Radiator composed of 14, 20, 28 mm diameter horizontal steel elements fusion welded with 28 mm diameter manifolds





#### **ORDER EXAMPLE**

To correctly order this model follow the example specified below:

PRODUCT TRO20#1830015 OR1 ST 9010 R12

TRO20#1830015 Article code composed of Model, Height (1839) and Number of elements (015)

OR1 Connector code found in the table here below
ST Standard Support code found in the table here below
9010 Colour code to be checked in the Tubes Colour Chart

R12 Connection code that defines the type of union for copper pipes or multi-layer pipes

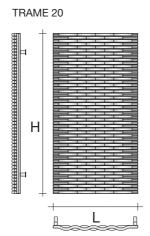
found herein at page 222

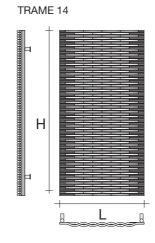
**ACCESSORIES** 

Cod. GVR
One way Remote Valve Assembly, CHROME finish
Cod. GVRC#\*
One way Remote Valve Assembly, COLOUR finish\*
\* Specify the color code, e.g.: 9010, after checking the Tubes Colour Chart

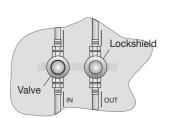
# **TECHNICAL DIAGRAM**

# TRAME 28

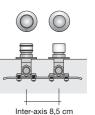




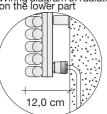
#### Connection to radiator

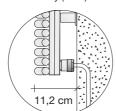


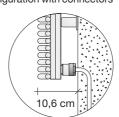
Connection to water system



Wiring diagram of radiator to the Remote Valve Assembly (GVR) in the standard OR1 configuration with connectors on the lower part

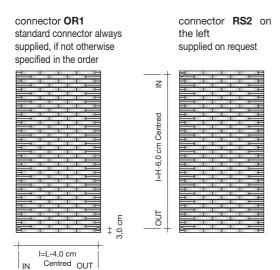


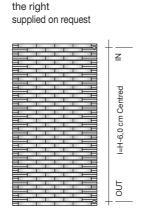




# Standard REAR CONNECTORS

They enable connection to the system via Remote Valve Assembly (GVR) and are supplied as an accessory. This type of connectors must be specified when placing the order, they are supplied WITHOUT an additional price charge



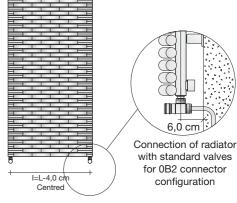


connector RD2 on

# **EXTERNAL CONNECTORS – standard type**

They enable connection to the system via Standard Valve and Lockshield and are supplied as an accessory. This type of connectors must be specified when placing the order, they are supplied WITH an additional price charge of €

EXTERNAL connector **0B2** supplied on request



# TRAME HORIZONTAL

Radiator composed of 14, 20, 28 mm diameter horizontal steel elements fusion welded with 28 mm diameter manifolds





# TRAME 14

Wie	dth	h 52,5			67			96			125			154		
N° elements	Height (cm)	Watts ∆T 50°C	Watts ∆T 30°C	Price (€)												
21	40,0	342	186		437	237		626	340		815	442		1004	545	
31	59,0	464	255		592	325		849	466		1105	607		1361	747	
43	81,8	606	336		773	428		1108	614		1443	799		1777	984	
47	89,4	653	361		883	489		1194	661		1555	861		1915	1060	
53	100,8	723	400		923	510		1323	732		1723	953		2122	1174	
69	131,2	914	503		1166	641		1671	919							
79	150,2	1036	564		1322	720		1894	1031							
89	169,2	1161	626		1481	798										
95	180,6	1237	662		1579	845										
103	195,8	1341	712		1712	909										

# TRAME 20

INAIVIE	20																					
Wie	dth		52,5			67			96			125			154			183			197,5	
N° elements	Height (cm)	Watts ∆T 50°C	Watts ∆T 30°C	Price (€)	Watts ∆T 50°C	Watts ΔT 30°C	Price (€)															
17	42,0	339	184		432	235		619	336		806	438		993	540		1180	641		1254	681	
25	62,0	479	260		611	332		876	476		1141	620		1405	763		1670	907		1788	971	
33	82,0	614	334		784	426		1123	611		1462	795		1801	979							
37	92,0	680	371		868	474		1243	679		1619	884		1994	1089							
41	102,0	745	408		950	521		1362	747		1773	972		2185	1198							
51	127,0	903	498		1153	636		1652	911								•					
61	152,0	1057	576		1349	735		1933	1053													
69	172,0	1177	635		1502	810					•											
73	182,0	1236	663		1578	847																
77	192,0	1295	692		1653	883																

