Objective: Major repair and modernisation works on immovable property with cadastral numbers: 2901303.331.01-study block, 2901303.331.03-dormitory, 2901303.331.04-education and teaching building, with the development of the adjacent territory, located in Cimislia

Subject: 2-1-5_IVC_Study block

Local estimate No. 2-1-5

Prepared in current prices

Estimate: Construction works						
No	**Symbol standards and Resource code**	**Works and expenses**	**U.M**	**Quantity according to project data**	**Estimated value (Lei)**	
					Per unit of measurement	**Total**
					Incl. salary	**Incl. salary**
1	**2**	**3**	**4**	**5**	**6**	**7**
		Chapter 1.1. Heating system				
1.1	IB06A	Steel radiators, monobloc with a length of up to 1000 mm, inclusive	pcs	160,0000		
1.2		KORADO steel radiator, Type 22K 500-400	pc	12,0000		
1.3		KORADO steel radiator, Type 22K 500-500	pcs	10,0000		
1.4		KORADO steel radiator, type 22K 500-600	pcs	22,0000		
1.5		KORADO steel radiator, type 22K 500-700	pcs	31,0000		
1.6		KORADO steel radiator, type 22K 500-800	pcs	40,0000		
1.7		KORADO steel radiator, type 22K 500-900	pcs	31,0000		
1.8		KORADO steel radiator, type 22K 500-1000	pcs	14,0000		
1.9	IB06B	Steel radiators, monoblock with a length of 1001 - 1500 mm	pcs	36,0000		
1.10		KORADO steel radiator, Type 22K 500-1100	pcs	26,0000		
1.11		KORADO steel radiator, Type 22K 500-1200	pcs	1,0000		
1.12		KORADO steel radiator, Type 22K 500-1300	pcs	1,0000		
1.13		KORADO steel radiator, Type 22K 500-1400	pcs	5,0000		
1.14		KORADO steel radiator, type 22K 500-1500	pcs	2,0000		
1.15		KORADO steel radiator, type 33K 500-1100	pcs	1,0000		
1.16	IB06D	Steel radiators, monobloc with a length of over 2000 mm (excluding the radiator)	pcs	1,0000		
1.17		KORADO steel radiator, Type 22K 500-3000	pcs	1,0000		
1.18	ID01A	Double-adjustment valve (flow or return) for central heating systems, with a nominal diameter of 3/8" -1/2" (RTR-N preset thermostatic valve, DN15 (Danfoss or equivalent))	pc	197,0000		
1.19	ID01A	Double-acting valve (flow or return) for central heating systems, with a nominal diameter of 3/8" -1/2" (RLV radiator shut-off valve, DN15 (Danfos or similar))	pc	197,0000		
1.20	ID01A	Double-acting valve (flow or return) for central heating systems, with a nominal diameter of 3/8" -1/2" (RTR 7090 thermostatic element, (Danfos or similar))	pc	155,0000		
1.21	IC35	High-density reinforced polyethylene or reinforced or unreinforced polypropylene pipe, installed at the connection of heating bodies or appliances in central heating systems, with	m	1,090,0000		

		an external diameter of up to 18.0 mm, inclusive (PE-X Multistrat pipe with TIGRIS ALUPEX aluminium foil; with oxygen barrier ; T-90°C, Plucru 10bar, S-Press fittings Ø16x2.0)				
1.22	IC35B	High-density reinforced polyethylene or reinforced or unreinforced polypropylene pipe, installed at the connection of heating bodies or appliances in central heating systems, with an outer diameter of 20.0 mm (PE-X Multilayer pipe with TIGRIS ALUPEX aluminium foil; with oxygen barrier; T-90°C, Plucru 10bar, S-Press fittings Ø20x2.25)	m	1,050,0000		
1.23	IC35C	High-density reinforced polyethylene or reinforced or unreinforced polypropylene pipe, installed at the connection of heating bodies or appliances in central heating systems, with an external diameter of 25.0 mm (PE-X Multistrat pipe with TIGRIS ALUPEX aluminium foil; with oxygen barrier; T-90°C, Plucru 10bar, S-Press fittings Ø25x2.5)	m	370,0000		
1.24	RpIF09C	Insulation of pipes with special insulation sleeves, inserted on pipes (Insulation tube for pipes with Tubolit S foil (TL-18/9-S) foil)	m	1 090,0000		
1.25	RpIF09C	Insulation of pipes with special insulation sleeves, inserted on pipes (Insulation tube for pipes with Tubolit S foil (TL-22/9-S) foil)	m	1 050,0000		
1.26	RpIF09C	Insulation of pipes with special insulation sleeves, inserted on pipes (Insulation tube for pipes with Tubolit S foil (TL-28/9-S) foil)	m	370,000		
1.27	IC11A	Longitudinally welded black steel pipe for installations, unthreaded, mounted by welding in columns, in central heating installations for residential and social-cultural buildings, pipe with a diameter of 1/2" (Steel pipe Ø18x2.0 (DN15))	m	25,0000		
1.28	IC11B	Longitudinally welded black steel pipe for installations, unthreaded, mounted by welding in columns, in central heating installations for residential and social-cultural buildings, the pipe having a diameter of 3/4" (Steel pipe Ø25x2.0 (DN20))	m	15,0000		
1.29	IC11C	Longitudinally welded black steel pipe for installations, unthreaded, mounted by welding in columns, in central heating installations for residential and social-cultural buildings, pipe with a diameter of 1" (Steel pipe Ø32x2.0 (DN25))	m	45,0000		
1.30	IC11D	Longitudinally welded black steel pipe for installations, unthreaded, mounted by welding in columns, in central heating installations for residential and social-cultural buildings, with a diameter of 1 1/4" (Steel pipe Ø38x2.0 (DN32))	m	25,0000		
1.31	IC11E	Longitudinally welded black steel pipe for installations, unthreaded, mounted by welding in columns, in central heating installations for residential and social-cultural buildings, the pipe having a diameter of 1 1/2" (Steel pipe Ø48x3.5 (DN40))	m	130,0000		
1.32	IC11F	Longitudinally welded black steel pipe for installations, unthreaded, mounted by welding in columns, in central heating installations for residential and social-cultural buildings, pipe with a diameter of 2" (Steel pipe Ø57x3.5 (DN50))	m	100,0000		
1.33	IC11F	Longitudinally welded black steel pipe for installations, unthreaded, mounted by welding in columns, in central heating installations for residential and social-cultural buildings, with a diameter of 2" (Steel pipe Ø76x3.5 (DN65))	m	85,0000		
1.34	RpIF09C	Insulation of pipes with special insulation sleeves, inserted on pipes (Mineral wool insulation DN15x50mm)	m	25,0000		
1.35	RpIF09C	Insulation of pipes with special insulation sleeves, inserted on pipes (mineral wool insulation DN20x50mm)	m	15,0000		
1.36	RpIF09C	Insulation of pipes with special insulation sleeves, inserted on pipes (mineral wool insulation DN25x50mm)	m	45,0000		
1.37	RpIF09C	Insulation of pipes with special insulation sleeves, inserted on pipes (mineral wool insulation DN32x50mm)	m	25,0000		
1.38	RpIF09C	Insulation of pipes with special insulation sleeves, inserted on pipes (mineral wool insulation DN40x50mm)	m	130,0000		
1.39	RpIF09C	Insulation of pipes with special insulation sleeves, inserted on pipes (mineral wool insulation DN50x50mm)	m	100,0000		
1.40	RpIF09C	Insulation of pipes with special insulation sleeves, inserted on pipes (mineral wool insulation DN65x50mm)	m	85,000		
1.41	IE03A	Performing pressure tightness tests on the supply pipes of heating devices (air heaters,	m	2 550,0000		

		convector heaters, skirting convectors, etc.) with a diameter of 3/8"... 1"				
1.42	IE03B	Performing pressure leak tests on the supply pipes of heating devices (air heaters, convector heaters, skirting convectors, etc.) with a diameter of 1 1/4" ... 2".	m	385,0000		
		TOTAL Chapter 1.1. Heating system				
		Including salary				
		Chapter 1.2. Heating system. Floor distribution unit				
1.43	IA52A	Collector placement box	pcs	10,0000		
1.44	IC46A	Distributor - manifold for heating points and central heating systems, mounted on ready-made support (Flow/return manifold, distance between branches 50-100 mm 3/4" (DN20) x 2 branches, distance 50 mm R551 (Giacomini or similar))	pc	1,0000		
1.45	IC46A	Distributor - collector for heating points and central heating systems, mounted on a ready-made support (Flow/return collector, distance between branches 50-100 mm 1 1/4" (DN32) x 3 branches, distance 70 mm R551 (Giacomini or similar))	pc	4,0000		
1.46	IC46A	Distributor - collector for heating points and central heating systems, mounted on a ready-made support (Flow/return collector, distance between branches 50-100 mm 1 1/4" (DN32) x 4 branches, distance 70 mm R551 (Giacomini or similar))	pc	1,0000		
1.47	IC46A	Distributor - collector for heating points and central heating systems, mounted on a ready-made support (flow/return collector, distance between branches 50-100 mm 1 1/2" (DN40) x 6 branches, distance 100 mm R551 (Giacomini or similar))	pc	1,000		
1.48	IC46A	Distributor - collector for heating points and central heating systems, mounted on a ready-made support (Flow/return collector, distance between branches 50-100 mm 2" (DN50) x 6 branches, distance 100 mm R551 (Giacomini or similar))	pc	3,0000		
1.49		Mounting brackets for manifolds	pcs	20,0000		
1.50	ID01A	Double adjustment valve (flow or return) for central heating systems, with a nominal diameter of 3/8" -1/2" (Valve-partner with measuring diaphragm on flow, PN16 DN15 LF ASV-BD (Danfoss or equivalent)	pc	4,0000		
1.51	ID01A	Double-adjustment valve (flow or return) for central heating systems, with a nominal diameter of 3/8" -1/2" (Valve-control partner with flow measurement diaphragm, PN16 DN15 ASV-BD (Danfoss or equivalent))	pc	3,0000		
1.52	ID01B	Double-adjustment valve (flow or return) for central heating systems, with a nominal diameter of 3/4" -1" (Valve-control partner with flow measurement diaphragm, PN16 DN20 ASV-BD (Danfoss or equivalent))	pc	1,0000		
1.53	ID01B	Double-adjustment valve (flow or return) for central heating systems, with a nominal diameter of 3/4" -1" (Valve-control partner with flow measurement diaphragm, PN16 DN25 ASV-BD (Danfoss or equivalent))	pc	3,0000		
1.54	ID04A	Gate or check valve with plugs for central heating systems, with a nominal diameter of 1/2" -1" (Ball valve, PN16, DN15 (Caleffi or equivalent))	pc	46,0000		
1.55	ID04A	Gate or check valve with plugs for central heating systems, with a nominal diameter of 1/2" -1" (Ball valve, PN16, DN20 (Caleffi or similar))	pc	42,0000		
1.56	ID04A	Shut-off or check valve with plugs for central heating systems, with a nominal diameter of 1/2" -1" (Ball valve, PN16, DN25 (Caleffi or similar))	pc	8,0000		
1.57	ID04B	Gate or check valve with plugs for central heating systems, with a nominal diameter of 1 1/4" -1 1/2" (Ball valve, PN16, DN32 (Caleffi or similar))	pc	6,0000		
1.58	ID04B	Gate or check valve with plugs for central heating systems, with a nominal diameter of 1 1/4" -1 1/2" (Ball valve, PN16, DN40 (Caleffi or similar))	pc	2,0000		
1.59	ID01A	Double adjustment valve (flow or return) for central heating systems, with a nominal diameter of 3/8" -1/2" (Flow/return end group with automatic air vent and fill/drain connection (Giacomini or similar))	pc	20,0000		
1.60	ID04A	Pass-through or check valve with plugs for plumbing installations	pcs	4,0000		

		with a nominal diameter of 1/2" -1" (Valve for draining 3/4")				
1.61	ID04A	Pass-through or check valve with plugs for central heating systems, with a nominal diameter of 1/2" -1" (Ball valve with lever, plug and 3/4" vent button)	pc	8,0000		
1.62	CN20B	Exterior paint applied to metal surfaces with BT-177 oil-based paint in 2 coats, including primer. GF-021	m2	66,5500		
1.63	CL18A	Various metal structures made of rolled profiles, sheet metal, corrugated sheet metal, concrete steel, pipes for supports or coverings, totally or partially embedded in concrete (Metal for support elements)	kg	320,0000		
		TOTAL Chapter 1.2. Heating system. Floor distribution group				
		Including salary				
		Chapter 1.3. Heating system. Air heating system				
1.64	ID01A	Double-adjustment valve (flow or return) for central heating systems, with a nominal diameter of 3/8" -1/2" (Servomotor valve (VA-VEH202TA or similar))	pc	6,0000		
1.65	ID04A	Pass or check valve with plugs for central heating systems, with a nominal diameter of 1/2" -1" (Ball valve, PN16, DN15 (Caleffi or similar))	pc	6,0000		
1.66	ID04A	Gate or check valve with plugs for central heating systems, with a nominal diameter of 1/2" -1" (Ball valve, PN16, DN20 (Caleffi or similar))	pc	12,0000		
1.67	ID01A	Double-adjustment valve (flow or return) for central heating systems, with a nominal diameter of 3/8" -1/2" (Automatic air vent Ø15)	pc	6,0000		
1.68	ID04A	Pass or check valve with plugs for central heating systems, with a nominal diameter of 1/2" -1" (3/4" drain valve)	pc	2,0000		
1.69	ID04A	Gate or check valve with plugs for central heating systems, with a nominal diameter of 1/2" -1" (Ball valve with lever, plug and 3/4" vent button)	pc	2,0000		
1.70	IC11B	Longitudinally welded black steel pipe for installations, unthreaded, mounted by welding in columns, in central heating installations for residential and social-cultural buildings, pipe with a diameter of 3/4" (Steel pipe Ø25x2.0 (DN20))	m	85,0000		
1.71	IC11C	Longitudinally welded black steel pipe for installations, unthreaded, mounted by welding in columns, in central heating installations for residential and social-cultural buildings, with a diameter of 1" (Steel pipe Ø32x2.0 (DN25))	m	35,0000		
1.72	IC11D	Longitudinally welded black steel pipe for installations, unthreaded, mounted by welding in columns, in central heating installations for residential and social-cultural buildings, pipe with a diameter of 1 1/4" (Steel pipe Ø38x2.0 (DN32))	m	35,0000		
1.73	RpIF09C	Insulation of pipes with special insulation sleeves, inserted on pipes (Mineral wool insulation DN20x50mm)	m	85,0000		
1.74	RpIF09C	Insulation of pipes with special insulation sleeves, inserted on pipes (mineral wool insulation DN25x50mm)	m	35,0000		
1.75	RpIF09C	Insulation of pipes with special insulation sleeves, inserted on pipes (mineral wool insulation DN32x50mm)	m	35,0000		
1.76	CN20B	Exterior paints applied to metal surfaces with BT-177 oil-based paint in 2 coats, including primer. GF-021	m2	14,2500		
1.77	CL18A	Various metal structures made of rolled profiles, sheet metal, corrugated sheet metal, concrete steel, pipes for supports or coverings, totally or partially embedded in concrete (Metal for support elements)	kg	95,0000		
		TOTAL Chapter 1.3. Heating system. Air heating system				
		Including salary				
		Chapter 2.1. Ventilation system. AR-1				
1.78	VA19A	Installation of ventilation ducts at a height from the floor to 3 m, made of galvanised sheet metal or aluminium, 0.5 mm thick (Circular air ducts made of galvanised sheet metal б=0.5 mm)	m2	116,0000		
1.79	VA21B	Installation of ventilation ducts at a height of up to 3 m from the floor, made of galvanised sheet metal or aluminium, 0.5 mm thick (rectangular air ducts made of galvanised sheet metal б=0.5 mm)	m2	7,2000		

