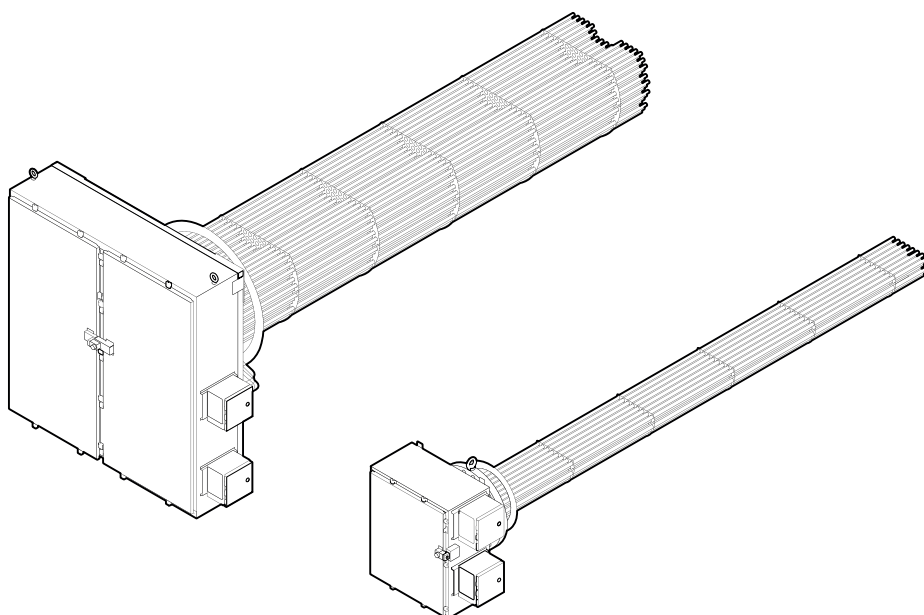


SteamVolt Medium Voltage Electric Elements for Steam Boiler Applications

Description

Chromalox SteamVolt Medium Voltage Electric heating elements have been designed to provide a turnkey solution for Boiler makers who are required to provide a decarbonised offer to End Users.

Utilising supply voltages of between 4160 - 6600V SteamVolt Electric elements have been designed and developed for heating loads from 1200 to 10000 kW and available with both ANSI (ASME) and DIN (PED) connection options.



Certification and Approvals

- ETL certification for heating elements up to and including 4160V
- UL certification for heating elements up to and including 7200V
- ATEX/IEC certification for heating elements up to and including 7200V
- ATEX: DEMKO 18 ATEX 1993U Rev. 0
- ATEX/IECEX certification mark for heating assemblies up to and including 7200V
- Hazardous Locations (CE) 0359 (EX) II 2 G Ex eb IIC T₁ Gb IP66 rating
- Equivalent to North American Class 1, Zones 1 & 2
- IECEX: IECEX UL 17.0093, Issue 0
- ATEX: DEMKO 17 ATEX 1940 Rev. 0
- EU Directive 2014/30/EU
- EU Directive 2011/65/EU
- UKCA

Associated equipment

- Boiler Level Control System and Level limiters
- Boiler TDS (Total Dissolved Solids) Control System
- Bottom Blowdown Control System with Manual/ Automatic valve options
- Feed Water Control Valve
- Boiler Ancillaries including Safety Valves, Isolation Valves
- Medium Voltage Converter System
- Boiler Control Panel

Materials

Heater Element	Flange	Carbon Steel
	Flange gasket	Graphite, Inconel 625
	Elements/stand offs	Incoloy 800
	Element spacers	304/304L Stainless Steel
	Over temperature thermocouple(s)	316/316L Stainless Steel, Type K
	Terminal housing	304 Stainless Steel

