

DEKLARACJA WŁAŚCIWOŚCI UŻYTKOWYCH
(DECLARATION OF PERFORMANCE)

Nr (No.) **NDWU/1/MAB/2022**

| 1. Niepowtarzalny kod identyfikacyjny typu wyrobu (Unique identification code of the product-type): MAB | | |
|--|---|--|
| 2. Zamierzone zastosowanie lub zastosowania: W instalacjach grzewczych w budynkach (Intended use/es: In heating systems in buildings) | | |
| 3. Producent (Manufacturer): INSTAL PROJEKT sp. z o. o., ul. Jana Pawła II 12 A, Nowa Wieś k/Włocławka, 87-853 Kruszyn, Polska (INSTAL PROJEKT sp. z o. o., Jana Pawła II 12 A str., Nowa Wieś near Włocławka, 87-853 Kruszyn, Poland.) | | |
| 4. System(-y) oceny i weryfikacji stałości właściwości użytkowych (System/s of AVCP): System 3 | | |
| 5. Norma zharmonizowana (Harmonised standard): EN 442-1:2014 | | |
| 6. Jednostka lub jednostki notyfikowane (Notified body/ies): Universität Stuttgart Institut für Gebäudeenergetik, Thermotechnik und Energiespeicherung (IGTE). Numer jednostki notyfikowanej (Notification no.): 0626. | | |
| 7. Deklarowane właściwości użytkowe (Declared performance/s): | | |
| Zasadnicze charakterystyki | Właściwości użytkowe | Zharmonizowana specyfikacja techniczna |
| Essential characteristics | Performance | Harmonised technical specification |
| Reakcja na ogień (Reaction to fire) | A1 | EN 442-1:2014 |
| Uwalnianie substancji niebezpiecznych (Release of dangerous substances) | Nie ma (None) | |
| Szczelność pod działaniem ciśnienia (Pressure tightness) | Brak przecieku przy ciśnieniu 1,3 krotnie większym od maksymalnego ciśnienia [kPa] (No leakage at 1,3 x maximum operating pressure [kPa]) | |
| Temperatura powierzchni (Surface temperature) | Maksymalnie 95 °C (Maximum 95 °C) | |
| Odporność na działanie ciśnienia (Resistance to pressure) | Brak pęknięć przy ciśnieniu 1,69 krotnie większym od maksymalnego dopuszczalnego ciśnienia roboczego [kPa]. (No breakage at 1,69 x maximum operating pressure [kPa]) | |
| | Maksymalne dopuszczalne ciśnienie robocze: 400 [kPa] (Maximum operating pressure) | |
| Nominalna moc cieplna (Φ 50 , Φ 30) (Rated thermal output) (Φ 50 , Φ 30) | Patrz Tabela nr.1 (See Table No.1) | |
| Moc cieplna w różnych warunkach eksploatacyjnych (charakterystyka) (Thermal output in different operating conditions (characteristic curve)) | Patrz Tabela nr.1 (See Table No.1) | |
| Odporność na korozję (Resistance against corrosion) | Brak korozji po 100 h w wilgoci (No corrosion after 100 h humidity) | |
| Odporność na słabe uderzenia (Resistance against minor impact) | Klasa 0 (Class 0) | |
| 8. Właściwości użytkowe określonego powyżej wyrobu są zgodne z zestawem deklarowanych właściwości użytkowych. Niniejsza deklaracja właściwości użytkowych wydana zostaje zgodnie z rozporządzeniem (UE) nr 305/2011 na wyłączną odpowiedzialność producenta określonego powyżej. (The performance of the product identified above is in conformity with the set of declared performance/s. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.) | | |

