Setting up of the EU HOUSE

EUINFONET/SER/01/2023

Main Design for supply with works

SETTING UP OF THE EU HOUSE

06 MECHANICAL INSTALLATIONS

Belgrade, 08.12.2023

A project implemented by:

eptisa

6.2. TECHNICAL DOCUMENTATION

6.2.1 TECHNICAL DESCRIPTION OF MECANICAL INSTALLATIONS

The ‘’Progress’’ building is located in Knez Mihajlova street, in Belgrade. The building has Su+P+7 floors.

For the delegation of the European Union, which leased the basement, the ground floor and the first floor, these levels are being reconstructed and adapted.

There are existing HVAC installations in the building. The 1st floor is air-conditioned with fan coil devices, while fresh air for ventilation needs is provided with an air conditioning units, common to all floors from the 1st to the 7th floor. Fan coil units are in operation, while the air conditioning unit is not working. The basement and ground floor are heated, cooled and ventilated with a another air conditioning unit. This air conditioning unit is in operation but does not meet the needs of these two levels.

Due to the current state of the installations and the need to separate the new tenant energetically from the rest of the building, a project for the adaptation and reconstruction of the mechanical installations was carried out.

1. Air conditioning of the 1st floor - offices and utility rooms

A multi split - VRV system will be used for the air conditioning of offices and ancillary rooms, maintaining the temperature in the space at 20 ± 1 °C in winter and 26 ± 1 °C in summer. The outdoor unit is on the roof of the building and several indoor units are planned. In each office, a parapet indoor unit is provided in place of the existing fan coil units. A new copper distribution to all units is foreseen, partly through the suspended ceiling, and partly through the parapet where the units stand. The condensation network of the existing fan coil devices is also retained by this project, because the internal units are placed in the places of the existing fan coil devices, which are being dismantled.

The recuperator is planned for ventilation purposes. The existing ducts of the floor is mostly retained. It's just adjusting to the new recuperator. Fresh air for ventilation purposes will be provided by installing a grille in the building's atrium, while waste air is discharged into a technical shaft next to the building, near the recuperator.

For the purpose of cooling the server room on the 1st floor, it is planned to install a split air conditioner, which cools all year round. A wall unit is planned, while an outdoor unit is planned on the facade of the atrium.

2. Air conditioning of the ground floor and basement - exhibition space, offices and auxiliary rooms

The multi split VRF system is planned for the air conditioning of the basement and ground floor rooms. The system would consist of one outdoor unit, located on the roof of the building, and several

internal parapet, cassette and ductable units in offices and areas where people are permanently staying.

The copper distribution from the outdoor unit on the roof is led along the facade of the atrium to the first floor, and from there through the wall to the ground floor and basement. Part of the distribution is then led through the suspended ceiling, and part in the walls. The condensation network is made of PVC sewer pipes and is led to the nearest sanitary connections in the building.

For ventilation purposes, the existing air conditioning unit in the basement, in the technical room, will be used. The complete unit and ducts network are kept, with a small change in the basement, in order to adapt that part to the new architecture of the building. The air conditioning unit is retained during the renovation. The water cooler and heater are thrown out and a freon exchanger (evaporator/condenser) is installed instead. This freon exchanger will be connected to the third outdoor unit, which will also be located on the roof of the building.

The outdoor unit is equipped with its own control system, which controls the operation of the air conditioning unit.

The copper distribution for all three outdoor units, which will be located on the roof of the building, is led along the wall of the atrium (along the facade) to the 1st floor, where the newly designed space also enters. From there, the distribution is led to all internal units, partly through the suspended ceiling, partly through the parapet or in the wall.

3. Sanitary premises - ventilation

For the purposes of ventilation - extracting air from sanitary room, it is planned to retain the existing ventilation system of the entire building.

DESIGNER,

Slobodan Cicmil, HVAC eng.