1.80	VA22B	Installation of ventilation ducts at a height of up to 3 m from the floor, made of galvanised sheet metal or aluminium, 0.7 mm thick (rectangular air ducts made of galvanised sheet metal б=0.7 mm)	m2	16,0000		
1.81	VA22C	Installation of ventilation ducts at a height of 3 m from the floor, made of galvanised or aluminium sheet metal, 0.7 mm thick (rectangular air ducts made of galvanised sheet metal б=0.7	m2	57,0000		
1.82	VA22D	Installation of ventilation ducts at a height of 3 m from the floor, made of galvanised or aluminium sheet metal, 0.7 mm thick (rectangular air ducts made of galvanised sheet metal б=0.7 mm)	m2	12,0000		
1.83	VA22E	Installation of ventilation ducts at a height from the floor to 3 m made of galvanised or aluminium sheet metal, 0.7 mm thick (rectangular air ducts made of galvanised sheet metal б=0.7	m2	19,3000		
1.84	VA05A	Installation on site of prefabricated ALP ventilation pipes with a section perimeter of 150 - 700 mm (flexible air duct Ø125)	m	2,0000		
1.85	VA05A	Installation on site of prefabricated ALP ventilation pipes with a section perimeter of 150 - 700 mm (flexible air duct Ø140)	m	1,0000		
1.86	VA05A	Installation on site of prefabricated ALP ventilation pipes with a cross-sectional perimeter of 150 - 700 mm (flexible air duct Ø160)	m	13,0000		
1.87	VA05A	Installation on site of prefabricated ALP ventilation pipes with a cross-sectional perimeter of 150–700 mm (flexible air duct Ø180)	m	3,0000		
1.88	IzH07A	Insulation of pipes with SPS 1 type mineral wool or SPS 1 type glass wool mattresses, sewn with galvanised steel wire on wire mesh, ready-made, covered on one side, with a thickness of 30 (Mineral wool insulation, thickness 30 mm, λ=0.036W/(mxK). with fire resistance EI60 "ТехноНиКоль", covered on the outside with aluminium foil with mesh for mechanical resistance)	m2	9,0000		
1.89	IzH07A	Insulation of pipes with mineral wool mats type SPS 1 or glass wool mats type SPS 1, sewn with galvanised steel wire on wire mesh, ready-made, covered on one side, with a thickness of 50 (Mineral wool insulation, thickness 50 mm, λ=0.038W/(mxK). with fire resistance EI60 "ТехноНиКоль", covered on the outside with aluminium foil with mesh for mechanical resistance)	m2	5,0000		
1.90	VB01A	Adjustment damper, butterfly, mounted on circular ducts type CFC-I, CFC-II, with perimeter 800 - 1600 mm (Manual flow regulator for hydraulic adjustment of the system (KR)) - labour	pc	43,0000		
1.91		Manual flow regulator for hydraulic adjustment of the KR 125 system (Vents or similar)	pc	4,0000		
1.92		Manual flow regulator for hydraulic adjustment of the KR 140 system (Vents or similar)	pc	1,0000		
1.93		Manual flow regulator for hydraulic adjustment of the KR 160 system (Vents or similar)	pc	35,0000		
1.94		Manual flow regulator for hydraulic adjustment of the KR 180 system (Vents or similar)	pc	3,0000		
1.95	VB09A Apl	Fixed blind frame, ready-made with a perimeter of 800 - 2500 mm, mounted on masonry (Rectangular multidirectional ceiling diffuser complete with PDZ-2 (AQN) side connection air distribution box) - labour only	pc	43,0000		
1.96		Rectangular multidirectional ceiling diffuser complete with PDZ-2 AQN 225x225 side connection air distribution box (Brofer or similar)	pc	3,0000		
1.97		Rectangular multidirectional ceiling diffuser complete with PDZ-2 AQN 300x300 side connection air distribution box (Brofer or similar)	pcs	19,0000		
1.98		Rectangular multidirectional ceiling diffuser complete with PDZ-2 AQN 375x375 side connection air distribution box (Brofer or equivalent)	pc	21,0000		
		TOTAL Chapter 2.1. Ventilation system. AR-1				
		Including salary				
		Chapter 2.2. Ventilation system. AR-2				
1.99	VA19A	Installation of ventilation ducts at a height from the floor to 3 m,	m2	57,8000		

		made of galvanised sheet metal or aluminium, 0.5 mm thick (Circular air ducts made of galvanised sheet metal б=0.5 mm)				
1.100	VA21B	Installation of ventilation ducts at a height of 3 m from the floor, made of galvanised sheet metal or aluminium, 0.5 mm thick (rectangular air ducts made of galvanised sheet metal б=0.5	m2	32,3000		
1.101	VA22B	Installation of ventilation ducts at a height of up to 3 m from the floor, made of galvanised sheet metal or aluminium, 0.7 mm thick (rectangular air ducts made of galvanised sheet metal б=0.7 mm)	m2	12,4000		
1.102	VA22C	Installation of ventilation ducts at a height of 3 m from the floor, made of galvanised or aluminium sheet metal, 0.7 mm thick (rectangular air ducts made of galvanised sheet metal б=0.7 mm)	m2	45,0000		
1.103	VA05A	Installation on site of prefabricated ALP ventilation pipes with a section perimeter of 150 - 700 mm (flexible air duct Ø100)	m	1,0000		
1.104	VA05A	On-site installation of prefabricated ALP ventilation pipes with a cross-sectional perimeter of 150–700 mm (flexible air duct Ø140)	m	1,0000		
1.105	VA05A	Installation on site of prefabricated ALP ventilation pipes with a cross-sectional perimeter of 150 - 700 mm (flexible air duct Ø150)	m	6,0000		
1.106	VA05A	Installation on site of prefabricated ALP ventilation pipes with a section perimeter of 150 - 700 mm (flexible air duct Ø160)	m	4,0000		
1.107	IzH07A	Insulation of pipes with SPS 1 type mineral wool or SPS 1 type glass wool mattresses, sewn with galvanised steel wire on wire mesh, ready-made, covered on one side, with a thickness of 50 (Mineral wool insulation, thickness 50 mm, λ=0.038W/(mxK). with fire resistance EI60 "ТехноНиКоль", covered on the outside with aluminium foil with mesh for mechanical resistance)	m2	36,0000		
1.108	VB01A	Control damper, butterfly, mounted on circular ducts type CFC-I, CFC-II, with perimeter 800 - 1600 mm (Manual flow regulator for hydraulic adjustment of the system (KR)) - labour only	pc	29,0000		
1.109		Manual flow regulator for hydraulic adjustment of the KR 100 system (Vents or similar)	pc	1,0000		
1.110		Manual flow regulator for hydraulic adjustment of the KR 140 system (Vents or similar)	pc	1,0000		
1.111		Manual flow regulator for hydraulic adjustment of the KR 150 system (Vents or similar)	pc	16,0000		
1.112		Manual flow regulator for hydraulic adjustment of the KR 160 system (Vents or similar)	pc	11,0000		
1.113	VB28A	Circular deflector with perimeter 900 - 1600 mm, type CR I and CN (Circular diffuser CFR+RC 150 (Brofer or similar)) - labour only	pc	1.0000		
1.114		Circular diffuser CFR+RC 150 (Brofer or similar)	pc	1,0000		
1.115	VB09A Apl	Frame with fixed blinds, ready-made with a perimeter of 800 - 2500 mm, mounted on masonry (Rectangular multidirectional ceiling diffuser complete with PDZ-2 (AQN) side connection air distribution box) - labour only	pc	28,0000		
1.116		Multidirectional rectangular ceiling diffuser complete with PDZ-2 AQN 225x225 side connection air distribution box (Brofer or similar)	pc	1,0000		
1.117		Rectangular multidirectional ceiling diffuser complete with PDZ-2 AQN 300x300 side connection air distribution box (Brofer or equivalent)	pc	13,0000		
1.118		Rectangular multidirectional ceiling diffuser complete with PDZ-2 AQN 375x375 side connection air distribution box (Brofer or equivalent)	pcs	14,0000		
		TOTAL Chapter 2.2. Ventilation system. AR-2				
		Including salary				
		Chapter 2.3. Ventilation system. AR-3				
1.119	VA19A	Installation of ventilation ducts at a height of 3 m from the floor, made of galvanised sheet metal or aluminium, 0.5 mm thick (circular air ducts made of galvanised sheet metal б=0.5 mm)	m2	112,8000		
1.120	VA21B	Installation of ventilation ducts at a height of up to 3 m from the	m2	7,2000		

		floor, made of galvanised sheet metal or aluminium, 0.5 mm thick (rectangular air ducts made of galvanised sheet metal б=0.5 mm)				
1.121	VA22B	Installation of ventilation ducts at a height of up to 3 m from the floor, made of galvanised sheet metal or aluminium, 0.7 mm thick (rectangular air ducts made of galvanised sheet metal б=0.7 mm)	m2	18,6000		
1.122	VA22C	Installation of ventilation ducts at a height of 3 m from the floor, made of galvanised or aluminium sheet metal, 0.7 mm thick (Ducts	m2	62,2000		
		rectangular air ducts made of galvanised sheet metal б=0.7 mm)				
1.123	VA22D	Installation of ventilation ducts at a height from the floor to 3 m made of galvanised sheet metal or aluminium, 0.7 mm thick (rectangular air ducts made of galvanised sheet metal б=0.7 mm)	m2	10,0000		
1.124	VA22E	Installation of ventilation ducts at a height of 3 m from the floor, made of galvanised or aluminium sheet metal, 0.7 mm thick (rectangular air ducts made of galvanised sheet metal б=0.7 mm)	m2	17,0000		
1.125	VA05A	Installation on site of prefabricated ALP ventilation pipes with a section perimeter of 150 - 700 mm (flexible air duct Ø100)	m	1,0000		
1.126	VA05A	Installation on site of prefabricated ALP ventilation pipes with a cross-sectional perimeter of 150–700 mm (flexible air duct Ø140)	m	1,0000		
1.127	VA05A	Installation on site of prefabricated ALP ventilation pipes with a cross-sectional perimeter of 150 - 700 mm (flexible air duct Ø160)	m	13,0000		
1.128	VA05A	Installation on site of prefabricated ALP ventilation pipes with a section perimeter of 150 - 700 mm (flexible air duct Ø180)	m	3,0000		
1.129	IzH07A	Insulation of pipes with SPS 1 type mineral wool or SPS 1 type glass wool mattresses, sewn with galvanised steel wire on wire mesh, ready-made, covered on one side, with a thickness of 30 (Mineral wool insulation, thickness 30 mm, λ=0.036W/(mxK). with fire resistance EI60 "ТехноНиКоль", covered on the outside with aluminium foil with mesh for mechanical resistance)	m2	18,0000		
1.130	IzH07A	Insulation of pipes with SPS 1 type mineral wool or SPS 1 type glass wool mats, sewn with galvanised steel wire on wire mesh, ready-made, covered on one side, with a thickness of 50 (Mineral wool insulation, thickness 50 mm, λ=0.038W/(mxK). with fire resistance EI60 "ТехноНиКоль", covered on the outside with aluminium foil with mesh for mechanical resistance)	m2	5,0000		
1.131	VB01A	Control damper, butterfly, mounted on circular ducts type CFC-I, CFC-II, with perimeter 800 - 1600 mm (Manual flow regulator for hydraulic adjustment of the system (KR)) - labour only	pcs	42,0000		
1.132		Manual flow regulator for hydraulic adjustment of the KR 100 system (Vents or similar)	pc	2,0000		
1.133		Manual flow regulator for hydraulic adjustment of the KR 140 system (Vents or similar)	pc	2,0000		
1.134		Manual flow regulator for hydraulic adjustment of the KR 160 system (Vents or similar)	pc	35,0000		
1.135		Manual flow regulator for hydraulic adjustment of the KR 180 system (Vents or similar)	pc	3,0000		
1.136	VB09A Apl	Frame with fixed blinds, ready-made with a perimeter of 800 - 2500 mm, mounted on masonry (Rectangular multidirectional ceiling diffuser complete with PDZ-2 (AQN) side connection air distribution box) - labour only	pc	42,0000		
1.137		Multidirectional rectangular ceiling diffuser complete with PDZ-2 AQN 225x225 side connection air distribution box (Brofer or similar)	pc	4,0000		
1.138		Rectangular multidirectional ceiling diffuser complete with PDZ-2 AQN 300x300 side connection air distribution box (Brofer or equivalent)	pc	17,0000		
1.139		Rectangular multidirectional ceiling diffuser complete with PDZ-2 AQN 375x375 side connection air distribution box (Brofer or equivalent)	pcs	21,0000		
		TOTAL Chapter 2.3. Ventilation system. AR-3				

