

# Rittling Security Enclosures

Submittal Data, English Language, IP Units

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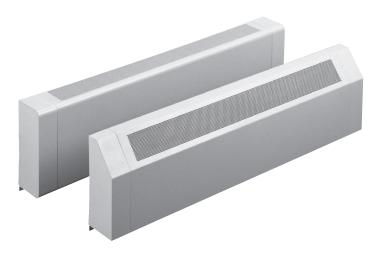
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Contractor	

#### Performance data: heating

Mean water temperature	
	°F
Design room temperature	
	°F
Heating capacity	
	BTU/hr ft

#### Performance data: cooling

Mean water temperature	
	°F
Design room temperature	
	°F
Cooling capacity	
	BTII/hr ft²



#### **English, IP Units**

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**English, IP Units** 

## Features

#### **Enclosures**

- 8 security models in pattern strip perforation or fully perforated styles
- 1 louvered style (S-SL)
- Perforation is standard 1/8" diameter holes on 3/16" staggered centerlines. Other perforation styles.
- 12-, 14- or 16-gauge, phosphatized cold rolled steel (perforated)
- 14-,16- or 18-gauge, phosphatized cold rolled steel (S-SL)
- Powder coating finish available in standard or decorator colors
- 1' to 8' lengths in 6" increments
- Stainless steel available

#### Copper/Aluminum Element

- Tube: 3/4", 1" or 1-1/4"
- Fin: 2-3/4" x 4", 3-1/4" x 3-1/4" or 4-1/4" x 4-1/4"
- 1' to 12' lengths in 6" increments

#### Steel Element

- Tube: 1", 1-1/4" or 2"
- Fin: 3-1/4" x 3-1/4" or 4-1/4" x 4-1/4"
- 1-1/2' to 10' length in 6" increments

#### Mounting

- Off-set mounting channel (standard)
- Off-set full back panel; 14-, 16- or 18-gauge galvannealed steel (perforated enclosures) and 18- or 20-gauge galvannealed steel (S-SL)
- Urethane gasket for air seal available
- 5/16" mounting holes in bottom flange of enclosure
- 4' or 8' lengths

#### **Hangers**

- Wall mounted second row brackets used for mounting all rows of element
- 16-GA galvannealed steel
- Slide cradle will accommodate 1-3/4-inch linear expansion for quiet operation
- Wall pipe hanger for use with bare tube supply and return pipes.

#### **Joints**

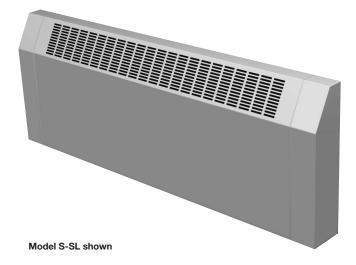
■ Internal joggle joiners provide hairline joints without any external fasteners

#### Damper (optional, partial perforated only)

- Tamper-proof, allen tool operated with exclusive "Anti-Slip" damper rod
- Durable knob option available for S-SL only (non-security)

#### **Accessories**

- Standard accessories are 18-gauge
- 14- and 16-gauge are available
- Overlap for telescoping fit
- Optional butt fit available



**English, IP Units** 

Performance ratings: model S-SP5/PS5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		element	Enclosure	Recommended minimum	EDR*	Steam heat	Hot water heat				
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
		1	ı		Steel element	ı	J	J.	ı	ı	
		1	12	16	3.6	867	676	598	529	460	
		1	18	22	3.8	905	706	624	552	480	
		2	18	22	5.6	1351	1054	933	824	716	
	1S-3¼ X 3¼-32	1	24	28	3.9	942	735	650	575	500	
		2	24	28	5.9	1408	1098	971	859	746	
		3	24	28	6.6	1582	1234	1091	965	838	
		1	12	16	4.0	964	752	665	588	511	
<u></u>		1	18	22	4.3	1038	810	716	633	550	
Dia. steel		2	18	22	6.3	1523	1188	1051	929	807	
Dia	1S-3¼ X 3¼-40	1	24	28	4.5	1075	839	742	656	570	
<b>=</b>		2	24	28	6.7	1600	1248	1104	976	848	
		3	24	28	9.5	2274	1774	1569	1387	1205	
		1	12	16	4.4	1067	832	736	651	565	
	1S-31/4 X 31/4-48	1	18	22	5.1	1214	947	838	741	643	
		2	18	22	7.3	1746	1362	1205	1065	925	
		1	24	28	5.2	1251	976	863	763	663	
		2	24	28	7.4	1786	1393	1232	1089	947	
		3	24	28	9.0	2163	1687	1493	1320	1147	
		1	12	16	4.6	1115	870	769	680	591	
		1	18	22	4.8	1164	908	803	710	617	
	10 41/ 1/ 10	2	18	22	7.3	1745	1361	1204	1065	925	
	1S-4¼ X 4¼-32	1	24	28	5.1	1212	945	836	739	642	
		2	24	28	7.6	1818	1418	1254	1109	964	
		3	24	28	8.7	2085	1626	1438	1272	1105	
		1	12	16	5.3	1260	983	870	769	668	
<u> </u>		1	18	22	5.7	1357	1059	937	828	719	
Dia. steel	10 41/ 1/ 10	2	18	22	8.0	1915	1494	1321	1168	1015	
Dia	1S-4¼ X 4¼-40	1	24	28	5.9	1406	1097	970	858	745	
<b>-</b>		2	24	28	8.4	2012	1569	1388	1227	1066	
		3	24	28	11.6	2788	2174	1923	1700	1477	
		1	12	16	5.9	1406	1097	970	858	745	
		1	18	22	6.7	1600	1248	1104	976	848	
	40 41/ W 41/ 40	2	18	22	8.9	2133	1664	1472	1301	1131	
	1S-4¼ X 4¼-48	1	24	28	6.9	1648	1286	1137	1005	874	
		2	24	28	9.1	2182	1702	1505	1331	1156	
		3	24	28	10.5	2521	1966	1739	1538	1336	

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

General data
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Performance ratings: model S-SP5/PS5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

	Rows		ment Enclosure n	Recommended minimum EDR*	Steam heat	Hot water heat				
	Element	(on 6-inch	height (in inches)	installed height (in inches)	(ft²/ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
					Steel element					
		1	12	16	3.5	850	663	587	519	451
		1	18	22	3.7	887	692	612	541	470
	41/ C 01/ V 01/ 00	2	18	22	5.7	1365	1065	942	833	724
	11/4S-31/4 X 31/4-32	1	24	28	3.9	924	721	638	564	490
		2	24	28	5.9	1422	1109	981	867	754
		3	24	28	6.8	1631	1272	1125	995	864
		1	12	16	3.9	936	730	646	571	496
tee		1	18	22	4.2	1008	786	696	615	534
1¹/₄" Dia. steel		2	18	22	6.2	1479	1154	1020	902	784
۵	11/4S-31/4 X 31/4-40	1	24	28	4.4	1044	814	720	637	553
11/4		2	24	28	6.5	1554	1212	1072	948	823
		3	24	28	9.2	2208	1722	1524	1347	1170
		1	12	16	4.2	1016	793	701	620	539
	11/4S-31/4 X 31/4-48	1	18	22	4.8	1156	902	798	705	613
		2	18	22	6.9	1647	1285	1137	1005	873
		1	24	28	5.0	1191	929	822	727	631
		2	24	28	7.0	1685	1314	1163	1028	893
		3	24	28	8.4	2022	1577	1395	1233	1072
		1	12	16	4.6	1110	870	770	680	590
		1	18	22	4.8	1150	890	790	700	610
	41/0 41/ 7/ 41/ 00	2	18	22	7.2	1730	1350	1190	1060	920
	11/4S-41/4 X 41/4-32	1	24	28	5	1190	930	820	730	630
		2	24	28	7.5	1810	1410	1250	1100	960
		3	24	28	8.6	2070	1610	1430	1260	1100
		1	12	16	5.2	1250	980	860	760	660
ee		1	18	22	5.6	1340	1050	920	820	710
a.st	41/0 41/ 1/ 40	2	18	22	7.9	1900	1480	1310	1160	1010
ä	1 <sup>1</sup> / <sub>4</sub> S-4 <sup>1</sup> / <sub>4</sub> X 4 <sup>1</sup> / <sub>4</sub> -40	1	24	28	5.8	1380	1080	950	840	730
11/4" Dia. steel		2	24	28	8.3	1980	1540	1370	1210	1050
_		3	24	28	11.5	2760	1760	1560	1380	1200
		1	12	16	5.8	1400	1090	970	850	740
		1	18	22	6.6	1580	1230	1090	960	840
	41/0 41/ 7/ 41/ 40	2	18	22	8.8	2100	1640	1450	1280	1110
	1 <sup>1</sup> / <sub>4</sub> S-4 <sup>1</sup> / <sub>4</sub> X 4 <sup>1</sup> / <sub>4</sub> -48	1	24	28	6.8	1620	1260	1120	990	860
		2	24	28	9	2170	1690	1500	1320	1150
		3	24	28	10.4	2500	1950	1730	1530	1330

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

General data
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Performance ratings: model S-SP5/PS5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element		Rows of element (on 6-inch centers)  Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft²/ ft)	Steam heat	Hot water heat				
					215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
	Steel element									
		1	12	16	4.4	1060	827	731	647	562
		1	18	22	4.6	1106	863	763	675	586
	2S-4 <sup>1</sup> / <sub>4</sub> X 4 <sup>1</sup> / <sub>4</sub> -32	2	18	22	7.0	1676	1307	1157	1022	888
	23-474 X 474-32	1	24	28	4.8	1152	899	795	703	611
		2	24	28	7.3	1746	1362	1205	1065	925
		3	24	28	8.3	2002	1562	1381	1221	1061
	2S-4¹/₄ X 4¹/₄-40	1	12	16	5.0	1211	944	835	738	642
ee		1	18	22	5.4	1304	1017	900	795	691
r. st		2	18	22	7.6	1820	1420	1256	1110	965
2" Dia. steel	23-4 /4 X 4 /4-40	1	24	28	5.6	1350	1053	932	824	716
2		2	24	28	8.0	1912	1492	1320	1167	1014
		3	24	28	10.9	2622	2045	1809	1599	1390
		1	12	16	5.6	1350	1053	932	824	716
		1	18	22	6.4	1536	1198	1060	937	814
	2S-4 <sup>1</sup> / <sub>4</sub> X 4 <sup>1</sup> / <sub>4</sub> -48	2	18	22	8.4	2006	1565	1384	1224	1063
	23-4 /4 A 4 /4-40	1	24	28	6.6	1583	1235	1092	966	839
		2	24	28	8.6	2052	1601	1416	1252	1088
		3	24	28	9.8	2346	1830	1619	1431	1244

<sup>\*</sup>EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

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- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

Performance ratings: model S-SP5/PS5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		Rows of element	Enclosure	Recommended minimum	EDR*	Steam heat		Hot wa	ter heat	
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
				C	opper elemen	t				
		1	12	16	4.4	1056	824	729	644	560
		1	18	22	4.6	1114	869	768	679	590
	2/0.02/3/4.00	2	18	22	7.3	1754	1368	1211	1070	930
	34C-234 X 4-32	1	24	28	5.0	1190	929	821	726	631
		2	24	28	8.3	1981	1546	1367	1209	1050
		3	24	28	9.7	2323	1812	1603	1417	1231
,		1	12	16	5.2	1260	982	869	768	668
Dia. copper		1	18	22	5.7	1358	1059	937	828	720
S		2	18	22	8.3	1986	1549	1371	1212	1053
Dia.	34C-234 X 4-40	1	24	28	6.2	1476	1151	1018	900	782
34"		2	24	28	9.3	2221	1733	1533	1355	1177
ω,		3	24	28	11.0	2650	2067	1828	1616	1404
		1	12	16	5.5	1319	1028	910	804	699
		1	18	22	6.3	1515	1182	1046	924	803
		2	18	22	8.2	1965	1533	1356	1199	1042
	34C-234 X 4-48	1	24	28	7.1	1692	1320	1168	1032	897
		2	24	28	10.3	2473	1929	1706	1509	1311
		3	24	28	12.6	3026	2361	2088	1846	1604
		1	12	16	4.1	990	772	683	604	525
		1	18	22	4.4	1044	814	720	637	553
		2	18	22	6.7	1612	1257	1112	983	854
	3/4C-31/4 X 31/4-32	1	24	28	4.7	1116	870	770	681	591
		2	24	28	7.6	1820	1420	1256	1110	965
		3	24	28	8.8	2112	1647	1457	1288	1119
		1	12	16	4.8	1152	899	795	703	611
Dia. copper		1	18	22	5.2	1242	969	857	758	658
So		2	18	22	7.4	1786	1393	1232	1089	946
Jia.	3/4C-31/4 X 31/4-40	1	24	28	5.6	1350	1053	932	824	716
34" [		2	24	28	8.3	1997	1558	1378	1218	1058
6,		3	24	28	9.8	2362	1842	1630	1441	1252
		1	12	16	5.0	1206	941	832	736	639
		1	18	22	5.8	1386	1081	956	845	735
	2/0.01/ 7/01/ -0	2	18	22	7.2	1730	1350	1194	1055	917
	3/4C-3 <sup>1</sup> / <sub>4</sub> X 3 <sup>1</sup> / <sub>4</sub> -48	1	24	28	6.5	1548	1207	1068	944	820
		2	24	28	9.1	2177	1698	1502	1328	1154
		3	24	28	10.9	2621	2044	1808	1599	1389

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

General	data

Performance ratings: model S-SP5/PS5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		Rows of element	Enclosure	Recommended minimum	EDR*	Steam heat		Hot wa	ter heat	
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
				C	opper elemen	t				
		1	12	16	5.5	1310	1020	900	800	690
		1	18	22	5.8	1390	1080	960	850	740
	3/4C-41/4 X 41/4-32	2	18	22	8.5	2050	1600	1410	1250	1090
		1	24	28	6.2	1480	1150	1020	900	780
		2	24	28	9.6	2310	1800	1590	1410	1220
		3	24	28	11	2640	2060	1820	1610	1400
Ĺ		1	12	16	6.4	1350	1190	1060	930	810
Dia. copper		1	18	22	6.9	1660	1290	1150	1010	880
8	210417741740	2	18	22	9.3	2170	1730	1530	1350	1180
Dia.	3/4C-41/4 X 41/4-40	1	24	28	7.5	1790	1400	1240	1090	950
3/4"		2	24	28	10.4	2490	1940	1720	1520	1320
e .		3	24	28	12	2870	2240	1980	1750	1520
		1	12	16	6.7	1610	1260	1110	980	850
		1	18	22	7.7	1850	1440	1280	1130	980
	210 411 7 411 40	2	18	22	8.9	2130	1660	1470	1300	1130
	3/4C-41/4 X 41/4-48	1	24	28	8.6	2070	1610	1430	1260	1100
		2	24	28	11.2	2690	2100	1860	1640	1430
		3	24	28	13	3120	2430	2150	1900	1650
		1	12	16	4.0	968	755	668	590	513
		1	18	22	4.3	1020	796	704	622	541
	40.0%/ V 4.00	2	18	22	6.3	1517	1183	1047	926	804
	1C-2¾ X 4-32	1	24	28	4.6	1099	857	758	670	582
		2	24	28	7.1	1700	1326	1173	1037	901
		3	24	28	8.3	1998	1558	1379	1219	1059
١.		1	12	16	5.1	1220	952	842	744	647
ber		1	18	22	5.5	1329	1037	917	811	704
co	10 03/ V 4 40	2	18	22	7.3	1742	1359	1202	1063	923
Dia. copper	1C-2¾ X 4-40	1	24	28	6.0	1437	1121	992	877	762
=		2	24	28	8.0	1927	1503	1330	1176	1021
, .		3	24	28	9.7	2326	1814	1605	1419	1233
		1	12	16	5.2	1258	981	868	768	667
		1	18	22	6.1	1464	1142	1010	893	776
	1C-2¾ X 4-48	2	18	22	7.3	1763	1375	1216	1075	934
	10-2% A 4-48	1	24	28	6.7	1618	1262	1116	987	857
		2	24	28	8.6	2061	1608	1422	1257	1092
1		3	24	28	10.2	2450	1911	1690	1494	1298

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

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- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

