

DECLARATION OF PERFORMANCE

no. **DOPGLO-017**

(Issued in accordance with REGULATION (UE) No. 305/2011 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2011)

1. Unique identification code of the product-type:

TONALE

(EN 442-2:2014 - Annex G – Picture G2 – Die-cast aluminium radiator elements)

2. Type, batch or serial number or any other element allowing the construction product to be identified in accordance with Article 11(4):

Model	TONALE							
	2000	1800	1735	1600	1400	1200	1000	900
Pipe centres [mm]	2000	1800	1735	1600	1400	1200	1000	900

Model	TONALE								
	813	800	730	700	623	600	530	500	350
Pipe centres [mm]	813	800	730	700	623	600	530	500	350

Batch number: SEE PACKAGING.

3. Intended use(s) of the construction product, in accordance with the applicable harmonised technical specification, as intended by the manufacturer:

Metallic radiators for heating residential buildings, permanently installed. Operation with hot water or steam, heated by a remote heat source, at temperatures below 120°C.

4. Name, registered trade name or registered trade mark and address of the manufacturer in accordance with Article 11(5):

GLOBAL di Fardelli Ottorino & C. s.r.l., via Rondinera no. 51, 24060 ROGNO (BG) Italy

5. Name and address of the authorised representative whose mandate covers the tasks referred to in Article 12(2): **NA**

6. System of assessment and verification of constancy of performance of the construction product as referred to in Annex V:

System 3

7. Type tests in accordance with EN 442 Standard were carried out by:

POLITECNICO DI MILANO – DIPARTIMENTO DI ENERGETICA - Laboratorio Misure Ricerche Termotecniche M.R.T. - Notified body number 1695

The verification of conformity covered:

Dimensional Sizes, Thermal Output, Tightness and Resistance to Pressure, Pressure drop.

In accordance with:

System 3

8. 8. In the case of a declaration of performance relating to a construction product for which a European Technical Assessment has been issued: **NA**

9. Declared performance

Essential characteristics		Performance									Harmonised technical specification
Reaction to fire		A1									EN 442-1:2014
Release of hazardous substances		none									EN 442-1:2014
Pressure tightness		No leakage at 2080 kPa									EN 442-1:2014
Surface temperature		Below 120°C									EN 442-1:2014
Max. operating pressure		1600 kPa									EN 442-1:2014
Resistance to pressure		No breakage at 2700 kPa									EN 442-1:2014
Rated thermal output	Pipe centres	2000	1800	1735	1600	1400	1200	1000	900		EN 442-1:2014
	$\Phi_{\Delta t 30} =$	109.4 W	100.1 W	97.0 W	90.6 W	80.7 W	71.5 W	61.6 W	56.5 W		
	$\Phi_{\Delta t 50} =$	222.0 W	203.6 W	197.5 W	184.6 W	165.0 W	144.6 W	123.5 W	112.7 W		
Thermal output in different operating conditions (Characteristic curve)	Characteristic equation	$\Phi = Km \times \Delta t^n$									EN 442-1:2014
	Km=	0.98240	0.88584	0.85451	0.78947	0.69339	0.65475	0.60244	0.57049		
	n=	1.38555	1.38994	1.39137	1.39434	1.39873	1.37973	1.36074	1.35124		
Rated thermal output	Pipe centres	813	800	730	700	623	600	530	500	350	EN 442-1:2014
	$\Phi_{\Delta t 30} =$	51.7 W	50.9 W	47.0 W	45.3 W	40.8 W	39.5 W	35.4 W	33.6 W	24.6 W	
	$\Phi_{\Delta t 50} =$	103.1 W	101.7 W	93.9 W	90.5 W	81.7 W	79.0 W	70.9 W	67.4 W	49.4 W	
Thermal output in different operating conditions (Characteristic curve)	Characteristic equation	$\Phi = Km \times \Delta t^n$									EN 442-1:2014
	Km=	0.51789	0.51004	0.46772	0.44961	0.40313	0.38924	0.34693	0.32880	0.23797	
	n=	1.35326	1.35357	1.35520	1.35589	1.35769	1.35822	1.35985	1.36055	1.36404	
Durability as:	Resistance against corrosion	No corrosion after 200 hours in a humidity test chamber									EN 442-1:2014
	Painting resistance (Cross-cut test)	Class 0									

Notes to the table:

- Column 1 shall contain the list of essential characteristics as determined in the harmonised technical specification for the intended use(s) referred to in point 3;
- For each characteristic listed in column 1 and in accordance with the requirements of Article 6, column 2 shall contain the declared performance, expressed in terms of level, class or by means of a description, in relation to the corresponding essential characteristics. The letters 'NPD' (No Performance Determined) where no performance is declared;
- For each essential characteristic listed in column 1, column 3 shall contain:
 - the dated reference of the corresponding harmonised standard and, where relevant, the reference number of the specific technical documentation or the appropriate technical documentation used;
 - or
 - the dated reference of the corresponding European Assessment Document, if available, and the reference number of the European Technical Assessment used.

Where specific technical documentation has been used, in accordance with Article 37 or 38, the requirements which the product meets: **NA**

10. The product performance referred to in point 1 and 2 is in conformity with the declared performance referred to in point 9. This declaration of performance is issued under the sole responsibility of the manufacturer referred to in point 4.

ROGNO, 24/11/2022

Signed for and on behalf of:
Global di Fardelli Ottorino & C. s.r.l.
Ing. SANDRO PANTEGHINI – Technical Dept.