

Turnbull & Scott™
Trusted.

Turnbull & Scott Trench Heating



Hitte Natural Convection

HITTE

CONTEMPORARY TRENCH AND PERIMETER HEATING FROM HITTE

The Hitte team has been designing and manufacturing space heating products for over 20 years in the Czech Republic. High quality materials, skilled engineers and modern production methods are combined to deliver the Hitte portfolio which carries a 10 year manufacturer's warranty.

The contemporary and stylish Trench and Perimeter Heating ranges offer highly effective and discrete heating and cooling solutions whether installed as primary or secondary heating systems or as a cold air barrier under large glazed areas.

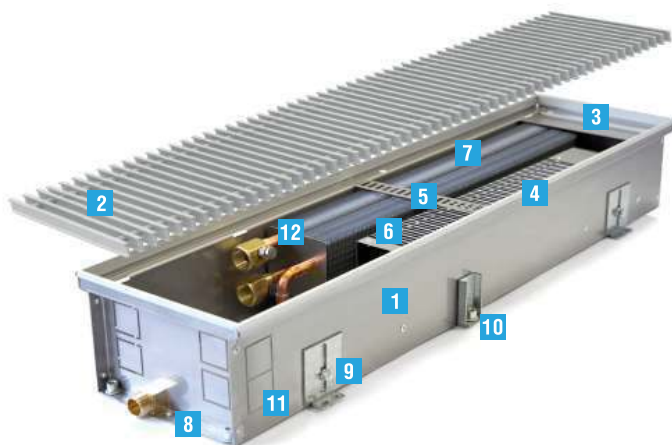
The Hitte Trench range includes Natural Convection, Fan Assisted and Electric options as well

as combined Heating–Cooling units. Models are also available for use in wet and humid environments.

For areas where creating a floor trench is not feasible, the Natural Convection floor standing Perimeter Heater presents an elegant alternative.

In addition to the standard straight trench units, mitred cornering, and blank units can be added to provide a continuous aesthetic. Curved/arc shaped trench heaters can also be manufactured to order. The Hitte team will undertake bespoke designs for the most complex and challenging of projects.

PRODUCT FEATURES



- 1** The standard trough, for use in dry environments, is available in either black powder coated FeZn steel or AISI 304 stainless steel. For wet and humid environments and for heating–cooling trench units the trough is AISI 316 stainless steel.
- 2** The flexible sprung design grille covers are available in various aluminum shades or wood.
- 3** There are 2 protective metal cover plates, the larger covers the pipe connections and the smaller covers the electrical terminals.
- 4** The decorative edging can match the selected grille colour. It must be flush with the finished floor or within 0–1 mm.
- 5** The spacer is used to maintain the geometry of the trough prior to installation. It should be removed post–installation.
- 6** The 24DC fan for fan–assisted trench heating models. (Fan–assisted trench heating models have a significantly increased heating output level compared to natural convection models).
- 7** The heat exchanger element has aluminum fins on copper tubes with 1/2" pipe connections.
- 8** The drainage pipe for water/condensate outflow, for models NWX, FWX, FCX.
- 9** The height adjustable fixing screw attaches the trench unit to the trench floor after the unit has been leveled.
- 10** Adjustable leveling legs. There will be one at each corner and additional leveling legs along the length of the trough will be fitted in longer units.
- 11** Knock–outs for heating pipe access.
- 12** Air bleed valve.

TRENCH HEATING PRODUCT CODES

convectors

	HITTE	FXX	080	245	2000	X	N	X	X
brand name									
MODEL									
NXX — natural convection									
NXA — natural convection, an air spigot									
NWX — natural convection, for wet environment									
NWA — natural convection, for wet environment, an air spigot									
NSX — natural convection, self-standing									
NMX — natural convection, wall-mounted									
FXX — with a fan									
FXA — with a fan, an air spigot									
FWX — with a fan, for wet environment									
FWA — with a fan, for wet environment, an air spigot									
FSX — with a fan, self-standing									
FMX — with a fan, wall-mounted									
FCX — with a fan, cooling/heating									
FCA — with a fan, cooling/heating, an air spigot									
EXX — electrical 220V									
HEIGHT									
WIDTH									
LENGTH									
TROUGH MATERIAL									
X — standard, AISI 304 stainless steel									
F — black powder coated FeZn steel, RAL 9005									
A — non-standard, additional information required									
EDGING									
N — aluminum									
L — light bronze									
D — dark bronze									
- — without edges									
A — non-standard, additional information required									
PIPE CONNECTION									
X — standard (right side)									
L — left side									
A — non-standard, additional information required									
PRODUCT CLASSIFICATION									
X — standard									
A — non-standard, additional information required									

grilles

	HITTE	G	XX	080	245	2000	X	N	XX
brand name									
MODEL									
G — a grille									
S — on a spring									
T — consists of segments									
L — longitudinal									
GRILLE CLASSIFICATION									
X — standard									
A — non-standard, additional information required									
HEIGHT									
WIDTH									
LENGTH									
LENGTH CLASSIFICATION									
X — standard									
A — non-standard, additional information required									
GRILLE MATERIAL									
N — aluminum									
L — light bronze									
D — dark bronze									
O — oak									
A — ash tree									
B — beech									
I — stainless steel									
GRILLE MATERIAL CLASSIFICATION									
X — standard									
A — non-standard, additional information required									



WITH FAN



WITHOUT FAN



FOR HEATING



FOR COOLING



FOR WET ENVIRONMENT



LOW-NOISE



AIR SPIGOT FOR FRESH AIR



ELECTRICAL



TROUGH MADE OF BLACK POWDER COATED FeZn STEEL, RAL 9005

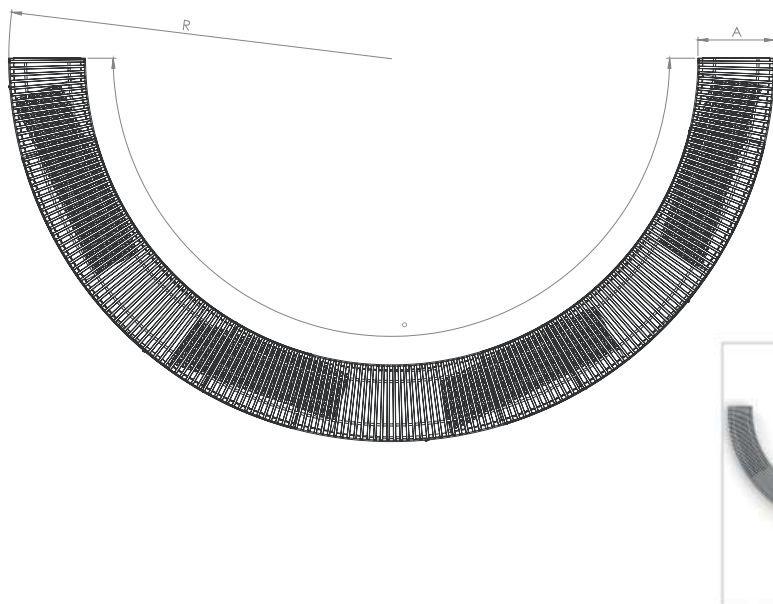


TROUGH MADE OF AISI 304 STAINLESS STEEL



TROUGH MADE OF AISI 316 STAINLESS STEEL FOR WET/HUMID ENVIRONMENTS AND COMBINED HEATING-COOLING TRENCH UNITS.

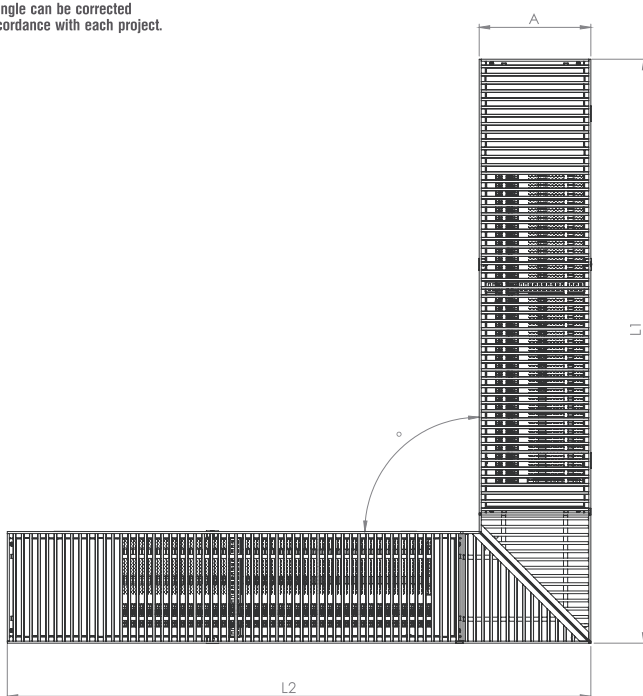
CURVED TRENCH HEATING

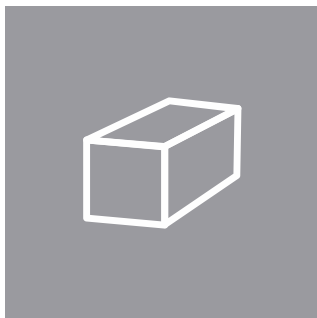
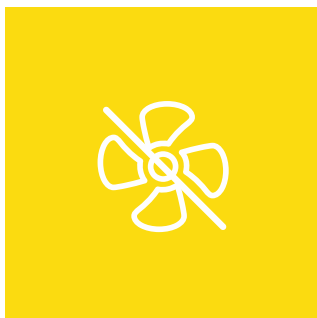


MITRED CORNERS



The angle can be corrected
in accordance with each project.





