

DEKLARACJA WŁAŚCIWOŚCI UŻYTKOWYCH
(DECLARATION OF PERFORMANCE)

Nr (No.) **NDWU/1/TUBUS 3 D50/2022**

1. Niepowtarzalny kod identyfikacyjny typu wyrobu (Unique identification code of the product-type): TUBUS 3		
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 (INSTAL PROJEKT sp. z o. o., 87-853 Kruszyn, Nowa Wieś near Włocławek, Jana Pawła II 12 A str. 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): INSTYTUT ENERGETYKI. Numer jednostki notyfikowanej (Notification no.): 1452.		
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: 1000 [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) $\phi 50$	Moc cieplna [W] (55/45/20°C) $\phi 30$	Wykładnik n	ΔT	K_M	Moc cieplna w różnych warunkach eksploatacji			
Radiator model	Rated thermal output (75/65/20°C) $\phi 50$	Rated thermal output (55/45/20°C) $\phi 30$	Index exponent n	ΔT	K_M	Thermal output in different operating conditions (characteristic curve)			
TUB3-020/02D50	44	23	1,2616	50	0,31769	$\phi =$	0,31769	x ΔT	1,2616
TUB3-020/03D50	66	35	1,2616	50	0,47653	$\phi =$	0,47653	x ΔT	1,2616
TUB3-020/04D50	88	46	1,2616	50	0,63538	$\phi =$	0,63538	x ΔT	1,2616
TUB3-020/05D50	111	58	1,2616	50	0,79422	$\phi =$	0,79422	x ΔT	1,2616
TUB3-020/06D50	133	70	1,2616	50	0,95307	$\phi =$	0,95307	x ΔT	1,2616
TUB3-020/07D50	155	81	1,2616	50	1,11191	$\phi =$	1,11191	x ΔT	1,2616
TUB3-020/08D50	177	93	1,2616	50	1,27075	$\phi =$	1,27075	x ΔT	1,2616
TUB3-020/09D50	199	104	1,2616	50	1,42960	$\phi =$	1,42960	x ΔT	1,2616
TUB3-020/10D50	221	116	1,2616	50	1,58844	$\phi =$	1,58844	x ΔT	1,2616
TUB3-020/11D50	243	128	1,2616	50	1,74729	$\phi =$	1,74729	x ΔT	1,2616
TUB3-020/12D50	265	139	1,2616	50	1,90613	$\phi =$	1,90613	x ΔT	1,2616
TUB3-020/13D50	287	151	1,2616	50	2,06498	$\phi =$	2,06498	x ΔT	1,2616
TUB3-020/14D50	309	162	1,2616	50	2,22382	$\phi =$	2,22382	x ΔT	1,2616
TUB3-020/15D50	332	174	1,2616	50	2,38266	$\phi =$	2,38266	x ΔT	1,2616
TUB3-020/16D50	354	186	1,2616	50	2,54151	$\phi =$	2,54151	x ΔT	1,2616
TUB3-020/17D50	376	197	1,2616	50	2,70035	$\phi =$	2,70035	x ΔT	1,2616
TUB3-020/18D50	398	209	1,2616	50	2,85920	$\phi =$	2,85920	x ΔT	1,2616
TUB3-020/19D50	420	220	1,2616	50	3,01804	$\phi =$	3,01804	x ΔT	1,2616
TUB3-020/20D50	442	232	1,2616	50	3,17689	$\phi =$	3,17689	x ΔT	1,2616
TUB3-020/21D50	464	244	1,2616	50	3,33573	$\phi =$	3,33573	x ΔT	1,2616
TUB3-020/22D50	486	255	1,2616	50	3,49458	$\phi =$	3,49458	x ΔT	1,2616
TUB3-020/23D50	508	267	1,2616	50	3,65342	$\phi =$	3,65342	x ΔT	1,2616
TUB3-020/24D50	530	278	1,2616	50	3,81226	$\phi =$	3,81226	x ΔT	1,2616
TUB3-020/25D50	553	290	1,2616	50	3,97111	$\phi =$	3,97111	x ΔT	1,2616
TUB3-020/26D50	575	302	1,2616	50	4,12995	$\phi =$	4,12995	x ΔT	1,2616
TUB3-020/27D50	597	313	1,2616	50	4,28880	$\phi =$	4,28880	x ΔT	1,2616
TUB3-020/28D50	619	325	1,2616	50	4,44764	$\phi =$	4,44764	x ΔT	1,2616
TUB3-020/29D50	641	336	1,2616	50	4,60649	$\phi =$	4,60649	x ΔT	1,2616
TUB3-020/30D50	663	348	1,2616	50	4,76533	$\phi =$	4,76533	x ΔT	1,2616
TUB3-020/31D50	685	360	1,2616	50	4,92417	$\phi =$	4,92417	x ΔT	1,2616
TUB3-020/32D50	707	371	1,2616	50	5,08302	$\phi =$	5,08302	x ΔT	1,2616
TUB3-020/33D50	729	383	1,2616	50	5,24186	$\phi =$	5,24186	x ΔT	1,2616
TUB3-020/34D50	751	394	1,2616	50	5,40071	$\phi =$	5,40071	x ΔT	1,2616
TUB3-020/35D50	774	406	1,2616	50	5,55955	$\phi =$	5,55955	x ΔT	1,2616
TUB3-020/36D50	796	418	1,2616	50	5,71840	$\phi =$	5,71840	x ΔT	1,2616
TUB3-020/37D50	818	429	1,2616	50	5,87724	$\phi =$	5,87724	x ΔT	1,2616
TUB3-020/38D50	840	441	1,2616	50	6,03608	$\phi =$	6,03608	x ΔT	1,2616
TUB3-020/39D50	862	452	1,2616	50	6,19493	$\phi =$	6,19493	x ΔT	1,2616
TUB3-020/40D50	884	464	1,2616	50	6,35377	$\phi =$	6,35377	x ΔT	1,2616
TUB3-020/41D50	906	476	1,2616	50	6,51262	$\phi =$	6,51262	x ΔT	1,2616
TUB3-020/42D50	928	487	1,2616	50	6,67146	$\phi =$	6,67146	x ΔT	1,2616
TUB3-020/43D50	950	499	1,2616	50	6,83031	$\phi =$	6,83031	x ΔT	1,2616
TUB3-020/44D50	972	510	1,2616	50	6,98915	$\phi =$	6,98915	x ΔT	1,2616
TUB3-020/45D50	995	522	1,2616	50	7,14799	$\phi =$	7,14799	x ΔT	1,2616
TUB3-030/02D50	65	34	1,2667	50	0,45514	$\phi =$	0,45514	x ΔT	1,2667
TUB3-030/03D50	97	51	1,2667	50	0,68271	$\phi =$	0,68271	x ΔT	1,2667
TUB3-030/04D50	129	68	1,2667	50	0,91028	$\phi =$	0,91028	x ΔT	1,2667
TUB3-030/05D50	162	85	1,2667	50	1,13786	$\phi =$	1,13786	x ΔT	1,2667
TUB3-030/06D50	194	101	1,2667	50	1,36543	$\phi =$	1,36543	x ΔT	1,2667
TUB3-030/07D50	226	118	1,2667	50	1,59300	$\phi =$	1,59300	x ΔT	1,2667
TUB3-030/08D50	258	135	1,2667	50	1,82057	$\phi =$	1,82057	x ΔT	1,2667
TUB3-030/09D50	291	152	1,2667	50	2,04814	$\phi =$	2,04814	x ΔT	1,2667
TUB3-030/10D50	323	169	1,2667	50	2,27571	$\phi =$	2,27571	x ΔT	1,2667
TUB3-030/11D50	355	186	1,2667	50	2,50328	$\phi =$	2,50328	x ΔT	1,2667
TUB3-030/12D50	388	203	1,2667	50	2,73085	$\phi =$	2,73085	x ΔT	1,2667
TUB3-030/13D50	420	220	1,2667	50	2,95843	$\phi =$	2,95843	x ΔT	1,2667
TUB3-030/14D50	452	237	1,2667	50	3,18600	$\phi =$	3,18600	x ΔT	1,2667
TUB3-030/15D50	485	254	1,2667	50	3,41357	$\phi =$	3,41357	x ΔT	1,2667
TUB3-030/16D50	517	271	1,2667	50	3,64114	$\phi =$	3,64114	x ΔT	1,2667