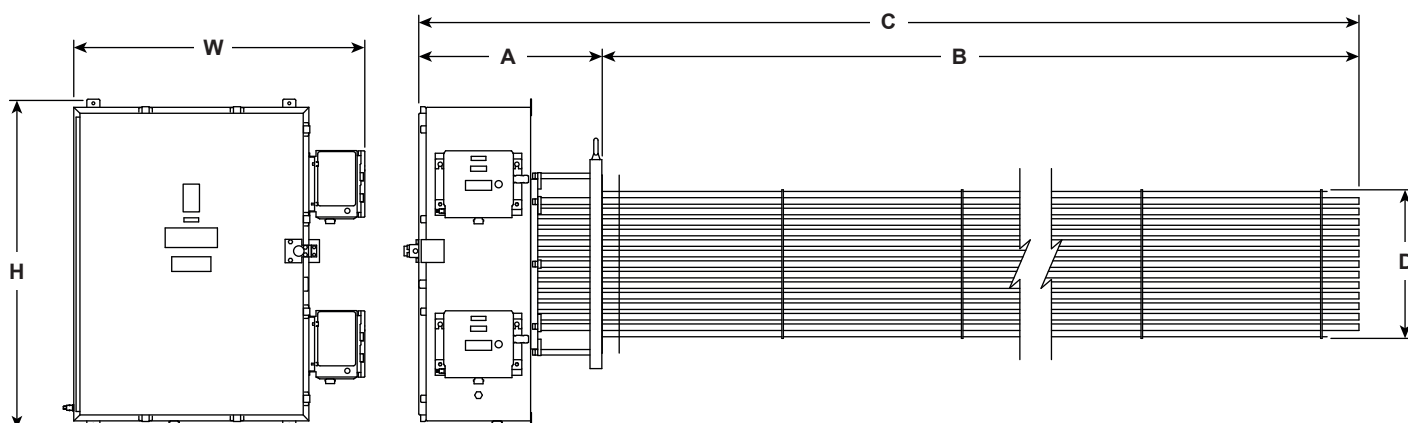
Sizing and selection - ANSI (ASME) Flange

Part Number	Steam lb/hr	Steam kg/hr	kW	Voltage	Amps	Circuits- Phase	Flange	Temperature & Pressure (Design)	Temperature & Pressure (Max. Operating)
307548021	3,466	1,572	1,150	4,160	160	1-3PH	16"-300# RF	250 psi g @ 406 °F (17.2 bar g @ 207 °C)	235 psi g @ 401 °F (16.2 bar g @ 205 °C)
307548022	6,932	3,144	2,300	4,160	319	2-3PH	20"-300# RF	250 psi g @ 406 °F (17.2 bar g @ 207 °C)	235 psi g @ 401 °F (16.2 bar g @ 205 °C)
307548023	13,864	6,289	4,600	4,160	638	3-3PH	30"-300# RF	250 psi g @ 406 °F (17.2 bar g @ 207 °C)	235 psi g @ 401 °F (16.2 bar g @ 205 °C)
307548024	20,796	9,433	6,900	4,160	958	4-3PH	36"-300# RF	250 psi g @ 406 °F (17.2 bar g @ 207 °C)	235 psi g @ 401 °F (16.2 bar g @ 205 °C)
307548121	5485	2488	1820	6600	159	1-3PH	20"-300# RF	250 psi g @ 406 °F (17.2 bar g @ 207 °C)	235 psi g @ 401 °F (16.2 bar g @ 205 °C)
307548122	11001	4990	3620	6600	317	2-3PH	30"-300# RF	250 psi g @ 406 °F (17.2 bar g @ 207 °C)	235 psi g @ 401 °F (16.2 bar g @ 205 °C)
307548123	22001	9979	7300	6600	639	3-3PH	36"-300# RF	250 psi g @ 406 °F (17.2 bar g @ 207 °C)	235 psi g @ 401 °F (16.2 bar g @ 205 °C)
307548124	33032	14983	10960	6600	959	4-3PH	48"-300# RF	250 psi g @ 406 °F (17.2 bar g @ 207 °C)	235 psi g @ 401 °F (16.2 bar g @ 205 °C)
307548221	3466	1572	1150	4160	160	1-3PH	16"-300# RF	450 psi g @ 460 °F (31.0 bar g @ 237 °C)	423 psi g @ 454 °F (29.1 bar g @ 234 °C)
307548222	6932	3144	2300	4160	319	2-3PH	20"-300# RF	450 psi g @ 460 °F (31.0 bar g @ 237 °C)	423 psi g @ 454 °F (29.1 bar g @ 234 °C)
307548223	13864	6289	4600	4160	638	3-3PH	30"-300# RF	450 psi g @ 460 °F (31.0 bar g @ 237 °C)	423 psi g @ 454 °F (29.1 bar g @ 234 °C)
307548224	20796	9433	6900	4160	958	4-3PH	36"-300# RF	450 psi g @ 460 °F (31.0 bar g @ 237 °C)	423 psi g @ 454 °F (29.1 bar g @ 234 °C)
307548321	5485	2488	1820	6600	159	1-3PH	20"-300# RF	450 psi g @ 460 °F (31.0 bar g @ 237 °C)	423 psi g @ 454 °F (29.1 bar g @ 234 °C)
307548322	11001	4990	3650	6600	319	2-3PH	30"-300# RF	450 psi g @ 460 °F (31.0 bar g @ 237 °C)	423 psi g @ 454 °F (29.1 bar g @ 234 °C)
307548323	22001	9979	7300	6600	639	3-3PH	36"-300# RF	450 psi g @ 460 °F (31.0 bar g @ 237 °C)	423 psi g @ 454 °F (29.1 bar g @ 234 °C)
307548324	33032	14983	10960	6600	959	4-3PH	48"-300# RF	450 psi g @ 460 °F (31.0 bar g @ 237 °C)	423 psi g @ 454 °F (29.1 bar g @ 234 °C)