HITTE
NATURAL TRENCH HEATING

NXX NATURAL TRENCH HEATING

NXX Trench Heating operates on the principle of natural convection, without a fan. Cold air is drawn from the window side of the unit, passes through a heat exchanger and rises naturally up into the room. As the air rises, it is replaced by more cool air and this cycle continues as long as hot water is circulating through the heat exchanger.

The Natural Trench Heating Range has two types:

- NXX model for standard dry environments such as offices, shops, houses etc.
- NWX for wet/humid environments such as bathrooms, swimming pools or saunas

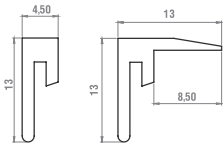
Standard Features

- choice of trough material – stainless steel or black powder coated FeZn steel; ;
- choice of natural, light bronze or dark bronze painted aluminium perimeter trough edging;
- spacers to protect trench geometry during installation and concrete pouring;
- cover plates to protect water and electrical connections;
- drainage connectors for wet/humid environment trench units and combined heating and cooling trench units;
- a set of trench floor fixing legs and level adjustment screws;
- 18mm MDF cover to protect against damage and exposure to construction debris during installation.

Bespoke Trench Heating Design & Manufacture

Bespoke trenching heating systems can be designed and manufactured to meet the most challenging project specifications.

Standard Edging or Extended Edging



Standard Edging

The standard edge creates a frame around the perimeter of the unit and fits snugly against the trough.

Extended Edging

The extended edge is an optional feature and should be specified when placing the order.

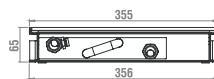
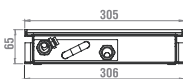
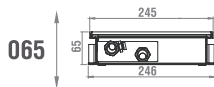
The extended edge should be attached to the inner edge of the trough after the supper layer of the floor is finished.

Typically this would match the Grille colour unless an alternative colour is requested.

NXX 065



NATURAL CONVECTION TRENCH HEATING



L 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 2500 2600 2700 2800 2900 3000

NXX 065 Specifications

Natural Convection Trench Heating

Height: 65 mm

Width: 245 / 305 / 355

Length: 800 mm – 3000 mm (step 100 mm)

Description:

- for dry interiors: offices, apartments, private houses, shop windows;
- suitable for installation in multi-story buildings where the depth of the floor screed does not exceed 7–10 cm;
- can be combined with other heating systems.

Connection: inner thread G 1/2"

Water temperature: 38 –110 °C

Maximum working pressure: 16 bar



Knock-outs for water pipe connections at multiple locations to suit project preferences.

Standard Trough Material Options



Suitable for standard dry environments only.

NXX 065 Grille Option

Available Grille colours in the Hitte standard range.
Non-standard colours available on request at additional cost (RAL system).



MATT ALUMINUM



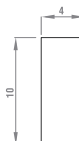
DARK BRONZE



LIGHT BRONZE



BLACK RAL 9005



Standard Grille

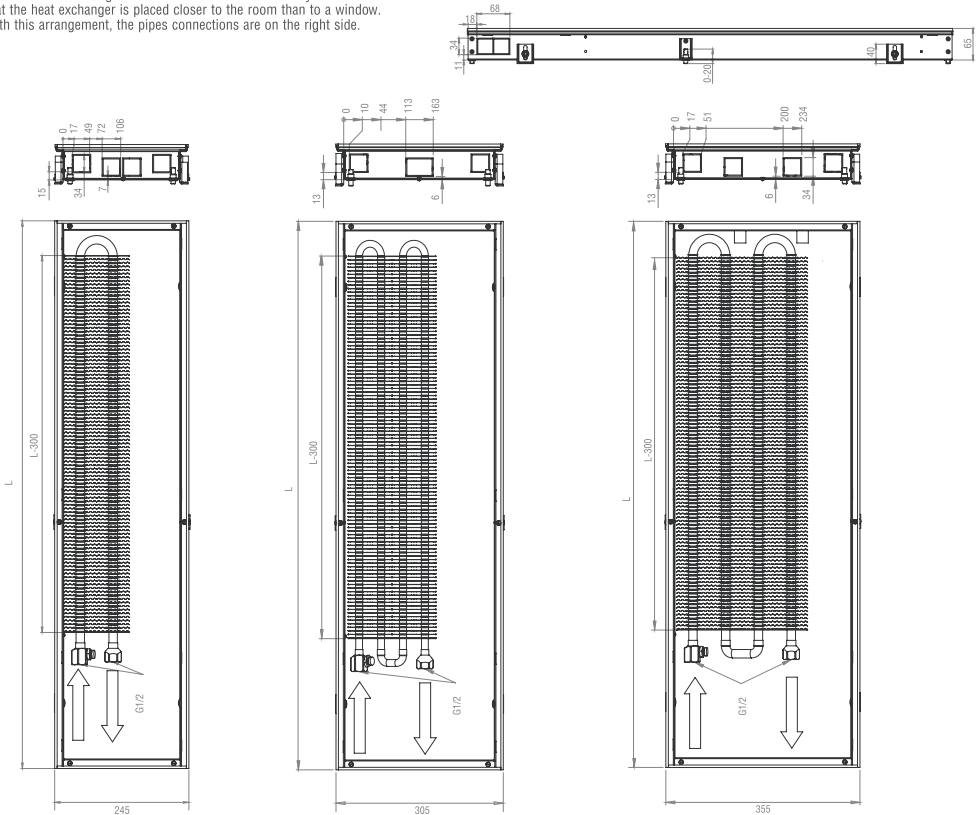
H 065 Thermal Output Table



	width	t water	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000
65	245	95/85/20	150	181	211	242	273	304	335	366	397	428	458	489	551	551	582	613	644	674	705	736	767	798	829
		75/65/20	101	122	143	164	185	206	227	248	269	289	310	331	352	373	394	415	436	457	478	498	519	540	561
		50/40/20	45	55	64	73	83	92	102	111	120	130	139	148	158	167	176	186	195	205	214	223	233	242	251
65	305	95/85/20	173	208	244	279	315	351	386	422	457	493	528	564	635	635	671	706	742	778	813	849	884	920	956
		75/65/20	118	143	167	191	216	240	265	289	313	338	362	386	411	435	460	484	508	533	557	582	606	630	655
		50/40/20	54	65	77	88	99	110	121	133	144	155	166	177	189	200	211	222	233	245	256	267	278	289	300
65	355	95/85/20	185	223	261	299	337	375	413	451	490	528	566	604	680	680	718	756	794	832	870	909	947	985	1023
		75/65/20	122	147	172	197	222	247	272	298	323	348	373	398	423	448	473	498	524	549	574	599	624	649	674
		50/40/20	52	62	73	84	94	105	115	126	137	147	158	169	179	190	201	211	222	232	243	254	264	275	286

Installation

Natural Trench Heating is installed into a floor in such way that the heat exchanger is placed closer to the room than to a window. With this arrangement, the pipes connections are on the right side.



Accessories

Hydraulic parameters of the heat exchangers are on a p. 48-53



FLEXIBLE STEEL
HOSES
HITTE, 1/2"



LOCK-SHIELD
VALVE ARCO 1/2"



THERMOSTATIC
VALVE ARCO 1/2"



ELECTRIC ACTUATOR
SIEMENS STA 73 AC/DC 24 NC

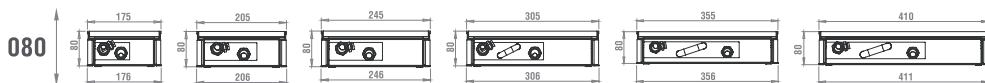


BALL VALVE
ARCO 1/2"

NXX 080



NATURAL CONVECTION TRENCH HEATING



L 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 2500 2600 2700 2800 2900 3000

NXX 080 Specifications

Natural trench heating for a dry environment

Description:

- for dry interiors: offices, apartments, private houses, shop windows;
- suitable for installation in multi-storey buildings, where the depth of the floor screed does not exceed 7–10 cm;
- can be combined with other heating systems.

Heat exchanger water connection: inner thread G 1/2

Stainless steel trough for dry interiors: AISI 304

Trough material thickness: 1 mm

Water temperature: 38 - 110 °C

Maximum working pressure: 16 bar

NWX 080 Specifications

Natural trench heating for wet/humid environments

Description:

- for wet/humid environments: swimming pools, bathrooms, winter gardens;
- suitable for installation in multi-storey buildings, where the depth of the floor screed does not exceed 7–10 cm;

Water/moisture drainage connection: Ø18 mm

Heat exchanger water connections: 1/2" inner thread

Stainless steel trough for wet/humid interiors: AISI 316

Trough material thickness: 1 mm

Water temperature: 38 - 110 °C

Maximum working pressure: 16 bar

Standard Trough Material Options



Knock-outs for water pipe connections at multiple locations to suit project preferences.

Suitable for standard dry environments only.

NXX 080 Grille Option

Available Grille colours in the Hitte standard range.
Non-standard colours available on request at additional cost (RAL system).