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TUB3-030/17D50	549	287	1,2667	50	3,86871	$\phi =$	3,86871	x ΔT	1,2667
TUB3-030/18D50	581	304	1,2667	50	4,09628	$\phi =$	4,09628	x ΔT	1,2667
TUB3-030/19D50	614	321	1,2667	50	4,32385	$\phi =$	4,32385	x ΔT	1,2667
TUB3-030/20D50	646	338	1,2667	50	4,55142	$\phi =$	4,55142	x ΔT	1,2667
TUB3-030/21D50	678	355	1,2667	50	4,77899	$\phi =$	4,77899	x ΔT	1,2667
TUB3-030/22D50	711	372	1,2667	50	5,00657	$\phi =$	5,00657	x ΔT	1,2667
TUB3-030/23D50	743	389	1,2667	50	5,23414	$\phi =$	5,23414	x ΔT	1,2667
TUB3-030/24D50	775	406	1,2667	50	5,46171	$\phi =$	5,46171	x ΔT	1,2667
TUB3-030/25D50	808	423	1,2667	50	5,68928	$\phi =$	5,68928	x ΔT	1,2667
TUB3-030/26D50	840	440	1,2667	50	5,91685	$\phi =$	5,91685	x ΔT	1,2667
TUB3-030/27D50	872	457	1,2667	50	6,14442	$\phi =$	6,14442	x ΔT	1,2667
TUB3-030/28D50	904	474	1,2667	50	6,37199	$\phi =$	6,37199	x ΔT	1,2667
TUB3-030/29D50	937	490	1,2667	50	6,59956	$\phi =$	6,59956	x ΔT	1,2667
TUB3-030/30D50	969	507	1,2667	50	6,82713	$\phi =$	6,82713	x ΔT	1,2667
TUB3-030/31D50	1001	524	1,2667	50	7,05471	$\phi =$	7,05471	x ΔT	1,2667
TUB3-030/32D50	1034	541	1,2667	50	7,28228	$\phi =$	7,28228	x ΔT	1,2667
TUB3-030/33D50	1066	558	1,2667	50	7,50985	$\phi =$	7,50985	x ΔT	1,2667
TUB3-030/34D50	1098	575	1,2667	50	7,73742	$\phi =$	7,73742	x ΔT	1,2667
TUB3-030/35D50	1131	592	1,2667	50	7,96499	$\phi =$	7,96499	x ΔT	1,2667
TUB3-030/36D50	1163	609	1,2667	50	8,19256	$\phi =$	8,19256	x ΔT	1,2667
TUB3-030/37D50	1195	626	1,2667	50	8,42013	$\phi =$	8,42013	x ΔT	1,2667
TUB3-030/38D50	1227	643	1,2667	50	8,64770	$\phi =$	8,64770	x ΔT	1,2667
TUB3-030/39D50	1260	660	1,2667	50	8,87528	$\phi =$	8,87528	x ΔT	1,2667
TUB3-030/40D50	1292	676	1,2667	50	9,10285	$\phi =$	9,10285	x ΔT	1,2667
TUB3-030/41D50	1324	693	1,2667	50	9,33042	$\phi =$	9,33042	x ΔT	1,2667
TUB3-030/42D50	1357	710	1,2667	50	9,55799	$\phi =$	9,55799	x ΔT	1,2667
TUB3-030/43D50	1389	727	1,2667	50	9,78556	$\phi =$	9,78556	x ΔT	1,2667
TUB3-030/44D50	1421	744	1,2667	50	10,01313	$\phi =$	10,01313	x ΔT	1,2667
TUB3-030/45D50	1454	761	1,2667	50	10,24070	$\phi =$	10,24070	x ΔT	1,2667
TUB3-040/02D50	85	44	1,2698	50	0,58887	$\phi =$	0,58887	x ΔT	1,2698
TUB3-040/03D50	127	66	1,2698	50	0,88330	$\phi =$	0,88330	x ΔT	1,2698
TUB3-040/04D50	169	88	1,2698	50	1,17774	$\phi =$	1,17774	x ΔT	1,2698
TUB3-040/05D50	212	111	1,2698	50	1,47217	$\phi =$	1,47217	x ΔT	1,2698
TUB3-040/06D50	254	133	1,2698	50	1,76661	$\phi =$	1,76661	x ΔT	1,2698
TUB3-040/07D50	296	155	1,2698	50	2,06104	$\phi =$	2,06104	x ΔT	1,2698
TUB3-040/08D50	338	177	1,2698	50	2,35547	$\phi =$	2,35547	x ΔT	1,2698
TUB3-040/09D50	381	199	1,2698	50	2,64991	$\phi =$	2,64991	x ΔT	1,2698
TUB3-040/10D50	423	221	1,2698	50	2,94434	$\phi =$	2,94434	x ΔT	1,2698
TUB3-040/11D50	465	243	1,2698	50	3,23878	$\phi =$	3,23878	x ΔT	1,2698
TUB3-040/12D50	508	265	1,2698	50	3,53321	$\phi =$	3,53321	x ΔT	1,2698
TUB3-040/13D50	550	287	1,2698	50	3,82764	$\phi =$	3,82764	x ΔT	1,2698
TUB3-040/14D50	592	310	1,2698	50	4,12208	$\phi =$	4,12208	x ΔT	1,2698
TUB3-040/15D50	635	332	1,2698	50	4,41651	$\phi =$	4,41651	x ΔT	1,2698
TUB3-040/16D50	677	354	1,2698	50	4,71095	$\phi =$	4,71095	x ΔT	1,2698
TUB3-040/17D50	719	376	1,2698	50	5,00538	$\phi =$	5,00538	x ΔT	1,2698
TUB3-040/18D50	761	398	1,2698	50	5,29982	$\phi =$	5,29982	x ΔT	1,2698
TUB3-040/19D50	804	420	1,2698	50	5,59425	$\phi =$	5,59425	x ΔT	1,2698
TUB3-040/20D50	846	442	1,2698	50	5,88868	$\phi =$	5,88868	x ΔT	1,2698
TUB3-040/21D50	888	464	1,2698	50	6,18312	$\phi =$	6,18312	x ΔT	1,2698
TUB3-040/22D50	931	486	1,2698	50	6,47755	$\phi =$	6,47755	x ΔT	1,2698
TUB3-040/23D50	973	509	1,2698	50	6,77199	$\phi =$	6,77199	x ΔT	1,2698
TUB3-040/24D50	1015	531	1,2698	50	7,06642	$\phi =$	7,06642	x ΔT	1,2698
TUB3-040/25D50	1058	553	1,2698	50	7,36086	$\phi =$	7,36086	x ΔT	1,2698
TUB3-040/26D50	1100	575	1,2698	50	7,65529	$\phi =$	7,65529	x ΔT	1,2698
TUB3-040/27D50	1142	597	1,2698	50	7,94972	$\phi =$	7,94972	x ΔT	1,2698
TUB3-040/28D50	1184	619	1,2698	50	8,24416	$\phi =$	8,24416	x ΔT	1,2698
TUB3-040/29D50	1227	641	1,2698	50	8,53859	$\phi =$	8,53859	x ΔT	1,2698
TUB3-040/30D50	1269	663	1,2698	50	8,83303	$\phi =$	8,83303	x ΔT	1,2698
TUB3-040/31D50	1311	685	1,2698	50	9,12746	$\phi =$	9,12746	x ΔT	1,2698
TUB3-040/32D50	1354	708	1,2698	50	9,42189	$\phi =$	9,42189	x ΔT	1,2698
TUB3-040/33D50	1396	730	1,2698	50	9,71633	$\phi =$	9,71633	x ΔT	1,2698
TUB3-040/34D50	1438	752	1,2698	50	10,01076	$\phi =$	10,01076	x ΔT	1,2698
TUB3-040/35D50	1481	774	1,2698	50	10,30520	$\phi =$	10,30520	x ΔT	1,2698
TUB3-040/36D50	1523	796	1,2698	50	10,59963	$\phi =$	10,59963	x ΔT	1,2698
TUB3-040/37D50	1565	818	1,2698	50	10,89407	$\phi =$	10,89407	x ΔT	1,2698

