DEKLARACJA WŁAŚCIWOŚCI UŻYTKOWYCH
(DECLARATION OF PERFORMANCE)
Nr (No.) **NDWU/1/TUBUS 3 D50P/2021**

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 Gawłowscy, Ścierzyńscy Spółka jawna, Nowa Wieś k/ Włocławka, ul. Jana Pawła II 12A, 87-853 Kruszyn, Polska.
(INSTAL-PROJEKT Gawłowscy, Ścierzyńscy Spółka jawna, 87-853 Kruszyn, Nowa Wieś near Włocławek, Jana Pawła II 12A str., Poland.)

4. System(-y) oceny i weryfikacji stałości właściwości użytkowych:
(System/s of AVCP:)

System 3

5. Norma zharmonizowana:
(Harmonised standard:)

PN-EN 442-1:2015
EN 442-1:2014

6. Jednostka lub jednostki notyfikowane:
(Notified body/ies:)

Notyfikowana jednostka badawcza Instytut Energetyki - Oddział Techniki Grzewczej i Sanitarnej ul. Wilcza 8, PL- 26-610 Radom . Nr akredytacji: AB 143, Nr notyfikacji: 1452, wykonała wstępne badanie typu i wydała sprawozdanie z badań.
(Notified/accredited body Instytut Energetyki - Oddział Techniki Grzewczej i Sanitarnej ul. Wilcza 8, PL- 26-610 Radom. Accreditation no. AB 143, Notification no. 1452, performed initial type testing and issued test reports)

7. Deklarowane właściwości użytkowe:
(Declared performance/s:)

Zasadnicze charakterystyki Essential characteristics	**Właściwości użytkowe** Performance	**Zharmonizowana specyfikacja techniczna** Harmonised technical specification
Reakcja na ogień (Reaction to fire)	A1	PN-EN 442-1:2015 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 1000 [kPa])	
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 impast)	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.)

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) Φ50	Rated thermal output (55/45/20 °C) Φ30	Index exponent n	ΔT	K_M	Thermal output in different operating conditions (characteristic curve)				
TUB3-020/02D50P	44	23	1,2616	50	0,3191	ϕ =	0,3191	x	ΔT	1,2616
TUB3-020/03D50P	67	35	1,2616	50	0,4787	ϕ =	0,4787	x	ΔT	1,2616
TUB3-020/04D50P	89	47	1,2616	50	0,6383	ϕ =	0,6383	x	ΔT	1,2616
TUB3-020/05D50P	111	58	1,2616	50	0,7978	ϕ =	0,7978	x	ΔT	1,2616
TUB3-020/06D50P	133	70	1,2616	50	0,9574	ϕ =	0,9574	x	ΔT	1,2616
TUB3-020/07D50P	155	82	1,2616	50	1,1169	ϕ =	1,1169	x	ΔT	1,2616
TUB3-020/08D50P	178	93	1,2616	50	1,2765	ϕ =	1,2765	x	ΔT	1,2616
TUB3-020/09D50P	200	105	1,2616	50	1,4361	ϕ =	1,4361	x	ΔT	1,2616
TUB3-020/10D50P	222	117	1,2616	50	1,5956	ϕ =	1,5956	x	ΔT	1,2616
TUB3-020/11D50P	244	128	1,2616	50	1,7552	ϕ =	1,7552	x	ΔT	1,2616
TUB3-020/12D50P	266	140	1,2616	50	1,9148	ϕ =	1,9148	x	ΔT	1,2616
TUB3-020/13D50P	289	151	1,2616	50	2,0743	ϕ =	2,0743	x	ΔT	1,2616
TUB3-020/14D50P	311	163	1,2616	50	2,2339	ϕ =	2,2339	x	ΔT	1,2616
TUB3-020/15D50P	333	175	1,2616	50	2,3934	ϕ =	2,3934	x	ΔT	1,2616
TUB3-020/16D50P	355	186	1,2616	50	2,5530	ϕ =	2,5530	x	ΔT	1,2616
TUB3-020/17D50P	377	198	1,2616	50	2,7126	ϕ =	2,7126	x	ΔT	1,2616
TUB3-020/18D50P	400	210	1,2616	50	2,8721	ϕ =	2,8721	x	ΔT	1,2616
TUB3-020/19D50P	422	221	1,2616	50	3,0317	ϕ =	3,0317	x	ΔT	1,2616
TUB3-020/20D50P	444	233	1,2616	50	3,1913	ϕ =	3,1913	x	ΔT	1,2616
TUB3-020/21D50P	466	245	1,2616	50	3,3508	ϕ =	3,3508	x	ΔT	1,2616
TUB3-020/22D50P	488	256	1,2616	50	3,5104	ϕ =	3,5104	x	ΔT	1,2616
TUB3-020/23D50P	511	268	1,2616	50	3,6700	ϕ =	3,6700	x	ΔT	1,2616
TUB3-020/24D50P	533	280	1,2616	50	3,8295	ϕ =	3,8295	x	ΔT	1,2616
TUB3-020/25D50P	555	291	1,2616	50	3,9891	ϕ =	3,9891	x	ΔT	1,2616
TUB3-020/26D50P	577	303	1,2616	50	4,1486	ϕ =	4,1486	x	ΔT	1,2616
TUB3-020/27D50P	599	315	1,2616	50	4,3082	ϕ =	4,3082	x	ΔT	1,2616
TUB3-020/28D50P	622	326	1,2616	50	4,4678	ϕ =	4,4678	x	ΔT	1,2616
TUB3-020/29D50P	644	338	1,2616	50	4,6273	ϕ =	4,6273	x	ΔT	1,2616
TUB3-020/30D50P	666	350	1,2616	50	4,7869	ϕ =	4,7869	x	ΔT	1,2616
TUB3-020/31D50P	688	361	1,2616	50	4,9465	ϕ =	4,9465	x	ΔT	1,2616
TUB3-020/32D50P	710	373	1,2616	50	5,1060	ϕ =	5,1060	x	ΔT	1,2616
TUB3-020/33D50P	733	385	1,2616	50	5,2656	ϕ =	5,2656	x	ΔT	1,2616
TUB3-020/34D50P	755	396	1,2616	50	5,4251	ϕ =	5,4251	x	ΔT	1,2616
TUB3-020/35D50P	777	408	1,2616	50	5,5847	ϕ =	5,5847	x	ΔT	1,2616
TUB3-020/36D50P	799	420	1,2616	50	5,7443	ϕ =	5,7443	x	ΔT	1,2616
TUB3-020/37D50P	821	431	1,2616	50	5,9038	ϕ =	5,9038	x	ΔT	1,2616