# TRAME 28

Wie	dth		52,5			67			96			125			154			183			197,5	
N° elements	Height (cm)	Watts ∆T 50°C	Watts ΔT 30°C	Price (€)	Watts ∆T 50°C	Watts ∆T 30°C	Price (€)															
13	42,4	343	186		438	237		627	339		816	442		1006	544		1195	647		1280	693	
19	62,2	475	254		606	324		869	465		1131	605		1394	746		1656	886		1774	949	
25	82,0	604	329		770	419		1104	601		1437	782		1770	963							
29	95,2	688	376		878	479		1258	687		1638	895		2018	1102							
39	128,2	897	492		1145	628		1640	899		2136	1171										
47	154,6	1064	576		1358	735		1946	1054													
51	167,8	1148	618		1465	788																
55	181,0	1232	659		1573	841																
59	194,2	1317	700		1681	893																

# ADDITIONAL COLOUR CHARGE (see the official Tubes Colour Chart)

Additional colour charges are calculated over the Pure white price (Cat. C0), for the other categories the additional charges herein below are applicable:

Category C1 and C2 +10% C3 Category +20%

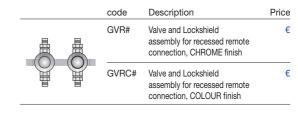
RAL not included in the colour chart +30%

According to samples Request feasibility and cost estimate

Colours not available: GRCR

Standard VALVES (for Valves and Lockshields, valves that can be fitted with thermostatic valves, or Single pipe, Twin pipe, Stainless steel and thermostatic heads see pages 217 - 218 - 219 - 220)

		code	Description	Price
		Z1TLNR#ANR129010	Valve and Lockshield - ValCOLOR Copper Angle 1/2" RAL 9010 Glossy Pure White	€
		Z1RAC#R12CRO	2 copper unions diam. 12 mm for ValCOLOR Chrome finish Valve+Lockshield	€
-		ZRCF#	Kit with pipe collars for towel warmers	€



# TRAME Horizontal Electric

Radiator composed of 14, 20, 28 mm diameter horizontal steel elements fusion welded with 28 mm diameter manifolds



#### **ORDER EXAMPLE**

To correctly order this model follow the example specified below:

TRO20E#0525 0420 A2 ST 9010 PRODUCT

TRO20E#0525 0430 Article code composed of Model, Width (0525mm) and Height (0430mm)

A2 (KA2 x mixed) Resistor code found in the table on the side

Standard Support code, only one support code available for Electric and Mixed version ST

9010 Colour code to be checked in the Tubes Colour Chart

# ACCESSORIES ELECTRIC/MIXED version (only for standard STD resistors)

ZRF004 Kit with wireless room thermostat

Or ZRF005 Portable, programmable digital wireless chronothermostat kit

# ACCESSORIES for MIXED version with rear connectors

Cod. GVR One way Remote Valve Assembly, CHROME finish Cod. GVRC#\* One way Remote Valve Assembly, COLOUR finish\* \* Specify the color code, e.g.: 9010, after checking the Tubes Colour Chart\* For other types of Valves see the table in page 217 - 218 - 219 - 220.

# Wireless connections



Wireless room thermostat

ZRF004





TRAME 28



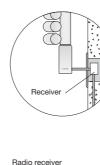
TRAME 20



TRAME 14

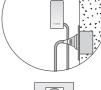
How to carry out connection to the Electric supply





(supplied with ZRF004 or ZRF005)

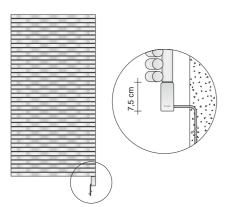




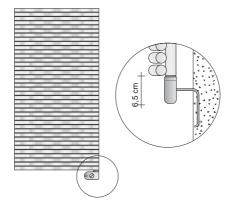
Remote switch (not

Electric plug not

Electric Standard



Electric with Room Thermostat



# **TRAME Horizontal Electric**

Radiator composed of 14, 20, 28 mm diameter horizontal steel elements fusion welded with 28 mm diameter manifolds



The electric version is made with a standard type resistor, the version with the new terminal will be available as of June 2014 with an additional price.