MATT
ALUMINUM



OAK



DARK
BRONZE



BEECH



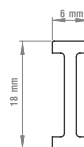
LIGHT
BRONZE



ASH TREE



BLACK
RAL 9005



Standard Grille

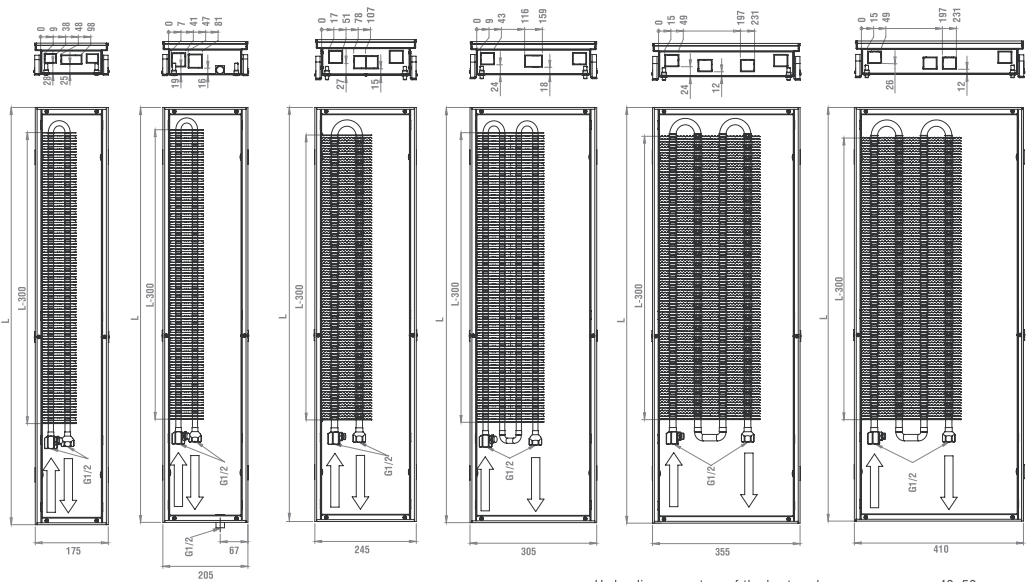
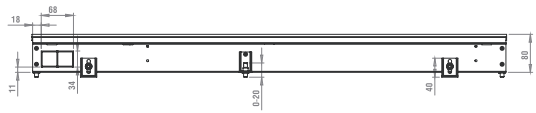
H 080 Thermal Output Table



	width	t water	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000
80	175	95/85/20	105	127	149	171	192	214	236	257	279	301	323	344	388	388	409	431	453	475	496	518	540	561	583
		75/65/20	72	86	101	116	131	146	160	175	190	205	220	234	249	264	279	294	308	323	338	353	367	382	397
		50/40/20	32	39	46	53	59	66	73	79	86	93	99	106	113	120	126	133	140	146	153	160	166	173	180
80	205	95/85/20	156	188	220	252	284	316	348	380	412	445	477	509	573	573	605	637	669	701	733	766	798	830	862
		75/65/20	103	124	145	166	188	209	230	251	272	294	315	336	357	378	400	421	442	463	484	506	527	548	569
		50/40/20	44	53	62	71	80	89	98	107	116	125	134	143	152	161	170	179	188	197	206	215	224	233	242
80	245	95/85/20	199	240	281	322	363	404	445	486	527	568	609	650	732	732	773	814	855	896	937	978	1019	1060	1101
		75/65/20	129	155	182	208	235	261	288	315	341	368	394	421	447	474	500	527	553	580	606	633	660	686	713
		50/40/20	53	63	74	85	96	107	117	128	139	150	161	172	182	193	204	215	226	237	247	258	269	280	291
80	305	95/85/20	203	245	287	328	370	412	454	496	538	579	621	663	747	747	789	831	872	914	956	998	1040	1082	1123
		75/65/20	137	166	194	222	250	279	307	335	364	392	420	449	477	505	534	562	590	618	647	675	703	732	760
		50/40/20	61	74	87	99	112	125	137	150	163	175	188	201	213	226	238	251	264	276	289	302	314	327	340
80	355	95/85/20	307	370	433	496	559	623	686	749	812	875	939	1002	1128	1128	1191	1255	1318	1381	1444	1507	1571	1634	1697
		75/65/20	199	240	281	323	364	405	446	487	528	569	610	651	692	734	775	816	857	898	939	980	1021	1062	1103
		50/40/20	82	99	116	133	150	167	184	201	217	234	251	268	285	302	319	336	353	370	387	404	421	438	454
80	410	95/85/20	326	393	460	528	595	662	729	796	864	931	998	1065	1200	1200	1267	1334	1401	1468	1536	1603	1670	1737	1804
		75/65/20	214	258	302	346	390	434	478	523	567	611	655	699	743	787	831	875	920	964	1008	1052	1096	1140	1184
		50/40/20	90	108	127	145	164	182	201	219	238	256	275	294	312	331	349	368	386	405	423	442	460	479	497

Installation

Natural Trench Heating is installed into a floor in such way that the heat exchanger is placed closer to the room than to a window. With this arrangement, the pipes connections are on the right side.



Accessories

Hydraulic parameters of the heat exchangers are on a p. 48-53



FLEXIBLE STEEL HOSES
HITTE, 1/2"



LOCK-SHIELD VALVE ARCO 1/2"



THERMOSTATIC VALVE ARCO 1/2"



ELECTRIC ACTUATOR
SIEMENS STA 73 AC/DC 24 NC

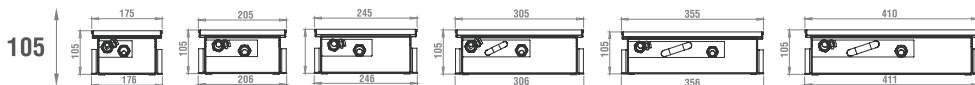


BALL VALVE
ARCO 1/2"

NXX 105



NATURAL CONVECTION TRENCH HEATING



L 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 2500 2600 2700 2800 2900 3000

NXX 105 Specifications

Natural trench heating for a dry environment

Description:

- for dry interiors: offices, apartments, private houses, shop windows;
- can be combined with other heating systems.

Heat exchanger water connection: inner thread G 1/2

Stainless steel trough for dry interiors: AISI 304

Trough material thickness: 1 mm

Water temperature: 38 - 110 °C

Maximum working pressure: 16 bar

NWX 105 Specifications

Natural trench heating for wet/humidwet/humid environments

Description:

- for wet/humid environments: swimming pools, bathrooms, winter gardens;
- suitable for installation in multi-storey buildings, where the depth of the floor screed does not exceed 7–10 cm;

Water/moisture drainage connection: Ø18 mm

Heat exchanger water connections: 1/2" inner thread

Stainless steel trough for wet/humid interiors: AISI 316

Trough material thickness: 1 mm

Water temperature: 38 - 110 °C

Maximum working pressure: 16 bar

Standard Trough Material Options



Knock-outs for water pipe connections at multiple locations to suit project preferences.

Suitable for standard dry environments only.

NXX 105 Grille Option

Available Grille colours in the Hitte standard range.
Non-standard colours available on request at additional cost (RAL system).



MATT
ALUMINIUM



OAK



DARK
BRONZE



BEECH



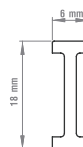
LIGHT
BRONZE



ASH TREE



BLACK
RAL 9005



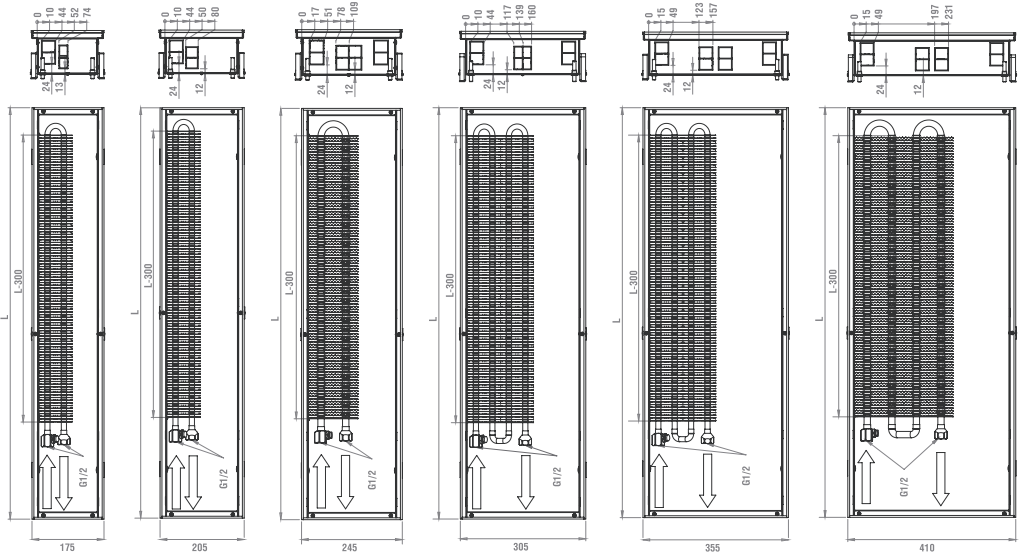
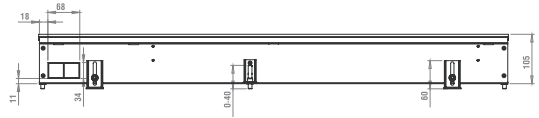
Standard Grille