TUB3-020/38D50P	844	443	1,2616	50	6,0634	ϕ =	6,0634	x	ΔT	1,2616
TUB3-020/39D50P	866	454	1,2616	50	6,2230	ϕ =	6,2230	x	ΔT	1,2616
TUB3-020/40D50P	888	466	1,2616	50	6,3825	ϕ =	6,3825	x	ΔT	1,2616
TUB3-020/41D50P	910	478	1,2616	50	6,5421	ϕ =	6,5421	x	ΔT	1,2616
TUB3-020/42D50P	932	489	1,2616	50	6,7016	ϕ =	6,7016	x	ΔT	1,2616
TUB3-020/43D50P	955	501	1,2616	50	6,8612	ϕ =	6,8612	x	ΔT	1,2616
TUB3-020/44D50P	977	513	1,2616	50	7,0208	ϕ =	7,0208	x	ΔT	1,2616
TUB3-020/45D50P	999	524	1,2616	50	7,1803	ϕ =	7,1803	x	ΔT	1,2616
TUB3-030/02D50P	65	34	1,2667	50	0,4580	ϕ =	0,4580	x	ΔT	1,2667
TUB3-030/03D50P	98	51	1,2667	50	0,6869	ϕ =	0,6869	x	ΔT	1,2667
TUB3-030/04D50P	130	68	1,2667	50	0,9159	ϕ =	0,9159	x	ΔT	1,2667
TUB3-030/05D50P	163	85	1,2667	50	1,1449	ϕ =	1,1449	x	ΔT	1,2667
TUB3-030/06D50P	195	102	1,2667	50	1,3739	ϕ =	1,3739	x	ΔT	1,2667
TUB3-030/07D50P	228	119	1,2667	50	1,6029	ϕ =	1,6029	x	ΔT	1,2667
TUB3-030/08D50P	260	136	1,2667	50	1,8318	ϕ =	1,8318	x	ΔT	1,2667
TUB3-030/09D50P	293	153	1,2667	50	2,0608	ϕ =	2,0608	x	ΔT	1,2667
TUB3-030/10D50P	325	170	1,2667	50	2,2898	ϕ =	2,2898	x	ΔT	1,2667
TUB3-030/11D50P	358	187	1,2667	50	2,5188	ϕ =	2,5188	x	ΔT	1,2667
TUB3-030/12D50P	390	204	1,2667	50	2,7478	ϕ =	2,7478	x	ΔT	1,2667
TUB3-030/13D50P	423	221	1,2667	50	2,9767	ϕ =	2,9767	x	ΔT	1,2667
TUB3-030/14D50P	455	238	1,2667	50	3,2057	ϕ =	3,2057	x	ΔT	1,2667
TUB3-030/15D50P	488	255	1,2667	50	3,4347	ϕ =	3,4347	x	ΔT	1,2667
TUB3-030/16D50P	520	272	1,2667	50	3,6637	ϕ =	3,6637	x	ΔT	1,2667
TUB3-030/17D50P	553	289	1,2667	50	3,8927	ϕ =	3,8927	x	ΔT	1,2667
TUB3-030/18D50P	585	306	1,2667	50	4,1216	ϕ =	4,1216	x	ΔT	1,2667
TUB3-030/19D50P	618	323	1,2667	50	4,3506	ϕ =	4,3506	x	ΔT	1,2667
TUB3-030/20D50P	650	340	1,2667	50	4,5796	ϕ =	4,5796	x	ΔT	1,2667
TUB3-030/21D50P	683	357	1,2667	50	4,8086	ϕ =	4,8086	x	ΔT	1,2667
TUB3-030/22D50P	715	374	1,2667	50	5,0376	ϕ =	5,0376	x	ΔT	1,2667
TUB3-030/23D50P	748	391	1,2667	50	5,2665	ϕ =	5,2665	x	ΔT	1,2667
TUB3-030/24D50P	780	408	1,2667	50	5,4955	ϕ =	5,4955	x	ΔT	1,2667
TUB3-030/25D50P	813	425	1,2667	50	5,7245	ϕ =	5,7245	x	ΔT	1,2667
TUB3-030/26D50P	845	442	1,2667	50	5,9535	ϕ =	5,9535	x	ΔT	1,2667
TUB3-030/27D50P	878	459	1,2667	50	6,1825	ϕ =	6,1825	x	ΔT	1,2667
TUB3-030/28D50P	910	476	1,2667	50	6,4114	ϕ =	6,4114	x	ΔT	1,2667
TUB3-030/29D50P	943	493	1,2667	50	6,6404	ϕ =	6,6404	x	ΔT	1,2667
TUB3-030/30D50P	975	510	1,2667	50	6,8694	ϕ =	6,8694	x	ΔT	1,2667
TUB3-030/31D50P	1008	528	1,2667	50	7,0984	ϕ =	7,0984	x	ΔT	1,2667
TUB3-030/32D50P	1040	545	1,2667	50	7,3274	ϕ =	7,3274	x	ΔT	1,2667
TUB3-030/33D50P	1073	562	1,2667	50	7,5563	ϕ =	7,5563	x	ΔT	1,2667
TUB3-030/34D50P	1105	579	1,2667	50	7,7853	ϕ =	7,7853	x	ΔT	1,2667
TUB3-030/35D50P	1138	596	1,2667	50	8,0143	ϕ =	8,0143	x	ΔT	1,2667
TUB3-030/36D50P	1170	613	1,2667	50	8,2433	ϕ =	8,2433	x	ΔT	1,2667
TUB3-030/37D50P	1203	630	1,2667	50	8,4723	ϕ =	8,4723	x	ΔT	1,2667
TUB3-030/38D50P	1235	647	1,2667	50	8,7013	ϕ =	8,7013	x	ΔT	1,2667
TUB3-030/39D50P	1268	664	1,2667	50	8,9302	ϕ =	8,9302	x	ΔT	1,2667
TUB3-030/40D50P	1300	681	1,2667	50	9,1592	ϕ =	9,1592	x	ΔT	1,2667