Performance ratings: model S-SP5/PS5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		Rows of element	Enclosure	Recommended minimum	EDR*	Steam heat		Hot wa	ter heat	
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
				C	opper elemen	t				
		1	12	16	3.7	880	690	610	540	470
		1	18	22	3.9	940	730	650	570	500
	40.01/ V.01/ 00	2	18	22	5.8	1380	1080	950	840	730
	1C-3 <sup>1</sup> / <sub>4</sub> X 3 <sup>1</sup> / <sub>4</sub> -32	1	24	28	4.2	1000	780	690	610	530
		2	24	28	6.5	1570	1220	1080	960	830
		3	24	28	7.5	1810	1410	1250	1100	960
		1	12	16	4.5	1080	840	750	660	570
ber		1	18	22	4.9	1180	920	810	720	630
Dia. copper		2	18	22	6.6	1580	1230	1090	960	840
Dia.	1C-3 <sup>1</sup> / <sub>4</sub> X 3 <sup>1</sup> / <sub>4</sub> -40	1	24	28	5.3	1280	1000	880	780	680
-		2	24	28	7.3	1760	1370	1210	1070	930
•		3	24	28	8.5	2040	1590	1410	1240	1080
		1	12	16	4.9	1170	910	810	710	620
		1	18	22	5.7	1360	1060	940	830	720
		2	18	22	6.5	1560	1220	1080	950	830
	1C-3 <sup>1</sup> / <sub>4</sub> X 3 <sup>1</sup> / <sub>4</sub> -48	1	24	28	6.3	1510	1180	1040	920	800
		2	24	28	7.6	1820	1420	1260	1110	960
		3	24	28	8.8	2100	1640	1450	1280	1110
		1	12	16	5.3	1280	1000	880	780	680
		1	18	22	5.7	1360	1060	940	830	720
	10 11/ 7/ 11/ 00	2	18	22	8.4	2010	1570	1390	1230	1070
	1C-4 <sup>1</sup> / <sub>4</sub> X 4 <sup>1</sup> / <sub>4</sub> -32	1	24	28	6	1450	1130	1000	890	770
		2	24	28	9.4	2260	1760	1560	1380	1200
		3	24	28	10.8	2590	2020	1790	1580	1370
		1	12	16	6.3	1500	1170	1040	920	800
per		1	18	22	6.8	1630	1270	1130	990	860
Dia. copper	10 11/ 1/ 10	2	18	22	9.1	2200	1700	1500	1330	1160
Jia.	1C-4 <sup>1</sup> / <sub>4</sub> X 4 <sup>1</sup> / <sub>4</sub> -40	1	24	28	7.3	1750	1370	1210	1070	930
<u>+</u>		2	24	28	10.2	2440	1900	1680	1490	1290
-		3	24	28	11.7	2810	2190	1940	1710	1490
		1	12	16	6.6	1430	1230	1090	960	840
		1	18	22	7.5	1810	1410	1250	1100	960
	40 41/. 3/ 41/ 40	2	18	22	8.7	2090	1630	1440	1280	1110
	1C-4 <sup>1</sup> / <sub>4</sub> X 4 <sup>1</sup> / <sub>4</sub> -48	1	24	28	8.5	2030	1580	1400	1240	1080
		2	24	28	11	2640	2060	1820	1610	1400
		3	24	28	12.6	3020	2360	2090	1840	1600

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

General data
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Performance ratings: model S-SP5/PS5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		Rows of element	Enclosure	Recommended minimum	EDR*	Steam heat		Hot wa	ter heat	
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
			J.	C	opper elemen	<u> </u>	J	J.	ı	1
		1	12	16	4.1	992	774	685	605	526
		1	18	22	4.4	1048	818	723	639	556
		2	18	22	6.6	1594	1243	1100	972	845
	11/4C-23/4 X 4-32	1	24	28	4.6	1104	861	762	674	585
		2	24	28	7.4	1786	1393	1232	1089	946
		3	24	28	8.8	2112	1647	1457	1288	1119
_		1	12	16	5.1	1220	952	842	744	647
bbe		1	18	22	5.5	1319	1028	910	804	699
Dia. copper		2	18	22	7.5	1793	1398	1237	1094	950
Dia	11/4C-23/4 X 4-40	1	24	28	5.9	1417	1105	978	864	751
11/4"		2	24	28	8.3	1992	1554	1374	1215	1056
+		3	24	28	10.0	2401	1873	1657	1465	1273
		1	12	16	5.2	1248	973	861	761	661
	11/4C-23/4 X 4-48	1	18	22	6.0	1440	1123	994	878	763
		2	18	22	7.4	1775	1385	1225	1083	941
		1	24	28	6.6	1594	1243	1100	972	845
		2	24	28	9.2	2208	1723	1524	1347	1170
		3	24	28	11.3	2708	2112	1869	1652	1435
		1	12	16	3.8	916	714	632	559	485
		1	18	22	4.0	968	755	668	590	513
	11/4C-31/4 X 31/4-32	2	18	22	6.1	1454	1134	1003	887	771
	174C-374 X 374-32	1	24	28	4.2	1020	795	703	622	540
		2	24	28	6.8	1629	1271	1124	994	864
		3	24	28	8.0	1908	1488	1317	1164	1011
<u>.</u>		1	12	16	4.5	1071	836	739	654	568
Dia. copper		1	18	22	4.8	1158	903	799	706	614
8	11/4C-31/4 X 31/4-40	2	18	22	6.8	1620	1264	1118	988	859
Dia	174 <b>C-</b> 374 X 374-40	1	24	28	5.2	1244	970	858	759	659
11/4"		2	24	28	7.5	1800	1404	1242	1098	954
-		3	24	28	8.7	2098	1636	1447	1280	1112
		1	12	16	4.9	1170	913	807	714	620
		1	18	22	5.6	1350	1053	932	824	716
	11/4C-31/4 X 31/4-48	2	18	22	6.5	1569	1224	1082	957	831
	1/40-0/4 A 0/4-40	1	24	28	6.2	1494	1165	1031	911	792
		2	24	28	8.1	1952	1522	1347	1191	1034
		3	24	28	9.7	2321	1811	1602	1416	1230

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

General data
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Performance ratings: model S-SP5/PS5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

	-	Rows of element	Enclosure	Recommended minimum	EDR*	Steam heat		Hot wa	ter heat	
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
				C	opper elemen	t				
		1	12	16	5.3	1260	980	870	770	670
		1	18	22	5.6	1340	1050	930	820	710
İ	1 <sup>1</sup> / <sub>4</sub> C-4 <sup>1</sup> / <sub>4</sub> X 4 <sup>1</sup> / <sub>4</sub> -32	2	18	22	8.3	1990	1550	1370	1210	1060
	1 /40-4 /4 X 4 /4-32	1	24	28	5.9	1420	1110	980	870	750
		2	24	28	9.3	2220	1730	1530	1350	1180
		3	24	28	10.6	2550	1990	1760	1560	1350
<u> </u>		1	12	16	6.2	1480	1150	1020	900	780
copper		1	18	22	6.7	1610	1260	1110	980	850
8	1 <sup>1</sup> / <sub>4</sub> C-4 <sup>1</sup> / <sub>4</sub> X 4 <sup>1</sup> / <sub>4</sub> -40	2	18	22	9	2160	1690	1490	1320	1150
Dia.	174C-474 X 474-40	1	24	28	7.2	1730	1350	1190	1060	920
11/4"		2	24	28	10	2400	1870	1660	1460	1270
-		3	24	28	11.5	2770	2160	1910	1690	1470
		1	12	16	6.5	1550	1210	1070	950	820
		1	18	22	7.5	1790	1400	1240	1090	950
	1¹/4C-4¹/4 X 4¹/4-48	2	18	22	8.6	2070	1620	1430	1260	1100
	1 74G-4 74 A 4 74-40	1	24	28	8.3	2000	1560	1380	1220	1060
		2	24	28	10.7	2570	2000	1770	1570	1360
		3	24	28	12.4	2980	2320	2050	1820	1580

<sup>\*</sup>EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

General data	General	data
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Performance ratings: model S-SL; louvered enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		Rows of element	Enclosure	Recommended minimum	EDR*	Steam heat		Hot wa	ter heat	
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
					Steel element		,			
		1	12	16	3.63	871	680	601	531	462
		1	18	22	3.77	904	705	624	552	479
	10.01/ \( \) 01/ 00	2	18	22	5.67	1360	1060	938	829	721
	1S-3 <sup>1</sup> / <sub>4</sub> X 3 <sup>1</sup> / <sub>4</sub> -32	1	24	28	3.96	950	741	656	580	504
		2	24	28	6.00	1439	1122	993	878	763
		3	24	28	6.93	1663	1297	1148	1015	881
		1	12	16	4.02	964	752	665	588	511
<u>8</u>		1	18	22	4.35	1043	813	720	636	553
Dia. steel		2	18	22	6.22	1492	1163	1029	910	791
Dia	1S-3 <sup>1</sup> / <sub>4</sub> X 3 <sup>1</sup> / <sub>4</sub> -40	1	24	28	4.62	1109	865	765	676	588
<b>∓</b>		2	24	28	6.60	1584	1236	1093	966	840
		3	24	28	7.54	1808	1411	1248	1103	958
		1	12	16	4.62	1109	865	765	676	588
		1	18	22	5.14	1234	963	852	753	654
		2	18	22	6.79	1630	1272	1125	994	864
	1S-3 <sup>1</sup> / <sub>4</sub> X 3 <sup>1</sup> / <sub>4</sub> -48	1	24	28	5.42	1300	1014	897	793	689
		2	24	28	7.21	1729	1349	1193	1055	916
		3	24	28	8.31	1993	1555	1375	1216	1056
		1	12	16	5.50	1320	1030	911	805	700
		1	18	22	5.71	1370	1069	945	836	726
		2	18	22	8.58	2060	1607	1421	1257	1092
	1S-4 <sup>1</sup> / <sub>4</sub> X 4 <sup>1</sup> / <sub>4</sub> -32	1	24	28	6.00	1440	1123	994	878	763
		2	24	28	9.08	2180	1700	1504	1330	1155
		3	24	28	10.50	2520	1966	1739	1537	1336
		1	12	16	6.08	1460	1139	1007	891	774
<u> </u>		1	18	22	6.58	1580	1232	1090	964	837
Dia. steel		2	18	22	9.42	2260	1763	1559	1379	1198
Dia	1S-4 <sup>1</sup> / <sub>4</sub> X 4 <sup>1</sup> / <sub>4</sub> -40	1	24	28	7.00	1680	1310	1159	1025	890
<u>-</u>		2	24	28	10.00	2400	1872	1656	1464	1272
		3	24	28	11.42	2740	2137	1891	1671	1452
		1	12	16	7.00	1680	1310	1159	1025	890
		1	18	22	7.79	1870	1459	1290	1141	991
	40 41/ 3/ 41/ 50	2	18	22	10.29	2470	1927	1704	1507	1309
	1S-4 <sup>1</sup> / <sub>4</sub> X 4 <sup>1</sup> / <sub>4</sub> -48	1	24	28	8.21	1970	1537	1359	1202	1044
		2	24	28	10.92	2620	2044	1808	1598	1389
		3	24	28	12.58	3020	2356	2084	1842	1601

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

 $\label{lem:lemportant} \textbf{Important rating information} \ \mathsf{Performance} \ \mathsf{ratings} \ \mathsf{based} \ \mathsf{on} :$ 

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

General data
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Performance ratings: model S-SL; louvered enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		Rows of element	Enclosure	Recommended minimum	EDR*	Steam heat		Hot water heat				
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53		
					Steel element							
		1	12	16	3.71	890	694	614	543	472		
		1	18	22	3.79	910	710	628	555	482		
		2	18	22	5.79	1390	1084	959	848	737		
	11/4S-31/4 X 31/4-32	1	24	28	4.08	980	764	676	598	519		
		2	24	28	6.21	1490	1162	1028	909	790		
		3	24	28	7.08	1700	1326	1173	1037	901		
		1	12	16	4.21	1010	788	697	616	535		
ee		1	18	22	4.50	1080	842	745	659	572		
Dia. steel		2	18	22	6.29	1510	1178	1042	921	800		
	11/4S-31/4 X 31/4-40	1	24	28	4.79	1150	897	794	702	610		
11/4"		2	24	28	6.79	1630	1271	1125	994	864		
		3	24	28	7.79	1870	1459	1290	1141	991		
	11/4S-31/4 X 31/4-48	1	12	16	4.71	1130	881	780	689	599		
		1	18	22	5.21	1250	975	863	763	663		
		2	18	22	7.00	1680	1310	1159	1025	890		
		1	24	28	5.50	1320	1030	911	805	700		
		2	24	28	7.42	1780	1388	1228	1086	943		
		3	24	28	8.58	2060	1607	1421	1257	1092		
		1	12	16	5.42	1300	1014	897	793	689		
		1	18	22	5.58	1340	1045	925	817	710		
		2	18	22	8.42	2020	1576	1394	1232	1071		
	11/4S-41/4 X 41/4-32	1	24	28	5.92	1420	1108	980	866	753		
		2	24	28	8.92	2140	1669	1477	1305	1134		
		3	24	28	10.29	2470	1927	1704	1507	1309		
		1	12	16	6.08	1460	1139	1007	891	774		
steel		1	18	22	6.50	1560	1217	1076	952	827		
a.	41/0 41/ W 41/ 40	2	18	22	9.21	2210	1724	1525	1348	1171		
Dia.	11/4S-41/4 X 41/4-40	1	24	28	6.79	1630	1271	1125	994	864		
11/4"		2	24	28	9.79	2350	1833	1622	1434	1246		
		3	24	28	11.21	2690	2098	1856	1641	1426		
		1	12	16	6.79	1630	1271	1125	994	864		
		1	18	22	7.58	1820	1420	1256	1110	965		
	41/.C 41/. V 41/ 40	2	18	22	10.08	2420	1888	1670	1476	1283		
	11/4S-41/4 X 41/4-48	1	24	28	8.00	1920	1498	1325	1171	1018		
		2	24	28	10.71	2570	2005	1773	1568	1362		
		3	24	28	12.42	2980	2324	2056	1818	1579		

<sup>\*</sup>EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

General data
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Performance ratings: model S-SL; louvered enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Element		element (on 6-inch height	Enclosure	t minimum	EDR* (ft²/ ft)	Steam heat	Hot water heat				
			height (in inches)			215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
	Steel element										
		1	12	16	5.34	1281	999	884	781	679	
		1	18	22	5.50	1320	1030	911	805	700	
	2S-4 <sup>1</sup> / <sub>4</sub> X 4 <sup>1</sup> / <sub>4</sub> -32	2	18	22	8.29	1990	1552	1373	1214	1055	
	20-4 /4 X 4 /4-02	1	24	28	5.83	1399	1091	965	853	741	
		2	24	28	8.78	2108	1644	1454	1286	1117	
		3	24	28	10.14	2433	1898	1679	1484	1289	
	2S-4¹/₄ X 4¹/₄-40	1	12	16	5.99	1438	1122	992	877	762	
steel		1	18	22	6.40	1537	1199	1060	937	814	
3. st		2	18	22	9.07	2177	1698	1502	1328	1154	
Dia.		1	24	28	6.69	1606	1252	1108	979	851	
2		2	24	28	9.64	2315	1806	1597	1412	1227	
		3	24	28	11.04	2650	2067	1828	1616	1404	
		1	12	16	6.69	1606	1252	1108	979	851	
	2S-4¹/₄ X 4¹/₄-48	1	18	22	7.47	1793	1398	1237	1094	950	
		2	18	22	9.93	2384	1859	1645	1454	1263	
	23-4 /4 A 4 /4-40	1	24	28	7.88	1891	1475	1305	1154	1002	
		2	24	28	10.55	2531	1975	1747	1544	1342	
		3	24	28	12.23	2935	2290	2025	1791	1556	

<sup>\*</sup>EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

General data
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Performance ratings: model S-SL; louvered enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

	TO/III per active	Rows of	Enclosure	Recommended minimum installed height (in inches)	EDR* (ft²/ ft)	Steam heat	Hot water heat			
	Element	element (on 6-inch centers)	height (in inches)			215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
			J	C	opper elemen	t	ı	J.	ı	1
		1	12	16	4.24	1016	793	701	620	539
		1	18	22	4.48	1076	839	742	656	570
		2	18	22	6.66	1597	1246	1102	974	847
	3/4C-23/4 X 4-32	1	24	28	4.81	1155	901	797	705	612
		2	24	28	7.54	1808	1411	1248	1103	958
		3	24	28	8.64	2072	1616	1430	1264	1098
ارا		1	12	16	5.01	1201	937	829	733	637
Dia. copper		1	18	22	5.47	1313	1024	906	801	696
8	3/ O 03/ V 4 40	2	18	22	7.12	1709	1333	1179	1043	906
Dia.	3/4C-23/4 X 4-40	1	24	28	5.80	1393	1086	961	849	738
		2	24	28	7.92	1901	1483	1312	1159	1007
		3	24	28	9.05	2171	1694	1498	1325	1151
		1	12	16	5.42	1300	1014	897	793	689
	³/4C-2³/4 X 4-48	1	18	22	6.13	1472	1148	1016	898	780
		2	18	22	7.32	1756	1369	1211	1071	930
		1	24	28	6.79	1630	1272	1125	994	864
		2	24	28	8.20	1967	1534	1357	1200	1042
		3	24	28	9.38	2251	1755	1553	1373	1193
	3/4C-3¹/4 X 3¹/4-32	1	12	16	4.92	1180	920	814	720	625
		1	18	22	5.42	1300	1014	897	793	689
		2	18	22	7.50	1800	1404	1242	1098	954
	/4C-3 /4 X 3 /4-32	1	24	28	5.79	1390	1084	959	848	737
		2	24	28	8.58	2060	1607	1421	1257	1092
		3	24	28	9.79	2350	1833	1622	1434	1246
_		1	12	16	5.50	1320	1030	911	805	700
Dia. copper		1	18	22	6.08	1460	1139	1007	891	774
8	3/4C-31/4 X 31/4-40	2	18	22	8.79	2110	1646	1456	1287	1118
Dia.	,+O-O /4 A O /4-40	1	24	28	6.58	1580	1232	1090	964	837
3/4"		2	24	28	9.21	2210	1724	1525	1348	1171
"		3	24	28	10.21	2450	1911	1691	1495	1299
		1	12	16	6.00	1440	1123	994	878	763
		1	18	22	6.92	1660	1295	1145	1013	880
	3/4C-31/4 X 31/4-48	2	18	22	9.00	2160	1685	1490	1318	1145
		1	24	28	7.50	1800	1404	1242	1098	954
		2	24	28	9.50	2280	1778	1573	1391	1208
		3	24	28	10.50	2520	1966	1739	1537	1336

