

FCZI SA

Fan coils

Vertical and horizontal

Universal and floor installation

Cooling capacity 1,0 ÷ 17,1 kW

Heating capacity 0,9 ÷ 8,6 kW



FCZI SA AS



FCZI SA U

- **ELECTRIC SAVING EQUAL TO 50% COMPARED TO A FAN COIL WITH 3-SPEED MOTOR**
- **ADVANCED CONTROLLER ALLOWING PROGRAMMING VIA SMART DEVICES**

FEATURES

The fan coils of the FCZI SA series are suitable for air conditioning. These machines, with their revamped design, are available in various set-ups depending on the installation position, with the possibility of being ducted as well. They feature brushless inverter motors coupled with ABS fans with an impeller equipped with inspectionable airfoil and scroll fins. This feature gives the machine a net reduction in the noise emission level, as well as a reduction in the motor's electrical consumption compared to traditional fans with a metal structure. The unit has a coil with 3 or 4 rows and can have a secondary 1 or 2 row coil for four-pipe system configurations. FCZI SA units are compatible with the VMF management system.

Versions without installed controller,

Vertical installation FCZI SA AS

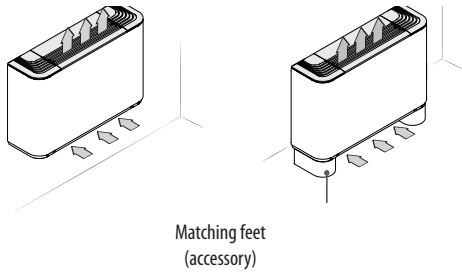
Vertical or horizontal installation: FCZI SA U

- housing RAL9003, grille/feet RAL 7047
- Brushless motor with 0-100% speed continuous variation to guarantee best performance at very low sound level
- Centrifugal fan designed to guarantee continuous modulation of the air flow rate and to increase comfort and electric saving.
- Metallic protective cabinet with rustproofing polyester paint
- Adjustable air distribution grille (U version)

- Automatic power-off function with closure of the air delivery grille, (U version)
- Low loss of charge in the heat exchanger
- Easy installation and maintenance
- **G2** air filter for all versions, extractable shrouds for easy, effective cleaning
- Water connections can be reversed during installation phase

Configurations available

With fixed grille (vertical free-standing) - AS



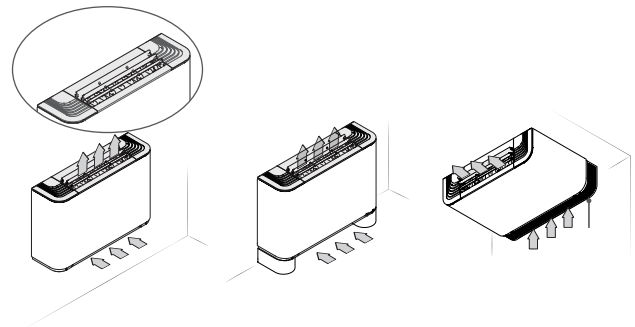
- **FCZ SA AS**
 - Without installed controller
 - Compatible with VMF system

Vertical installation only

- For 2/4 pipe systems

With adjustable/fixed grille (Universal) - U

With adjustable air distribution grille - U



- **FCZI SA U**
 - Without installed controller
 - Compatible with VMF system
 - Adjustable air distribution grille
 - Single for size 2-3
 - Three independent for sizes 4-5-7

With the flap completely closed the unit is off

Vertical or horizontal installation

- For 2/4 pipe systems

UNIT SELECTION

By appropriately combining the variety of options available, each model can be configured in order to meet all specific system requirements.

Description

FCZI SA

Size

2-3-4-5-7-9

Main coil

- 0 Standard
- 5 Oversized (1)

Supplementary coil

- 0 Without coil
- 1 Standard
- 2 Oversized

Versions

- AS Free standing without installed switch
- U Universal with adjustable grille, without installed controller

Voltage

110V-240V - 50Hz/60Hz

(1) Oversized coil "5" does not allow the installation of the supplementary coil "1 or 2"

SIZE AVAILABLE FOR VERSION

Version	Size available main coil only (2 pipes)											
FCZI SA	200	250	300	350	400	450	500	550	700	750	900	901
AS
U

Version	Size available main and supplementary coil (4 pipes)										
FCZI SA	201	202	301	302	401	402	501	502	701	702	901
AS
U

ACCESSORIES

Probes and accessories for control panels

- **WMT21:** Electronic thermostat with LCD display (wall installation).
- **SWAI:** Water temperature probe for WMT21 control panels. Cable length L=2m.