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TUB3-040/38D50	1607	840	1,2698	50	11,18850	$\phi =$	11,18850	x ΔT	1,2698
TUB3-040/39D50	1650	862	1,2698	50	11,48293	$\phi =$	11,48293	x ΔT	1,2698
TUB3-040/40D50	1692	884	1,2698	50	11,77737	$\phi =$	11,77737	x ΔT	1,2698
TUB3-040/41D50	1734	907	1,2698	50	12,07180	$\phi =$	12,07180	x ΔT	1,2698
TUB3-040/42D50	1777	929	1,2698	50	12,36624	$\phi =$	12,36624	x ΔT	1,2698
TUB3-040/43D50	1819	951	1,2698	50	12,66067	$\phi =$	12,66067	x ΔT	1,2698
TUB3-040/44D50	1861	973	1,2698	50	12,95510	$\phi =$	12,95510	x ΔT	1,2698
TUB3-040/45D50	1904	995	1,2698	50	13,24954	$\phi =$	13,24954	x ΔT	1,2698
TUB3-050/02D50	104	55	1,2722	50	0,71990	$\phi =$	0,71990	x ΔT	1,2722
TUB3-050/03D50	157	82	1,2722	50	1,07985	$\phi =$	1,07985	x ΔT	1,2722
TUB3-050/04D50	209	109	1,2722	50	1,43980	$\phi =$	1,43980	x ΔT	1,2722
TUB3-050/05D50	261	136	1,2722	50	1,79974	$\phi =$	1,79974	x ΔT	1,2722
TUB3-050/06D50	313	164	1,2722	50	2,15969	$\phi =$	2,15969	x ΔT	1,2722
TUB3-050/07D50	365	191	1,2722	50	2,51964	$\phi =$	2,51964	x ΔT	1,2722
TUB3-050/08D50	418	218	1,2722	50	2,87959	$\phi =$	2,87959	x ΔT	1,2722
TUB3-050/09D50	470	245	1,2722	50	3,23954	$\phi =$	3,23954	x ΔT	1,2722
TUB3-050/10D50	522	273	1,2722	50	3,59949	$\phi =$	3,59949	x ΔT	1,2722
TUB3-050/11D50	574	300	1,2722	50	3,95944	$\phi =$	3,95944	x ΔT	1,2722
TUB3-050/12D50	626	327	1,2722	50	4,31939	$\phi =$	4,31939	x ΔT	1,2722
TUB3-050/13D50	679	354	1,2722	50	4,67934	$\phi =$	4,67934	x ΔT	1,2722
TUB3-050/14D50	731	382	1,2722	50	5,03928	$\phi =$	5,03928	x ΔT	1,2722
TUB3-050/15D50	783	409	1,2722	50	5,39923	$\phi =$	5,39923	x ΔT	1,2722
TUB3-050/16D50	835	436	1,2722	50	5,75918	$\phi =$	5,75918	x ΔT	1,2722
TUB3-050/17D50	887	463	1,2722	50	6,11913	$\phi =$	6,11913	x ΔT	1,2722
TUB3-050/18D50	940	491	1,2722	50	6,47908	$\phi =$	6,47908	x ΔT	1,2722
TUB3-050/19D50	992	518	1,2722	50	6,83903	$\phi =$	6,83903	x ΔT	1,2722
TUB3-050/20D50	1044	545	1,2722	50	7,19898	$\phi =$	7,19898	x ΔT	1,2722
TUB3-050/21D50	1096	572	1,2722	50	7,55893	$\phi =$	7,55893	x ΔT	1,2722
TUB3-050/22D50	1148	600	1,2722	50	7,91888	$\phi =$	7,91888	x ΔT	1,2722
TUB3-050/23D50	1201	627	1,2722	50	8,27882	$\phi =$	8,27882	x ΔT	1,2722
TUB3-050/24D50	1253	654	1,2722	50	8,63877	$\phi =$	8,63877	x ΔT	1,2722
TUB3-050/25D50	1305	681	1,2722	50	8,99872	$\phi =$	8,99872	x ΔT	1,2722
TUB3-050/26D50	1357	709	1,2722	50	9,35867	$\phi =$	9,35867	x ΔT	1,2722
TUB3-050/27D50	1409	736	1,2722	50	9,71862	$\phi =$	9,71862	x ΔT	1,2722
TUB3-050/28D50	1462	763	1,2722	50	10,07857	$\phi =$	10,07857	x ΔT	1,2722
TUB3-050/29D50	1514	790	1,2722	50	10,43852	$\phi =$	10,43852	x ΔT	1,2722
TUB3-050/30D50	1566	818	1,2722	50	10,79847	$\phi =$	10,79847	x ΔT	1,2722
TUB3-050/31D50	1618	845	1,2722	50	11,15842	$\phi =$	11,15842	x ΔT	1,2722
TUB3-050/32D50	1670	872	1,2722	50	11,51837	$\phi =$	11,51837	x ΔT	1,2722
TUB3-050/33D50	1723	899	1,2722	50	11,87831	$\phi =$	11,87831	x ΔT	1,2722
TUB3-050/34D50	1775	927	1,2722	50	12,23826	$\phi =$	12,23826	x ΔT	1,2722
TUB3-050/35D50	1827	954	1,2722	50	12,59821	$\phi =$	12,59821	x ΔT	1,2722
TUB3-050/36D50	1879	981	1,2722	50	12,95816	$\phi =$	12,95816	x ΔT	1,2722
TUB3-050/37D50	1931	1008	1,2722	50	13,31811	$\phi =$	13,31811	x ΔT	1,2722
TUB3-050/38D50	1984	1036	1,2722	50	13,67806	$\phi =$	13,67806	x ΔT	1,2722
TUB3-050/39D50	2036	1063	1,2722	50	14,03801	$\phi =$	14,03801	x ΔT	1,2722
TUB3-050/40D50	2088	1090	1,2722	50	14,39796	$\phi =$	14,39796	x ΔT	1,2722
TUB3-050/41D50	2140	1117	1,2722	50	14,75791	$\phi =$	14,75791	x ΔT	1,2722
TUB3-050/42D50	2192	1145	1,2722	50	15,11785	$\phi =$	15,11785	x ΔT	1,2722
TUB3-050/43D50	2245	1172	1,2722	50	15,47780	$\phi =$	15,47780	x ΔT	1,2722
TUB3-050/44D50	2297	1199	1,2722	50	15,83775	$\phi =$	15,83775	x ΔT	1,2722
TUB3-050/45D50	2349	1226	1,2722	50	16,19770	$\phi =$	16,19770	x ΔT	1,2722
TUB3-070/02D50	143	75	1,2762	50	0,97347	$\phi =$	0,97347	x ΔT	1,2762
TUB3-070/03D50	215	112	1,2762	50	1,46021	$\phi =$	1,46021	x ΔT	1,2762
TUB3-070/04D50	287	149	1,2762	50	1,94694	$\phi =$	1,94694	x ΔT	1,2762
TUB3-070/05D50	359	187	1,2762	50	2,43368	$\phi =$	2,43368	x ΔT	1,2762
TUB3-070/06D50	430	224	1,2762	50	2,92042	$\phi =$	2,92042	x ΔT	1,2762
TUB3-070/07D50	502	262	1,2762	50	3,40715	$\phi =$	3,40715	x ΔT	1,2762
TUB3-070/08D50	574	299	1,2762	50	3,89389	$\phi =$	3,89389	x ΔT	1,2762
TUB3-070/09D50	645	336	1,2762	50	4,38063	$\phi =$	4,38063	x ΔT	1,2762
TUB3-070/10D50	717	374	1,2762	50	4,86736	$\phi =$	4,86736	x ΔT	1,2762
TUB3-070/11D50	789	411	1,2762	50	5,35410	$\phi =$	5,35410	x ΔT	1,2762
TUB3-070/12D50	860	448	1,2762	50	5,84083	$\phi =$	5,84083	x ΔT	1,2762
TUB3-070/13D50	932	486	1,2762	50	6,32757	$\phi =$	6,32757	x ΔT	1,2762
TUB3-070/14D50	1004	523	1,2762	50	6,81431	$\phi =$	6,81431	x ΔT	1,2762