		Including salary				
		Chapter 2.4. Ventilation system. AR-4				
1,140	VA19A	Installation of ventilation ducts at a height of 3 m from the floor, made of galvanised sheet metal or aluminium, 0.5 mm thick (circular air ducts made of galvanised sheet metal б=0.5 mm)	m2	92,6000		
1,141	VA21B	Installation of ventilation ducts at a height of 3 m from the floor, made of galvanised sheet metal or aluminium, 0.5 mm thick (rectangular air ducts made of galvanised sheet metal б=0.5 mm)	m2	32,0000		
1.142	VA22B	Installation of ventilation ducts at a height of up to 3 m from the floor, made of galvanised sheet metal or aluminium, 0.7 mm thick (Rectangular air ducts made of galvanised sheet metal б=0.5 mm)	m2	16,4000		
		rectangular air ducts made of galvanised sheet metal б=0.7 mm)				
1.143	VA22C	Installation of ventilation ducts at a height from the floor to 3 m made of galvanised or aluminium sheet metal, 0.7 mm thick (rectangular air ducts made of galvanised sheet metal б=0.7 mm)	m2	68,8000		
1.144	VA05A	Installation on site of prefabricated ALP ventilation pipes with a section perimeter of 150 - 700 mm (flexible air duct Ø100)	m	3,0000		
1.145	VA05A	Installation on site of prefabricated ALP ventilation pipes with a section perimeter of 150 - 700 mm (flexible air duct Ø140)	m	3,0000		
1.146	VA05A	Installation on site of prefabricated ALP ventilation pipes with a section perimeter of 150 - 700 mm (flexible air duct Ø150)	m	8,0000		
1.147	VA05A	Installation on site of prefabricated ALP ventilation pipes with a cross-sectional perimeter of 150–700 mm (flexible air duct Ø160)	m	3,0000		
1.148	IzH07A	Insulation of pipes with SPS 1 type mineral wool or SPS 1 type glass wool mattresses, sewn with galvanised steel wire on wire mesh, ready-made, covered on one side, with a thickness of 50 (Mineral wool insulation, thickness 50 mm, λ=0.038W/(mxK). with fire resistance EI60 "ТехноНиКоль", covered on the outside with aluminium foil with mesh for mechanical resistance)	m2	36,0000		
1.149	VB01A	Control damper, butterfly, mounted on circular ducts type CFC-I, CFC-II, with perimeter 800 - 1600 mm (Manual flow regulator for hydraulic adjustment of the system (KR)) - labour only	pc	42,0000		
1.150		Manual flow regulator for hydraulic adjustment of the KR 100 system (Vents or similar)	pc	9,0000		
1.151		Manual flow regulator for hydraulic adjustment of the KR 140 system (Vents or similar)	pc	6,0000		
1.152		Manual flow regulator for hydraulic adjustment of the KR 150 system (Vents or similar)	pc	21,0000		
1.153		Manual flow regulator for hydraulic adjustment of the KR 160 system (Vents or similar)	pc	6,0000		
1.154	VB28A	Circular deflector with perimeter 900 - 1600 mm, type CR I and CN (Circular diffuser (Brofer or similar)) - labour only	pc	6,0000		
1.155		CFR+RC 150 circular diffuser (Brofer or similar)	pc	3,0000		
1.156		EVA-CR 100 adjustable circular diffuser (Brofer or similar)	pcs	3,0000		
1.157	VB09A Apl	Frame with fixed blinds, ready-made with a perimeter of 800 - 2500 mm, mounted on masonry (Rectangular multidirectional ceiling diffuser complete with PDZ-2 (AQN) side connection air distribution box) - labour only	pc	36,000		
1.158		Multidirectional rectangular ceiling diffuser complete with PDZ-2 AQN 225x225 side connection air distribution box (Brofer or equivalent)	pc	6,0000		
1.159		Rectangular multidirectional ceiling diffuser complete with PDZ-2 AQN 300x300 side connection air distribution box (Brofer or similar)	pcs	14,0000		
1.16		Rectangular multidirectional ceiling diffuser complete with PDZ-2 AQN 375x375 side connection air distribution box (Brofer or equivalent)	pc	16,0000		
		TOTAL Chapter 2.4. Ventilation system. AR-4				

		Including salary				
		Chapter 2.5. Ventilation system. AR-5				
1.161	VA19A	Installation of ventilation ducts at a height from the floor to 3 m, made of galvanised sheet metal or aluminium, 0.5 mm thick (Circular air ducts made of galvanised sheet metal б=0.5 mm)	m2	10,0000		
1.162	VA20A	Installation of ventilation ducts at a height of up to 3 m from the floor, made of galvanised sheet metal or aluminium, 0.6 mm thick (circular air ducts made of galvanised sheet metal б=0.6 mm)	m2	3,5000		
1,163	VA22B	Installation of ventilation ducts at a height of up to 3 m from the floor, made of galvanised sheet metal or aluminium, 0.7 mm thick (rectangular air ducts made of galvanised sheet metal б=0.7 mm)	m2	4,8000		
1.164	VA22C	Installation of ventilation ducts at a height of 3 m from the floor, made of galvanised or aluminium sheet metal, 0.7 mm thick (Rectangular air ducts made of galvanised sheet metal б=0.7 mm)	m2	42,6000		
		rectangular air ducts made of galvanised sheet metal б=0.7 mm)				
1.165	VA22D	Installation of ventilation ducts at a height from the floor to 3 m made of galvanised or aluminium sheet metal, 0.7 mm thick (rectangular air ducts made of galvanised sheet metal б=0.7 mm)	m2	86,4000		
1.166	VA05A	Installation on site of prefabricated ALP ventilation pipes with a section perimeter of 150 - 700 mm (flexible air duct Ø160)	m	3,0000		
1.167	IzH07A	Insulation of pipes with SPS 1 type mineral wool or SPS 1 type glass wool mattresses, sewn with galvanised steel wire on wire mesh, ready-made, covered on one side, with a thickness of 30 (Mineral wool insulation, thickness 30 mm, λ=0.036W/(mxK). with fire resistance EI60 "ТехноНиКоль", covered on the outside with aluminium foil with mesh for mechanical resistance)	m2	40,0000		
1.168	VB01A	Adjustment damper, butterfly, mounted on circular ducts type CFC-I, CFC-II, with perimeter 800 - 1600 mm (Manual flow regulator for hydraulic adjustment of the system (KR)) - labour only	pc	7,0000		
1.169		Manual flow regulator for hydraulic adjustment of the KR 125 system (Vents or similar)	pc	1,0000		
1.170		Manual flow regulator for hydraulic adjustment of the KR 160 system (Vents or similar)	pc	6,0000		
1.171	VB28A	Circular deflector with perimeter 900 - 1600 mm, type CR I and CN (Circular diffuser (Brofer or similar)) - labour only	pc	12,0000		
1.172		CFR+RC 350 circular diffuser (Brofer or similar)	pc	6,0000		
1.173		DCG-P 400 circular diffuser (Brofer or equivalent)	pc	5,0000		
1,174		EVA-CR 125 adjustable circular diffuser for suction (Brofer or similar)	pcs	1,0000		
1.175	VB09A Apl	Frame with fixed blinds, ready-made with a perimeter of 800 - 2500 mm, mounted on masonry (Rectangular multidirectional ceiling diffuser complete with PDZ-2 (AQN) side connection air distribution box) - labour only	pc	6,0000		
1.176		Multidirectional rectangular ceiling diffuser complete with PDZ-2 AQN 300x300 side connection air distribution box (Brofer or similar)	pc	3,0000		
1.177		Rectangular multidirectional ceiling diffuser complete with PDZ-2 AQN 375x375 side connection air distribution box (Brofer or equivalent)	pc	3,0000		
		TOTAL Chapter 2.5. Ventilation system. AR-5				
		Including salary				
		Chapter 2.6. Ventilation system. AR-6				
1,178	VA19A	Installation of ventilation ducts at a height from the floor to 3 m, made of galvanised sheet metal or aluminium, 0.5 mm thick (Circular air ducts made of galvanised sheet metal б=0.5 mm)	m2	111,4000		
1.179	VA21B	Installation of ventilation ducts at a height from the floor to 3 m, made of galvanised sheet metal or aluminium, 0.5 mm thick (rectangular air ducts made of galvanised sheet metal б=0.5 mm)	m2	7,2000		

1,180	VA22B	Installation of ventilation ducts at a height of up to 3 m from the floor, made of galvanised sheet metal or aluminium, 0.7 mm thick (rectangular air ducts made of galvanised sheet metal б=0.7 mm)	m2	16,0000		
1.181	VA22C	Installation of ventilation ducts at a height of 3 m from the floor, made of galvanised or aluminium sheet metal, 0.7 mm thick (rectangular air ducts made of galvanised sheet metal б=0.7 mm)	m2	75,0000		
1.182	VA22D	Installation of ventilation ducts at a height of 3 m from the floor, made of galvanised or aluminium sheet metal, 0.7 mm thick (rectangular air ducts made of galvanised sheet metal б=0.7 mm)	m2	14,0000		
1.183	VA22E	Installation of ventilation ducts at a height from the floor to 3 m made of galvanised or aluminium sheet metal, 0.7 mm thick (rectangular air ducts made of galvanised sheet metal б=0.7 mm)	m2	19,3000		
1.184	VA05A	Installation on site of prefabricated ALP ventilation pipes with a section perimeter of 150 - 700 mm (flexible air duct Ø100)	m	1,0000		
1.185	VA05A	Installation on site of prefabricated ALP ventilation pipes with a cross-sectional perimeter of 150 - 700 mm (flexible air duct Ø140)	m	1,0000		
1.186	VA05A	Installation on site of ALP ventilation pipes, ready-made	m	13,0000		
		manufactured, with a section perimeter of 150 - 700 mm (Flexible air duct Ø160)				
1.187	VA05A	On-site installation of prefabricated ALP ventilation pipes with a section perimeter of 150–700 mm (flexible air duct Ø180)	m	3,0000		
1.188	IzH07A	Insulation of pipes with SPS 1 type mineral wool or SPS 1 type glass wool mattresses, sewn with galvanised steel wire on wire mesh, ready-made, covered on one side, with a thickness of 30 (Mineral wool insulation, thickness 30 mm, λ=0.036W/(mxK). with fire resistance EI60 "ТехноНиКоль", covered on the outside with aluminium foil with mesh for mechanical resistance)	m2	27,0000		
1.189	IzH07A	Insulation of pipes with SPS 1 type mineral wool or SPS 1 type glass wool mats, sewn with galvanised steel wire on wire mesh, ready-made, covered on one side, with a thickness of 50 (Mineral wool insulation, thickness 50 mm, λ=0.038W/(mxK). with fire resistance EI60 "ТехноНиКоль", covered on the outside with aluminium foil with mesh for mechanical resistance)	m2	6,0000		
1.190	VB01A	Adjustment damper, butterfly, mounted on circular ducts type CFC-I, CFC-II, with perimeter 800 - 1600 mm (Manual flow regulator for hydraulic adjustment of the system (KR)) - labour only	pc	41,0000		
1,191		Manual flow regulator for hydraulic adjustment of the KR 100 system (Vents or similar)	pc	2,0000		
1.192		Manual flow regulator for hydraulic adjustment of the KR 140 system (Vents or similar)	pc	1,0000		
1.193		Manual flow regulator for hydraulic adjustment of the KR 160 system (Vents or similar)	pc	35,0000		
1.194		Manual flow regulator for hydraulic adjustment of the KR 180 system (Vents or similar)	pc	3,0000		
1.195	VB28A	Circular deflector with perimeter 900 - 1600 mm, type CR I and CN (Circular diffuser CFR+RC 150 (Brofer or similar)) - labour only	pc	1,0000		
1.196		Circular diffuser CFR+RC 150 (Brofer or similar)	pc	1,0000		
1.197	VB09A Apl	Frame with fixed blinds, ready-made with a perimeter of 800 - 2500 mm, mounted on masonry (Rectangular multidirectional ceiling diffuser complete with PDZ-2 (AQN) side connection air distribution box) - labour only	pc	40,0000		
1.198		Multidirectional rectangular ceiling diffuser complete with PDZ-2 AQN 225x225 side connection air distribution box (Brofer or similar)	pc	2,0000		
1.199		Rectangular multidirectional ceiling diffuser complete with	pc	17,0000		

		PDZ-2 AQN 300x300 side connection air distribution box (Brofer or equivalent)				
1.200		Rectangular multidirectional ceiling diffuser complete with PDZ-2 AQN 375x375 side connection air distribution box (Brofer or equivalent)	pcs	21,0000		
		TOTAL Chapter 2.6. Ventilation system. AR-6				
		Including salary				
		Chapter 2.7. Ventilation system. AR-7				
1,201	VA19A	Installation of ventilation ducts at a height of 0.5 m to 3 m above the floor, made of galvanised sheet metal or aluminium, 0.5 mm thick (circular air ducts made of galvanised sheet metal, thickness 0.5 mm)	m2	93,2000		
1.202	VA22B	Installation of ventilation ducts at a height of 3 m from the floor, made of galvanised sheet metal or aluminium, 0.7 mm thick (rectangular air ducts made of galvanised sheet metal б=0.7 mm)	m2	26,0000		
1.203	VA22C	Installation of ventilation ducts at a height of 3 m from the floor, made of galvanised or aluminium sheet metal, 0.7 mm thick (rectangular air ducts made of galvanised sheet metal б=0.7 mm)	m2	54,0000		
1.204	VA05A	Installation on site of prefabricated ALP ventilation pipes with a section perimeter of 150 - 700 mm (flexible air duct Ø100)		1,0000		
1.205	VA05A	Installation on site of prefabricated ALP ventilation pipes with a cross-sectional perimeter of 150–700 mm (flexible air duct Ø140)	m	5,0000		
1.206	VA05A	Installation on site of prefabricated ALP ventilation pipes with a cross-sectional perimeter of 150 - 700 mm (Flexible air duct	m	9,0000		
		flexible air duct Ø160)				
1.207	IzH07A	Insulation of pipes with SPS 1 type mineral wool or SPS 1 type glass wool mattresses, sewn with galvanised steel wire on wire mesh, ready-made, covered on one side, with a thickness of 50 (Mineral wool insulation, thickness 50 mm, λ=0.038W/(mxK). with fire resistance EI60 "ТехноНиКоль", covered on the outside with aluminium foil with mesh for mechanical resistance)	m2	30,0000		
1.208	VB01A	Adjustment damper, butterfly, mounted on circular ducts type CFC-I, CFC-II, with perimeter 800 - 1600 mm (Manual flow regulator for hydraulic adjustment of the system (KR)) - labour	pc	35,0000		
1,209		Manual flow regulator for hydraulic adjustment of the KR 100 system (Vents or similar)	pc	1,0000		
1.210		Manual flow regulator for hydraulic adjustment of the KR 140 system (Vents or similar)	pc	12,0000		
1.211		Manual flow regulator for hydraulic adjustment of the KR 160 system (Vents or similar)	pc	22,0000		
1.212	VB28A	Circular deflector with perimeter 900 - 1600 mm, type CR I and CN (Circular diffuser CFR+RC 150 (Brofer or similar)) - labour only	pc	1,0000		
1.213		Circular diffuser CFR+RC 150 (Brofer or similar)	pc	1,0000		
1.214	VB09A Apl	Frame with fixed blinds, ready-made with a perimeter of 800 - 2500 mm, mounted on masonry (Rectangular multidirectional ceiling diffuser complete with PDZ-2 (AQN) side connection air distribution box) - labour only	pc	34,0000		
1.215		Multidirectional rectangular ceiling diffuser complete with PDZ-2 AQN 225x225 side connection air distribution box (Brofer or similar)	pc	6,0000		
1.216		Rectangular multidirectional ceiling diffuser complete with PDZ-2 AQN 300x300 side connection air distribution box (Brofer or equivalent)	pc	17,0000		
1.217		Rectangular multidirectional ceiling diffuser complete with PDZ-2 AQN 375x375 side connection air distribution box (Brofer or equivalent)	pcs	11,0000		
		TOTAL Chapter 2.7. Ventilation system. AR-7				
		Including salary				
		Chapter 2.8. Ventilation system. AR-8				
1.218	VA20A	Installation of ventilation ducts at a height of 3 m from the floor,	m2	48,3000		