VMF system

- **VMF-E2Z:** User interface for mounting on with two selectors: one to control the temperature and one for the speed
- **VMF-E4:** Wall mounted user interface allowing control via a capacitive touch keyboard.
- **VMF-E5:** Wall recessed panel allowing control of a complete hydronic system via a capacitive touch keyboard.
- **VMF-E18X:** Thermostat for serial communication
- **VMF-SW:** water sensor replacing that supplied with VMF-E1 thermostats for installation upstream of the valve.
- **VMF-SW1:** additional water sensor for 4-pipe systems with E1 thermostats offering maximum control in the cooling range.

Coil - Hot water

- **BV:** Single row hot water heat exchanger

Valve kit

- **VCZ_X4:** Valve kits for single coil units, installed in 4 pipe systems with totally separated "Cooling" and "Heating" circuits. The kit consists of 2 valves with 3-way 4 port connection complete with electro-thermal actuators, insulating shells for the valves and associated hydraulic piping. The VCF1X4L valve kit allows left side connection.
- **VCZ or VCF:** kit containing a motorised 3-way valve with insulating shell plus coupling and pipes in insulated copper. Applicable for standard or oversized main coil.
- **VCZD or VCFD:** Kit consisting of powered 2-way valve, copper Applicable for standard or oversized main coil.
- **VJP/VJP_M:** Control and balancing combination valve for 2 and 4 pipe systems to install outside the unit, supplied without fittings and hydraulic components. The valve, can guarantee a constant water flow rate in the terminal, within its operating range.

The VJP is controlled by on-off logic with compatible control panels (accessories)

The VJP_M is controlled by modulating logic with panels not supplied by Aermec

The design water flow rate is crucial to refine the selection of the valve shown in the compatibility table.

Installation accessoires

- **AMP:** kit for the wall mounting installation.
- **DSC4:** Condensate drainage device for use when natural run-off is not possible.
- **GA:** Grille to hide hydraulics and electrics on ceiling mounted units; also applicable for floor installation.
- **ZXZ:** Copy of esthetical and structural feet

Compatibility of accessories

FCZI SA				Single coil model											
				200	250	300	350	400	450	500	550	700	750	900	950
V	Hz														
Probes and accessories for control panels															
WMT21	AS-U	24/230	50	•	•	•	•	•	•	•	•	•	•	•	•
SWAI	AS-U	In combination with WMT21													
VMF System															
VMF-E18X	AS-U	230	50/60	•	•	•	•	•	•	•	•	•	•	•	•
VMF-E2Z	AS-U			•	•	•	•	•	•	•	•	•	•	•	•
VMF-E4	AS-U	5	dc	•	•	•	•	•	•	•	•	•	•	•	•
VMF-E5	AS-U	24	50/60	•	•	•	•	•	•	•	•	•	•	•	•
VMF-SW	AS-U			•	•	•	•	•	•	•	•	•	•	•	•
VMF-SW1	AS-U			•	•	•	•	•	•	•	•	•	•	•	•
Additional coil (heating only)															
BV122	AS-U			•											
BV132	AS-U				•										
BV142	AS-U							•		•					
BVZ800	AS-U											•			
BV162	AS-U													•	
Water valves															
Valve Kit for 4 pipe systems with main coil															
VCZ1X4L-R	AS-U	24	50/60	•	•										
VCZ2X4L-R	AS-U	24	50/60			•	•	•	•	•	•	•	•		
VCZ3X4L-R	AS-U	24	50/60											•	•
3 way valve kit															
VCZ41	AS-U	230	50/60	•	•										
VCZ42	AS-U	230	50/60			•	•	•	•	•	•	•	•		
VCZ43	AS-U	230	50/60											•	•
VCZ4124	AS-U	24	50/60	•	•										
VCZ4224	AS-U	24	50/60			•	•	•	•	•	•	•	•		
VCZ4324	AS-U	24	50/60											•	•
2 way valve kit															
VCZD1	AS-U	230	50/60	•	•										
VCZD2	AS-U	230	50/60			•	•	•	•	•	•	•	•		
VCZD3	AS-U	230	50/60											•	•
VCZD124	AS-U	24	50/60	•	•										
VCZD224	AS-U	24	50/60			•	•	•	•	•	•	•	•		
VCZD324	AS-U	24	50/60											•	•
Combined adjustment and balancing valve independent of pressure															
VJP060	AS-U	230	50/60	•	•	•	•			•	•	•			
VJP090	AS-U	230	50/60						•	•	•	•			
VJP150	AS-U	230	50/60										•	•	•
VJP060M	AS-U	24	50/60	•	•	•	•								
VJP090M	AS-U	24	50/60						•	•	•	•			
VJP150M	AS-U	24	50/60										•	•	•
Installation accessories															
AMP20	U			•	•	•	•	•	•	•	•	•			
AMPZ	U			•	•	•	•	•	•	•	•	•	•	•	•
DSC4	AS-U	230	50/60 (1)	•	•	•	•	•	•	•	•	•	•	•	•
Panel to close rear of unit															
PCZ200	AS-U			•	•										
PCZ300	AS-U					•	•								
PCZ500	AS-U							•	•	•	•				
PCZ800	AS-U											•	•		
PCZ1000	AS-U													•	•
Grille for ceiling mounted units															
GA200	U			•	•										
GA300	U					•	•								
GA500	U							•	•	•	•				
GA800	U											•	•	•	•
ZXZ	AS-U			•	•	•	•	•	•	•	•	•	•	•	•