Licence number: 330 5356 03

6.4. DRAWINGS

List of drawings

Name of drawing	Drawing label	Drawing scale
Situation plan	01	1:200
Basement plan – HVAC equipment	02	1:50
Ground floor plan – HVAC equipment	03	1:50
First floor plan - HVAC equipment	04	1:50

AMG strukture d.o.o.
Preduzeće za projektovanje, inženjering i nadzor
Ul. Marka Tajčevića br. 12a, Beograd
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INVESTITOR: Delegacija Evropske unije u Republici Srbiji Ul. Milentija Popovića 40, Novi Beograd	VRSTA TEH. DOK.: IDR-IDEJNO REŠENJE
OBJEKAT: Investiciono održavanje i opremanje dela objekta i galerije Progres, Ul. Zmaj Jovina 8 -10, Beograd	ODGOVORNI PROJEKTANT: Olja V. Jovanović dipl.inž.arh. licenca br. 300 3542 03 PROJEKTANT:
1. - PROJEKAT ARHITEKTURE	PROJEKTANT SARADNIK:

NAZIV CRTEŽA:	Razmera	Br. teh. dok.	Datum	Crtež br.
SITUACIONI PLAN-POSTOJECE STANJE	1:200	124/23-M	12. 2023.	01

TOILET 3
TOILET 2
LIFT
LIFT
INTERIOR WALL 7
-Glue and dispersion paint yellow (RT C30)
Kondenz DN50 PVC
u rigolu/
in floor drain
STAIRCASE
platform for the disabled
TOILET 1
SERVICE KITCHEN
MULTIFUNCTIONAL HALL
HALL
storage 1
storage 2
audio video cabin
interpreter cabin
GRANICA PROJEKTA
PROJECT LIMIT
NOVO/PROJEKTOVANO
NEW
POSTOJEĆE
EXISTING
Kondenz DN32 PVC
u rigolu/
in the ceiling
Kondenz DN50 PVC
u rigolu/
in the wall
Cu Ø15.88-28.58
u zidu/
in the wall
Cu Ø9.52-19.05
u zidu/
in the wall
Cu Ø9.52-15.88
u zidu/
in the wall
Cu Ø6.35-12.7
u zidu/
in the wall
Cu Ø9.52-22.2
u zidu/
in the wall
Cu Ø15.88-28.58
u plafonu
in the ceiling
Cu Ø9.52-15.88
u plafonu
in the ceiling
Cu Ø6.35-12.7
u zidu/
in the ceiling
Dx izmenjivač klima komora
Dx exchanger air handling unit
Cu 28.580/13.88mm
VRF System 2 - Suteren i Prizemlje
VRF System 2 - Basement and ground floor
Cu Ø12.7-28.58 - za priključ
from ground floor
S - 600x500
postojeće-existing
R - 600x500
postojeće-existing
E - Ø200
postojeće-existing
R - 300x300
postojeće-existing
R - 400x300
postojeće-existing
R - 450x300
postojeće-existing
R - 700x300
postojeće-existing
R - 750x300
postojeće-existing
S - 750x300
postojeće-existing
S - 1200x400
postojeće-existing
S - 1200x400
postojeće-existing
S - Ø200
E - 150x150
V = 210 m³/h
Y=3000
VATJAG 420x120
V = 460 m³/h
Y=3000
S - 150x200
V = 250 m³/h
Y=3000
S - 150x300
V = 420 m³/h
Y=3000
S - 250x200
V = 420 m³/h
Y=3000
R - 200x200
V = 460 m³/h
Y=3000
E - 150x150
V = 210 m³/h
Y=3000
E - 150x150
V = 210 m³/h
Y=3000
S - 150x300
V = 420 m³/h
Y=3000
S - 150x300
V = 420 m³/h
Y=3000
S - 150x300
V = 420 m³/h
Y=3000
S - 150x300
V = 420 m³/h
Y=3000
VATJAG 420x120
V = 460 m³/h
Y=3000
VATJAG 420x120
V = 460 m³/h
Y=3000
VATJAG 420x120
V = 460 m³/h
Y=3000
VATJAG 420x120
V = 460 m³/h
Y=3000
VATJAG 420x120
V = 460 m³/h
Y=3000
VATJAG 420x120
V = 460 m³/h
Y=3000
S - 150x200
V = 250 m³/h
Y=3000
S - 150x200
V = 250 m³/h
Y=3000
S - 250x200
V = 420 m³/h
Y=3000
S - 250x200
V = 420 m³/h
Y=3000
S - 150x300
V = 420 m³/h
Y=3000
S - 150x300
V = 420 m³/h
Y=3000
S - 150x300

