

# Heating elements

Heating elements type

**KDO**

Warranty

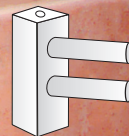
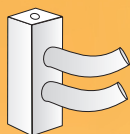
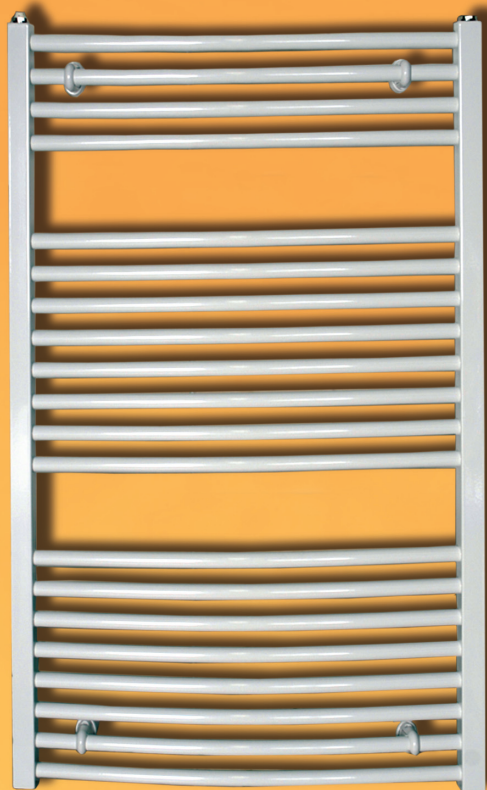
**5** year  
guarantee

Heating elements type

**K**

Heating elements type

**KOS**



EN **442** EURONORM

ČZ  
ČESKÉ VÝROBKY



**thermal trend**

QUALITY THROUGH TRADITION

**Product description:**

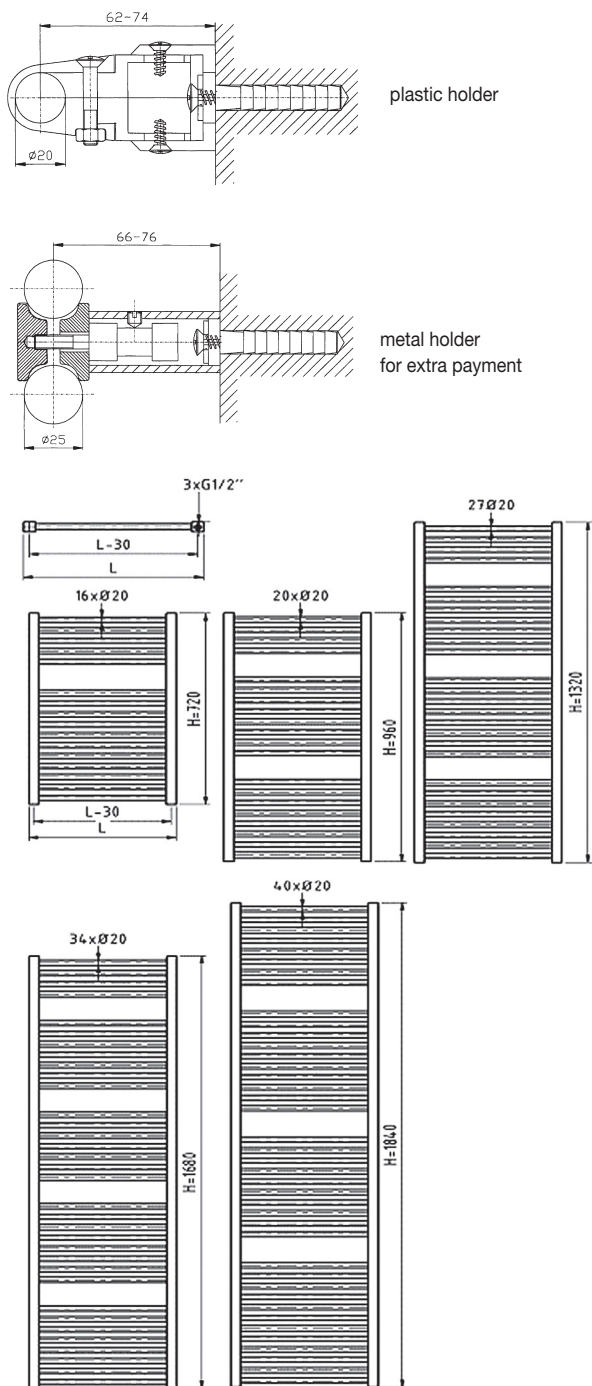
Bathroom (towel rail) radiators are heating elements a new generation designed for heating of bathrooms, corridors, toilets, kitchen nooks, fitness centres etc. They also serve for drying towels, dish-clothes and other textiles that can be hang up on the heating element.