For further details concerning control panels and VMF system refer to the dedicated sheets.

* Contact Aermec

**The water valves can be combined with the unit if it is also provided a control panel that controls

(1) DSC4 is not available with AMPZ

Compatibility of accessories

FCZI SA				Twin coil model										
				V	Hz	201	202	301	302	401	402	501	502	701
Probes and accessories for control panels														
WMT21	AS-U	24/230	50	•	•	•	•	•	•	•	•	•	•	•
SWAI	AS-U	In combination with WMT21												
VMF System														
VMF-E18X	AS-U	230	50/60	•	•	•	•	•	•	•	•	•	•	•
VMF-E2Z	AS-U			•	•	•	•	•	•	•	•	•	•	•
VMF-E4	AS-U			•	•	•	•	•	•	•	•	•	•	•
VMF-E5	AS-U	24	50/60	•	•	•	•	•	•	•	•	•	•	•
VMF-SW	AS-U			•	•	•	•	•	•	•	•	•	•	•
VMF-SW1	AS-U			•	•	•	•	•	•	•	•	•	•	•
Water valves														
3 way valve kit														
VCZ41	AS-U	230	50/60	•	•									
VCZ42	AS-U	230	50/60			•	•	•	•	•	•	•	•	
VCZ43	AS-U	230	50/60											•
VCZ4124	AS-U	24	50/60	•	•									
VCZ4224	AS-U	24	50/60			•	•	•	•	•	•	•	•	
VCZ4324	AS-U	24	50/60											•
2 way valve kit														
VCZD1	AS-U	230	50/60	•	•									
VCZD2	AS-U	230	50/60			•	•	•	•	•	•	•	•	
VCZD3	AS-U	230	50/60											•
VCZD124	AS-U	24	50/60	•	•									
VCZD224	AS-U	24	50/60			•	•	•	•	•	•	•	•	
VCZD324	AS-U	24	50/60											•
3 way valve kit for heating coil only														
VCF44	AS-U	230	50/60	•	•	•	•	•	•	•	•	•	•	
VCF45	AS-U	230	50/60											•
VCF4424	AS-U	24	50/60	•	•	•	•	•	•	•	•	•	•	
VCF4524	AS-U	24	50/60											•
2 way valve kit for heating coil only														
VCFD4	AS-U	230	50/60	•	•	•	•	•	•	•	•	•	•	•
VCFD424	AS-U	24	50/60	•	•	•	•	•	•	•	•	•	•	•
Combined adjustment and balancing valve independent of pressure														
VJP060	AS-U	230	50/60	•	•	•	•	•	•	•	•	•	•	
VJP150	AS-U	230	50/60											•
VJP060M	AS-U	24	50/60	•	•	•	•	•	•	•	•	•	•	
VJP150M	AS-U	24	50/60											•
Installation accessories														
AMP20	U			•	•	•	•	•	•	•	•	•	•	
AMPZ	U			•	•	•	•	•	•	•	•	•	•	•
DSC4	AS-U	230	50/60	(1)	•	•	•	•	•	•	•	•	•	•
Panel to close rear of unit														
PCZ200	AS-U			•	•									
PCZ300	AS-U					•	•							
PCZ500	AS-U							•	•	•	•			
PCZ800	AS-U											•	•	
PCZ1000	AS-U													•
Grille for ceiling mounted units														
GA200	U			•	•									
GA300	U					•	•							
GA500	U							•	•	•	•			
GA800	U											•	•	•
ZXZ	AS-U			•	•	•	•	•	•	•	•	•	•	•