Sizing and selection -DIN (PED) Flange

Part Number	Steam lb/hr	Steam kg/hr	kW	Voltage	Amps	Circuits- Phase	Flange	Temperature & Pressure (Design)	Temperature & Pressure (Max. Operating)
307548011	3,466	1,572	1,150	4,160	160	1-3PH	DN 400 PN40	250 psi g @ 406 °F (17.2 bar g @ 207 °C)	235 psi g @ 401 °F (16.2 bar g @ 205 °C)
307548012	6,932	3,144	2,300	4,160	319	2-3PH	DN 500 PN40	250 psi g @ 406 °F (17.2 bar g @ 207 °C)	235 psi g @ 401 °F (16.2 bar g @ 205 °C)
307548013	13,864	6,289	4,600	4,160	638	3-3PH	DN 800 PN40	250 psi g @ 406 °F (17.2 bar g @ 207 °C)	235 psi g @ 401 °F (16.2 bar g @ 205 °C)
307548014	20,796	9,433	6,900	4,160	958	4-3PH	DN 900 PN40	250 psi g @ 406 °F (17.2 bar g @ 207 °C)	235 psi g @ 401 °F (16.2 bar g @ 205 °C)
307548111	5,485	2,488	1,820	6,600	159	1-3PH	DN 500 PN40	250 psi g @ 406 °F (17.2 bar g @ 207 °C)	235 psi g @ 401 °F (16.2 bar g @ 205 °C)
307548112	11,001	4,990	3,620	6,600	317	2-3PH	DN 800 PN40	250 psi g @ 406 °F (17.2 bar g @ 207 °C)	235 psi g @ 401 °F (16.2 bar g @ 205 °C)
307548113	22,001	9,979	7,300	6,600	639	3-3PH	DN 900 PN40	250 psi g @ 406 °F (17.2 bar g @ 207 °C)	235 psi g @ 401 °F (16.2 bar g @ 205 °C)
307548211	3,466	1,572	1,150	4,160	160	1-3PH	DN 400 PN40	450 psi g @ 460 °F (31.0 bar g @ 237 °C)	423 psi g @ 454 °F (29.1 bar g @ 234 °C)
307548212	6,932	3,144	2,300	4,160	319	2-3PH	DN 500 PN40	450 psi g @ 460 °F (31.0 bar g @ 237 °C)	423 psi g @ 454 °F (29.1 bar g @ 234 °C)
307548213	13,864	6,289	4,600	4,160	638	3-3PH	DN 800 PN40	450 psi g @ 460 °F (31.0 bar g @ 237 °C)	423 psi g @ 454 °F (29.1 bar g @ 234 °C)
307548214	20,796	9,433	6,900	4,160	958	4-3PH	DN 900 PN40	450 psi g @ 460 °F (31.0 bar g @ 237 °C)	423 psi g @ 454 °F (29.1 bar g @ 234 °C)
307548311	5485	2488	1820	6600	159	1-3PH	DN 500 PN40	450 psi g @ 460 °F (31.0 bar g @ 237 °C)	423 psi g @ 454 °F (29.1 bar g @ 234 °C)
307548312	11001	4990	3650	6600	319	2-3PH	DN 800 PN40	450 psi g @ 460 °F (31.0 bar g @ 237 °C)	423 psi g @ 454 °F (29.1 bar g @ 234 °C)
307548313	22001	9979	7300	6600	639	3-3PH	DN 900 PN40	450 psi g @ 460 °F (31.0 bar g @ 237 °C)	423 psi g @ 454 °F (29.1 bar g @ 234 °C)