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Tabela nr 1

(Table no. 1)

| Model grzejnika | Normalna moc cieplna [W] (75/65/20°C) ϕ 50 | Moc cieplna [W] (55/45/20°C) ϕ 30 | Wykładnik n | ΔT | K_M | Moc cieplna w różnych warunkach eksploatacji | | | |
|-----------------|--|--|------------------|------------|----------|---|----------|--------------|--------|
| Radiator model | Rated thermal output (75/65/20°C) ϕ 50 | Rated thermal output (55/45/20°C) ϕ 30 | Index exponent n | ΔT | K_M | Thermal output in different operating conditions (characteristic curve) | | | |
| MAB-040/9 | 232 | 120 | 1,2813 | 50 | 1,54269 | $\phi =$ | 1,54269 | x ΔT | 1,2813 |
| MAB-040/13 | 335 | 174 | 1,2813 | 50 | 2,22690 | $\phi =$ | 2,22690 | x ΔT | 1,2813 |
| MAB-040/18 | 437 | 228 | 1,2775 | 50 | 2,95470 | $\phi =$ | 2,95470 | x ΔT | 1,2775 |
| MAB-040/23 | 535 | 279 | 1,2737 | 50 | 3,67056 | $\phi =$ | 3,67056 | x ΔT | 1,2737 |
| MAB-040/28 | 631 | 330 | 1,2699 | 50 | 4,38695 | $\phi =$ | 4,38695 | x ΔT | 1,2699 |
| MAB-040/37 | 792 | 416 | 1,2631 | 50 | 5,66272 | $\phi =$ | 5,66272 | x ΔT | 1,2631 |
| MAB-040/45 | 964 | 506 | 1,2631 | 50 | 6,88952 | $\phi =$ | 6,88952 | x ΔT | 1,2631 |
| MAB-040/54 | 1157 | 607 | 1,2631 | 50 | 8,26881 | $\phi =$ | 8,26881 | x ΔT | 1,2631 |
| MAB-040/63 | 1350 | 708 | 1,2631 | 50 | 9,64810 | $\phi =$ | 9,64810 | x ΔT | 1,2631 |
| MAB-040/72 | 1542 | 809 | 1,2631 | 50 | 11,02046 | $\phi =$ | 11,02046 | x ΔT | 1,2631 |
| MAB-060/9 | 307 | 159 | 1,2869 | 50 | 2,00183 | $\phi =$ | 2,00183 | x ΔT | 1,2869 |
| MAB-060/13 | 444 | 230 | 1,2869 | 50 | 2,89223 | $\phi =$ | 2,89223 | x ΔT | 1,2869 |
| MAB-060/18 | 581 | 302 | 1,2839 | 50 | 3,82729 | $\phi =$ | 3,82729 | x ΔT | 1,2839 |
| MAB-060/23 | 711 | 370 | 1,2809 | 50 | 4,73876 | $\phi =$ | 4,73876 | x ΔT | 1,2809 |
| MAB-060/28 | 836 | 435 | 1,2779 | 50 | 5,63852 | $\phi =$ | 5,63852 | x ΔT | 1,2779 |
| MAB-060/37 | 1051 | 549 | 1,2726 | 50 | 7,23922 | $\phi =$ | 7,23922 | x ΔT | 1,2726 |