For further concerning control panels and VMF system refer to the dedicated sheets.

**** The water valves can be combined with the unit if it is also provided a control panel that controls**

(1) DSC4 is not available with AMPZ

Technical data - with single coil

FCZI SA		200			250			300			350			400			450		
Fan speed		H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L
Heating Performance																			
2 pipe systems																			
Heating capacity (70°C)	(1) kW	3,70	2,95	2,02	4,05	3,18	2,20	5,50	4,46	3,47	6,15	4,92	3,77	7,15	5,74	4,32	7,82	6,29	4,57
Water flow rate	(1) l/h	324	258	177	355	278	193	482	391	304	539	431	330	627	503	379	685	551	400
Pressure drop	(1) kPa	18	12	6	23	15	7	18	12	7	20	14	8	24	16	9	16	11	6
Heating capacity (45°C)	(2) kW	1,84	1,46	1,00	2,01	1,58	1,09	2,73	2,21	1,72	3,06	2,44	1,87	3,55	2,85	2,14	3,88	3,12	2,27
Water flow rate	(2) l/h	319	254	174	350	274	190	475	385	299	531	425	325	617	495	373	675	543	394
Pressure drop	(2) kPa	17	12	6	23	15	8	17	12	8	20	14	8	23	16	9	16	11	6
Cooling Performance																			
Total cooling capacity	(3) kW	1,60	1,28	0,89	1,94	1,55	1,06	2,65	2,17	1,68	3,02	2,46	1,89	3,60	2,92	2,21	4,03	3,21	2,41
Sensible cooling capacity	(3) kW	1,33	1,05	0,71	1,52	1,20	0,79	2,04	1,65	1,26	2,18	1,76	1,33	2,67	2,14	1,59	2,90	2,30	1,69
Water flow rate	(3) l/h	275	221	153	334	267	182	456	374	288	560	460	350	619	503	379	694	552	414
Pressure drop	(3) kPa	18	12	6	25	17	8	18	12	8	25	17	11	24	16	10	22	15	9
Fans																			
Centrifugal Fans	n°	1						2						2					
Air flow rate	m³/h	290	220	140	290	220	140	450	350	260	450	350	260	600	460	330	600	460	330
Sound level																			
Sound power level	dB(A)	50	43	31	50	43	31	48	41	34	48	41	34	51	44	37	51	44	37
Sound pressure level	dB(A)	42	35	23	42	35	23	40	33	26	40	33	26	43	36	29	43	36	29
Hydraulic connections																			
Main coil																			
Standard	Ø	1/2"			/			3/4"			/			3/4"			/		
Oversized	Ø	/			1/2"			/			3/4"			/			3/4"		
Electrical data																			
Power supply	110V-240V - 50Hz/60Hz																		