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TUB3-070/15D50	1076	560	1,2762	50	7,30104	$\phi =$	7,30104	x ΔT	1,2762
TUB3-070/16D50	1147	598	1,2762	50	7,78778	$\phi =$	7,78778	x ΔT	1,2762
TUB3-070/17D50	1219	635	1,2762	50	8,27452	$\phi =$	8,27452	x ΔT	1,2762
TUB3-070/18D50	1291	672	1,2762	50	8,76125	$\phi =$	8,76125	x ΔT	1,2762
TUB3-070/19D50	1362	710	1,2762	50	9,24799	$\phi =$	9,24799	x ΔT	1,2762
TUB3-070/20D50	1434	747	1,2762	50	9,73472	$\phi =$	9,73472	x ΔT	1,2762
TUB3-070/21D50	1506	785	1,2762	50	10,22146	$\phi =$	10,22146	x ΔT	1,2762
TUB3-070/22D50	1577	822	1,2762	50	10,70820	$\phi =$	10,70820	x ΔT	1,2762
TUB3-070/23D50	1649	859	1,2762	50	11,19493	$\phi =$	11,19493	x ΔT	1,2762
TUB3-070/24D50	1721	897	1,2762	50	11,68167	$\phi =$	11,68167	x ΔT	1,2762
TUB3-070/25D50	1793	934	1,2762	50	12,16840	$\phi =$	12,16840	x ΔT	1,2762
TUB3-070/26D50	1864	971	1,2762	50	12,65514	$\phi =$	12,65514	x ΔT	1,2762
TUB3-070/27D50	1936	1009	1,2762	50	13,14188	$\phi =$	13,14188	x ΔT	1,2762
TUB3-070/28D50	2008	1046	1,2762	50	13,62861	$\phi =$	13,62861	x ΔT	1,2762
TUB3-070/29D50	2079	1083	1,2762	50	14,11535	$\phi =$	14,11535	x ΔT	1,2762
TUB3-070/30D50	2151	1121	1,2762	50	14,60209	$\phi =$	14,60209	x ΔT	1,2762
TUB3-070/31D50	2223	1158	1,2762	50	15,08882	$\phi =$	15,08882	x ΔT	1,2762
TUB3-070/32D50	2294	1195	1,2762	50	15,57556	$\phi =$	15,57556	x ΔT	1,2762
TUB3-070/33D50	2366	1233	1,2762	50	16,06229	$\phi =$	16,06229	x ΔT	1,2762
TUB3-070/34D50	2438	1270	1,2762	50	16,54903	$\phi =$	16,54903	x ΔT	1,2762
TUB3-070/35D50	2510	1308	1,2762	50	17,03577	$\phi =$	17,03577	x ΔT	1,2762
TUB3-070/36D50	2581	1345	1,2762	50	17,52250	$\phi =$	17,52250	x ΔT	1,2762
TUB3-070/37D50	2653	1382	1,2762	50	18,00924	$\phi =$	18,00924	x ΔT	1,2762
TUB3-070/38D50	2725	1420	1,2762	50	18,49598	$\phi =$	18,49598	x ΔT	1,2762
TUB3-070/39D50	2796	1457	1,2762	50	18,98271	$\phi =$	18,98271	x ΔT	1,2762
TUB3-070/40D50	2868	1494	1,2762	50	19,46945	$\phi =$	19,46945	x ΔT	1,2762
TUB3-070/41D50	2940	1532	1,2762	50	19,95618	$\phi =$	19,95618	x ΔT	1,2762
TUB3-070/42D50	3011	1569	1,2762	50	20,44292	$\phi =$	20,44292	x ΔT	1,2762
TUB3-080/02D50	163	85	1,2779	50	1,09784	$\phi =$	1,09784	x ΔT	1,2779
TUB3-080/03D50	244	127	1,2779	50	1,64677	$\phi =$	1,64677	x ΔT	1,2779
TUB3-080/04D50	326	170	1,2779	50	2,19569	$\phi =$	2,19569	x ΔT	1,2779
TUB3-080/05D50	407	212	1,2779	50	2,74461	$\phi =$	2,74461	x ΔT	1,2779
TUB3-080/06D50	488	254	1,2779	50	3,29353	$\phi =$	3,29353	x ΔT	1,2779
TUB3-080/07D50	570	297	1,2779	50	3,84245	$\phi =$	3,84245	x ΔT	1,2779
TUB3-080/08D50	651	339	1,2779	50	4,39138	$\phi =$	4,39138	x ΔT	1,2779
TUB3-080/09D50	733	381	1,2779	50	4,94030	$\phi =$	4,94030	x ΔT	1,2779
TUB3-080/10D50	814	424	1,2779	50	5,48922	$\phi =$	5,48922	x ΔT	1,2779
TUB3-080/11D50	895	466	1,2779	50	6,03814	$\phi =$	6,03814	x ΔT	1,2779
TUB3-080/12D50	977	509	1,2779	50	6,58706	$\phi =$	6,58706	x ΔT	1,2779
TUB3-080/13D50	1058	551	1,2779	50	7,13599	$\phi =$	7,13599	x ΔT	1,2779
TUB3-080/14D50	1140	593	1,2779	50	7,68491	$\phi =$	7,68491	x ΔT	1,2779
TUB3-080/15D50	1221	636	1,2779	50	8,23383	$\phi =$	8,23383	x ΔT	1,2779
TUB3-080/16D50	1302	678	1,2779	50	8,78275	$\phi =$	8,78275	x ΔT	1,2779
TUB3-080/17D50	1384	720	1,2779	50	9,33167	$\phi =$	9,33167	x ΔT	1,2779
TUB3-080/18D50	1465	763	1,2779	50	9,88060	$\phi =$	9,88060	x ΔT	1,2779
TUB3-080/19D50	1547	805	1,2779	50	10,42952	$\phi =$	10,42952	x ΔT	1,2779
TUB3-080/20D50	1628	848	1,2779	50	10,97844	$\phi =$	10,97844	x ΔT	1,2779
TUB3-080/21D50	1709	890	1,2779	50	11,52736	$\phi =$	11,52736	x ΔT	1,2779
TUB3-080/22D50	1791	932	1,2779	50	12,07628	$\phi =$	12,07628	x ΔT	1,2779
TUB3-080/23D50	1872	975	1,2779	50	12,62521	$\phi =$	12,62521	x ΔT	1,2779
TUB3-080/24D50	1954	1017	1,2779	50	13,17413	$\phi =$	13,17413	x ΔT	1,2779
TUB3-080/25D50	2035	1059	1,2779	50	13,72305	$\phi =$	13,72305	x ΔT	1,2779
TUB3-080/26D50	2116	1102	1,2779	50	14,27197	$\phi =$	14,27197	x ΔT	1,2779
TUB3-080/27D50	2198	1144	1,2779	50	14,82089	$\phi =$	14,82089	x ΔT	1,2779
TUB3-080/28D50	2279	1187	1,2779	50	15,36982	$\phi =$	15,36982	x ΔT	1,2779
TUB3-080/29D50	2361	1229	1,2779	50	15,91874	$\phi =$	15,91874	x ΔT	1,2779
TUB3-080/30D50	2442	1271	1,2779	50	16,46766	$\phi =$	16,46766	x ΔT	1,2779
TUB3-080/31D50	2523	1314	1,2779	50	17,01658	$\phi =$	17,01658	x ΔT	1,2779
TUB3-080/32D50	2605	1356	1,2779	50	17,56550	$\phi =$	17,56550	x ΔT	1,2779
TUB3-080/33D50	2686	1398	1,2779	50	18,11443	$\phi =$	18,11443	x ΔT	1,2779
TUB3-080/34D50	2768	1441	1,2779	50	18,66335	$\phi =$	18,66335	x ΔT	1,2779
TUB3-080/35D50	2849	1483	1,2779	50	19,21227	$\phi =$	19,21227	x ΔT	1,2779
TUB3-080/36D50	2930	1526	1,2779	50	19,76119	$\phi =$	19,76119	x ΔT	1,2779
TUB3-080/37D50	3012	1568	1,2779	50	20,31011	$\phi =$	20,31011	x ΔT	1,2779
TUB3-090/02D50	182	95	1,2795	50	1,21966	$\phi =$	1,21966	x ΔT	1,2795