		made of galvanised sheet metal or aluminium, 0.6 mm thick (circular air ducts made of galvanised sheet metal б=0.6 mm)				
1.219	VA22C	Installation of ventilation ducts at a height of 3 m from the floor, made of galvanised sheet metal or aluminium, 0.7 mm thick (rectangular air ducts made of galvanised sheet metal б=0.7	m2	25,0000		
1.220	IzH07A	Insulation of pipes with SPS 1 type mineral wool or SPS 1 type glass wool mattresses, sewn with galvanised steel wire on wire mesh, ready-made, covered on one side, 50 mm thick (mineral wool insulation, 50 mm thick, λ=0.038W/(mxK). with fire resistance EI60 "ТехноНиКоль", covered on the outside with aluminium foil with mesh for mechanical resistance)	m2	16,0000		
1.221	VB28A	Circular deflector with perimeter 900 - 1600 mm, type CR I and CN (Circular diffuser CFR+RC 150 (Brofer or similar)) - labour only	pc	9,0000		
1.222		Circular diffuser CFR+RC 350 (Brofer or similar)	pc	5,0000		
1.223		DCG-P 400 circular diffuser (Brofer or similar)	pcs	4,0000		
		TOTAL Chapter 2.8. Ventilation system. AR-8				
		Including salary				
		Chapter 2.9. Ventilation system. AR-9				
1.224	VA19A	Installation of ventilation ducts at a height from the floor to 3 m, made of galvanised sheet metal or aluminium, 0.5 mm thick (Circular air ducts made of galvanised sheet metal б=0.5 mm)	m2	38,0000		
1.225	VA20A	Installation of ventilation ducts at a height from the floor to 3 m, made of galvanised sheet metal or aluminium, 0.6 mm thick (circular air ducts made of galvanised sheet metal б=0.6 mm)	m2	1,6000		
1.226	VA05A	Installation on site of ready-made ALP ventilation pipes with a section perimeter of 150 - 700 mm (Flexible air duct Ø150)	m	1,0000		
1.227	VA05A	Installation on site of prefabricated ALP ventilation pipes with a cross-sectional perimeter of 150 - 700 mm (flexible air duct Ø200)	m	1,0000		
1.228	IzH07A	Insulation of pipes with SPS 1 type mineral wool or SPS 1 type glass wool mats, sewn with galvanised steel wire on wire mesh, ready-made, covered on one side, with a thickness of 30 (mineral wool insulation, thickness 30 mm, λ=0.036W/(mxK). with fire resistance EI60 "ТехноНиКоль", covered on the outside with aluminium foil with mesh for mechanical resistance)	m2	30,0000		
1.229	VB01A	Control damper, butterfly, mounted on circular ducts type CFC-I, CFC-II, with perimeter 800 - 1600 mm (Manual flow regulator for hydraulic adjustment of the system (KR)) - labour only	pcs	8,0000		
1.230		Manual flow regulator for hydraulic adjustment of the KR 100 system (Vents or similar)	pc	4,0000		
1.231		Manual flow regulator for hydraulic adjustment of the KR 140 system (Vents or similar)	pc	2,0000		
1.232		Manual flow regulator for hydraulic adjustment of the KP 150 system (Vents or similar)	pc	2,0000		
1.233	VB01B	Control damper, butterfly, mounted on circular ducts type CFC-I, CFC-II, with perimeter 1600 - 3200 mm Manual flow regulator for hydraulic adjustment of the system (KP) - labour only	pcs	1,0000		
1.234		Manual flow regulator for hydraulic adjustment of the KP 200 system (Vents or similar)	pc	1,0000		
1.235	VB28A	Circular deflector with perimeter 900 - 1600 mm, type CR I and CN (Circular diffuser (Brofer or similar)) - labour only	pc	8,0000		
1.236		EVA-CR 100 adjustable circular diffuser for suction (Brofer or similar)	pc	3,0000		
1.237		EVA-CR 125 adjustable circular suction diffuser (Brofer or similar)	pc	5,0000		
1.238	VB09A Apl	Frame with fixed blinds, ready-made with a perimeter of 800 - 2500 mm, mounted on masonry (Rectangular multidirectional ceiling diffuser complete with PDZ-2 (AQN) side connection air distribution box) - labour only	pc	3,0000		
1.239		Multidirectional rectangular ceiling diffuser complete with	pc	2,0000		

		PDZ-2 AQN 375x375 side connection air distribution box (Brofer or similar)				
1.240		Rectangular multidirectional ceiling diffuser complete with PDZ-2 AQN 450x450 side connection air distribution box (Brofer or similar)	pcs	1,0000		
		TOTAL Chapter 2.9. Ventilation system. AR-9				
		Including salary				
		Chapter 2.10. Ventilation system. AR-10				
1,241	VA19A	Installation of ventilation ducts at a height from the floor to 3 m, made of galvanised sheet metal or aluminium, 0.5 mm thick (Circular air ducts made of galvanised sheet metal б=0.5 mm)	m2	19,0000		
1.242	IzH07A	Insulation of pipes with SPS 1 type mineral wool or SPS 1 type glass wool mattresses, sewn with galvanised steel wire on wire mesh, ready-made, covered on one side, 50 mm thick (Mineral wool insulation, 50 mm thick, λ=0.038W/(mxK). with fire resistance EI60 "ТехноНиКоль", covered on the outside with aluminium foil with mesh for mechanical resistance)	m2	15,0000		
1.243	VB28A	Circular deflector with perimeter 900 - 1600 mm, type CR I and CN (Circular diffuser (Brofer or similar)) - labour only	pc	4,0000		
1.244		EAV-CM 160 adjustable circular diffuser (Brofer or similar)	pc	4,0000		
		TOTAL Chapter 2.10. Ventilation system. AR-10				
		Including salary				
		Chapter 2.11. Ventilation system. A-11				
1.245	VA19A	Installation of ventilation ducts at a height from the floor to 3 m, made of galvanised sheet metal or aluminium, 0.5 mm thick (Circular air ducts made of galvanised sheet metal б=0.5 mm)	m2	16,0000		
1.246	VA22C	Installation of ventilation ducts at a height from the floor to 3 m made of galvanised or aluminium sheet metal, 0.7 mm thick (rectangular air ducts made of galvanised sheet metal б=0.7 mm)	m2	17,2000		
1.247	IzH07A	Insulation of pipes with SPS 1 type mineral wool or SPS 1 type glass wool mattresses, sewn with galvanised steel wire on wire mesh, ready-made, covered on one side, 30 mm thick (mineral wool insulation, 30 mm thick, λ=0.036W/(mxK). with fire resistance EI60 "ТехноНиКоль", covered on the outside with aluminium foil with mesh for mechanical resistance)	m2	24,0000		
1.248	VB01A	Control damper, butterfly, mounted on circular ducts type CFC-I, CFC-II, with perimeter 800 - 1600 mm (Manual flow regulator for hydraulic adjustment of the system (KR)) - labour only	pcs	27,0000		
1.249		Manual flow regulator for hydraulic adjustment of the KR 100 system (Vents or similar)	pc	24,0000		
1.250		Manual flow regulator for hydraulic adjustment of the KR 125 system (Vents or similar)	pc	3,0000		
1.251	VB28A	Circular deflector with perimeter 900 - 1600 mm, type CR I and CN (Circular diffuser (Brofer or similar)) - labour only	pc	27,0000		
1.252		EVA-CR 100 adjustable circular diffuser for suction (Brofer or similar)	pc	24,0000		
1.253		EVA-CR 125 adjustable circular diffuser for suction (Brofer or similar)	pcs	3,0000		
		TOTAL Chapter 2.11. Ventilation system. A-11				
		Including salary				
		Chapter 2.12. Ventilation system. A-12				
1.254	VA19A	Installation of ventilation ducts at a height of 3 m from the floor, made of galvanised sheet metal or aluminium, 0.5 mm thick (circular air ducts made of galvanised sheet metal б=0.5 mm)	m2	0,3200		
1.255	CL20A	Ready-made ventilation grilles made of black sheet metal, with manually adjustable blinds, painted and installed in masonry (MVMA 150b Vn Al aluminium ventilation grille (Vents or similar))	pcs	1,0000		
1.256	CL18A	Various metal structures made of rolled profiles, sheet metal, corrugated sheet metal, concrete steel, pipes for supports or coverings, totally or partially embedded in concrete (Metal for support elements)	kg	1,0000		
		TOTAL Chapter 2.12. Ventilation system. A-12				
		Including salary				

		Chapter 2.13. Ventilation system. A-13				
1.257	VA19A	Installation of ventilation ducts at a height of up to 3 m from the floor, made of galvanised sheet metal or aluminium, 0.5 mm thick (circular air ducts made of galvanised sheet metal б=0.5 mm)	m2	2,7500		
1.258	CL20A	Ready-made ventilation grilles made of black sheet metal, with manually adjustable blinds, painted and installed in masonry (MVMA 150b Vn Al aluminium ventilation grille (Vents or similar))	pcs	1,0000		
1.259	CL18A	Various metal structures made of rolled profiles, sheet metal, corrugated sheet metal, concrete steel, pipes for supports or coverings, totally or partially embedded in concrete (Metal for support elements)	kg	5,0000		
		TOTAL Chapter 2.13. Ventilation system. A-13				
		Including salary				
		Chapter 2.14. Ventilation system. A-14				
1.260	VA19A	Installation of ventilation ducts at a height from the floor to 3 m, made of galvanised sheet metal or aluminium, 0.5 mm thick (circular air ducts made of galvanised sheet metal б=0.5 mm)	m2	4,4000		
1.261	VB01A	Adjustment damper, butterfly, installed on circular ducts type CFC-I, CFC-II, with a perimeter of 800 - 1600 mm (Manual flow regulator for hydraulic adjustment of the system (KR)) - labour only	pcs	2,0000		
1.262		Manual flow regulator for hydraulic adjustment of the KR 100 system (Vents or similar)	pc	2,0000		
1.263	VB28A	Circular deflector with perimeter 900 - 1600 mm, type CR I and CN (Circular diffuser (Brofer or similar)) - labour only	pc	2,0000		
1.264		EVA-CR 100 adjustable circular diffuser for suction (Brofer or similar)	pc	2,0000		
1.265	CL20A	Ready-made ventilation grilles made of black sheet metal, with manually adjustable blinds, painted and mounted in masonry (MVMA 150b Vn Al aluminium ventilation grille (Vents or similar))	pcs	1,0000		
1.266	CL18A	Various metal structures made of rolled profiles, sheet metal, corrugated sheet metal,	kg	30,0000		
		concrete steel, pipes for supports or coverings, fully embedded or Partially in concrete (Metal for supporting elements)				
		TOTAL Chapter 2.14. Ventilation system. A-14				
		Including salary				
		Chapter 2.15. Ventilation system. A-15				
1.267	VA19A	Installation of ventilation ducts at a height from the floor to 3 m, made of galvanised sheet metal or aluminium, 0.5 mm thick (Circular air ducts made of galvanised sheet metal б=0.5 mm)	m2	5,7000		
1.268	IzH07A	Insulation of pipes with SPS 1 type mineral wool or SPS 1 type glass wool mattresses, sewn with galvanised steel wire on wire mesh, ready-made, covered on one side, 30 mm thick (Mineral wool insulation, 30 mm thick, λ=0.036W/(mxK). with fire resistance EI60 "ТехноНиКоль", covered on the outside with aluminium foil with mesh for mechanical resistance)	m2	8,0000		
1.269	CL18A	Various metal structures made of rolled profiles, sheet metal, corrugated sheet metal, concrete steel, pipes for supports or coverings, totally or partially embedded in concrete (Metal for support elements)	kg	40,0000		
		TOTAL Chapter 2.15. Ventilation system. A-15				
		Including salary				
		Chapter 2.16. Ventilation system. A-16				
1.270	VA19A	Installation of ventilation ducts at a height from the floor to 3 m, made of galvanised sheet metal or aluminium, 0.5 mm thick (Circular air ducts made of galvanised sheet metal б=0.5 mm)	m2	7,5000		
1.271	IzH07A	Insulation of pipes with SPS 1 type mineral wool or SPS 1 type glass wool mats, sewn with galvanised steel wire on wire mesh, ready-made, covered on one side, with a thickness of 30 (mineral wool insulation, thickness 30 mm, λ=0.036W/(mxK). with fire resistance EI60 "ТехноНиКоль", covered on the outside with aluminium foil with mesh for mechanical resistance)	m2	9,0000		
1.272	CL18A	Various metal structures made of rolled profiles, sheet metal, corrugated sheet metal, concrete steel, pipes for supports or coverings, totally or partially embedded in concrete (Metal for support elements)	kg	50,0000		