**Use of the product:**

Bathroom radiators are designed for heating systems in individual houses and in residential buildings in which is normally used finished water or other heat-transfer medium for maximum working temperature of 110°C namely either with forced circulation or gravity circulation for working pressure p=1,0 MPa.

# Heating element type K

**Used material:** vertical profile - 30x30 mm square  
horizontal profile - straight tube, diameter 20mm



**Heater power Q[W] for heat-transfer substance water according to DIN EN 442**

Type description	Height H [mm]	Length L [mm]	Thread pitch [mm]	t <sub>1</sub> /t <sub>2</sub> [°C]	Q[W] pro t <sub>1</sub> [°C]			Thermal exponent n [-]	Water volume n [l]	Rec. Radiator input power [W]
					20	22	24			
K 450 / 720	720	450	420	90/70	417	399	381	1,3222	2,6	200
				75/65	328	310	293			
				55/45	167	152	138			
K 600 / 720	720	600	570	90/70	538	514	491	1,3114	3,25	300
				75/65	423	401	380			
				55/45	217	198	180			
K 750 / 720	720	750	720	90/70	655	627	599	1,3005	3,9	300
				75/65	517	490	464			
				55/45	266	243	221			
K 450 / 960	960	450	420	90/70	526	503	481	1,3106	3,37	300
				75/65	414	393	371			
				55/45	212	194	176			
K 600 / 960	960	600	570	90/70	679	650	621	1,3042	4,18	300
				75/65	535	508	480			
				55/45	275	251	228			
K 750 / 960	960	750	720	90/70	828	792	757	1,2977	4,98	400
				75/65	653	620	586			
				55/45	337	308	280			
K 450 / 1320	1320	450	420	90/70	713	683	652	1,2922	4,6	400
				75/65	564	535	506			
				55/45	291	266	242			
K 600 / 1320	1320	600	570	90/70	922	883	843	1,2927	5,65	500
				75/65	728	691	654			
				55/45	376	344	313			
K 750 / 1320	1320	750	720	90/70	1125	1077	1029	1,2932	6,7	600
				75/65	889	843	798			
				55/45	459	420	382			
K 450 / 1680	1680	450	420	90/70	926	886	847	1,2917	5,8	500
				75/65	732	694	657			
				55/45	378	346	314			
K 600 / 1680	1680	600	570	90/70	1200	1148	1096	1,3064	7,05	600
				75/65	946	896	848			
				55/45	485	443	402			
K 750 / 1680	1680	750	720	90/70	1468	1404	1340	1,321	8,3	700
				75/65	1154	1093	1033			
				55/45	588	536	486			
K 450 / 1840	1840	450	420	90/70	1062	1016	971	1,3027	6,8	500
				75/65	838	794	751			
				55/45	431	394	357			
K 600 / 1840	1840	600	570	90/70	1370	1312	1253	1,2923	8,25	700
				75/65	1083	1027	972			
				55/45	559	512	465			
K 750 / 1840	1840	750	720	90/70	1669	1598	1528	1,2819	9,7	900
				75/65	1321	1254	1187			
				55/45	686	628	571			

The heating performance data applies to one-side connection of top-down

**Applies to all elements types**

**Radiator connection (inner thread G 1/2")**

- Single-sided connection from the top down, see the output tables, correction factor fx=1,0
- Diagonal connection from the top down, correction factor fx=1,011
- Connection from the bottom down, correction factor fx=0,969
- Bottom central connection (pitch of 50 mm), radiators customized on request only, correction factor fx=0,892

**Elektric heating elements**

These radiators can be use for direct self-heating. Can be used as the basis for any mentioned of the heating element and it must be attached to an electrical rod with electrical output which corresponding to a maximum of 70% of heating power at heating conditions 90/70/20. As heat transfer medium serve anticorrosion liquid with the freezing point -5°C. Type of electric heating rods: 1373/XX .....heating rod with temperature limiter of radiators liquid (shielding IP64)

Electrical heating elements can be placed in bathrooms in zones 1,2,3.

