

Variable speed drives  
**Altivar 61**  
At the *heart* of your  
HVAC applications!



Variable torque offer for 3-phase asynchronous motors:

- From 37 to 220 kW
- 3-phase 200/240 V 380/480 V
- UL Type 1 / IP20 and UL Type 12 / IP54
- Integrated EMC class A or B filters

Variable speed drives  
**Altivar 21 / Altivar 61**  
Stimulate your HVAC  
*solutions!*



For 3-phase asynchronous motors from 0,75 to 220 kW

Variable speed drives

## Altivar 21

A *breath* of fresh air for your HVAC applications!

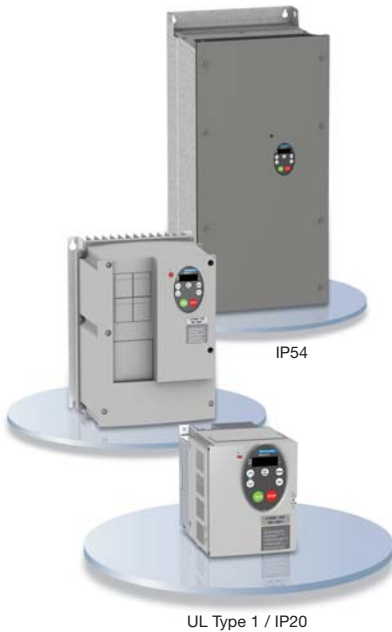


Variable torque offer for 3-phase asynchronous motors:

- From 0.75 to 30 kW
- 3-phase 200/240 V and 3-phase 380/480 V
- UL Type 1 / IP20 and IP54
- Integrated EMC class A or B filters

## Simply Smart!

Leverage  
**ingenuity**  
and intelligence  
for **ease of use**



# A *breath* of fresh air for your HVAC applications!

## Take a deep *breath*!

Thanks to this new range of drives **specifically for HVAC applications**, you can focus on the essentials and avoid the superfluous:

- **Economical**, it is specially designed to optimise your needs. IP54 product with EN 55011 class A or B (IEC/EN 61800-3) **integrated EMC filters**.
- **Simple** “plug and drive” usage, the **Altivar 21** enables immediate start-up following its initial connection. Pressing the “LOC/REM” button provides access to the local controls for testing your application.
- **Compact**, it easily integrates in your machines and can be mounted side by side.

## Brave the *fresh air*!

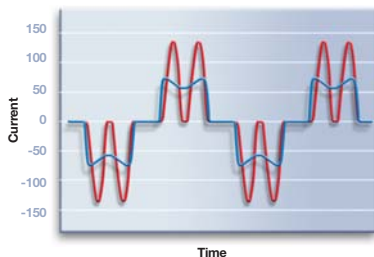
The **Altivar 21** simplifies **integration** in your building management systems:

- Its option cards enable you to connect to the main types of communication bus used in building management (LonWorks, BACnet, METASYS N2 and APOGEE FLN).
- Its design complies with international standards and certifications: CE, UL, CSA, C-Tick...



## Listen to the *breath* of the wind!

Reliable and robust, the **Altivar 21** makes life simpler:



- Its “harmonic less” technology provides **immediate hassle free operation**, without having to add specialised devices for treating the harmonics (DC choke, AC choke): THDI < 30% (IEC 61000-3-12 < 48%).
- Its usage you with **peace of mind**: adaptive tuning of ramps and motor power supply to optimise energy consumption.
- Its remote terminal increases **user-friendliness**:
  - auto-tuning of functions
  - downloading and saving of configurations.



# Altivar 21

## Manage and your building

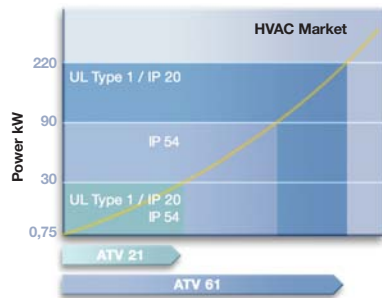
Benefit from all the indispensable and pump applications.

### Ventilation:

- **Detection** of fan belt breakage.
- Automatic **restart**, catch on the fly.
- **Jump frequencies**.

### Pumping:

- **Continuity of service** assured in the event of loss of measuring signals: fallback position, automatic/manual operation.
- **Safety and protection of pump:** Detection of current threshold. Limitation of operating time at low speed. PTC probe management.