		TOTAL Chapter 2.16. Ventilation system. A-16				
		Including salary				
		Chapter 2.17. Ventilation system. A-17				
1.273	VA19A	Installation of ventilation ducts at a height of up to 3 m from the floor, made of galvanised sheet metal or aluminium, 0.5 mm thick (circular air ducts made of galvanised sheet metal б=0.5 mm)	m2	9,4500		
1.274	IzH07A	Insulation of pipes with SPS 1 type mineral wool or SPS 1 type glass wool mattresses, sewn with galvanised steel wire on wire mesh, ready-made, covered on one side, 30 mm thick (Mineral wool insulation, 30 mm thick, λ=0.036W/(mxK). with fire resistance EI60 "ТехноНиКоль", covered on the outside with aluminium foil with mesh for mechanical resistance)	m2	8,0000		
1.275	VB01A	Control damper, butterfly, mounted on circular ducts type CFC-I, CFC-II, with perimeter 800 - 1600 mm (Manual flow regulator for hydraulic adjustment of the system (KR)) - labour only	pcs	1,0000		
1.276		Manual flow regulator for hydraulic adjustment of the KR 125 system (Vents or similar)	pc	1,0000		
1.277	VB28A	Circular deflector with perimeter 900 - 1600 mm, type CR I and CN (Circular diffuser (Brofer or similar)) - labour only	pc	2,0000		
1.278		EVA-CR 100 adjustable circular diffuser for suction (Brofer or similar)	pc	1,0000		
1.279		EVA-CR 125 adjustable circular diffuser for suction (Brofer or similar)	pcs	1,0000		
1.280	CL18A	Various metal structures made of rolled profiles, sheet metal, corrugated sheet metal, concrete steel, pipes for supports or coverings, totally or partially embedded in concrete (Metal for support elements)	kg	50,0000		
1.281	CL20A	Ready-made ventilation grilles made of black sheet metal, with manually adjustable blinds, painted and mounted in masonry (Air transfer grille for anodised aluminium door GTA 500x200 (Brofer or similar))	pc	16,0000		
1.282	CL20A	Ready-made ventilation grilles made of black sheet metal, with manually adjustable blinds, painted and mounted in masonry (Air transfer grille for anodised aluminium door GTA-C 400x100 (Brofer or similar)	pc	24,0000		
		TOTAL Chapter 2.17. Ventilation system. A-17				
		Including salary				
		Chapter 2.18. Ventilation system. SP-1				
1.283	VA22C	Installation of ventilation ducts at a height from the floor to 3 m made of galvanised or aluminium sheet, 0.7 mm thick (rectangular air ducts made of galvanised sheet б=0.8 mm)	m	7,5000		
1.284	IzH07A	Insulation of pipes with SPS 1 type mineral wool or SPS 1 type glass wool mats, sewn with galvanised steel wire on wire mesh, ready-made, covered on one side, with a thickness of 30 (mineral wool insulation, thickness 30 mm, λ=0.036W/(mxK). with fire resistance EI60 "ТехноНиКоль", covered on the outside with aluminium foil with mesh for mechanical resistance)	m2	9,0000		
		TOTAL Chapter 2.18. Ventilation system. SP-1				
		Including salary				
		Chapter 3. Heat supply system for ventilation radiator AR1-AR9				
1.285	IC11A	Longitudinally welded black steel pipe for installations, unthreaded, mounted by welding in columns, in central heating installations for residential and social-cultural buildings, pipe with a diameter of 1/2" (Steel pipe Ø18x2.0 (DN15))	m	10,0000		
1.286	IC11B	Longitudinally welded black steel pipe for installations, unthreaded, mounted by welding in columns, in central heating installations for residential and social-cultural buildings, with a diameter of 3/4" (Steel pipe Ø25x2.0 (DN20))	m	70,0000		
1.287	IC11C	Longitudinally welded black steel pipe for installations, unthreaded, mounted by welding in columns, in central heating installations for residential and social-cultural buildings, pipe with a diameter of 1" (Steel pipe Ø32x2.0 (DN25))	m	50,0000		
1.288	IC11D	Longitudinally welded black steel pipe for installations,	m	95,0000		

		unthreaded, mounted by welding in columns, in central heating installations for residential and social-cultural buildings, pipe with a diameter of 1 1/4" (Steel pipe Ø38x2.0 (DN32))				
1.289	IC11E	Longitudinally welded black steel pipe for installations, unthreaded, mounted by welding in columns, in central heating installations for residential and social-cultural buildings, with a diameter of 1 1/2" (Steel pipe Ø48x3.5 (DN40))	m	75,0000		
1.290	IC11F	Longitudinally welded black steel pipe for installations, unthreaded, mounted by welding in columns, in central heating installations for residential and social-cultural buildings, the pipe having a diameter of 2" (Steel pipe Ø57x3.5 (DN50))	m	65,0000		
1.291	IC11F	Longitudinally welded black steel pipe for installations, unthreaded, mounted by welding in columns, in central heating installations for residential and social-cultural buildings, pipe with a diameter of 2" (Steel pipe Ø76x3.5 (DN65))	m	5,0000		
1.292	RpIF09C	Insulation of pipes with special insulation sleeves, inserted on pipes (Mineral wool insulation DN15x50mm)	m	10,0000		
1.293	RpIF09C	Insulation of pipes with special insulation sleeves, inserted on pipes (mineral wool insulation DN20x50mm)	m	70,0000		
1.294	RpIF09C	Insulation of pipes with special insulation sleeves, inserted on pipes (mineral wool insulation DN25x50mm)	m	50,0000		
1.295	RpIF09C	Insulation of pipes with special insulation sleeves, inserted on pipes (mineral wool insulation DN32x50mm)	m	95,0000		
1.296	RpIF09C	Insulation of pipes with special insulation sleeves, inserted on pipes (mineral wool insulation DN40x50mm)	m	75,0000		
1.297	RpIF09C	Insulation of pipes with special insulation sleeves, inserted on pipes (mineral wool insulation DN50x50mm)	m	65,0000		
1.298	RpIF09C	Insulation of pipes with special insulation sleeves, inserted on pipes (mineral wool insulation DN65x50mm)	m	5,0000		
1.299	ID01A	Double adjustment valve (flow or return) for central heating systems, with a nominal diameter of 3/8" -1/2" (Valve-partner with measuring diaphragm on flow, PN16 DN15 LF ASV-BD (Danfoss or equivalent))	pc	6,0000		
1.300	ID01A	Double-adjustment valve (flow or return) for central heating systems, with a nominal diameter of 3/8" -1/2" (Valve-partner with measuring diaphragm on flow,	pc	3,0000		
		PN16 DN15 ASV-BD (Danfoss or equivalent)				
1.301	ID04A	Shut-off or check valve with plugs for central heating systems, with a nominal diameter of 1/2" -1" (Ball valve, PN16, DN15 (Caleffi or similar))	pc	2,0000		
1.302	ID04A	Gate or check valve with plugs for central heating systems, with a nominal diameter of 1/2" -1" (Ball valve, PN16, DN20 (Caleffi or similar))	pc	4,0000		
1.303	ID04A	Gate or check valve with plugs for central heating systems, with a nominal diameter of 1/2" -1" (Ball valve, PN16, DN25 (Caleffi or similar))	pc	1,0000		
1.304	SE56A	Filter for drinking water, with threaded plugs for pipe mounting (Y-type filter, PN16, DN15 (Caleffi or similar))	pc	1,0000		
1.305	SE56A	Filter for drinking water, with threaded connectors for pipe mounting (Y-type filter, PN16, DN20 (Caleffi or similar))	pc	2,0000		
1.306	SE56A	Filter for drinking water, with threaded connectors for pipe mounting (Y-type filter, PN16, DN25 (Caleffi or similar))	pc	6,0000		
1.307	ID01A	Double-adjustment valve (flow or return) for central heating systems, with a nominal diameter of 3/8" -1/2" (PN 16 DN15 check valve (Caleffi or similar))	pc	1,0000		
1.308	ID01B	Double control valve (flow or return) for central heating systems, with a nominal diameter of 3/4" -1" (PN 16 DN20 check valve (Caleffi or similar))	pc	2,0000		
1.309	ID01B	Double-adjustment valve (flow or return) for central heating systems, with a nominal diameter of 3/4" -1" (PN 16 DN25 check valve (Caleffi or similar))	pc	6,0000		
1.310	ID04A	Pass or check valve with plugs for central heating systems, with a nominal diameter of 1/2" -1" (1/2" drain valve)	pc	9,0000		
1.311	ID04A	Gate or check valve with plugs for central heating systems, with a nominal diameter of 1/2" -1" (3/4" drain valve)	pc	4,0000		

1.312	ID01A	Valve with double adjustment (flow or return) for central heating systems, with a nominal diameter of 3/8" -1/2" (Automatic air vent Ø15)	pc	9,0000		
1.313	ID04	Shut-off or check valve with plugs for central heating systems, with a nominal diameter of 1/2" -1" (Ball valve for automatic air vent Ø15)	pc	9,0000		
1.314	ID04A	Stop or check valve with plugs for central heating systems, with a nominal diameter of 1/2" -1" (Ball valve with lever, plug and 3/4" vent button)	pc	4,0000		
1.315	CN20B	Exterior paint applied to metal surfaces with BT-177 oil-based paint in 2 coats, including primer.GF-021	m2	45,6900		
1.316	CL18A	Various metal structures made of rolled profiles, sheet metal, corrugated sheet metal, concrete steel, pipes for supports or coverings, totally or partially embedded in concrete (Metal for support elements)	kg	255,0000		
1.317	IE03A	Performing pressure tightness tests on the supply pipes of heating devices (air heaters, thermoconvectors, skirting convectors, etc.) with a diameter of 3/8"... 1"	m	130,0000		
1.318	IE03B	Performing pressure leak tests on heating appliance supply pipes (air heaters, convector heaters, baseboard convectors, etc.) with a diameter of 1 1/4" ... 2".	m	240,0000		
		TOTAL Chapter 3. Heat supply system for AR1-AR9 ventilation radiators				
		Including salary				
		Chapter 4. Air conditioning system				
1.319		Freon pipes Ø 9.52 insulated in Armaflex foam rubber tubes b=19mm for freon pipes	m	9,0000		
1.320		Freon pipes Ø 15.88 insulated in Armaflex foam rubber tubes b=19mm for freon pipes	m	9,0000		
		TOTAL Chapter 4. Air conditioning system				
		Including salary				
		Chapter 5. Drainage system				
1.321	SB26A	Enamelled cast iron drain (receiver) for draining water from terraces and roofs, with a diameter of 100-150 mm (Condensation trap with wall-mounted shutter HL 138)	pc	1,0000		
1.322	SB08A	Plastic sewer pipe, joined with rubber gasket, surface-mounted or buried under the floor, with a diameter of 32 mm (PVC pipe by gluing, thermally insulated with 9 mm ϕ20x1.5 elastomer tubes)	m	4,0000		
		TOTAL Chapter 5. Drainage system				
		Including salary				

Total		
Social insurance	24,0000%	
Total		
Transport expenses	%	
Total		
Storage expenses	%	
Total		
Overhead expenses	%	
Total		
Estimated profit	%	

Total Estimate excluding VAT	

Estimate: Installation works						
No	**Symbol standards and resource code**	**Works and expenses**	**U.M.**	**Quantity according to project data**	**Estimated value (Lei)**	
					Per unit of measurement	**Total**
					Incl. salary	**Incl. salary**
1	**2**	**3**	**4**	**5**	**6**	**7**

		Chapter 1. Floor distribution group				
2.1	ID04A	Shut-off or check valve with plugs for central heating systems, with a nominal diameter of 1/2" -1" (Automatic balancing valve on the return, pressure difference maintenance range 5-25 kPa; PN 16, DN15 ASV-PV (Danfoss or similar))	pc	4,0000		
2.2	ID04A	Shut-off or check valve with plugs for central heating systems, with a nominal diameter of 1/2" -1" (Automatic balancing valve on the return, pressure difference maintenance range 5-25 kPa; PN 16, DN20 ASV-PV (Danfoss or similar))	pc	3,0000		
2.3	ID04A	Passage or check valve with plugs for central heating systems, with a nominal diameter of 1/2" -1" (automatic balancing valve on the return, pressure difference maintenance range 5-25 kPa; PN 16, DN25 ASV-PV (Danfoss or similar))	pc	2,0000		
2.4	ID04B	Shut-off or check valve with plugs for central heating systems, with a nominal diameter of 1 1/4" -1 1/2" (Automatic balancing valve on the return, pressure difference maintenance range 5-25 kPa; PN 16, DN32 ASV-PV (Danfoss or similar))	pc	2,0000		
2.5	IB09B adopt	Wall or ceiling-mounted hot water convector heater, connected with plugs, with a heat output of 8.1 - 19.0 kW (Water convector Q=3-20 kW/h, Lmax=2100 m3/h fan n=0.095 kW; n=1450 rpm; U-230V including EC controller (Volcana VR Mini EC or analogue))	pcs	6,0000		
		TOTAL Chapter 1. Floor distribution group				
		Including salary				
		Chapter 2.1. Ventilation system. AR-1				
2.6	VC16A	Installation of an ALTPA-type partial air treatment unit in the premises, through suction, filtration, ventilation, heating, cooling, and discharge, with a treated air flow rate of 3,000 - 7,500 m³/h (Discharge-suction ventilation system with heat recovery and discharge flow rate: L=3670m3/h, P=450Pa fan N=3.30kW; n=2700rpm; 1=5.4A; U=400V at suction: L=3195m3/h, P=450Pa fan N-3.30kW; n=2700rpm; 1=5.4A; U=400V (Duplex 5000 Multi-V or similar))	pcs	1,0000		
2.7	VC12A	Installation of air filter with filter bags, with a total weight of 50-200 kg.	pcs	2,0000		
2.8	VC29A	Installation of air heating battery with filter bags, weighing	pcs	1,0000		
		a total weight of 50-200 kg (T5000 3R/type 2)				
2.9	08-03-601-1	Wired control and steering panel for AR	pcs	1,0000		
2.10	VB18B	Noise attenuator, rectangular with perimeter 2000 - 3200 mm (Noise attenuator LDR-800-250-950)	pcs	1,0000		
2.11	VB18B	Noise attenuator, rectangular with perimeter 2000 - 3200 mm (Noise attenuator LDR-900-250-950)	pc	1,0000		
2.12	VB01A	Adjustment damper, butterfly, mounted on circular ducts type CFC-I, CFC-II, with perimeter 800 - 1600 mm (Manual flow regulator for hydraulic adjustment of the system (EFC-P)) - labour only	pcs	14,0000		
2.13	IA40A	Safety device against gas-air shortage (CO2 sensor for the room) - labour only	pc	14,0000		
2.14	CL20A	Ready-made ventilation grilles made of black sheet metal, with manually adjustable blinds, painted and mounted in masonry (External metal grille with exhaust blinds SS-A 1000x400 (Brofer or similar))	pc	1,0000		
		TOTAL Chapter 2.1. Ventilation system. AR-1				
		Including salary				
		Chapter 2.2. Ventilation system. AR-2				
2.15	VC16A	Installation of an ALTPA-type partial air treatment unit in the premises, by means of suction, filtration, ventilation, heating, cooling and discharge, with a treated air flow rate of 3,000 - 7,500 m³/h (Discharge-suction ventilation system with heat recovery and discharge flow rate: L=2195m3/h, P=450Pa fan N=2.50kW; n=2970rpm; 1=3.8A; U=400V at suction: L=2195m3/h, P=450Pa N=2.50kW; n=2970rpm; 1-3.8A; U=400V (Duplex 3500 Multi-V or similar))	pcs	1,0000		
2.16	VC12A	Installation of air filter with filter bags, with a total weight of 50-200 kg.	pc	2,0000		
2.17	VC29A	Installation of air heating battery with filter bags, with a total	pcs	1,0000		

