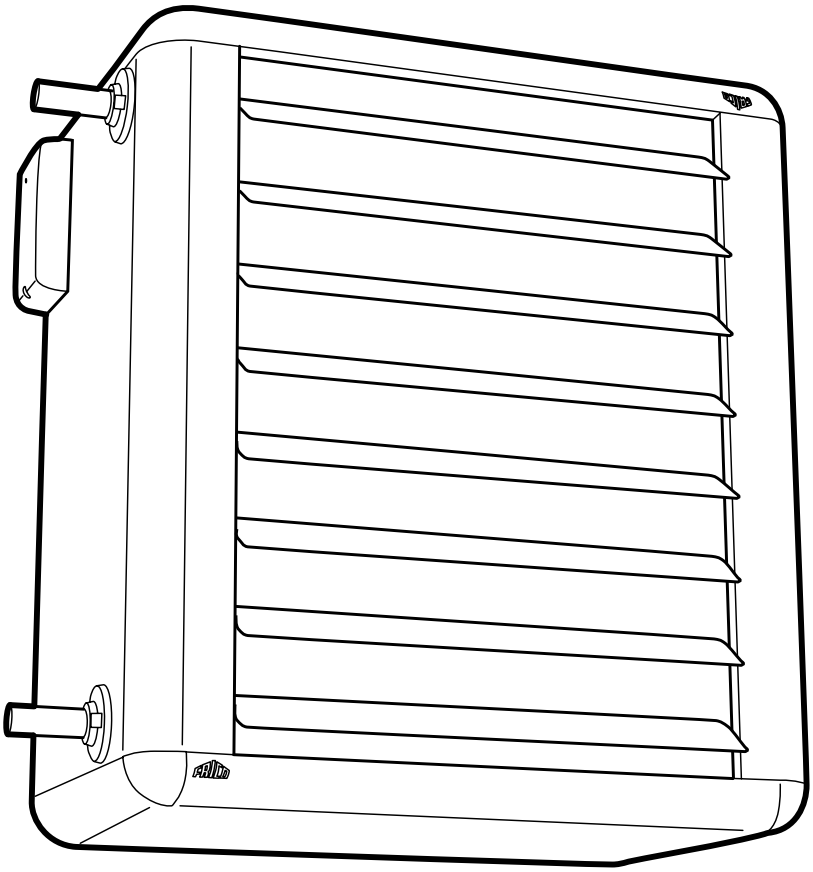
FRICO

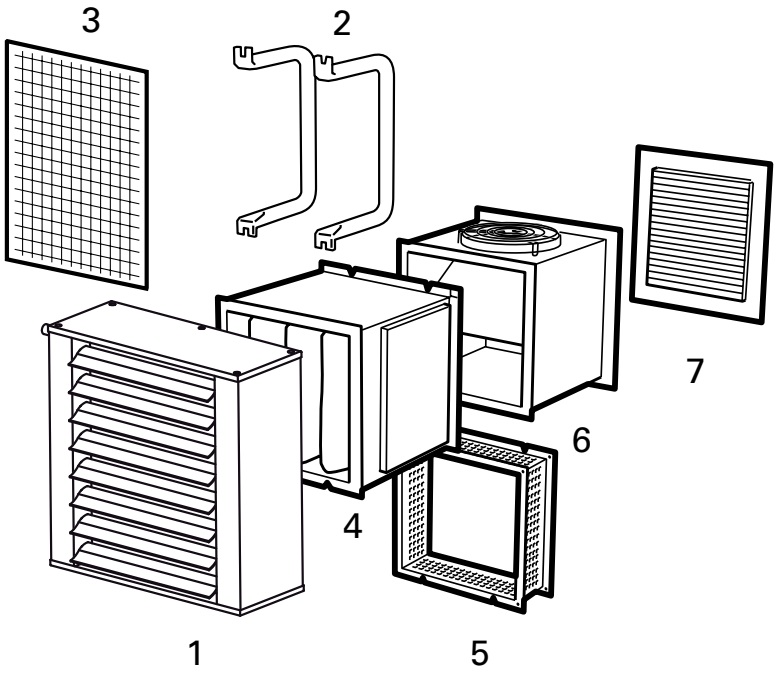
SWH



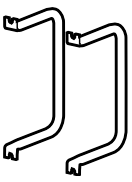
Fan heater SWH

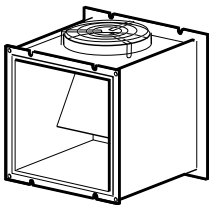
1 Fan heater SWH
2 Mounting brackets SWB
3 Basic filter SWFTN
4 Filter section, deep-pleated bagfilter EU3 SWF
5 Return air intake SWD
6 Mixing cabinet with damper SWBS
7 Outer wall grill SWY
8 Extra air director, adjustable louvres SWLR

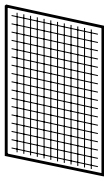
1 Fläktluftvärmare SWH
2 Monteringskonsoler SWB
3 Trådnätsfilter SWFTN
4 Filterskåp, djupveckad filterkasset EU3 SWF
5 Distansdel för filterskåp SWD
6 Blandningsskåp med spjäll SWBS
7 Yttervägggsgaller SWY
8 Extra luftriktare, ställbara lameller SWLR

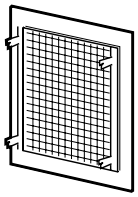


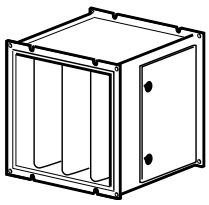
Type	Description	RSK-nr	NRF-nr
SWB0	Mounting brackets SWH02	672 49 10	85 023 14
SWB1	Mounting brackets SWH12	672 49 11	85 023 15
SWB2	Mounting brackets SWH22	672 49 12	85 023 16
SWB3	Mounting brackets SWH32/SWH33	672 49 13	85 023 17
SWFTN02	Basic filter SWH02	673 03 95	
SWFTN1	Basic filter SWH12	673 03 96	
SWFTN2	Basic filter SWH22	673 03 97	
SWFTN3	Basic filter SWH32/SWH33	673 03 98	
SWF1	Filter section SWH12	672 70 14	
SWF2	Filter section SWH22	672 70 15	
SWF3	Filter section SWH32/SWH33	672 70 16	
SWEF1	Extra filter cassette EU3 SWH12	672 70 17	
SWEF2	Extra filter cassette EU3 SWH22	672 70 18	
SWEF3	Extra filter cassette EU3 SWH32/SWH33	672 70 19	
SWD1	Return air intake SWH12	672 70 20	
SWD2	Return air intake SWH22	672 70 21	
SWD3	Return air intake SWH32/SWH33	672 70 22	
SWBS1	Mixing cabinet SWH12	672 70 08	85 021 32
SWBS2	Mixing cabinet SWH22	672 70 09	85 021 33
SWBS3	Mixing cabinet SWH32/SWH33	672 70 10	85 021 34
SWY1	Outer wall grille SWH12	672 70 11	85 021 35
SWY2	Outer wall grille SWH22	672 70 12	85 021 36
SWY3	Outer wall grille SWH32/SWH33	672 70 13	85 021 37
SWLR1	Extra air director sideways SWH12	672 70 26	
SWLR2	Extra air director sideways SWH22	672 70 27	
SWLR3	Extra air director sideways SWH32/SWH33	672 70 28	

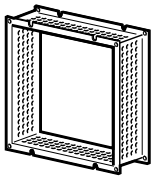

SWB


SWBS

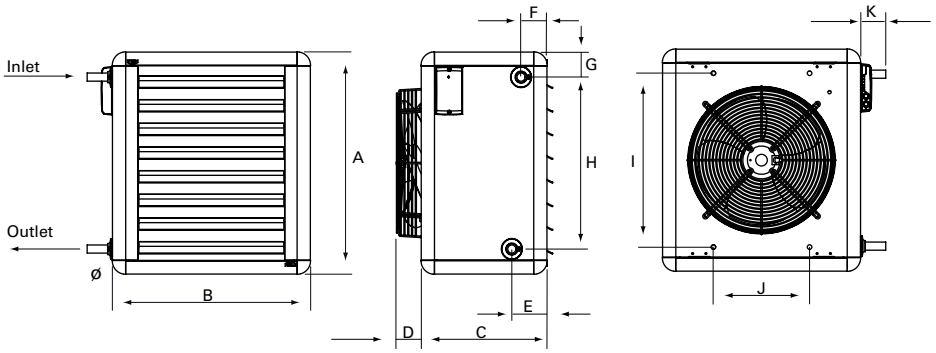

SWFTN


SWY


SWF

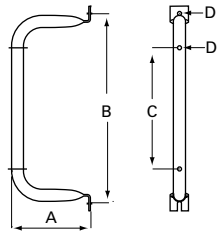

SWD

Dimensions



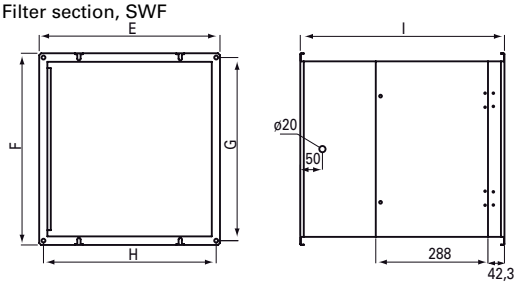
Type	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]	J [mm]	K [mm]	Ø [mm]
SWH02	525	515	320	40	95	70	70	390	405	260	70	22
SWH12	600	535	340	70	95	70	70	465	470	260	70	22
SWH22	725	680	370	50	100	70	70	585	580	400	75	28
SWH32/33	850	820	450	75	100	70	70	710	700	530	75	28

Mounting brackets SWB



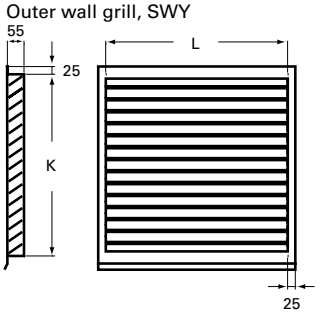
Type	A [mm]	B [mm]	C [mm]	D [mm]
SWB0	195	405	235	10
SWB1	195	470	300	10
SWB2	250	580	410	10
SWB3	335	700	530	10