1. UNUTRAŠNJA PARAPETNA JEDINICA VRF SISTEMA
   - toplotni kapacitet nominalni: Q_N/Q_{ref}=7,10/8,00 kW
   - toplotni kapacitet korigovani: Q_K/Q_{ref}=6,90/8,00 kW
   - protok vazduha: 1080-960-840 m^3/h
   - el. snaga ventilatora: 84 W
   - radni napon: U=1x220-240V: 50 Hz
   - dimenzije kućišta (ŠxVxD): 1410x630x220 mm
   - za ugradnju u parapet sa sopstvenim kucistem
   - nivo buke: 43 / 43 / 37 dB
   - priključak liquid/gas: Ø9.52 /15,88 mm
   - masa neto: 34,0 kg
2. UNUTRAŠNJA KASETNA JEDINICA VRF SISTEMA
   - toplotni kapacitet nominalni: Q_N/Q_{ref}=7,10/8,00 kW
   - toplotni kapacitet korigovani: Q_K/Q_{ref}=6,90/8,00 kW
   - protok vazduha: 1020-900-780 m^3/h
   - el. snaga ventilatora: 32 W
   - radni napon: U=1x220-240V: 50 Hz
   - dimenzije kućišta (ŠxVxD): 840x204x840 mm
   - za ugradnju u spusteni plafon
   - nivo buke: 36 / 34 / 31 dB
   - priključak liquid/gas: Ø9.52 /15,88 mm
   - masa neto: 21 kg
3. VAZDUŠNA ZAVESA
   - širina: 1,5m min
   - visina ugradnje: 4m
   - protok vazduha: 3930/3330m3/h
   - el. snaga ventilatora: 660 W
   - radni napon: U=1x220-240V: 50 Hz
   - dimenzije kućišta (ŠxVxD): 1642x205x212 mm
   - masa neto: 26,0 kg

1. INDOOR FLOOR STANDING UNIT VRF SYSTEM
   - Rated capacity: Q_C/Q_N=7,10/8,00 kW
   - Corrected capacity: Q_C/Q_N=6,90/8,00 kW
   - Air flow: 1080-960-840 m^3/h
   - el. power: 84 W
   - volt: U=1x220-240V: 50 Hz
   - dimension (WxHxD): 1410x630x220 mm
   - for installation in the parapet with its own housing
   - noise level: 43 / 43 / 37 dB
   - pipe connection liquid/gas: Ø9.52 /15,88 mm
   - weight: 34,0 kg
2. INDOOR CASSETTE UNIT VRF SYSTEM
   - Rated capacity: Q_C/Q_N=7,10/8,00 kW
   - Corrected capacity: Q_C/Q_N=6,90/8,00 kW
   - Air flow: 1020-900-780 m^3/h
   - el. power: 32 W
   - volt: U=1x220-240V: 50 Hz
   - dimension (WxHxD): 840x204x840 mm
   - for installation in the ceiling
   - noise level: 36 / 34 / 31 dB
   - pipe connection liquid/gas: Ø9.52 /15,88 mm
   - weight: 21 kg
3. AIR CURTAIN
   - width: 1,5m min
   - installation height: 4m
   - Air flow: 3930/3330 m^3/h
   - el. power: 66 W
   - volt: U=1x220-240V: 50 Hz
   - dimension (WxHxD): 1642x205x212 mm
   - weight: 26,0 kg

R.br.	Naziv prostorije	Povrsina m2	zavrsna obrada poda	obrada zida	obrada plafona
01	GALERIJA	232.05	postojeci pod - kamen	kamen/disperzija	disperzija
02	STEPENISTE	40.45	postojeci pod - kamen	kamen/disperzija	disperzija
UKUPNA NETO POVRSINA 272.50 m2					

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CLIENT:
Delegation of the European Union to the Republic of Serbia
Ul. Milentija Popovica 40, Novi Beograd

DESIGN TYPE:
MAIN DESIGN

TITL:
Investment maintenance and furnishing of space in the building and gallery "Progres" 8-10 Zmaj Jovina Street, Belgrade

RESPONSIBLE DESIGNER:
Slobodan Ciornii Meng.
Licence No.330 535603

DESIGN TYPE:
6.1 - PROJEKAT MASINSKIH INSTALACIJA
6.1 - HVAC DESIGN

DESIGNER ASSISTANTE:

DRAWING NAME:
PRIZEMLJE - MASINSKE INSTALACIJE
GROUND FLOOR PLAN - HVAC EQUIPMENT

Scale	Drawing No.	Date	Page No.
1:50	124/23-M	11. 2023.	03

1. UNUTRAŠNJA PARAPETNA JEDINICA VRF SISTEMA
- toplotni kapacitet nominalni: Q_H/Q_h=4,00/3,60 kW
- toplotni kapacitet korigovani: Q_H/Q_h=4,00/3,50 kW
- protok vazduha: 630-570-510 m^3/h
- el. snaga ventilatora: 36 W
- radni napon: U=1x220-240V; 50 Hz
- dimenzije kućišta (ŠxVxD): 1067x635x203 mm
- za ugradnju u parapet sa sopstvenim kucistem
- nivo buke: 37 / 35 / 33 dB
- priključak liquid/gas: Ø6,35 /12,70 mm
- masa neto: 27,0 kg