		weight of 50-200 kg (T3500 3R/type 2)				
2.18	08-03-601	Wired control and management panel for AR	pc	1,0000		
2.19	VB18B	Noise attenuator, rectangular with perimeter 2000 - 3200 mm (Noise attenuator LDR-400-400-1200)	pc	1,0000		
2.20	VB18B	Noise attenuator, rectangular with perimeter 2000 - 3200 mm (Noise attenuator LDR-600-250-950)	pcs	2,0000		
2.21	VB02A	Adjustment damper, butterfly, mounted on rectangular ducts type CFR-I, CFR-II, with perimeter 1000 - 1600 mm (Rectangular fire damper for ducts, can be mounted next to the wall, with fire resistance EI60 (HELMER-60-NO-140 K-MB24-0) Systemair or similar) - labour only	pc	1,0000		
2.22	VB01A	Control damper, butterfly, mounted on circular ducts type CFC-I, CFC-II, with perimeter 800 - 1600 mm (Manual flow regulator for hydraulic adjustment of the system (EFC-P)) - labour only	pc	4,0000		
2.23	VB02A	Adjustment damper, butterfly, mounted on rectangular ducts type CFR-I, CFR-II, with a perimeter of 1000 - 1600 mm (Manual flow regulator for hydraulic adjustment of the system REG-L (BE3A or analogue)) - labour only	pc	4,0000		
2.24	IA40A	Safety device against gas-air shortage (CO2 sensor for the room) - labour only	pc	8,0000		
2.25	CL20A	Ready-made ventilation grilles made of black sheet metal, with manually adjustable blinds, painted and mounted in masonry (External metal grille with exhaust blinds SS-A 600x400 (Brofer or similar))	pc	1,0000		
2.26	CL20A	Ready-made ventilation grilles made of black sheet metal, with manually adjustable blinds, painted and mounted in masonry (External metal grille with exhaust blinds SS-E 600x400 (Brofer or similar))	pc	1,0000		
		TOTAL Chapter 2.2. Ventilation system. AR-2				
		Including salary				
		Chapter 2.3. Ventilation system. AR-3				
2.27	VC16A	Installation of an ALTPA-type partial air treatment unit in the premises, through suction, filtration, ventilation, heating, cooling, and discharge, with a treated air flow rate of 3,000 - 7,500 m³/h (Discharge-suction ventilation system with heat recovery and discharge flow rate: L=3590m3/h, P=450Pa fan N=3.30kW; n=2700 rpm; 1=5.4A; U=400V suction fan: L=3115 m3/h, P=450Pa N-3.30kW; n=2700 rpm; 1=5.4A; U=400V (Duplex 5000 Multi-V or similar)	pcs	1,0000		
2.28	VC12A	Installation of air filter with filter bags, with a total weight of 50-200 kg.	pcs	2,0000		
2.29	VC29A	Installation of air heating battery with filter bags, with a total weight of 50-200 kg (T5000 3R/type 2)	pcs	1,0000		
2.30	08-03-601	Wired control and management panel for AR	pc	1,0000		
2.31	VB18B	Noise attenuator, rectangular with perimeter 2000 - 3200 mm (Noise attenuator LDR-800-250-950)	pcs	1,0000		
2.32	VB18B	Noise attenuator, rectangular with perimeter 2000 - 3200 mm (Noise attenuator LDR-900-250-950)	pc	1,0000		
2.33	VB01A	Adjustment damper, butterfly, mounted on circular ducts type CFC-I, CFC-II, with perimeter 800 - 1600 mm (Manual flow regulator for hydraulic adjustment of the system (EFC-P)) - labour only	pc	12,000		
2.34	IA40A	Safety device against gas-air shortage (CO2 sensor for the room) - labour only	pc	12,0000		
2.35	CL20A	Ready-made ventilation grilles made of black sheet metal, with manually adjustable blinds, painted and mounted in masonry (External metal grille with exhaust blinds SS-A 1000x400 (Brofer or similar))	pc	1,0000		
		TOTAL Chapter 2.3. Ventilation system. AR-3				
		Including salary				
		Chapter 2.4. Ventilation system. AR-4				
2.36	VC16A	Installation of an ALTPA-type partial air treatment unit in the	pcs	1,0000		

		premises, by means of suction, filtration, ventilation, heating, cooling and discharge, with a treated air flow rate of 3,000 - 7,500 m³/h (Discharge-suction ventilation system with heat recovery and discharge flow rate: L=2880m3/h, P=450Pa fan N=2.50kW; n=2970rpm; 1-3.8A; U=400V suction fan: L=2310m3/h, P-450Pa N=2.50kW; n=2970rpm; 1-3.8A; U=400V (Duplex 3500 Multi-V or similar)				
2.37	VC12A	Installation of air filter with filter bags, with a total weight of 50-200 kg.	pcs	2,0000		
2.38	VC29A	Installation of air heating battery with filter bags, with a total weight of 50-200 kg (T3500 3R/type 2)	pcs	1,0000		
2.39	08-03-601	Wired control and management panel for AR	pc	1,0000		
2.40	VB18B	Noise attenuator, rectangular with perimeter 2000 - 3200 mm (Noise attenuator LDR-400-400-1200)	pc	1,0000		
2.41	VB18B	Noise attenuator, rectangular with perimeter 2000 - 3200 mm (Noise attenuator LDR-600-250-950)	pcs	2,0000		
2.42	VB01A	Adjustment damper, butterfly, mounted on circular ducts type CFC-I, CFC-II, with perimeter 800 - 1600 mm (Manual flow regulator for hydraulic adjustment of the system (EFC-P)) - labour only	pc	2,0000		
2.43	VB02A	Adjustment damper, butterfly, mounted on rectangular ducts type CFR-I, CFR-II, with perimeter 1000 - 1600 mm (Manual flow regulator for hydraulic adjustment of the system REG-L-250x200-N-M220 (BE3A or equivalent)) - labour only	pc	4,0000		
2.44	IA40A	Gas-air safety device (CO2 sensor for the room) - labour only	pc	6,0000		
2.45	CL20A	Ready-made ventilation grilles made of black sheet metal, with manually adjustable blinds, painted and mounted in masonry (External metal grille with exhaust blinds SS-A 800x400 (Brofer or similar))	pc	1,0000		
2.46	CL20A	Ready-made ventilation grilles made of black sheet metal, with manually adjustable blinds, painted and mounted in masonry (External metal grille with exhaust blinds SS-E 600x400 (Brofer or similar))	pc	1,0000		
		TOTAL Chapter 2.4. Ventilation system. AR-4				
		Including salary				
		Chapter 2.5. Ventilation system. AR-5				
2.47	VC16A	Installation of an ALTPA-type partial air treatment unit in the premises, by means of suction, filtration, ventilation, heating, cooling and discharge, with a treated air flow rate of 3,000 - 7,500 m³/h (Ventilation system	pcs	1,0000		
		ventilation at discharge-suction with heat recovery with discharge flow rate: L=3280m3/h, P=450Pa fan N-3.30kW; n=2700rpm; 1-5.4A; U=400V suction: L=3360m3/h, P=450Pa N-3.30kW; n=2700rpm; 1=5.4A; U=400V (Duplex 5000 Multi-V or analogue))				
2.48	VC12A	Installation of air filter with filter bags, with a total weight of 50-200 kg.	pcs	2,0000		
2.49	VC29A	Installation of air heating battery with filter bags, with a total weight of 50-200 kg (T5000 3R/type 2)	pcs	1,0000		
2.50	08-03-601	Wired control and steering panel for AR	pcs	1,0000		
2.51	VB18B	Noise attenuator, rectangular with perimeter 2000 - 3200 mm (Noise attenuator LDR-700-300-950)	pcs	2,0000		
2.52	VB01A	Adjustment damper, butterfly, mounted on circular ducts type CFC-I, CFC-II, with perimeter 800 - 1600 mm (Manual flow regulator for hydraulic adjustment of the system (EFC-P)) - labour only	pc	2,0000		
2.53	VB02B	Adjustment damper, butterfly, mounted on rectangular ducts type CFR-I, CFR-II, with a perimeter of 1600 - 3200 mm (Manual flow regulator for hydraulic adjustment of the system REG-L-700x250-N-M220 (BE3A or equivalent) - labour only	pc	2,0000		
2.54	IA40A	Safety device against gas-air shortage (CO2 sensor for the room) - labour only	pc	4,0000		
2.55	CL20A	Ready-made ventilation grilles made of black sheet metal, with manually adjustable blinds, painted and mounted in masonry (External metal grille with exhaust blinds SS-A 600x600 (Brofer or similar))	pc	1,0000		
		TOTAL Chapter 2.5. Ventilation system. AR-5				

		Including salary				
		Chapter 2.6. Ventilation system. AR-6				
2.56	VC16A	Installation of an ALTPA-type partial air treatment unit in the premises, by means of suction, filtration, ventilation, heating, cooling and discharge, with a treated air flow rate of 3,000 - 7,500 m³/h (Discharge-suction ventilation system with heat recovery and discharge flow rate: L=3530m3/h, P=450Pa fan N=3.30kW; n=2700rpm; 1=5.4A; U=400V suction fan: L=3055m3/h, P-450Pa N=3.30kW; n=2700rpm; 1-5.4A; U=400V (Duplex 5000 Multi-V or similar)	pcs	1,0000		
2.57	VC12A	Installation of air filter with filter bags, with a total weight of 50-200 kg.	pcs	2,0000		
2.58	VC29A	Installation of air heating battery with filter bags, with a total weight of 50-200 kg (T5000 3R/type 2)	pcs	1,0000		
2.59	08-03-601	Wired control and management panel for AR	pc	1,0000		
2.60	VB18B	Noise attenuator, rectangular with perimeter 2000 - 3200 mm (Noise attenuator LDR-800-250-950)	pc	1,0000		
2.61	VB18B	Noise attenuator, rectangular with perimeter 2000 - 3200 mm (Noise attenuator LDR-900-250-950)	pc	1,0000		
2.62	VB01A	Adjustment damper, butterfly, mounted on circular ducts type CFC-I, CFC-II, with perimeter 800 - 1600 mm (Manual flow regulator for hydraulic adjustment of the system (EFC-P)) - labour only	pc	12,0000		
2.63	IA40A	Safety device against gas-air shortage (CO2 sensor for the room) - labour only	pc	12,0000		
2.64	CL20A	Ready-made ventilation grilles made of black sheet metal, with manually adjustable blinds, painted and mounted in masonry (External metal grille with exhaust blinds SS-A 1000x400 (Brofer or similar))	pcs	1,0000		
		TOTAL Chapter 2.6. Ventilation system. AR-6				
		Including salary				
		Chapter 2.7. Ventilation system. AR-7				
2.65	VC16A	Installation of an ALTPA-type partial air treatment unit in the premises, by means of suction, filtration, ventilation, heating, cooling and discharge, with a treated air flow rate of 3,000 - 7,500 m³/h (Discharge-suction ventilation system with heat recovery and discharge flow rate: L=2520m3/h, P=450Pa fan fan N=2.50kW; n=2970rpm; 1=3.8A; U=400V at suction: L=2560m3/h, P=450Pa N=2.50kW; n=2970rpm; 1-3.8A; U=400V (Duplex 3500 Multi-V or similar))	pcs	1,0000		
2.66	VC12A	Installation of air filter with filter bags, with a total weight of 50-200 kg.	pcs	2,0000		
2.67	VC29A	Installation of air heating battery with filter bags, with a total weight of 50-200 kg (T3500 3R/type 2)	pcs	1,0000		
2.68	08-03-601	Wired control and management panel for AR	pc	1,0000		
2.69	VB18B	Noise attenuator, rectangular with perimeter 2000 - 3200 mm (Noise attenuator LDR-400-400-1200)	pcs	1,0000		
2.70	VB18B	Noise attenuator, rectangular with perimeter 2000 - 3200 mm (Noise attenuator LDR-600-250-950)	pcs	2,0000		
2.71	VB01A	Adjustment damper, butterfly, mounted on circular ducts type CFC-I, CFC-II, with perimeter 800 - 1600 mm (Manual flow regulator for hydraulic adjustment of the system (EFC-P)) - labour only	pc	8,0000		
2.72	IA40A	Safety device against gas-air shortage (CO2 sensor for the room) - labour only	pc	8,0000		
2.73	CL20A	Ready-made ventilation grilles made of black sheet metal, with manually adjustable blinds, painted and mounted in masonry (External metal grille with exhaust blinds SS-A 800x400 (Brofer or similar))	pc	1,0000		
2.74	CL20A	Ready-made ventilation grilles made of black sheet metal, with manually adjustable blinds, painted and mounted in masonry (External metal grille with exhaust blinds SS-E 800x400 (Brofer or similar))	pc	1,0000		
		TOTAL Chapter 2.7. Ventilation system. AR-7				
		Including salary				

		Chapter 2.8. Ventilation system. AR-8				
2.75	VC16A	Installation of an ALTPA-type partial air treatment unit in the premises, by means of suction, filtration, ventilation, heating, cooling and discharge, with a treated air flow rate of 3,000 - 7,500 m³/h (Discharge-suction ventilation system with heat recovery and discharge flow rate: L=2400m3/h, P=450Pa fan N=2.50kW; n=2970rpm; 1=3.8A; U=400V at suction: L=2400m3/h, P=450Pa fan N=2.50kW; n=2970rpm; 1-3.8A; U=400V (Duplex 3500 Multi-V or similar))	pcs	1,0000		
2.76	VC12A	Installation of air filter with filter bags, with a total weight of 50-200 kg.	pcs	2,0000		
2.77	VC29A	Installation of air heating battery with filter bags, with a total weight of 50-200 kg (T3500 3R/type 2)	pcs	1,0000		
2.78	08-03-601	Wired control and management panel for AR	pc	1,0000		
2.79	VB18B	Noise attenuator, rectangular with perimeter 2000 - 3200 mm (Noise attenuator LDR-500-300-950)	pcs	2,0000		
2.80	CL20A	Ready-made ventilation grilles made of black sheet metal, with manually adjustable blinds, painted and mounted in masonry (External metal grille with exhaust blinds SS-A 1000x400 (Brofer or similar))	pc	1,0000		
2.81	CL20A	Ready-made ventilation grilles made of black sheet metal, with manually adjustable blinds, painted and mounted in masonry (External metal grille with exhaust blinds SS-E 1000x400 (Brofer or similar))	pc	1,0000		
		TOTAL Chapter 2.8. Ventilation system. AR-8				
		Including salary				
		Chapter 2.9. Ventilation system. AR-9				
2.82	VC16A	Installation of an ALTPA-type partial air treatment unit in the premises, by means of suction, filtration, ventilation, heating, cooling and discharge, with a treated air flow rate of 3,000 - 7,500 m³/h (Discharge-suction ventilation system with heat recovery and discharge flow rate: L=600m3/h, P=400Pa fan N-0.39kW; n=3400rpm; 1=2.5A; U=400V at suction: L=505m3/h, P=400Pa fan N=0.39kW; n=3400rpm; 1=2.5A; U=400V (Duplex 1100 Flexi or equivalent))	pcs	1,0000		
2.83	VC12A	Installation of air filter with filter bags, with a total weight of 50-200 kg.	pc	2,0000		
2.84	VC29A	Installation of air heating battery with filter bags, with a total weight of 50-200 kg (HW.2-C)	pcs	1,0000		
2.85	08-03-601	Wired control and management panel for AR	pc	1,0000		
2.86	VB18B	Noise attenuator, rectangular with perimeter 2000 - 3200 mm (Noise attenuator LDR-250-900)	pcs	2,0000		
2.87	CL20A	Ready-made ventilation grilles made of black sheet metal, with manually adjustable louvers , painted and mounted in masonry (External metal grille with exhaust louvers SS-A 400x200 (Brofer or similar))	pc	1,0000		
		TOTAL Chapter 2.9. Ventilation system. AR-9				
		Including salary				
		Chapter 2.10. Ventilation system. AR-10				
2.88	VC16A	Installation of an ALTPA-type partial air treatment unit in the premises, through suction, filtration, ventilation, heating, cooling, and discharge, with a treated air flow rate of 3,000 - 7,500 m³/h (Discharge-suction ventilation system with heat recovery, discharge flow rate: L=460m3/h, P=150Pa fan N-0.179kW; n=4100rpm; 1=0.78A; U-230V suction fan: L=460m3/h, P=150Pa N=0.179kW; n=4100rpm; 1-0.78A; U=230V (Duplex 560 Pro-V or similar)	pcs	1,0000		
2.89	VC12A	Installation of air filter with filter bags, with a total weight of 50-200 kg.	pc	2,0000		
2.90	08-03-601	Wired control and steering panel for AR	pc	1,0000		
2.91	VB18B	Noise attenuator, rectangular with perimeter 2000 - 3200 mm (Noise attenuator LDR-200-900)	pcs	2,0000		
2.92	CL20A	Ready-made ventilation grilles made of black sheet metal, with	pc	1,0000		

