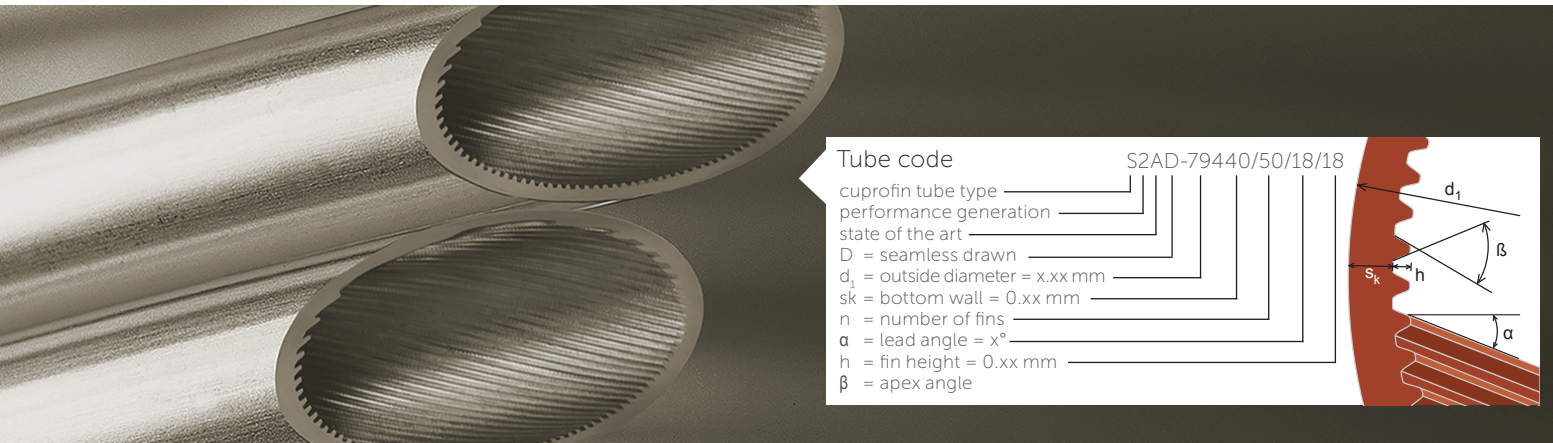


## cuprofin<sup>®</sup>-L10

Inner-grooved seamless drawn cupronickel tubes for seawater applications



Tube code S2AD-79440/50/18/18

- cuprofin tube type
- performance generation
- state of the art
- D = seamless drawn
- $d_1$  = outside diameter = x.xx mm
- $s_k$  = bottom wall = 0.xx mm
- n = number of fins
- $\alpha$  = lead angle = x°
- h = fin height = 0.xx mm
- $\beta$  = apex angle

### Application

Wieland cuprofin-L10 tubes are highly efficient heat transfer tubes, which are especially qualified for seawater applications and other saline water, as well as their environment (e.g. coastal area). This is due to the

very high resistance of L10 to corrosion and erosion through fast-flowing, saline water, in particular seawater, and also to the insensitivity to stress corrosion and corrosion fatigue in these fluids.

### Form of delivery

#### Level-wound coils

Material	Cupronickel CuNi10Fe1Mn	Cupronickel C 70600
Standard	Wieland R-1191	ASTM B 359
Temper	annealed R290 (EN 12451*)	annealed O61

#### Straight lengths

Material	Cupronickel CuNi10Fe1Mn	Cupronickel C 70600
Standard	Wieland R-1190	ASTM B 359
Temper	annealed R290 (EN 12451*) hard	annealed O61 on request

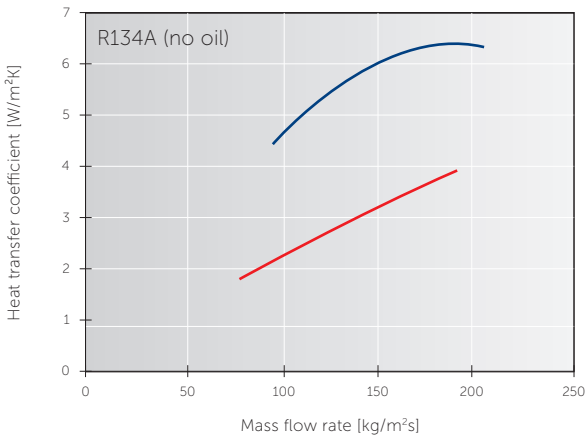
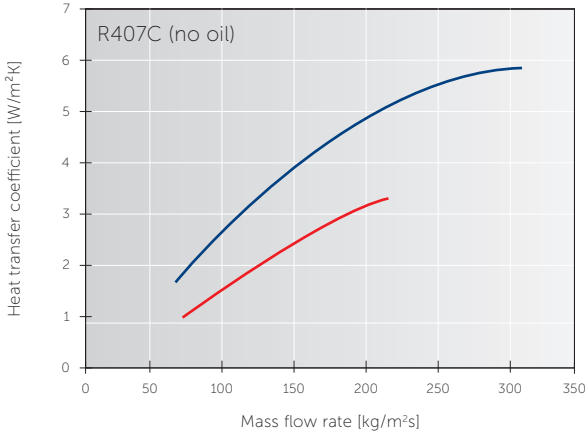
\*Particular material appraisal 3.2 required for conformity to the Pressure Equipment Directive PED 2014/68/EU.