| MAB-060/45 | 1278 | 667 | 1,2726 | 50 | 8,80193 | $\phi =$ | 8,80193 | x ΔT | 1,2726 |
| MAB-060/54 | 1535 | 801 | 1,2726 | 50 | 10,56499 | $\phi =$ | 10,56499 | x ΔT | 1,2726 |
| MAB-060/63 | 1790 | 934 | 1,2726 | 50 | 12,32137 | $\phi =$ | 12,32137 | x ΔT | 1,2726 |
| MAB-060/72 | 2046 | 1068 | 1,2726 | 50 | 14,08442 | $\phi =$ | 14,08442 | x ΔT | 1,2726 |
| MAB-070/9 | 359 | 186 | 1,2909 | 50 | 2,30024 | $\phi =$ | 2,30024 | x ΔT | 1,2909 |
| MAB-070/13 | 519 | 268 | 1,2909 | 50 | 3,32602 | $\phi =$ | 3,32602 | x ΔT | 1,2909 |
| MAB-070/18 | 678 | 351 | 1,2885 | 50 | 4,38658 | $\phi =$ | 4,38658 | x ΔT | 1,2885 |
| MAB-070/23 | 830 | 430 | 1,2861 | 50 | 5,42251 | $\phi =$ | 5,42251 | x ΔT | 1,2861 |
| MAB-070/28 | 977 | 507 | 1,2837 | 50 | 6,43922 | $\phi =$ | 6,43922 | x ΔT | 1,2837 |
| MAB-070/37 | 1229 | 639 | 1,2793 | 50 | 8,24244 | $\phi =$ | 8,24244 | x ΔT | 1,2793 |
| MAB-070/45 | 1494 | 777 | 1,2793 | 50 | 10,01844 | $\phi =$ | 10,01844 | x ΔT | 1,2793 |
| MAB-070/54 | 1793 | 933 | 1,2793 | 50 | 12,02213 | $\phi =$ | 12,02213 | x ΔT | 1,2793 |
| MAB-070/63 | 2091 | 1088 | 1,2793 | 50 | 14,02582 | $\phi =$ | 14,02582 | x ΔT | 1,2793 |
| MAB-070/72 | 2391 | 1244 | 1,2793 | 50 | 16,03601 | $\phi =$ | 16,03601 | x ΔT | 1,2793 |
| MAB-090/9 | 439 | 226 | 1,2973 | 50 | 2,74660 | $\phi =$ | 2,74660 | x ΔT | 1,2973 |
| MAB-090/13 | 635 | 327 | 1,2973 | 50 | 3,97136 | $\phi =$ | 3,97136 | x ΔT | 1,2973 |
| MAB-090/18 | 830 | 428 | 1,2958 | 50 | 5,22060 | $\phi =$ | 5,22060 | x ΔT | 1,2958 |
| MAB-090/23 | 1017 | 525 | 1,2943 | 50 | 6,42919 | $\phi =$ | 6,42919 | x ΔT | 1,2943 |
| MAB-090/28 | 1196 | 618 | 1,2928 | 50 | 7,60863 | $\phi =$ | 7,60863 | x ΔT | 1,2928 |
| MAB-090/37 | 1504 | 778 | 1,2901 | 50 | 9,67258 | $\phi =$ | 9,67258 | x ΔT | 1,2901 |
| MAB-090/45 | 1829 | 946 | 1,2901 | 50 | 11,76176 | $\phi =$ | 11,76176 | x ΔT | 1,2901 |