		manually adjustable blinds, painted and mounted in masonry (External metal grille with exhaust blinds BMC1-OV 1000x100 (Brofer or similar))				
2.93	CL20A	Ready-made ventilation grilles made of black sheet metal, with manually adjustable blinds, painted and mounted in masonry (External metal grille with exhaust blinds SS-A 400x200 (Brofer or similar))	pc	1,0000		
2.94	CL20A	Ready-made ventilation grilles made of black sheet metal, with manually adjustable blinds, painted and mounted in masonry (External metal grille with exhaust blinds SS-E 400x200 (Brofer or similar))	pc	1,0000		
		TOTAL Chapter 2.10. Ventilation system. AR-10				
		Including salary				
		Chapter 2.11. Ventilation system. A-11				
2.95	VC04B	Installation of single-suction, explosion-proof fans, directly driven with coupling, with a flow rate of 1,700-5,200 m³/h with a 0.8-1.5 kW electric motor (Suction ventilation system: L=1425 m³/h, P=300Pa complete with rectangular fan N=0.855kw; n=1300rpm; I=1.70A; U=400V including elastic support VKPF 4D 500x300 (Vents or similar))	pcs	1,0000		
2.96	VB18B	Noise attenuator, rectangular with perimeter 2000 - 3200 mm (Noise attenuator SR 500x300)	pc	1,0000		
2.97	VB02A	Adjustment damper, butterfly, mounted on rectangular ducts type CFR-I, CFR-II, with perimeter 1000 - 1600 mm (Check valve KOM1 500x300 (Vents or similar)) - labour only	pc	1,0000		
		TOTAL Chapter 2.11. Ventilation system. A-11				
		Including salary				
		Chapter 2.12. Ventilation system. A-12				
2.90	VC03B	Installation of standardised, silent, single-suction radial fans, driven by transmission belts, with a flow rate of 900-11,200 m³/h with a 0.37-7.5 kW electric motor (Silent circular bathroom fan: L=55 m³/h, P=20 Pa electric motor N=0.008 kW; n=2400 rpm; U=230 V SILENT-100 (Soler&Palau or equivalent)	pcs	1,0000		
		TOTAL Chapter 2.12. Ventilation system. A-12				
		Including salary				
		Chapter 2.13. Ventilation system. A-13				
2.91	VC03B	Installation of radial, silent, single-suction standard fans, driven by transmission belts, with a flow rate of 900-11,200 m³/h with a 0.37-7.5 kW electric motor (Silent circular bathroom fan: L=100 m³/h, P=30 Pa electric motor N=0.016 kW; n=2350 rpm; U-230V SILENT-200 (Soler&Palau	pcs	1,0000		
		or equivalent)				
		TOTAL Chapter 2.13. Ventilation system. A-13				
		Including salary				
		Chapter 2.14. Ventilation system. A-14				
2.100	VC03B	Installation of radial fans, silent, single-suction, standardised, belt-driven, with a flow rate of 900-11,200 m³/h with a 0.37-7.5 kW electric motor (Suction ventilation system: L=90 m³/h, P=50 Pa to be completed: silent axial fan with built-in attenuator N=0.029 kW; n=2400 rpm; I=0.17A; U=220V TD-160/100 N (Soler&Palau or similar))	pcs	1,0000		
2.101	VB02A	Adjustment damper, butterfly, mounted on rectangular ducts type CFR-I, CFR-II, with perimeter 1000 - 1600 mm (MCA-250 check valve (Soler&Palau or equivalent)) - labour only	pc	1,0000		
		TOTAL Chapter 2.14. Ventilation system. A-14				
		Including salary				
		Chapter 2.15. Ventilation system. A-15				
2.102	VC03B	Installation of radial fans, silent, single-suction, standardised, belt-driven, with a flow rate of 900-11,200 m³/h with an electric motor of 0.37-7.5 kW (Silent circular bathroom fan: L=40 m³/h, P=20 Pa electric motor N=0.008 kW; n=2400 rpm; U=230 V SILENT-100 (Soler&Palau or similar)	pcs	1,0000		
		TOTAL Chapter 2.15. Ventilation system. A-15				
		Including salary				

		Chapter 2.16. Ventilation system. A-16				
2.103	VC03B	Installation of radial, silent, single-suction standard fans, driven by transmission belts, with a flow rate of 900-11,200 m³/h with a 0.37-7.5 kW electric motor (Silent circular bathroom fan: L=55 m³/h, P=20 Pa electric motor N=0.008kW; n=2400rpm; U=230V SILENT-100 (Soler&Palau or similar)	pcs	1,0000		
		TOTAL Chapter 2.16. Ventilation system. A-16				
		Including salary				
		Chapter 2.17. Ventilation system. A-17				
2.104	VC03B	Installation of standardised, silent, single-suction radial fans, driven by transmission belts, with a flow rate of 900-11,200 m³/h with an electric motor of 0.37 - 7.5 kW (Suction ventilation system: L=125m³/h, P=80Pa to be completed: silent axial fan with built-in attenuator N=0.027kW; n=2100rpm; I=0.12A; U=230V TD-350/125 N (Soler&Palau or similar)	pcs	1,0000		
2.105	VB02A	Adjustment damper, butterfly, mounted on rectangular ducts type CFR-I, CFR-II, with perimeter 1000 - 1600 mm (MCA-250 S check valve (Soler&Palau or equivalent)) - labour only	pc	1,0000		
		TOTAL Chapter 2.17. Ventilation system. A-17				
		Including salary				
		Chapter 2.18. Ventilation system. SP-1				
2.106	VC04B	Installation of single-suction, explosion-proof fans, directly driven with coupling, with a flow rate of 1,700-5,200 m³/h with a 0.8-1.5 kW electric motor (Overpressure ventilation system: L=1,500 m³/h, P=250Pa to be completed: rectangular fan N=0.57kW; n=1270rpm; 1-0.94A; U=380V including elastic support VKPF 4D 500x250 (Vents or similar))	pcs	1,0000		
2.107	VB02A	Control damper, butterfly, mounted on rectangular ducts type CFR-I, CFR-II, with perimeter 1000 - 1600 mm (Air flow shut-off device with servomotor RRVAF 500x250 (Vents or similar)) - labour only	pc	1,0000		
2.108	CL20A	Ready-made ventilation grilles made of black sheet metal, with manually adjustable blinds, painted and mounted in masonry (BMA-VO 700x400 ventilation grille (Brofer or similar))	pcs	3,0000		
2.109	CL20A	Ready-made ventilation grilles made of black sheet metal, with manually adjustable blinds, painted and mounted in masonry (SS-A 400x400 external metal grille with exhaust blinds (Brofer or similar))	pcs	1,0000		
		TOTAL Chapter 2.18. Ventilation system. SP-1				
		Including salary				
		Chapter 3. Radiator heating system **ventilation system AR1-AR9**				
2.110	ID04A	t or check valve with plugs for central heating installations, with a nominal diameter of 1/2" -1" (Automatic balancing valve on return, pressure difference maintenance range 5-25 kPa; PN 16, DN15 ASV-PV (Danfoss or similar))	pc	6,0000		
2.111	ID04A	Passage or check valve with plugs for central heating systems, with a nominal diameter of 1/2" -1" (automatic balancing valve on the return, pressure difference maintenance range 5-25 kPa; PN 16, DN20 ASV-PV (Danfoss or equivalent))	pcs	3,0000		
2.112	ID01A	Double-adjustment valve (flow or return) for central heating systems, with a nominal diameter of 3/8" -1/2" (AVDO DN15 bypass valve (Danfoss or equivalent))	pc	9,0000		
		TOTAL Chapter 3. Heat supply system for AR1-AR9 ventilation radiators				
		Including salary				
		Chapter 4. Air conditioning system				
2.113	VC37D	Installation of domestic air conditioning units (split system) with motor power up to 8.5 kW, on staircases (indoor unit)	pcs	1,0000		
2.114	VC37D	Installation of domestic air conditioning units (split system) with motor power up to 8.5 kW, from the stairs (outdoor unit)	pcs	1,0000		
		TOTAL Chapter 4. Air conditioning system				
		Including salary				

Total		
Social insurance	24,0000%	
Total		
Transportation expenses	%	
Total		
Storage expenses	%	
Total		
Overhead expenses	%	
Total		
Estimated profit	%	

Total Estimate without VAT	

Estimate: Equipment

No	Symbol standards and resource code	Works and expenses	U.M	Quantity according to project data	Estimated value (Lei)	
					Per unit of measurement	Total
					Incl. salary	Incl. salary
1	2	3	4	5	6	7
		Chapter 1. Floor distribution group				
3.1		Automatic balancing valve on return, pressure difference maintenance range 5-25 kPa; PN 16, DN15 ASV-PV (Danfoss or similar)	pcs	3,0000		
3.2		Automatic balancing valve on return, pressure difference maintenance range 5-25 kPa; PN 16, DN20 ASV-PV (Danfoss or equivalent)	pc	3,0000		
3.3		Automatic balancing valve on return, pressure difference maintenance range 5-25 kPa; PN 16, DN25 ASV-PV (Danfoss or equivalent)	pcs	2,0000		
3.4		Automatic balancing valve on return, pressure difference maintenance range 5-25 kPa; PN 16, DN32 ASV-PV (Danfoss or equivalent)	pcs	2,0000		
3.5		Water convector Q=3-20kW/h, Lmax=2100m3/h fan n=0.095kW; n=1450rpm; U-230V including EC controller (Volcana VR Mini EC or equivalent)	pcs	6,0000		
		TOTAL Chapter 1. Floor distribution group				
		Including salary				
		Chapter 2.1. Ventilation system. AR-1				
3.6		ventilation system with heat recovery, discharge flow rate: L=3670m3/h, P=450Pa fan N=3.30kW; n=2700rpm; 1=5.4A; U=400V suction: L=3195m3/h, P=450Pa fan N-3.30kW; n=2700rpm; 1=5.4A; U=400V in addition: - heat recovery unit with plastic plates in counterflow with minimum energy efficiency of 60% Q=30.98kW/h from -16 to +9.2°C - filter, with M5 filtration class at discharge filter, with G4 filtration class at suction water battery for air heating with anti-freeze system and mixing node included Q-13.28kW/h from +9.2 to +20°C automation system to be included in the package with the machine (Duplex 5000 Multi-V or analogue)	pcs	1,0000		
3.7		LDR-800-250-950 noise attenuator (Systemair or similar)	pc	1,0000		
3.8		LDR-900-250-950 noise attenuator (Systemair or similar)	pc	1,0000		
3.9		Manual flow regulator for hydraulic adjustment of the EFC-P 160 system (Brofer or similar)	pc	2,0000		
3.10		Manual flow regulator for hydraulic adjustment of the EFC-P 225 system (Brofer or similar)	pcs	12,0000		
3.11		CO2 sensor for the chamber	pc	14,0000		
3.12		External metal grille with exhaust blinds SS-A 1000x400 (Brofer or similar)	pc	1,0000		
		TOTAL Chapter 2.1. Ventilation system. AR-1				
		Including salary				

		Chapter 2.2. Ventilation system. AR-2				
3.13		Exhaust-suction ventilation system with heat recovery, exhaust flow rate: L=2195m3/h, P=450Pa fan fan N=2.50kW; n=2970rpm; 1=3.8A; U=400V suction: L=2195m3/h, P=450Pa N=2.50kW; n=2970rpm; 1-3.8A; U=400V additional features: - heat recovery unit with plastic plates in counterflow with minimum energy efficiency of 60% Q=18.53kW/h from -16 to +9.2°C - filter, with M5 filtration class on discharge - filter, with G4 filtration class on suction - water battery for air heating with anti-freeze system and mixing node included Q-7.94kW/h from +9.2 to +20°C - automation system to be included in the package with the machine (Duplex 3500 Multi-V or similar)	pcs	1,0000		
3.14		LDR-400-400-1200 noise attenuator (Systemair or equivalent)	pc	1,0000		
3.15		LDR-600-250-950 noise attenuator (Systemair or similar)	pcs	2,0000		
3.6		Rectangular fire damper for ducts, can be installed close to the wall, with fire resistance EI60 (HELMER-60-NO-140 K-MB24-0) Systemair or similar	pcs	1,0000		
3.17		Manual flow regulator for hydraulic adjustment of the EFC-P 200 system (Brofer or similar)	pc	2,0000		
3.18		Manual flow regulator for hydraulic adjustment of the EFC-P 225 system (Brofer or similar)	pc	2,0000		
3.19		Manual flow regulator for hydraulic adjustment of the REG-L-250x200-N-M220 system (BE3A or similar)	pcs	3,0000		
3.20		Manual flow regulator for hydraulic adjustment of the REG-L-300x200-N-M220 system (BE3A or analogue)	pcs	1,0000		
3.21		CO2 sensor for the chamber	pc	8,0000		
3.22		External metal grille with SS-A 600x400 exhaust louvers (Brofer or similar)	pc	1,0000		
3.23		External metal grille with exhaust louvers SS-E 600x400 (Brofer or similar)	pc	1,0000		
		TOTAL Chapter 2.2. Ventilation system. AR-2				
		Including salary				
		Chapter 2.3. Ventilation system. AR-3				
3.24		Exhaust-suction ventilation system with heat recovery, exhaust flow rate: L=3590m3/h, P=450Pa fan N=3.30kW; n=2700rpm; 1=5.4A; U=400V suction fan:	pcs	1.0000		
		L=3115m3/h, P=450Pa N-3.30kW; n=2700rpm; 1=5.4A; U=400V in addition: heat recovery unit with plastic plates in counterflow with minimum energy efficiency of 60% Q=30.30 kW/h from -16 to +9.2°C filter, with M5 filtration class at discharge filter, with G4 filtration class at intake water battery for air heating with anti-freeze system and mixing node included Q-12.99 kW/h from +9.2 to +20°C - automation system to be included in the equipment package (Duplex 5000 Multi-V or similar)				
3.25		LDR-800-250-950 noise attenuator (Systemair or similar)	pc	1,0000		
3.26		LDR-900-250-950 noise attenuator (Systemair or similar)	pcs	1,0000		
3.27		Manual flow regulator for hydraulic adjustment of the EFC-P 225 system (Brofer or similar)	pcs	12,0000		
3.28		CO2 sensor for the chamber	pc	12,0000		
3.29		External metal grille with exhaust blinds SS-A 1000x400 (Brofer or similar)	pc	1,0000		
		TOTAL Chapter 2.3. Ventilation system. AR-3				
		Including salary				
		Chapter 2.4. Ventilation system. AR-4				
3.30		Exhaust-suction ventilation system with heat recovery, exhaust	pcs	1,0000		