TUB3-030/41D50P	1333	698	1,2667	50	9,3882	ϕ =	9,3882	x	ΔT	1,2667
TUB3-030/42D50P	1365	715	1,2667	50	9,6172	ϕ =	9,6172	x	ΔT	1,2667
TUB3-030/43D50P	1398	732	1,2667	50	9,8462	ϕ =	9,8462	x	ΔT	1,2667
TUB3-030/44D50P	1430	749	1,2667	50	10,0751	ϕ =	10,0751	x	ΔT	1,2667
TUB3-030/45D50P	1463	766	1,2667	50	10,3041	ϕ =	10,3041	x	ΔT	1,2667
TUB3-040/02D50P	85	45	1,2698	50	0,5930	ϕ =	0,5930	x	ΔT	1,2698
TUB3-040/03D50P	128	67	1,2698	50	0,8896	ϕ =	0,8896	x	ΔT	1,2698
TUB3-040/04D50P	170	89	1,2698	50	1,1861	ϕ =	1,1861	x	ΔT	1,2698
TUB3-040/05D50P	213	111	1,2698	50	1,4826	ϕ =	1,4826	x	ΔT	1,2698
TUB3-040/06D50P	256	134	1,2698	50	1,7791	ϕ =	1,7791	x	ΔT	1,2698
TUB3-040/07D50P	298	156	1,2698	50	2,0757	ϕ =	2,0757	x	ΔT	1,2698
TUB3-040/08D50P	341	178	1,2698	50	2,3722	ϕ =	2,3722	x	ΔT	1,2698
TUB3-040/09D50P	383	200	1,2698	50	2,6687	ϕ =	2,6687	x	ΔT	1,2698
TUB3-040/10D50P	426	223	1,2698	50	2,9652	ϕ =	2,9652	x	ΔT	1,2698
TUB3-040/11D50P	469	245	1,2698	50	3,2617	ϕ =	3,2617	x	ΔT	1,2698
TUB3-040/12D50P	511	267	1,2698	50	3,5583	ϕ =	3,5583	x	ΔT	1,2698
TUB3-040/13D50P	554	290	1,2698	50	3,8548	ϕ =	3,8548	x	ΔT	1,2698
TUB3-040/14D50P	596	312	1,2698	50	4,1513	ϕ =	4,1513	x	ΔT	1,2698
TUB3-040/15D50P	639	334	1,2698	50	4,4478	ϕ =	4,4478	x	ΔT	1,2698
TUB3-040/16D50P	682	356	1,2698	50	4,7444	ϕ =	4,7444	x	ΔT	1,2698
TUB3-040/17D50P	724	379	1,2698	50	5,0409	ϕ =	5,0409	x	ΔT	1,2698
TUB3-040/18D50P	767	401	1,2698	50	5,3374	ϕ =	5,3374	x	ΔT	1,2698
TUB3-040/19D50P	809	423	1,2698	50	5,6339	ϕ =	5,6339	x	ΔT	1,2698
TUB3-040/20D50P	852	445	1,2698	50	5,9304	ϕ =	5,9304	x	ΔT	1,2698
TUB3-040/21D50P	895	468	1,2698	50	6,2270	ϕ =	6,2270	x	ΔT	1,2698
TUB3-040/22D50P	937	490	1,2698	50	6,5235	ϕ =	6,5235	x	ΔT	1,2698
TUB3-040/23D50P	980	512	1,2698	50	6,8200	ϕ =	6,8200	x	ΔT	1,2698
TUB3-040/24D50P	1022	534	1,2698	50	7,1165	ϕ =	7,1165	x	ΔT	1,2698
TUB3-040/25D50P	1065	557	1,2698	50	7,4131	ϕ =	7,4131	x	ΔT	1,2698
TUB3-040/26D50P	1108	579	1,2698	50	7,7096	ϕ =	7,7096	x	ΔT	1,2698
TUB3-040/27D50P	1150	601	1,2698	50	8,0061	ϕ =	8,0061	x	ΔT	1,2698
TUB3-040/28D50P	1193	624	1,2698	50	8,3026	ϕ =	8,3026	x	ΔT	1,2698
TUB3-040/29D50P	1235	646	1,2698	50	8,5991	ϕ =	8,5991	x	ΔT	1,2698
TUB3-040/30D50P	1278	668	1,2698	50	8,8957	ϕ =	8,8957	x	ΔT	1,2698
TUB3-040/31D50P	1321	690	1,2698	50	9,1922	ϕ =	9,1922	x	ΔT	1,2698
TUB3-040/32D50P	1363	713	1,2698	50	9,4887	ϕ =	9,4887	x	ΔT	1,2698
TUB3-040/33D50P	1406	735	1,2698	50	9,7852	ϕ =	9,7852	x	ΔT	1,2698
TUB3-040/34D50P	1448	757	1,2698	50	10,0818	ϕ =	10,0818	x	ΔT	1,2698
TUB3-040/35D50P	1491	779	1,2698	50	10,3783	ϕ =	10,3783	x	ΔT	1,2698
TUB3-040/36D50P	1534	802	1,2698	50	10,6748	ϕ =	10,6748	x	ΔT	1,2698
TUB3-040/37D50P	1576	824	1,2698	50	10,9713	ϕ =	10,9713	x	ΔT	1,2698
TUB3-040/38D50P	1619	846	1,2698	50	11,2679	ϕ =	11,2679	x	ΔT	1,2698
TUB3-040/39D50P	1661	869	1,2698	50	11,5644	ϕ =	11,5644	x	ΔT	1,2698
TUB3-040/40D50P	1704	891	1,2698	50	11,8609	ϕ =	11,8609	x	ΔT	1,2698
TUB3-040/41D50P	1747	913	1,2698	50	12,1574	ϕ =	12,1574	x	ΔT	1,2698
TUB3-040/42D50P	1789	935	1,2698	50	12,4539	ϕ =	12,4539	x	ΔT	1,2698
TUB3-040/43D50P	1832	958	1,2698	50	12,7505	ϕ =	12,7505	x	ΔT	1,2698