FCZI SA		500			550			700			750			900			950		
Fan speed		H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L
Heating Performance																			
2 pipe systems																			
Heating capacity (70°C)	(1) kW	8,50	7,31	5,27	9,75	8,34	5,82	11,00	9,80	8,10	12,50	11,30	9,10	15,14	13,35	10,77	17,10	14,42	11,20
Water flow rate	(1) l/h	745	641	462	855	731	510	964	859	710	1096	991	798	1328	1171	945	1500	1264	982
Pressure drop	(1) kPa	28	21	12	26	20	10	29	23	17	18	15	10	22	17	12	33	24	15
Heating capacity (45°C)	(2) kW	4,22	3,63	2,62	4,85	4,14	2,89	5,47	4,87	4,03	6,21	5,62	4,52	7,53	6,64	5,35	8,50	7,17	5,57
Water flow rate	(2) l/h	734	631	455	842	720	502	950	846	699	1079	975	786	1307	1152	930	1476	1245	967
Pressure drop	(2) kPa	28	21	12	25	19	10	29	23	16	17	14	10	21	17	12	33	24	15
Cooling Performance																			
Total cooling capacity	(3) kW	4,25	3,69	2,68	4,79	4,13	2,91	5,50	4,89	3,92	6,14	5,34	4,27	6,91	5,00	4,29	8,60	7,32	5,77
Sensible cooling capacity	(3) kW	3,18	2,73	1,94	3,49	2,98	2,07	4,30	3,76	2,99	4,72	4,05	3,20	5,68	3,78	2,97	5,78	4,87	3,80
Water flow rate	(3) l/h	731	634	460	824	711	501	946	841	675	1056	918	734	1189	860	738	1479	1259	992
Pressure drop	(3) kPa	29	22	13	28	21	11	30	24	16	18	14	10	23	12	9	30	22	15
Fans																			
Centrifugal Fans	n°	2						3						3					
Air flow rate	m³/h	720	600	400	720	600	400	1140	930	700	1140	930	700	1140	930	700	1140	930	700
Sound level																			
Sound level	dB(A)	56	51	42	56	51	42	62	57	50	62	57	50	62	57	51	61	57	51
Nivel de presión sonora	dB(A)	48	43	34	48	43	34	54	49	42	54	49	42	54	49	43	53	49	43
Hydraulic connections																			
Main coil																			
Standard	Ø	3/4"			/			3/4"			/			3/4"			/		
Oversized	Ø	/			3/4"			/			3/4"			/			3/4"		
Electrical data																			
Power supply	110V-240V - 50Hz/60Hz																		

(1) Room air temperature 20°C d.b.; Water (in/out) 70°C/60°C;

(2) Room air temperature 20°C d.b.; Water (in/out) 45°C/40°C

(3) Room air temperature 27°C d.b./19°C w.b.; Water (in/out) 7°C/12°C

Sound pressure level (A-weighted) measured indoors with volume V=85m³, reverberation time t = 0.5 s; Direction factor Q = 2; Distance r = 2.5m

Technical data - with main + supplementary coil

FCZI SA	201			202			301			302			401			402				
Fan speed	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L		
Heating Performance																				
4 pipe systems																				
Heating capacity (65°)	(1)	kW	1,61	1,36	1,02	2,73	2,23	1,57	2,56	2,19	1,81	4,33	3,58	2,84	3,13	2,65	2,13	5,29	4,34	3,35
Water flow rate	(1)	l/h	138	117	88	234	191	135	221	188	155	372	308	244	269	228	183	455	373	288
Pressure drop	(1)	kPa	10	7	5	7	5	3	29	22	15	22	16	11	8	7	4	7	4	3
Cooling Performance																				
Total cooling capacity	(2)	kW	1,60	1,28	0,89	1,60	1,28	0,89	2,65	2,17	1,68	2,65	2,17	1,68	3,60	2,92	2,21	3,60	2,92	2,21
Sensible cooling capacity	(2)	kW	1,33	1,05	0,71	1,33	1,05	0,71	2,04	1,65	1,26	2,04	1,65	1,26	2,67	2,14	1,59	2,67	2,14	1,59
Water flow rate	(2)	l/h	275	221	153	275	221	153	456	374	288	456	374	288	619	503	379	619	503	379
Pressure drop	(2)	kPa	18	12	6	18	12	6	18	12	8	18	12	8	24	16	10	24	16	10
Fans																				
Centrifugal Fans	n°	1						2						2						
Air flow rate	m³/h	290	220	140	290	220	140	450	350	260	450	350	260	600	460	330	600	460	330	
Sound level																				
Sound power level	(3)	dB(A)	50	43	31	50	43	31	48	41	34	48	41	34	51	44	39	51	44	39
Sound pressure level		dB(A)	42	35	23	42	35	23	40	33	26	40	33	26	43	36	31	43	36	31
Hydraulic connections																				
Main coil	Ø	1/2"			1/2"			3/4"			3/4"			3/4"			3/4"			
Additional coil	Ø	1/2"			1/2"			1/2"			1/2"			1/2"			1/2"			
Electrical data																				
Power supply	110V-240V - 50Hz/60Hz																			