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TUB3-090/03D50	273	142	1,2795	50	1,82949	$\phi =$	1,82949	$\times \Delta T$	1,2795
TUB3-090/04D50	364	189	1,2795	50	2,43932	$\phi =$	2,43932	$\times \Delta T$	1,2795
TUB3-090/05D50	455	237	1,2795	50	3,04915	$\phi =$	3,04915	$\times \Delta T$	1,2795
TUB3-090/06D50	546	284	1,2795	50	3,65898	$\phi =$	3,65898	$\times \Delta T$	1,2795
TUB3-090/07D50	637	331	1,2795	50	4,26881	$\phi =$	4,26881	$\times \Delta T$	1,2795
TUB3-090/08D50	728	379	1,2795	50	4,87865	$\phi =$	4,87865	$\times \Delta T$	1,2795
TUB3-090/09D50	819	426	1,2795	50	5,48848	$\phi =$	5,48848	$\times \Delta T$	1,2795
TUB3-090/10D50	910	473	1,2795	50	6,09831	$\phi =$	6,09831	$\times \Delta T$	1,2795
TUB3-090/11D50	1001	521	1,2795	50	6,70814	$\phi =$	6,70814	$\times \Delta T$	1,2795
TUB3-090/12D50	1092	568	1,2795	50	7,31797	$\phi =$	7,31797	$\times \Delta T$	1,2795
TUB3-090/13D50	1183	615	1,2795	50	7,92780	$\phi =$	7,92780	$\times \Delta T$	1,2795
TUB3-090/14D50	1274	663	1,2795	50	8,53763	$\phi =$	8,53763	$\times \Delta T$	1,2795
TUB3-090/15D50	1365	710	1,2795	50	9,14746	$\phi =$	9,14746	$\times \Delta T$	1,2795
TUB3-090/16D50	1456	757	1,2795	50	9,75729	$\phi =$	9,75729	$\times \Delta T$	1,2795
TUB3-090/17D50	1547	805	1,2795	50	10,36712	$\phi =$	10,36712	$\times \Delta T$	1,2795
TUB3-090/18D50	1638	852	1,2795	50	10,97695	$\phi =$	10,97695	$\times \Delta T$	1,2795
TUB3-090/19D50	1729	899	1,2795	50	11,58678	$\phi =$	11,58678	$\times \Delta T$	1,2795
TUB3-090/20D50	1820	947	1,2795	50	12,19661	$\phi =$	12,19661	$\times \Delta T$	1,2795
TUB3-090/21D50	1911	994	1,2795	50	12,80644	$\phi =$	12,80644	$\times \Delta T$	1,2795
TUB3-090/22D50	2002	1041	1,2795	50	13,41628	$\phi =$	13,41628	$\times \Delta T$	1,2795
TUB3-090/23D50	2093	1089	1,2795	50	14,02611	$\phi =$	14,02611	$\times \Delta T$	1,2795
TUB3-090/24D50	2184	1136	1,2795	50	14,63594	$\phi =$	14,63594	$\times \Delta T$	1,2795
TUB3-090/25D50	2275	1183	1,2795	50	15,24577	$\phi =$	15,24577	$\times \Delta T$	1,2795
TUB3-090/26D50	2366	1231	1,2795	50	15,85560	$\phi =$	15,85560	$\times \Delta T$	1,2795
TUB3-090/27D50	2457	1278	1,2795	50	16,46543	$\phi =$	16,46543	$\times \Delta T$	1,2795
TUB3-090/28D50	2548	1325	1,2795	50	17,07526	$\phi =$	17,07526	$\times \Delta T$	1,2795
TUB3-090/29D50	2639	1373	1,2795	50	17,68509	$\phi =$	17,68509	$\times \Delta T$	1,2795
TUB3-090/30D50	2730	1420	1,2795	50	18,29492	$\phi =$	18,29492	$\times \Delta T$	1,2795
TUB3-090/31D50	2821	1467	1,2795	50	18,90475	$\phi =$	18,90475	$\times \Delta T$	1,2795
TUB3-090/32D50	2912	1515	1,2795	50	19,51458	$\phi =$	19,51458	$\times \Delta T$	1,2795
TUB3-090/33D50	3003	1562	1,2795	50	20,12441	$\phi =$	20,12441	$\times \Delta T$	1,2795
TUB3-090/34D50	3094	1609	1,2795	50	20,73424	$\phi =$	20,73424	$\times \Delta T$	1,2795