### Heating and air conditioning:

- Adjustment of flow rates on the basis of actual needs for better **energy management**, use of PI regulator.
- **Suppression of mechanical resonance** using jump frequencies and up 16 kHz switching frequency adjustable during operation.
- **Reduction of consumption** using energy saving and quadratic ratios.
- **Installation monitoring:** diagnostics, fault management, alarms.



# monitor s using **Altivar**.

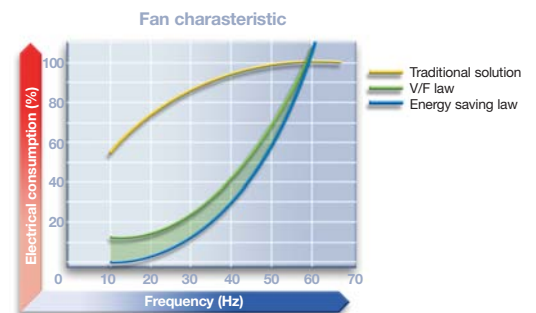
functions for fan



## Altivar 61

Ventilation:  
Air treatment plant

- Enhanced comfort with reduced noise pollution caused by fan operation: jump frequencies, energy saving ratio, adjustment of switching frequency during operation, variable “white noise” frequency.



Ventilation:  
safety / smoke extraction

- Drive **forced start** function with fault inhibition, selection of running direction and speed reference.
- For high inertia applications, **braking possible** using resistors, **catch on the fly** by speed search regardless of the direction of rotation.

Pumping: water regulation

- Essential functions for the protection of your installations.
- Detection of underload, overload.
- Detection of absence of fluid.

Multipump: water distribution

- With its multipump cards, the **Altivar 61** provides **flexibility, user-friendliness and adaptability** for the management of several pumps.
- **Monitoring and full control of the installation** by switching and spreading the wear and tear between pumps.

# At the *heart* of your HVAC applications!



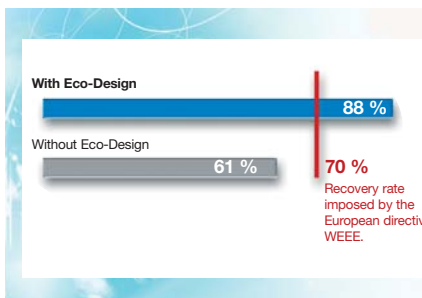
## Let it *warm your heart*!

The **Altivar 61** offers you a **wide range of functions** for your pump and fan applications in buildings. Its **evolutionary design** is particularly aimed at meeting your needs. It incorporates the requirements imposed by international standards and certifications (CE, UL, CSA, C-Tick, GOST, etc.). **Robust**, the service life of the Altivar 61 is increased due to its **maintenance facilities** (diagnostics, self-tests, etc.).

## *Opt for* this softhearted “toughie”!

The **Altivar 61** offers you:

- **User-friendliness**, its graphic terminal displays easy to read messages and offers still more functions (auto-tuning of functions, remote monitoring).
- **Simplicity**, its «**Simply Start**» menu enables quick start-up and immediate benefit of its full performance.
- **Adaptability**, customisation of parameters, display screen, languages, etc.
- **Safety**, conformity to machine standard EN 954-1 category 3 and the standard for electrical installations IEC/EN 61508 SIL2. IP54 product with EN 55011 class A or B (IEC/EN 61800-3) **integrated EMC filters**.



The **Altivar 61** has been developed in-line with the Eco-design approach: it optimise the consumption of energy and natural resources.

## *Put your heart* into it!

The **Altivar 61** simplifies the **opening** of the door to the construction world:

- **Communication cards for the HVAC market:** LonWorks, BACnet, METASYS N2 and APOGEE FLN.
- **Modbus and CANopen protocols integrated** as standard: reduce your cabling.
- **Input/output extension cards:** logic inputs, outputs, relay, PTC probe and analogue inputs..
- Use the **ingenuity** of the **multipump cards** to create your applications (sequences, integrated programmes).
- **PowerSuite software:** stay in control, even from a distance! For configuring, adjusting, saving... your applications.
- **Transparent ready** enables you to manage your buildings using the Ethernet card and a simple Web browser.