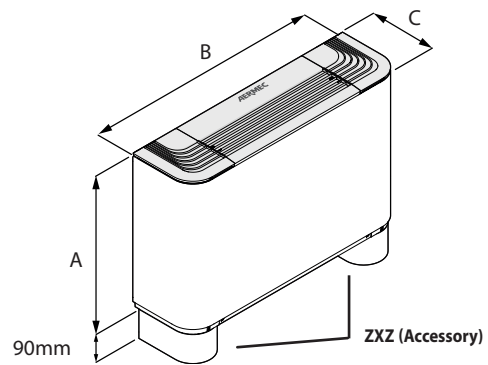
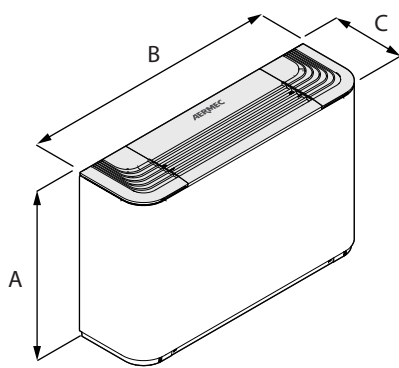
FCZI SA	501			502			701			702			901				
Fan speed	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L		
Heating Performance																	
4 pipe systems																	
Heating capacity (65°C)	(1)	kW	3,74	3,34	2,59	6,44	5,66	4,16	4,95	4,29	3,66	8,80	7,48	6,24	5,73	5,63	4,74
Water flow rate	(1)	l/h	321	287	223	554	486	358	426	369	315	757	643	536	493	484	407
Pressure drop	(1)	kPa	10	8	5	7	7	3	20	16	15	16	12	11	12	11	9
Cooling Performance																	
Total cooling capacity	(2)	kW	4,25	3,69	2,68	4,25	3,69	2,68	5,50	4,89	3,92	5,50	4,89	3,92	6,91	5,00	4,29
Sensible cooling capacity	(2)	kW	3,18	2,73	1,94	3,18	2,73	1,94	4,30	3,76	2,99	4,30	3,76	2,99	5,68	3,78	2,97
Water flow rate	(2)	l/h	731	634	460	731	634	460	946	841	675	946	841	675	1189	860	738
Pressure drop	(2)	kPa	29	22	13	29	22	13	30	24	16	30	24	16	22	12	9
Fans																	
Centrifugal Fans	n°	2						3						3			
Air flow rate	m³/h	720	600	400	720	600	400	1140	930	700	1140	930	700	1140	930	700	
Sound level																	
Sound power level	(3)	dB(A)	56	51	42	56	51	42	61	57	51	61	57	51	61	57	51
Sound pressure level		dB(A)	48	43	34	48	43	34	53	49	43	53	49	43	53	49	43
Hydraulic connections																	
Main coil	Ø	3/4"			3/4"			3/4"			3/4"			3/4"			
Additional coil	Ø	1/2"			1/2"			1/2"			1/2"			1/2"			
Electrical data																	
Power supply	110V-240V - 50Hz/60Hz																

(1) Room air temperature 20°C d.b.; Water (in/out) 65°C/55°C

(2) Room air temperature 27°C d.b./19°C w.b.; Water (in/out) 7°C/12°C

Sound pressure level (A-weighted) measured indoors with volume V=85m³, reverberation time t = 0.5 s; Direction factor Q = 2; Distance r = 2.5m

Dimensions and Weights



FCZI SA	200	201	202	250	300	301	302	350	400	401	402	450	500	501	502	550	700	701	702	750	900	901	/	950		
Dimensions for all versions																										
A	mm		486				486				486				486				486				591			
A (with feet)	mm		576				576				576				576				576				681			
B	mm		750				980				1200				1200				1320				1320			
C	mm		220				220				220				220				220				220			
Weight without feet	kg		15	15	16	16	17	17	18	18	22	23	24	24	22	23	24	24	29	30	31	31			34	