Filter section, SWF



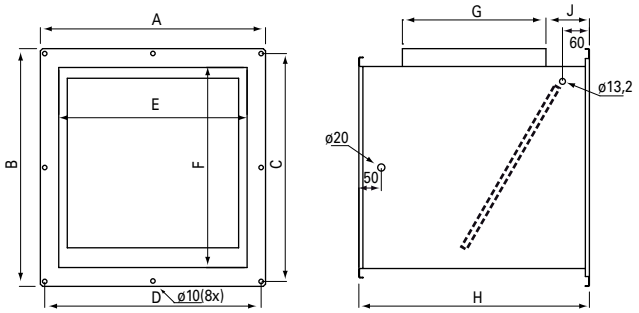
Type	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]
SWF1	466	492	470	444	524
SWF2	616	602	580	594	524
SWF3	746	722	700	724	524

Outer wall grill, SWY



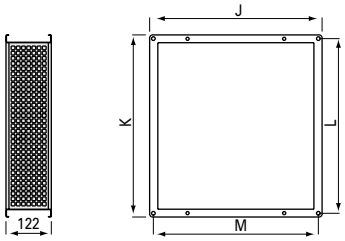
Type	K [mm]	L [mm]
SWY1	500	400
SWY2	600	600
SWY3	800	700

Mixing cabinet with damper, SWBS



Type	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G (ø) [mm]	H [mm]	J [mm]
SWBS1	502	600	578	480	422	448	320	564	97
SWBS2	702	702	680	680	572	558	405	672	109
SWBS3	802	902	880	780	702	678	504	772	114

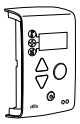
Return air intake, SWD



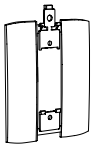
Type	J [mm]	K [mm]	L [mm]	M [mm]
SWD1	466	492	470	444
SWD2	616	602	580	594
SWD3	746	722	700	724

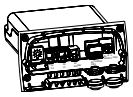
Control SWH

SIRe Basic



SIReUB1,
control unit Basic

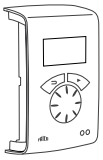


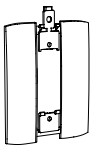


Integrated
control card
Base in SWH

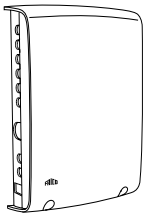
Modular cable

SIRe Competent



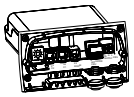


SIReUA1,
control unit
Competent and
Advanced



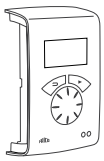
SIReC1X,
control card HUB
Competent

Modular cables

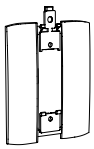


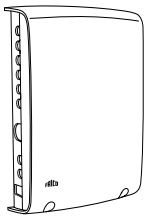
Integrated control
card Base in SWH

SIRe Advanced

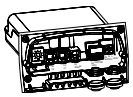


SIReUA1,
control unit
Competent and
Advanced

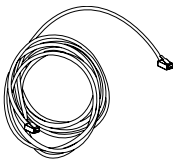




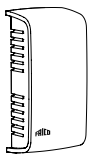
SIReA1X,
control card
HUB Advanced



Integrated
control card
Base in SWH

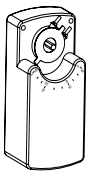


Modular cables



SIReOTX,
outdoor temperature
sensor

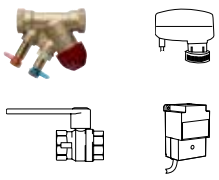
For Advanced with
mixing cabinet -
SIReFAWM also
includes damper
motor SMM24 and
clamp-on sensor
SIReWTA.

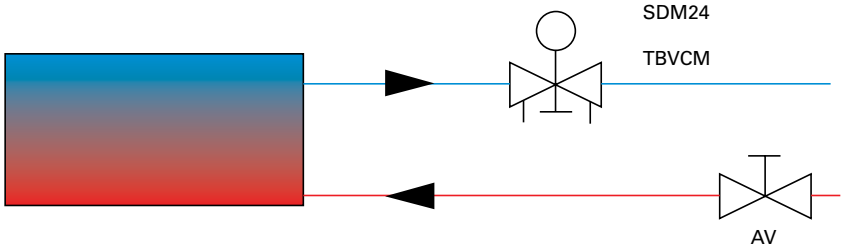


SMM24,
damper
motor

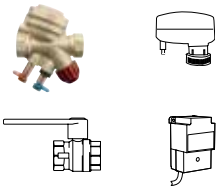
Type	RSK-nr	EL-nr	Description	L (m)
SIReB	673 09 57	49 306 01	Control system SIRe Basic	
SIReFC	673 09 59	49 306 03	Control system SIRe Competent	
SIReFA	673 09 61	49 306 05	Control system SIRe Advanced	
SIReFAWM	673 09 63	49 306 08	Control system SIRe Advanced with mixing cabinett	
SIReRTX	673 09 22		External room temperature sensor	
SIReWTA			Clamp-on sensor	
SIReUR	673 09 21		Kit for recessed installation	
SIReCJ4			Used to join two RJ11(4/4)	
SIReCJ6			Used to join two RJ12 (6/6)	
SIReCC603	673 09 23		Modular cable RJ12	3 m
SIReCC605	673 09 24		Modular cable RJ12	5 m
SIReCC610	673 09 25		Modular cable RJ12	10 m
SIReCC615	673 09 26		Modular cable RJ12	15 m
SIReCC403	673 09 27		Modular cable RJ11	3 m
SIReCC405	673 09 28		Modular cable RJ11	5 m
SIReCC410	673 09 29		Modular cable RJ11	10 m
SIReCC415	673 09 30		Modular cable RJ11	15 m

