

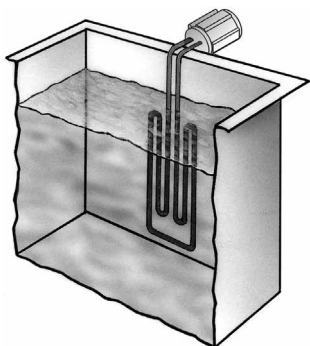
Over-the-Side Immersion Heaters - DX

Application

Side mount immersion heaters are for use in solutions requiring easy removal of heaters for cleaning or inspection.

Single phase or three phase heaters are available. Refer to the Corrosion Guide (Section D) to assist in the selection of the heater most suited to your conditions.

Refer to Section D to select the heater with a watt density suitable to your application. Lower watt densities normally provide longer service life.



Installation

During installation the heated section (See Figure 24 and on page B38) of the heater must always remain totally immersed or the heater may fail.

When determining your minimum liquid level be sure to make allowance for loss of solution volume by evaporation and removal of work.

TYPE DXC - Used mainly for heating water or water solutions which will not corrode copper.

TYPES DXI, DXS - Type DXI heaters are used in water rinse tanks with contaminants which would be corrosive to copper. Type DXS and DXI are also suitable for use in oil based solutions or other chemical solutions which would not be corrosive to stainless or Incoloy®.

TYPES DXN, DXT - These high grade Inconel® or titanium sheathed heaters are frequently used when copper, stainless or Incoloy® sheathed heaters are unsuitable. Check the Corrosion Guide in Section D for further information.

To Order Specify

- Quantity
- Phase
- Catalog number
- Wattage
- Voltage

Note: The type DXT titanium sheathed heater does not have stand-off brackets.

Table 34 – Single Element Over-the-Side Immersion (Figure 24)

Sheath	kW	Watt Density		Catalog No.	Part No.	Net Weight	
		W/in ²	W/cm ²			lbs	kg
Copper	9.0	19	2.9	DXC1030	RTC-30	8.8	4
	15.0	32	5.0	DXC1050	RTC-50		
	22.5	48	7.4	DXC1075	RTC-75		
304 S.S.	9.0	19	2.9	DXS1030	RTSS-30		
	15.0	32	5.0	DXS1050	RTSS-50		
	22.5	48	7.4	DXS1075	RTSS-75		
Incoloy®	9.0	19	2.9	DXI1030	RTI-30		
	15.0	32	5.0	DXI1050	RTI-50		
	22.5	48	7.4	DXI1075	RTI-75		
Inconel®	9.0	19	2.9	DXN1030	RTIL-30		
	15.0	32	5.0	DXN1050	RTIL-50		
	22.5	48	7.4	DXN1075	RTIL-75		
Titanium	3.0	19	2.9	DXT1030	RTT-30		
	5.0	32	5.0	DXT1050	RTT-50		
	7.5	48	7.4	DXT1075	RTT-75		

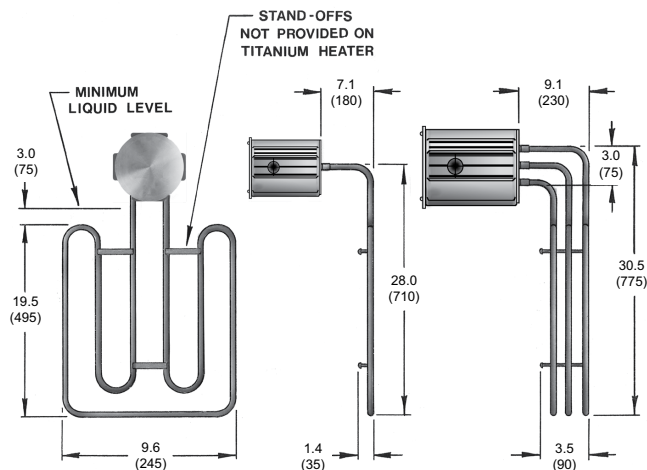


Figure 24

Figure 25

Note: Special dimensions are available.

Table 35 – Three Element Over-the-Side Immersion (Figure 25)

Sheath	kW	Watt Density		Catalog No.	Part No.	Net Weight	
		W/in ²	W/cm ²			lbs	kg
Copper	9.0	19	2.9	DXC3090	-	22.0	10
	15.0	32	5.0	DXC3150			
	22.5	48	7.4	DXC3225			
304 S.S.	9.0	19	2.9	DXS3090			
	15.0	32	5.0	DXS3150			
	22.5	48	7.4	DXS3225			
Incoloy®	9.0	19	2.9	DXI3090			
	15.0	32	5.0	DXI3150			
	22.5	48	7.4	DXI3225			
Inconel®	9.0	19	2.9	DXN3090			
	15.0	32	5.0	DXN3150			
	22.5	48	7.4	DXN3225			

Application

Calortech™ bottom mount heaters are available as standard in copper or Incoloy® sheaths for use in most liquid heating applications. Check the construction details listed below and also Section D of the Calortech™ catalog for watt density and sheath selection.

Construction

Types DXLC and DXRC heaters have copper sheathed heating elements silver brazed to a welded 304 stainless steel box and riser.