Web-enabled Power & Control  
**Transparent Ready**

# Selection guide

Motor power		3-phase from 200V to 240V	Dimensions (mm)		
kW	HP	UL Type 1 / IP20	L	H	P
0,75	1	ATV21H075M3X	105	130	150
1,5	2	ATV21HU15M3X	105	130	150
2,2	3	ATV21HU22M3X	105	130	150
3	-	ATV21HU30M3X	140	170	150
4	5	ATV21HU40M3X	140	170	150
5,5	7,5	ATV21HU55M3X	180	220	170
7,5	10	ATV21HU75M3X	180	220	170
11	15	ATV21HD11M3X	245	310	190
15	20	ATV21HD15M3X	245	310	190
18,5	25	ATV21HD18M3X	245	310	190
22	30	ATV21HD22M3X	240	420	210
30	40	ATV21HD30M3X	320	630	290

Motor power		3-phase from 380V to 480V	Dimensions (mm)		
kW	HP	UL Type 1 / IP20	L	H	P
0,75	1	ATV21H075N4	105	130	150
1,5	2	ATV21HU15N4	105	130	150
2,2	3	ATV21HU22N4	105	130	150
3	-	ATV21HU30N4	140	170	150
4	5	ATV21HU40N4	140	170	150
5,5	7,5	ATV21HU55N4	140	170	150
7,5	10	ATV21HU75N4	180	220	170
11	15	ATV21HD11N4	180	220	170
15	20	ATV21HD15N4	245	310	190
18,5	25	ATV21HD18N4	245	310	190
22	30	ATV21HD22N4	240	420	210
30	40	ATV21HD30N4	240	420	210



# Selection guide

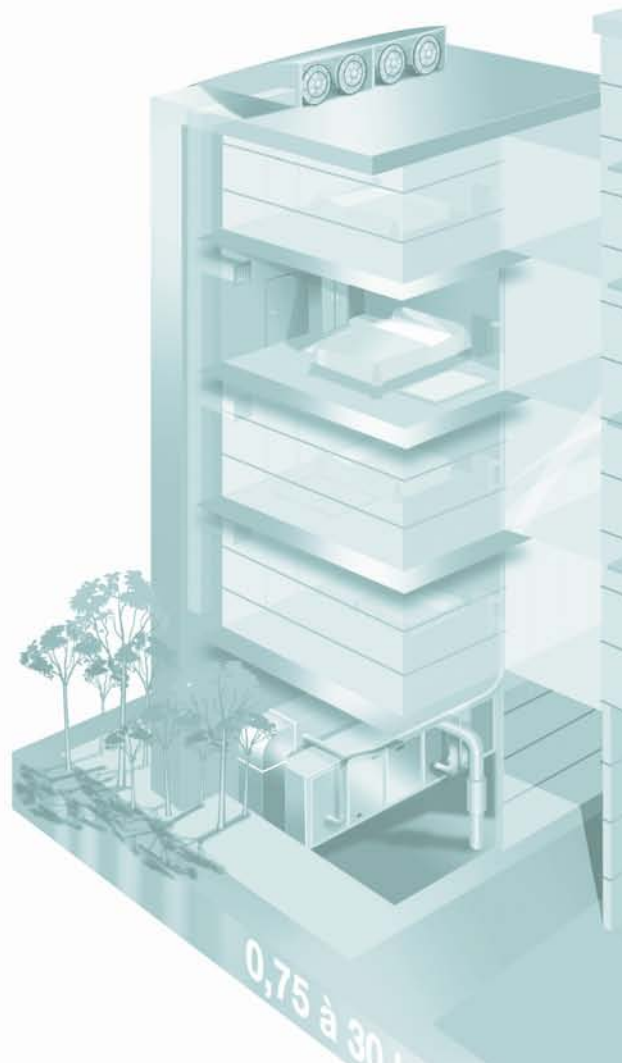
Motor power		3-phase from 380V to 480V	Dimensions (mm)		
kW	HP	UL Type 12 / IP54	L	H	P
0,75	1	ATV21W075N4 (1)	215	297	206
1,5	2	ATV21WU15N4 (1)	215	297	206
2,2	3	ATV21WU22N4 (1)	230	340	222
3	-	ATV21WU30N4 (1)	230	340	222
4	5	ATV21WU40N4 (1)	230	340	222
5,5	7,5	ATV21WU55N4 (1)	230	340	222
7,5	10	ATV21WU75N4 (1)	230	340	222
11	15	ATV21WD11N4 (1)	290	560	315
15	20	ATV21WD15N4 (1)	290	560	315
18,5	25	ATV21WD18N4 (1)	310	665	315
22	30	ATV21WD22N4 (1)	284	720	315
30	40	ATV21WD30N4 (1)	284	720	315

(1) with integrated EMC class A filters. To order a product with integrated EMC class B filters, add the letter "C" to the end of the reference.