| MAB-090/54 | 2195 | 1136 | 1,2901 | 50 | 14,11286 | $\phi =$ | 14,11286 | x ΔT | 1,2901 |
| MAB-090/63 | 2561 | 1325 | 1,2901 | 50 | 16,46397 | $\phi =$ | 16,46397 | x ΔT | 1,2901 |
| MAB-090/72 | 2927 | 1515 | 1,2901 | 50 | 18,82131 | $\phi =$ | 18,82131 | x ΔT | 1,2901 |
| MAB-100/9 | 479 | 246 | 1,3030 | 50 | 2,92914 | $\phi =$ | 2,92914 | x ΔT | 1,3030 |
| MAB-100/13 | 693 | 356 | 1,3030 | 50 | 4,23362 | $\phi =$ | 4,23362 | x ΔT | 1,3030 |
| MAB-100/18 | 905 | 468 | 1,2926 | 50 | 5,76189 | $\phi =$ | 5,76189 | x ΔT | 1,2926 |
| MAB-100/23 | 1108 | 575 | 1,2822 | 50 | 7,34545 | $\phi =$ | 7,34545 | x ΔT | 1,2822 |
| MAB-100/28 | 1349 | 701 | 1,2822 | 50 | 8,94704 | $\phi =$ | 8,94704 | x ΔT | 1,2822 |
| MAB-100/37 | 1783 | 926 | 1,2822 | 50 | 11,82219 | $\phi =$ | 11,82219 | x ΔT | 1,2822 |
| MAB-100/45 | 2168 | 1126 | 1,2822 | 50 | 14,37573 | $\phi =$ | 14,37573 | x ΔT | 1,2822 |
| MAB-100/54 | 2602 | 1351 | 1,2822 | 50 | 17,25088 | $\phi =$ | 17,25088 | x ΔT | 1,2822 |
| MAB-100/63 | 3035 | 1577 | 1,2822 | 50 | 20,12602 | $\phi =$ | 20,12602 | x ΔT | 1,2822 |
| MAB-100/72 | 3469 | 1802 | 1,2822 | 50 | 23,00117 | $\phi =$ | 23,00117 | x ΔT | 1,2822 |
| MAB-120/9 | 558 | 285 | 1,3144 | 50 | 3,26072 | $\phi =$ | 3,26072 | x ΔT | 1,3144 |
| MAB-120/13 | 806 | 412 | 1,3144 | 50 | 4,71245 | $\phi =$ | 4,71245 | x ΔT | 1,3144 |
| MAB-120/18 | 1053 | 545 | 1,2904 | 50 | 6,76473 | $\phi =$ | 6,76473 | x ΔT | 1,2904 |
| MAB-120/23 | 1289 | 675 | 1,2663 | 50 | 9,09685 | $\phi =$ | 9,09685 | x ΔT | 1,2663 |
| MAB-120/28 | 1569 | 822 | 1,2663 | 50 | 11,07502 | $\phi =$ | 11,07502 | x ΔT | 1,2663 |
| MAB-120/37 | 2075 | 1087 | 1,2663 | 50 | 14,64120 | $\phi =$ | 14,64120 | x ΔT | 1,2663 |
| MAB-120/45 | 2523 | 1321 | 1,2663 | 50 | 17,80354 | $\phi =$ | 17,80354 | x ΔT | 1,2663 |
| MAB-120/54 | 3027 | 1585 | 1,2663 | 50 | 21,36288 | $\phi =$ | 21,36288 | x ΔT | 1,2663 |
| MAB-120/63 | 3532 | 1850 | 1,2663 | 50 | 24,92222 | $\phi =$ | 24,92222 | x ΔT | 1,2663 |