H 105 Thermal Output Table

	width	t water	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000
105	175	95/85/20	191	230	270	309	349	388	427	467	506	546	585	624	703	703	743	782	821	861	900	940	979	1018	1058
		75/65/20	127	153	180	206	232	258	284	311	337	363	389	415	442	468	494	520	546	573	599	625	651	677	704
		50/40/20	55	66	78	89	100	111	123	134	145	157	168	179	191	202	213	225	236	247	259	270	281	293	304
105	205	95/85/20	241	291	340	390	440	490	539	589	639	688	738	788	887	887	937	987	1036	1086	1136	1185	1235	1285	1335
		75/65/20	158	190	223	255	288	320	353	385	418	450	483	515	548	580	613	645	678	710	743	775	808	840	873
		50/40/20	66	79	93	106	120	133	147	161	174	188	201	215	228	242	255	269	282	296	310	323	337	350	364
105	245	95/85/20	252	304	356	408	460	512	564	615	667	719	771	823	927	927	979	1031	1083	1135	1187	1239	1291	1343	1395
		75/65/20	169	204	239	274	308	343	378	413	448	483	518	552	587	622	657	692	727	762	796	831	866	901	936
		50/40/20	74	90	105	120	136	151	166	182	197	212	228	243	258	274	289	304	320	335	350	365	381	396	411
105	305	95/85/20	287	346	405	464	523	582	641	700	759	818	877	936	1054	1054	1114	1173	1232	1291	1350	1409	1468	1527	1586
		75/65/20	188	227	266	305	344	383	422	460	499	538	577	616	655	693	732	771	810	849	888	927	965	1004	1043
		50/40/20	79	96	112	129	145	161	178	194	211	227	243	260	276	292	309	325	342	358	374	391	407	424	440
105	355	95/85/20	416	502	588	674	760	845	931	1017	1103	1189	1275	1360	1532	1532	1618	1704	1790	1875	1961	2047	2133	2219	2305
		75/65/20	270	325	381	436	492	547	603	659	714	770	825	881	936	992	1048	1103	1159	1214	1270	1325	1381	1437	1492
		50/40/20	110	133	155	178	201	224	246	269	292	314	337	360	382	405	428	450	473	496	519	541	564	587	609
105	410	95/85/20	441	531	622	713	804	895	986	1077	1167	1258	1349	1440	1622	1622	1712	1803	1894	1985	2076	2167	2258	2348	2439
		75/65/20	285	344	403	461	520	579	638	696	755	814	873	932	990	1049	1108	1167	1225	1284	1343	1402	1461	1519	1578
		50/40/20	116	140	164	188	212	236	260	284	308	332	356	380	404	428	452	476	500	524	548	572	596	620	643

Installation

Natural Trench Heating is installed into a floor in such way that the heat exchanger is placed closer to the room than to a window. With this arrangement, the pipes connections are on the right side.



Accessories

Hydraulic parameters of the heat exchangers are on a p. 48-53



FLEXIBLE STEEL HOSES
HITTE, 1/2"



RETURN VALVE ARCO 1/2"



THERMOSTATIC VALVE ARCO 1/2"



ELECTRIC ACTUATOR
SIEMENS STA 73 AC/DC 24 NC

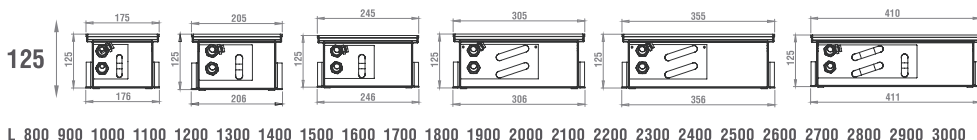


BALL VALVE
ARCO 1/2"

NXX 125



NATURAL CONVECTION TRENCH HEATING



NXX 125 Specifications

Natural trench heating for a dry environment

Description:

- for dry interiors: offices, apartments, private houses, shop windows;
- can be combined with other heating systems.

Heat exchanger water connection: inner thread G 1/2

Stainless steel trough for dry interiors: AISI 304

Trough material thickness: 1 mm

Water temperature: 38 - 110 °C

Maximum working pressure: 16 bar

NWX 125 Specifications

Natural trench heating for wet/humidwet/humid environments

Description:

- for wet/humid environments: swimming pools, bathrooms, winter gardens;
- suitable for installation in multi-storey buildings, where the depth of the floor screed does not exceed 7–10 cm;

Water/moisture drainage connection: Ø18 mm

Heat exchanger water connections: 1/2" inner thread

Stainless steel trough for wet/humid interiors: AISI 316

Trough material thickness: 1 mm

Water temperature: 38 - 110 °C

Maximum working pressure: 16 bar

Standard Trough Material Options



Knock-outs for water pipe connections at multiple locations to suit project preferences.

Suitable for standard dry environments only.

NXX 125 Grille Option

Available Grille colours in the Hitte standard range.
Non-standard colours available on request at additional cost (RAL system).



MATT
ALUMINIUM



OAK



DARK
BRONZE



BEECH



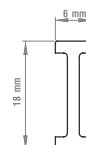
LIGHT
BRONZE



ASH TREE



BLACK
RAL 9005



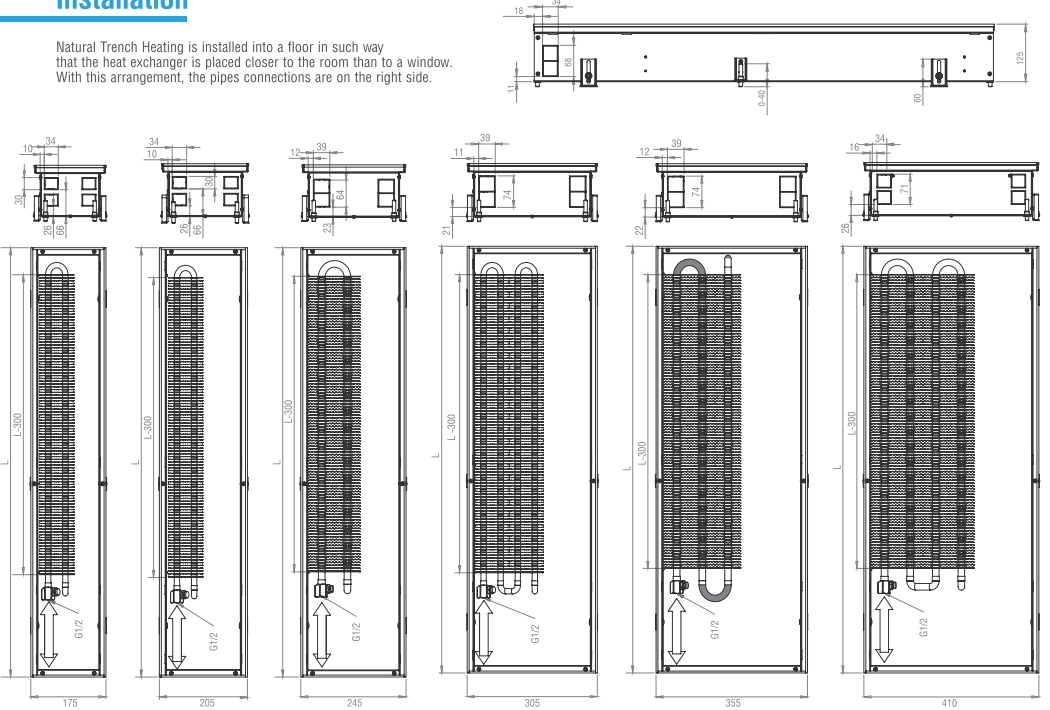
Standard Grille

H 125 Thermal Output Table

	width	t water	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000
125	175	95/85/20	200	242	283	324	365	407	448	489	531	572	613	655	737	737	778	820	861	902	944	985	1026	1068	1109
		75/65/20	133	160	188	215	243	270	298	325	352	380	407	435	462	490	517	544	572	599	627	654	682	709	736
		50/40/20	57	69	81	93	104	116	128	140	152	163	175	187	199	211	222	234	246	258	270	282	293	305	317
125	205	95/85/20	254	306	358	410	463	515	567	620	672	724	776	829	933	933	985	1038	1090	1142	1195	1247	1299	1351	1404
		75/65/20	165	199	234	268	302	336	370	404	438	472	506	540	574	609	643	677	711	745	779	813	847	881	915
		50/40/20	69	83	97	111	125	139	153	167	182	196	210	224	238	252	266	281	295	309	323	337	351	365	379
125	245	95/85/20	259	313	366	420	473	527	580	634	687	741	794	848	954	954	1008	1061	1115	1168	1222	1275	1329	1382	1436
		75/65/20	174	210	245	281	317	353	389	425	460	496	532	568	604	640	675	711	747	783	819	855	890	926	962
		50/40/20	76	92	108	123	139	155	170	186	202	218	233	249	265	280	296	312	327	343	359	375	390	406	422
125	305	95/85/20	395	477	558	640	721	803	884	966	1047	1129	1210	1292	1455	1455	1536	1618	1699	1781	1862	1944	2025	2107	2188
		75/65/20	252	304	356	408	460	512	564	615	667	719	771	823	875	927	979	1031	1083	1135	1187	1239	1291	1343	1394
		50/40/20	100	120	141	161	182	202	223	243	264	284	305	325	346	366	387	407	428	449	469	490	510	531	551
125	355	95/85/20	439	530	620	711	802	892	983	1073	1164	1255	1345	1436	1617	1617	1707	1798	1889	1979	2070	2160	2251	2342	2432
		75/65/20	280	338	396	454	511	569	627	685	742	800	858	916	973	1031	1089	1147	1205	1262	1320	1378	1436	1493	1551
		50/40/20	111	134	157	180	202	225	248	271	294	317	340	363	385	408	431	454	477	500	523	546	568	591	614
125	410	95/85/20	460	554	649	744	839	933	1028	1123	1218	1313	1407	1502	1692	1692	1786	1881	1976	2071	2165	2260	2355	2450	2545
		75/65/20	297	358	420	481	542	603	664	726	787	848	909	971	1032	1093	1154	1216	1277	1338	1399	1461	1522	1583	1644
		50/40/20	121	146	171	196	220	245	270	295	320	345	370	395	420	445	470	495	519	544	569	594	619	644	669

Installation

Natural Trench Heating is installed into a floor in such way that the heat exchanger is placed closer to the room than to a window. With this arrangement, the pipes connections are on the right side.