Dimensions/weights (approximate) in mm and kg



Part Number		Dimensions				Enclosure		Weight
ANSI (ASME) flange	DIN (PED) Flange	A mm (in)	B mm (in)	C mm (in)	D mm (in)	W mm (in)	H mm (in)	kg (lbs)
307548021	307548011	686 (27)	4,275 (169)	4,950 (195)	374 (15)	991 (39)	915 (36)	694 (1,530)
307548022	307548012	717 (29)	4,275 (169)	4,950 (195)	470 (19)	1,448 (57)	1,220 (48)	1,041 (2,995)
307548023	307548013	717 (29)	4,231 (167)	4,953 (195)	715 (29)	1,753 (69)	1,577 (62)	2,837 (6,254)
307548024	307548014	717 (29)	4,321 (167)	4,953 (195)	857 (34)	2,058 (81)	1,882 (75)	4,018 (8,860)
307548121	307548111	717 (29)	4,275 (169)	4,953 (195)	470 (19)	1,143 (45)	1,220 (48)	1,114 (2,455)
307548122	307548112	717 (29)	4,231 (167)	4,950 (195)	715 (29)	1,753 (69)	1,577 (62)	2,610 (5,754)
307548123	307548113	762 (30)	4,242 (167)	4,953 (195)	857 (34)	2,058 (81)	1,882 (75)	4,336 (9,560)
307548124		762 (30)	4,242 (167)	4,953 (195)	1,150 (46)	2,058 (81)	1,882 (75)	6,505 (14,339)
307548221	307548211	686 (27)	4,275 (169)	4,950 (195)	374 (15)	991 (39)	915 (36)	733 (1,615)
307548222	307548212	717 (29)	4,275 (169)	4,950 (195)	470 (19)	1,448 (57)	1,220 (48)	1,359 (2,995)
307548223	307548213	717 (29)	4,231 (167)	4,950 (195)	715 (29)	1,753 (69)	1,577 (62)	2,945 (6,491)
307548224	307548214	762 (30)	4,231 (167)	4,950 (195)	857 (34)	2,058 (81)	1,882 (75)	4187 (9,230)
307548321	307548311	717 (29)	4,275 (169)	4,950 (195)	470 (19)	1,143 (45)	1,220 (48)	1,100 (2,524)
307548322	307548312	717 (29)	4,231 (167)	4,950 (195)	715 (29)	1,753 (69)	1,577 (62)	2,719 (5,993)
307548323	307548313	762 (30)	4,242 (167)	4,950 (195)	857 (34)	2,058 (81)	1,882 (75)	4,503 (9,926)
307548324		762 (30)	4,242 (167)	4,950 (195)	1,150 (46)	2,058 (81)	1,882 (75)	6,556 (14,452)