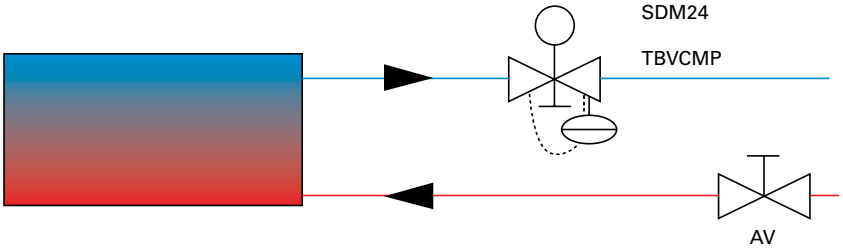
VMO



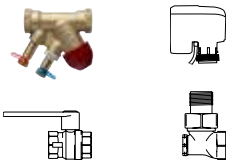


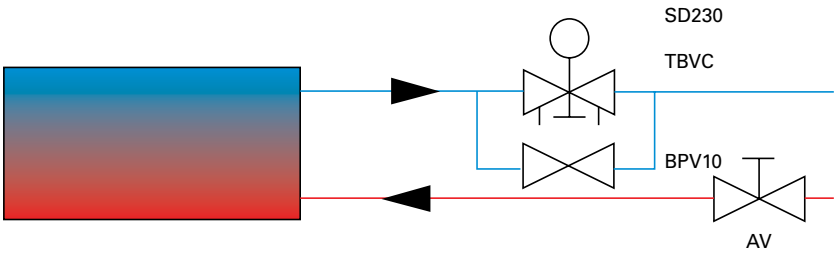
VMOP



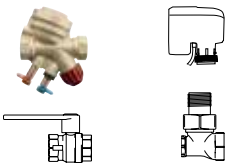


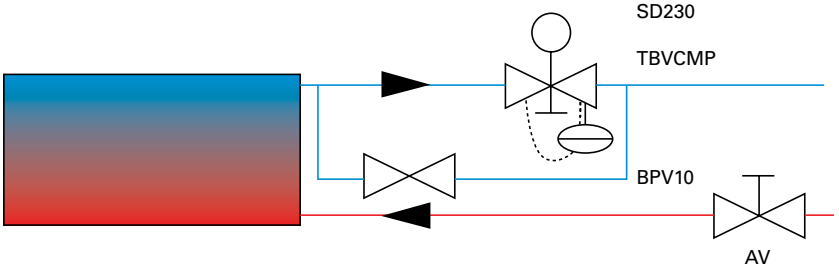
VOS



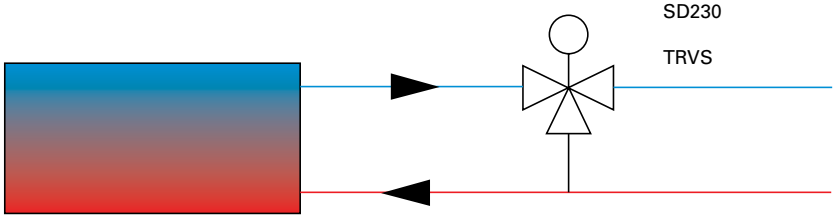


VOSP

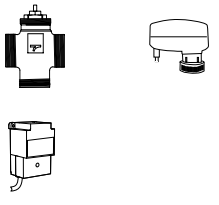


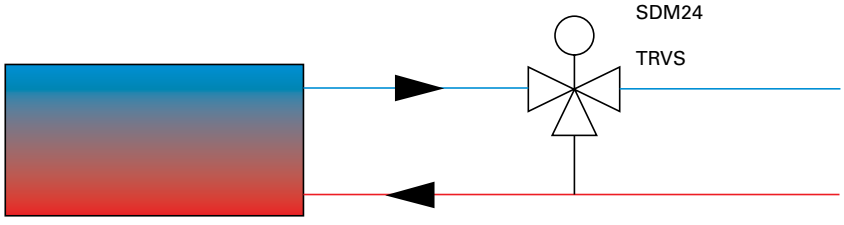


VOT



VMT

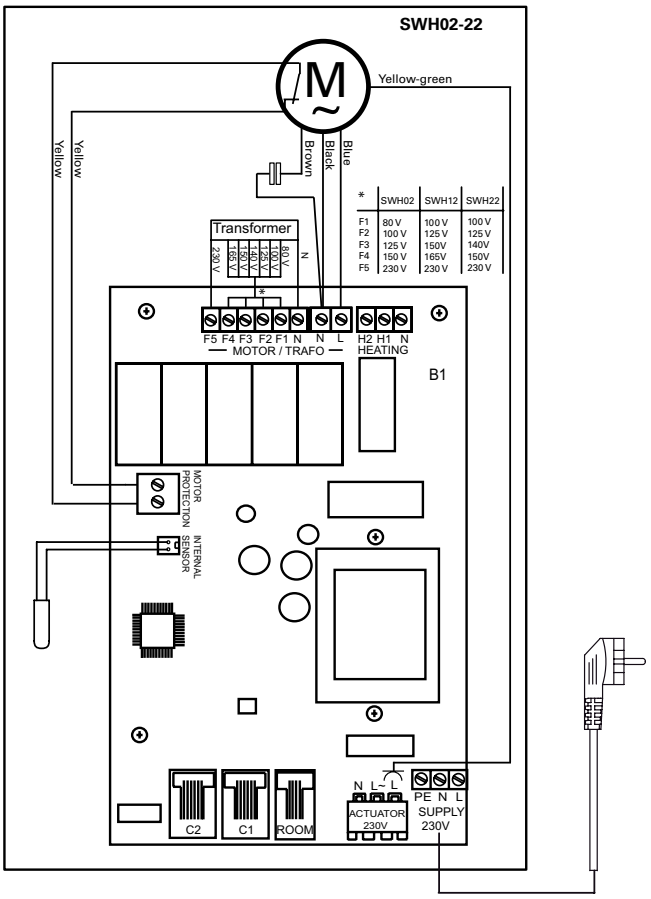


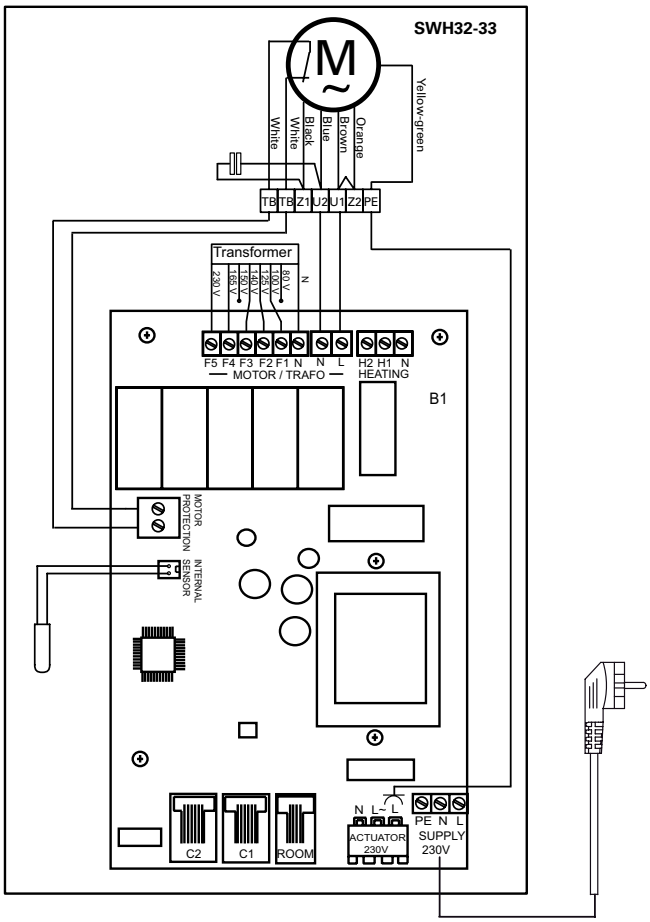


Type	RSK-nr	Description	Flow	Voltage [V]	Connection	Kvs
VMO15LF	673 09 47	Modulating valve kit	Low flow	24 V	DN15	0,40
VMO15NF	673 09 48	Modulating valve kit	Normal flow	24 V	DN15	1,0
VMO20	673 09 49	Modulating valve kit	Normal flow	24 V	DN20	2,0
VMO25	673 09 50	Modulating valve kit	Normal flow	24 V	DN25	4,0
VMOP15LF	673 09 51	Pressure independent and modulating valve kit	Low flow	24 V	DN15	-
VMOP15NF	673 09 52	Pressure independent and modulating valve kit	Normal flow	24 V	DN15	-
VMOP20	673 09 53	Pressure independent and modulating valve kit	Normal flow	24 V	DN20	-
VMOP25	673 09 54	Pressure independent and modulating valve kit	Normal flow	24 V	DN25	-
VOS15LF	673 09 35	Valve kit on/off	Low flow	230 V	DN15	0,90
VOS15NF	673 09 36	Valve kit on/off	Low flow	230 V	DN15	1,8
VOS20	673 09 37	Valve kit on/off	Normal flow	230 V	DN20	3,4
VOS25	673 09 38	Valve kit on/off	Normal flow	230 V	DN20	7,2
VOSP15LF	673 09 43	Pressure independent valve kit	Low flow	230 V	DN15	-
VOSP15NF	673 09 44	Pressure independent valve kit	Normal flow	230 V	DN15	-
VOSP20	673 09 45	Pressure independent valve kit	Normal flow	230 V	DN20	-
VOSP25	673 09 46	Pressure independent valve kit	Normal flow	230 V	DN25	-
VOT15		Three way valve and actuator on/off			DN15	
VOT20		Three way valve and actuator on/off			DN20	
VOT25		Three way valve and actuator on/off			DN25	
VMT15		Three way valve and modulating actuator			DN15	
VMT20		Three way valve and modulating actuator			DN20	
VMT25		Three way valve and modulating actuator			DN25	