Accessories

Hydraulic parameters of the heat exchangers are on a p. 48-53



FLEXIBLE STEEL HOSES
HITTE, 1/2"



RETURN VALVE ARCO 1/2"



THERMOSTATIC VALVE ARCO 1/2"



ELECTRIC ACTUATOR
SIEMENS STA 73 AC/DC 24 NC

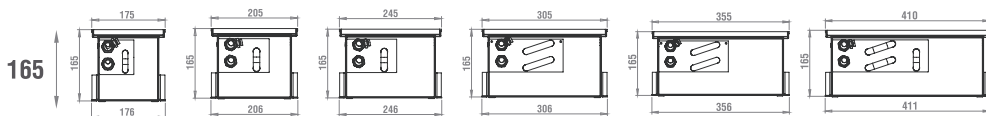


BALL VALVE
ARCO 1/2"

NXX 165



NATURAL CONVECTION TRENCH HEATING



L 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 2500 2600 2700 2800 2900 3000

NXX 165 Specifications

Natural trench heating for a dry environment

Description:

- for dry interiors: offices, apartments, private houses, shop windows;
- can be combined with other heating systems.

Heat exchanger water connection: inner thread G 1/2

Stainless steel trough for dry interiors: AISI 304

Trough material thickness: 1 mm

Water temperature: 38 - 110 °C

Maximum working pressure: 16 bar

NWX 165 Specifications

Natural trench heating for wet/humidwet/humid environments

Description:

- for wet/humid environments: swimming pools, bathrooms, winter gardens;
- suitable for installation in multi-storey buildings, where the depth of the floor screed does not exceed 7–10 cm;

Water/moisture drainage connection: Ø18 mm

Heat exchanger water connections: 1/2" inner thread

Stainless steel trough for wet/humid interiors: AISI 316

Trough material thickness: 1 mm

Water temperature: 38 - 110 °C

Maximum working pressure: 16 bar

Standard Trough Material Options



Knock-outs for water pipe connections at multiple locations to suit project preferences.



Suitable for standard dry environments only.

NXX 165 Grille Option

Available Grille colours in the Hitte standard range.
Non-standard colours available on request at additional cost (RAL system).



MATT
ALUMINUM



OAK



DARK
BRONZE



BEECH



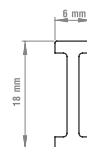
LIGHT
BRONZE



ASH TREE



BLACK
RAL 9005



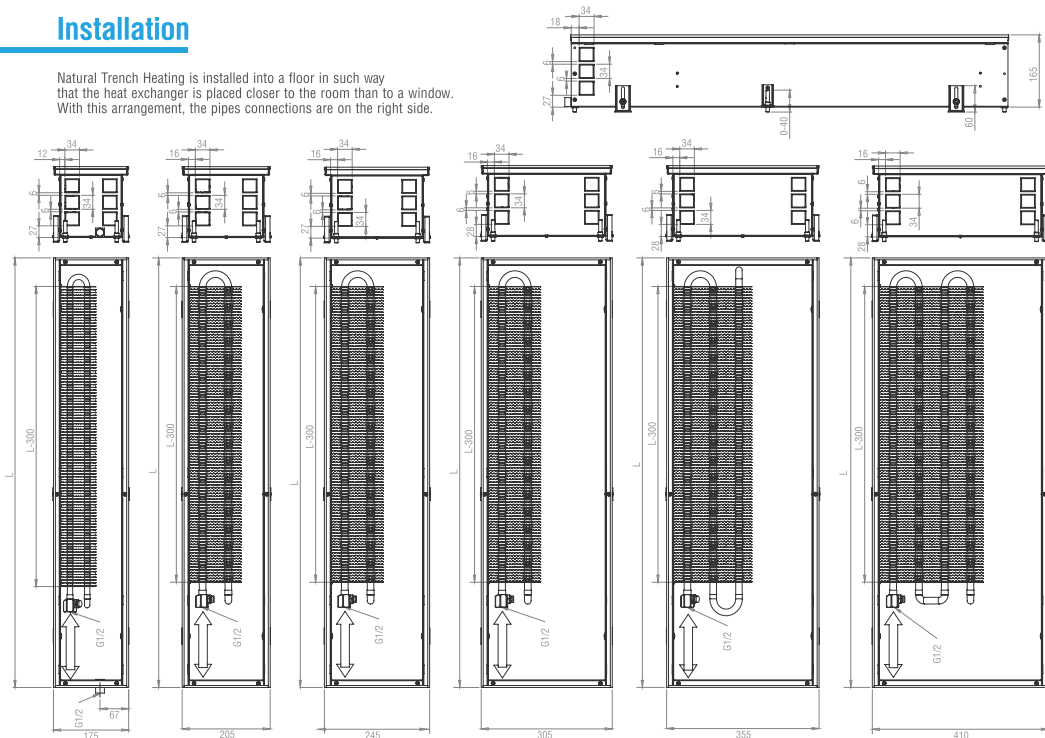
Standard Grille

H 165 Thermal Output Table

	width	t water	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000
165	175	95/85/20	203	245	287	329	371	413	455	497	539	581	623	665	748	748	790	832	874	916	958	1000	1042	1084	1126
		75/65/20	135	163	191	218	246	274	302	330	357	385	413	441	469	497	524	552	580	608	636	663	691	719	747
		50/40/20	58	70	82	94	106	118	130	142	154	165	177	189	201	213	225	237	249	261	273	285	297	309	321
165	205	95/85/20	310	374	438	502	566	630	694	758	822	886	950	1014	1142	1142	1206	1270	1333	1397	1461	1525	1589	1653	1717
		75/65/20	202	244	285	327	369	410	452	494	535	577	619	660	702	744	785	827	869	910	952	994	1035	1077	1119
		50/40/20	84	101	118	135	153	170	187	204	222	239	256	273	290	308	325	342	359	377	394	411	428	446	463
165	245	95/85/20	357	431	504	578	652	725	799	872	946	1020	1093	1167	1314	1314	1388	1461	1535	1609	1682	1756	1829	1903	1977
		75/65/20	234	282	331	379	427	476	524	572	620	669	717	765	814	862	910	958	1007	1055	1103	1151	1200	1248	1296
		50/40/20	98	118	139	159	179	199	220	240	260	280	301	321	341	361	382	402	422	442	463	483	503	523	544
165	305	95/85/20	430	519	607	696	785	873	962	1050	1139	1228	1316	1405	1582	1582	1671	1760	1848	1937	2026	2114	2203	2292	2380
		75/65/20	274	331	387	444	500	557	614	670	727	783	840	896	953	1009	1066	1122	1179	1236	1292	1349	1405	1462	1518
		50/40/20	109	131	153	176	198	221	243	265	288	310	333	355	377	400	422	445	467	489	512	534	556	579	601
165	355	95/85/20	521	629	736	844	952	1059	1167	1274	1382	1489	1597	1704	1919	1919	2027	2134	2242	2349	2457	2564	2672	2779	2887
		75/65/20	331	400	468	536	605	673	741	810	878	946	1015	1083	1151	1220	1288	1356	1425	1493	1561	1630	1698	1766	1835
		50/40/20	130	157	184	211	238	265	291	318	345	372	399	426	453	480	506	532	558	584	610	636	662	688	714
165	410	95/85/20	689	831	973	1115	1257	1399	1541	1683	1825	1967	2109	2251	2535	2535	2677	2819	2962	3104	3246	3388	3530	3672	3814
		75/65/20	433	523	612	702	791	880	970	1059	1148	1238	1327	1416	1506	1595	1685	1774	1863	1953	2042	2131	2221	2310	2399
		50/40/20	167	201	236	270	304	339	373	408	442	476	511	545	580	614	648	683	717	752	786	820	854	888	

Installation

Natural Trench Heating is installed into a floor in such way that the heat exchanger is placed closer to the room than to a window. With this arrangement, the pipes connections are on the right side.



Accessories

Hydraulic parameters of the heat exchangers are on a p. 48–53



FLEXIBLE STEEL
HOSES
HITTE. 1/2"



RETURN
VALVE ARCO 1/2"



THERMOSTATIC
VALVE ARCO 1/2"



ELECTRIC ACTUATOR
SIEMENS STA 73 AC/DC 24 NC

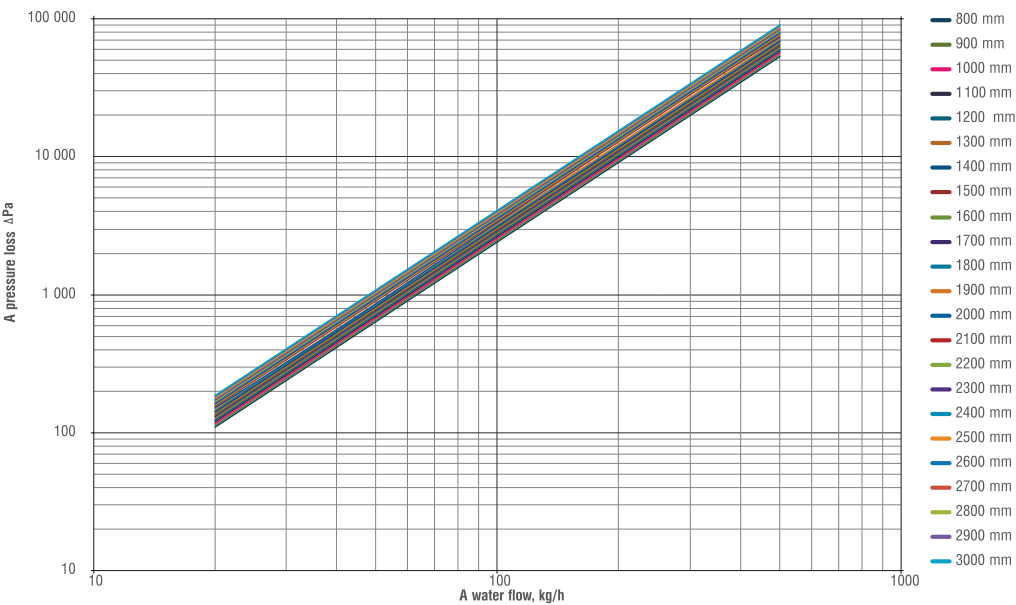


BALL VALVE
ARCO 1/2"

Attention! Due to the continuous development of products, the manufacturer reserves the right to make additional changes without prior notice.