#### TRAME 14 electric

Model	<b>H</b> (cm)	<b>L</b> (cm)	Electric resistor Watts	Category C0 RAL 9010 (€)
TRO14E#05250400	40,0	52,5	300	
TRO14E#05250818	81,8	52,5	600	
TRO14E#05251312	131,2	52,5	900	
TRO14E#05251806	180,6	52,5	1200	

#### TRAME 20 electric

Model	<b>H</b> (cm)	L (cm)	Electric resistor Watts	Category C0 RAL 9010 (€)
TRO20E#05250420	42,0	52,5	300	
TRO20E#05250820	82,0	52,5	600	
TRO20E#05251270	127,0	52,5	900	
TRO20E#05251820	182,0	52,5	1200	

# TRAME 28 electric

Model	<b>H</b> (cm)	L (cm)	Electric resistor Watts	Category C0 RAL 9010 (€)
TRO28E#05250424	42,4	52,5	300	
TRO28E#05250820	82,0	52,5	600	
TRO28E#05251282	128,2	52,5	900	
TRO28E#05251810	181,0	52,5	1200	

# ADDITIONAL CHARGES FOR COLOURS AND FINISHES (see the official Tubes Colour Chart)

Additional colour charges are calculated over the Pure white price (Cat. C0), for the other categories the additional charges herein below are applicable:

Category C1 and C2 +10% C3 Category +20%

RAL not included in the colour chart +30%

PLATED finishes: NOT available Colours not available: GRCR

# WIRELESS THERMOSTATS

Code	Description	Price (€)
ZRF004	Kit with wall type room thermostat (Wireless) + Receiver	
ZRF005	Portable, digital wireless chronothermostat kit with weekly programming + Receiver	

# CODES/ PRICES TABLE FOR ELECTRIC AND MIXED VERSION RESISTORS

Mar del		300 W			600 W			900 W			1200 W	
Model	Resistor	code	Price	Resistor	r code	Price	Resistor	code	Price	Resistor	code	Price
	For Electric	For Mixed	(€)									
Standard (STD) White cord	A2	KA2		B2	KB2		C2	KC2		D2	KD2	
Standard (STD) Grey cord	G2	KG2		H2	KH2		12	KI2		L2	KL2	
Room thermostat - White	A5	KA5		B5	KB5		C5	KC5		D5	KD5	
Room thermostat - Grey	A7	KA7		B7	KB7		C7	KC7		D7	KD7	
Radiator Thermostat - White	N1	N.D.		N2	N.D.		N3	N.D.		N4	N.D.	
Radiator Thermostat - Chrome	N5	N.D.		N6	N.D.		N7	N.D.		N8	N.D.	
White edge cap	U1	KU1		U2	KU2		U3	KU3		U4	KU4	
Grey edge cap	V1	KV1		V2	KV2		V3	KV3		V4	KV4	
Chrome edge cap	Z1	KZ1		Z2	KZ2		Z3	KZ3		Z4	KZ4	

# TRAME Horizontal Mixed

Radiator composed of 14, 20, 28 mm diameter horizontal steel elements fusion welded with 28 mm diameter manifolds



#### **ORDER EXAMPLE**

To correctly order this model follow the example specified below:

PRODUCT TRO20M#0525 0420 KA2 ST 9010

TRO20M#0525 0430 Article code composed of Model, Width (0525mm) and Height (0430mm)

Resistor code found in the table on the side KA2

Standard Support code, only one support code available for Electric and Mixed version ST

9010 Colour code to be checked in the Tubes Colour Chart

ACCESSORIES ELECTRIC/MIXED version (only for standard STD resistors)

ZRF004 Kit with wireless room thermostat

Or ZRF005 Portable, programmable digital wireless chronothermostat kit

ACCESSORIES for MIXED version with rear connectors

Cod. GVR One way Remote Valve Assembly, CHROME finish Cod. GVRC#\* One way Remote Valve Assembly, COLOUR finish\* \* Specify the color code, e.g.: 9010, after checking the Tubes Colour Chart\* For other types of Valves see the table in page 217 - 218 - 219 - 220.