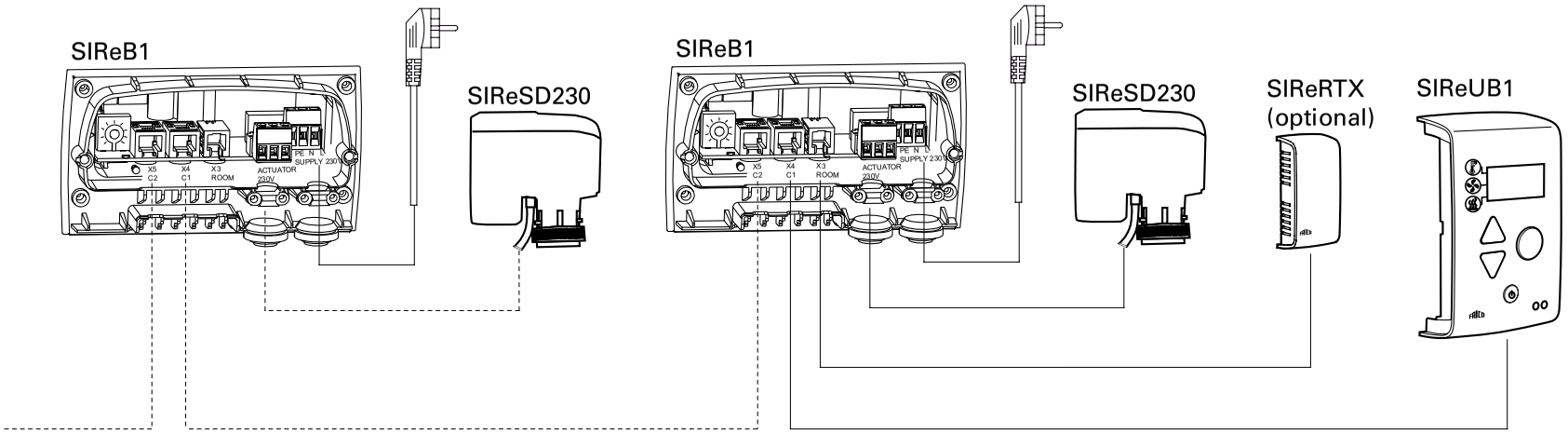
Wiring diagrams SWH

Internal

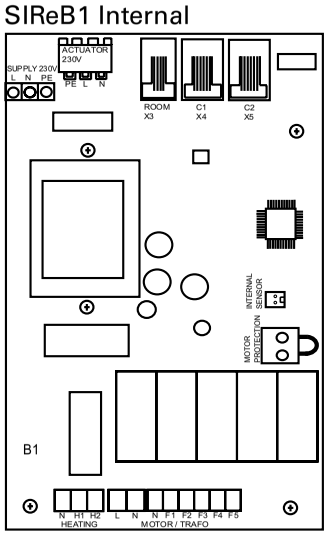


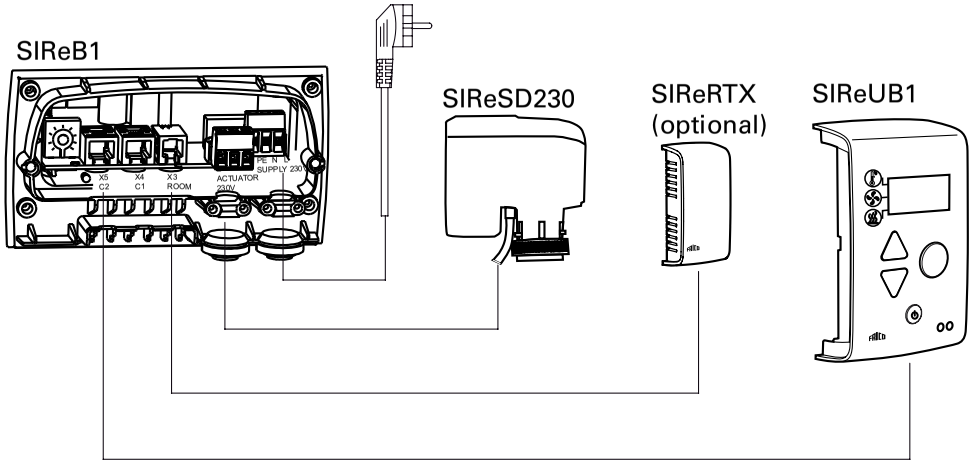


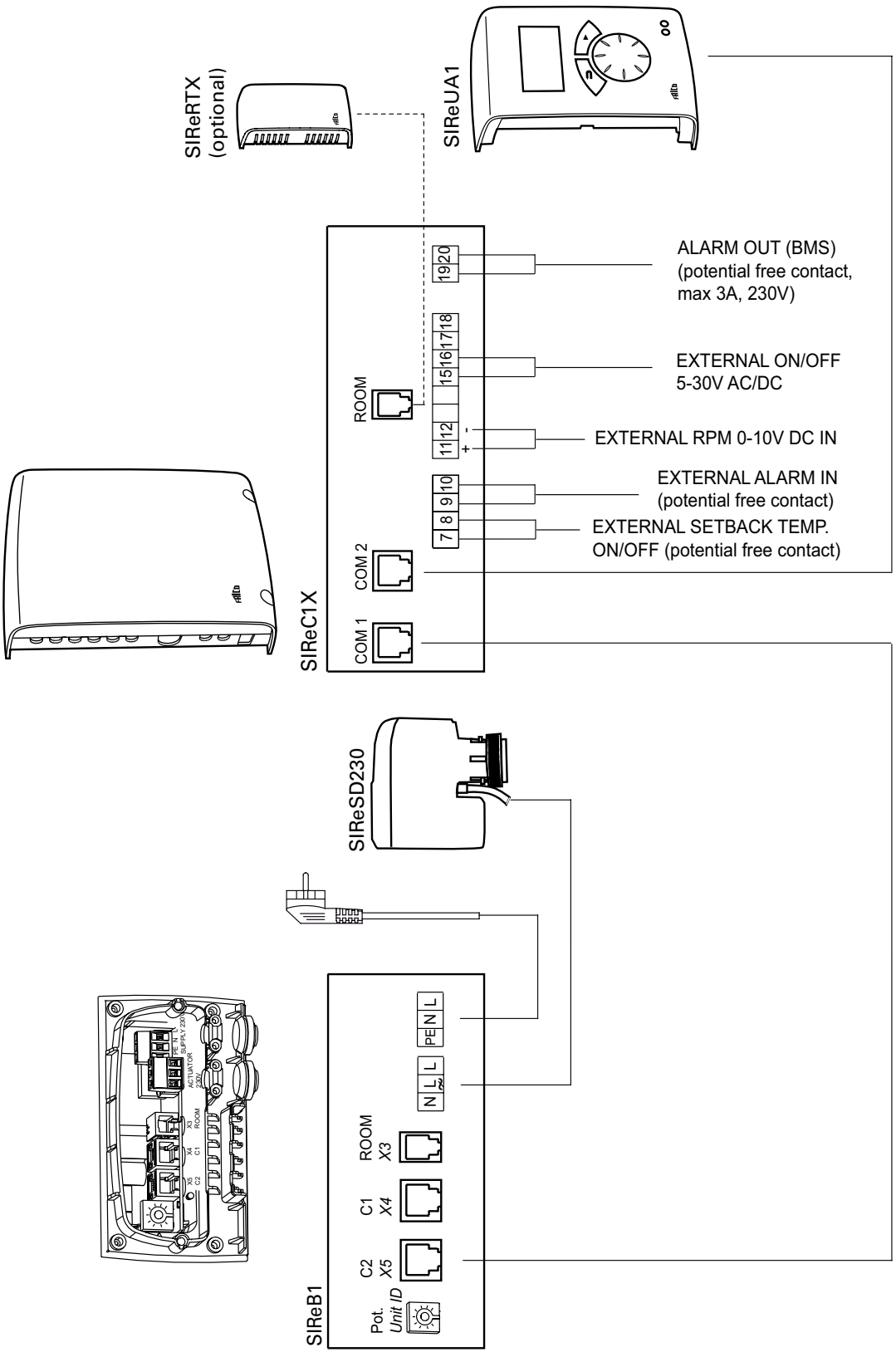
Parallell connection

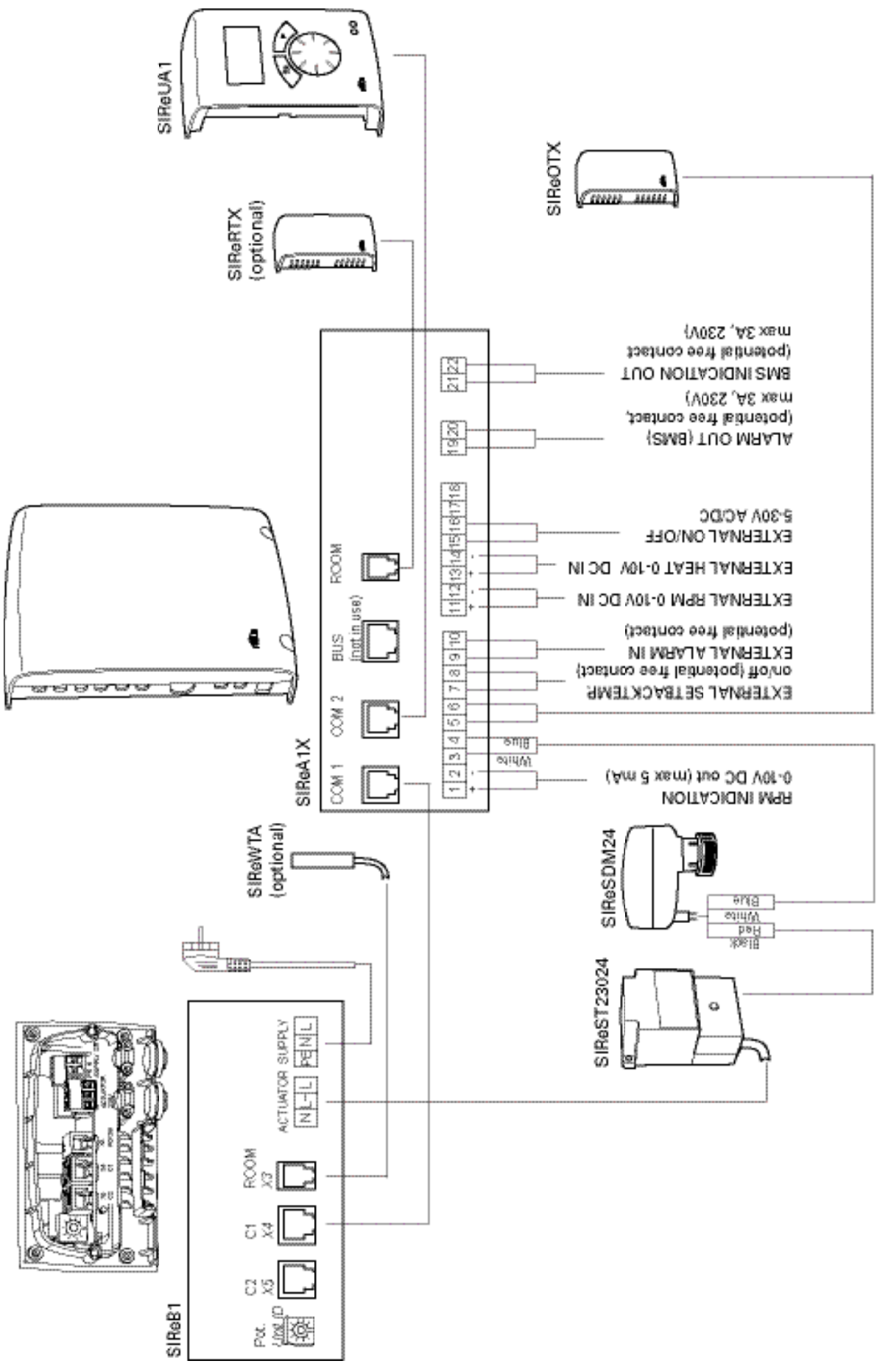


SIRe Basic

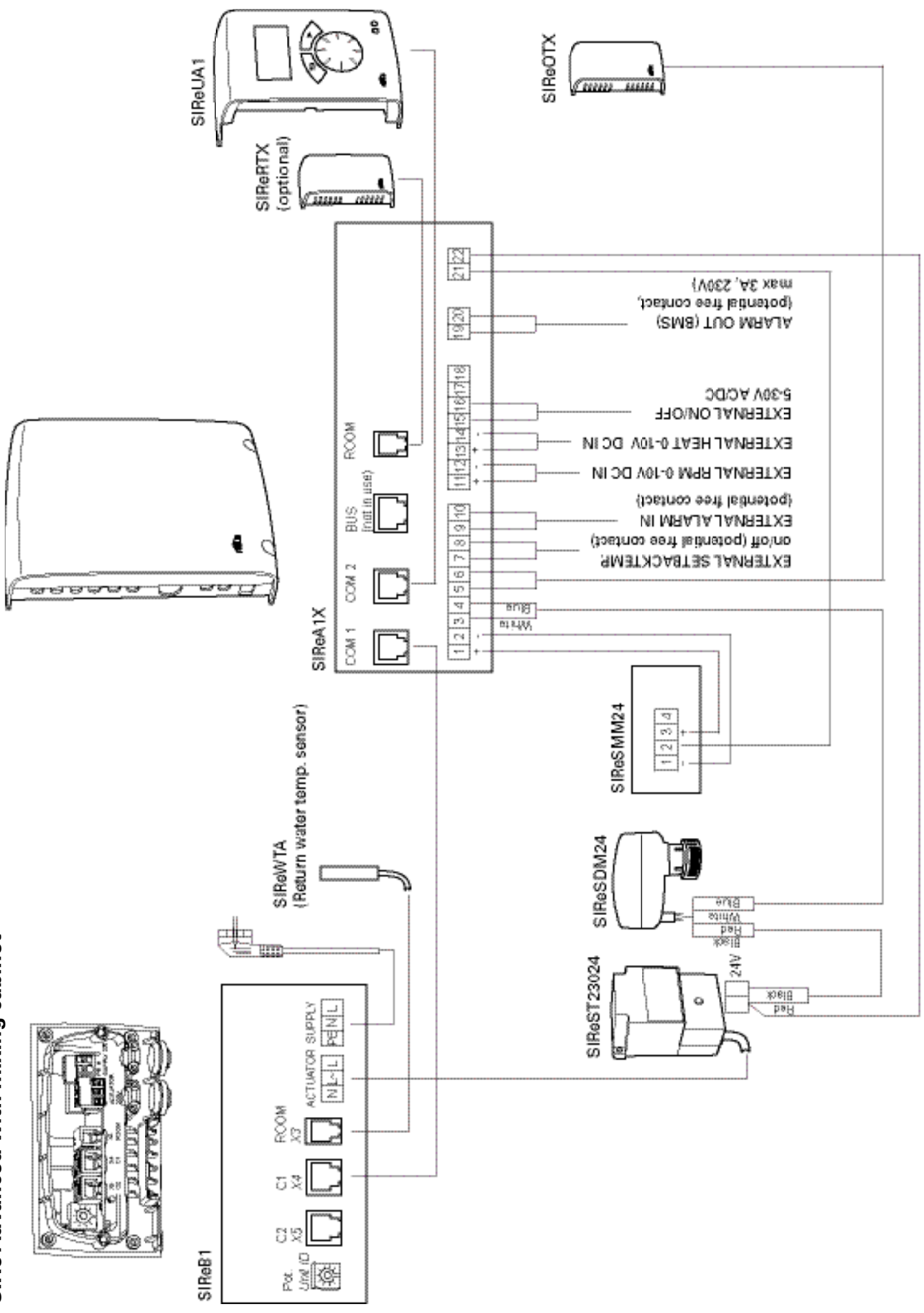





SIReRTX
(optional)
SIReUA1
SIReC1X
ROOM
COM 2
COM 1
19 20
15 16 17 18
11 12
+ -
7 8 9 10
ALARM OUT (BMS)
(potential free contact,
max 3A, 230V)
EXTERNAL ON/OFF
5-30V AC/DC
EXTERNAL RPM 0-10V DC IN
EXTERNAL ALARM IN
(potential free contact)
EXTERNAL SETBACK TEMP.
ON/OFF (potential free contact)
SIReSD230
SIReB1
Pot.
Unit ID
C2
X5
C1
X4
ROOM
X3
N L L
PE N L