2. UNUTRAŠNJA PARAPETNA JEDINICA VRF SISTEMA
- toplotni kapacitet nominalni: Q_H/Q_h=5,00/4,50 kW
- toplotni kapacitet korigovani: Q_H/Q_h=5,00/4,40 kW
- protok vazduha: 690-600-570 m^3/h
- el. snaga ventilatora: 44 W
- radni napon: U=1x220-240V; 50 Hz
- dimenzije kućišta (ŠxVxD): 1067x635x203 mm
- za ugradnju u parapet sa sopstvenim kucistem
- nivo buke: 38 / 37 / 35 dB
- priključak liquid/gas: Ø6,35 /12,70 mm
- masa neto: 27,0 kg

3. UNUTRAŠNJA PARAPETNA JEDINICA VRF SISTEMA
- toplotni kapacitet nominalni: Q_H/Q_h=6,30/5,60 kW
- toplotni kapacitet korigovani: Q_H/Q_h=6,30/5,50 kW
- protok vazduha: 960-840-720 m^3/h
- el. snaga ventilatora: 54 W
- radni napon: U=1x220-240V; 50 Hz
- dimenzije kućišta (ŠxVxD): 1345x635x203 mm
- za ugradnju u parapet sa sopstvenim kucistem
- nivo buke: 40 / 37 / 34 dB
- priključak liquid/gas: Ø6,35 /12,70 mm
- masa neto: 34,0 kg

4. REKUPERATOR TOPLOTE
- protok vazduha LOW /HIGH: 800/1000 m^3/h
- raspoloživi externi napor: 160 Pa
- temper. efikasnost: 71/73 %
- napon: 220-240V, 50Hz
- el. snaga ventilatora: P= 463 W
- dimenzije (V x Š x D): 405 x 1230 x 1101 mm
- masa neto: 70 kg

5. KANALSKI ELEKTRO GREJAC
- 4 kW
- napon: 380V, 50Hz
- 300x250mm

6. SPLIT SISTEM ZA TEHNICKU PROSTORIJU - SAMO HLADJENJE
- toplotni kapacitet nominalni: Q_h=3,80 kW
- protok vazduha: 576 m^3/h
- el. snaga ventilatora: 19 W
- el. snaga spoljna jedinica.: 1500W
- napajanje: U=1x220-240V; 50 Hz
- dimenzije kućišta unutr.jed. (ŠxVxD): 837x189x308 mm
- dimenzije kućišta spolj.jed. (ŠxVxD): 770x545x288 mm
- zidna ugradnja
- priključak liquid/gas: Ø6,35 /9,52 mm
- masa spolj. jed neto: 33,3kg
- masa unutr. jed. neto: 8,7 kg

1. INDOOR FLOOR STANDING UNIT VRF SYSTEM
- Rated capacity: Q_H/Q_C=4,00/3,60 kW
- Corrected capacity: Q_H/Q_C=4,00/3,50 kW
- Air flow: 630-570-510 m^3/h
- el. power: 36 W
- volt: U=1x220-240V; 50 Hz
- dimension (WxHxD): 1067x635x203 mm
- for installation in the parapet with its own housing
- noise level: 37 / 35 / 33 dB
- pipe connection liquid/gas: Ø6,35 /12,70 mm
- weight: 27,0 kg

2. INDOOR FLOOR STANDING UNIT VRF SYSTEM
- Rated capacity: Q_H/Q_C=5,00/4,50 kW
- Corrected capacity: Q_H/Q_C=5,00/4,40 kW
- Air flow: 690-600-570 m^3/h
- el. power: 44 W
- volt: U=1x220-240V; 50 Hz
- dimension (WxHxD): 1067x635x203 mm
- for installation in the parapet with its own housing
- noise level: 38 / 37 / 35 dB
- pipe connection liquid/gas: Ø6,35 /12,70 mm
- weight: 27,0 kg