#### Wireless connections







Portable, digital wireless chronothermostat ZRF005

# TRAME 28



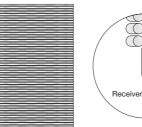




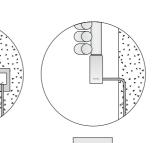
TRAME 14





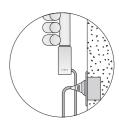


Radio receiver (supplied with ZRF004 or ZRF005)



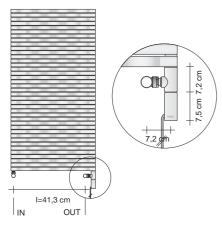
How to carry out connection to the Electric supply

Remote switch (not

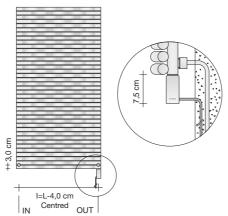


Electric plug not

Mixed with Kit and external Connectors



Mixed Standard with Rear Connectors



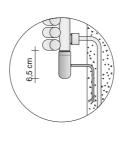
Mixed with Kit. Room thermostat and **External Connectors** 



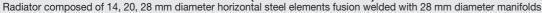
7,2 cm 6,5 cm 11,5 cm

Mixed with Room thermostat and Rear Connectors





# TRAME HORIZONTAL Mixed (Electric-Water)





The electric version is made with a standard type resistor, the version with the new terminal will be available as of June 2014 with an additional price.

#### TRAME 14 mixed Standard

Model	Н	L	Electric resistor	Thermal yield	Thermal yield	Category C0	Category C1/C2	Category C3
	(cm)	(cm)	Watts	Watts ∆T 30°C	Watts ∆T 50°C	RAL 9010 (€)	(€)	(€)
TRO14MS#05250400	40,0	52,5	300	186	342			
TRO14MS#05250818	81,8		600	336	606			
TRO14MS#05251312	131,2		900	503	914			
TRO14MS#05251806	180,6		1200	662	1237			

#### TRAME 20 mixed Standard

Model	Н	L	Electric resistor	Thermal yield	Thermal yield	Category C0	Category C1/C2	Category C3
	(cm)	(cm)	Watts	Watts ∆T 30°C	Watts ∆T 50°C	RAL 9010 (€)	(€)	(€)
TRO20MS#05250420	42,0	52,5	300	184	339			
TRO20MS#05250820	82,0		600	334	614			
TRO20MS#05251270	127,0		900	498	903			
TRO20MS#05251820	182,0		1200	663	1236			

# TRAME 28 mixed Standard

Model	Н	L	Electric resistor	Thermal yield	Thermal yield	Category C0	Category C1/C2	Category C3
	(cm)	(cm)	Watts	Watts ∆T 30°C	Watts ∆T 50°C	RAL 9010 (€)	(€)	(€)
TRO28MS#05250424	42,4	52,5	300	186	343			
TRO28MS#05250820	82,0		600	329	604			
TRO28MS#05251282	128,2		900	492	897			
TRO28MS#05251810	181,0		1200	659	1232			

# TRAME 14 mixed WITH KIT

Model	Н	L	Electric resistor	Thermal yield	Thermal yield	Category C0	Category C1/C2	Category C3
	(cm)	(cm)	Watts	Watts ∆T 30°C	Watts ∆T 50°C	RAL 9010 (€)	(€)	(€)
TRO14MK#05250400	40,0	52,5	300	186	342			
TRO14MK#05250818	81,8		600	336	606			
TRO14MK#05251312	131,2		900	503	914			
TRO14MK#05251806	180,6		1200	662	1237			

#### TRAME 20 mixed WITH KIT

Model	H (cm)	L (cm)	Electric resistor Watts	Thermal yield Watts AT 30°C	Thermal yield Watts ∆T 50°C	Category C0 RAL 9010 (€)	Category C1/C2 (€)	Category C3
TRO20MK#05250420	42,0	52,5	300	184	339	11/12 00 10 (c)	(6)	(0)
TRO20MK#05250820	82,0		600	334	614			
TRO20MK#05251270	127,0		900	498	903			
TRO20MK#05251820	182,0		1200	663	1236			

# TRAME 28 mixed WITH KIT

Model	Н	L	Electric resistor	Thermal yield	Thermal yield	Category C0	Category C1/C2	Category C3
	(cm)	(cm)	Watts	Watts ∆T 30°C	Watts ∆T 50°C	RAL 9010 (€)	(€)	(€)
TRO28MK#05250424	42,4	52,5	300	186	343			
TRO28MK#05250820	82,0		600	329	604			
TRO28MK#05251282	128,2		900	492	897			
TRO28MK#05251810	181,0		1200	659	1232			

# ADDITIONAL CHARGES FOR COLOURS AND FINISHES (see the official Tubes Colour Chart)

Additional colour charges are calculated over the Pure white price (Cat. C0), for the other categories the additional charges herein below are applicable:

Category C1 and C2 +10% C3 Category +20%

RAL not included in the colour chart +30%

PLATED finishes: NOT availableColours not available: GRCR

# WIRELESS THERMOSTATS

Code	Description	Price (€)
ZRF004	Kit with wall type room thermostat (Wireless) + Receiver	
ZRF005	Portable, digital wireless chronothermostat kit with weekly programming + Receiver	

# CODES/ PRICES TABLE FOR ELECTRIC AND MIXED VERSION RESISTORS

	300 W				600 W			900 W			1200 W		
Model	Resistor code		Price	Price Resistor code		Price	Resisto	Resistor code		Resistor	code	Price	
	For Electric	For Mixed	(€)	For Electric	For Mixed	(€)	For Electric	For Mixed	(€)	For Electric	For Mixed	(€)	
Standard (STD) White cord	A2	KA2		B2	KB2		C2	KC2		D2	KD2		
Standard (STD) Grey cord	G2	KG2		H2	KH2		12	KI2		L2	KL2		
Room thermostat - White	A5	KA5		B5	KB5		C5	KC5		D5	KD5		
Room thermostat - Grey	A7	KA7		B7	KB7		C7	KC7		D7	KD7		
Radiator Thermostat - White	N1	N.D.		N2	N.D.		N3	N.D.		N4	N.D.		
Radiator Thermostat - Chrome	N5	N.D.		N6	N.D.		N7	N.D.		N8	N.D.		
White edge cap	U1	KU1		U2	KU2		U3	KU3		U4	KU4		
Grey edge cap	V1	KV1		V2	KV2		V3	KV3		V4	KV4		
Chrome edge cap	<i>7</i> 1	K71		72	K72		73	K73		74	K74		

Standard VALVES (for Valves and Lockshields, valves that can be fitted with thermostati, Thermostatic valves, or Single pipe, Twin pipe, Stainless steel and thermostatic heads see pages 217 - 218 - 219 - 220)

	code	Description	Price	 code	Description	Price
	Z1TLNR#ANR129010	Valve and Lockshield - ValCOLOR Copper Angle 1/2" RAL 9010 Glossy Pure White	€	GVR#	Valve and Lockshield assembly for recessed remote connection, CHROME finish	€
	Z1RAC#R12CRO	2 copper unions diam. 12 mm for ValCOLOR Chrome finish Valve+Lockshield	€	GVRC#	Valve and Lockshield assembly for recessed remote connection, COLOUR finish	€
	ZRCF#	Kit with pipe collars for towel warmers	€			



#### **ORDER EXAMPLE**

To correctly order this model follow the example specified below:

TRV28#1830015 R05 ST 9010 R12 PRODUCT

TRV28#1830015 Article code composed of Model, Height (1839) and Number of elements (015)

R05 Connector code found in the table here below ST Standard Support code found in the table here below 9010 Colour code to be checked in the Tubes Colour Chart

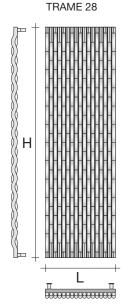
R12 Connection code that defines the type of union for copper pipes or multi-layer pipes

found herein at page 222

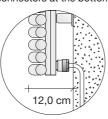
**ACCESSORIES** 

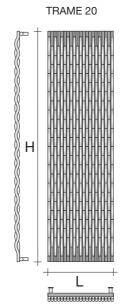
Cod. GVR One way Remote Valve Assembly, CHROME finish Cod. GVRC#\* One way Remote Valve Assembly, COLOUR finish\* \* Specify the color code, e.g.: 9010, after checking the Tubes Colour Chart

#### **TECHNICAL DIAGRAM**

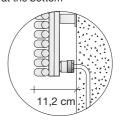


Connection of radiator to the Remote Valve Assembly (GVR) in standard R05 configuration with connectors at the bottom





Connection of radiator to the Remote Valve Assembly (GVR) in standard R05 configuration with connectors at the bottom



# Standard REAR CONNECTORS

They enable connection to the system via Remote Valve Assembly (GVR) and are supplied as an accessory. This type of connectors must be specified when placing the order, they are supplied WITHOUT an additional price charge

connector RS1

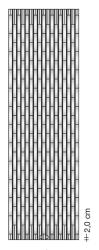
left side on the rear

supplied on

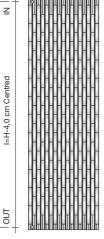
request

# connector R05 standard connector always

supplied, if not otherwise specified in the order



I=5,0 cm Centred

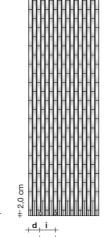


connector RD1 right side on the rear

supplied on

request

770



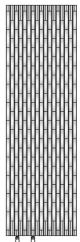
# connector R2M Rear custom made supplied on request