SIReUA1
SIReRTX (optional)
SIReOTX
SIReA1X
COM 1
COM 2
BUS (not in use)
ROOM
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
+ -
White
Blue
RPM INDICATION
0-10V DC out (max 5 mA)
EXTERNAL SETBACKTEMP
on/off (potential free contact)
EXTERNAL ALARM IN
(potential free contact)
EXTERNAL RPM 0-10V DC IN
EXTERNAL HEAT 0-10V DC IN
EXTERNAL ON/OFF
5-30V AC/DC
ALARM OUT (BMS)
(potential free contact,
max 3A, 230V)
BMS INDICATION OUT
(potential free contact
max 3A, 230V)
SIReWTA (optional)
SIReSDM24
Black
Red
White
Blue
SIReST23024
SIReB1
Pot. Low/Up
C2 X5
C1 X4
ROOM X3
ACTUATOR
SUPPLY
N L
N L

SIRe Advanced with mixing cabinet



Technical specifications | Fan heater SWH with water heat

Type	RSK-nr	Heat output *1 [kW]	Air flow*2 [m³/h]	Air flow*2 [m³/s]	Sound level*2,3 [dB(A)]	Δt*1,4 [°C]
SWH02	672 68 79	12	530 - 1120	0,15 - 0,31	26 - 39	28
SWH12	672 68 89	20	840 - 1810	0,23 - 0,50	31 - 48	22
SWH22	672 68 99	33	1470 - 3260	0,41 - 0,91	29 - 55	23
SWH32	672 69 09	51	2870 - 5860	0,80 - 1,63	41 - 58	23
SWH33	672 69 19	66	2625 - 5420	0,73 - 1,51	41 - 58	31

Type	Air throw*5 [m]	Water volume*6 [l]	Voltage [V]	Amperage [A]	HxWxD [mm]	Weight [kg]
SWH02	4	1,3	230 V~	0,34	525x515x320	15
SWH12	8	1,5	230 V~	0,64	600x535x340	19
SWH22	10	2,7	230 V~	1,12	725x680x370	27
SWH32	12	3,8	230 V~	2,12	850x820x450	46
SWH33	11	5,2	230 V~	2,13	850x820x450	46

*1) Applicable at water temperature 80/60 °C, air temperature, in +15 °C.
*2) Applies to fan position 1 – 4.
*3) Conditions: Distance to the unit 5 metres. Directional factor: 2. Equivalent absorption area: 200 m².
*4) Δt = temperature rise of passing air at maximum heat output and highest airflow.
*5) The air throw data above is valid for highest airflow when the horizontally adjustable air director is used and the outlet temperature is +40 °C and the room temperature is +18 °C. The air throw is defined as the distance in a straight angle from the fan heater to the pointwhere the air speed has dropped to 0,2 m/s.
*6) Water volume inside battery.

CE compliant.
Protection class: IPX4.

Incoming / outgoing water temperature 130/70 °C

			Air temp. in = -15 °C				Air temp. in = 0 °C				Air temp. in = +15 °C			
Type	**Fan position**	**Airflow**	**Output**	**Air temp. out**	**Water flow**	**Pressure drop**	**Output**	**Air. temp. out**	**Water flow**	**Pressure drop**	**Output**	**Air. temp. out**	**Water flow**	**Pressure drop**
		[m³/s]	[kW]	[°C]	[l/s]	[kPa]	[kW]	[°C]	[l/s]	[kPa]	[kW]	[°C]	[l/s]	[kPa]
SWH02	Max	0,35	26,3	40	0,11	3,8	21,7	48	0,09	2,7	17,3	55	0,07	1,8
	4	0,31	24,4	42	0,10	3,3	20,1	50	0,08	2,3	16,0	57	0,07	1,5
	3	0,27	22,4	45	0,09	2,8	18,5	52	0,08	2,0	14,7	59	0,06	1,3
	2	0,20	18,4	51	0,08	2,0	15,1	57	0,06	1,4	12,0	63	0,05	0,9
	1	0,15	14,7	57	0,06	1,3	12,1	63	0,05	0,9	9,6	68	0,04	0,6
SWH12	Max	0,75	42,1	26	0,17	2,8	34,7	36	0,14	2,0	27,5	45	0,11	1,3
	4	0,50	33,6	34	0,14	1,9	27,6	42	0,11	1,3	21,9	50	0,09	0,9
	3	0,42	30,3	37	0,13	1,6	24,8	45	0,10	1,1	19,7	53	0,08	0,7
	2	0,31	25,1	43	0,10	1,1	20,6	50	0,09	0,8	16,3	57	0,07	0,5
	1	0,23	20,7	49	0,09	0,8	16,9	56	0,07	0,5	13,3	61	0,06	0,3
SWH22	Max	1,17	69,7	29	0,29	3,9	57,6	38	0,24	2,8	45,9	47	0,19	1,8
	4	0,91	60,3	33	0,25	3,0	49,7	42	0,21	2,1	39,6	50	0,16	1,4
	3	0,77	54,6	37	0,23	2,5	45,0	45	0,19	1,8	35,8	53	0,15	1,2
	2	0,59	46,6	42	0,19	1,9	38,3	50	0,16	1,3	30,4	57	0,13	0,9
	1	0,41	36,4	50	0,15	1,2	29,9	56	0,12	0,8	23,7	62	0,10	0,5
SWH32	Max	1,84	109,0	28	0,45	5,5	89,8	38	0,37	3,9	71,7	47	0,30	2,6
	4	1,63	101,0	30	0,42	4,8	83,7	40	0,34	3,4	66,8	48	0,28	2,2
	3	1,33	90,2	34	0,37	3,9	74,4	43	0,31	2,7	59,2	51	0,24	1,8
	2	1,08	79,6	38	0,33	3,1	65,6	47	0,27	2,2	52,2	54	0,22	1,4
	1	0,80	65,6	45	0,27	2,2	53,9	52	0,22	1,5	42,8	59	0,18	1,0
SWH33	Max	1,71	142,0	46	0,59	9,9	117,0	53	0,48	6,9	93,6	59	0,39	4,6
	4	1,51	131,0	48	0,54	8,5	108,0	55	0,45	6,0	86,2	61	0,36	3,9
	3	1,25	116,0	53	0,48	6,8	95,7	59	0,39	4,8	76,2	64	0,31	3,1
	2	1,00	99,8	57	0,41	5,2	82,2	63	0,34	3,6	65,4	68	0,27	2,4
	1	0,73	79,4	64	0,33	3,4	65,2	69	0,27	2,4	52,0	73	0,21	1,6

Incoming / outgoing water temperature 110/80 °C

			Air temp. in = -15 °C				Air temp. in = 0 °C				Air temp. in = +15 °C			
Type	**Fan position**	**Airflow**	**Output**	**Air temp. out**	**Water flow**	**Pressure drop**	**Output**	**Air. temp. out**	**Water flow**	**Pressure drop**	**Output**	**Air. temp. out**	**Water flow**	**Pressure drop**
		[m³/s]	[kW]	[°C]	[l/s]	[kPa]	[kW]	[°C]	[l/s]	[kPa]	[kW]	[°C]	[l/s]	[kPa]
SWH02	Max	0,35	26,9	41	0,22	13,8	22,4	49	0,18	9,9	18,1	57	0,15	6,7
	4	0,31	25,0	43	0,21	12,1	20,7	51	0,17	8,6	16,7	59	0,14	5,8
	3	0,27	22,9	46	0,19	10,3	19,0	54	0,16	7,3	15,3	61	0,13	5,0
	2	0,20	18,7	52	0,15	7,2	15,5	59	0,13	5,1	125,0	65	0,10	3,4
	1	0,15	14,9	58	0,12	4,7	12,3	64	0,10	3,3	9,9	69	0,08	2,2
SWH12	Max	0,75	44,2	28	0,36	11,1	36,8	38	0,30	7,9	29,7	47	0,24	5,4
	4	0,50	35,1	36	0,29	7,3	29,2	45	0,24	5,2	23,5	53	0,19	3,5
	3	0,42	31,6	39	0,26	6,0	26,2	48	0,22	4,2	21,0	55	0,17	2,8
	2	0,31	26,1	45	0,22	4,2	21,6	53	0,18	3,0	17,3	60	0,14	2,0
	1	0,23	21,3	52	0,18	2,9	17,6	58	0,15	2,1	14,1	64	0,12	1,4
SWH22	Max	1,17	72,4	30	0,60	15,0	60,3	40	0,50	10,7	48,8	49	0,40	7,3
	4	0,91	62,5	35	0,51	11,4	51,9	44	0,43	8,1	41,9	53	0,35	5,5
	3	0,77	56,4	39	0,46	9,5	46,9	47	0,39	6,7	37,8	55	0,31	4,5
	2	0,59	48,0	44	0,40	7,1	39,8	52	0,33	5,0	32,0	59	0,26	3,4
	1	0,41	37,3	52	0,31	4,5	30,8	58	0,25	3,1	24,8	64	0,20	2,1
SWH32	Max	1,84	112,0	29	0,93	21,0	93,7	39	0,77	15,0	75,9	48	0,63	10,2
	4	1,63	105,0	32	0,86	18,5	87,3	41	0,72	13,2	70,6	50	0,58	8,9
	3	1,33	93,1	36	0,77	14,8	77,4	45	0,64	10,5	62,5	53	0,51	7,1
	2	1,08	82,0	40	0,68	11,7	68,1	48	0,56	8,3	54,9	56	0,45	5,6
	1	0,80	67,3	46	0,55	8,2	55,7	54	0,46	5,8	44,9	61	0,37	3,9
SWH33	Max	1,71	145,0	47	1,19	36,3	120,0	54	0,99	25,8	96,9	61	0,80	17,4
	4	1,51	133,0	49	1,10	31,1	111,0	56	0,91	22,2	89,2	63	0,73	14,9
	3	1,25	118,0	53	0,97	24,6	97,5	60	0,80	17,6	78,5	66	0,65	11,8
	2	1,00	101,0	58	0,83	18,8	83,5	64	0,69	13,2	67,1	69	0,55	8,9
	1	0,73	80,0	65	0,66	12,3	66,0	70	0,54	8,6	52,9	74	0,44	5,7