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

General data		General	data
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Performance ratings: model S-SL; louvered enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		Rows of element	Enclosure	Recommended minimum installed height (in inches)	EDR* (ft²/ ft)	Steam heat		Hot wa	ter heat	
	Element	(on 6-inch centers)	height (in inches)			215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
				C	opper elemen		,			
		1	12	16	6.42	1540	1201	1063	939	816
		1	18	22	6.79	1630	1271	1125	994	864
	210 411 74 411 00	2	18	22	10.08	2420	1888	1670	1476	1283
	3/4C-41/4 X 41/4-32	1	24	28	7.29	1750	1365	1208	1068	928
		2	24	28	11.42	2740	2137	1891	1671	1452
		3	24	28	13.08	3140	2449	2167	1915	1664
_		1	12	16	7.58	1820	1420	1256	1110	965
Dia. copper		1	18	22	8.29	1990	1552	1373	1214	1055
00		2	18	22	10.79	2590	2020	1787	1580	1373
Dia.	3/4C-41/4 X 41/4-40	1	24	28	8.79	2110	1646	1456	1287	1118
3/4"		2	24	28	12.00	2880	2246	1987	1757	1526
ຕີ		3	24	28	13.71	3290	2566	2270	2007	1744
	<sup>3</sup> / <sub>4</sub> C-4 <sup>1</sup> / <sub>4</sub> X 4 <sup>1</sup> / <sub>4</sub> -48	1	12	16	8.21	1970	1537	1359	1202	1044
		1	18	22	9.29	2230	1739	1539	1360	1182
		2	18	22	11.08	2660	2075	1835	1623	1410
		1	24	28	10.29	2470	1927	1704	1507	1309
		2	24	28	12.42	2980	2324	2056	1818	1579
		3	24	28	14.21	3410	2660	2353	2080	1807
		1	12	16	4.15	997	777	688	608	528
		1	18	22	4.43	1063	829	733	648	563
		2	18	22	6.60	1584	1236	1093	966	840
	1C-2 <sup>3</sup> / <sub>4</sub> X 4-32	1	24	28	4.68	1122	875	774	684	595
		2	24	28	7.40	1775	1385	1225	1083	941
		3	24	28	8.44	2026	1580	1398	1236	1074
		1	12	16	4.90	1175	916	811	717	623
per		1	18	22	5.34	1280	999	883	781	679
cob	10.03/ 7/ 4/0	2	18	22	6.99	1676	1308	1157	1023	888
Dia. copper	1C-2 <sup>3</sup> / <sub>4</sub> X 4-40	1	24	28	5.75	1379	1076	952	841	731
=		2	24	28	7.78	1868	1457	1289	1139	990
,-		3	24	28	8.86	2125	1658	1466	1296	1126
		1	12	16	5.28	1267	988	874	773	672
		1	18	22	6.00	1439	1122	993	878	763
	10.037. ¥ 4.40	2	18	22	7.21	1729	1349	1193	1055	916
	1C-2 <sup>3</sup> / <sub>4</sub> X 4-48	1	24	28	6.66	1597	1246	1102	974	847
		2	24	28	7.98	1914	1493	1321	1168	1014
		3	24	28	9.19	2204	1719	1521	1345	1168

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

General data		General	data
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Performance ratings: model S-SL; louvered enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		Rows of element	Enclosure	Recommended minimum	minimum EDR* installed height (ft²/ ft)	Steam heat	Hot water heat			
	Element	(on 6-inch centers)	height (in inches)	installed height		215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
				C	opper elemen	t				
		1	12	16	4.79	1150	897	794	702	610
		1	18	22	5.29	1270	991	876	775	673
	10.01/ 7.01/ 00	2	18	22	7.42	1780	1388	1228	1086	943
	1C-3 <sup>1</sup> / <sub>4</sub> X 3 <sup>1</sup> / <sub>4</sub> -32	1	24	28	5.71	1370	1069	945	836	726
		2	24	28	8.42	2020	1576	1394	1232	1071
		3	24	28	9.58	2300	1794	1587	1403	1219
		1	12	16	5.42	1300	1014	897	793	689
ber		1	18	22	6.00	1440	1123	994	878	763
cob		2	18	22	8.58	2060	1607	1421	1257	1092
Dia. copper	1C-3 <sup>1</sup> / <sub>4</sub> X 3 <sup>1</sup> / <sub>4</sub> -40	1	24	28	6.50	1560	1217	1076	952	827
1" [		2	24	28	9.00	2160	1685	1490	1318	1145
'		3	24	28	10.08	2420	1888	1670	1476	1283
	1C-3'/4 X 3'/4-48	1	12	16	5.92	1420	1108	980	866	753
		1	18	22	6.71	1610	1256	1111	982	853
		2	18	22	8.79	2110	1646	1456	1287	1118
		1	24	28	7.29	1750	1365	1208	1068	928
		2	24	28	9.29	2230	1739	1539	1360	1182
		3	24	28	10.29	2470	1927	1704	1507	1309
		1	12	16	6.29	1510	1178	1042	921	800
		1	18	22	6.71	1610	1256	1111	982	853
		2	18	22	10.00	2400	1872	1656	1464	1272
	1C-4 <sup>1</sup> / <sub>4</sub> X 4 <sup>1</sup> / <sub>4</sub> -32	1	24	28	7.08	1700	1326	1173	1037	901
		2	24	28	11.21	2690	2098	1856	1641	1426
		3	24	28	12.79	3070	2395	2118	1873	1627
		1	12	16	7.42	1780	1388	1228	1086	943
Dia. copper		1	18	22	8.08	1940	1513	1339	1183	1028
cob	10 11/ 1/ 10	2	18	22	10.58	2540	1981	1753	1549	1346
Jia.	1C-4 <sup>1</sup> / <sub>4</sub> X 4 <sup>1</sup> / <sub>4</sub> -40	1	24	28	8.71	2090	1630	1442	1275	1108
1		2	24	28	11.79	2830	2207	1953	1726	1500
		3	24	28	13.42	3220	2512	2222	1964	1707
		1	12	16	8.00	1920	1498	1325	1171	1018
		1	18	22	9.08	2180	1700	1504	1330	1155
	40 41/. V 41/. 40	2	18	22	10.92	2620	2044	1808	1598	1389
	1C-4 <sup>1</sup> / <sub>4</sub> X 4 <sup>1</sup> / <sub>4</sub> -48	1	24	28	10.08	2420	1888	1670	1476	1283
		2	24	28	12.08	2900	2262	2001	1769	1537
		3	24	28	13.92	3340	2605	2305	2037	1770

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

Performance ratings: model S-SL; louvered enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

	-	Rows of element	Enclosure	height installed height (ff2	EDR*	Steam heat	Hot water heat			
	Element	(on 6-inch centers)	height (in inches)		(ft²/ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
				C	opper elemen	t	1		1	
		1	12	16	4.10	983	767	679	600	521
		1	18	22	4.35	1043	813	720	636	553
		2	18	22	6.46	1551	1210	1070	946	822
	11/4C-23/4 X 4-32	1	24	28	4.62	1109	865	765	676	588
		2	24	28	7.26	1742	1359	1202	1063	923
		3	24	28	8.31	1993	1555	1375	1216	1056
		1	12	16	4.81	1155	901	797	705	612
bbe		1	18	22	5.28	1267	988	874	773	672
11/4" Dia. copper		2	18	22	6.88	1650	1287	1139	1007	875
Dia	11/4C-23/4 X 4-40	1	24	28	5.67	1360	1060	938	829	721
- <sub>4</sub>		2	24	28	7.65	1835	1431	1266	1119	972
-		3	24	28	8.72	2092	1632	1444	1276	1109
İ	1 <sup>1</sup> / <sub>4</sub> C-2 <sup>3</sup> / <sub>4</sub> X 4-48	1	12	16	5.23	1254	978	865	765	665
		1	18	22	5.94	1426	1112	984	870	756
		2	18	22	7.07	1696	1323	1170	1035	899
İ		1	24	28	6.55	1571	1225	1084	958	833
		2	24	28	7.87	1888	1472	1302	1151	1000
		3	24	28	9.05	2171	1694	1498	1325	1151
		1	12	16	4.50	1080	842	745	659	572
İ		1	18	22	5.08	1220	952	842	744	647
	1 <sup>1</sup> / <sub>4</sub> C-3 <sup>1</sup> / <sub>4</sub> X 3 <sup>1</sup> / <sub>4</sub> -32	2	18	22	7.21	1730	1349	1194	1055	917
İ	1'/4C-3'/4 X 3'/4-32	1	24	28	5.50	1320	1030	911	805	700
ĺ		2	24	28	8.21	1970	1537	1359	1202	1044
		3	24	28	9.42	2260	1763	1559	1379	1198
<u> </u>		1	12	16	5.29	1270	991	876	775	673
copper		1	18	22	5.79	1390	1084	959	848	737
8 -	1 <sup>1</sup> / <sub>4</sub> C-3 <sup>1</sup> / <sub>4</sub> X 3 <sup>1</sup> / <sub>4</sub> -40	2	18	22	8.42	2020	1576	1394	1232	1071
Dia.	174G-374 X 374-40	1	24	28	6.21	1490	1162	1028	909	790
11/4"		2	24	28	8.79	2110	1646	1456	1287	1118
-		3	24	28	9.92	2380	1856	1642	1452	1261
		1	12	16	5.71	1370	1069	945	836	726
		1	18	22	6.58	1580	1232	1090	964	837
	1 <sup>1</sup> / <sub>4</sub> C-3 <sup>1</sup> / <sub>4</sub> X 3 <sup>1</sup> / <sub>4</sub> -48	2	18	22	8.71	2090	1630	1442	1275	1108
	1 /4U-3 /4 A 3 /4-40	1	24	28	7.21	1730	1349	1194	1055	917
		2	24	28	9.08	2180	1700	1504	1330	1155
		3	24	28	10.21	2450	1911	1691	1495	1299

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

Performance ratings: model S-SL; louvered enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		element	Enclosure	Recommended minimum EI	EDR*	Steam heat	n heat Hot water heat				
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
				С	opper elemen	t					
		1	12	16	6.21	1490	1162	1028	909	790	
İ		1	18	22	6.58	1580	1232	1090	964	837	
İ	1 <sup>1</sup> / <sub>4</sub> C-4 <sup>1</sup> / <sub>4</sub> X 4 <sup>1</sup> / <sub>4</sub> -32	2	18	22	9.79	2350	1833	1622	1434	1246	
	1 /40-4 /4 X 4 /4-32	1	24	28	7.00	1680	1310	1159	1025	890	
		2	24	28	11.00	2640	2059	1822	1610	1399	
		3	24	28	12.58	3020	2356	2084	1842	1601	
<u> </u>	1 <sup>1</sup> / <sub>4</sub> C-4 <sup>1</sup> / <sub>4</sub> X 4 <sup>1</sup> / <sub>4</sub> -40	1	12	16	7.29	1750	1365	1208	1068	928	
copper		1	18	22	8.00	1920	1498	1325	1171	1018	
8		2	18	22	10.42	2500	1950	1725	1525	1325	
Dia.		1	24	28	8.58	2060	1607	1421	1257	1092	
11/4"		2	24	28	11.58	2780	2168	1918	1696	1473	
-		3	24	28	13.21	3170	2473	2187	1934	1680	
	1 <sup>1</sup> / <sub>4</sub> C-4 <sup>1</sup> / <sub>4</sub> X 4 <sup>1</sup> / <sub>4</sub> -48	1	12	16	7.92	1900	1482	1311	1159	1007	
		1	18	22	9.00	2160	1685	1490	1318	1145	
		2	18	22	10.71	2570	2005	1773	1568	1362	
		1	24	28	9.92	2380	1856	1642	1452	1261	
		2	24	28	11.92	2860	2231	1973	1745	1516	
		3	24	28	13.71	3290	2566	2270	2007	1744	

<sup>\*</sup>EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

Performance ratings: model S-DSP5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		element Enclosure minimum	Recommended	EDR*	Steam heat	Hot water heat				
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
					Steel element					
		1	12	16	3.63	871	680	600	530	460
	1S-3¼ X 3¼-32	1	18	22	3.82	917	720	630	560	490
	13-374 A 374-32	1	24	28	4.39	1053	820	730	640	560
		2	24	28	6.65	1595	1240	1100	970	850
<u>8</u>		1	12	16	4.02	964	750	670	590	510
. ste	1S-3¼ X 3¼-40	1	18	22	4.18	1004	780	690	610	530
1" Dia. steel	13-3/4 X 3/4-40	1	24	28	4.90	1176	920	810	720	620
-		2	24	28	7.31	1755	1370	1210	1070	930
	1S-3¼ X 3¼- 48	1	12	16	4.62	1109	870	770	680	590
		1	18	22	4.60	1104	860	760	670	590
		1	24	28	5.39	1293	1010	890	790	690
		2	24	28	8.04	1930	1510	1330	1180	1020
	1S-4¼ X 4¼-32	1	12	16	5.50	1320	1030	910	810	700
		1	18	22	5.10	1223	950	840	750	650
		1	24	28	5.85	1404	1100	970	860	740
		2	24	28	8.86	2126	1660	1470	1300	1130
<u></u>	1S-4¼ X 4¼-40	1	12	16	6.08	1460	1140	1010	890	770
ste		1	18	22	5.58	1338	1040	920	820	710
1" Dia. steel		1	24	28	6.53	1568	1220	1080	960	830
		2	24	28	9.75	2340	1830	1610	1430	1240
		1	12	16	7.00	1680	1310	1160	1020	890
	1S-4¼ X 4¼-48	1	18	22	6.13	1472	1150	1020	900	780
	13-474 A 474-40	1	24	28	7.18	1724	1340	1190	1050	910
	Familiar I and Discret D	2	24	28	10.73	2574	2010	1780	1570	1360

<sup>\*</sup>EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

Performance ratings: model S-DSP5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		element Enclosure minimum		Recommended	EDR*	Steam heat	Steam heat Hot water heat			
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
					Steel element					
		1	12	16	3.71	890	690	610	540	470
	11/4S-31/4 X 31/4-32	1	18	22	3.75	899	700	620	550	480
	1745-374 A 374-32	1	24	28	4.30	1032	800	710	630	550
		2	24	28	6.52	1564	1220	1080	950	830
11/4" Dia. steel		1	12	16	4.21	1010	790	700	620	540
a. s	11/4S-31/4 X 31/4-40	1	18	22	4.10	984	770	680	600	520
ا ق	1745-374 A 374-40	1	24	28	4.80	1153	900	800	700	610
11/4		2	24	28	7.17	1720	1340	1190	1050	910
	11/4S-31/4 X 31/4-48	1	12	16	4.71	1130	880	780	690	600
		1	18	22	4.51	1082	840	750	660	570
		1	24	28	5.28	1268	990	870	770	670
		2	24	28	7.88	1892	1480	1310	1150	1000
	11/4S-41/4 X 41/4-32	1	12	16	5.42	1300	1010	900	790	690
		1	18	22	5.00	1199	940	830	730	640
		1	24	28	5.74	1377	1070	950	840	730
		2	24	28	8.69	2085	1630	1440	1270	1110
tee	11/4S-41/4 X 41/4-40	1	12	16	6.08	1460	1140	1010	890	770
a. S.		1	18	22	5.47	1312	1020	910	800	700
11/4" Dia. steel		1	24	28	6.40	1537	1200	1060	940	810
		2	24	28	9.56	2294	1790	1580	1400	1220
		1	12	16	6.79	1630	1270	1120	990	860
	11/4S-41/4 X 41/4-48	1	18	22	6.01	1443	1130	1000	880	760
	1743-474 A 474-40	1	24	28	7.05	1691	1320	1170	1030	900
	Establish District D	2	24	28	10.51	2523	1970	1740	1540	1340

<sup>\*</sup>EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

General data
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Performance ratings: model S-DSP5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		Rows of element	Enclosure	Recommended minimum installed height (in inches)	EDR* (ft²/ ft)	Steam heat	Hot water heat				
	Element	(on 6-inch centers)	height (in inches)			215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
			,		Steel element		,	,			
		1	12	16	5.34	1281	1000	880	780	680	
	2S-41/4 X 41/4-32	1	18	22	4.91	1179	920	810	720	620	
		1	24	28	5.69	1366	1070	940	830	720	
		2	24	28	8.28	1986	1550	1370	1210	1050	
steel	2S-4¼ X 4¼-40	1	12	16	5.99	1438	1120	990	880	760	
r st		1	18	22	5.40	1297	1010	890	790	690	
Dia.		1	24	28	6.26	1503	1170	1040	920	800	
2		2	24	28	9.10	2184	1700	1510	1330	1160	
	2S-4¼ X 4¼-48	1	12	16	6.69	1606	1250	1110	980	850	
		1	18	22	5.94	1426	1110	980	870	760	
		1	24	28	6.89	1653	1290	1140	1010	880	
		2	24	28	10.01	2402	1870	1660	1470	1270	