Types DXLI and DXRI heaters feature high density Incoloy® sheathed heating elements and 304 stainless steel immersed parts in a fully welded construction.

Types DXLF and DXRF heaters feature low density Incoloy® sheathed heating elements and steel immersed parts in a fully welded construction.

Special Features (Ordered Separately)

- Special wattage or voltage
- Special riser height
- Special materials
- Multiple rows of elements for higher wattages
- Built-in thermostat or high limit controller
- 4" (102 mm) sludge legs
- Passivation for Incoloy® and stainless steel sheath
- Explosion-proof construction

Table 36 – Terminal Housings

Box Type	No Thermostat				With Thermostat			
	K		L		K		L	
	in	mm	in	mm	in	mm	in	mm
Moisture Resistant (Standard)	3.50	89	4.25	108	6.250	159	6.000	152
Explosion-Proof	4.75	108	4.00	102	7.000	178	5.625	143

To Order Specify

- Quantity
- Catalog number
- Voltage
- Phase
- Wattage
- Special features

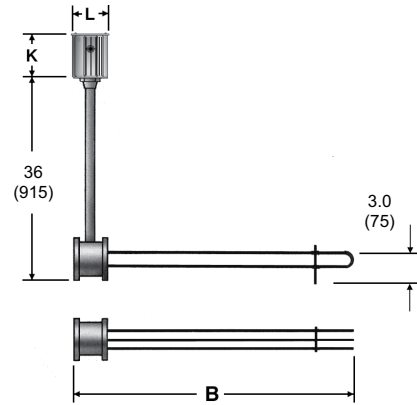


Figure 26

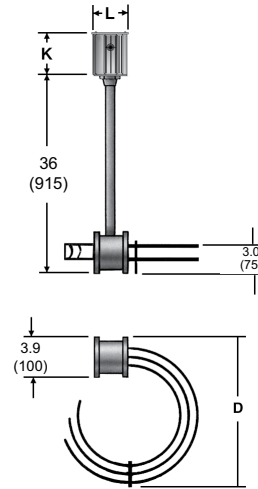


Figure 27

Table 37 – Over-the-Side Heaters (Figure 26 and Figure 27)

Sheath Material	kW	Dimensions				Watt Density		Figure 24		Figure 25		Net Weight	
		B (Figure 26)		D (Figure 27)		W/in ²	W/cm ²	Catalog No.	Part No.	Catalog No.	Part No.	lb	kg
		in	mm	in	mm								
Copper	3.0	12.4	315	–	–	53	8.1	DXLC3030	TLC-330-1	–	KTLC-330-1	11.0	5
	6.0	22.2	565	15.7	400	60	9.3	DXLC3060	TLC-360-1	DXRC3060	KTLC-360-1	11.0	5
	9.0	30.1	765	17.3	440	55	8.5	DXLC3090	TLC-390-1	DXRC3090	KTLC-390-1	13.2	6
	12.0	37.0	940	18.9	480	54	8.4	DXLC3120	TLC-312-1	DXRC3120	KTLC-312-1	13.2	6
	15.0	43.9	1115	20.5	520	54	8.4	DXLC3150	TLC-315-1	DXRC3150	KTLC-315-1	15.4	7
	18.0	51.8	1315	22.0	560	53	8.2	DXLC3180	TLC-318-1	DXRC3180	KTLC-318-1	15.4	7
Incoloy®	3.0	12.4	315	–	–	53	8.1	DXLI3030	TLI-330-1	–	KTLI-330-1	11.0	5
	6.0	22.2	565	15.7	400	60	9.3	DXLI3060	TLI-360-1	DXRI3060	KTLI-360-1	11.0	5
	9.0	30.1	765	17.3	440	55	8.5	DXLI3090	TLI-390-1	DXRI3090	KTLI-390-1	13.2	6
	12.0	37.0	940	18.9	480	54	8.4	DXLI3120	TLI-312-1	DXRI3120	KTLI-312-1	13.2	6
	15.0	43.9	1115	20.5	520	54	8.4	DXLI3150	TLI-315-1	DXRI3150	KTLI-315-1	15.4	7
	18.0	51.8	1315	22.0	560	53	8.2	DXLI3180	TLI-318-1	DXRI3180	KTLI-318-1	15.4	7
	3.0	22.2	565	15.7	400	30	4.6	DXLF3030	TLO-330-1	DXRF3030	KTLO-330-1	11.0	5
	6.0	37.0	940	18.9	480	27	4.2	DXLF3060	TLO-360-1	DXRF3060	KTLO-360-1	13.2	6
	9.0	51.8	1315	22.0	560	26	4.1	DXLF3090	TLO-390-1	DXRF3090	KTLO-390-1	15.4	7
	3.0	565	940	18.9	480	14	2.1	DXLF3030-1	–	DXRF3030-1	–	11.0	5
	4.5	940	1115	20.5	520	16	2.5	DXLF3045	–	DXRF3045	–	13.2	6
	6.0	1315	1315	22.0	560	18	2.7	DXLF3060-1	–	DXRF3060-1	–	15.4	7