Incoming / outgoing water temperature 90/70 °C

			Air temp. in = -15 °C				Air temp. in = 0 °C				Air temp. in = +15 °C			
Type	**Fan position**	**Airflow**	**Output**	**Air temp. out**	**Water flow**	**Pressure drop**	**Output**	**Air. temp. out**	**Water flow**	**Pressure drop**	**Output**	**Air. temp. out**	**Water flow**	**Pressure drop**
		[m³/s]	**[kW]**	**[°C]**	**[l/s]**	**[kPa]**	**[kW]**	**[°C]**	**[l/s]**	**[kPa]**	**[kW]**	**[°C]**	**[l/s]**	**[kPa]**
SWH02	Max	0,35	23,4	34	0,29	23,0	19,0	42	0,23	15,7	14,8	49	0,18	10,0
	4	0,31	21,7	36	0,27	20,0	17,6	44	0,22	13,6	13,7	51	0,17	8,6
	3	0,27	19,9	38	0,24	17,1	16,1	46	0,20	11,6	12,5	52	0,15	7,3
	2	0,20	16,3	43	0,20	11,8	13,1	50	0,16	8,1	10,2	56	0,12	5,1
	1	0,15	12,9	49	0,16	7,8	10,4	54	0,13	5,3	8,1	59	0,10	3,3
SWH12	Max	0,75	38,7	23	0,47	18,7	31,4	32	0,38	12,7	24,4	42	0,30	8,0
	4	0,50	30,7	29	0,38	12,2	24,9	38	0,30	8,3	19,3	46	0,24	5,2
	3	0,42	27,6	33	0,34	10,0	22,3	41	0,27	6,8	17,3	48	0,21	4,2
	2	0,31	22,8	38	0,28	7,1	18,4	45	0,23	4,8	14,2	52	0,17	3,0
	1	0,23	18,6	43	0,23	4,9	15,0	49	0,18	3,3	11,6	55	0,14	2,0
SWH22	Max	1,17	63,2	50	0,77	25,0	51,4	34	0,63	17,1	40,1	43	0,49	10,8
	4	0,91	54,5	29	0,67	19,0	44,2	38	0,54	13,0	34,4	46	0,42	8,2
	3	0,77	49,2	32	0,60	15,8	39,9	40	0,49	10,7	31,0	48	0,38	6,8
	2	0,59	41,9	36	0,51	11,7	33,8	44	0,41	8,0	26,3	51	0,32	5,0
	1	0,41	32,5	43	0,40	7,4	26,2	49	0,32	5,0	20,3	55	0,25	3,1
SWH32	Max	1,84	98,1	24	1,20	35,1	79,8	33	0,98	24,0	62,3	43	0,76	15,2
	4	1,63	91,5	26	1,12	30,9	74,3	35	0,91	21,0	58,0	44	0,71	13,3
	3	1,33	81,2	29	0,99	24,7	65,8	38	0,81	16,8	51,3	46	0,63	10,6
	2	1,08	71,7	33	0,88	19,6	57,7	41	0,71	13,3	45,0	49	0,55	8,4
	1	0,80	58,6	38	0,72	13,6	47,4	46	0,58	9,2	36,7	52	0,47	5,7
SWH33	Max	1,71	126,0	39	1,54	60,4	102,0	46	1,25	41,0	79,4	53	0,97	25,9
	4	1,51	116,0	41	1,42	52,0	93,8	48	1,15	35,2	73,0	54	0,89	22,2
	3	1,25	102,0	45	1,25	41,3	82,7	51	1,01	27,9	64,3	57	0,79	17,6
	2	1,00	87,8	49	1,08	31,2	70,8	54	0,87	21,0	54,9	59	0,67	13,2
	1	0,73	69,5	54	0,85	20,3	55,9	59	0,68	13,6	43,3	63	0,53	8,5

			Incoming / outgoing water temperature 80/60 °C											
			Air temp. in = -15 °C				Air temp. in = 0 °C				Air temp. in = +15 °C			
Type	Fan position	Airflow	Output	Air temp. out	Water flow	Pressure drop	Output	Air. temp. out	Water flow	Pressure drop	Output	Air. temp. out	Water flow	Pressure drop
		[m³/s]	[kW]	[°C]	[l/s]	[kPa]	[kW]	[°C]	[l/s]	[kPa]	[kW]	[°C]	[l/s]	[kPa]
SWH02	Max	0,35	20,7	28	0,25	18,7	16,3	36	0,20	12,2	12,2	43	0,15	7,2
	4	0,31	19,2	30	0,23	16,3	15,1	37	0,18	10,6	11,3	45	0,14	6,2
	3	0,27	17,6	32	0,21	13,9	13,9	39	0,17	9,0	10,3	46	0,13	5,3
	2	0,20	14,4	37	0,18	9,7	11,3	43	0,14	6,3	8,4	49	0,10	3,7
	1	0,15	11,4	41	0,14	6,4	9,0	47	0,11	4,1	6,7	52	0,08	2,4
SWH12	Max	0,75	34,0	18	0,41	15,0	26,8	28	0,33	9,7	20,0	37	0,24	5,7
	4	0,50	27,0	24	0,33	9,8	21,3	33	0,26	6,3	15,8	41	0,19	3,7
	3	0,42	24,2	27	0,30	8,1	19,1	35	0,23	5,2	14,2	42	0,17	3,0
	2	0,31	20,0	31	0,24	5,7	15,7	39	0,19	3,6	11,7	45	0,14	2,1
	1	0,23	16,4	36	0,20	3,9	12,8	42	0,16	2,5	9,5	48	0,12	1,5
SWH22	Max	1,17	55,7	20	0,68	20,2	44,0	29	0,54	13,1	32,9	38	0,40	7,7
	4	0,91	48,0	24	0,58	15,4	37,9	32	0,46	10,0	28,3	40	0,34	5,9
	3	0,77	43,4	26	0,53	12,8	34,2	34	0,42	8,3	25,5	42	0,31	4,8
	2	0,59	36,9	30	0,45	9,5	29,1	38	0,35	6,1	21,7	45	0,26	3,6
	1	0,41	28,7	36	0,35	6,0	22,5	42	0,27	3,9	16,8	48	0,20	2,2
SWH32	Max	1,84	86,4	19	1,05	28,2	68,4	29	0,83	18,4	51,2	38	0,62	10,8
	4	1,63	80,6	21	0,98	24,8	63,8	30	0,78	16,1	47,7	39	0,58	9,5
	3	1,33	71,5	24	0,87	19,9	56,5	33	0,69	12,9	42,2	41	0,51	7,6
	2	1,08	63,0	27	0,77	15,8	49,7	35	0,61	10,2	37,1	43	0,45	6,0
	1	0,80	51,7	32	0,63	11,0	40,7	39	0,50	7,1	30,3	46	0,37	4,1
SWH33	Max	1,71	111,0	32	1,35	48,9	87,7	40	1,07	31,7	65,7	46	0,80	18,6
	4	1,51	102,0	34	1,25	42,1	80,8	41	0,98	27,2	60,4	48	0,74	16,0
	3	1,25	90,5	38	1,10	33,5	71,3	44	0,87	21,6	53,3	50	0,65	12,7
	2	1,00	77,7	41	0,95	25,3	61,1	47	0,74	16,3	45,6	52	0,55	9,5
	1	0,73	61,6	46	0,75	16,5	48,3	51	0,59	10,6	36,0	55	0,44	6,2