<sup>\*</sup>EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

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**English, IP Units** 

General data
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Performance ratings: model S-DSP5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Flement		element Enclosure m		Recommended minimum EDR*	Steam heat	Hot water heat				
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
				C	opper elemen	t				
		1	12	16	4.23	1016	790	700	620	540
	%C-2% x 4-32	1	18	22	4.23	1016	790	700	620	540
	%4G-2% X 4-32	1	24	28	4.48	1076	840	740	660	570
ایا		2	24	28	6.65	1597	1250	1100	970	850
Dia. copper		1	12	16	5.00	1201	940	830	730	640
8	2/0.02/ 4.40	1	18	22	5.00	1201	940	830	730	640
Dia.	34C-234 x 4-40	1	24	28	5.47	1313	1020	910	800	700
34"		2	24	28	7.12	1709	1330	1180	1040	910
	%C-2% x 4-48	1	12	16	5.42	1300	1010	900	790	690
		1	18	22	5.42	1300	1010	900	790	690
		1	24	28	6.13	1472	1150	1020	900	780
		2	24	28	7.32	1756	1370	1210	1070	930
	%C-3¼ x 3¼-32	1	12	16	4.92	1180	920	810	720	630
		1	18	22	4.81	1155	900	800	700	610
		1	24	28	5.10	1223	950	840	750	650
		2	24	28	7.56	1815	1420	1250	1110	960
copper	%C-3¼ x 3¼-40	1	12	16	5.50	1320	1030	910	810	700
%" Dia. col		1	18	22	5.69	1365	1060	940	830	720
		1	24	28	6.22	1493	1160	1030	910	790
		2	24	28	8.10	1943	1520	1340	1190	1030
		1	12	16	6.00	1440	1120	990	880	760
	34C-31/4 x 31/4-48	1	18	22	6.16	1478	1150	1020	900	780
	740-374 X 374-46	1	24	28	6.97	1673	1300	1150	1020	890
		2	24	28	8.31	1995	1560	1380	1220	1060

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

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Security Enclosure Submittal Set: 21

**English, IP Units** 

General data
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Performance ratings: model S-DSP5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		Rows of element Enclosure Recommended minimum		EDR*	Steam heat	h heat Hot water heat				
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
				С	opper elemen	t				
		1	12	16	6.42	1540	1200	1060	940	820
	34C-41/4 x 41/4-32	1	18	22	6.42	1540	1200	1060	940	820
	%4C-4%4 X 4%4-32	1	24	28	6.79	1630	1270	1120	990	860
١. ا		2	24	28	10.08	2420	1890	1670	1480	1280
3/4" Dia. copper		1	12	16	7.58	1820	1420	1260	1110	960
8	3/0 41/ + 41/ 40	1	18	22	7.58	1820	1420	1260	1110	960
Dia.	<sup>3</sup> / <sub>4</sub> C-4 <sup>1</sup> / <sub>4</sub> x 4 <sup>1</sup> / <sub>4</sub> -40	1	24	28	8.29	1990	1550	1370	1210	1050
34"		2	24	28	10.79	2590	2020	1790	1580	1370
	34C-4¼ x 4¼-48	1	12	16	8.21	1970	1540	1360	1200	1040
		1	18	22	8.21	1970	1540	1360	1200	1040
		1	24	28	9.29	2230	1740	1540	1360	1180
		2	24	28	11.08	2660	2070	1840	1620	1410
	1C-2¾ x 4-32	1	12	16	4.15	997	780	690	610	530
		1	18	22	4.15	997	780	690	610	530
		1	24	28	4.43	1063	830	730	650	560
		2	24	28	6.60	1584	1240	1090	970	840
ber	1C-2¾ x 4-40	1	12	16	4.90	1175	920	810	720	620
00		1	18	22	4.90	1175	920	810	720	620
1" Dia. copper		1	24	28	5.33	1280	1000	880	780	680
		2	24	28	6.98	1676	1310	1160	1020	890
		1	12	16	5.28	1267	990	870	770	670
	1C-2¾ x 4-48	1	18	22	5.28	1267	990	870	770	670
	10-274 X 4-40	1	24	28	6.00	1439	1120	990	880	760
	Environtant Direct D	2	24	28	7.20	1729	1350	1190	1050	920

<sup>\*</sup>EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

General data
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Performance ratings: model S-DSP5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		Rows of element	Enclosure	Recommended minimum	EDR*	Steam heat		Hot wa	ter heat	
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
				C	opper elemen	t				
		1	12	16	4.79	1150	900	790	700	610
	1C-3 <sup>1</sup> / <sub>4</sub> x 3 <sup>1</sup> / <sub>4</sub> -32	1	18	22	4.72	1133	880	780	690	600
	10-3'/4 X 3'/4-32	1	24	28	5.03	1208	940	830	740	640
١. ا		2	24	28	7.50	1800	1400	1240	1100	950
Dia. copper		1	12	16	5.42	1300	1010	900	790	690
900	10.01/ 01/ 10	1	18	22	5.56	1335	1040	920	810	710
Dia.	1C-3 <sup>1</sup> / <sub>4</sub> x 3 <sup>1</sup> / <sub>4</sub> -40	1	24	28	6.06	1455	1130	1000	890	770
=		2	24	28	7.94	1905	1490	1310	1160	1010
		1	12	16	5.92	1420	1110	980	870	750
	40.01/01/ 40	1	18	22	6.00	1440	1120	990	880	760
	1C-3 <sup>1</sup> / <sub>4</sub> x 3 <sup>1</sup> / <sub>4</sub> -48	1	24	28	6.81	1635	1280	1130	1000	870
		2	24	28	8.19	1965	1530	1360	1200	1040
		1	12	16	6.29	1510	1180	1040	920	800
	1C-4 <sup>1</sup> / <sub>4</sub> x 4 <sup>1</sup> / <sub>4</sub> -32	1	18	22	6.29	1510	1180	1040	920	800
	1C-4 /4 X 4 /4-32	1	24	28	6.71	1610	1260	1110	980	850
		2	24	28	10.00	2400	1870	1660	1460	1270
Dia. copper		1	12	16	7.42	1780	1390	1230	1090	940
00	1C-4 <sup>1</sup> / <sub>4</sub> x 4 <sup>1</sup> / <sub>4</sub> -40	1	18	22	7.42	1780	1390	1230	1090	940
Jia.	1C-474 X 474-40	1	24	28	8.08	1940	1510	1340	1180	1030
=		2	24	28	10.58	2540	1980	1750	1550	1350
		1	12	16	8.00	1920	1500	1320	1170	1020
	1C-4 <sup>1</sup> / <sub>4</sub> x 4 <sup>1</sup> / <sub>4</sub> -48	1	18	22	8.00	1920	1500	1320	1170	1020
	10-4 /4 X 4 /4-40	1	24	28	9.08	2180	1700	1500	1330	1160
		2	24	28	10.92	2620	2040	1810	1600	1390

<sup>\*</sup>EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

General data
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Performance ratings: model S-DSP5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		Rows of element	Enclosure	Recommended minimum	EDR*	Steam heat		Hot wa	ter heat	
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
				С	opper elemen	t				
		1	12	16	4.10	983	770	680	600	520
	11/4C-23/4 x 4-32	1	18	22	4.10	983	770	680	600	520
	1740-294 X 4-32	1	24	28	4.35	1043	810	720	640	550
<u>.</u>		2	24	28	6.46	1551	1210	1070	950	820
Dia. copper		1	12	16	4.81	1155	900	800	700	610
8 .	11/4C-23/4 x 4-40	1	18	22	4.81	1155	900	800	700	610
Dia	1740-294 X 4-40	1	24	28	5.28	1267	990	870	770	670
11/4"		2	24	28	6.88	1650	1290	1140	1010	870
-		1	12	16	5.23	1254	980	870	760	660
	11/4C-23/4 x 4-48	1	18	22	5.23	1254	980	870	760	660
	1740-294 X 4-46	1	24	28	5.94	1426	1110	980	870	760
		2	24	28	7.07	1696	1320	1170	1030	900
		1	12	16	4.50	1080	840	750	660	570
	11/4C-31/4 x 31/4-32	1	18	22	6.21	1490	1160	1030	910	790
	174C-374 X 374-32	1	24	28	6.58	1580	1230	1090	960	840
ایا		2	24	28	9.79	2350	1830	1620	1430	1250
Dia. copper		1	12	16	5.29	1270	990	880	770	670
8	11/4C-31/4 x 31/4-40	1	18	22	5.47	1313	1020	910	800	700
	1740-374 X 374-40	1	24	28	6.00	1440	1120	990	880	760
11/4"		2	24	28	7.81	1875	1460	1290	1140	990
-		1	12	16	5.71	1370	1070	950	840	730
	11/4C-31/4 x 31/4-48	1	18	22	5.94	1425	1110	980	870	760
	1740-374 X 374-40	1	24	28	6.75	1620	1260	1120	990	860
	Eminate Divers	2	24	28	8.03	1928	1500	1330	1180	1020

<sup>\*</sup>EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

General data
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Performance ratings: model S-DSP5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

	-	Rows of element	Enclosure	Recommended minimum	EDR*	Steam heat		Hot wa	ter heat	
	Element	Element (on 6-inch (in inches) installed height (ft²/ ft)		215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53		
		ı	1	C	opper elemen	t				
		1	12	16	6.21	1490	1160	1030	910	790
İ	11/4C-41/4 x 41/4-32	1	18	22	6.21	1490	1160	1030	910	790
	1/40-4/4 X 4/4-02	1	24	28	6.58	1580	1230	1090	960	840
=		2	24	28	9.79	2350	1830	1620	1430	1250
copper		1	12	16	7.29	1750	1370	1210	1070	930
8	11/4C-41/4 x 41/4-40	1	18	22	7.29	1750	1370	1210	1070	930
Dia.	174 <b>G-</b> 474 X 474-40	1	24	28	8.00	1920	1500	1320	1170	1020
11/4"		2	24	28	10.42	2500	1950	1730	1530	1330
-		1	12	16	7.92	1900	1480	1310	1160	1010
	11/4C-41/4 x 41/4-48	1	18	22	7.92	1900	1480	1310	1160	1010
	1740-474 X 474-40	1	24	28	9.00	2160	1680	1490	1320	1140
		2	24	28	10.71	2570	2000	1770	1570	1360

<sup>\*</sup>EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

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Security Enclosure Submittal Set: 25

**English, IP Units** 

General data
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Performance ratings: model PDS5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		Rows of element	Enclosure	Recommended minimum	EDR*	Steam heat		Hot wa	ter heat	
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
					Steel element					
		1	12	16	3.63	871	680	600	530	460
	1S-3¼ X 3¼-32	1	18	22	3.82	917	720	630	560	490
	13-374 A 374-32	1	24	28	4.39	1053	820	730	640	560
1		2	24	28	6.65	1595	1240	1100	970	850
e		1	12	16	4.02	964	750	670	590	510
st(	1S-3¼ X 3¼-40	1	18	22	4.18	1004	780	690	610	530
1" Dia. steel	13-3/4 A 3/4-40	1	24	28	4.90	1176	920	810	720	620
-		2	24	28	7.31	1755	1370	1210	1070	930
		1	12	16	4.62	1109	870	770	680	590
	1S-3¼ X 3¼- 48	1	18	22	4.60	1104	860	760	670	590
	15-3/4 A 3/4- 46	1	24	28	5.39	1293	1010	890	790	690
		2	24	28	8.04	1930	1510	1330	1180	1020
		1	12	16	5.50	1320	1030	910	810	700
	1S-4¼ X 4¼-32	1	18	22	5.10	1223	950	840	750	650
	13-4/4 X 4/4-32	1	24	28	5.85	1404	1100	970	860	740
		2	24	28	8.86	2126	1660	1470	1300	1130
<u></u>		1	12	16	6.08	1460	1140	1010	890	770
ste	1S-4¼ X 4¼-40	1	18	22	5.58	1338	1040	920	820	710
1" Dia. steel	13-474 A 474-40	1	24	28	6.53	1568	1220	1080	960	830
-		2	24	28	9.75	2340	1830	1610	1430	1240
		1	12	16	7.00	1680	1310	1160	1020	890
	1S-4¼ X 4¼-48	1	18	22	6.13	1472	1150	1020	900	780
	13-474 A 474-40	1	24	28	7.18	1724	1340	1190	1050	910
		2	24	28	10.73	2574	2010	1780	1570	1360

<sup>\*</sup>EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

Performance ratings: model PDS5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		Rows of element	Enclosure	Recommended minimum	EDR*	Steam heat		Hot wa	ter heat	
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
					Steel element					
		1	12	16	3.71	890	690	610	540	470
	41/ C 01/ V 01/ 00	1	18	22	3.75	899	700	620	550	480
	11/4S-31/4 X 31/4-32	1	24	28	4.30	1032	800	710	630	550
		2	24	28	6.52	1564	1220	1080	950	830
steel		1	12	16	4.21	1010	790	700	620	540
	44/0 04/ 3/ 40	1	18	22	4.10	984	770	680	600	520
1¼" Dia.	11/4S-31/4 X 31/4-40	1	24	28	4.80	1153	900	800	700	610
11/4		2	24	28	7.17	1720	1340	1190	1050	910
		1	12	16	4.71	1130	880	780	690	600
	44/0 04/ 3/ 40	1	18	22	4.51	1082	840	750	660	570
	11/4S-31/4 X 31/4-48	1	24	28	5.28	1268	990	870	770	670
		2	24	28	7.88	1892	1480	1310	1150	1000
		1	12	16	5.42	1300	1010	900	790	690
	41/0 41/ 3/ 41/ 00	1	18	22	5.00	1199	940	830	730	640
	11/4S-41/4 X 41/4-32	1	24	28	5.74	1377	1070	950	840	730
		2	24	28	8.69	2085	1630	1440	1270	1110
steel		1	12	16	6.08	1460	1140	1010	890	770
	11/4S-41/4 X 41/4-40	1	18	22	5.47	1312	1020	910	800	700
ä	1745-474 X 474-40	1	24	28	6.40	1537	1200	1060	940	810
1¹/₄" Dia.		2	24	28	9.56	2294	1790	1580	1400	1220
-		1	12	16	6.79	1630	1270	1120	990	860
	11/4S-41/4 X 41/4-48	1	18	22	6.01	1443	1130	1000	880	760
	1743-474 A 474-48	1	24	28	7.05	1691	1320	1170	1030	900
		2	24	28	10.51	2523	1970	1740	1540	1340

<sup>\*</sup>EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

General data
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Performance ratings: model PDS5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		Rows of element	Enclosure	Recommended minimum	EDR*	Steam heat		Hot wa	ter heat	
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
		ı			Steel element			1		
		1	12	16	5.34	1281	1000	880	780	680
	2S-41/4 X 41/4-32	1	18	22	4.91	1179	920	810	720	620
	20 474 X 474 02	1	24	28	5.69	1366	1070	940	830	720
		2	24	28	8.28	1986	1550	1370	1210	1050
steel		1	12	16	5.99	1438	1120	990	880	760
. st	2S-41/4 X 41/4-40	1	18	22	5.40	1297	1010	890	790	690
Dia.	23-474 X 474-40	1	24	28	6.26	1503	1170	1040	920	800
2		2	24	28	9.10	2184	1700	1510	1330	1160
		1	12	16	6.69	1606	1250	1110	980	850
	2S-41/4 X 41/4-48	1	18	22	5.94	1426	1110	980	870	760
	23-474 A 474-40	1	24	28	6.89	1653	1290	1140	1010	880
		2	24	28	10.01	2402	1870	1660	1470	1270

<sup>\*</sup>EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

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Security Enclosure Submittal Set: 28

**English, IP Units** 

General data
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Performance ratings: model PDS5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		olomont	Enclosure	minimum	EDR*	Steam heat	Hot water heat				
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
				С	opper elemen	t					
		1	12	16	4.23	1016	790	700	620	540	
	34C-234 x 4-32	1	18	22	4.23	1016	790	700	620	540	
	%4G-2% X 4-32	1	24	28	4.48	1076	840	740	660	570	
ا ا		2	24	28	6.65	1597	1250	1100	970	850	
Dia. copper		1	12	16	5.00	1201	940	830	730	640	
00	2/0.02/ 4.40	1	18	22	5.00	1201	940	830	730	640	
Dia	34C-234 x 4-40	1	24	28	5.47	1313	1020	910	800	700	
3/4"		2	24	28	7.12	1709	1330	1180	1040	910	
	%C-2% x 4-48	1	12	16	5.42	1300	1010	900	790	690	
		1	18	22	5.42	1300	1010	900	790	690	
		1	24	28	6.13	1472	1150	1020	900	780	
		2	24	28	7.32	1756	1370	1210	1070	930	
	2/0.01/ 01/ 00	1	12	16	4.92	1180	920	810	720	630	
		1	18	22	4.81	1155	900	800	700	610	
	34C-31/4 x 31/4-32	1	24	28	5.10	1223	950	840	750	650	
		2	24	28	7.56	1815	1420	1250	1110	960	
edc		1	12	16	5.50	1320	1030	910	810	700	
8	34C-31/4 x 31/4-40	1	18	22	5.69	1365	1060	940	830	720	
Dia. copper	74G-374 X 374-4U	1	24	28	6.22	1493	1160	1030	910	790	
3/4"		2	24	28	8.10	1943	1520	1340	1190	1030	
, .		1	12	16	6.00	1440	1120	990	880	760	
	34C-31/4 x 31/4-48	1	18	22	6.16	1478	1150	1020	900	780	
	740-374 X 374-40	1	24	28	6.97	1673	1300	1150	1020	890	
	Eminated Disease D	2	24	28	8.31	1995	1560	1380	1220	1060	

