The essential guide Motion & Drives

2011



Schneider Electric

ZOOM



Altivar 32

More than 150 application-specific functions

The Altivar 32 range of variable speed drives controls asynchronous and synchronous motors rated from 0.18 to 15 kW operating in open loop mode in complex machines:

- Compact, vertical and slim format (45 mm)
- Integrated function blocks for creating simple control system functions (timers, counters, comparators, etc.)
- Machine safety functions integrated as standard (STO, SLS, SS1)
- Open design: communicates with most industrial networks

For more information, see page 18

Lexium 32

Inspired by Simplicity

The Lexium 32 servo drive range (0.15 to 7 kW) is a drive system designed for applications where high precision and dynamic positioning are critical:

- Suitable for packaging, materials processing (cutting, turning, milling, etc.) and handling, printing and textile applications
- 3 servo drive families and two types of servo motor available
- Simplified engineering: motor sizing, CAD and cabinet drawings, support for PLCopen libraries and SoMove setup software
- Integrated “Safe Torque Off” function
- Quick integration: wide selection of fieldbus modules

For more information, see page 44





Ultra slim and ultra powerful

Practical and innovative, the Altivar 32 and Lexium 32 ranges can help reduce the size of your enclosures by as much as 40%.

- Extra slim book format
- Easy to configure and setup with SoMove software
- Packed with common software tools, accessories and functions
- Homogeneous mounting and wiring systems
- High-performance communication system
- Built-in Bluetooth as standard
- Can be configured with the power off in its original packaging: configurations can be transferred remotely via mobile phone using SoMove Mobile software

SoMove and SoMove Mobile

User-friendly and efficient

SoMove is a common setup software tool for PCs, designed for Schneider Electric's latest motor control devices.

- Available as a free download from www.schneider-electric.com, SoMove allows you to prepare drive configuration files and set parameters, while making maintenance easier.
- Compatible with communication tools, such as Multi-Loader, Simple Loader, remote display terminals, etc.

SoMove Mobile is an application for mobile phones:

- Remote configuration or modification of Altivar 32 variable speed drives, Lexium 32 servo drives and many products from the TeSys range
- File and data exchange via Bluetooth, USB, e-mail, MMS, etc.



For more information, see page 50

Altistart 22

Integrated bypass function

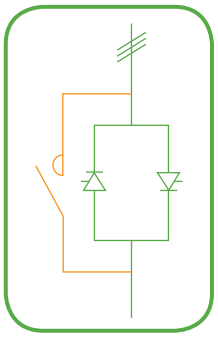


The Altistart 22 range of compact soft start/soft stop units for pumps and fans is designed for infrastructure and industrial applications.

- Integrated bypass function for controlled starting and stopping, using both voltage and torque, of three-phase squirrel cage asynchronous motors
- Power ratings between 4 and 400 kW

With the Altistart 22 range driving your applications, you can:

- Cut your operating costs
- Reduce the number of components you need to manage (multifunction products)
- Control temperature rises due to its low heat dissipation
- Simplify wiring (6 cables instead of 12)
- Protect your electrical installation
- Save space in your enclosures with a fully equipped product



3 controlled phases

For more information, see page 10

ZOOM



Altivar 212, variable speed drive dedicated to HVAC

Altivar 212 for HVAC*

Save up to 70% on your energy bills**

Designed for pumps, fans and compressors, the new generation of Altivar 212 drives optimises the performance of motors rated from 0.75 to 75 kW (1 to 100 hp).

- A wealth of integrated application-specific functions (sleep/ wake-up, smoke extraction, etc.)
- Advanced performance management for your installations (service continuity)
- Instant overview of energy consumption
- Fault detection ensures work can be carried out quickly
- Preventive maintenance: fault alarms, operating time, etc.
- Connection to the supervision network via embedded protocols for effective building management
- Uses tools such as Multi-Loader, remote graphic display terminal, Bluetooth, etc. to install, configure and visualise your installation

*HVAC: Heating, Ventilation and Air Conditioning
**compared to a conventional solution with valves

For more information, see page 15

Altivar 61Q and Altivar 71Q

A rugged water-cooled range

Altivar Q variable speed drives are suitable for applications in very dusty or corrosive atmospheres, such as tunnels, mines or marine environments, or in small rooms without air conditioning.