They enable connection to the system via Standard Valve and Lockshield and are supplied as an accessory. This type of connectors must be specified when placing the order, they are supplied WITH an additional price charge of €

**EXTERNAL CONNECTORS - standard type** 

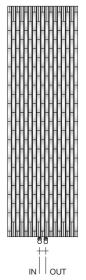
#### connector B2M Standard custom

made supplied on request



# connector 0B2

Standard Connection at bottom - CUSTOM MADE



Standard R2M Connection at bottom - CUSTOM MADE

in this case you need to specify "d" and "i" which must comply to the following: i min.=5 cm

OUT

d min.=2 cm



# TRAME 20

Hei	Height		96			125			154			183		197,5		
N° elements	Width (cm)	Watts ∆T 50°C	Watts ∆T 30°C	Price (€)												
11	27,0	413	210		515	264		606	311		686	351		719	368	
13	32,0	488	248		609	312		717	368		811	415		850	435	
15	37,0	563	286		703	361		827	424		936	479		980	501	
17	42,0	638	324		796	408		937	480		1061	543		1111	568	
19	47,0	713	363		890	457		1047	537		1186	607		1242	635	
21	52,0	789	401		984	505		1158	594		1311	671		1373	702	
23	57,0	863	439		1077	553		1268	650		1435	735		1503	769	
25	62,0	938	477		1171	601		1378	706		1560	799		1634	836	
27	67,0	1013	515		1265	649		1488	763		1685	863		1765	903	
29	72,0	1086	552		1358	697		1599	820		1810	927		1896	970	
31	77,0	1163	591		1452	745		1709	876		1935	991		2026	1036	
33	82,0	1238	630		1546	793										
35	87,0	1313	668		1639	841										
37	92,0	1388	706		1733	889										
39	97,0	1463	744		1827	937										

#### TRAME 28

III	0															
Hei	ight		96		125				154			183			197,5	
N° elements	Width (cm)	Watts ∆T 50°C	Watts ∆T 30°C	Price (€)												
9	29,2	432	220		537	273		634	323		724	369		762	389	
11	35,8	528	268		657	334		775	395		885	451		931	475	
13	42,4	625	318		776	395		916	466		1046	533		1101	562	
15	49,0	721	366		895	455		1057	538		1207	615		1270	648	
17	55,6	817	415		1015	516		1198	610		1367	697		1439	734	
19	62,2	913	464		1134	577		1339	682		1528	779		1609	821	
21	68,8	1009	513		1253	638		1480	754		1689	861		1778	907	
23	75,4	1105	562		1373	699		1620	825		1850	943		1947	993	
25	82,0	1201	610		1492	759		1761	897							
27	88,6	1297	659		1612	820		1902	969							
29	95,2	1393	708		1731	881		2043	1040							
31	101,8	1489	757		1850	941		2184	1112							
33	108,4	1585	805		1970	1002		2325	1184							
35	115,0	1682	855		2089	1063		2466	1256							
37	121,6	1778	904		2208	1123		2607	1328							

# ADDITIONAL COLOUR CHARGE (see the official Tubes Colour Chart)

Additional colour charges are calculated over the Pure white price (Cat. C0), for the other categories the additional charges herein below are applicable:

Category C1 and C2 +10% C3 Category +20%

RAL not included in the colour chart +30%

According to samples Request feasibility and cost estimate

Colours not available: GRCR

Standard VALVES (for Valves and Lockshields, valves that can be fitted with thermostatic valves, or Single pipe, Twin pipe, Stainless steel and thermostatic heads see pages 217 - 218 - 219 - 220)

			code	Description	Price
			Z1TLNR#ANR129010	Valve and Lockshield - ValCOLOR Copper Angle 1/2" RAL 9010 Glossy Pure White	€
			Z1RAC#R12CRO	2 copper unions diam. 12 mm for ValCOLOR Chrome finish Valve+Lockshield	€
-	J	J	ZRCF#	Kit with pipe collars for towel warmers	€

 code	Description	Price
GVR#	Valve and Lockshield assembly for recessed remote connection, CHROME finish	€
GVRC#	Valve and Lockshield assembly for recessed remote connection, COLOUR finish	€