<sup>\*</sup>EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

General data
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Performance ratings: model PDS5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		Rows of element Enclosure		Recommended minimum	EDR*	Steam heat	Hot water heat				
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
				С	opper elemen	t					
		1	12	16	6.42	1540	1200	1060	940	820	
	34C-41/4 x 41/4-32	1	18	22	6.42	1540	1200	1060	940	820	
	94 <b>0-</b> 474 X 474-32	1	24	28	6.79	1630	1270	1120	990	860	
١. ا		2	24	28	10.08	2420	1890	1670	1480	1280	
3/4" Dia. copper		1	12	16	7.58	1820	1420	1260	1110	960	
8	3/0 41/ - 41/ 40	1	18	22	7.58	1820	1420	1260	1110	960	
Dia.	3/4C-41/4 x 41/4-40	1	24	28	8.29	1990	1550	1370	1210	1050	
34"		2	24	28	10.79	2590	2020	1790	1580	1370	
	%C-4¼ x 4¼-48	1	12	16	8.21	1970	1540	1360	1200	1040	
		1	18	22	8.21	1970	1540	1360	1200	1040	
		1	24	28	9.29	2230	1740	1540	1360	1180	
		2	24	28	11.08	2660	2070	1840	1620	1410	
	1C-2¾ x 4-32	1	12	16	4.15	997	780	690	610	530	
		1	18	22	4.15	997	780	690	610	530	
		1	24	28	4.43	1063	830	730	650	560	
		2	24	28	6.60	1584	1240	1090	970	840	
ber		1	12	16	4.90	1175	920	810	720	620	
00	1C-2¾ x 4-40	1	18	22	4.90	1175	920	810	720	620	
Dia. copper	1G-274 X 4-4U	1	24	28	5.33	1280	1000	880	780	680	
=		2	24	28	6.98	1676	1310	1160	1020	890	
		1	12	16	5.28	1267	990	870	770	670	
	1C-2¾ x 4-48	1	18	22	5.28	1267	990	870	770	670	
	10-274 X 4-40	1	24	28	6.00	1439	1120	990	880	760	
	Emiliaria Discret D	2	24	28	7.20	1729	1350	1190	1050	920	

<sup>\*</sup>EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

**Important rating information** Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

General data
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Performance ratings: model PDS5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		Rows of element	ement Enclosure	Recommended minimum	EDR*	Steam heat	Hot water heat				
	Element	(on 6-inch	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
				С	opper elemen	t					
		1	12	16	4.79	1150	900	790	700	610	
	1C-3¼ x 3¼-32	1	18	22	4.72	1133	880	780	690	600	
	10-374 X 374-32	1	24	28	5.03	1208	940	830	740	640	
١, ١		2	24	28	7.50	1800	1400	1240	1100	950	
copper		1	12	16	5.42	1300	1010	900	790	690	
So	1C-31/4 x 31/4-40	1	18	22	5.56	1335	1040	920	810	710	
Dia.		1	24	28	6.06	1455	1130	1000	890	770	
<del>-</del>		2	24	28	7.94	1905	1490	1310	1160	1010	
	1C-3¼ x 3¼-48	1	12	16	5.92	1420	1110	980	870	750	
		1	18	22	6.00	1440	1120	990	880	760	
		1	24	28	6.81	1635	1280	1130	1000	870	
		2	24	28	8.19	1965	1530	1360	1200	1040	
		1	12	16	6.29	1510	1180	1040	920	800	
		1	18	22	6.29	1510	1180	1040	920	800	
	1C-41/4 x 41/4-32	1	24	28	6.71	1610	1260	1110	980	850	
		2	24	28	10.00	2400	1870	1660	1460	1270	
copper		1	12	16	7.42	1780	1390	1230	1090	940	
00	1C-4¼ x 4¼-40	1	18	22	7.42	1780	1390	1230	1090	940	
Dia.	1G-474 X 474-40	1	24	28	8.08	1940	1510	1340	1180	1030	
📮		2	24	28	10.58	2540	1980	1750	1550	1350	
		1	12	16	8.00	1920	1500	1320	1170	1020	
	1C-4¼ x 4¼-48	1	18	22	8.00	1920	1500	1320	1170	1020	
	10-474 X 474-40	1	24	28	9.08	2180	1700	1500	1330	1160	
		2	24	28	10.92	2620	2040	1810	1600	1390	

<sup>\*</sup>EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

 $\label{lem:lemportant} \textbf{Important rating information} \ \mathsf{Performance} \ \mathsf{ratings} \ \mathsf{based} \ \mathsf{on} :$ 

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

Performance ratings: model PDS5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		Rows of element Enclosure		Recommended minimum	EDR*	Steam heat	Hot water heat				
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
				С	opper elemen	t					
		1	12	16	4.10	983	770	680	600	520	
	11/4C-23/4 x 4-32	1	18	22	4.10	983	770	680	600	520	
	1740-294 X 4-32	1	24	28	4.35	1043	810	720	640	550	
<u>.</u>		2	24	28	6.46	1551	1210	1070	950	820	
Dia. copper		1	12	16	4.81	1155	900	800	700	610	
8 .	11/4C-23/4 x 4-40	1	18	22	4.81	1155	900	800	700	610	
Dia	1/4C-2% X 4-40	1	24	28	5.28	1267	990	870	770	670	
11/4"		2	24	28	6.88	1650	1290	1140	1010	870	
-	11/4C-23/4 x 4-48	1	12	16	5.23	1254	980	870	760	660	
		1	18	22	5.23	1254	980	870	760	660	
		1	24	28	5.94	1426	1110	980	870	760	
		2	24	28	7.07	1696	1320	1170	1030	900	
		1	12	16	4.50	1080	840	750	660	570	
	11/4C-31/4 x 31/4-32	1	18	22	4.66	1118	870	770	680	590	
	174C-374 X 374-32	1	24	28	4.94	1185	920	820	720	630	
ايا		2	24	28	7.35	1763	1380	1220	1080	930	
Dia. copper		1	12	16	5.29	1270	990	880	770	670	
8	11/4C-31/4 x 31/4-40	1	18	22	5.47	1313	1020	910	800	700	
	1740-374 X 374-40	1	24	28	6.00	1440	1120	990	880	760	
11/4"		2	24	28	7.81	1875	1460	1290	1140	990	
-		1	12	16	5.71	1370	1070	950	840	730	
	11/4C-31/4 x 31/4-48	1	18	22	5.94	1425	1110	980	870	760	
	1740-374 X 374-40	1	24	28	6.75	1620	1260	1120	990	860	
	Eminate Divers	2	24	28	8.03	1928	1500	1330	1180	1020	

<sup>\*</sup>EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

Performance ratings: model PDS5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

	,	Rows of element	Enclosure height (in inches)	Recommended minimum installed height (in inches)	EDR* (ft²/ ft)	Steam heat	Hot water heat				
	Element	(on 6-inch centers)				215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
			,	С	opper elemen	t	,				
		1	12	16	6.21	1490	1160	1030	910	790	
	11/4C-41/4 x 41/4-32	1	18	22	6.21	1490	1160	1030	910	790	
		1	24	28	6.58	1580	1230	1090	960	840	
<u> </u>		2	24	28	9.79	2350	1830	1620	1430	1250	
copper		1	12	16	7.29	1750	1370	1210	1070	930	
	11/4C-41/4 x 41/4-40	1	18	22	7.29	1750	1370	1210	1070	930	
Dia.	174G-474 X 474-40	1	24	28	8.00	1920	1500	1320	1170	1020	
11/4"		2	24	28	10.42	2500	1950	1730	1530	1330	
-		1	12	16	7.92	1900	1480	1310	1160	1010	
	11/4C-41/4 x 41/4-48	1	18	22	7.92	1900	1480	1310	1160	1010	
	1 /4G-4 /4 X 4 /4-48	1	24	28	9.00	2160	1680	1490	1320	1140	
		2	24	28	10.71	2570	2000	1770	1570	1360	

<sup>\*</sup>EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

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Security Enclosure Submittal Set: 33

**English, IP Units** 

General data
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Performance ratings: model S-TP5/PR5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		Rows of element Enclose			EDR*	Steam heat	Hot water heat				
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
					Steel element						
		1	12	16	3.6	867	676	598	529	460	
		1	18	22	3.8	905	706	624	552	480	
	10.01/ 3/ 01/ 00	2	18	22	5.5	1314	1025	907	801	696	
	1S-3¼ X 3¼-32	1	24	28	3.8	924	720	637	563	490	
		2	24	28	5.8	1389	1083	958	847	736	
		3	24	28	6.5	1563	1219	1079	954	829	
		1	12	16	3.9	946	738	652	577	501	
<u>e</u>		1	18	22	4.2	1020	795	704	622	540	
1" Dia. steel		2	18	22	6.3	1504	1173	1038	917	797	
Dia	1S-3¼ X 3¼-40	1	24	28	4.4	1057	824	729	645	560	
-		2	24	28	6.5	1562	1218	1078	953	828	
		3	24	28	7.7	1839	1435	1269	1122	975	
	1S-3¼ X 3¼- 48	1	12	16	4.4	1067	832	736	651	565	
		1	18	22	4.9	1177	918	812	718	624	
		2	18	22	7.1	1707	1331	1177	1041	904	
		1	24	28	5.1	1214	947	838	741	643	
		2	24	28	7.4	1766	1378	1219	1077	936	
		3	24	28	8.9	2142	1671	1478	1307	1136	
		1	12	16	4.6	1115	870	769	680	591	
		1	18	22	4.8	1164	908	803	710	617	
		2	18	22	7.1	1697	1324	1171	1035	899	
	1S-4¼ X 4¼-32	1	24	28	4.9	1188	926	820	725	630	
		2	24	28	7.5	1794	1399	1238	1094	951	
		3	24	28	8.6	2060	1607	1422	1257	1092	
		1	12	16	5.2	1236	964	853	754	655	
<u></u>		1	18	22	5.6	1333	1040	920	813	707	
1" Dia. steel	10 4/ 3/ 4/ 10	2	18	22	7.9	1891	1475	1305	1153	1002	
Dia.	1S-4¼ X 4¼-40	1	24	28	5.8	1382	1078	953	843	732	
=		2	24	28	8.2	1963	1531	1355	1198	1041	
		3	24	28	9.4	2254	1758	1555	1375	1195	
		1	12	16	5.9	1406	1097	970	858	745	
		1	18	22	6.5	1551	1210	1070	946	822	
	10.41/ 3/ 41/	2	18	22	8.7	2085	1626	1438	1272	1105	
	1S-4¼ X 4¼-48	1	24	28	6.7	1600	1248	1104	976	848	
		2	24	28	9.0	2157	1683	1489	1316	1143	
		3	24	28	10.4	2497	1947	1723	1523	1323	

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

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Security Enclosure Submittal Set: 34

**English, IP Units** 

Performance ratings: model S-TP5/PR5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

<b>5</b> 1		element Enclosure		Recommended minimum EDR*	Steam heat	Hot water heat				
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
					Steel element					
		1	12	16	3.5	850	663	587	519	451
		1	18	22	3.7	887	692	612	541	470
	44/0 04/ 7/ 00/	2	18	22	5.5	1327	1035	916	810	703
	11/4S-31/4 X 31/4-32	1	24	28	3.8	906	706	625	552	480
		2	24	28	5.8	1403	1094	968	856	744
		3	24	28	6.7	1612	1257	1112	983	854
		1	12	16	3.8	918	716	633	560	487
ee		1	18	22	4.1	990	772	683	604	525
1¼" Dia. steel		2	18	22	6.1	1460	1139	1008	891	774
ä	11/4S-31/4 X 31/4-40	1	24	28	4.3	1026	800	708	626	544
11/4		2	24	28	6.3	1516	1183	1046	925	804
		3	24	28	7.4	1786	1393	1232	1089	946
		1	12	16	4.2	1016	793	701	620	539
	11/4S-31/4 X 31/4-48	1	18	22	4.7	1121	875	774	684	594
		2	18	22	6.7	1610	1256	1111	982	853
		1	24	28	4.8	1156	902	798	705	613
		2	24	28	6.9	1666	1300	1150	1016	883
		3	24	28	8.3	2002	1562	1382	1221	1061
	11/4S-41/4 X 41/4-32	1	12	16	4.6	1110	860	760	670	580
		1	18	22	4.8	1140	890	790	700	600
		2	18	22	7	1690	1320	1170	1030	900
		1	24	28	4.9	1170	910	810	710	620
		2	24	28	7.4	1770	1380	1220	1080	940
		3	24	28	8.5	2030	1580	1400	1240	1080
		1	12	16	5.1	1230	960	850	750	650
ee		1	18	22	5.5	1330	1040	920	810	700
ı. st		2	18	22	7.8	1860	1450	1280	1130	990
ä	11/4S-41/4 X 41/4-40	1	24	28	5.7	1360	1060	940	830	720
1¹/₄" Dia. steel		2	24	28	8.1	1940	1510	1340	1180	1030
		3	24	28	9.3	2220	1730	1530	1350	1180
		1	12	16	5.8	1380	1080	950	840	730
		1	18	22	6.4	1540	1200	1060	940	820
	4/04/34/5	2	18	22	8.6	2060	1610	1420	1260	1090
	11/4S-41/4 X 41/4-48	1	24	28	6.6	1580	1230	1090	960	840
		2	24	28	8.9	2130	1660	1470	1300	1130
	-	3	24	28	10.3	2460	1920	1700	1500	1300

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

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**English, IP Units** 

General data
--------------

Performance ratings: model S-TP5/PR5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

	-	Rows of element	Enclosure	Recommended minimum	EDR*	Steam heat	Hot water heat				
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
			,		Steel element			,			
		1	12	16	4.4	1060	827	731	647	562	
		1	18	22	4.6	1106	863	763	675	586	
	2S-4¼ X 4¼-32	2	18	22	6.8	1630	1271	1124	994	864	
İ	23-474 X 474-32	1	24	28	4.7	1129	881	779	689	598	
		2	24	28	7.2	1723	1344	1189	1051	913	
		3	24	28	8.2	1979	1543	1365	1207	1049	
	2S-41/4 X 41/4-40	1	12	16	4.9	1187	926	819	724	629	
steel		1	18	22	5.3	1280	999	883	781	679	
l. st		2	18	22	7.5	1797	1402	1240	1096	952	
Dia.		1	24	28	5.5	1327	1035	916	809	703	
2		2	24	28	7.8	1866	1456	1288	1138	989	
		3	24	28	8.8	2120	1654	1463	1293	1124	
		1	12	16	5.6	1350	1053	932	824	716	
		1	18	22	6.2	1490	1162	1028	909	790	
	2S-4¼ X 4¼-48	2	18	22	8.2	1961	1529	1353	1196	1039	
	20-7/4 X 4/4-40	1	24	28	6.4	1536	1198	1060	937	814	
		2	24	28	8.5	2029	1583	1400	1238	1075	
		3	24	28	9.7	2324	1812	1603	1417	1232	