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| MAB-120/72 | 4037 | 2114 | 1,2663 | 50 | 28,48840 | $\phi =$ | 28,48840 | x ΔT | 1,2663 |
| MAB-140/9 | 636 | 319 | 1,3542 | 50 | 3,18369 | $\phi =$ | 3,18369 | x ΔT | 1,3542 |
| MAB-140/13 | 919 | 460 | 1,3542 | 50 | 4,59596 | $\phi =$ | 4,59596 | x ΔT | 1,3542 |
| MAB-140/18 | 1201 | 612 | 1,3206 | 50 | 6,85224 | $\phi =$ | 6,85224 | x ΔT | 1,3206 |
| MAB-140/23 | 1470 | 761 | 1,2870 | 50 | 9,56335 | $\phi =$ | 9,56335 | x ΔT | 1,2870 |
| MAB-140/28 | 1790 | 927 | 1,2870 | 50 | 11,64645 | $\phi =$ | 11,64645 | x ΔT | 1,2870 |
| MAB-140/37 | 2365 | 1225 | 1,2870 | 50 | 15,38973 | $\phi =$ | 15,38973 | x ΔT | 1,2870 |
| MAB-140/45 | 2876 | 1490 | 1,2870 | 50 | 18,71639 | $\phi =$ | 18,71639 | x ΔT | 1,2870 |
| MAB-140/54 | 3451 | 1788 | 1,2870 | 50 | 22,45967 | $\phi =$ | 22,45967 | x ΔT | 1,2870 |
| MAB-140/63 | 4026 | 2086 | 1,2870 | 50 | 26,19663 | $\phi =$ | 26,19663 | x ΔT | 1,2870 |
| MAB-140/72 | 4601 | 2384 | 1,2870 | 50 | 29,93991 | $\phi =$ | 29,93991 | x ΔT | 1,2870 |
| MAB-160/9 | 714 | 350 | 1,3939 | 50 | 3,05813 | $\phi =$ | 3,05813 | x ΔT | 1,3939 |
| MAB-160/13 | 1031 | 506 | 1,3939 | 50 | 4,41683 | $\phi =$ | 4,41683 | x ΔT | 1,3939 |
| MAB-160/18 | 1348 | 676 | 1,3509 | 50 | 6,83357 | $\phi =$ | 6,83357 | x ΔT | 1,3509 |
| MAB-160/23 | 1650 | 846 | 1,3078 | 50 | 9,89836 | $\phi =$ | 9,89836 | x ΔT | 1,3078 |
| MAB-160/28 | 2009 | 1030 | 1,3078 | 50 | 12,05144 | $\phi =$ | 12,05144 | x ΔT | 1,3078 |
| MAB-160/37 | 2655 | 1361 | 1,3078 | 50 | 15,92698 | $\phi =$ | 15,92698 | x ΔT | 1,3078 |
| MAB-160/45 | 3228 | 1655 | 1,3078 | 50 | 19,36610 | $\phi =$ | 19,36610 | x ΔT | 1,3078 |
| MAB-160/54 | 3874 | 1986 | 1,3078 | 50 | 23,24164 | $\phi =$ | 23,24164 | x ΔT | 1,3078 |
| MAB-160/63 | 4519 | 2317 | 1,3078 | 50 | 27,11137 | $\phi =$ | 27,11137 | x ΔT | 1,3078 |
| MAB-160/72 | 5165 | 2648 | 1,3078 | 50 | 30,98692 | $\phi =$ | 30,98692 | x ΔT | 1,3078 |
| MAB-180/9 | 792 | 381 | 1,4337 | 50 | 2,90523 | $\phi =$ | 2,90523 | x ΔT | 1,4337 |
| MAB-180/13 | 1145 | 550 | 1,4337 | 50 | 4,19605 | $\phi =$ | 4,19605 | x ΔT | 1,4337 |
| MAB-180/18 | 1496 | 739 | 1,3811 | 50 | 6,73610 | $\phi =$ | 6,73610 | x ΔT | 1,3811 |
| MAB-180/23 | 1831 | 929 | 1,3285 | 50 | 10,13193 | $\phi =$ | 10,13193 | x ΔT | 1,3285 |
| MAB-180/28 | 2229 | 1131 | 1,3285 | 50 | 12,33219 | $\phi =$ | 12,33219 | x ΔT | 1,3285 |
| MAB-180/37 | 2946 | 1494 | 1,3285 | 50 | 16,29802 | $\phi =$ | 16,29802 | x ΔT | 1,3285 |
| MAB-180/45 | 3582 | 1817 | 1,3285 | 50 | 19,81844 | $\phi =$ | 19,81844 | x ΔT | 1,3285 |
| MAB-180/54 | 4299 | 2181 | 1,3285 | 50 | 23,78427 | $\phi =$ | 23,78427 | x ΔT | 1,3285 |
| MAB-180/63 | 5015 | 2544 | 1,3285 | 50 | 27,74474 | $\phi =$ | 27,74474 | x ΔT | 1,3285 |
| MAB-180/72 | 5732 | 2908 | 1,3285 | 50 | 31,71057 | $\phi =$ | 31,71057 | x ΔT | 1,3285 |

W imieniu producenta podpisał:

(Signed for and on behalf of the manufacturer by:)

Z-ca Prezesa ds. realizacji

Bartosz Ścierzyński

Nowa Wieś 21.02.2023

Bartosz Ścierzyński
Bartosz Ścierzyński
 Członek Zarządu

INSTAL PROJEKT sp. z o.o.
 (dawniej INSTAL-PROJEKT Gawłowski, Ścierzyński Sp. J.)
 ul. Jana Pawła II 12A
 Nowa Wieś k/Włocławka, 87-853 Kruszyn
 NIP 888-10-04-722, BDO 000008268
 tel. 54 235 59 05

(podpis)
 (signature)