3. INDOOR FLOOR STANDING UNIT VRF SYSTEM
- Rated capacity: Q_H/Q_C=6,30/5,60 kW
- Corrected capacity: Q_H/Q_C=6,30/5,50 kW
- Air flow: 960-840-720 m^3/h
- el. power: 54 W
- volt: U=1x220-240V; 50 Hz
- dimension (WxHxD): 1345x635x203 mm
- for installation in the parapet with its own housing
- noise level: 40 / 37 / 34 dB
- pipe connection liquid/gas: Ø6,35 /12,70 mm
- weight: 34,0 kg

4. RECUPERATOR HEAT EXCHANGER
- protok vazduha LOW /HIGH: 800/1000 m^3/h
- raspoloživi externi napor: 160 Pa
- temper. efikasnost: 71/73 %
- napon: 220-240V, 50Hz
- el. snaga ventilatora: P= 463 W
- dimenzije (V x Š x D): 405 x 1230 x 1101 mm
- masa neto: 70 kg

5. DUCTABLE ELECTRICAL HEATER
- 4 kW
- napon: 380V, 50Hz
- 300x250mm

6. SPLIT SYSTEM FOR TECHNICAL ROOM - ONLY COOLING
- Rated capacity: Q_h=3,80 kW
- air flow: 576 m^3/h
- el. power fan: 19 W
- el. power outdoor unit.: 1500W
- volt: U=1x220-240V; 50 Hz
- dimension indoor unit. (ŠxVxD): 837x189x308 mm
- dimension outdoor unit. (ŠxVxD): 770x545x288 mm
- wall mounted
- connection liquid/gas: Ø6,35 /9,52 mm
- weight outdoor unit neto: 33,3kg
- weight indoor unit neto: 8,7 kg

7. SPOLJNA JEDINICA VRF SISTEMA - SISTEM PRZEMLJA I SUTERENA
- nominalni kapacitet hlađenja/grejanja: 84,00/94,50 kW
-korigovani kapacitet hlađenja/grejanja: 84,80/91,50 kW
- EER/COP: 4,54/4,68
- napajanje: 3x380-415V; 50 Hz
- ulazna snaga hlađenje/grejanje: P=28,70/30,40 kW
- dimenzije: ŠxDxV= 1240x760x1690 + 930x760x1690mm
- masa neto: 300,00 + 215,00 kg
- opseg ts na režimu grejanja: -25,0 ≈ +18,0°C
- opseg ts na režimu hlađenja: -15,0 ≈ +48,0°C
- nivo buke: 63,1/64,1 dB
- priključak liquid/gas: 19.05/34,9 mm

8. SPOLJNA JEDINICA VRF SISTEMA - SISTEM SPRATA
- nominalni kapacitet hlađenja/grejanja: 56,00/63,00 kW
-korigovani kapacitet hlađenja/grejanja: 52,40/61,00 kW
- EER/COP: 4,39/4,29
- napajanje: 3x380-400V; 50 Hz
- ulazna snaga hlađenje/grejanje: P=18,10/20,40 kW
- dimenzije: ŠxDxV= 1240x760x1690 mm
- masa neto: 300,00 kg
- opseg ts na režimu grejanja: -25,0 ≈ +18,0°C
- opseg ts na režimu hlađenja: -15,0 ≈ +48,0°C
- nivo buke: 62,0/64,5 dB
- priključak liquid/gas: 15,88/28,58 mm

9. SPOLJNA JEDINICA VRF SISTEMA - SISTEM KLIMA KOMORA
- nominalni kapacitet hlađenja/grejanja: 56,00/63,00 kW
-korigovani kapacitet hlađenja/grejanja: 53,60/61,10 kW
- EER/COP: 4,39/4,29
- napajanje: 3x380-400V; 50 Hz
- ulazna snaga hlađenje/grejanje: P=18,10/20,40 kW
- dimenzije: ŠxDxV= 1240x760x1690 mm
- masa neto: 300,00 kg
- opseg ts na režimu grejanja: -25,0 ≈ +18,0°C
- opseg ts na režimu hlađenja: -15,0 ≈ +48,0°C
- nivo buke: 62,0/64,5 dB
- priključak liquid/gas: 15,88/28,58 mm

7. OUTDOOR UNIT VRF SYSTEM - GROUND FLOOR AND BASEMENT
- rated capacity cooling/heating: 84,00/94,50 kW
-corrected capacity cooling/heating: 84,80/91,50 kW
- EER/COP: 4,54/4,68
- napajanje: 3x380-415V; 50 Hz
- ulazna snaga hlađenje/grejanje: P=28,70/30,40 kW
- dimenzije: ŠxDxV= 1240x760x1690 + 930x760x1690mm
- masa neto: 300,00 + 215,00 kg
- opseg ts na režimu grejanja: -25,0 ≈ +18,0°C
- opseg ts na režimu hlađenja: -15,0 ≈ +48,0°C
- nivo buke: 63,1/64,1 dB
- priključak liquid/gas: 19.05/34,9 mm