TUB3-100/02D50	201	105	1,2811	50	1,34125	$\phi =$	1,34125	$\times \Delta T$	1,2811
TUB3-100/03D50	302	157	1,2811	50	2,01187	$\phi =$	2,01187	$\times \Delta T$	1,2811
TUB3-100/04D50	403	209	1,2811	50	2,68250	$\phi =$	2,68250	$\times \Delta T$	1,2811
TUB3-100/05D50	504	262	1,2811	50	3,35312	$\phi =$	3,35312	$\times \Delta T$	1,2811
TUB3-100/06D50	604	314	1,2811	50	4,02374	$\phi =$	4,02374	$\times \Delta T$	1,2811
TUB3-100/07D50	705	366	1,2811	50	4,69437	$\phi =$	4,69437	$\times \Delta T$	1,2811
TUB3-100/08D50	806	419	1,2811	50	5,36499	$\phi =$	5,36499	$\times \Delta T$	1,2811
TUB3-100/09D50	906	471	1,2811	50	6,03561	$\phi =$	6,03561	$\times \Delta T$	1,2811
TUB3-100/10D50	1007	523	1,2811	50	6,70624	$\phi =$	6,70624	$\times \Delta T$	1,2811
TUB3-100/11D50	1108	576	1,2811	50	7,37686	$\phi =$	7,37686	$\times \Delta T$	1,2811
TUB3-100/12D50	1208	628	1,2811	50	8,04749	$\phi =$	8,04749	$\times \Delta T$	1,2811
TUB3-100/13D50	1309	680	1,2811	50	8,71811	$\phi =$	8,71811	$\times \Delta T$	1,2811
TUB3-100/14D50	1410	733	1,2811	50	9,38873	$\phi =$	9,38873	$\times \Delta T$	1,2811
TUB3-100/15D50	1511	785	1,2811	50	10,05936	$\phi =$	10,05936	$\times \Delta T$	1,2811
TUB3-100/16D50	1611	837	1,2811	50	10,72998	$\phi =$	10,72998	$\times \Delta T$	1,2811
TUB3-100/17D50	1712	890	1,2811	50	11,40061	$\phi =$	11,40061	$\times \Delta T$	1,2811
TUB3-100/18D50	1813	942	1,2811	50	12,07123	$\phi =$	12,07123	$\times \Delta T$	1,2811
TUB3-100/19D50	1913	994	1,2811	50	12,74185	$\phi =$	12,74185	$\times \Delta T$	1,2811
TUB3-100/20D50	2014	1047	1,2811	50	13,41248	$\phi =$	13,41248	$\times \Delta T$	1,2811
TUB3-100/21D50	2115	1099	1,2811	50	14,08310	$\phi =$	14,08310	$\times \Delta T$	1,2811
TUB3-100/22D50	2215	1151	1,2811	50	14,75372	$\phi =$	14,75372	$\times \Delta T$	1,2811
TUB3-100/23D50	2316	1204	1,2811	50	15,42435	$\phi =$	15,42435	$\times \Delta T$	1,2811
TUB3-100/24D50	2417	1256	1,2811	50	16,09497	$\phi =$	16,09497	$\times \Delta T$	1,2811
TUB3-100/25D50	2518	1308	1,2811	50	16,76560	$\phi =$	16,76560	$\times \Delta T$	1,2811
TUB3-100/26D50	2618	1361	1,2811	50	17,43622	$\phi =$	17,43622	$\times \Delta T$	1,2811
TUB3-100/27D50	2719	1413	1,2811	50	18,10684	$\phi =$	18,10684	$\times \Delta T$	1,2811
TUB3-100/28D50	2820	1465	1,2811	50	18,77747	$\phi =$	18,77747	$\times \Delta T$	1,2811
TUB3-100/29D50	2920	1518	1,2811	50	19,44809	$\phi =$	19,44809	$\times \Delta T$	1,2811
TUB3-100/30D50	3021	1570	1,2811	50	20,11872	$\phi =$	20,11872	$\times \Delta T$	1,2811
TUB3-100/31D50	3122	1622	1,2811	50	20,78934	$\phi =$	20,78934	$\times \Delta T$	1,2811
TUB3-120/02D50	240	124	1,2828	50	1,58507	$\phi =$	1,58507	$\times \Delta T$	1,2828
TUB3-120/03D50	359	187	1,2828	50	2,37760	$\phi =$	2,37760	$\times \Delta T$	1,2828
TUB3-120/04D50	479	249	1,2828	50	3,17014	$\phi =$	3,17014	$\times \Delta T$	1,2828