		flow rate: L=2880m3/h, P=450Pa fan N=2.50kW; n=2970rpm; 1-3.8A; U=400V suction fan: L=2310m3/h, P-450Pa N=2.50kW; n=2970rpm; 1-3.8A; U=400V additional features: - heat recovery unit with plastic counterflow plates with minimum energy efficiency of 60% Q=24.31kW/h from -16 to +9.2°C - - filter, with M5 filtration class on discharge filter, with G4 filtration class on suction - water battery for air heating with anti-freeze system and mixing node included Q-10.42kW/h from +9.2 to +20°C automation system to be included in the package with the machine (Duplex 3500 Multi-V or analogue)				
3.31		LDR-400-400-1200 noise attenuator (Systemair or equivalent)	pc	1,0000		
3.32		LDR-600-250-950 noise attenuator (Systemair or similar)	pcs	2,0000		
3.33		Manual flow regulator for hydraulic adjustment of the EFC-P 225 system (Brofer or similar)	pcs	2,0000		
3.34		Manual flow regulator for hydraulic adjustment of the REG-L-250x200-N-M220 system (BE3A or similar)	pcs	3,0000		
3.35		Manual flow regulator for hydraulic adjustment of the REG-L-300x200-N-M220 system (BE3A or analogue)	pcs	1,0000		
3.36		CO2 sensor for the chamber	pc	6,0000		
3.37		External metal grille with SS-A 800x400 exhaust louvers (Brofer or similar)	pc	1,0000		
3.38		External metal grille with SS-E 600x400 exhaust louvers (Brofer or similar)	pc	1,0000		
		TOTAL Chapter 2.4. Ventilation system. AR-4				
		Including salary				
		Chapter 2.5. Ventilation system. AR-5				
3.39		Exhaust-suction ventilation system with heat recovery with exhaust flow: L=3280m3/h, P=450Pa fan N-3.30kW; n=2700rpm; 1-5.4A; U=400V suction: L=3360m3/h, P=450Pa N-3.30kW; n=2700rpm; 1=5.4A; U=400V in addition: heat recovery unit with plastic plates in counterflow with minimum energy efficiency of 60% Q=26.15kW/h from -16 to +7.8°C filter, with filtration class M5 at discharge - filter, with filtration class G4 at suction - water battery for air heating with anti-freeze system and mixing node included Q=11.21 kW/h from +7.8 to +18°C automation system automation system to be included in the package with the	pcs	1,0000		
3.40		LDR-700-300-950 noise attenuator (Systemair or equivalent)	pc	2,0000		
3.41		Manual flow regulator for hydraulic adjustment of the EFC-P 225 system (Brofer or similar)	pcs	2,0000		
3.42		Manual flow regulator for hydraulic adjustment of the REG-L-700x250-N-M220 system (BE3A or similar)	pcs	2,0000		
3.43		CO2 sensor for the chamber	pc	4,0000		
3.44		External metal grille with SS-A 600x600 exhaust louvers (Brofer or similar)	pc	1,0000		
		TOTAL Chapter 2.5. Ventilation system. AR-5				
		Including salary				
		Chapter 2.6. Ventilation system. AR-6				
3.45		Exhaust-suction ventilation system with heat recovery, exhaust flow rate: L=3530m3/h, P=450Pa fan N=3.30kW; n=2700rpm; 1=5.4A; U=400V suction fan: L=3055m3/h, P-450Pa N=3.30kW; n=2700rpm; 1-5.4A; U=400V additional: heat recovery unit with plastic plates in counterflow with minimum energy efficiency of 60% Q=29.80kW/h from -16 to +9.2°C - filter, with M5 filtration class on discharge filter, with G4 filtration class on suction water battery for air heating with anti-freeze system and mixing node included Q-12.77kW/h from +9.2 to +20°C automation system to be included in the package with the machine (Duplex 5000 Multi-V or analogue)	pcs	1,0000		

3.46		LDR-800-250-950 noise attenuator (Systemair or similar)	pc	1,0000		
3.47		LDR-900-250-950 noise attenuator (Systemair or similar)	pc	1,0000		
3.48		Manual flow regulator for hydraulic adjustment of the EFC-P 225 system (Brofer or similar)	pc	12,0000		
3.49		CO2 sensor for the chamber	pc	12,0000		
3.50		External metal grille with exhaust blinds SS-A 1000x400 (Brofer or similar)	pc	1,0000		
		TOTAL Chapter 2.6. Ventilation system. AR-6				
		Including salary				
		Chapter 2.7. Ventilation system. AR-7				
3.51		Exhaust-suction ventilation system with heat recovery with exhaust flow: L=2520m3/h, P=450Pa fan fan N=2.50kW; n=2970rpm; 1=3.8A; U=400V suction: L=2560m3/h, P=450Pa N=2.50kW; n=2970rpm; 1-3.8A; U=400V in addition: - heat recovery unit with plastic plates in counterflow with minimum energy efficiency of 60% Q-21.27kW/h from -16 to +9.2°C - - filter, with M5 filtration class on discharge filter, with G4 filtration class on suction - water battery for air heating with anti-freeze system and mixing node included Q-9.12 kW/h from +9.2 to +20°C automation system to be included in the package with the machine (Duplex 3500 Multi-V or analogue)	pcs	1,0000		
3.52		LDR-400-400-1200 noise attenuator (Systemair or equivalent)	pc	1,0000		
3.53		LDR-600-250-950 noise attenuator (Systemair or similar)	pcs	2,0000		
3.54		Manual flow regulator for hydraulic adjustment of the EFC-P 200 system (Brofer or similar)	pcs	2,0000		
3.55		Manual flow regulator for hydraulic adjustment of the EFC-P 225 system (Brofer or similar)	pc	6,0000		
3.56		CO2 sensor for the chamber	pc	8,0000		
3.57		External metal grille with SS-A 800x400 exhaust louvers (Brofer or similar)	pc	1,0000		
3.58		External metal grille with exhaust louvers SS-E 800x400 (Brofer or similar)	pc	1,0000		
		TOTAL Chapter 2.7. Ventilation system. AR-7				
		Including salary				
		Chapter 2.8. Ventilation system. AR-8				

3.59		Exhaust-suction ventilation system with heat recovery, exhaust flow rate: L=2400m3/h, P=450Pa fan N=2.50kW; n=2970rpm; 1=3.8A; U=400V suction: L=2400m3/h, P=450Pa fan N=2.50kW; n=2970rpm; 1-3.8A; U=400V in addition: - heat recovery unit with plastic plates in counterflow with minimum energy efficiency of 60% Q=18.01kW/h from -16 to +6.4°C - filter, with M5 filtration class on discharge filter, with G4 filtration class on suction - water battery for air heating with anti-freeze system and mixing node included Q-7.72kW/h from +6.4 to +16°C automation system to be included with the equipment (Duplex 3500 Multi-V or analogue)	pc	1,0000		
3.60		LDR-500-300-950 noise attenuator (Systemair or similar)	pc	2,0000		
3.61		External metal grille with discharge louvers SS-A 1000x400 (Brofer or similar)	pc	1,0000		
3.62		External metal grille with discharge blinds SS-E 1000x400 (Brofer or similar)	pc	1,0000		
		TOTAL Chapter 2.8. Ventilation system. AR-8 Including				
		salary				
		Chapter 2.9. Ventilation system. AR-9				
3.63		Exhaust-supply ventilation system with heat recovery, with exhaust flow rate: L=600m3/h, P=400Pa fan N-0.39kW; n=3400rpm; 1=2.5A; U=400V suction: L=505m3/h, P=400Pa fan N=0.39kW; n=3400rpm; 1=2.5A; U=400V in addition: - heat recovery unit with plastic plates in counterflow with minimum energy efficiency of 60% Q-5.35kW/h from -16 to +10.6°C - filter, with filtration class M5 at discharge - filter, with filtration class G4 at suction - water battery for air heating with anti-freeze system and mixing node included Q-2.29 kW/h from +10.6 to +22°C automation system to be included in the package with the machine (Duplex 1100 Flexi or analogue)	pc	1,0000		
3.64		LDR-250-900 noise attenuator (Systemair or similar)	pc	2,0000		
3.65		External metal grille with SS-A 400x200 discharge louvers (Brofer or similar)	pc	1,0000		
		TOTAL Chapter 2.9. Ventilation system. AR-9 Including				
		salary				
		Chapter 2.10. Ventilation system. AR-10				
3.66		Exhaust-suction ventilation system with heat recovery with exhaust flow: L=460m3/h, P=150Pa fan N-0.179kW; n=4100rpm; 1=0.78A; U-230V suction fan: L=460m3/h, P=150Pa N=0.179kW; n=4100rpm; 1-0.78A; U=230V in addition: - heat recovery unit with plastic counterflow plates with minimum energy efficiency of 60% Q=4.71kW/h from -16 to +14.6°C - filter, with M5 filtration class on discharge filter, with G4 filtration class on suction automation system to be included with the machine (Duplex 560 Pro-V or similar)	pc	1,0000		
3.67		LDR-200-900 noise attenuator (Systemair or similar)	pc	2,0000		
3.68		External metal grille with louvers on the discharge side BMC1-OV 1000x100 (Brofer or similar)	pc	1,0000		
3.69		External metal grille with discharge louvers SS-A 400x200 (Brofer or similar)	pc	1,0000		
3.70		External metal grille with discharge blinds SS-E 400x200 (Brofer or similar)	pc	1,0000		
		TOTAL Chapter 2.10. Ventilation system. AR-10				
		Including salary				
		Chapter 2.11. Ventilation system. A-11				
3.71		Suction ventilation system: L=1425m3/h, P=300Pa complete with rectangular fan N=0.855kw; n=1300rpm; I=1.70A; U=400V including elastic support VKPF 4D 500x300 (Vents or similar)	pc	1,0000		
3.72		SR 500x300 noise attenuator (Vents or similar)	pc	1,0000		

3.73		Check valve KOM1 500x300 (Vents or equivalent)	pc	1,0000		
		TOTAL Chapter 2.11. Ventilation system. A-11				
		Including salary				
		Chapter 2.12. Ventilation system. A-12				
3.74		Silent circular bathroom fan: L=55m3/h, P=20Pa electric motor N=0.008kW; n=2400rpm; U=230V SILENT-100 (Soler&Palau or similar)	pcs	1,0000		
		TOTAL Chapter 2.12. Ventilation system. A-12				
		Including salary				
		Chapter 2.13. Ventilation system. A-13				
3.75		Silent circular bathroom fan: L=100m3/h, P=30Pa electric motor N=0.016kW; n=2350rpm; U-230V SILENT-200 (Soler&Palau or similar)	pc	1,0000		
		TOTAL Chapter 2.13. Ventilation system. A-13				
		Including salary				
		Chapter 2.14. Ventilation system. A-14				
3.76		Suction ventilation system: L=90m3/h, P=50Pa to be completed: silent axial fan with built-in attenuator N=0.029kW; n=2400rpm; I=0.17A; U=220V TD-160/100 N (Soler&Palau or similar)	pcs	1,0000		
3.77		MCA-250 directional valve (Soler&Palau or similar)	pcs	1,0000		
		TOTAL Chapter 2.14. Ventilation system. A-14				
		Including salary				
		Chapter 2.15. Ventilation system. A-15				
3.78		Silent circular bathroom fan: L=40m3/h, P=20Pa electric motor N=0.008kW; n=2400rpm; U=230V SILENT-100 (Soler&Palau or similar)	pcs	1,0000		
		TOTAL Chapter 2.15. Ventilation system. A-15				
		Including salary				
		Chapter 2.16. Ventilation system. A-16				
3.79		Silent circular bathroom fan: L=55m3/h, P=20Pa electric motor N=0.008kW; n=2400rpm; U=230V SILENT-100 (Soler&Palau or similar)	pcs	1,0000		
		TOTAL Chapter 2.16. Ventilation system. A-16				
		Including salary				
		Chapter 2.17. Ventilation system. A-17				
3.80		Suction ventilation system: L=125m3/h, P=80Pa to be completed: silent axial fan with built-in attenuator N=0.027kW; n=2100rpm; I=0.12A; U=230V TD-350/125 N (Soler&Palau or similar)	pcs	1,0000		
3.81		MCA-250 S directional valve (Soler&Palau or equivalent)	pc	1,0000		
		TOTAL Chapter 2.17. Ventilation system. A-17				
		Including salary				
		Chapter 2.18. Ventilation system. SP-1				
3.82		Overpressure ventilation system: L=1500m3/h, P=250Pa to be completed: rectangular fan N=0.57kW; n=1270rpm; 1-0.94A; U=380V including elastic support VKPF 4D 500x250 (Vents or similar)	pcs	1,0000		
3.83		Air flow shut-off device with RRVAF 500x250 servomotor (Vents or similar)	pc			
3.84		BMA-VO 700x400 ventilation grille (Brofer or similar)	pcs	3,0000		
3.85		External metal grille with SS-A 400x400 exhaust louvers (Brofer or similar)	pc	1,0000		
		TOTAL Chapter 2.18. Ventilation system. SP-1				
		Including salary				
		Chapter 3. Heat supply system for ventilation radiator AR1-AR9				
3.86		Automatic balancing valve on return, pressure difference maintenance range 5-25 kPa; PN 16, DN15 APT-R (Ridan or similar)	pcs	6,0000		
3.87		Automatic balancing valve on return, pressure difference maintenance range	pcs	3,0000		

		5-25 kPa; PN 16, DN20 APT-R (Ridan or equivalent)				
		TOTAL Chapter 3. Heat supply system for AR1-AR9 ventilation radiators				
		Including salary				
3.88		AVDO DN15 bypass valve (Danfoss or equivalent)	pc	9,0000		
		Chapter 4. Air conditioning system				
3.89		Split unit with cooling capacity 7.1 kW, heating capacity 8.0 kW, N=2.24 kW, U=230 V, total flow rate L=1440 m3/h In addition: indoor floor unit (PSA-RP71 KA) outdoor unit (SUZ-M71VA) Remote controller (Mitsubishi Electric or similar)	pcs	1,0000		
		TOTAL Chapter 4. Air conditioning system				
		Including salary				

Total		
Storage expenses	%	

Total Estimate excluding VAT	

Prepared by:

(position, signature, surname, first name)

Verified:

(position, signature, surname, first name)