Pressure loss 2 tube heat exchanger Cu Ø12 mm
depending on the length and water flow

A trench length (mm)	0,8	0,9	1	1,1	1,2	1,3	1,4	1,5	1,6	1,7	1,8	1,9	2	2,1	2,2	2,3	2,4	2,5	2,6	2,7	2,8	2,9	3	
A heat exchanger length (mm)	0,55	0,65	0,75	0,85	0,95	1,05	1,15	1,25	1,35	1,45	1,55	1,65	1,75	1,85	1,95	2,05	2,15	2,25	2,35	2,45	2,55	2,65	2,75	
A pipe length (mm)	1,09	1,29	1,49	1,69	1,89	2,09	2,29	2,49	2,69	2,89	3,09	3,29	3,49	3,69	3,89	4,09	4,29	4,49	4,69	4,89	5,09	5,29	5,49	
A water flow (kg/h)	Δ p (Pa)																							
20	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	
40	82	86	89	93	96	100	103	107	110	114	118	121	125	128	132	135	139	142	146	150	153	157	160	
60	173	180	188	195	203	210	218	225	233	240	248	255	263	270	278	285	293	300	308	315	323	330	338	
100	443	462	481	500	519	539	558	577	596	615	635	654	673	692	711	731	750	769	788	807	827	846	865	
160	1051	1097	1142	1188	1233	1279	1325	1370	1416	1461	1507	1552	1598	1644	1689	1735	1780	1826	1872	1917	1963	2008	2054	
250	2389	2493	2596	2700	2804	2907	3011	3114	3218	3322	3425	3529	3633	3736	3840	3944	4047	4151	4254	4358	4462	4565	4669	
400	5673	5919	6165	6411	6657	6903	7149	7395	7642	7888	8134	8380	8626	8872	9118	9364	9610	9856	10102	10349	10595	10841	11087	
600	11962	12481	13000	13519	14037	14557	15076	15595	16114	16632	17151	17670	18189	18708	19227	19746	20265	20784	21303	21822	22341	22859	23378	



For models:

- NXX 080 175

NXX 105 175
- FXX 065 175

FXX 080 175

FXX 105 175

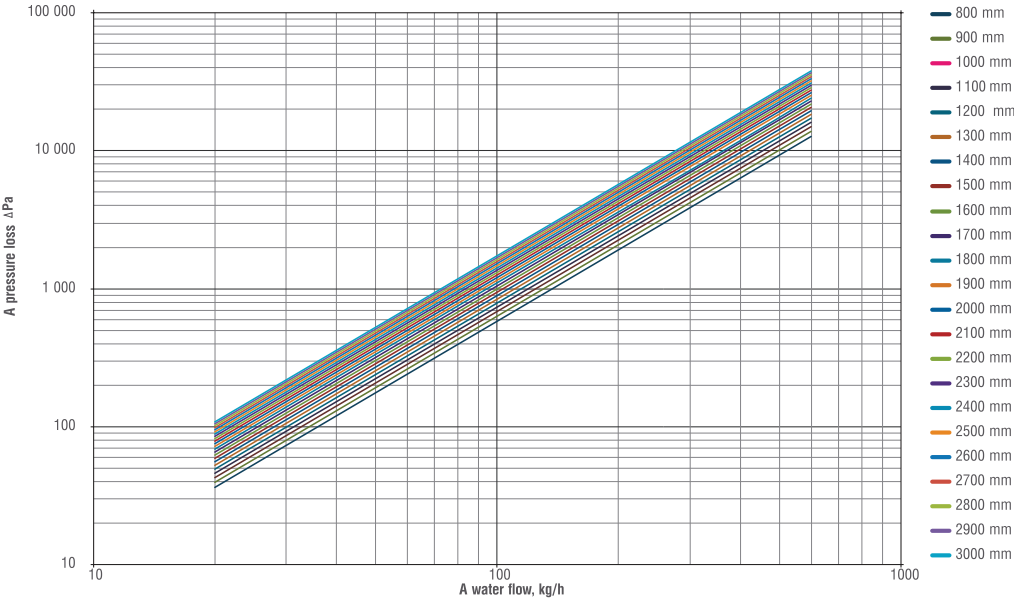
FXX 065 205

FXX 080 205

FXX 105 205

Pressure loss 4 tube heat exchanger Cu Ø12 mm
depending on the length and water flow

A trench length (mm)	0,8	0,9	1	1,1	1,2	1,3	1,4	1,5	1,6	1,7	1,8	1,9	2	2,1	2,2	2,3	2,4	2,5	2,6	2,7	2,8	2,9	3
A heat exchanger length (mm)	0,55	0,65	0,75	0,85	0,95	1,05	1,15	1,25	1,35	1,45	1,55	1,65	1,75	1,85	1,95	2,05	2,15	2,25	2,35	2,45	2,55	2,65	2,75
A pipe length (mm)	2,1776	2,5776	2,9776	3,3776	3,7776	4,1776	4,5776	4,9776	5,3776	5,7776	6,1776	6,5776	6,9776	7,3776	7,7776	8,1776	8,5776	8,9776	9,3776	9,7776	10,178	10,578	10,978
A water flow (kg/h)	Δp (Pa)																						
20	36,074	39,182	42,289	45,396	48,503	51,61	54,717	57,824	60,932	64,039	67,146	70,253	73,36	76,467	79,575	82,682	85,789	88,896	92,003	95,11	98,217	101,32	104,43
40	125,62	136,44	147,26	158,08	168,9	179,72	190,54	201,36	212,18	223	233,82	244,64	255,46	266,27	277,09	287,91	298,73	309,55	320,37	331,19	342,01	352,83	363,65
60	260,63	283,07	305,52	327,97	350,42	372,87	395,31	417,76	440,21	462,66	485,11	507,56	530	552,45	574,9	597,35	619,8	642,24	664,69	687,14	709,59	732,04	754,49
100	653,65	709,95	766,25	822,55	878,85	935,15	991,45	1047,8	1104,1	1160,4	1216,7	1273	1329,3	1385,6	1441,9	1498,2	1554,5	1610,8	1667,1	1723,4	1779,7	1836	1892,3
160	1523,2	1654,4	1785,6	1916,8	2048	2179,2	2310,4	2441,6	2572,8	2704	2835,2	2966,4	3097,6	3228,8	3360	3491,2	3622,4	3753,6	3884,8	4016	4147,2	4278,4	4409,6
250	3401,2	3694,2	3987,1	4280,1	4573,1	4866	5159	5451,9	5744,9	6037,8	6330,8	6623,7	6916,7	7209,7	7502,6	7795,6	8088,5	8381,5	8674,4	8967,4	9260,3	9553,3	9846,2
400	7926	8608,7	9291,3	9974	10657	11339	12022	12705	13387	14070	14753	15435	16118	16801	17483	18166	18849	19532	20214	20897	21580	22262	22945
600	16444	17861	19277	20694	22110	23526	24943	26359	27775	29192	30608	32025	33441	34857	36274	37690	39107	40523	41939	43356	44772	46188	47605



For models:

