Notified laboratory NB 2693

HEATEST, s.r.o., č. p. 84, 276 01 Býkev, Czech Republic

issues

for the purposes of with Regulation (EU) No 305/2011 of the European Parliament and Council of 9 March 2011, (the Construction products Regulation or CPR) as amended this

ASSESSMENT OF PERFORMANCE REPORT

No. 2693-CPR-0020-2023

for construction product:

Family of construction product:	**Column radiator**
Intended use:	in heating systems in buildings
Type, name or trademark:	**JDDH S 5025**
Manufacturer:	**TIANJIN JIUDING YANGGUANG HVAC CO., LTD.**
Full address:	No. 9 Wuwei Road, Lutai Ninghe Tianjin City, China (PRC)
Manufacturing site:	No. 9 Wuwei Road, Lutai Ninghe Tianjin City, China (PRC)
Registered trade mark	JIUDING RADIATOR

This Assessment of Performance Report attest that the performance of the above-mentioned construction product has been assessed under AVCP system 3 with regard to the essential characteristic listed at Annex No 1 of this Report in accordance with harmonised standard

EN 442-1:2014

This Report will remain applicable as long as neither the harmonised standard, the construction product, nor the AVCP methods are modified significantly. Its distribution without the written consent of the NB2693 is possible only as a whole, including the Annexes, which are an integral part of the Report.

This Report covers only essential characteristic(s) mentioned in Annex No. 1 of this Report. It is not an exhaustive statement of the performance of the product. The manufacturer is entitled to declare the performance of other essential characteristics than those mentioned in Annex No. 1 of this Report.

This Report is not considered a product certificate or a document to accompany the product nor the Declaration of Performance.

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At Býkev on: 29. 03. 2023

Copy No 1

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Annex No. 1: Assessed essential characteristics

Essential characteristic Clause No. – Description		Performance Level or class, units	Basis for the assessment of performance
4.3	Reaction to fire	A1	**Descriptive documentation** 045/2023
4.4	Release of dangerous substances	None	**Descriptive documentation** SGS Test Report (SVHC) No.TSNEC2000446701 from 08.04. 2020
4.5	Pressure tightness	no leakage at 1,3 × maximum operating pressure (MOP) [kPa]	**Descriptive documentation** Product details from 27.03.2023
4.6	Surface temperature	Maximum 100 °C	**Descriptive documentation** Product details from 27.03.2022
4.7	Resistance to pressure	no breakage at 1,69 × MOP MOP: 1000 kPa	**Test report No.** 045/2023
4.9	Rated thermal output	**see Annex No. 2**	**Test report No.** 045/2023
4.10	Thermal output in different operating conditions	**see Annex No. 2**	**Test report No.** 045/2023
Durability as:			
4.11	Resistance against corrosion	No corrosion after 100 h humidity	**Test report No.** P-VZLUTEST-068/23
4.11	Resistance against minor impact	ISO 2409:2013 – 1c – 0	**Test report No.** 048/2023

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end of Annex No. 1

Annex No. 2 Table of thermal outputs

In accordance with EN 442-2, cl. 5.5.1.2, for radiators the thermal output is considered linear with number of sections.

$$\Phi = \Phi_L \times N_S = K_T \times H^b \times \Delta T^{(c0+c1\times H)} \times N_S = K_L \times \Delta T^n \times N_S = K_M \times \Delta T^n$$

Φ	thermal output in *W*
Φ_L	thermal output of the module in *(W/section)*
K_T	constant of the type
b, c_0,c_1	coefficients of the characteristic equation of the type
K_M	constant of the model; $K_M = K_L \times N_S = K_T \times H^b \times N_S$
ΔT	excess temperature in *K*
n	the exponent; $n=c_0 + c_1 \times H$
N_S	number of sections

Coefficients of the characteristic equation of the type:

Symbol	Value
K_T	0,4577
b	0,8826
c_0	1,2781
c_1	0,0123

Modular thermal outputs:

Height	Number of sections	Modular standard rated thermal output	Modular standard low temperature thermal output	Thermal output in different operating conditions, as $\Phi_L = K_L \times \Delta T^n$ (W/sect.)	
H (m)	N_S	$\Phi_{L,50}$ (W/section)	$\Phi_{L,30}$ (W/section)	K_L	n
0,600	1	44,5	23,1	0,2916	1,2855
0,900	1	64,6	33,5	0.4171	1,2892
1,200	1	84,5	43,7	0,5376	1,2929
1,500	1	104	53,8	0,6546	1,2966
1,600	1	111	57,2	0,6930	1,2978
1,800	1	124	64,0	0,7689	1,3002
2,000	1	138	70,9	0,8439	1,3027

