / Totaleco Turbo N° 24 to 42
070565	Tool for brushing Totaleco / Totaleco Turbo N° 56

7. Servicing book - Reclaimers

DATES	TECHNICIAN NAME AND SIGNATURE	TEMPERATURES		CO	CO_2 OR O2	EFFICIENCY ON PCI	REMARKS
		SMOKE	HEATING RETURN				

8. Controls and adjustments of commissioning of Totaleco

INSTALLER:	WORKSITE:

WARRANTY EFFECTIVE DATE (DELIVERY):

Type of boiler: N°

1. Hydraulic circuit

- Pump No: Flow rate: m^3/h
- Group pump: Type
- Individual pump: Type:

- Presence of return probe: Aquastat setting 90°C

2. Fuel circuit

- Type of fuel:
- Upstream pressure (on filter in mbar) :
- Injector pressure (in mbar):
- Flow rate (in m3/h) :
- Furnace room temperature (in °C):

3. Combustion check

- Pressure or vacuum pressure at boiler outlet (mm WC):
- CO (%): CO_2 (%): O_2 (%):
- Smoke temperatures (°C):
- Heating return temperature (°C):
- Efficiency on PCI (%):

4. Safety device checks

Following effective commissioning, the following safety devices must be triggered to ensure the devices operate correctly:

- Flow regulation, minimum pressure switch on boiler and gas pressure regulator station, relay box.

Remarks :

This service cannot under any circumstances represent a plant or furnace room compliance inspection or certificate.

Date of commissioning:
Technician name and signature:

Customer signature :

Corporate seal