- NXX 125 175

NXX 165 175

NXX 205 175

NXX 065 305

NXX 080 305

NXX 105 305
- FXX 125 175

FXX 125 205

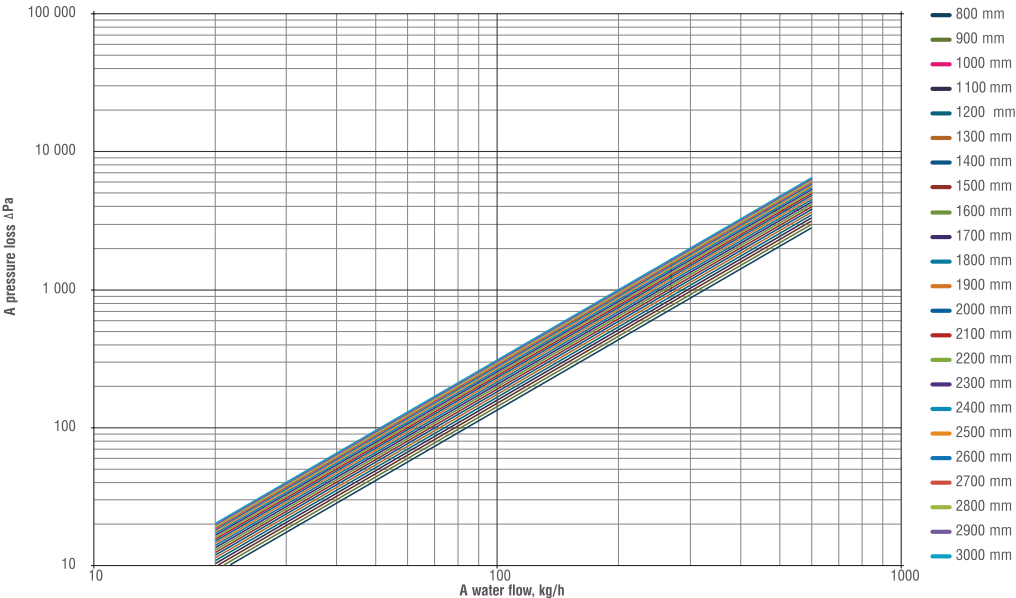
FXX 080 305

FXX 105 305

FXX 105 355

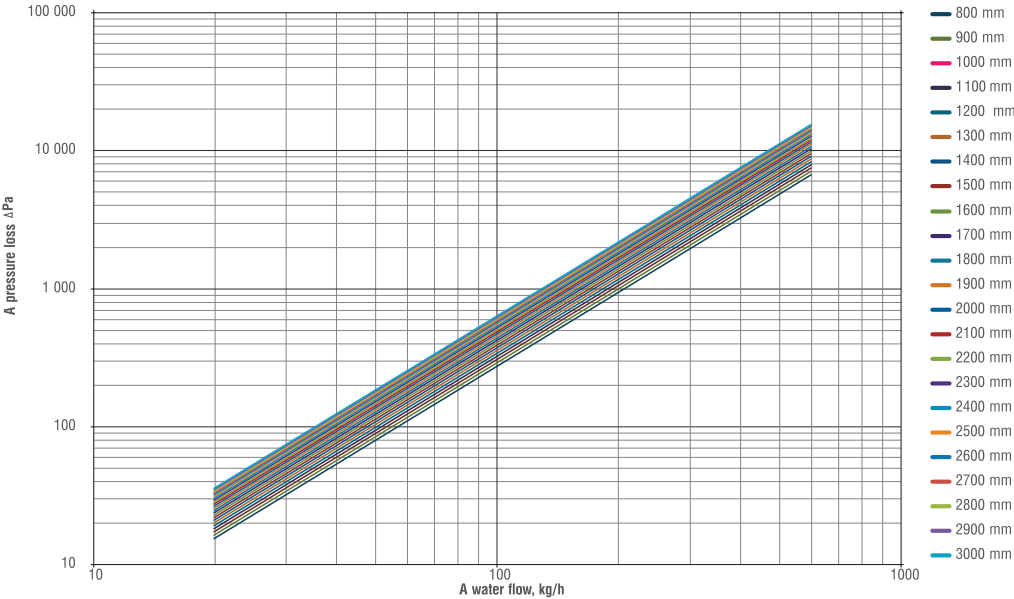
Pressure loss 2 tube heat exchanger Cu Ø15 mm
depending on the length and water flow

A trench length (mm)	0,8	0,9	1	1,1	1,2	1,3	1,4	1,5	1,6	1,7	1,8	1,9	2	2,1	2,2	2,3	2,4	2,5	2,6	2,7	2,8	2,9	3	
A heat exchanger length (mm)	0,55	0,65	0,75	0,85	0,95	1,05	1,15	1,25	1,35	1,45	1,55	1,65	1,75	1,85	1,95	2,05	2,15	2,25	2,35	2,45	2,55	2,65	2,75	
A pipe length (mm)	1,0888	1,2888	1,4888	1,6888	1,8888	2,0888	2,2888	2,4888	2,6888	2,8888	3,0888	3,2888	3,4888	3,6888	3,8888	4,0888	4,2888	4,4888	4,6888	4,8888	5,0888	5,2888	5,4888	
A water flow (kg/h)	Δp (Pa)																							
20	8,5986	9,1302	9,6618	10,193	10,725	11,256	11,788	12,32	12,851	13,383	13,914	14,446	14,978	15,509	16,041	16,572	17,104	17,635	18,167	18,699	19,23	19,762	20,293	
40	27,937	29,664	31,391	33,118	34,845	36,572	38,3	40,027	41,754	43,481	45,208	46,935	48,662	50,389	52,116	53,843	55,57	57,298	59,025	60,752	62,479	64,206	65,933	
60	55,659	59,1	62,541	65,982	69,422	72,863	76,304	79,745	83,186	86,627	90,068	93,509	96,95	100,39	103,83	107,27	110,71	114,15	117,59	121,04	124,48	127,92	131,36	
100	132,64	140,84	149,04	157,24	165,44	173,64	181,84	190,04	198,24	206,44	214,64	222,84	231,04	239,24	247,44	255,64	263,84	272,04	280,24	288,44	296,64	304,84	313,04	
160	294,9	313,14	331,37	349,6	367,83	386,06	404,29	422,52	440,75	458,99	477,22	495,45	513,68	531,91	550,14	568,37	586,61	604,84	623,07	641,3	659,53	677,76	695,99	
250	629,76	668,69	707,63	746,56	785,49	824,42	863,35	902,29	941,22	980,15	1019,1	1058	1096,9	1135,9	1174,8	1213,7	1252,7	1291,6	1330,5	1369,5	1408,4	1447,3	1486,3	
400	1400,2	1486,7	1573,3	1659,8	1746,4	1833	1919,5	2006,1	2092,6	2179,2	2265,8	2352,3	2438,9	2525,4	2612	2698,6	2785,1	2871,7	2958,2	3044,8	3131,4	3217,9	3304,5	
600	2789,6	2962	3134,5	3306,9	3479,4	3651,8	3824,3	3996,7	4169,2	4341,6	4514,1	4686,5	4859	5031,4	5203,9	5376,3	5548,8	5721,3	5893,7	6066,2	6238,6	6411,1	6583,5	



Pressure loss 4 tube heat exchanger Cu Ø15 mm
depending on the length and water flow

A trench length (mm)	0,8	0,9	1	1,1	1,2	1,3	1,4	1,5	1,6	1,7	1,8	1,9	2	2,1	2,2	2,3	2,4	2,5	2,6	2,7	2,8	2,9	3	
A heat exchanger length (mm)	0,55	0,65	0,75	0,85	0,95	1,05	1,15	1,25	1,35	1,45	1,55	1,65	1,75	1,85	1,95	2,05	2,15	2,25	2,35	2,45	2,55	2,65	2,75	
A pipe length (mm)	2,1776	2,5776	2,9776	3,3776	3,7776	4,1776	4,5776	4,9776	5,3776	5,7776	6,1776	6,5776	6,9776	7,3776	7,7776	8,1776	8,5776	8,9776	9,3776	9,7776	10,178	10,578	10,978	
A water flow (kg/h)	Δp (Pa)																							
20	17,197	18,26	19,324	20,387	21,45	22,513	23,576	24,639	25,702	26,766	27,829	28,892	29,955	31,018	32,081	33,144	34,208	35,271	36,334	37,397	38,46	39,523	40,587	
40	55,874	59,328	62,782	66,236	69,691	73,145	76,599	80,053	83,507	86,962	90,416	93,87	97,324	100,78	104,23	107,69	111,14	114,6	118,05	121,5	124,96	128,41	131,87	
60	111,32	118,2	125,08	131,96	138,84	145,73	152,61	159,49	166,37	173,25	180,14	187,02	193,9	200,78	207,66	214,54	221,43	228,31	235,19	242,07	248,95	255,84	262,72	
100	265,28	281,68	298,08	314,48	330,88	347,28	363,68	380,08	396,48	412,88	429,28	445,68	462,08	478,48	494,88	511,28	527,68	544,08	560,48	576,88	593,28	609,68	626,08	
160	589,81	626,27	662,73	699,2	735,66	772,12	808,58	845,05	881,51	917,97	954,43	990,9	1027,4	1063,8	1100,3	1136,7	1173,2	1209,7	1246,1	1282,6	1319,1	1355,5	1392	
250	1259,5	1337,4	1415,3	1493,1	1571	1648,8	1726,7	1804,6	1882,4	1960,3	2038,2	2116	2193,9	2271,8	2349,6	2427,5	2505,4	2583,2	2661,1	2739	2816,8	2894,7	2972,5	
400	2800,3	2973,4	3146,6	3319,7	3492,8	3665,9	3839	4012,2	4185,3	4358,4	4531,5	4704,6	4877,8	5050,9	5224	5397,1	5570,2	5743,4	5916,5	6089,6	6262,7	6435,8	6609	
600	5579,1	5924	6268,9	6613,8	6958,7	7303,6	7648,5	7993,4	8338,4	8683,3	9028,2	9373,1	9718	10063	10408	10753	11098	11443	11787	12132	12477	12822	13167	



For models:

- NXX 125 205

NXX 165 205

NXX 205 205

NXX 125 245

NXX 165 245

NXX 205 245

NXX 065 355

NXX 080 355

NXX 080 410

NXX 105 410
- FXX 125 245

FXX 165 245

FXX 165 305

FXX 065 355

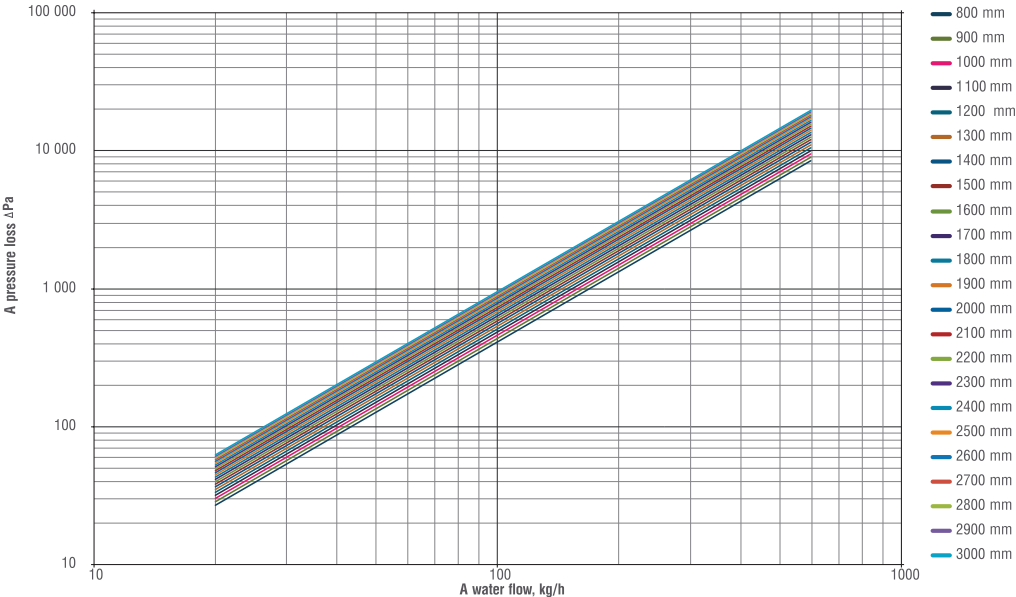
FXX 080 355

FXX 080 410

FXX 105 410

Pressure loss 6 tube heat exchanger CuØ 12 mm
depending on the length and water flow

A trench length (mm)	0,8	0,9	1	1,1	1,2	1,3	1,4	1,5	1,6	1,7	1,8	1,9	2	2,1	2,2	2,3	2,4	2,5	2,6	2,7	2,8	2,9	3	
A heat exchanger length (mm)	0,55	0,65	0,75	0,85	0,95	1,05	1,15	1,25	1,35	1,45	1,55	1,65	1,75	1,85	1,95	2,05	2,15	2,25	2,35	2,45	2,55	2,65	2,75	
A pipe length (mm)	3,2664	3,8664	4,4664	5,0664	5,6664	6,2664	6,8664	7,4664	8,0664	8,6664	9,2664	9,8664	10,466	11,066	11,666	12,266	12,866	13,466	14,066	14,666	15,266	15,866	16,466	
A water flow (kg/h)																								
20	25,796	27,391	28,985	30,58	32,175	33,769	35,364	36,959	38,554	40,148	41,743	43,338	44,933	46,527	48,122	49,717	51,311	52,906	54,501	56,096	57,69	59,285	60,88	
40	83,811	88,992	94,173	99,355	104,54	109,72	114,9	120,08	125,26	130,44	135,62	140,8	145,99	151,17	156,35	161,53	166,71	171,89	177,07	182,26	187,44	192,62	197,8	
60	166,98	177,3	187,62	197,94	208,27	218,59	228,91	239,24	249,56	259,88	270,2	280,53	290,85	301,17	311,49	321,82	332,14	342,46	352,78	363,11	373,43	383,75	394,08	
100	397,92	422,52	447,12	471,72	496,32	520,92	545,52	570,12	594,72	619,32	643,92	668,52	693,12	717,72	742,32	766,92	791,52	816,12	840,72	865,32	889,92	914,52	939,12	
160	884,71	939,41	994,1	1048,8	1103,5	1158,2	1212,9	1267,6	1322,3	1377	1431,7	1486,3	1541	1595,7	1650,4	1705,1	1759,8	1814,5	1869,2	1923,9	1978,6	2033,3	2088	
250	1889,3	2060,1	2122,9	2239,7	2356,5	2473,3	2590,1	2706,9	2823,7	2940,5	3057,3	3174,1	3290,8	3407,6	3524,4	3641,2	3758	3874,8	3991,6	4108,4	4225,2	4342	4458,8	
400	4200,5	4460,2	4719,9	4979,5	5239,2	5498,9	5758,6	6018,2	6277,9	6537,6	6797,3	7057	7316,6	7576,3	7836	8095,7	8355,4	8615	8874,7	9134,4	9394,1	9653,8	9913,4	
600	8368,7	8886	9403,4	9920,7	10438	10955	11473	11990	12508	13025	13542	14060	14577	15094	15612	16129	16646	17164	17681	18198	18716	19233	19751	



For models:

NXX 165 305

NXX 205 305

NXX 125 355

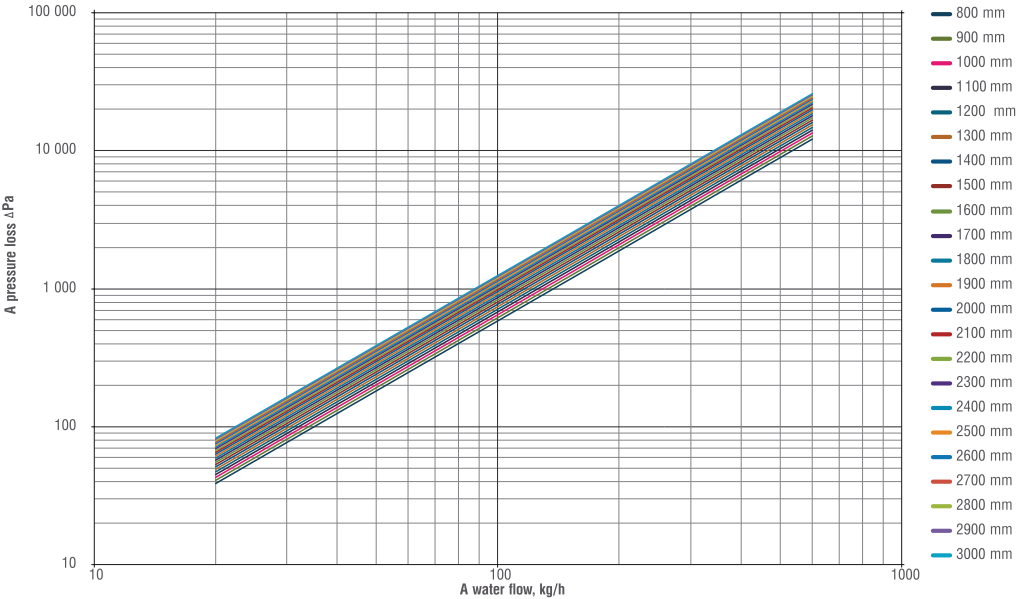
NXX 165 355

NXX 205 355

FXX 125 355

Pressure loss 8 tube heat exchanger Cu Ø15 mm
depending on the length and water flow

A trench length (mm)	0,8	0,9	1	1,1	1,2	1,3	1,4	1,5	1,6	1,7	1,8	1,9	2	2,1	2,2	2,3	2,4	2,5	2,6	2,7	2,8	2,9	3	
A heat exchanger length (mm)	0,55	0,65	0,75	0,85	0,95	1,05	1,15	1,25	1,35	1,45	1,55	1,65	1,75	1,85	1,95	2,05	2,15	2,25	2,35	2,45	2,55	2,65	2,75	
A pipe length (mm)	4,3552	5,1552	5,9552	6,7552	7,5552	8,3552	9,1552	9,9552	10,755	11,555	12,355	13,155	13,955	14,755	15,555	16,355	17,155	17,955	18,755	19,555	20,355	21,155	21,955	
A water flow (kg/h)	Δp (Pa)																							
20	34,394	36,521	38,647	40,773	42,9	45,026	47,152	49,279	51,405	53,531	55,657	57,784	59,91	62,036	64,163	66,289	68,415	70,542	72,668	74,794	76,92	79,047	81,173	
40	111,75	118,66	125,56	132,47	139,38	146,29	153,2	160,11	167,01	173,92	180,83	187,74	194,65	201,56	208,47	215,37	222,28	229,19	236,1	243,01	249,92	256,82	263,73	
60	222,64	236,36	250,16	263,93	277,69	291,45	305,22	318,98	332,74	346,51	360,27	374,03	387,8	401,56	415,33	429,09	442,85	456,62	470,38	484,14	497,91	511,67	525,43	
100	530,56	563,36	596,16	628,96	661,76	694,56	727,36	760,16	792,96	825,76	858,56	891,36	924,16	956,96	989,76	1022,6	1055,4	1088,2	1121	1153,8	1186,6	1219,4	1252,2	
160	1179,6	1252,5	1325,5	1398,4	1471,3	1544,2	1617,2	1690,1	1763	1835,9	1908,9	1981,8	2054,7	2127,6	2200,6	2273,5	2346,4	2419,3	2492,3	2565,2	2638,1	2711	2784	
250	2519	2674,8	2830,5	2986,2	3142	3297,7	3453,4	3609,1	3764,9	3920,6	4076,3	4232,1	4387,8	4543,5	4699,3	4855	5010,7	5166,4	5322,2	5477,9	5633,6	5789,4	5945,1	
400	5600,7	5946,9	6293,1	6639,4	6985,6	7331,9	7678,1	8024,3	8370,6	8716,8	9063	9409,3	9755,5	10102	10448	10794	11140	11487	11833	12179	12525	12872	13218	
600	11158	11848	12538	13228	13917	14607	15297	15987	16677	17367	18056	18746	19436	20126	20816	21505	22195	22885	23575	24265	24954	25644	26334	



For models:

NXX 125 410
NXX 165 410
NXX 205 410

FFX 125 410
FFX 165 410



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