<sup>\*</sup>EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

## Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

General data
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Performance ratings: model S-TP5/PR5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		Rows of element Enclosu		e Recommended minimum	EDR*	Steam heat	Hot water heat				
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
		ı		C	opper elemen	t	1		1	1	
		1	12	16	4.3	1037	809	715	632	550	
		1	18	22	4.6	1114	869	768	679	590	
	2/ 0.02/ 4.00	2	18	22	7.3	1754	1368	1211	1070	930	
	3/4C-23/4 x 4-32	1	24	28	4.9	1171	914	808	714	621	
		2	24	28	8.2	1961	1529	1353	1196	1039	
		3	24	28	9.7	2323	1812	1603	1417	1231	
L		1	12	16	5.2	1240	967	855	756	657	
edc		1	18	22	5.7	1358	1059	937	828	720	
Dia. copper	2/ 0 02/ 1 10	2	18	22	8.2	1965	1533	1356	1199	1042	
Dia.	3/4C-23/4 x 4-40	1	24	28	6.0	1437	1121	991	876	761	
3/4"		2	24	28	9.2	2200	1716	1518	1342	1166	
m T		3	24	28	10.9	2605	2032	1798	1589	1381	
		1	12	16	5.4	1299	1013	896	792	688	
	³/ <sub>4</sub> C-2¾ x 4-48	1	18	22	6.2	1496	1167	1032	912	793	
		2	18	22	8.1	1943	1516	1341	1185	1030	
		1	24	28	7.1	1692	1320	1168	1032	897	
		2	24	28	9.5	2274	1774	1569	1387	1205	
		3	24	28	11.4	2747	2143	1895	1676	1456	
	2/ 0 0// 0// 00	1	12	16	4.1	972	758	671	593	515	
		1	18	22	4.4	1044	814	720	637	553	
		2	18	22	6.7	1612	1257	1112	983	854	
	3/4C-31/4 x 31/4-32	1	24	28	4.6	1098	856	758	670	582	
		2	24	28	7.5	1801	1405	1243	1099	955	
		3	24	28	8.8	2112	1647	1457	1288	1119	
_		1	12	16	4.7	1134	885	782	692	601	
Dia. copper		1	18	22	5.2	1242	969	857	758	658	
8	3/.0. 21/ 21/. 40	2	18	22	7.4	1766	1378	1219	1078	936	
Dia.	<sup>3</sup> / <sub>4</sub> C-3 <sup>1</sup> / <sub>4</sub> x 3 <sup>1</sup> / <sub>4</sub> -40	1	24	28	5.5	1314	1025	907	802	696	
3/4"		2	24	28	8.2	1978	1543	1365	1206	1048	
6		3	24	28	9.7	2322	1811	1602	1417	1231	
		1	12	16	5.0	1188	927	820	725	630	
		1	18	22	5.7	1368	1067	944	834	725	
	<sup>3</sup> /4C-3 <sup>1</sup> /4 x 3 <sup>1</sup> /4-48	2	18	22	7.1	1711	1334	1180	1044	907	
	/4U-3 /4 X 3 /4-48	1	24	28	6.5	1548	1207	1068	944	820	
		2	24	28	8.3	2002	1562	1382	1221	1061	
		3	24	28	9.9	2379	1856	1641	1451	1261	

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

General data
--------------

Performance ratings: model S-TP5/PR5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		Rows of element	Enclosure		EDR* (ft²/ ft)	Steam heat		Hot wa	ter heat	
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)		215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
				C	opper elemen	t				
		1	12	16	5.4	1290	1010	890	790	680
		1	18	22	5.8	1390	1080	960	850	740
	2/0 4/ 4/ 00	2	18	22	8.5	2040	1590	1410	1240	1080
	3/4C-41/4 x 41/4-32	1	24	28	6.1	1470	1150	1010	900	780
		2	24	28	9.5	2290	1790	1580	1400	1210
		3	24	28	11	2630	2050	1810	1600	1390
		1	12	16	6.3	1510	1180	1040	920	800
³/₄" Dia. copper		1	18	22	6.9	1640	1280	1130	1000	870
8		2	18	22	9.2	2200	1720	1520	1340	1170
Dia.	3/4C-41/4 x 41/4-40	1	24	28	7.3	1760	1370	1210	1070	930
/ <sub>4</sub> " [		2	24	28	10.3	2470	1930	1700	1510	1310
6		3	24	28	11.8	2840	2220	1960	1730	1510
		1	12	16	6.6	1590	1240	1100	970	840
	<sup>3</sup> / <sub>4</sub> C-4 <sup>1</sup> / <sub>4</sub> x 4 <sup>1</sup> / <sub>4</sub> -48	1	18	22	7.6	1830	1430	1260	1120	970
		2	18	22	8.8	2120	1650	1460	1290	120
		1	24	28	8.6	2060	1610	1420	1260	1090
		2	24	28	10.3	2470	1930	1700	1510	1310
		3	24	28	11.8	2830	2210	1950	1730	1500
		1	12	16	4.0	968	755	668	590	513
		1	18	22	4.3	1020	796	704	622	541
		2	18	22	6.1	1465	1143	1011	894	776
	1C-2¾ x 4-32	1	24	28	4.4	1046	816	722	638	555
		2	24	28	7.0	1674	1306	1155	1021	887
		3	24	28	8.3	1998	1558	1379	1219	1059
		1	12	16	5.1	1220	952	842	744	647
Dia. copper		1	18	22	5.5	1329	1037	917	811	704
cob	10.00/ 1.10	2	18	22	7.2	1716	1338	1184	1047	909
Jia.	1C-2¾ x 4-40	1	24	28	6.0	1437	1121	992	877	762
1" [		2	24	28	8.0	1927	1503	1330	1176	1021
		3	24	28	9.5	2271	1771	1567	1385	1204
		1	12	16	5.2	1258	981	868	768	667
		1	18	22	6.0	1438	1122	992	877	762
	10.03/ × 4.40	2	18	22	7.2	1736	1354	1198	1059	920
	1C-2¾ x 4-48	1	24	28	6.6	1592	1242	1099	971	844
		2	24	28	8.5	2034	1587	1403	1241	1078
		3	24	28	10.1	2422	1889	1671	1477	1284

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

 $\label{lem:lemportant} \textbf{Important rating information} \ \mathsf{Performance} \ \mathsf{ratings} \ \mathsf{based} \ \mathsf{on} :$ 

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

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**English, IP Units** 

General data
--------------

Performance ratings: model S-TP5/PR5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		Rows of element Enclosure		Recommended minimum EDR*	Steam heat	Hot water heat				
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
				C	opper elemen	t				
		1	12	16	3.7	880	690	610	540	470
		1	18	22	3.9	930	730	640	570	490
	10.01/ 01/ 00	2	18	22	5.6	1360	1060	940	830	720
	1C-3 <sup>1</sup> / <sub>4</sub> x 3 <sup>1</sup> / <sub>4</sub> -32	1	24	28	4	990	770	680	600	520
		2	24	28	6.4	1540	1200	1060	940	820
		3	24	28	7.5	1790	1400	1240	1090	950
		1	12	16	4.5	1070	830	740	650	570
Dia. copper		1	18	22	4.9	1170	910	810	710	620
S		2	18	22	6.5	1560	1220	1080	950	830
Jia.	1C-3 <sup>1</sup> / <sub>4</sub> x 3 <sup>1</sup> / <sub>4</sub> -40	1	24	28	5.3	1280	1000	880	780	680
<u>=</u>		2	24	28	7.3	1740	1360	1200	1060	920
.		3	24	28	8.3	2000	1560	1380	1220	1060
		1	12	16	4.9	1170	910	810	710	620
	1C-3 <sup>1</sup> / <sub>4</sub> x 3 <sup>1</sup> / <sub>4</sub> -48	1	18	22	5.6	1350	1050	930	820	720
		2	18	22	6.4	1540	1200	1060	940	820
		1	24	28	6.2	1490	1160	1030	910	790
		2	24	28	7.5	1810	1410	1250	1100	960
		3	24	28	8.7	2080	1620	1430	1270	1100
		1	12	16	5.3	1270	990	880	780	670
		1	18	22	5.7	1360	1060	940	830	720
		2	18	22	8.3	2000	1560	1380	1220	1060
	1C-4 <sup>1</sup> / <sub>4</sub> x 4 <sup>1</sup> / <sub>4</sub> -32	1	24	28	6	1440	1120	990	880	760
		2	24	28	9.4	2250	1760	1550	1370	1190
		3	24	28	10.8	2580	2010	1780	1570	1370
		1	12	16	6.2	1480	1150	1020	900	780
ber		1	18	22	6.7	1610	1260	1110	980	850
Dia. copper	40 41/ . 41/ 45	2	18	22	9	2160	1690	1490	1320	1150
Jia.	1C-4 <sup>1</sup> / <sub>4</sub> x 4 <sup>1</sup> / <sub>4</sub> -40	1	24	28	7.2	1730	1350	1190	1060	920
=		2	24	28	10.1	2420	1890	1670	1480	1280
-		3	24	28	11.6	2780	2170	1920	1700	1470
		1	12	16	6.5	1560	1220	1080	950	830
		1	18	22	7.5	1790	1400	1240	1090	950
	10 41/ 41/ 10	2	18	22	8.7	2080	1620	1440	1270	110
	1C-4 <sup>1</sup> / <sub>4</sub> x 4 <sup>1</sup> / <sub>4</sub> -48	1	24	28	8.4	2020	1580	1390	1230	1070
		2	24	28	10.8	2600	2020	1790	1580	1370
		3	24	28	12.4	2980	2320	2050	1820	1580

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

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- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

General data
--------------

Performance ratings: model S-TP5/PR5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

Flores		Rows of element	Enclosure	Recommended minimum	EDR*	Steam heat	Hot water heat				
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53	
				C	opper elemen	t	,				
		1	12	16	4.1	992	774	685	605	526	
		1	18	22	4.3	1030	803	710	628	546	
	44/0.00/ 4.00	2	18	22	6.6	1574	1228	1086	960	834	
	11/4C-23/4 x 4-32	1	24	28	4.6	1104	861	762	674	585	
		2	24	28	7.6	1824	1423	1259	1113	967	
		3	24	28	8.8	2112	1647	1457	1288	1119	
_		1	12	16	4.9	1181	921	815	720	626	
bbe		1	18	22	5.4	1299	1013	896	792	688	
Dia. copper		2	18	22	7.4	1773	1383	1223	1081	940	
Dia	11/4C-23/4 x 4-40	1	24	28	5.8	1397	1090	964	852	741	
11/4"		2	24	28	8.3	1992	1554	1374	1215	1056	
+		3	24	28	9.9	2380	1857	1642	1452	1262	
		1	12	16	5.1	1229	958	848	750	651	
	1¼C-2¾ x 4-48	1	18	22	5.9	1421	1108	980	867	753	
		2	18	22	7.3	1754	1368	1211	1070	930	
		1	24	28	6.6	1594	1243	1100	972	845	
		2	24	28	9.4	2250	1755	1552	1372	1192	
		3	24	28	11.1	2664	2078	1838	1625	1412	
		1	12	16	3.8	916	714	632	559	485	
		1	18	22	4.0	950	741	656	580	504	
	41/ 0 21/ 21/ 20	2	18	22	6.0	1437	1121	991	876	761	
	11/4C-31/4 x 31/4-32	1	24	28	4.2	1020	795	703	622	540	
		2	24	28	6.9	1664	1298	1148	1015	882	
		3	24	28	8.0	1908	1488	1317	1164	1011	
ايرا		1	12	16	4.3	1037	809	715	632	550	
copper		1	18	22	4.8	1140	890	787	696	604	
8	41/ 0 21/ + 21/ 40	2	18	22	6.7	1602	1250	1105	977	849	
Dia.	11/4C-31/4 x 31/4-40	1	24	28	5.1	1227	957	847	748	650	
11/4"		2	24	28	7.5	1800	1404	1242	1098	954	
-		3	24	28	8.7	2079	1622	1435	1268	1102	
		1	12	16	4.8	1152	899	795	703	611	
		1	18	22	5.6	1332	1039	919	813	706	
	41/ <sub>2</sub> C 21/ <sub>2</sub> × 21/ <sub>2</sub> 40	2	18	22	6.5	1550	1209	1070	946	822	
	11/4C-31/4 x 31/4-48	1	24	28	6.2	1494	1165	1031	911	792	
		2	24	28	8.3	1988	1551	1372	1213	1054	
		3	24	28	9.5	2284	1781	1576	1393	1210	

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

 $\label{lem:lemportant} \textbf{Important rating information} \ \mathsf{Performance} \ \mathsf{ratings} \ \mathsf{based} \ \mathsf{on} :$ 

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

General data
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Performance ratings: model S-TP5/PR5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		Rows of element Enclosure Recommended minimum	EDR*	Steam heat	Hot water heat					
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
				C	opper elemer	nt				
		1	12	16	5.3	1270	990	880	780	670
		1	18	22	5.5	1330	1040	920	810	710
	1 <sup>1</sup> / <sub>4</sub> C-4 <sup>1</sup> / <sub>4</sub> x 4 <sup>1</sup> / <sub>4</sub> -32	2	18	22	8.2	1960	1530	1350	1200	1040
		1	24	28	5.9	1420	1110	980	870	750
		2	24	28	9.5	2220	1730	1530	1350	1180
		3	24	28	10.6	2540	1980	1750	1550	1350
<u>_</u>		1	12	16	6	1450	1130	1000	890	770
copper		1	18	22	6.6	1590	1240	1100	970	840
8	1 <sup>1</sup> / <sub>4</sub> C-4 <sup>1</sup> / <sub>4</sub> x 4 <sup>1</sup> / <sub>4</sub> -40	2	18	22	8.9	2130	1660	1470	1300	1130
Dia.	1'/4C-4'/4 X 4'/4-4U	1	24	28	7.1	1710	1330	1180	1040	910
11/4"		2	24	28	10	2390	1860	1650	1460	1270
_		3	24	28	11.4	2740	2140	1890	1670	1450
		1	12	16	6.4	1530	1190	1060	950	810
		1	18	22	7.4	1770	1380	1220	1090	940
	1 <sup>1</sup> / <sub>4</sub> C-4 <sup>1</sup> / <sub>4</sub> x 4 <sup>1</sup> / <sub>4</sub> -48	2	18	22	8.5	2050	1600	1420	1260	1090
	1 740-4 74 X 4 74-40	1	24	28	8.3	1980	1540	1370	1220	1050
		2	24	28	10.9	2620	2040	1800	1600	1390
		3	24	28	12.2	2930	2280	2020	1790	1550

<sup>\*</sup>EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

Performance ratings: model S-FP5/S-RP5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		Rows of element	Enclosure	Recommended minimum EDR*	Steam heat	Hot water heat				
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
					Steel element		,	,		
		1	12	16	3.6	867	676	598	529	460
		1	18	22	3.8	905	706	624	552	480
	10.01/ 3/ 01/ 00	2	18	22	5.5	1314	1025	907	801	696
	1S-31/4 X 31/4-32	1	24	28	3.8	924	720	637	563	490
		2	24	28	5.8	1389	1083	958	847	736
		3	24	28	6.5	1563	1219	1079	954	829
		1	12	16	3.9	946	738	652	577	501
<u></u>		1	18	22	4.2	1020	795	704	622	540
Dia. steel		2	18	22	6.3	1504	1173	1038	917	797
Dia	1S-31/4 X 31/4-40	1	24	28	4.4	1057	824	729	645	560
<b>-</b>		2	24	28	6.5	1562	1218	1078	953	828
		3	24	28	7.7	1839	1435	1269	1122	975
	1S-3¼ X 3¼- 48	1	12	16	4.4	1067	832	736	651	565
		1	18	22	4.9	1177	918	812	718	624
		2	18	22	7.1	1707	1331	1177	1041	904
		1	24	28	5.1	1214	947	838	741	643
		2	24	28	7.4	1766	1378	1219	1077	936
		3	24	28	8.9	2142	1671	1478	1307	1136
		1	12	16	4.6	1115	870	769	680	591
		1	18	22	4.8	1164	908	803	710	617
	1S-4¼ X 4¼-32	2	18	22	7.1	1697	1324	1171	1035	899
	13-474 A 474-32	1	24	28	4.9	1188	926	820	725	630
		2	24	28	7.5	1794	1399	1238	1094	951
		3	24	28	8.6	2060	1607	1422	1257	1092
		1	12	16	5.2	1236	964	853	754	655
<u>96</u>		1	18	22	5.6	1333	1040	920	813	707
1" Dia. steel	1S-4¼ X 4¼-40	2	18	22	7.9	1891	1475	1305	1153	1002
Dia	13-474 X 474-40	1	24	28	5.8	1382	1078	953	843	732
-		2	24	28	8.2	1963	1531	1355	1198	1041
		3	24	28	9.4	2254	1758	1555	1375	1195
		1	12	16	5.9	1406	1097	970	858	745
		1	18	22	6.5	1551	1210	1070	946	822
	1S-4¼ X 4¼-48	2	18	22	8.7	2085	1626	1438	1272	1105
	10-474 A 474-40	1	24	28	6.7	1600	1248	1104	976	848
		2	24	28	9.0	2157	1683	1489	1316	1143
		3	24	28	10.4	2497	1947	1723	1523	1323

