



TECHNICAL SPECIFICATION

Durrës Hammam





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22644-001_ALB_EU4C_RFP_01 - "Provision of Consultancy for Design services for EU4CULTURE Project - Support for revitalization of cultural heritage sites and monuments affected by Earthquake in Albania."

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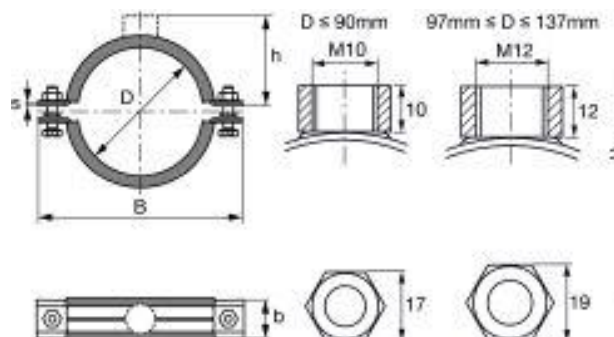
15. DIVISION 15 – MECHANICAL PLANT

15.1 FIREFIGHTING SYSTEM

15.1.3 Metallic construction and profile installation.

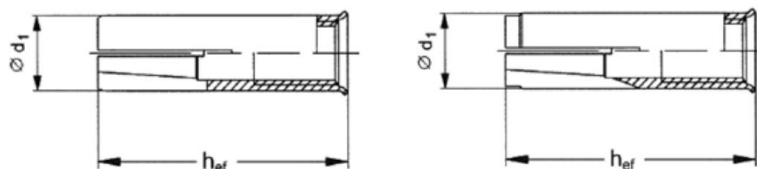
Anchor M12/M10/M8, bolts, plastic climbs, metallic concrete anchor, nail, foam, adhesive, metallic tape, silicone, etc.

- Max load $F=400\text{ N}$
- Fasteners Moment = 3 Nm
- Material compound = stainless steel, EN 10088, AISI 316Ti / AISI 316L
- Thermal resistance $-50 - 120\text{ }^{\circ}\text{C}$
- Pipe insulation material- rubber EPDM
- Rubber material durability $50^{\circ} \pm 5^{\circ}$
- Acoustic isolation 18 dB (A)



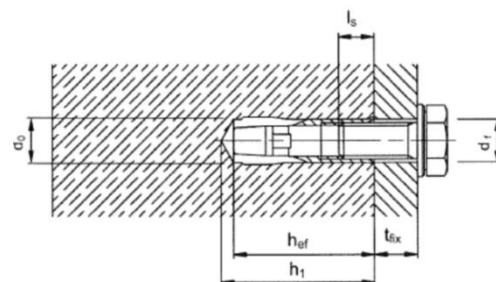
Anchor used in direct wall and ceiling installation

- Hole diameter :20 mm
- Hole length 115mm
- Anchor length- 85 mm
- Key size 24 mm
- Head configuration –hexagonal head



Anchor used for thread rod installation

- Hole diameter :M12
- Hole length 50 mm
- Drill diameter 15 mm
- Head configuration – inner threading
- Material compound: galvanized A4 (SS316)



Thermal clamps – they are used for pipe at terrace assembly and serves for their thermal protection.



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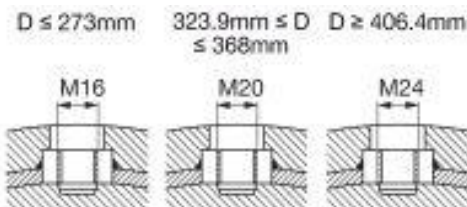
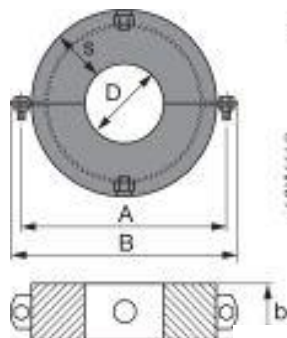
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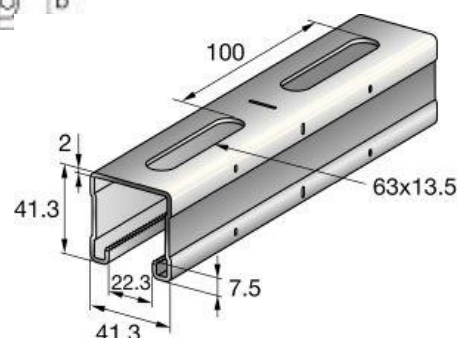
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- Diameter – $D=711.2$ mm
- Distance breached the sectional thickness (bxs) – 140x60mm
- Distance $B=950$ mm
- Max load $F=17000$ N
- Distance $A=900$ mm
- Density 250 kg/m³
- Thermic resistance - 45 - 105 °C



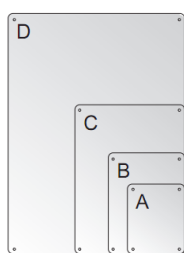
Metallic construction

- Height – 41mm
- Distance -6mm
- Thickness– 2 mm
- Wight per meter = 2080 g
- Material compound : S250GD - DIN EN 10346



15. 1. 4 Fire Fighting Signalization

Signage serves to help people to find the escape way , fire extinguishing equipment or emergency phones. Signaling cards used belong warning category and has dimensions and material as below. Signs of fire in accordance with EN ISO 7010 norm.