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TUB3-120/05D50	599	311	1,2828	50	3,96267	$\phi =$	3,96267	x ΔT	1,2828
TUB3-120/06D50	719	373	1,2828	50	4,75521	$\phi =$	4,75521	x ΔT	1,2828
TUB3-120/07D50	839	435	1,2828	50	5,54774	$\phi =$	5,54774	x ΔT	1,2828
TUB3-120/08D50	958	498	1,2828	50	6,34027	$\phi =$	6,34027	x ΔT	1,2828
TUB3-120/09D50	1078	560	1,2828	50	7,13281	$\phi =$	7,13281	x ΔT	1,2828
TUB3-120/10D50	1198	622	1,2828	50	7,92534	$\phi =$	7,92534	x ΔT	1,2828
TUB3-120/11D50	1318	684	1,2828	50	8,71788	$\phi =$	8,71788	x ΔT	1,2828
TUB3-120/12D50	1438	747	1,2828	50	9,51041	$\phi =$	9,51041	x ΔT	1,2828
TUB3-120/13D50	1557	809	1,2828	50	10,30295	$\phi =$	10,30295	x ΔT	1,2828
TUB3-120/14D50	1677	871	1,2828	50	11,09548	$\phi =$	11,09548	x ΔT	1,2828
TUB3-120/15D50	1797	933	1,2828	50	11,88802	$\phi =$	11,88802	x ΔT	1,2828
TUB3-120/16D50	1917	995	1,2828	50	12,68055	$\phi =$	12,68055	x ΔT	1,2828
TUB3-120/17D50	2037	1058	1,2828	50	13,47308	$\phi =$	13,47308	x ΔT	1,2828
TUB3-120/18D50	2156	1120	1,2828	50	14,26562	$\phi =$	14,26562	x ΔT	1,2828
TUB3-120/19D50	2276	1182	1,2828	50	15,05815	$\phi =$	15,05815	x ΔT	1,2828
TUB3-120/20D50	2396	1244	1,2828	50	15,85069	$\phi =$	15,85069	x ΔT	1,2828
TUB3-120/21D50	2516	1306	1,2828	50	16,64322	$\phi =$	16,64322	x ΔT	1,2828
TUB3-120/22D50	2636	1369	1,2828	50	17,43576	$\phi =$	17,43576	x ΔT	1,2828
TUB3-120/23D50	2755	1431	1,2828	50	18,22829	$\phi =$	18,22829	x ΔT	1,2828
TUB3-120/24D50	2875	1493	1,2828	50	19,02082	$\phi =$	19,02082	x ΔT	1,2828
TUB3-120/25D50	2995	1555	1,2828	50	19,81336	$\phi =$	19,81336	x ΔT	1,2828
TUB3-120/26D50	3115	1617	1,2828	50	20,60589	$\phi =$	20,60589	x ΔT	1,2828
TUB3-150/02D50	297	154	1,2854	50	1,94491	$\phi =$	1,94491	x ΔT	1,2854
TUB3-150/03D50	446	231	1,2854	50	2,91737	$\phi =$	2,91737	x ΔT	1,2854
TUB3-150/04D50	594	308	1,2854	50	3,88983	$\phi =$	3,88983	x ΔT	1,2854
TUB3-150/05D50	743	385	1,2854	50	4,86229	$\phi =$	4,86229	x ΔT	1,2854
TUB3-150/06D50	891	462	1,2854	50	5,83474	$\phi =$	5,83474	x ΔT	1,2854
TUB3-150/07D50	1040	539	1,2854	50	6,80720	$\phi =$	6,80720	x ΔT	1,2854
TUB3-150/08D50	1188	616	1,2854	50	7,77966	$\phi =$	7,77966	x ΔT	1,2854
TUB3-150/09D50	1337	693	1,2854	50	8,75211	$\phi =$	8,75211	x ΔT	1,2854
TUB3-150/10D50	1485	770	1,2854	50	9,72457	$\phi =$	9,72457	x ΔT	1,2854
TUB3-150/11D50	1634	847	1,2854	50	10,69703	$\phi =$	10,69703	x ΔT	1,2854
TUB3-150/12D50	1782	924	1,2854	50	11,66948	$\phi =$	11,66948	x ΔT	1,2854
TUB3-150/13D50	1931	1001	1,2854	50	12,64194	$\phi =$	12,64194	x ΔT	1,2854
TUB3-150/14D50	2079	1078	1,2854	50	13,61440	$\phi =$	13,61440	x ΔT	1,2854
TUB3-150/15D50	2228	1155	1,2854	50	14,58686	$\phi =$	14,58686	x ΔT	1,2854
TUB3-150/16D50	2376	1232	1,2854	50	15,55931	$\phi =$	15,55931	x ΔT	1,2854
TUB3-150/17D50	2525	1309	1,2854	50	16,53177	$\phi =$	16,53177	x ΔT	1,2854
TUB3-150/18D50	2673	1386	1,2854	50	17,50423	$\phi =$	17,50423	x ΔT	1,2854
TUB3-150/19D50	2822	1463	1,2854	50	18,47668	$\phi =$	18,47668	x ΔT	1,2854
TUB3-150/20D50	2970	1540	1,2854	50	19,44914	$\phi =$	19,44914	x ΔT	1,2854
TUB3-150/21D50	3119	1617	1,2854	50	20,42160	$\phi =$	20,42160	x ΔT	1,2854
TUB3-150/22D50	3267	1694	1,2854	50	21,39405	$\phi =$	21,39405	x ΔT	1,2854
TUB3-180/02D50	354	184	1,2876	50	2,30091	$\phi =$	2,30091	x ΔT	1,2876
TUB3-180/03D50	532	275	1,2876	50	3,45137	$\phi =$	3,45137	x ΔT	1,2876
TUB3-180/04D50	709	367	1,2876	50	4,60182	$\phi =$	4,60182	x ΔT	1,2876
TUB3-180/05D50	886	459	1,2876	50	5,75228	$\phi =$	5,75228	x ΔT	1,2876
TUB3-180/06D50	1063	551	1,2876	50	6,90273	$\phi =$	6,90273	x ΔT	1,2876
TUB3-180/07D50	1240	643	1,2876	50	8,05319	$\phi =$	8,05319	x ΔT	1,2876
TUB3-180/08D50	1418	734	1,2876	50	9,20365	$\phi =$	9,20365	x ΔT	1,2876
TUB3-180/09D50	1595	826	1,2876	50	10,35410	$\phi =$	10,35410	x ΔT	1,2876
TUB3-180/10D50	1772	918	1,2876	50	11,50456	$\phi =$	11,50456	x ΔT	1,2876
TUB3-180/11D50	1949	1010	1,2876	50	12,65501	$\phi =$	12,65501	x ΔT	1,2876
TUB3-180/12D50	2126	1102	1,2876	50	13,80547	$\phi =$	13,80547	x ΔT	1,2876
TUB3-180/13D50	2304	1193	1,2876	50	14,95593	$\phi =$	14,95593	x ΔT	1,2876
TUB3-180/14D50	2481	1285	1,2876	50	16,10638	$\phi =$	16,10638	x ΔT	1,2876
TUB3-180/15D50	2658	1377	1,2876	50	17,25684	$\phi =$	17,25684	x ΔT	1,2876
TUB3-180/16D50	2835	1469	1,2876	50	18,40729	$\phi =$	18,40729	x ΔT	1,2876
TUB3-180/17D50	3012	1560	1,2876	50	19,55775	$\phi =$	19,55775	x ΔT	1,2876
TUB3-180/18D50	3190	1652	1,2876	50	20,70820	$\phi =$	20,70820	x ΔT	1,2876
TUB3-180/19D50	3367	1744	1,2876	50	21,85866	$\phi =$	21,85866	x ΔT	1,2876
TUB3-180/20D50	3544	1836	1,2876	50	23,00912	$\phi =$	23,00912	x ΔT	1,2876
TUB3-180/21D50	3721	1928	1,2876	50	24,15957	$\phi =$	24,15957	x ΔT	1,2876
TUB3-180/22D50	3898	2019	1,2876	50	25,31003	$\phi =$	25,31003	x ΔT	1,2876
TUB3-180/23D50	4076	2111	1,2876	50	26,46048	$\phi =$	26,46048	x ΔT	1,2876