TUB3-040/44D50P	1874	980	1,2698	50	13,0470	ϕ =	13,0470	x	ΔT	1,2698
TUB3-040/45D50P	1917	1002	1,2698	50	13,3435	ϕ =	13,3435	x	ΔT	1,2698
TUB3-050/02D50P	105	55	1,2722	50	0,7268	ϕ =	0,7268	x	ΔT	1,2722
TUB3-050/03D50P	158	83	1,2722	50	1,0902	ϕ =	1,0902	x	ΔT	1,2722
TUB3-050/04D50P	211	110	1,2722	50	1,4536	ϕ =	1,4536	x	ΔT	1,2722
TUB3-050/05D50P	264	138	1,2722	50	1,8170	ϕ =	1,8170	x	ΔT	1,2722
TUB3-050/06D50P	316	165	1,2722	50	2,1804	ϕ =	2,1804	x	ΔT	1,2722
TUB3-050/07D50P	369	193	1,2722	50	2,5438	ϕ =	2,5438	x	ΔT	1,2722
TUB3-050/08D50P	422	220	1,2722	50	2,9072	ϕ =	2,9072	x	ΔT	1,2722
TUB3-050/09D50P	474	248	1,2722	50	3,2706	ϕ =	3,2706	x	ΔT	1,2722
TUB3-050/10D50P	527	275	1,2722	50	3,6340	ϕ =	3,6340	x	ΔT	1,2722
TUB3-050/11D50P	580	303	1,2722	50	3,9974	ϕ =	3,9974	x	ΔT	1,2722
TUB3-050/12D50P	632	330	1,2722	50	4,3608	ϕ =	4,3608	x	ΔT	1,2722
TUB3-050/13D50P	685	358	1,2722	50	4,7242	ϕ =	4,7242	x	ΔT	1,2722
TUB3-050/14D50P	738	385	1,2722	50	5,0876	ϕ =	5,0876	x	ΔT	1,2722
TUB3-050/15D50P	791	413	1,2722	50	5,4510	ϕ =	5,4510	x	ΔT	1,2722
TUB3-050/16D50P	843	440	1,2722	50	5,8143	ϕ =	5,8143	x	ΔT	1,2722
TUB3-050/17D50P	896	468	1,2722	50	6,1777	ϕ =	6,1777	x	ΔT	1,2722
TUB3-050/18D50P	949	495	1,2722	50	6,5411	ϕ =	6,5411	x	ΔT	1,2722
TUB3-050/19D50P	1001	523	1,2722	50	6,9045	ϕ =	6,9045	x	ΔT	1,2722
TUB3-050/20D50P	1054	550	1,2722	50	7,2679	ϕ =	7,2679	x	ΔT	1,2722
TUB3-050/21D50P	1107	578	1,2722	50	7,6313	ϕ =	7,6313	x	ΔT	1,2722
TUB3-050/22D50P	1159	605	1,2722	50	7,9947	ϕ =	7,9947	x	ΔT	1,2722
TUB3-050/23D50P	1212	633	1,2722	50	8,3581	ϕ =	8,3581	x	ΔT	1,2722
TUB3-050/24D50P	1265	660	1,2722	50	8,7215	ϕ =	8,7215	x	ΔT	1,2722
TUB3-050/25D50P	1318	688	1,2722	50	9,0849	ϕ =	9,0849	x	ΔT	1,2722
TUB3-050/26D50P	1370	715	1,2722	50	9,4483	ϕ =	9,4483	x	ΔT	1,2722
TUB3-050/27D50P	1423	743	1,2722	50	9,8117	ϕ =	9,8117	x	ΔT	1,2722
TUB3-050/28D50P	1476	770	1,2722	50	10,1751	ϕ =	10,1751	x	ΔT	1,2722
TUB3-050/29D50P	1528	798	1,2722	50	10,5385	ϕ =	10,5385	x	ΔT	1,2722
TUB3-050/30D50P	1581	825	1,2722	50	10,9019	ϕ =	10,9019	x	ΔT	1,2722
TUB3-050/31D50P	1634	853	1,2722	50	11,2653	ϕ =	11,2653	x	ΔT	1,2722
TUB3-050/32D50P	1686	880	1,2722	50	11,6287	ϕ =	11,6287	x	ΔT	1,2722
TUB3-050/33D50P	1739	908	1,2722	50	11,9921	ϕ =	11,9921	x	ΔT	1,2722
TUB3-050/34D50P	1792	936	1,2722	50	12,3555	ϕ =	12,3555	x	ΔT	1,2722
TUB3-050/35D50P	1845	963	1,2722	50	12,7189	ϕ =	12,7189	x	ΔT	1,2722
TUB3-050/36D50P	1897	991	1,2722	50	13,0823	ϕ =	13,0823	x	ΔT	1,2722
TUB3-050/37D50P	1950	1018	1,2722	50	13,4457	ϕ =	13,4457	x	ΔT	1,2722
TUB3-050/38D50P	2003	1046	1,2722	50	13,8091	ϕ =	13,8091	x	ΔT	1,2722
TUB3-050/39D50P	2055	1073	1,2722	50	14,1725	ϕ =	14,1725	x	ΔT	1,2722
TUB3-050/40D50P	2108	1101	1,2722	50	14,5359	ϕ =	14,5359	x	ΔT	1,2722
TUB3-050/41D50P	2161	1128	1,2722	50	14,8993	ϕ =	14,8993	x	ΔT	1,2722
TUB3-050/42D50P	2213	1156	1,2722	50	15,2627	ϕ =	15,2627	x	ΔT	1,2722
TUB3-050/43D50P	2266	1183	1,2722	50	15,6261	ϕ =	15,6261	x	ΔT	1,2722
TUB3-050/44D50P	2319	1211	1,2722	50	15,9895	ϕ =	15,9895	x	ΔT	1,2722
TUB3-050/45D50P	2372	1238	1,2722	50	16,3529	ϕ =	16,3529	x	ΔT	1,2722
TUB3-070/02D50P	145	76	1,2762	50	0,9857	ϕ =	0,9857	x	ΔT	1,2762