8. OUTDOOR UNIT VRF SYSTEM - 1. FLOOR
- rated capacity cooling/heating: 56,00/63,00 kW
-corrected capacity cooling/heating: 52,40/61,00 kW
- EER/COP: 4,39/4,29
- napajanje: 3x380-415V; 50 Hz
- ulazna snaga hlađenje/grejanje: P=18,10/20,40 kW
- dimenzije: ŠxDxV= 1240x760x1690 mm
- masa neto: 300,00 kg
- opseg ts na režimu grejanja: -25,0 ≈ +18,0°C
- opseg ts na režimu hlađenja: -15,0 ≈ +48,0°C
- nivo buke: 62,0/64,5 dB
- priključak liquid/gas: 15,88/28,58 mm

9. OUTDOOR UNIT VRF SYSTEM - AIR HANDLING UNIT
- rated capacity cooling/heating: 56,00/63,00 kW
-corrected capacity cooling/heating: 52,40/61,00 kW
- EER/COP: 4,39/4,29
- napajanje: 3x380-415V; 50 Hz
- ulazna snaga hlađenje/grejanje: P=18,10/20,40 kW
- dimenzije: ŠxDxV= 1240x760x1690 mm
- masa neto: 300,00 kg
- opseg ts na režimu grejanja: -25,0 ≈ +18,0°C
- opseg ts na režimu hlađenja: -15,0 ≈ +48,0°C
- nivo buke: 62,0/64,5 dB
- priključak liquid/gas: 15,88/28,58 mm

stepeniste
ostava 1
ostava 2
ostava 3
tehnicka soba
hodnik
ulazni hol
kancelarijski prostor
kancelarija1
kancelarija 2
sala za sastanke
Ulica Kneza Mihailova
VRF Sistem 2 - Suteren i Prizemlje
VRF System 2 - Basement and Ground floor
Cu 34,9/19,05mm
u plafonu
in the ceiling
Dx izmenjivac klima komora
Dx exchanger air handling unit
Cu 28,58/15,88mm
VRF Sistem 1 - Sprat
VRF System 1 - 1. floor
Cu 28,58/15,88mm
Spoljna protivkisna zaluzina
Weather resistant louvre
500x300mm
POSTOJECE FASADE
NOVOPROJEKTOVANO
GRANICA PROJEKTA
PROJECT LIMIT
Cu 12,7/6,35mm
u parapetu
in the parapet
Cu 15,88/9,52mm
Cu 19,05/9,52mm
Cu 22,20/9,52mm
Cu 9,52/6,35mm
R - 100x100 - V = 60 m³/h
R - 150x100 - V = 90 m³/h
R - 150x150 - V = 120 m³/h
R - 200x250 - V = 330 m³/h
R - 250x250 - V = 490 m³/h
R - 300x250 - V = 610 m³/h
R - 150x200 - V = 165 m³/h
R - 400x200 - V = 1000 m³/h Y=2750
S - 400x200 - V = 1000 m³/h Y=2750
S - 200x200 - V = 390 m³/h Y=2750
R - 200x200 - V = 390 m³/h Y=2750
EA - 300x250 - V = 1000 m³/h Y=2750
EA - 350x250 - V = 1000 m³/h Y=2750
S - 300x250 - V = 540 m³/h
S - 300x250 - V = 610 m³/h Y=2700
S - 250x250 - V = 340 m³/h
S - 200x250 - V = 170 m³/h
Reserka - 325x125 - V = 170 m³/h
Reserka - 225x75 - V = 30 m³/h
Reserka/Grille - 525x125 - V = 390 m³/h
Reserka - 525x125 V = 170 m³/h
Reserka - 325x125 - V = 65 m³/h
Reserka - 325x125 - V = 130 m³/h
Reserka - 325x125 - V = 170 m³/h
Reserka - 325x125 - V = 340 m³/h
Reserka - 325x125 - V = 170 m³/h
Reserka - 325x125 - V = 340 m³/h
Reserka - 325x125 - V = 170 m³/h
Reserka - 325x125 - V = 170 m³/h
Reserka - 325x125 - V = 170