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TUB3-200/02D50	392	203	1,2889	50	2,53470	$\phi =$	2,53470	x ΔT	1,2889
TUB3-200/03D50	589	305	1,2889	50	3,80205	$\phi =$	3,80205	x ΔT	1,2889
TUB3-200/04D50	785	406	1,2889	50	5,06940	$\phi =$	5,06940	x ΔT	1,2889
TUB3-200/05D50	981	508	1,2889	50	6,33675	$\phi =$	6,33675	x ΔT	1,2889
TUB3-200/06D50	1177	609	1,2889	50	7,60410	$\phi =$	7,60410	x ΔT	1,2889
TUB3-200/07D50	1373	711	1,2889	50	8,87145	$\phi =$	8,87145	x ΔT	1,2889
TUB3-200/08D50	1570	813	1,2889	50	10,13880	$\phi =$	10,13880	x ΔT	1,2889
TUB3-200/09D50	1766	914	1,2889	50	11,40615	$\phi =$	11,40615	x ΔT	1,2889
TUB3-200/10D50	1962	1016	1,2889	50	12,67350	$\phi =$	12,67350	x ΔT	1,2889
TUB3-200/11D50	2158	1117	1,2889	50	13,94085	$\phi =$	13,94085	x ΔT	1,2889
TUB3-200/12D50	2354	1219	1,2889	50	15,20820	$\phi =$	15,20820	x ΔT	1,2889
TUB3-200/13D50	2551	1320	1,2889	50	16,47555	$\phi =$	16,47555	x ΔT	1,2889
TUB3-200/14D50	2747	1422	1,2889	50	17,74290	$\phi =$	17,74290	x ΔT	1,2889
TUB3-200/15D50	2943	1524	1,2889	50	19,01025	$\phi =$	19,01025	x ΔT	1,2889
TUB3-200/16D50	3139	1625	1,2889	50	20,27760	$\phi =$	20,27760	x ΔT	1,2889
TUB3-200/17D50	3335	1727	1,2889	50	21,54495	$\phi =$	21,54495	x ΔT	1,2889
TUB3-200/18D50	3532	1828	1,2889	50	22,81230	$\phi =$	22,81230	x ΔT	1,2889
TUB3-200/19D50	3728	1930	1,2889	50	24,07965	$\phi =$	24,07965	x ΔT	1,2889
TUB3-200/20D50	3924	2031	1,2889	50	25,34700	$\phi =$	25,34700	x ΔT	1,2889
TUB3-200/21D50	4120	2133	1,2889	50	26,61435	$\phi =$	26,61435	x ΔT	1,2889

W imieniu producenta podpisał:

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

Z-ca Prezesa ds. realizacji

Bartosz Ścierzyński

Nowa Wieś 03.11.2022

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 ds. realizacji

Bartosz Ścierzyński
 Bartosz Ścierzyński

(podpis)
 (signature)