Thermal outputs for the type range:

Model SKU	Standard rated thermal output Φ_{50} (W)	Standard low temperature thermal output Φ_{30} (W)	Thermal output in different operating conditions, as $\Phi = K_M \times \Delta T^n$	
			K_M	n
JDDH S 5025 0606	267	139	1,7496	1,2855
JDDH S 5025 0607	312	162	2,0412	1,2855
JDDH S 5025 0608	356	185	2,3327	1,2855
JDDH S 5025 0609	401	208	2,6243	1,2855
JDDH S 5025 0610	445	231	2,9159	1,2855
JDDH S 5025 0611	490	254	3,2075	1,2855
JDDH S 5025 0612	535	277	3,4991	1,2855
JDDH S 5025 0613	579	300	3,7907	1,2855
JDDH S 5025 0614	624	323	4,0823	1,2855
JDDH S 5025 0615	668	347	4,3739	1,2855
JDDH S 5025 0616	713	370	4,6655	1,2855
JDDH S 5025 0617	757	393	4,9571	1,2855
JDDH S 5025 0618	802	416	5,2487	1,2855
JDDH S 5025 0619	846	439	5,5403	1,2855
JDDH S 5025 0620	891	462	5,8319	1,2855
JDDH S 5025 0621	935	485	6,1235	1,2855
JDDH S 5025 0622	980	508	6,4150	1,2855
JDDH S 5025 0623	1025	531	6,7066	1,2855
JDDH S 5025 0624	1069	554	6,9982	1,2855
JDDH S 5025 0625	1114	578	7,2898	1,2855
JDDH S 5025 0626	1158	601	7,5814	1,2855
JDDH S 5025 0627	1203	624	7,8730	1,2855
JDDH S 5025 0628	1247	647	8,1646	1,2855

Model SKU	Standard rated thermal output Φ_{50} (W)	Standard low temperature thermal output Φ_{30} (W)	Thermal output in different operating conditions, as $\Phi = K_M \times \Delta T^n$	
			K_M	n
JDDH S 5025 0906	388	201	2,5023	1,2892
JDDH S 5025 0907	452	234	2,9194	1,2892
JDDH S 5025 0908	517	268	3,3365	1,2892
JDDH S 5025 0909	582	301	3,7535	1,2892
JDDH S 5025 0910	646	335	4,1706	1,2892
JDDH S 5025 0911	711	368	4,5876	1,2892
JDDH S 5025 0912	776	401	5,0047	1,2892
JDDH S 5025 0913	840	435	5,4217	1,2892
JDDH S 5025 0914	905	468	5,8388	1,2892
JDDH S 5025 0915	970	502	6,2559	1,2892
JDDH S 5025 0916	1034	535	6,6729	1,2892
JDDH S 5025 0917	1099	569	7,0900	1,2892
JDDH S 5025 0918	1164	602	7,5070	1,2892
JDDH S 5025 0919	1228	636	7,9241	1,2892
JDDH S 5025 0920	1293	669	8,3411	1,2892
JDDH S 5025 0921	1357	703	8,7582	1,2892
JDDH S 5025 0922	1422	736	9,1753	1,2892
JDDH S 5025 0923	1487	770	9,5923	1,2892
JDDH S 5025 0924	1551	803	10,0094	1,2892
JDDH S 5025 0925	1616	836	10,4264	1,2892
JDDH S 5025 0926	1681	870	10,8435	1,2892
JDDH S 5025 0927	1745	903	11,2605	1,2892
JDDH S 5025 0928	1810	937	11,6776	1,2892