Order example: - eletrical bathroom heating element, type KDO600/1680 filled with liquid with the freezing point - 5°C furnished with heating rod 800W of power with room thermostat

**Characteristic data :**

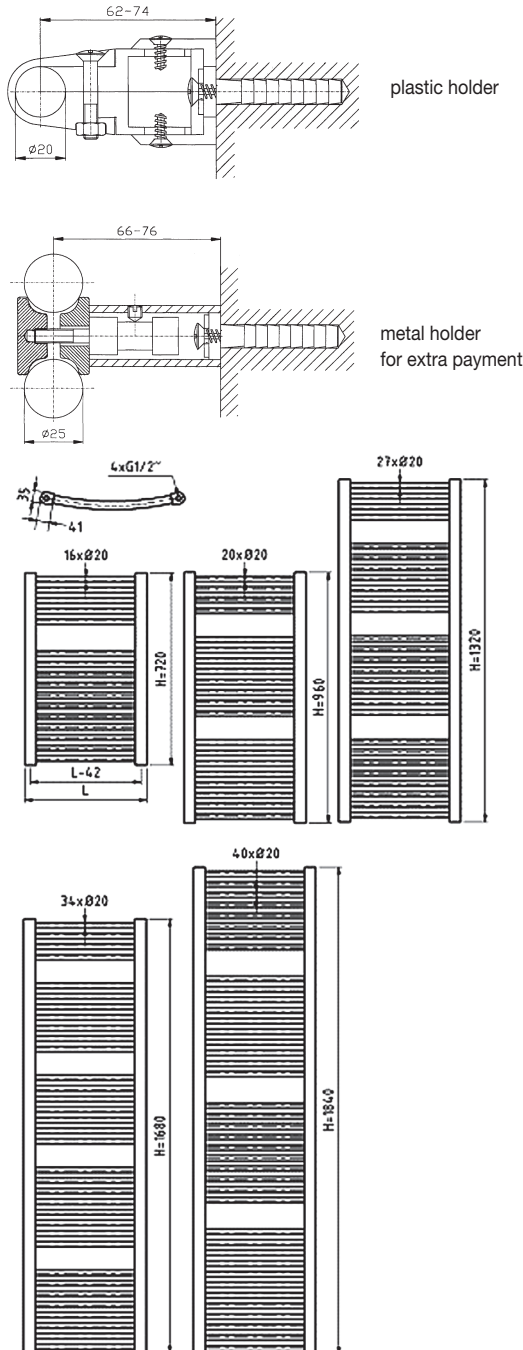
values of hydraulic resistance	
connections	resistance coefficient
DN 15(1/2)	2,5

Connecting thread	G1/2" (internal)
Test pressure	p= 1,5 MPa
Working pressure	p= 1,0 MPa