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

Performance ratings: model S-FP5/S-RP5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		Rows of element Enclosure		Recommended minimum EDR*	Steam heat	Hot water heat				
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
					Steel element					
		1	12	16	3.5	850	663	587	519	451
		1	18	22	3.7	887	692	612	541	470
	44/0 04/ V 04/ 00	2	18	22	5.5	1327	1035	916	810	703
	11/4S-31/4 X 31/4-32	1	24	28	3.8	906	706	625	552	480
		2	24	28	5.8	1403	1094	968	856	744
		3	24	28	6.7	1612	1257	1112	983	854
		1	12	16	3.8	918	716	633	560	487
ee		1	18	22	4.1	990	772	683	604	525
1¼" Dia. steel		2	18	22	6.1	1460	1139	1008	891	774
Ö	11/4S-31/4 X 31/4-40	1	24	28	4.3	1026	800	708	626	544
11/4		2	24	28	6.3	1516	1183	1046	925	804
		3	24	28	7.4	1786	1393	1232	1089	946
	11/4S-31/4 X 31/4-48	1	12	16	4.2	1016	793	701	620	539
		1	18	22	4.7	1121	875	774	684	594
		2	18	22	6.7	1610	1256	1111	982	853
		1	24	28	4.8	1156	902	798	705	613
		2	24	28	6.9	1666	1300	1150	1016	883
		3	24	28	8.3	2002	1562	1382	1221	1061
		1	12	16	4.6	1110	860	760	670	580
		1	18	22	4.8	1140	890	790	700	600
	44/0 44/ 7/ 44/ 00	2	18	22	7	1690	1320	1170	1030	900
	11/4S-41/4 X 41/4-32	1	24	28	4.9	1170	910	810	710	620
		2	24	28	7.4	1770	1380	1220	1080	940
		3	24	28	8.5	2030	1580	1400	1240	1080
		1	12	16	5.1	1230	960	850	750	650
ee		1	18	22	5.5	1330	1040	920	810	700
a. st	44/0 44/ 3/ 40	2	18	22	7.8	1860	1450	1280	1130	990
ä	11/4S-41/4 X 41/4-40	1	24	28	5.7	1360	1060	940	830	720
11/4" Dia. steel		2	24	28	8.1	1940	1510	1340	1180	1030
•		3	24	28	9.3	2220	1730	1530	1350	1180
		1	12	16	5.8	1380	1080	950	840	730
		1	18	22	6.4	1540	1200	1060	940	820
	41/0 41/3/41/45	2	18	22	8.6	2060	1610	1420	1260	1090
	11/4S-41/4 X 41/4-48	1	24	28	6.6	1580	1230	1090	960	840
		2	24	28	8.9	2130	1660	1470	1300	1130
		3	24	28	10.3	2460	1920	1700	1500	1300

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

General data
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Performance ratings: model S-FP5/S-RP5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

	-	element	ent height installed height		EDR* (ft²/ ft)	Steam heat	Hot water heat					
	Element	(on 6-inch centers)		installed height		215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53		
	Steel element											
		1	12	16	4.4	1060	827	731	647	562		
		1	18	22	4.6	1106	863	763	675	586		
	2S-41/4 X 41/4-32	2	18	22	6.8	1630	1271	1124	994	864		
	25-474 X 474-32	1	24	28	4.7	1129	881	779	689	598		
		2	24	28	7.2	1723	1344	1189	1051	913		
		3	24	28	8.2	1979	1543	1365	1207	1049		
	2S-4¼ X 4¼-40	1	12	16	4.9	1187	926	819	724	629		
steel		1	18	22	5.3	1280	999	883	781	679		
r st		2	18	22	7.5	1797	1402	1240	1096	952		
Dia.	23-474 A 474-40	1	24	28	5.5	1327	1035	916	809	703		
2		2	24	28	7.8	1866	1456	1288	1138	989		
		3	24	28	8.8	2120	1654	1463	1293	1124		
		1	12	16	5.6	1350	1053	932	824	716		
		1	18	22	6.2	1490	1162	1028	909	790		
	2S-4¼ X 4¼-48	2	18	22	8.2	1961	1529	1353	1196	1039		
	23-474 A 474-40	1	24	28	6.4	1536	1198	1060	937	814		
		2	24	28	8.5	2029	1583	1400	1238	1075		
		3	24	28	9.7	2324	1812	1603	1417	1232		

<sup>\*</sup>EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

General data
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Performance ratings: model S-FP5/S-RP5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		Rows of element	Enclosure	Recommended minimum EDR* installed height (in inches)	Steam heat	Hot water heat				
	Element	(on 6-inch centers)	height (in inches)			215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
				C	opper elemen	t	,			
		1	12	16	4.3	1037	809	715	632	550
		1	18	22	4.6	1114	869	768	679	590
	2/0.02/ 4.00	2	18	22	7.3	1754	1368	1211	1070	930
	%C-2% x 4-32	1	24	28	4.9	1171	914	808	714	621
		2	24	28	8.2	1961	1529	1353	1196	1039
		3	24	28	9.7	2323	1812	1603	1417	1231
		1	12	16	5.2	1240	967	855	756	657
Dia. copper		1	18	22	5.7	1358	1059	937	828	720
8		2	18	22	8.2	1965	1533	1356	1199	1042
Dia.	34C-234 x 4-40	1	24	28	6.0	1437	1121	991	876	761
34"		2	24	28	9.2	2200	1716	1518	1342	1166
ω,		3	24	28	10.9	2605	2032	1798	1589	1381
	%C-2% x 4-48	1	12	16	5.4	1299	1013	896	792	688
		1	18	22	6.2	1496	1167	1032	912	793
		2	18	22	8.1	1943	1516	1341	1185	1030
		1	24	28	7.1	1692	1320	1168	1032	897
		2	24	28	9.5	2274	1774	1569	1387	1205
		3	24	28	11.4	2747	2143	1895	1676	1456
		1	12	16	4.1	972	758	671	593	515
		1	18	22	4.4	1044	814	720	637	553
	0/2 2/ 2/ 22	2	18	22	6.7	1612	1257	1112	983	854
	34C-31/4 x 31/4-32	1	24	28	4.6	1098	856	758	670	582
		2	24	28	7.5	1801	1405	1243	1099	955
		3	24	28	8.8	2112	1647	1457	1288	1119
		1	12	16	4.7	1134	885	782	692	601
per		1	18	22	5.2	1242	969	857	758	658
co	0/2 2/ 2/ 12	2	18	22	7.4	1766	1378	1219	1078	936
ja.	<sup>3</sup> / <sub>4</sub> C-3 <sup>1</sup> / <sub>4</sub> x 3 <sup>1</sup> / <sub>4</sub> -40	1	24	28	5.5	1314	1025	907	802	696
34" Dia. copper		2	24	28	8.2	1978	1543	1365	1206	1048
ω,		3	24	28	9.7	2322	1811	1602	1417	1231
		1	12	16	5.0	1188	927	820	725	630
		1	18	22	5.7	1368	1067	944	834	725
	2/0.01/ 01/ 12	2	18	22	7.1	1711	1334	1180	1044	907
	<sup>3</sup> / <sub>4</sub> C-3 <sup>1</sup> / <sub>4</sub> x 3 <sup>1</sup> / <sub>4</sub> -48	1	24	28	6.5	1548	1207	1068	944	820
		2	24	28	8.3	2002	1562	1382	1221	1061
		3	24	28	9.9	2379	1856	1641	1451	1261

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

General data
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Performance ratings: model S-FP5/S-RP5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		Rows of element	Enclosure	Recommended minimum EDR*	Steam heat	Hot water heat				
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
				C	opper elemen	t	,	,	,	
		1	12	16	5.4	1290	1010	890	790	680
		1	18	22	5.8	1390	1080	960	850	740
	2/0 4/ 4/ 00	2	18	22	8.5	2040	1590	1410	1240	1080
	34C-41/4 x 41/4-32	1	24	28	6.1	1470	1150	1010	900	780
		2	24	28	9.5	2290	1790	1580	1400	1210
		3	24	28	11	2630	2050	1810	1600	1390
		1	12	16	6.3	1510	1180	1040	920	800
per		1	18	22	6.9	1640	1280	1130	1000	870
34" Dia. copper		2	18	22	9.2	2200	1720	1520	1340	1170
Jia.	3/4C-41/4 x 41/4-40	1	24	28	7.3	1760	1370	1210	1070	930
1.4 1.1		2	24	28	10.3	2470	1930	1700	1510	1310
"		3	24	28	11.8	2840	2220	1960	1730	1510
	%C-4¼ x 4¼-48	1	12	16	6.6	1590	1240	1100	970	840
		1	18	22	7.6	1830	1430	1260	1120	970
		2	18	22	8.8	2120	1650	1460	1290	120
		1	24	28	8.6	2060	1610	1420	1260	1090
		2	24	28	10.3	2470	1930	1700	1510	1310
		3	24	28	11.8	2830	2210	1950	1730	1500
		1	12	16	4.0	968	755	668	590	513
		1	18	22	4.3	1020	796	704	622	541
	10.03/ + 4.00	2	18	22	6.1	1465	1143	1011	894	776
	1C-2¾ x 4-32	1	24	28	4.4	1046	816	722	638	555
		2	24	28	7.0	1674	1306	1155	1021	887
		3	24	28	8.3	1998	1558	1379	1219	1059
		1	12	16	5.1	1220	952	842	744	647
per		1	18	22	5.5	1329	1037	917	811	704
d	1C-2¾ x 4-40	2	18	22	7.2	1716	1338	1184	1047	909
ja.	1G-2% X 4-40	1	24	28	6.0	1437	1121	992	877	762
1" Dia. copper		2	24	28	8.0	1927	1503	1330	1176	1021
		3	24	28	9.5	2271	1771	1567	1385	1204
		1	12	16	5.2	1258	981	868	768	667
		1	18	22	6.0	1438	1122	992	877	762
	1C-2¾ x 4-48	2	18	22	7.2	1736	1354	1198	1059	920
	1G-274 X 4-40	1	24	28	6.6	1592	1242	1099	971	844
		2	24	28	8.5	2034	1587	1403	1241	1078
		3	24	28	10.1	2422	1889	1671	1477	1284

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

Revised February 2016. Zehnder periodically makes changes to the design and/or specifications of its products. As a result, the design and specifications of each product at the time of order may be different than as described herein. Please contact Zehnder's Sales Support staff at 844-934-6337 for specific information on current design and specifications. Designs, specifications and other information contained herein are not express warranties, which are only as expressly set forth by Zehnder in its terms and conditions of sale. The latest version it is available at www.zehnder-rittling.com.

**English, IP Units** 

Performance ratings: model S-FP5/S-RP5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

	- per active	Rows of element	Enclosure	Recommended minimum	EDR*	Steam heat		Hot wa	ter heat	
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
				C	opper elemen	t				
		1	12	16	3.7	880	690	610	540	470
		1	18	22	3.9	930	730	640	570	490
	10.01/.01/.00	2	18	22	5.6	1360	1060	940	830	720
	1C-31/4 x 31/4-32	1	24	28	4	990	770	680	600	520
		2	24	28	6.4	1540	1200	1060	940	820
		3	24	28	7.5	1790	1400	1240	1090	950
		1	12	16	4.5	1070	830	740	650	570
Dia. copper		1	18	22	4.9	1170	910	810	710	620
doo		2	18	22	6.5	1560	1220	1080	950	830
Jia.	1C-31/4 x 31/4-40	1	24	28	5.3	1280	1000	880	780	680
<u>+</u>		2	24	28	7.3	1740	1360	1200	1060	920
·		3	24	28	8.3	2000	1560	1380	1220	1060
		1	12	16	4.9	1170	910	810	710	620
		1	18	22	5.6	1350	1050	930	820	720
		2	18	22	6.4	1540	1200	1060	940	820
	1C-31/4 x 31/4-48	1	24	28	6.2	1490	1160	1030	910	790
		2	24	28	7.5	1810	1410	1250	1100	960
		3	24	28	8.7	2080	1620	1430	1270	1100
		1	12	16	5.3	1270	990	880	780	670
		1	18	22	5.7	1360	1060	940	830	720
	10.41/ 41/ 00	2	18	22	8.3	2000	1560	1380	1220	1060
	1C-41/4 x 41/4-32	1	24	28	6	1440	1120	990	880	760
		2	24	28	9.4	2250	1760	1550	1370	1190
		3	24	28	10.8	2580	2010	1780	1570	1370
		1	12	16	6.2	1480	1150	1020	900	780
Dia. copper		1	18	22	6.7	1610	1260	1110	980	850
doo	10.41/ 41/ 40	2	18	22	9	2160	1690	1490	1320	1150
Jia.	1C-4¼ x 4¼-40	1	24	28	7.2	1730	1350	1190	1060	920
<u>+</u>		2	24	28	10.1	2420	1890	1670	1480	1280
•		3	24	28	11.6	2780	2170	1920	1700	1470
		1	12	16	6.5	1560	1220	1080	950	830
		1	18	22	7.5	1790	1400	1240	1090	950
	10 41/ 41/ 40	2	18	22	8.7	2080	1620	1440	1270	110
	1C-4¼ x 4¼-48	1	24	28	8.4	2020	1580	1390	1230	1070
		2	24	28	10.8	2600	2020	1790	1580	1370
		3	24	28	12.4	2980	2320	2050	1820	1580

\*EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

**English, IP Units** 

General data
--------------

Performance ratings: model S-FP5/S-RP5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

	<u>-</u>	Rows of element	Enclosure	Recommended minimum	EDR*	Steam heat		Hot wa	ter heat	
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
				C	opper elemen	t	,			
		1	12	16	4.1	992	774	685	605	526
		1	18	22	4.3	1030	803	710	628	546
	44/0.00/ 4.00	2	18	22	6.6	1574	1228	1086	960	834
	11/4C-23/4 x 4-32	1	24	28	4.6	1104	861	762	674	585
		2	24	28	7.6	1824	1423	1259	1113	967
		3	24	28	8.8	2112	1647	1457	1288	1119
_		1	12	16	4.9	1181	921	815	720	626
bbe		1	18	22	5.4	1299	1013	896	792	688
Dia. copper		2	18	22	7.4	1773	1383	1223	1081	940
Dia	11/4C-23/4 x 4-40	1	24	28	5.8	1397	1090	964	852	741
11/4"		2	24	28	8.3	1992	1554	1374	1215	1056
+		3	24	28	9.9	2380	1857	1642	1452	1262
		1	12	16	5.1	1229	958	848	750	651
		1	18	22	5.9	1421	1108	980	867	753
	44/0.00/ 4.40	2	18	22	7.3	1754	1368	1211	1070	930
	11/4C-23/4 x 4-48	1	24	28	6.6	1594	1243	1100	972	845
		2	24	28	9.4	2250	1755	1552	1372	1192
		3	24	28	11.1	2664	2078	1838	1625	1412
		1	12	16	3.8	916	714	632	559	485
		1	18	22	4.0	950	741	656	580	504
	41/ 0 21/ 21/ 20	2	18	22	6.0	1437	1121	991	876	761
	11/4C-31/4 x 31/4-32	1	24	28	4.2	1020	795	703	622	540
		2	24	28	6.9	1664	1298	1148	1015	882
		3	24	28	8.0	1908	1488	1317	1164	1011
ايرا		1	12	16	4.3	1037	809	715	632	550
copper		1	18	22	4.8	1140	890	787	696	604
8	41/ 0 21/ + 21/ 40	2	18	22	6.7	1602	1250	1105	977	849
Dia.	11/4C-31/4 x 31/4-40	1	24	28	5.1	1227	957	847	748	650
11/4"		2	24	28	7.5	1800	1404	1242	1098	954
-		3	24	28	8.7	2079	1622	1435	1268	1102
		1	12	16	4.8	1152	899	795	703	611
		1	18	22	5.6	1332	1039	919	813	706
	41/ <sub>2</sub> C 21/ <sub>2</sub> × 21/ <sub>2</sub> 40	2	18	22	6.5	1550	1209	1070	946	822
	11/4C-31/4 x 31/4-48	1	24	28	6.2	1494	1165	1031	911	792
		2	24	28	8.3	1988	1551	1372	1213	1054
		3	24	28	9.5	2284	1781	1576	1393	1210

<sup>\*</sup>EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

 $\label{lem:lemportant} \textbf{Important rating information} \ \mathsf{Performance} \ \mathsf{ratings} \ \mathsf{based} \ \mathsf{on} :$ 

- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

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**English, IP Units** 

General data
--------------

Performance ratings: model S-FP5/S-RP5; perforated enclosure

In BTU/hr per active (finned) lineal foot of tube at entering air temperature of 65°F

		Rows of element	Enclosure	Recommended minimum	EDR*	Steam heat		Hot wa	ter heat	
	Element	(on 6-inch centers)	height (in inches)	installed height (in inches)	(ft²/ ft)	215°F factor of 1.00	190°F factor of 0.78	180°F factor of 0.69	170°F factor of 0.61	160°F factor of 0.53
			,	C	opper elemen	t	,			
		1	12	16	5.3	1270	990	880	780	670
		1	18	22	5.5	1330	1040	920	810	710
	11/4C-41/4 x 41/4-32	2	18	22	8.2	1960	1530	1350	1200	1040
	1740-474 X 474-32	1	24	28	5.9	1420	1110	980	870	750
		2	24	28	9.5	2220	1730	1530	1350	1180
		3	24	28	10.6	2540	1980	1750	1550	1350
		1	12	16	6	1450	1130	1000	890	770
copper		1	18	22	6.6	1590	1240	1100	970	840
8	11/4C-41/4 x 41/4-40	2	18	22	8.9	2130	1660	1470	1300	1130
Dia.	174G-474 X 474-40	1	24	28	7.1	1710	1330	1180	1040	910
11/4"		2	24	28	10	2390	1860	1650	1460	1270
-		3	24	28	11.4	2740	2140	1890	1670	1450
		1	12	16	6.4	1530	1190	1060	950	810
		1	18	22	7.4	1770	1380	1220	1090	940
	11/4C-41/4 x 41/4-48	2	18	22	8.5	2050	1600	1420	1260	1090
	1740-474 X 474-40	1	24	28	8.3	1980	1540	1370	1220	1050
		2	24	28	10.9	2620	2040	1800	1600	1390
		3	24	28	12.2	2930	2280	2020	1790	1550

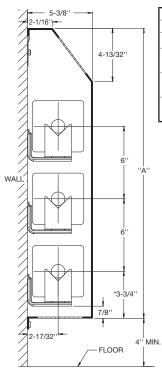
<sup>\*</sup>EDR - Equivalent Direct Radiation area (for steam heat) per active (finned) lineal foot of tube.