SCHEMA DEI FORMATI (mm.)

A = 120x145
B = 160x210
C = 230x310
D = 370x500

SIGLA DEI MATERIALI E SPESSORI		
ALLUMINIO	PVC RIGIDO	PVC ADESIVO
AL	PV	AD
0.5/0.7 mm.	1 mm.	

DIMENSIONE DEI CARTELLI (mm)				
DISTANZA LETTURA (Mt.)	4	6	10	16
BASE (mm.)	120	160	230	370
ALTEZZA (mm.)	145	210	310	500
SIGLA FORMATO	A	B	C	D

Simboli conformi D.L. 493 del 14/08/96 - CEE 92/58 - UNI





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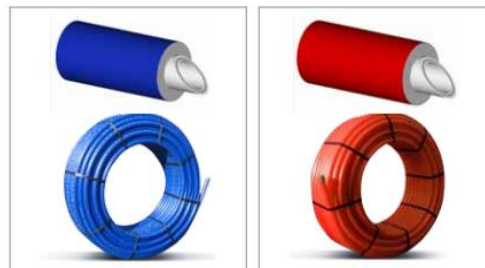


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15.2 WATER SUPPLY SYSTEM

15.2.1 Pe-X pipe + fittings

Cross linked polyethylene with high density and anti-oxygen barrier, insulated, flexible, long life for normal conditions: normal work pressure and work temperature $-40^{\circ}\text{C} \div 95^{\circ}\text{C}$ according to UNI EN 53961 standard



External diameter	mm	14	16	18	20	26	32
Internal diameter	mm	10	12	14	16	20	26
Thickness	mm	2	2	2	2	3	3
Roll length	m	50	50	50	50	50	25
Density	Kg/m ³	33					
Tensile strength	N/mm ²	>0.18					
Extension of isolation layer	%	>80					
Vapor permeability of layer	mg/Pa	<0.15					
Thermal transmission in isolation layer	W/mK	0.0397					
Thermal transmission in pipe layer	W/mK	0.066					

15.2.2 Pressed elbow AL-PEX D 16x1/2 F,

AL-PEX elbow serves for cold / hot water supply pipe line with the sanitary equipment's. They should offer perfect joint, high resistance against corrosion and chemical agents, light weight life duration over 25 year and resistance to mechanical shock.



15.2.4 Mini-valves

Stainless steel mini-valves serves to connect sanitary equipment to the sanitary water supply system.



15.2.14 Pressure reducer

The pressure reducer serves to adjust the pressure according to the required values.

- Bronze body, ink, steel,
- Mounting method with male-female threading or with flanges depending on the dimension.
- Maximum pressure 25 bar working temperature 80°C .





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Maximum inlet pressure	25 bar
Work interval (outlet pressure)	0.5 ÷ 6 bar (1.5 ÷ 6 bar) ¹
Maximum temperature of use	80 °C ÷ 130 °C ¹
Connections	ISO 228/1
Testing in accordance with the norms	DIN EN 1567
Suitable fluids	Water, air, oil
Degree of reduction	5 : 1 *

15.2.15 Non return valve with filter

The non-return valve serves to prevent the fluid from returning.

- Materials bronze, steel, stainless steel
- The way of connection with male-female threading or with flanges depending on the dimension
- Maximum working temperature 90 ° C, working pressure 16 bar.
- Net filter

15.3 WASTE WATER DISCHARGE SYSTEM

15.3.1 PP discharge pipe + fitting

Polypropylene pipe is a polymer without color , odor, nearly transparent and partially crystalline structure which means it can be paint with a lot of colors and have a smooth surface and shiny. Is distingue from below characteristics:

- Elastomery gasket, double edge and with seal;
- Higher mitigation point;
- High resistance against high temperature;
- Rigid and stronger;
- High superficial resistance against scratches and abrasions.