Model SKU	Standard rated thermal output Φ_{50} (W)	Standard low temperature thermal output Φ_{30} (W)	Thermal output in different operating conditions, as $\Phi = K_M \times \Delta T^n$	
			K_M	n
JDDH S 5025 1206	507	262	3,2257	1,2929
JDDH S 5025 1207	592	306	3,7633	1,2929
JDDH S 5025 1208	676	349	4,3009	1,2929
JDDH S 5025 1209	761	393	4,8385	1,2929
JDDH S 5025 1210	845	437	5,3761	1,2929
JDDH S 5025 1211	930	480	5,9137	1,2929
JDDH S 5025 1212	1014	524	6,4513	1,2929
JDDH S 5025 1213	1099	568	6,9889	1,2929
JDDH S 5025 1214	1184	611	7,5265	1,2929
JDDH S 5025 1215	1268	655	8,0641	1,2929
JDDH S 5025 1216	1353	699	8,6017	1,2929
JDDH S 5025 1217	1437	742	9,1393	1,2929
JDDH S 5025 1218	1522	786	9,6770	1,2929
JDDH S 5025 1219	1606	830	10,2146	1,2929
JDDH S 5025 1220	1691	874	10,7522	1,2929
JDDH S 5025 1504	418	215	2,6185	1,2966
JDDH S 5025 1505	522	269	3,2732	1,2966
JDDH S 5025 1506	627	323	3,9278	1,2966
JDDH S 5025 1507	731	377	4,5824	1,2966
JDDH S 5025 1508	836	431	5,2371	1,2966
JDDH S 5025 1509	940	485	5,8917	1,2966
JDDH S 5025 1510	1044	539	6,5463	1,2966
JDDH S 5025 1511	1149	592	7,2010	1,2966
JDDH S 5025 1512	1253	646	7,8556	1,2966
JDDH S 5025 1513	1358	700	8,5103	1,2966
JDDH S 5025 1514	1462	754	9,1649	1,2966
JDDH S 5025 1515	1567	808	9,8195	1,2966

Model SKU	Standard rated thermal output	Standard low temperature thermal output	Thermal output in different operating conditions, as $\Phi = K_M \times \Delta T^n$	
	Φ_{50} (W)	Φ_{30} (W)	K_M	n
JDDH S 5025 1604	444	229	2,7720	1,2978
JDDH S 5025 1605	555	286	3,4650	1,2978
JDDH S 5025 1606	667	343	4,1580	1,2978
JDDH S 5025 1607	778	401	4,8510	1,2978
JDDH S 5025 1608	889	458	5,5441	1,2978
JDDH S 5025 1609	1000	515	6,2371	1,2978
JDDH S 5025 1610	1111	572	6,9301	1,2978
JDDH S 5025 1611	1222	630	7,6231	1,2978
JDDH S 5025 1612	1333	687	8,3161	1,2978
JDDH S 5025 1613	1444	744	9,0091	1,2978
JDDH S 5025 1614	1555	801	9,7021	1,2978
JDDH S 5025 1615	1666	859	10,3951	1,2978
JDDH S 5025 1804	498	256	3,0757	1,3002
JDDH S 5025 1805	622	320	3,8446	1,3002
JDDH S 5025 1806	747	384	4,6136	1,3002
JDDH S 5025 1807	871	448	5,3825	1,3002
JDDH S 5025 1808	995	512	6,1514	1,3002
JDDH S 5025 1809	1120	576	6,9203	1,3002
JDDH S 5025 1810	1244	640	7,6893	1,3002
JDDH S 5025 1811	1369	704	8,4582	1,3002
JDDH S 5025 1812	1493	768	9,2271	1,3002
JDDH S 5025 1813	1617	832	9,9960	1,3002
JDDH S 5025 1814	1742	897	10,7650	1,3002
JDDH S 5025 1815	1866	961	11,5339	1,3002

Model SKU	Standard rated thermal output	Standard low temperature thermal output	Thermal output in different operating conditions, as $\Phi = K_M \times \Delta T^n$	
	Φ_{50} (W)	Φ_{30} (W)	K_M	n
JDDH S 5025 2004	552	284	3,3754	1,3027
JDDH S 5025 2005	689	354	4,2193	1,3027
JDDH S 5025 2006	827	425	5,0632	1,3027
JDDH S 5025 2007	965	496	5,9070	1,3027
JDDH S 5025 2008	1103	567	6,7509	1,3027
JDDH S 5025 2009	1241	638	7,5947	1,3027
JDDH S 5025 2010	1379	709	8,4386	1,3027
JDDH S 5025 2011	1517	780	9,2825	1,3027
JDDH S 5025 2012	1655	851	10,1263	1,3027
JDDH S 5025 2013	1793	921	10,9702	1,3027
JDDH S 5025 2014	1930	992	11,8140	1,3027
JDDH S 5025 2015	2068	1063	12,6579	1,3027

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end of Annex No2, end of the Assessment of Performance Report