## Communication Cards

LonWorks	VW3A21 312
METASYS N2	VW3A21 313
APOGEE FLN	VW3A21 314
BACnet	VW3A21 315

Remote Terminal	VW3A21 101
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# Selection guide

Motor power		3-phase from 200V to 240V	Dimensions (mm) Including keypad		
kW	HP	UL Type 1 / IP20	L	H	P
0,75	1	ATV61H075M3 (1)(4)	130	230	175
1,5	2	ATV61HU15M3 (1)(4)	130	230	175
2,2	3	ATV61HU22M3 (1)(4)	155	260	187
3	-	ATV61HU30M3 (1)(4)	155	260	187
4	5	ATV61HU40M3 (2)(4)	155	260	187
5,5	7,5	ATV61HU55M3 (2)(4)	175	295	187
7,5	10	ATV61HU75M3 (2)(4)	210	295	213
11	15	ATV61HD11M3X (3)(4)	230	400	213
15	20	ATV61HD15M3X (3)(4)	230	400	213
18,5	25	ATV61HD18M3X (3)	240	420	236
22	30	ATV61HD22M3X (3)	240	420	236
30	40	ATV61HD30M3X (3)	320	550	266
37	50	ATV61HD37M3X (3)	320	550	266
45	60	ATV61HD45M3X (3)	320	550	266
55	75	ATV61HD55M3X (3)(5)	320	920	377
75	100	ATV61HD75M3X (3)(5)	320	920	377
90	125	ATV61HD90M3X (3)(5)	360	1022	377

(1) For single-phase 0.75 to 7.5 kW range, select the next rating up (example: 2.2 kW - reference = ATV61HU30M3).

(2) For single-phase operation, select the next rating up and add a line choke.

(3) Without EMC filter.

(4) For up to 45 kW, add the letter "Z" to the end of the reference for an Altivar 61 incorporating a 7-segment terminal.

(5) With integrated DC bus inductance.

Motor power		3-phase from 380V to 480V	Dimensions (mm) Including keypad		
kW	HP	UL Type 1 / IP20	L	H	P
0,75	1	ATV61H075N4 (4)	130	230	175
1,5	2	ATV61HU15N4 (4)	130	230	175
2,2	3	ATV61HU22N4 (4)	130	230	175
3	-	ATV61HU30N4 (4)	155	260	187
4	5	ATV61HU40N4 (4)	155	260	187
5,5	7,5	ATV61HU55N4 (4)	175	295	187
7,5	10	ATV61HU75N4 (4)	175	295	187
11	15	ATV61HD11N4 (4)	210	295	213
15	20	ATV61HD15N4 (4)	230	400	213
18,5	25	ATV61HD18N4	230	400	213
22	30	ATV61HD22N4	240	420	236
30	40	ATV61HD30N4	240	550	266
37	50	ATV61HD37N4	240	550	266
45	60	ATV61HD45N4	320	630	290
55	75	ATV61HD55N4	320	630	290
75	100	ATV61HD75N4	320	630	290
90	125	ATV61HD90N4 (5)	320	920	377
110	150	ATV61HC11N4 (5)	320	920	377
132	200	ATV61HC13N4 (5)	360	1022	377
160	250	ATV61HC16N4 (5)	340	1190	377
220	300	ATV61HC22N4 (5)	440	1190	377
250	350	ATV61HC25N4 (5)	595	1190	377
315	400	ATV61HC31N4 (5)	595	1190	377
400	500	ATV61HC40N4 (5)	890	1390	377
500	700	ATV61HC50N4 (5)	890	1390	377
630	900	ATV61HC63N4 (5)	1120	1390	377

(4) For up to 75 kW, add the letter "Z" to the end of the reference for an Altivar 61 incorporating a 7-segment terminal.

(5) With integrated DC bus inductance.