Important rating information Performance ratings based on:

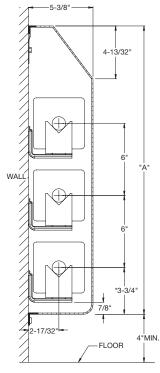
- Installation at height shown. (Lower heights are not recommended; for greater heights refer to EZselect selection software).
- Entering air temperature of 65°F. (For other temperatures, refer to EZselect selection software).
- Steam at nominal 1 (actual 0.9) psig and 215°F. (For other conditions, refer to EZselect selection software).
- Water average temperature (°F) shown and velocity of 3 fps or more. (For lower velocities, refer to EZselect selection software).

# Dimensional data

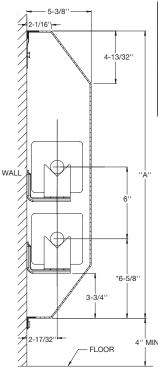
## **Perforated steel enclosures**



	S-SP5		
Pipe	size	<b>_</b>	
Steel	Copper	Fin size	Α
N/A	3/4", 1", 1-1/4"	2-3/4" x 4"	12"
1", 1-1/4", 2	3/4", 1", 1-1/4"	3-1/4" x 3-1/4"	18"
1", 1-1/4", 2	3/4", 1", 1-1/4"	4-1/4" x 4-1/4"	24"



	PS5		
Pipe	size		
Steel	Copper	Fin size	Α
N/A	3/4", 1", 1-1/4"	2-3/4" x 4"	12"
1", 1-1/4", 2	3/4", 1", 1-1/4"	3-1/4" x 3-1/4"	18"
1", 1-1/4", 2	3/4", 1", 1-1/4"	4-1/4" x 4-1/4"	24"



S-I	DSP5, PDS5	(shown)	
Pipe	size		
Steel	Copper	Fin size	Α
N/A	3/4", 1", 1-1/4"	2-3/4" x 4"	12"
1", 1-1/4", 2	3/4", 1", 1-1/4"	3-1/4" x 3-1/4"	18"
1", 1-1/4", 2	3/4", 1", 1-1/4"	4-1/4" x 4-1/4"	24"

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S-TP5, S	5-FP5, S-RP5	, PR5 (showr	1)
Pipe	size		
Steel	Copper	Fin size	Α
N/A	3/4", 1", 1-1/4"	2-3/4" x 4"	12"
1", 1-1/4", 2	3/4", 1", 1-1/4"	3-1/4" x 3-1/4"	18"
1", 1-1/4", 2	3/4", 1", 1-1/4"	4-1/4" x 4-1/4"	24"

## Notes:

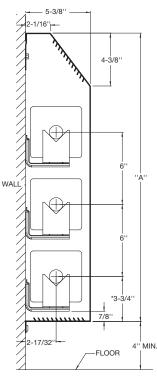
■ \*Centerlines are based on 1" copper tube.

 Damper option and number of rows available are dependant on enclosure size and piping configurations. (see page 55)

**English, IP Units** 

# Dimensional data

## Louvered steel enclosures



Pipe	oizo		
041	SIZE	Fi	
Steel	Copper	Fin size	Α
N/A	3/4", 1", 1-1/4"	2-3/4" x 4"	12"
1", 1-1/4"	3/4", 1", 1-1/4"	3-1/4" x 3-1/4"	18"
1", 1-1/4", 2	3/4", 1", 1-1/4"	4-1/4" x 4-1/4"	24"

#### Notes:

- \*Centerlines are based on 1" copper tube.
- Damper option and number of rows available are dependant on enclosure size and piping configurations. (see page 55)

**English, IP Units** 

## Accessories S-SP5 3-1/2" ■ Standard enclosures are available in 1' to 8' lengths in 6" increments 3-1/2 3-1/2" Access door also available in enclosure Section "X-X" internal joggle-joiner 3-1/2" Enclosure height "FBPO" "OC" "SLSRB" "WPH" "EC" "WT Offset Slip-in second Wall pipe Full height End cap Wall trim strip row bracket back panel (left hand shown) 3-1/2" - 5" - 7-1/2" channel hanger 3-1/2" 3-1/2" Door Door 6" x 6" 6" x 6" "OC" "AS" "AP" Access panel with access Outside corner Removable enclosure Inside corner End cap with access section, interlocking style door, overlapping style only door (w/allen key lock) only, no joggles or joiners (w/allen key lock) Top Enclosure Bottom Enclosure **Fasteners** (by others)

### Notes:

■ All accessories are overlap type, butt type optional (except as noted)

Revised February 2016. Zehnder periodically makes changes to the design and/or specifications of its products. As a result, the design and specifications of each product at the time of order may be different than as described herein. Please contact Zehnder's Sales Support staff at 844-934-6337 for specific information on current design and specifications. Designs, specifications and other information contained herein are not express warranties, which are only as expressly set forth by Zehnder in its terms and conditions of sale. The latest version of this document is available at www.zehnder-rittling.com.

Offset mounting

channel detail

Security damper (see

chart for availability) partial

perforated covers only

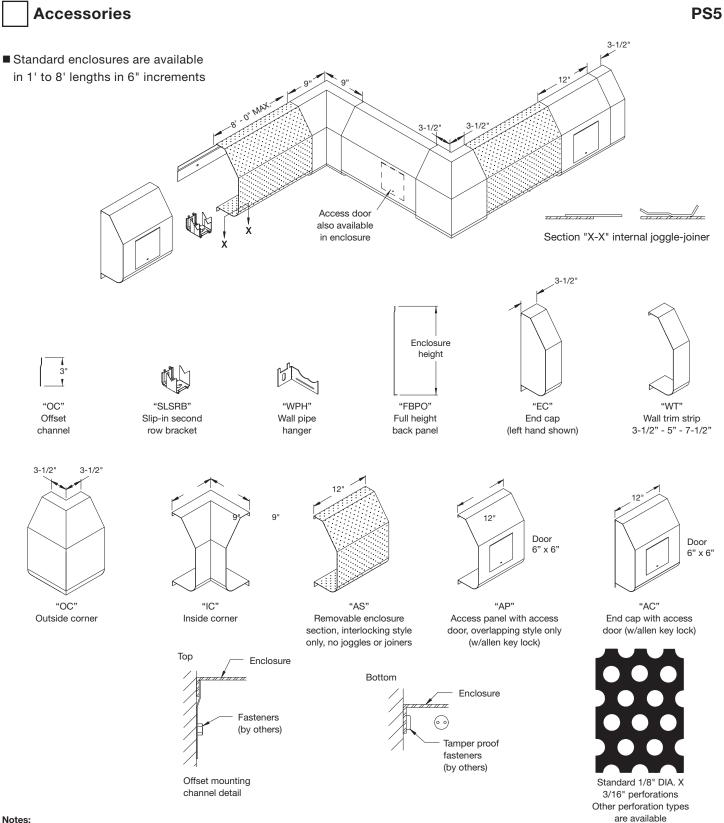
Standard 1/8" DIA. X 3/16"

perforations. Other perforation

types are available

Tamper proof fasteners (by others)

## **English, IP Units**



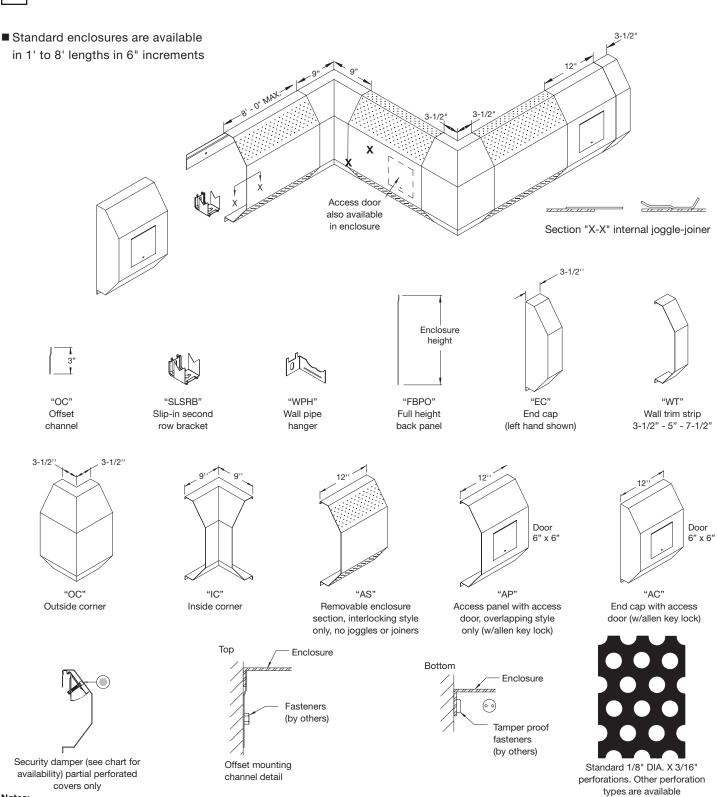
#### Notes:

■ All accessories are overlap type, butt type optional (except as noted)

**English, IP Units** 

# Accessories

## S-DSP5 (shown) / PDS5



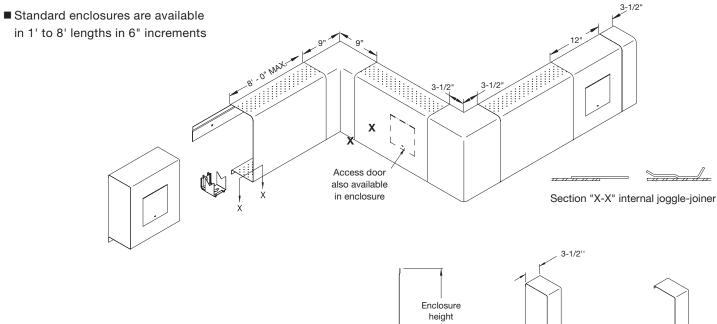
## Notes:

■ All accessories are overlap type, butt type optional (except as noted)

**English, IP Units** 

# Accessories

## S-TP5 (shown) / S-FP5 / PR5



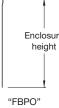




"SLSRB" Slip-in second row bracket



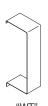
"WPH" Wall pipe hanger



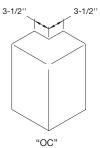
Full height back panel



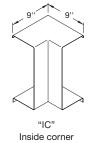
End cap (left hand shown)

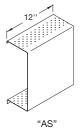


Wall trim strip 3-1/2" - 5" - 7-1/2"

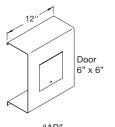


Outside corner

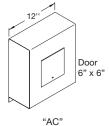




Removable enclosure section, interlocking style only, no joggles or joiners



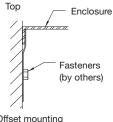
Access panel with access door, overlapping style only (w/allen key lock)



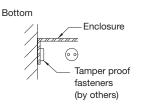
End cap with access door (w/allen key lock)



Security damper (see chart for availability) partial perforated covers only



Offset mounting channel detail





Standard 1/8" DIA. X 3/16" perforations. Other perforation types are available

#### Notes:

■ All accessories are overlap type, butt type optional (except as noted)

## **English, IP Units**

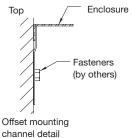
## Accessories S-SL 3-1/2" ■ Standard enclosures are available in 1' to 8' lengths in 6" increments 3-1/2 Access door also available Section "X-X" internal joggle-joiner in enclosure Enclosure height "OC" "WPH" "FBPO" "EC" Wall trim strip Offset Wall pipe Full height End cap Slip-in second channel row bracket hanger back panel (left hand shown) 3-1/2" - 5" - 7-1/2" 3-1/2 3-1/2" Door Door 6" x 6" 6" x 6" "OC" "IC" "AS" "AP" "AC" Removable perforated End cap with access door, left Outside corner Inside corner Access panel with access door (w/allen key lock) enclosure section butt type side shown (w/allen key lock) style only, no joggles or joiners

# \_\_\_\_\_

Knob damper



Security damper (consult factory on 10" and below) partial perforated covers only



Bottom Enclosure

Tamper proof fasteners (by others)

#### Notes:

■ All accessories are overlap type, butt type optional (except as noted)

## **Mechanical specifications**

#### General

Furnish and install finned tube heating elements and enclosures as indicated on plans, with required mounting components and accessories. Material shall be manufactured in accordance with Zehnder Rittling's High Quality Standards and in conformance to ISO 9001:2008 standards established and maintained by Zehnder Rittling of Buffalo, New York.

#### Steel heating elements

Steel heating elements shall consist of 0.027" thick galvanized fins permanently bonded to high pressure A106 seamless schedule 40B steel tubing by mechanically expanding the steel tubing to the steel fins. Steel tube wall thickness; 1" dia. - 0.133", 1-1/4" dia. - 0.140", 2" dia - 0.154", prior to tube expansion.

#### **Guaranteed working pressures:**

1" IPS - 780 psig at temperature up to 650°F. 1-1/4" IPS - 660 psig at temperatures up to 650°F. 2" IPS - 405 psig at temperatures up to 650°F.

## Copper-aluminum heating elements

Copper-aluminum heating elements shall consist of 0.016" thick, 1100 grade aluminum fins permanently bonded to lightly annealed copper alloy 122 seamless drawn tubing by mechanically expanding the copper tubing to the aluminum fins. Copper tube wall thickness; 3/4" dia - 0.020", 1" dia. - 0.025", 1-1/4" dia. - 0.028", prior to tube expansion. Copper tube meets the following ASTM standard designations: ASTM B42, ASTM B68, ASTM B75, ASTM B88, ASTM B111, ASTM B152, ASTM B280.

## **Guaranteed working pressures:**

1-1/4" CU - 194 psig at temperatures up to 300°F. 1" CU - 204 psig at temperature up to 300°F. 3/4" CU - 218 psig at temperatures up to 300°F.

## Mounting channel or full back panel:

Mounting channel shall be off-set from the wall and built from 20-gauge galvannealed steel and the full back panel from 14-, 16- or 18-gauge galvannealed steel (perforated enclosure) and 18- or 20-gauge galvannealed steel (S-SL enclosure). For rigidity, the mounting channel or full back panel shall position the enclosure directly against the wall to limit access. A urethane gasket is available to form an air seal at the wall (optional for mounting channel).

## Hanger brackets:

All hanger brackets shall be die formed for rigidity.

All hangers must provide for lengthwise movement of elements during expansion and contraction as well as aligning elements to prevent contact with brackets, walls, or enclosure.

#### **Enclosures and accessories:**

Enclosures shall be of the type as shown on the drawings. Enclosures shall be manufactured from 12-, 14-, or 16-gauge (perforated) or 14-, 16-, or 18-gauge (S-SL) cold rolled steel. All enclosures shall be reinforced with welded gussets. The joining of enclosure shall be accomplished by use of internal joggle joiners to provide for hairline joints and added rigidity.

Securing the top portion of the enclosure to the wall will be accomplished by use of a full length mounting channel or full back panel. The lower portion of the enclosure will be secured to the wall using security fasteners, which prevents removal without special tools (by others).

#### Damper:

Enclosure dampers shall be provided where indicated. Damper blades shall be fabricated from 18-gauge material painted to match enclosure color. Threaded damper screw and trunion shall provide positive operation of blade to provide variable heat output.

Security dampers available, to control airflow as required (operated by use of an allen key.) Knob damper only available with S-SL enclosure.

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## **Mechanical specifications**

## **Access doors**

Access doors shall be provided where noted on plans. Doors shall be 6 "  $\times$  6". Doors shall be hinged and have recessed security allen head operators. Doors shall be positioned directly in enclosure (or/in 12" long access panel). Consult factory on enclosure heights of 8" or below.

#### Paint:

All enclosures and accessories shall be degreased and chemically phosphatized before application of a durable, attractive, electrostatic epoxy powder coating. Decorator colors are available from Zehnder Rittling's color selector chart.

In the interest of product improvement, we reserve the right to make product and specification changes without notice.

Revised February 2016. Zehnder periodically makes changes to the design and/or specifications of its products. As a result, the design and specifications of each product at the time of order may be different than as described herein. Please contact Zehnder's Sales Support staff at 844-934-6337 for specific information on current design and specifications. Designs, specifications and other information contained herein are not express warranties, which are only as expressly set forth by Zehnder in its terms and conditions of sale. The latest version of this document is available at www.zehnder-rittling.com.

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# Warranty

Zehnder Rittling guarantees its products to be free from defects in material and workmanship for a period of one year from date of shipment from our Buffalo, New York factory.

Should there be any defects in the good(s), the purchaser should promptly notify Zehnder Rittling and upon receipt of written consent from Zehnder Rittling, the purchaser shall return the defective good(s) to the factory for inspection with freight prepaid. If inspection shows the goods to be defective, Zehnder Rittling will at its discretion repair or replace the said item(s).

Defects arising from damage due to shipment, improper installation, negligence or misuse by others are not covered by this warranty.

This warranty is extended only to the original purchaser from Zehnder Rittling.

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