TUB3-070/03D50P	218	113	1,2762	50	1,4785	ϕ =	1,4785	x	ΔT	1,2762
TUB3-070/04D50P	290	151	1,2762	50	1,9714	ϕ =	1,9714	x	ΔT	1,2762
TUB3-070/05D50P	363	189	1,2762	50	2,4642	ϕ =	2,4642	x	ΔT	1,2762
TUB3-070/06D50P	436	227	1,2762	50	2,9571	ϕ =	2,9571	x	ΔT	1,2762
TUB3-070/07D50P	508	265	1,2762	50	3,4499	ϕ =	3,4499	x	ΔT	1,2762
TUB3-070/08D50P	581	303	1,2762	50	3,9428	ϕ =	3,9428	x	ΔT	1,2762
TUB3-070/09D50P	653	340	1,2762	50	4,4356	ϕ =	4,4356	x	ΔT	1,2762
TUB3-070/10D50P	726	378	1,2762	50	4,9285	ϕ =	4,9285	x	ΔT	1,2762
TUB3-070/11D50P	799	416	1,2762	50	5,4213	ϕ =	5,4213	x	ΔT	1,2762
TUB3-070/12D50P	871	454	1,2762	50	5,9142	ϕ =	5,9142	x	ΔT	1,2762
TUB3-070/13D50P	944	492	1,2762	50	6,4070	ϕ =	6,4070	x	ΔT	1,2762
TUB3-070/14D50P	1016	530	1,2762	50	6,8998	ϕ =	6,8998	x	ΔT	1,2762
TUB3-070/15D50P	1089	567	1,2762	50	7,3927	ϕ =	7,3927	x	ΔT	1,2762
TUB3-070/16D50P	1162	605	1,2762	50	7,8855	ϕ =	7,8855	x	ΔT	1,2762
TUB3-070/17D50P	1234	643	1,2762	50	8,3784	ϕ =	8,3784	x	ΔT	1,2762
TUB3-070/18D50P	1307	681	1,2762	50	8,8712	ϕ =	8,8712	x	ΔT	1,2762
TUB3-070/19D50P	1379	719	1,2762	50	9,3641	ϕ =	9,3641	x	ΔT	1,2762
TUB3-070/20D50P	1452	757	1,2762	50	9,8569	ϕ =	9,8569	x	ΔT	1,2762
TUB3-070/21D50P	1525	794	1,2762	50	10,3498	ϕ =	10,3498	x	ΔT	1,2762
TUB3-070/22D50P	1597	832	1,2762	50	10,8426	ϕ =	10,8426	x	ΔT	1,2762
TUB3-070/23D50P	1670	870	1,2762	50	11,3355	ϕ =	11,3355	x	ΔT	1,2762
TUB3-070/24D50P	1742	908	1,2762	50	11,8283	ϕ =	11,8283	x	ΔT	1,2762
TUB3-070/25D50P	1815	946	1,2762	50	12,3211	ϕ =	12,3211	x	ΔT	1,2762
TUB3-070/26D50P	1888	984	1,2762	50	12,8140	ϕ =	12,8140	x	ΔT	1,2762
TUB3-070/27D50P	1960	1021	1,2762	50	13,3068	ϕ =	13,3068	x	ΔT	1,2762
TUB3-070/28D50P	2033	1059	1,2762	50	13,7997	ϕ =	13,7997	x	ΔT	1,2762
TUB3-070/29D50P	2105	1097	1,2762	50	14,2925	ϕ =	14,2925	x	ΔT	1,2762
TUB3-070/30D50P	2178	1135	1,2762	50	14,7854	ϕ =	14,7854	x	ΔT	1,2762
TUB3-070/31D50P	2251	1173	1,2762	50	15,2782	ϕ =	15,2782	x	ΔT	1,2762
TUB3-070/32D50P	2323	1210	1,2762	50	15,7711	ϕ =	15,7711	x	ΔT	1,2762
TUB3-070/33D50P	2396	1248	1,2762	50	16,2639	ϕ =	16,2639	x	ΔT	1,2762
TUB3-070/34D50P	2468	1286	1,2762	50	16,7568	ϕ =	16,7568	x	ΔT	1,2762
TUB3-070/35D50P	2541	1324	1,2762	50	17,2496	ϕ =	17,2496	x	ΔT	1,2762
TUB3-070/36D50P	2614	1362	1,2762	50	17,7425	ϕ =	17,7425	x	ΔT	1,2762
TUB3-070/37D50P	2686	1400	1,2762	50	18,2353	ϕ =	18,2353	x	ΔT	1,2762
TUB3-070/38D50P	2759	1437	1,2762	50	18,7281	ϕ =	18,7281	x	ΔT	1,2762
TUB3-070/39D50P	2831	1475	1,2762	50	19,2210	ϕ =	19,2210	x	ΔT	1,2762
TUB3-070/40D50P	2904	1513	1,2762	50	19,7138	ϕ =	19,7138	x	ΔT	1,2762
TUB3-070/41D50P	2977	1551	1,2762	50	20,2067	ϕ =	20,2067	x	ΔT	1,2762
TUB3-070/42D50P	3049	1589	1,2762	50	20,6995	ϕ =	20,6995	x	ΔT	1,2762
TUB3-080/02D50P	165	86	1,2779	50	1,1140	ϕ =	1,1140	x	ΔT	1,2779
TUB3-080/03D50P	248	129	1,2779	50	1,6710	ϕ =	1,6710	x	ΔT	1,2779
TUB3-080/04D50P	330	172	1,2779	50	2,2281	ϕ =	2,2281	x	ΔT	1,2779
TUB3-080/05D50P	413	215	1,2779	50	2,7851	ϕ =	2,7851	x	ΔT	1,2779
TUB3-080/06D50P	496	258	1,2779	50	3,3421	ϕ =	3,3421	x	ΔT	1,2779
TUB3-080/07D50P	578	301	1,2779	50	3,8991	ϕ =	3,8991	x	ΔT	1,2779
TUB3-080/08D50P	661	344	1,2779	50	4,4561	ϕ =	4,4561	x	ΔT	1,2779

TUB3-080/09D50P	743	387	1,2779	50	5,0131	ϕ =	5,0131	x	ΔT	1,2779
TUB3-080/10D50P	826	430	1,2779	50	5,5701	ϕ =	5,5701	x	ΔT	1,2779
TUB3-080/11D50P	909	473	1,2779	50	6,1272	ϕ =	6,1272	x	ΔT	1,2779
TUB3-080/12D50P	991	516	1,2779	50	6,6842	ϕ =	6,6842	x	ΔT	1,2779
TUB3-080/13D50P	1074	559	1,2779	50	7,2412	ϕ =	7,2412	x	ΔT	1,2779
TUB3-080/14D50P	1156	602	1,2779	50	7,7982	ϕ =	7,7982	x	ΔT	1,2779
TUB3-080/15D50P	1239	645	1,2779	50	8,3552	ϕ =	8,3552	x	ΔT	1,2779
TUB3-080/16D50P	1322	688	1,2779	50	8,9122	ϕ =	8,9122	x	ΔT	1,2779
TUB3-080/17D50P	1404	731	1,2779	50	9,4692	ϕ =	9,4692	x	ΔT	1,2779
TUB3-080/18D50P	1487	774	1,2779	50	10,0263	ϕ =	10,0263	x	ΔT	1,2779
TUB3-080/19D50P	1569	817	1,2779	50	10,5833	ϕ =	10,5833	x	ΔT	1,2779
TUB3-080/20D50P	1652	860	1,2779	50	11,1403	ϕ =	11,1403	x	ΔT	1,2779
TUB3-080/21D50P	1735	903	1,2779	50	11,6973	ϕ =	11,6973	x	ΔT	1,2779
TUB3-080/22D50P	1817	946	1,2779	50	12,2543	ϕ =	12,2543	x	ΔT	1,2779
TUB3-080/23D50P	1900	989	1,2779	50	12,8113	ϕ =	12,8113	x	ΔT	1,2779
TUB3-080/24D50P	1982	1032	1,2779	50	13,3683	ϕ =	13,3683	x	ΔT	1,2779
TUB3-080/25D50P	2065	1075	1,2779	50	13,9254	ϕ =	13,9254	x	ΔT	1,2779
TUB3-080/26D50P	2148	1118	1,2779	50	14,4824	ϕ =	14,4824	x	ΔT	1,2779
TUB3-080/27D50P	2230	1161	1,2779	50	15,0394	ϕ =	15,0394	x	ΔT	1,2779
TUB3-080/28D50P	2313	1204	1,2779	50	15,5964	ϕ =	15,5964	x	ΔT	1,2779
TUB3-080/29D50P	2395	1247	1,2779	50	16,1534	ϕ =	16,1534	x	ΔT	1,2779
TUB3-080/30D50P	2478	1290	1,2779	50	16,7104	ϕ =	16,7104	x	ΔT	1,2779
TUB3-080/31D50P	2561	1333	1,2779	50	17,2674	ϕ =	17,2674	x	ΔT	1,2779
TUB3-080/32D50P	2643	1376	1,2779	50	17,8245	ϕ =	17,8245	x	ΔT	1,2779
TUB3-080/33D50P	2726	1419	1,2779	50	18,3815	ϕ =	18,3815	x	ΔT	1,2779
TUB3-080/34D50P	2808	1462	1,2779	50	18,9385	ϕ =	18,9385	x	ΔT	1,2779
TUB3-080/35D50P	2891	1505	1,2779	50	19,4955	ϕ =	19,4955	x	ΔT	1,2779
TUB3-080/36D50P	2974	1548	1,2779	50	20,0525	ϕ =	20,0525	x	ΔT	1,2779
TUB3-080/37D50P	3056	1591	1,2779	50	20,6095	ϕ =	20,6095	x	ΔT	1,2779
TUB3-090/02D50P	185	96	1,2795	50	1,2398	ϕ =	1,2398	x	ΔT	1,2795
TUB3-090/03D50P	278	144	1,2795	50	1,8596	ϕ =	1,8596	x	ΔT	1,2795
TUB3-090/04D50P	370	192	1,2795	50	2,4795	ϕ =	2,4795	x	ΔT	1,2795
TUB3-090/05D50P	463	241	1,2795	50	3,0994	ϕ =	3,0994	x	ΔT	1,2795
TUB3-090/06D50P	555	289	1,2795	50	3,7193	ϕ =	3,7193	x	ΔT	1,2795
TUB3-090/07D50P	648	337	1,2795	50	4,3392	ϕ =	4,3392	x	ΔT	1,2795
TUB3-090/08D50P	740	385	1,2795	50	4,9591	ϕ =	4,9591	x	ΔT	1,2795
TUB3-090/09D50P	833	433	1,2795	50	5,5789	ϕ =	5,5789	x	ΔT	1,2795
TUB3-090/10D50P	925	481	1,2795	50	6,1988	ϕ =	6,1988	x	ΔT	1,2795
TUB3-090/11D50P	1018	529	1,2795	50	6,8187	ϕ =	6,8187	x	ΔT	1,2795
TUB3-090/12D50P	1110	577	1,2795	50	7,4386	ϕ =	7,4386	x	ΔT	1,2795
TUB3-090/13D50P	1203	626	1,2795	50	8,0585	ϕ =	8,0585	x	ΔT	1,2795
TUB3-090/14D50P	1295	674	1,2795	50	8,6784	ϕ =	8,6784	x	ΔT	1,2795
TUB3-090/15D50P	1388	722	1,2795	50	9,2982	ϕ =	9,2982	x	ΔT	1,2795
TUB3-090/16D50P	1480	770	1,2795	50	9,9181	ϕ =	9,9181	x	ΔT	1,2795
TUB3-090/17D50P	1573	818	1,2795	50	10,5380	ϕ =	10,5380	x	ΔT	1,2795
TUB3-090/18D50P	1665	866	1,2795	50	11,1579	ϕ =	11,1579	x	ΔT	1,2795
TUB3-090/19D50P	1758	914	1,2795	50	11,7778	ϕ =	11,7778	x	ΔT	1,2795