# Selection guide

Motor power		3-phase from 380V to 480V	Encombremments (mm) Including keypad		
kW	HP	UL Type 12 / IP54	L	H	P
0,75	1	ATV61W075N4 (6)	235	490	272
1,5	2	ATV61WU15N4 (6)	235	490	272
2,2	3	ATV61WU22N4 (6)	235	490	272
3	-	ATV61WU30N4 (6)	235	490	272
4	5	ATV61WU40N4 (6)	235	490	286
5,5	7,5	ATV61WU55N4 (6)	235	490	286
7,5	10	ATV61WU75N4 (6)	255	525	286
11	15	ATV61WD11N4 (6)	255	525	286
15	20	ATV61WD15N4 (6)	290	560	315
18,5	25	ATV61WD18N4 (6)	310	665	315
22	30	ATV61WD22N4 (6)	310	665	315
30	40	ATV61WD30N4 (6)	284	720	315
37	50	ATV61WD37N4 (6)	284	880	343
45	60	ATV61WD45N4 (6)	284	880	343
55	75	ATV61WD55N4 (6)	362	1000	364
75	100	ATV61WD75N4 (6)	362	1000	364
90	125	ATV61WD90N4 (6)	362	1000	364

(6) with integrated EMC class A filters. To order a product with integrated EMC class B filters, add the letter "C" to the end of the reference.

## PowerSuite software workshop

PowerSuite CD-Rom for PC or Pocket PC

(English, French, German, Chinese, Spanish and Italia) \_\_\_\_\_ VW3 A8104

Connection kit

for PC \_\_\_\_\_ VW3 A8106

Adaptor for wireless link

Modbus-Bluetooth® \_\_\_\_\_ VW3 A8114

USB-Bluetooth® \_\_\_\_\_ VW3 A8115

## Input/output cards

Logic inputs/outputs

1 voltage output, 24 V

1 voltage output, -10 V

1 logic output, relay

4 programmable logic inputs

2 assignable logic outputs with open collector

1 input for 6 PTC probes max. \_\_\_\_\_ VW3 A3201

Extended inputs/outputs

Same as logic inputs/outputs card +

2 analogue inputs

2 analogue outputs

1 pulse input \_\_\_\_\_ VW3 A3202

Controller Inside programmable card \_\_\_\_\_ VW3 A3501

## Communication cards

LonWorks \_\_\_\_\_ VW3 A3312

METASYS N2 \_\_\_\_\_ VW3 A3313

APOGEE FLN \_\_\_\_\_ VW3 A3314

BACnet \_\_\_\_\_ VW3 A3315

Fipio \_\_\_\_\_ VW3 A3311

Ethernet \_\_\_\_\_ VW3 A3310

Modbus Plus \_\_\_\_\_ VW3 A3302

Profibus DP \_\_\_\_\_ VW3 A3307

DeviceNet \_\_\_\_\_ VW3 A3309

Uni-Telway \_\_\_\_\_ VW3 A3303

InterBus \_\_\_\_\_ VW3 A3304

## Multipump card

ATV38 compatibility \_\_\_\_\_ VW3 A3502

others \_\_\_\_\_ VW3 A3503

# The efficiency of Telemecanique branded *solutions*

Used in combination, Telemecanique products provide quality solutions, meeting all your **Automation** and **Control** applications requirements.



Simple machines  
**Altistart 01**: 0,37 to 75 kW  
**Altivar 11**: 0,18 to 2,2 kW  
**Altivar 31**: 0,18 to 15 kW



Complex, high power machines  
**Altivar 71**: 0,37 to 500 kW



Pumping and ventilation machines  
**Altistart 48**: 4 to 1 200 kW  
**Altivar 11...347**: 0,18 to 2,2 kW  
**Altivar 21**: 0,75 to 30 kW  
**Altivar 61**: 37 to 220 kW



## A worldwide presence

### Constantly available

- More than 5 000 points of sale in 130 countries.
- You can be sure to find the range of products that are right for you and which complies fully with the standards in the country where they are used.

### Technical assistance wherever you are

- Our technicians are at your disposal to assist you in finding the optimum solution for your particular needs.
- Schneider Electric provides you with all necessary technical assistance, throughout the world.



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[www.telemecanique.com](http://www.telemecanique.com)

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*Simply Smart!*