$d_1$		$s_k$	h	n	$\alpha$	Weight approx.	Tube code
mm	inch	mm	mm	-	°	[g/m]	
7.94	5/16	0.40	0.18	50	18	95	S2AD-79440/50/18/18
8.00	-	0.40	0.18	50	18	95	S2AD-80040/50/18/18
9.52	3/8	0.45	0.20	60	18	129	S2AD-95245/60/18/20
12.00	-	0.50	0.25	70	18	186	S2AD-12050/70/18/25
12.70	1/2	0.50	0.25	70	18	196	S2AD-12750/70/18/25
15.00	-	0.56	0.30	75	18	265	S2AD-15056/75/18/30
15.87	5/8	0.58	0.30	75	18	288	S2AD-15858/75/18/30

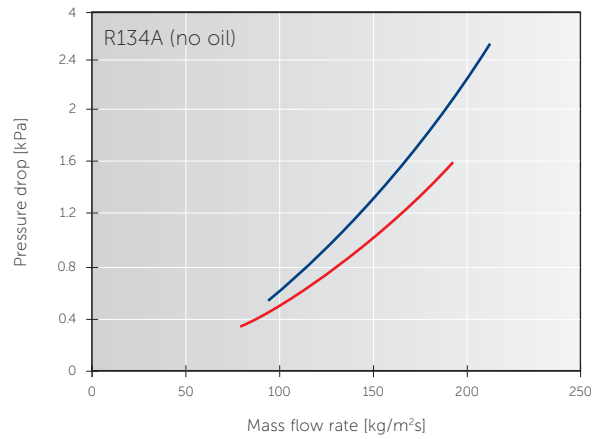
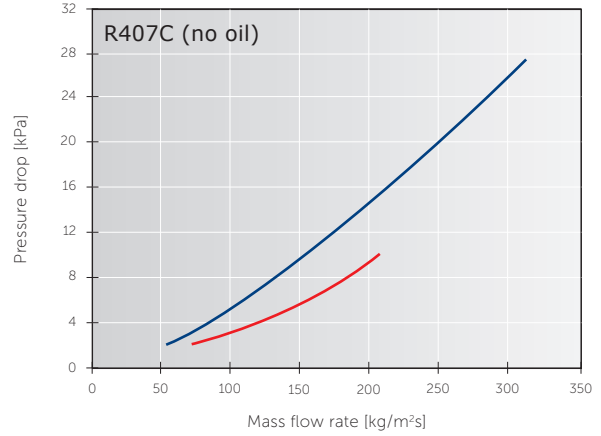
Other types and wall thicknesses are available upon request.

# Evaporation

## Heat transfer performance

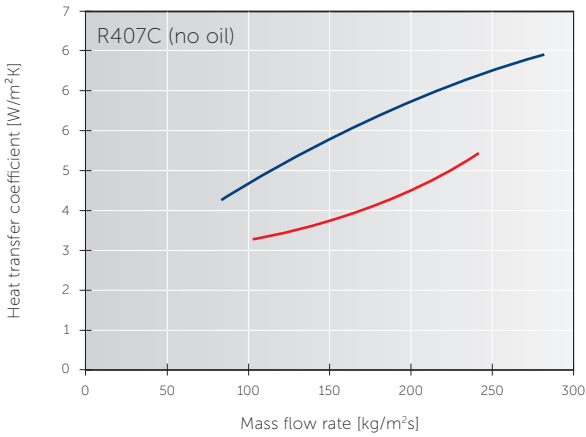


## Pressure drop

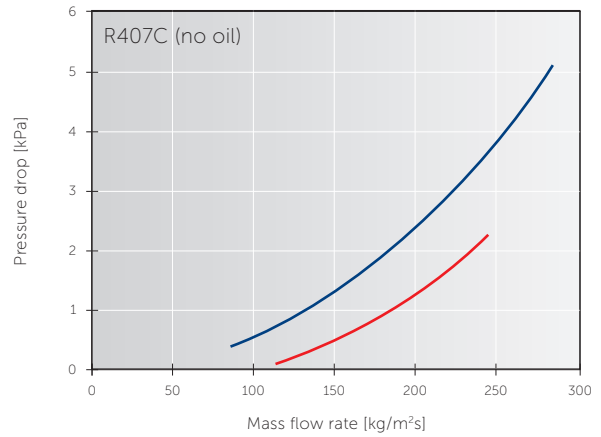


# Condensation

## Heat transfer performance



## Pressure drop



**Test conditions** Evaporation – 9.52 mm tubes  $t_c = 0\text{ }^\circ\text{C}$  superheat  $\sim 5\text{ K}$ , inlet quality 20 % tube length 2 m  
 Condensation – 9.52 mm tubes  $t_c = 35\text{ }^\circ\text{C}$  subcooling  $\sim 2\text{ K}$ , inlet superheat 5K tube length 2 m

— cuprofin standard  
 — plain tube

	Standard	E	EDX	C	G	This leaflet
Tube Application	evaporation condensation	evaporation	evaporation	condensation	single phase heat transfer	L10 evaporation condensation
Process Application	fin coils shell & tube	fin coils	shell and tube evaporation	fin coils	highly viscous liquids	seawater
Material	copper	copper	copper	copper	copper	cupro nickel