TUB3-090/20D50P	1850	962	1,2795	50	12,3977	ϕ =	12,3977	x	ΔT	1,2795
TUB3-090/21D50P	1943	1010	1,2795	50	13,0175	ϕ =	13,0175	x	ΔT	1,2795
TUB3-090/22D50P	2035	1059	1,2795	50	13,6374	ϕ =	13,6374	x	ΔT	1,2795
TUB3-090/23D50P	2128	1107	1,2795	50	14,2573	ϕ =	14,2573	x	ΔT	1,2795
TUB3-090/24D50P	2220	1155	1,2795	50	14,8772	ϕ =	14,8772	x	ΔT	1,2795
TUB3-090/25D50P	2313	1203	1,2795	50	15,4971	ϕ =	15,4971	x	ΔT	1,2795
TUB3-090/26D50P	2405	1251	1,2795	50	16,1170	ϕ =	16,1170	x	ΔT	1,2795
TUB3-090/27D50P	2498	1299	1,2795	50	16,7368	ϕ =	16,7368	x	ΔT	1,2795
TUB3-090/28D50P	2590	1347	1,2795	50	17,3567	ϕ =	17,3567	x	ΔT	1,2795
TUB3-090/29D50P	2683	1395	1,2795	50	17,9766	ϕ =	17,9766	x	ΔT	1,2795
TUB3-090/30D50P	2775	1443	1,2795	50	18,5965	ϕ =	18,5965	x	ΔT	1,2795
TUB3-090/31D50P	2868	1492	1,2795	50	19,2164	ϕ =	19,2164	x	ΔT	1,2795
TUB3-090/32D50P	2960	1540	1,2795	50	19,8363	ϕ =	19,8363	x	ΔT	1,2795
TUB3-090/33D50P	3053	1588	1,2795	50	20,4561	ϕ =	20,4561	x	ΔT	1,2795
TUB3-090/34D50P	3145	1636	1,2795	50	21,0760	ϕ =	21,0760	x	ΔT	1,2795
TUB3-100/02D50P	205	107	1,2811	50	1,3652	ϕ =	1,3652	x	ΔT	1,2811
TUB3-100/03D50P	308	160	1,2811	50	2,0478	ϕ =	2,0478	x	ΔT	1,2811
TUB3-100/04D50P	410	213	1,2811	50	2,7304	ϕ =	2,7304	x	ΔT	1,2811
TUB3-100/05D50P	513	266	1,2811	50	3,4131	ϕ =	3,4131	x	ΔT	1,2811
TUB3-100/06D50P	615	320	1,2811	50	4,0957	ϕ =	4,0957	x	ΔT	1,2811
TUB3-100/07D50P	718	373	1,2811	50	4,7783	ϕ =	4,7783	x	ΔT	1,2811
TUB3-100/08D50P	820	426	1,2811	50	5,4609	ϕ =	5,4609	x	ΔT	1,2811
TUB3-100/09D50P	923	479	1,2811	50	6,1435	ϕ =	6,1435	x	ΔT	1,2811
TUB3-100/10D50P	1025	533	1,2811	50	6,8261	ϕ =	6,8261	x	ΔT	1,2811
TUB3-100/11D50P	1128	586	1,2811	50	7,5087	ϕ =	7,5087	x	ΔT	1,2811
TUB3-100/12D50P	1230	639	1,2811	50	8,1913	ϕ =	8,1913	x	ΔT	1,2811
TUB3-100/13D50P	1333	693	1,2811	50	8,8739	ϕ =	8,8739	x	ΔT	1,2811
TUB3-100/14D50P	1435	746	1,2811	50	9,5566	ϕ =	9,5566	x	ΔT	1,2811
TUB3-100/15D50P	1538	799	1,2811	50	10,2392	ϕ =	10,2392	x	ΔT	1,2811
TUB3-100/16D50P	1640	852	1,2811	50	10,9218	ϕ =	10,9218	x	ΔT	1,2811
TUB3-100/17D50P	1743	906	1,2811	50	11,6044	ϕ =	11,6044	x	ΔT	1,2811
TUB3-100/18D50P	1845	959	1,2811	50	12,2870	ϕ =	12,2870	x	ΔT	1,2811
TUB3-100/19D50P	1948	1012	1,2811	50	12,9696	ϕ =	12,9696	x	ΔT	1,2811
TUB3-100/20D50P	2050	1065	1,2811	50	13,6522	ϕ =	13,6522	x	ΔT	1,2811
TUB3-100/21D50P	2153	1119	1,2811	50	14,3348	ϕ =	14,3348	x	ΔT	1,2811
TUB3-100/22D50P	2255	1172	1,2811	50	15,0174	ϕ =	15,0174	x	ΔT	1,2811
TUB3-100/23D50P	2358	1225	1,2811	50	15,7001	ϕ =	15,7001	x	ΔT	1,2811
TUB3-100/24D50P	2460	1279	1,2811	50	16,3827	ϕ =	16,3827	x	ΔT	1,2811
TUB3-100/25D50P	2563	1332	1,2811	50	17,0653	ϕ =	17,0653	x	ΔT	1,2811
TUB3-100/26D50P	2665	1385	1,2811	50	17,7479	ϕ =	17,7479	x	ΔT	1,2811
TUB3-100/27D50P	2768	1438	1,2811	50	18,4305	ϕ =	18,4305	x	ΔT	1,2811
TUB3-100/28D50P	2870	1492	1,2811	50	19,1131	ϕ =	19,1131	x	ΔT	1,2811
TUB3-100/29D50P	2973	1545	1,2811	50	19,7957	ϕ =	19,7957	x	ΔT	1,2811
TUB3-100/30D50P	3075	1598	1,2811	50	20,4783	ϕ =	20,4783	x	ΔT	1,2811
TUB3-100/31D50P	3178	1651	1,2811	50	21,1609	ϕ =	21,1609	x	ΔT	1,2811
TUB3-120/02D50P	245	127	1,2828	50	1,6195	ϕ =	1,6195	x	ΔT	1,2828
TUB3-120/03D50P	367	191	1,2828	50	2,4292	ϕ =	2,4292	x	ΔT	1,2828