Incoming / outgoing water temperature 60/50 °C

			Air temp. in = -15 °C				Air temp. in = 0 °C				Air temp. in = +15 °C			
Type	**Fan position**	**Airflow**	**Output**	**Air temp. out**	**Water flow**	**Pressure drop**	**Output**	**Air. temp. out**	**Water flow**	**Pressure drop**	**Output**	**Air. temp. out**	**Water flow**	**Pressure drop**
		[m³/s]	**[kW]**	**[°C]**	**[l/s]**	**[kPa]**	**[kW]**	**[°C]**	**[l/s]**	**[kPa]**	**[kW]**	**[°C]**	**[l/s]**	**[kPa]**
SWH02	Max	0,35	17,3	21	0,42	49,4	13,1	29	0,32	29,6	9,1	36	0,22	15,2
	4	0,31	16,1	23	0,39	43,0	12,1	30	0,29	25,8	8,4	37	0,20	13,2
	3	0,27	14,7	24	0,36	36,7	11,1	31	0,27	21,9	7,7	38	0,19	11,2
	2	0,20	12,0	28	0,29	25,4	9,1	34	0,22	15,1	6,3	40	0,15	7,7
	1	0,15	9,6	32	0,23	16,7	7,2	37	0,17	9,9	5,0	42	0,12	5,1
SWH12	Max	0,75	28,7	13	0,69	40,5	21,7	22	0,52	24,2	15,0	31	0,36	12,2
	4	0,50	22,8	18	0,55	26,4	17,2	26	0,41	15,7	11,8	34	0,29	7,9
	3	0,42	20,5	20	0,49	21,7	15,4	28	0,37	12,8	10,6	35	0,26	6,5
	2	0,31	16,9	24	0,41	15,2	12,7	31	0,31	9,0	8,7	38	0,21	4,5
	1	0,23	13,8	28	0,33	10,5	10,3	34	0,25	6,2	7,1	40	0,17	3,1
SWH22	Max	1,17	46,9	14	1,13	54,0	35,5	23	0,86	32,4	24,6	32	0,59	16,5
	4	0,91	40,4	17	0,98	41,1	30,5	26	0,74	24,6	21,1	34	0,51	12,5
	3	0,77	36,5	20	0,88	34,1	27,5	28	0,66	20,3	19,0	35	0,46	10,3
	2	0,59	31,0	23	0,75	25,3	23,3	30	0,56	15,0	16,1	37	0,39	7,6
	1	0,41	24,1	28	0,58	15,9	18,1	34	0,44	9,4	12,5	40	0,30	4,8
SWH32	Max	1,84	72,7	14	1,76	75,9	55,1	23	1,33	45,4	38,2	32	0,92	23,1
	4	1,63	67,8	15	1,64	66,6	51,3	24	1,24	39,8	35,6	33	0,86	20,3
	3	1,33	60,1	18	1,45	53,4	45,4	26	1,10	31,8	31,5	34	0,76	16,2
	2	1,08	52,9	21	1,28	42,2	39,9	28	0,96	25,1	27,6	36	0,67	12,7
	1	0,80	43,4	25	1,05	29,2	32,6	32	0,79	17,3	22,5	38	0,54	8,8
SWH33	Max	1,71	92,9	25	2,25	130,0	70,2	32	1,70	77,3	48,7	38	1,18	39,5
	4	1,51	85,6	26	2,07	112,0	64,6	33	1,56	66,4	44,8	39	1,08	33,8
	3	1,25	75,6	29	1,83	88,8	56,9	35	1,38	52,7	39,4	41	0,95	26,8
	2	1,00	64,9	32	1,57	66,9	48,7	37	1,18	39,6	33,7	42	0,81	20,1
	1	0,73	51,4	36	1,24	43,6	38,5	41	0,93	25,6	26,6	45	0,64	13,0

			Incoming / outgoing water temperature 60/40 °C											
			Air temp. in = -15 °C				Air temp. in = 0 °C				Air temp. in = +15 °C			
Type	**Fan position**	**Airflow**	**Output**	**Air temp. out**	**Water flow**	**Pressure drop**	**Output**	**Air. temp. out**	**Water flow**	**Pressure drop**	**Output**	**Air. temp. out**	**Water flow**	**Pressure drop**
		[m³/s]	**[kW]**	**[°C]**	**[l/s]**	**[kPa]**	**[kW]**	**[°C]**	**[l/s]**	**[kPa]**	**[kW]**	**[°C]**	**[l/s]**	**[kPa]**
SWH02	Max	0,35	15,2	17	0,18	11,2	11,0	24	0,13	6,2	7,1	31	0,09	2,8
	4	0,31	14,1	18	0,17	9,7	10,2	25	0,12	5,4	6,6	32	0,08	2,4
	3	0,27	12,9	20	0,16	8,3	9,4	27	0,11	4,6	6,0	33	0,07	2,1
	2	0,20	10,6	23	0,13	5,8	7,7	29	0,09	3,2	4,9	35	0,06	1,4
	1	0,15	8,4	27	0,10	3,8	6,1	32	0,07	2,1	3,9	37	0,05	1,0
SWH12	Max	0,75	24,6	9	0,30	8,6	17,7	18	0,21	4,7	11,1	27	0,13	2,0
	4	0,50	19,6	13	0,24	5,7	14,1	22	0,17	3,1	8,9	29	0,11	1,3
	3	0,42	17,6	15	0,21	4,7	12,7	23	0,15	2,5	8,0	30	0,10	1,1
	2	0,31	14,6	19	0,18	3,3	10,5	26	0,13	1,8	6,6	32	0,08	0,8
	1	0,23	12,0	22	0,14	2,3	8,6	28	0,10	1,3	5,4	34	0,07	0,5
SWH22	Max	1,17	40,5	10	0,49	11,8	29,4	19	0,35	6,5	18,6	28	0,22	2,8
	4	0,91	35,0	13	0,42	9,0	25,3	22	0,31	5,0	16,1	29	0,19	2,2
	3	0,77	31,7	15	0,38	7,5	22,9	23	0,28	4,1	14,5	30	0,18	1,8
	2	0,59	27,0	18	0,33	5,6	19,5	25	0,24	3,1	12,4	32	0,15	1,4
	1	0,41	21,0	22	0,25	3,6	15,2	29	0,18	2,0	9,7	34	0,12	0,9
SWH32	Max	1,84	63,1	10	0,76	16,4	45,8	19	0,55	9,1	29,1	28	0,35	4,0
	4	1,63	58,9	11	0,71	14,5	42,7	20	0,51	8,0	27,2	29	0,33	3,5
	3	1,33	52,3	14	0,63	11,6	37,9	22	0,46	6,4	24,1	30	0,29	2,8
	2	1,08	46,1	16	0,56	9,2	33,4	24	0,40	5,1	21,3	31	0,26	2,2
	1	0,80	37,9	20	0,46	6,4	27,4	26	0,33	3,6	17,5	33	0,21	1,6
SWH33	Max	1,71	81,9	20	0,99	29,0	59,5	27	0,72	16,2	38,3	33	0,46	7,2
	4	1,51	75,6	22	0,91	25,0	54,9	28	0,66	13,9	35,3	34	0,43	6,2
	3	1,25	66,8	24	0,81	20,0	48,5	30	0,58	11,1	31,2	35	0,38	5,0
	2	1,00	57,4	27	0,69	15,1	41,6	32	0,50	8,4	26,8	37	0,32	3,8
	1	0,73	45,6	31	0,55	9,9	33,0	35	0,40	5,5	21,3	39	0,26	2,5

Incoming / outgoing water temperature 60/30 °C

			Air temp. in = -15 °C				Air temp. in = 0 °C				Air temp. in = +15 °C			
Type	**Fan position**	**Airflow**	**Output**	**Air temp. out**	**Water flow**	**Pressure drop**	**Output**	**Air. temp. out**	**Water flow**	**Pressure drop**	**Output**	**Air. temp. out**	**Water flow**	**Pressure drop**
		[m³/s]	**[kW]**	**[°C]**	**[l/s]**	**[kPa]**	**[kW]**	**[°C]**	**[l/s]**	**[kPa]**	**[kW]**	**[°C]**	**[l/s]**	**[kPa]**
SWH02	Max	0,35	13,0	12	0,10	4,1	8,8	19	0,07	2,0	4,8	26	0,04	0,7
	4	0,31	12,1	13	0,10	3,6	8,2	20	0,07	1,8	4,5	27	0,04	0,6
	3	0,27	11,1	15	0,09	3,1	7,5	21	0,06	1,5	4,1	27	0,03	0,5
	2	0,20	9,1	18	0,07	2,2	6,2	24	0,05	1,1	3,4	29	0,03	0,4
	1	0,15	7,3	21	0,06	1,4	5,0	26	0,04	0,7	2,7	30	0,02	0,2
SWH12	Max	0,75	20,4	5	0,16	2,9	13,6	14	0,11	1,4	7,1	23	0,06	0,4
	4	0,50	16,3	9	0,13	2,0	10,9	17	0,09	0,9	5,7	24	0,05	0,3
	3	0,42	14,7	10	0,12	1,6	9,8	18	0,08	0,8	5,1	25	0,04	0,2
	2	0,31	12,2	13	0,10	1,2	8,2	20	0,07	0,6	4,3	26	0,03	0,2
	1	0,23	10,1	17	0,08	0,8	6,8	22	0,05	0,4	3,5	27	0,03	0,1
SWH22	Max	1,17	34,1	6	0,27	4,1	23,0	15	0,18	2,0	12,3	24	0,10	0,6
	4	0,91	29,5	9	0,24	3,2	20,0	17	0,16	1,6	10,6	25	0,09	0,5
	3	0,77	26,8	10	0,21	2,7	18,1	18	0,15	1,3	9,7	25	0,08	0,4
	2	0,59	22,9	13	0,18	2,0	15,5	20	0,12	1,0	8,3	26	0,07	0,3
	1	0,41	18,0	17	0,14	1,3	12,1	23	0,10	0,6	6,5	28	0,05	0,2
SWH32	Max	1,84	53,2	6	0,43	5,8	36,1	15	0,29	2,8	19,3	24	0,16	0,9
	4	1,63	49,7	7	0,40	5,1	33,7	16	0,27	2,5	18,1	24	0,15	0,8
	3	1,33	44,3	9	0,36	4,1	30,0	17	0,24	2,0	16,1	25	0,13	0,6
	2	1,08	39,2	11	0,31	3,3	26,5	19	0,21	1,6	14,3	26	0,11	0,5
	1	0,80	32,4	15	0,26	2,3	21,9	21	0,18	1,1	11,8	27	0,09	0,4
SWH33	Max	1,71	70,6	15	0,57	10,6	48,2	22	0,39	5,3	26,4	28	0,21	1,8
	4	1,51	65,2	17	0,52	9,2	44,6	23	0,36	4,6	24,4	28	0,20	1,5
	3	1,25	57,8	19	0,46	7,4	39,5	24	0,32	3,7	21,6	29	0,17	1,2
	2	1,00	49,8	21	0,40	5,6	34,1	26	0,27	2,8	18,6	30	0,15	0,9
	1	0,73	39,7	25	0,32	3,7	27,2	29	0,22	1,9	14,9	32	0,12	0,6