Applies to all elements types

# Heating element type KDO

**Used material:** vertical D profile - 35x41 mm  
horizontal profile - curved tube, diameter 20mm



**Heater power Q[W] for heat-transfer substance water according to DIN EN 442**

Type description	Height H [mm]	Length L [mm]	Thread pitch [mm]	t <sub>1</sub> /t <sub>2</sub> [°C]	Q[W] pro t <sub>1</sub> [°C]			Thermal exponent n [-]	Water volume n [l]	Rec. Radiator input power [W]
					20	22	24			
KDO 450 / 720	720	450	408	90/70	450	432	414	1,2347	3,6	200
				75/65	360	342	324			
				55/45	191	176	160			
KDO 600 / 720	720	600	558	90/70	604	579	554	1,2507	4,35	300
				75/65	481	457	433			
				55/45	254	233	212			
KDO 750 / 720	720	750	708	90/70	759	727	695	1,2666	5,1	300
				75/65	602	572	542			
				55/45	315	289	263			
KDO 450 / 960	960	450	408	90/70	562	538	515	1,2564	4,53	300
				75/65	447	424	402			
				55/45	235	216	196			
KDO 600 / 960	960	600	558	90/70	752	720	689	1,2607	5,51	300
				75/65	597	567	538			
				55/45	314	288	262			
KDO 750 / 960	960	750	708	90/70	943	903	864	1,2651	6,49	400
				75/65	749	711	674			
				55/45	392	359	327			
KDO 450 / 1320	1320	450	408	90/70	752	720	688	1,2908	6	400
				75/65	594	564	534			
				55/45	307	281	255			
KDO 600 / 1320	1320	600	558	90/70	1003	960	918	1,2767	7,35	500
				75/65	795	754	714			
				55/45	414	379	345			
KDO 750 / 1320	1320	750	708	90/70	1253	1201	1149	1,2626	8,7	600
				75/65	996	946	896			
				55/45	522	479	436			
KDO 450 / 1680	1680	450	408	90/70	956	915	875	1,2781	7,6	500
				75/65	757	719	681			
				55/45	394	361	328			
KDO 600 / 1680	1680	600	558	90/70	1277	1223	1170	1,273	9,3	600
				75/65	1013	961	911			
				55/45	528	484	440			
KDO 750 / 1680	1680	750	708	90/70	1599	1531	1465	1,2678	11	700
				75/65	1269	1205	1141			
				55/45	664	608	554			
KDO 450 / 1840	1840	450	408	90/70	1090	1042	996	1,3063	8,7	500
				75/65	859	814	770			
				55/45	441	403	365			
KDO 600 / 1840	1840	600	558	90/70	1452	1390	1329	1,2853	10,7	700
				75/65	1148	1090	1032			
				55/45	596	545	496			
KDO 750 / 1840	1840	750	708	90/70	1812	1736	1661	1,2643	12,7	900
				75/65	1439	1367	1295			
				55/45	754	691	630			

The heating performance data applies to one-side connection of top-down

**Applies to all elements types**

**Fixing of heating elements**

Radiators are fixed in four points (types K450/720, K600/720, K450/960, K600/940, K450/1320 are fixed in three points only)  
Types K, KDO, KD are delivered standard included plastic holders (see picture), metal holders are delivered on request for extra payment  
All types of fixture sets include:  
-respective mounting brackets (consoles)  
-all connections pieces, included fixing set and washers  
- vent set for venting of radiators  
For drilling the wall shall be used drill 10 mm. To heating elements which are produced in other colour than white RAL 9016 are supplied standard metal mounting brackets in the same colours as radiator.

**Combined heating**

All the above mentioned heating elements connected to the heating system can be completean electric heating rod 1373/XX. This results in a radiator which can then be used at any time independently on the operation of the rest of the heating system. The recommended heat outputs are presented in the output tables of individual types. Type of electric heating rods: 1373/XX .....heating rod with temperature limiter of radiators water.  
So equipped heating element can be placed in bathrooms in zones 1,2,3 (i.e. nex to sink, bath and shower corner)

**Characteristic data :**

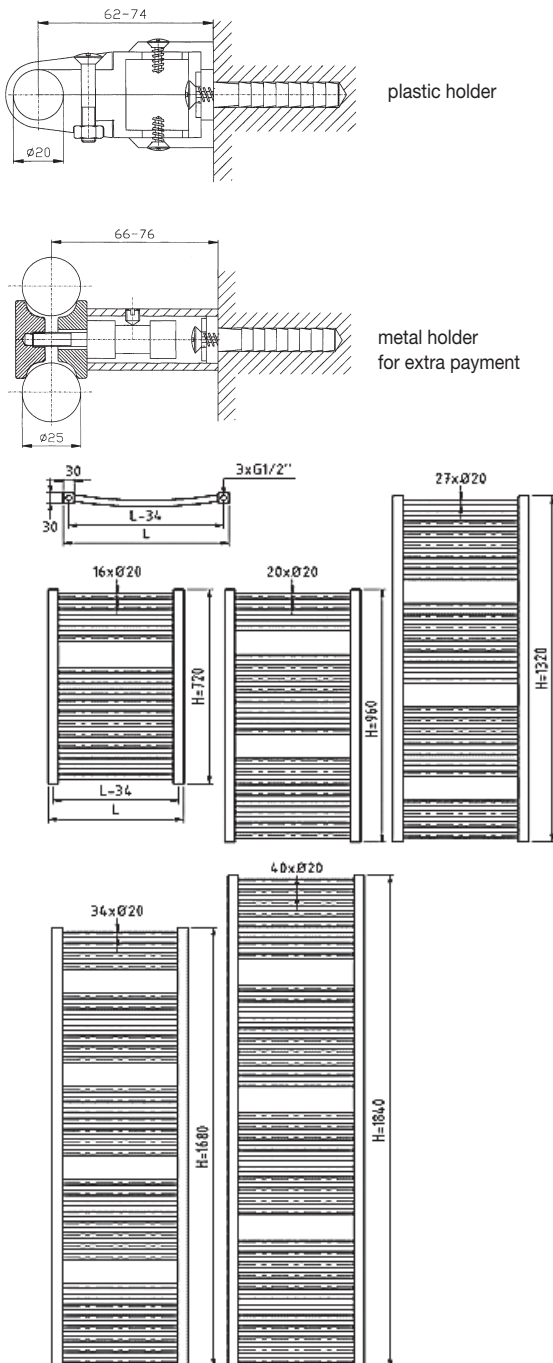
values of hydraulic resistance	
connections	resistance coefficient
DN 15(1/2)	2,5