TUB3-120/04D50P	490	254	1,2828	50	3,2389	ϕ =	3,2389	x	ΔT	1,2828
TUB3-120/05D50P	612	318	1,2828	50	4,0487	ϕ =	4,0487	x	ΔT	1,2828
TUB3-120/06D50P	734	381	1,2828	50	4,8584	ϕ =	4,8584	x	ΔT	1,2828
TUB3-120/07D50P	857	445	1,2828	50	5,6681	ϕ =	5,6681	x	ΔT	1,2828
TUB3-120/08D50P	979	508	1,2828	50	6,4779	ϕ =	6,4779	x	ΔT	1,2828
TUB3-120/09D50P	1102	572	1,2828	50	7,2876	ϕ =	7,2876	x	ΔT	1,2828
TUB3-120/10D50P	1224	636	1,2828	50	8,0973	ϕ =	8,0973	x	ΔT	1,2828
TUB3-120/11D50P	1346	699	1,2828	50	8,9071	ϕ =	8,9071	x	ΔT	1,2828
TUB3-120/12D50P	1469	763	1,2828	50	9,7168	ϕ =	9,7168	x	ΔT	1,2828
TUB3-120/13D50P	1591	826	1,2828	50	10,5265	ϕ =	10,5265	x	ΔT	1,2828
TUB3-120/14D50P	1714	890	1,2828	50	11,3363	ϕ =	11,3363	x	ΔT	1,2828
TUB3-120/15D50P	1836	953	1,2828	50	12,1460	ϕ =	12,1460	x	ΔT	1,2828
TUB3-120/16D50P	1958	1017	1,2828	50	12,9558	ϕ =	12,9558	x	ΔT	1,2828
TUB3-120/17D50P	2081	1081	1,2828	50	13,7655	ϕ =	13,7655	x	ΔT	1,2828
TUB3-120/18D50P	2203	1144	1,2828	50	14,5752	ϕ =	14,5752	x	ΔT	1,2828
TUB3-120/19D50P	2326	1208	1,2828	50	15,3850	ϕ =	15,3850	x	ΔT	1,2828
TUB3-120/20D50P	2448	1271	1,2828	50	16,1947	ϕ =	16,1947	x	ΔT	1,2828
TUB3-120/21D50P	2570	1335	1,2828	50	17,0044	ϕ =	17,0044	x	ΔT	1,2828
TUB3-120/22D50P	2693	1398	1,2828	50	17,8142	ϕ =	17,8142	x	ΔT	1,2828
TUB3-120/23D50P	2815	1462	1,2828	50	18,6239	ϕ =	18,6239	x	ΔT	1,2828
TUB3-120/24D50P	2938	1525	1,2828	50	19,4336	ϕ =	19,4336	x	ΔT	1,2828
TUB3-120/25D50P	3060	1589	1,2828	50	20,2434	ϕ =	20,2434	x	ΔT	1,2828
TUB3-120/26D50P	3182	1653	1,2828	50	21,0531	ϕ =	21,0531	x	ΔT	1,2828
TUB3-150/02D50P	305	158	1,2854	50	1,9973	ϕ =	1,9973	x	ΔT	1,2854
TUB3-150/03D50P	457	237	1,2854	50	2,9940	ϕ =	2,9940	x	ΔT	1,2854
TUB3-150/04D50P	610	316	1,2854	50	3,9920	ϕ =	3,9920	x	ΔT	1,2854
TUB3-150/05D50P	762	395	1,2854	50	4,9900	ϕ =	4,9900	x	ΔT	1,2854
TUB3-150/06D50P	914	474	1,2854	50	5,9880	ϕ =	5,9880	x	ΔT	1,2854
TUB3-150/07D50P	1067	553	1,2854	50	6,9860	ϕ =	6,9860	x	ΔT	1,2854
TUB3-150/08D50P	1219	632	1,2854	50	7,9840	ϕ =	7,9840	x	ΔT	1,2854
TUB3-150/09D50P	1372	711	1,2854	50	8,9820	ϕ =	8,9820	x	ΔT	1,2854
TUB3-150/10D50P	1524	790	1,2854	50	9,9800	ϕ =	9,9800	x	ΔT	1,2854
TUB3-150/11D50P	1676	869	1,2854	50	10,9780	ϕ =	10,9780	x	ΔT	1,2854
TUB3-150/12D50P	1829	948	1,2854	50	11,9760	ϕ =	11,9760	x	ΔT	1,2854
TUB3-150/13D50P	1981	1027	1,2854	50	12,9740	ϕ =	12,9740	x	ΔT	1,2854
TUB3-150/14D50P	2134	1106	1,2854	50	13,9719	ϕ =	13,9719	x	ΔT	1,2854
TUB3-150/15D50P	2286	1186	1,2854	50	14,9699	ϕ =	14,9699	x	ΔT	1,2854
TUB3-150/16D50P	2438	1265	1,2854	50	15,9679	ϕ =	15,9679	x	ΔT	1,2854
TUB3-150/17D50P	2591	1344	1,2854	50	16,9659	ϕ =	16,9659	x	ΔT	1,2854
TUB3-150/18D50P	2743	1423	1,2854	50	17,9639	ϕ =	17,9639	x	ΔT	1,2854
TUB3-150/19D50P	2896	1502	1,2854	50	18,9619	ϕ =	18,9619	x	ΔT	1,2854
TUB3-150/20D50P	3048	1581	1,2854	50	19,9599	ϕ =	19,9599	x	ΔT	1,2854
TUB3-150/21D50P	3200	1660	1,2854	50	20,9579	ϕ =	20,9579	x	ΔT	1,2854
TUB3-150/22D50P	3353	1739	1,2854	50	21,9559	ϕ =	21,9559	x	ΔT	1,2854
TUB3-180/02D50P	365	189	1,2876	50	2,3723	ϕ =	2,3723	x	ΔT	1,2876
TUB3-180/03D50P	548	284	1,2876	50	3,5585	ϕ =	3,5585	x	ΔT	1,2876
TUB3-180/04D50P	731	379	1,2876	50	4,7447	ϕ =	4,7447	x	ΔT	1,2876