Nominal diameter. Dn(mm)	External diameter. DE(mm)	Average external, minimal and maximal diameter (mm)		Thickness s (mm)		S Series
32	32	32.0	32.3	1.8	0.4/0	S 20
40	40	40.0	40.3	1.8	0.4/0	
50	50	50.0	50.3	1.8	0.4/0	
70	75	75.0	75.4	1.9	0.4/0	
90	90	90.0	90.4	2.2	0.5/0	



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100	110	110.0	110.4	2.7	0.5/0	
125	125	125.0	125.4	3.1	0.6/0	
150	160	160.0	160.5	3.9	0.6/0	

15.3.6 Drainage pipe

Its main purpose is; It is the transportation of wastewater from houses, office buildings, industrial areas and many areas. The purpose of use is to carry water in the most efficient way without causing water accumulation, to prevent flooding and soil erosion.

Characteristics:

- High superficial resistance against scratches and abrasions.
- High corrosion resistance
- Light weight, easy transportation
- Elastic structure, it is not affected by movements such as earthquakes and landslides.



15.3.7 Manhole with concrete cover

The manhole will be with a concrete cover, positioned underground.

Concrete brand - M 250.

15.3.8 Geotextile

Geotextile for pipe and drainage with high density (500gr). Main function: protection, stabilization, drainage and filtration of soil.





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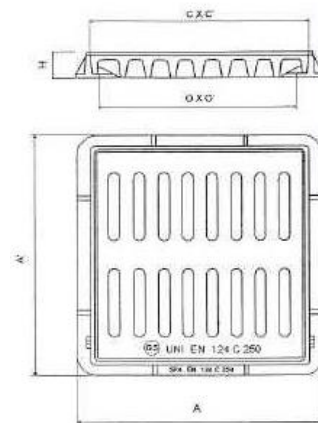


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15.3.11 Pusete betoni (60x60), (60x40) ujra shiu me kapak gize grile C250

Puste betoni e armuar, marka e betonit M 250 me kapak gize me karakteristika:

- Kapak pusete gize grile C 250 MM, 60x40 cm
- Lartesia 10 cm
- Presioni 2.4 N /mm²
- Pesha 40 kg



15.5 MACHINERY AND EQUIPMENT

15.5.3 Fire extinguisher with powder

Red powder paint dispenser (RAL 3000) removable with powder. It can be used for extinguishing fire in and around electrical equipment as it is non-conductive. Used only once. They are also effective in extinguishing fires that include Class B fires. Normal Capacity 5kg. Dimensions Ø 140 x 765 mm.

According UNI EN 3-7 2005 standard- Characteristics, performance requirements and test methods



15.5.4 Fire extinguisher with CO2

Cylinder type (portable) painted with RAL 3000 color . CO2 is safe to use on and around electrical equipment, as the gas itself is non-conductive, and once used, there is no sticky foam or messy powder left behind. They are also effective on Class B fires (flammable liquids). Normal capacity 5kg. Dimensions Ø 140 x 765 mm.

According UNI EN 3-7 2005 standard- Characteristics, performance requirements and test methods





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15.5.8 Electric radiant panel

- 8 mm cable for underfloor heating with self-temperature adjustment.
- The total length of the power line: 650 m.
- Thermal efficiency: 10W / m linear.
- Thermal efficiency: 100W / m² /
- Installed electric power 6.5 kW / h
- High density isolafix thermal insulation panel with a thickness of 10 mm

For cases of renovation of buildings and for floor applications with natural stone composition, it is recommended a radiant panel with the data according to the following table:

Floor construction	Approx.output (W/m ²)	Heating cable length (m/m ²)	Cable spacing
Natural Stone	100	10	100

Complete with temperature sensor, thermostat (with floor sensing, room sensing or room sensing with floor sensing limiter), touch panel and WiFi control panel and all accessories for normal operation.

Technical data for thermostat :

Temperature range floor sensing	5–35°C
Temperature range room sensing	5–40°C
Temperature range floor limiter	low 5°C/high 35°C
Switch capacity/Voltage	13 A/230 VAC
Ingress Protection	IP 21
Sensor type	NTC, 10kΩ /25°C
Sensor cable length	3 m
Dimensions	H 82 x W 82 x D 57 mm

Installation method:

1. 1-2 mm adhesive layer
2. 10 mm thermoinsulating aluminum panels
3. Electric cable 8 mm



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4. Levelling layer 1-2 mm above the cables
5. Tiles/stone...

Radiant panels are products that are tested according to the manufacturers' proposals made with thermal cameras that verify the panel temperature, when this process is passed and approved, layers are thrown and after this procedure there is no need for maintenance except the thermostat which is easily verifiable and controllable.

15.5.11 Water supply pump

General description:

Indoor silent inverter pump incorporates integrated speed control enabling the keeping of the perfect pressure at the taps, meaning that the pump performance will increase with increasing demand.

- intelligent controller
- integrated speed-controlled drive
- integrated tank
- integrated sensors
- integrated non-return valves.
- extremely low-noise 47 dB (A)



Technical data:

Selected liquid temperature: 20 °C

Flow: 1-3 m³/h

Head: 27 m

Intensity: 2.8 A

Density: 998.2 kg/m³