

## cuprofin® - G

### Inner-grooved seamless drawn copper tubes

#### Application

Wieland cuprofin-G tubes are highly efficient heat transfer tubes, which are specifically designed for recooling of liquids such as water-glycol mixtures. The grooves on the inside of the

tubes are optimised for single-phase heat transfer, allowing the development of more compact heat exchangers.

#### Form of delivery

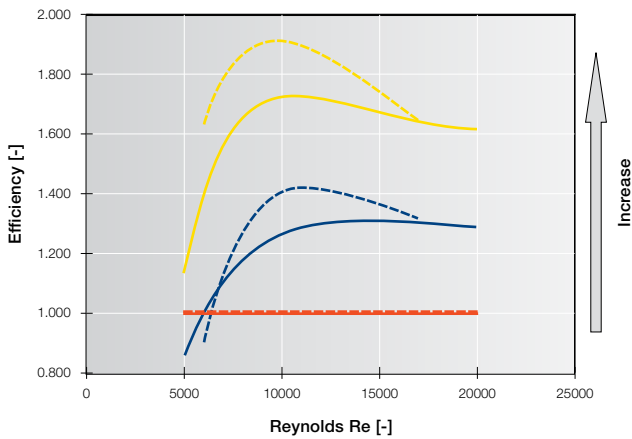
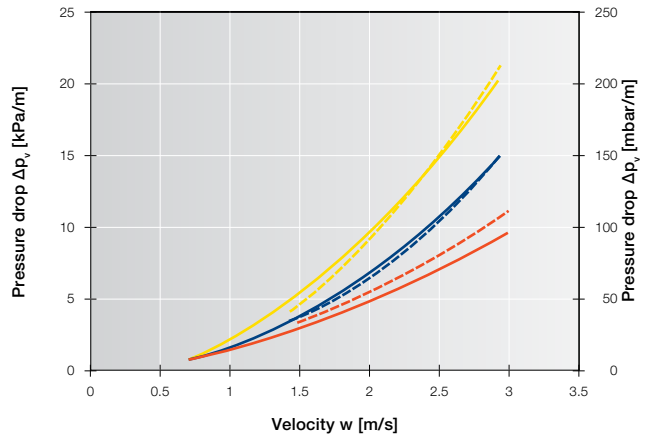
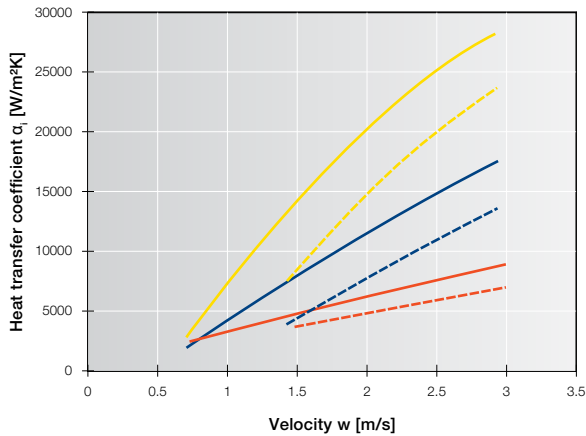
Level-wound coils			
Material	Copper Cu - DHP	Copper C 12200	Copper SF - Cu
Standard	EN 12735-2*	ASTM SB 359	VdTÜV 420/6
Temper	annealed Y040	light annealed O50	annealed F22
Straight lengths			
Material	Copper Cu - DHP	Copper C 12200	Copper SF - Cu
Standard	EN 12735-1*	ASTM SB 359	VdTÜV 420/7
Temper	hard R 290	hard drawn H80	hard F 36

\*Conforms to the Pressure Equipment Directive PED 97/23/EC.

$d_1$		$s_k$	$h$	$n$	$\alpha$	Tube code
mm	inch					
12.00		0.32	0.25	63	40	G2AD-12032/63/40/25
12.70	½	0.36	0.25	63	40	G2AD-12736/63/40/25
12.70	½	0.40	0.25	63	40	G2AD-12740/63/40/25
15.87	⅝	0.40	0.30	68	40	G2AD-15840/68/40/30

Other types upon request.

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## Test conditions

Tube dimensions [mm]:

cuprofin-G	12.7 x 0.36
cuprofin S2AD	12.7 x 0.36
plain tube	12.7 x 0.36

Anti-freeze agent:

Antifrogen L 30 % (1.2-propylene glycol)

## Formula

$$\text{Efficiency} = \frac{\frac{\alpha_{i, \text{cuprofin}^\circ}}{\Delta p_{v, \text{cuprofin}^\circ}}}{\frac{\alpha_{i, \text{plain tube}}}{\Delta p_{v, \text{plain tube}}}}$$

Efficiency means the increase of the heat transfer coefficient  $\alpha_i$  of the cuprofin-tube referring to the increase of pressure drop  $\Delta p_v$ . For each case the reference is the plain tube (efficiency =1).

— cuprofin-G	} Pr = 14.7	--- cuprofin-G	} Pr = 24
— cuprofin S2AD		--- cuprofin S2AD	
— plain tube		--- plain tube	

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

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