Nr (No.) **NDWU/1/TUBUS 3 D50P/2021**

TUB3-180/05D50P	914	473	1,2876	50	5,9308	ϕ =	5,9308	x	ΔT	1,2876
TUB3-180/06D50P	1096	568	1,2876	50	7,1170	ϕ =	7,1170	x	ΔT	1,2876
TUB3-180/07D50P	1279	662	1,2876	50	8,3031	ϕ =	8,3031	x	ΔT	1,2876
TUB3-180/08D50P	1462	757	1,2876	50	9,4893	ϕ =	9,4893	x	ΔT	1,2876
TUB3-180/09D50P	1644	852	1,2876	50	10,6755	ϕ =	10,6755	x	ΔT	1,2876
TUB3-180/10D50P	1827	946	1,2876	50	11,8616	ϕ =	11,8616	x	ΔT	1,2876
TUB3-180/11D50P	2010	1041	1,2876	50	13,0478	ϕ =	13,0478	x	ΔT	1,2876
TUB3-180/12D50P	2192	1136	1,2876	50	14,2340	ϕ =	14,2340	x	ΔT	1,2876
TUB3-180/13D50P	2375	1230	1,2876	50	15,4201	ϕ =	15,4201	x	ΔT	1,2876
TUB3-180/14D50P	2558	1325	1,2876	50	16,6063	ϕ =	16,6063	x	ΔT	1,2876
TUB3-180/15D50P	2741	1420	1,2876	50	17,7925	ϕ =	17,7925	x	ΔT	1,2876
TUB3-180/16D50P	2923	1514	1,2876	50	18,9786	ϕ =	18,9786	x	ΔT	1,2876
TUB3-180/17D50P	3106	1609	1,2876	50	20,1648	ϕ =	20,1648	x	ΔT	1,2876
TUB3-180/18D50P	3289	1704	1,2876	50	21,3510	ϕ =	21,3510	x	ΔT	1,2876
TUB3-180/19D50P	3471	1798	1,2876	50	22,5371	ϕ =	22,5371	x	ΔT	1,2876
TUB3-180/20D50P	3654	1893	1,2876	50	23,7233	ϕ =	23,7233	x	ΔT	1,2876
TUB3-180/21D50P	3837	1987	1,2876	50	24,9094	ϕ =	24,9094	x	ΔT	1,2876
TUB3-180/22D50P	4019	2082	1,2876	50	26,0956	ϕ =	26,0956	x	ΔT	1,2876
TUB3-180/23D50P	4202	2177	1,2876	50	27,2818	ϕ =	27,2818	x	ΔT	1,2876
TUB3-200/02D50P	406	210	1,2889	50	2,6225	ϕ =	2,6225	x	ΔT	1,2889
TUB3-200/03D50P	609	315	1,2889	50	3,9338	ϕ =	3,9338	x	ΔT	1,2889
TUB3-200/04D50P	812	420	1,2889	50	5,2451	ϕ =	5,2451	x	ΔT	1,2889
TUB3-200/05D50P	1015	525	1,2889	50	6,5564	ϕ =	6,5564	x	ΔT	1,2889
TUB3-200/06D50P	1218	631	1,2889	50	7,8676	ϕ =	7,8676	x	ΔT	1,2889
TUB3-200/07D50P	1421	736	1,2889	50	9,1789	ϕ =	9,1789	x	ΔT	1,2889
TUB3-200/08D50P	1624	841	1,2889	50	10,4902	ϕ =	10,4902	x	ΔT	1,2889
TUB3-200/09D50P	1827	946	1,2889	50	11,8015	ϕ =	11,8015	x	ΔT	1,2889
TUB3-200/10D50P	2030	1051	1,2889	50	13,1127	ϕ =	13,1127	x	ΔT	1,2889
TUB3-200/11D50P	2233	1156	1,2889	50	14,4240	ϕ =	14,4240	x	ΔT	1,2889
TUB3-200/12D50P	2436	1261	1,2889	50	15,7353	ϕ =	15,7353	x	ΔT	1,2889
TUB3-200/13D50P	2639	1366	1,2889	50	17,0466	ϕ =	17,0466	x	ΔT	1,2889
TUB3-200/14D50P	2842	1471	1,2889	50	18,3578	ϕ =	18,3578	x	ΔT	1,2889
TUB3-200/15D50P	3045	1576	1,2889	50	19,6691	ϕ =	19,6691	x	ΔT	1,2889
TUB3-200/16D50P	3248	1681	1,2889	50	20,9804	ϕ =	20,9804	x	ΔT	1,2889
TUB3-200/17D50P	3451	1787	1,2889	50	22,2917	ϕ =	22,2917	x	ΔT	1,2889
TUB3-200/18D50P	3654	1892	1,2889	50	23,6029	ϕ =	23,6029	x	ΔT	1,2889
TUB3-200/19D50P	3857	1997	1,2889	50	24,9142	ϕ =	24,9142	x	ΔT	1,2889
TUB3-200/20D50P	4060	2102	1,2889	50	26,2255	ϕ =	26,2255	x	ΔT	1,2889
TUB3-200/21D50P	4263	2207	1,2889	50	27,5368	ϕ =	27,5368	x	ΔT	1,2889

W imieniu producenta podpisał:
(Signed for and on behalf of the manufacturer by:)

Z-ca Prezesa ds. Produkcji
Bartosz Ścierzyński
Nowa Wieś 25.03.2022 r.

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Zastępca Prezesa
ds. realizacji
.....
Bartosz Ścierzyński
(podpis)
(signature)