Connecting thread	G1/2" (internal)
Test pressure	p' = 1,5 MPa
Working pressure	p = 1,0 MPa

Applies to all elements types

# Heating element type KOS

**Used material:** vertical profile - 30x30 mm square  
horizontal profile - curved tube, diameter 20mm



## Heater power Q[W] for heat-transfer substance water according to DIN EN 442

Type description	Height H [mm]	Length L [mm]	Thread pitch [mm]	t <sub>1</sub> /t <sub>2</sub> [°C]	Q[W] pro t <sub>1</sub> [°C]			Thermal exponent n [-]	Water volume n [l]	Rec. Radiator input power [W]
					20	22	24			
KOS 450 / 720	720	450	416	90/70	417	399	381	1,3222	2,6	200
				75/65	328	310	293			
				55/45	167	152	138			
KOS 600 / 720	720	600	566	90/70	538	514	491	1,3114	3,25	300
				75/65	423	401	380			
				55/45	217	198	180			
KOS 750 / 720	720	750	714	90/70	655	627	599	1,3005	3,9	300
				75/65	517	490	464			
				55/45	266	243	221			
KOS 450 / 960	960	450	416	90/70	526	503	481	1,3106	3,37	300
				75/65	414	393	371			
				55/45	212	194	176			
KOS 600 / 960	960	600	566	90/70	679	650	621	1,3042	4,18	300
				75/65	535	508	480			
				55/45	275	251	228			
KOS 750 / 960	960	750	714	90/70	828	792	757	1,2977	4,98	400
				75/65	653	620	586			
				55/45	337	308	280			
KOS 450 / 1320	1320	450	416	90/70	713	683	652	1,2922	4,6	400
				75/65	564	535	506			
				55/45	291	266	242			
KOS 600 / 1320	1320	600	566	90/70	922	883	843	1,2927	5,65	500
				75/65	728	691	654			
				55/45	376	344	313			
KOS 750 / 1320	1320	750	716	90/70	1125	1077	1029	1,2932	6,7	600
				75/65	889	843	798			
				55/45	459	420	382			
KOS 450 / 1680	1680	450	416	90/70	926	886	847	1,2917	5,8	500
				75/65	732	694	657			
				55/45	378	346	314			
KOS 600 / 1680	1680	600	566	90/70	1200	1148	1096	1,3064	7,05	600
				75/65	946	896	848			
				55/45	485	443	402			
KOS 750 / 1680	1680	750	716	90/70	1468	1404	1340	1,321	8,3	700
				75/65	1154	1093	1033			
				55/45	588	536	486			
KOS 450 / 1840	1840	450	416	90/70	1062	1016	971	1,3027	6,8	500
				75/65	838	794	751			
				55/45	431	394	357			
KOS 600 / 1840	1840	600	566	90/70	1370	1312	1253	1,2923	8,25	700
				75/65	1083	1027	972			
				55/45	559	512	465			
KOS 750 / 1840	1840	750	716	90/70	1669	1598	1528	1,2819	9,7	900
				75/65	1321	1254	1187			
				55/45	686	628	571			

The heating performance data applies to one-side connection of top-down