			Incoming / outgoing water temperature 55/35 °C											
			Air temp. in = -15 °C				Air temp. in = 0 °C				Air temp. in = +15 °C			
Type	**Fan position**	**Airflow**	**Output**	**Air temp. out**	**Water flow**	**Pressure drop**	**Output**	**Air. temp. out**	**Water flow**	**Pressure drop**	**Output**	**Air. temp. out**	**Water flow**	**Pressure drop**
		[m³/s]	**[kW]**	**[°C]**	**[l/s]**	**[kPa]**	**[kW]**	**[°C]**	**[l/s]**	**[kPa]**	**[kW]**	**[°C]**	**[l/s]**	**[kPa]**
SWH02	Max	0,35	13,8	14	0,17	9,5	9,7	21	0,12	5,0	5,8	28	0,07	1,9
	4	0,31	12,8	15	0,15	8,3	9,0	22	0,11	4,4	5,3	29	0,06	1,7
	3	0,27	11,8	16	0,14	7,1	8,2	23	0,10	3,7	4,9	30	0,06	1,5
	2	0,20	9,7	20	0,12	5,0	6,8	26	0,08	2,6	4,0	31	0,05	1,0
	1	0,15	7,7	23	0,09	3,3	5,4	28	0,06	1,7	3,2	33	0,04	0,7
SWH12	Max	0,75	22,0	7	0,27	7,2	15,4	16	0,19	3,7	8,9	25	0,11	1,4
	4	0,50	17,7	11	0,21	4,8	12,3	19	0,15	2,4	7,1	26	0,09	0,9
	3	0,42	15,9	12	0,19	3,9	11,1	20	0,13	2,0	6,4	27	0,08	0,7
	2	0,31	13,2	16	0,16	2,8	9,2	23	0,11	1,4	5,3	29	0,06	0,5
	1	0,23	10,8	19	0,13	1,9	7,5	25	0,09	1,0	4,4	30	0,05	0,4
SWH22	Max	1,17	36,8	8	0,44	10,0	25,7	17	0,31	5,2	15,0	26	0,18	2,0
	4	0,91	31,8	11	0,38	7,6	22,2	19	0,27	4,0	13,0	27	0,16	1,5
	3	0,77	28,7	12	0,35	6,3	20,1	20	0,24	3,3	11,8	27	0,14	1,2
	2	0,59	24,5	15	0,29	4,7	17,1	22	0,21	2,5	10,0	29	0,12	0,9
	1	0,41	19,1	19	0,23	3,0	13,3	25	0,16	1,6	7,9	31	0,09	0,6
SWH32	Max	1,84	57,2	8	0,69	13,9	40,1	17	0,48	7,2	23,6	25	0,28	2,7
	4	1,63	53,4	9	0,64	12,2	37,4	18	0,45	6,4	22,0	26	0,26	2,4
	3	1,33	47,5	11	0,57	9,8	33,2	19	0,40	5,1	19,5	27	0,24	1,9
	2	1,08	41,9	13	0,50	7,8	29,3	21	0,35	4,1	17,3	28	0,21	1,5
	1	0,80	34,5	16	0,41	5,5	24,1	23	0,29	2,8	14,2	29	0,17	1,1
SWH33	Max	1,71	74,6	17	0,90	24,7	52,5	24	0,63	13,0	31,3	30	0,38	5,0
	4	1,51	68,8	18	0,83	21,3	48,4	25	0,58	11,2	28,9	31	0,35	4,4
	3	1,25	60,9	20	0,73	17,0	42,8	26	0,51	8,9	25,6	32	0,31	3,5
	2	1,00	52,4	23	0,63	12,9	36,8	28	0,44	6,8	22,0	33	0,26	2,6
	1	0,73	41,6	27	0,50	8,5	29,2	31	0,35	4,4	17,6	35	0,21	1,8

Assembly and operating instructions

General Instructions

Read these instructions carefully before installation and use. Keep this manual for future reference.
The product may only be used as set out in the assembly and operating instructions. The guarantee is only valid if the product is used in the manner intended and in accordance with the instructions.

Application

SWH belongs to a new generation of intelligent fan heaters with SIRe integrated controls. SWH and SIRe together can provide fully automatic room heating, adaptable to each area of use.
SWH is suitable for use in premises where fan heaters are traditionally used, such as industrial buildings, as well as environments with low sound requirements.
Protection class: IPX4.

The unit consists of the following:

Corrosion-proof, hot rolled galvanized and powder coated casing. Colour code: RAL9016, NCS 0500. Top/bottom lids are easy to open and are fitted with hinges for easy and simple installation and maintenance.

Fully enclosed single-phase 230V, 50Hz, intergrated motor with an axial fan. Protection class IP44. Maximum surrounding temperature: +40 °C.

The motor is equipped with an automatically returning thermocontact which is connected to the terminal blocks.

Heating coil with aluminium fins (fin distance 2 mm) and copper tubes. Smooth pipe connections for soldering or clamping ring coupling. In standard designs, SWH is intended for hot water up +125 °C and 10 bar.

All models are delivered with individually adjustable louvres for controlling the air current in one direction. Louvres of anodized aluminium.

Mounting

The unit is delivered with casing, fan, heating coil and air director as standard. Mounting brackets are orded separately.

Can be mounted on the wall for horisontal air distribution or on the ceiling for vertical air distribution. By turning the fan heater, pipe connections are possible on both sides.

Mounting without accessories

Measure and mark the drilling holes on the wall or on the celing. Use a suitable screwing device to fit the brackets. Use the included set of screws to fit the brackets on to the unit.

Mounting with mixing cabinet SWBS and filter section SWF

The mixing cabinet and/or the filter section are mounted together with the unit with screws or guides.

The damper motor is fitted to the damper shaft. If required, the damper motor can be mounted on the opposite side of the mixing cabinet by loosening the screws holding the shaft. These screws can be reached from the inside of the mixing cabinet.

When the filter section is used with the unit only and mounted on to the wall, use the return air intake SWD. The return air intake is mounted together with the SW unit with screws or guides. The return air intake is mounted on to the wall with a suitable screwing device.

When the mixing cabinet is fitted with a return air duct, remove the three screws holding the circular protection grill and install a circular duct on to the mixing cabinet. The construction should bee stabilized by pendlums, rods, straps or similar from the wall or the ceiling.

Check the connections between the units, in case of air leakage use a suitable strip seal. All casings of the accessories are laquered on delivery.

Mounting of the basic filter SWFTN

The unit can be provided with a basic filter to protect the heating coil (not included on delivery). The top/bottom lid is opened, and

the filter is slid down behind the coil in tracks for this purpose. The filter can be reached for installation and cleaning/maintenance from both top or bottom of the unit.

SWH with the extra air director SWLR
The extra air director is mounted to the unit by hooking it onto the existing air director.

Ceiling mounting
The unit, the mixing cabinet and the filter section are mounted onto each other on the floor and lifted up as one unit to be mounted on the ceiling. The units should be mounted together with screws or guides.

Connection of heating coil
The installation should be carried out by a certified installer. By turning the fan heater, pipe connections are possible on both sides. Heating coil with copper pipes. Smooth pipe connections for soldering or compression fittings. For correct inlet and outlet connection of the heating coil, see dimension sketch.
Note! Be careful while connecting the pipes to prevent pipe damage and water leakage. The heating coil must not be connected to a mains pressure water system or an open water system.

Prior to use, the pipe system should be ventilated. The air valve should be connected on a high point in the pipe system. Air and draining valves are not included in the heating coil.

Units that are likely to be exposed to air temperatures below zero, for example when a mixing cabinet is used, should be equipped with external frost protection to ensure that the heating coil is not damaged by frost.

Electrical installation
The electrical installation should be carried out by a qualified electrician in conformity with prevailing regulations. The appliance should be preceded by an triple-pole switch with at least 3 mm breaking gap.

The fan motor is connected via the integrated control card that is located on the unit.

The control system is preinstalledin the fan heater with an integrated control card. SIRe is supplied pre-programmed with quick-release connections.See manual for SIRe.

The motor has a built-in thermal safety cut-out to protect against overheating. Alarm goes off and resets with SIRe. See manual for SIRe.

After the electrical installation of the motor, check the rotation of the fan. Seen from the inlet side, the impellers should be rotating anti-clockwise.

Maintenance
To ensure performance and reliabilty of the unit, inspection and cleaning should be carried out reguarly. Inspection should be carried out at least twice a year. Clean the unit when needed. During inspection the power supply must always be disconnected.

Cleaning the fan
Cleaning intervals of the fan is due to filter (if any) and air quality. When a filter section with a deep-pleated bag filter is used and the indoor air is of normal quality, the unit is generally cleaned once a year. If the impellers are not cleanded properly, vibrations/noise can occur and severly damage the bearings. If the vibrations/noise remain after cleaning, please contact a certified technician.
The unit, the mixing cabinet, the filter section and the heating coil can be vaccumed from dust.
When there are no accessories on the inlet side, inspection of the fan can be made from the outside of the unit. When the filter section is used, inspection can be carried out by the inspection door on the side of the filter section. To inspect the fan when the mixing cabinet is used (with no other accessories on the inlet side), the mixing box must be dismantled.

Filter

If used, the basic filter should be cleaned when necessary and checked at least 4 times a year. To clean the filter, open top or bottom lid by loosening a pair of screws underneath the lid and vaccum.
The filter in the filter section is a deep-pleated bag filter, type EU3 (G85). It should be replaced when the recommended pressure drop is increasing 75 Pa. Check the pressure drop at least 4 times a year.
Pressure drop for deep-pleated bagfilter replacement: 75 Pa.

Replacement filter of 20 mm frame width:

	WxHxD [mm]	Number of bags
SWEF1	420x446x350	4
SWEF2	552x558x400	4
SWEF3	630x680x450	5

Damper

Damper with accessories should be checked reguarly. The damper shaft should be lubricated when neccesary.

Heating coil

Inspect the coil for water leakage and corrosion. Dust on the surface of the heating coil can be vaccumed.

Motor

The motor is normaly maintenanance-free. If noise or vibrations should occur, inspect the bearing and replace it if necessary. Replacement should be carried out by a certified technician.

Safety

- *Ensure that the area around the intake is kept free from material which could prevent the air flow through the appliance!*
- *The appliances have hot surfaces during operation!*
- *This product is not designed to be used by children or persons with reduced physical or mental ability or a lack of experience and knowledge, unless instruction regarding the product's use has been given by a person with responsibility for their safety or that this person supervises operation. Children must be kept under supervision to ensure they do not play with the product.*
- *Lifting aids should be used to lift the appliance.*
- *When adjusting the louvers, please notice that the water heating coil may have sharp edges.*

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