- Reduced noise
- Corrosion-resistant
- Saves energy as there is no need for air conditioning
- Rugged
- Easy to install
- Low maintenance (stainless steel pipes), ensuring a long service life
- High-performance: high torque at low speed
- 3 sizes designed to cover a wide range of power ratings (90 to 800 kW)
- CE, UL, CSA and Marine certifications

For more information, see page 23 and 32



Altivar 61Q with water cooling system

Motion & Drives



Soft starters and variable speed drives

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Lexium 32 servo drives
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Single axes and multi-axis Systems Linear Motion ..... 56 and 57

Lexium PAS/CAS/TAS/MAX

The Altistart, Altivar and Lexium ranges increase the efficiency of your machines, reduce their energy consumption and optimise their kinematics.
Easy to install, offering intuitive programming and extensive communication options, they are easily integrated into your control system architectures.

Altistart and Altivar

Use Altistart soft starters to start your motors smoothly and so protect the mechanics of your equipment.
With the Altivar range of variable speed drives, you save energy and manage the speed of your motors to optimise and enhance productivity in your installations.





Lexium

Controllers, drives, motors and linear positioning axes: Schneider Electric offers a complete range of motion control products and solutions suitable for even the most specialised applications. Designed with maximum simplicity in mind throughout a machine's entire service life, the Lexium range reduces costs and optimises productivity.

Selection guide

Starters - Low voltage

			Simple machines		Complex machines/ Special machines
			⇨*Applications:* Compressors, fans, pumps, conveyors, car wash gantries, etc.	⇨*Applications:* Pumps, fans, turbines, compressors, conveyors, conveyor belts, lifting screws, escalators, etc.	⇨*Applications:* Pumps, high inertia fans and machines, compressors, conveyors, agitators, mixers, escalators, etc.
			Altistart 01  Soft start and Soft start/soft stop units	**Altistart 22**  Soft start/soft stop units	**Altistart 48**  Soft start/soft stop units
Description			• **Compact** • **Simple:** easy mounting, wiring and adjustment • **Efficient:** Current peaks limitation on starting, reduction of mechanical shocks, increased service life for your machines • **Energy saving**	• **Innovative** with its **integrated Bypass** contactor for motors up to 315 kW • **Cost-effective** • **Compact dimensions** • **Quick setup** • **Protection of motor and starter** • **Energy saving** • **3 controlled phases**	• **Torque control system:** controlled torque, prevention of pressure surges and limiting of temperature rises • **Simple:** quick setup • **Protection of motor and starter:** thermal protection, phase loss detection, locked rotor detection • **Energy saving**
Technical information	Power range for 50…60 Hz supply		0.37...15 kW	4... 400 kW	4...1200 kW
	Voltage		Single-phase 110…480 V Three-phase 110…480 V	Three-phase 208…600 V Three-phase 230…440 V	Three-phase 208…690 V
	Drive/Output frequency		–	–	–
	Motor type	Asynchronous	Yes	Yes	Yes
		Synchronous	No	No	No
Communication	Integrated		–	Modbus	Modbus
	As an option		Can be used with TeSys U motor starter-controller to create a complete motor starter solution	–	DeviceNet, Fipio, Profibus DP, Ethernet
Standards and certifications			IEC/EN 60947-4-2, C-Tick, CSA, UL, CE	IEC/EN 60947-4-2, C-Tick, CSA, UL, CE, GOST, CCC Class A EMC	IEC/EN 60947-4-2, C-Tick, CSA, UL, CE, DNV, GOST, CCC, NOM, SEPRO and TCF Classes A and B EMC
Intended use			Buildings, Simple machines.	Machines, Infrastructures and Buildings	

Selection guide

Standard drives - Low voltage

Simple machines

			⇨*Applications:* • Simple machines for industry (small handling applications, packaging, pumps, fans, etc.) • Simple consumer machines (access barriers, rotating advertising hoardings, medical beds, treadmills, dough mixers, etc.) • Other types of application: - Mobile machines and small appliances equipped with a power socket - Applications which traditionally use other solutions (2-speed DC motors, mechanical drives, etc.).	⇨ *Applications:* Simple industrial machines (material handling and packaging, textile machines, special machines, pumps and fans).	⇨ *Applications:* Simple industrial machines (material handling and packaging, textile machines, special machines, pumps and fans).
			Altivar 12	**Altivar 312**	**Altivar 31C IP55**
					
			Variable speed drives for small machines with 240 V three-phase asynchronous motor	Variable speed drives for three-phase asynchronous motors	Variable speed drives for three-phase asynchronous motors for machines in harsh environments.
Description			• **Compact** • **Easy to set up** (Plug & Play) • **Reliable, cost-effective solution** for compact machines	• **Open:** large number of communication cards available as options • **User-friendly:** simplified interface • **Autotuning:** maximum performance	• **Rugged** even in the most hostile environments: - Installed as close as possible to the motor - Integrated functions for applications requiring IP55 degree of protection - Modbus and CANopen communication protocols • **Flexibility** to adapt to each machine: - Customisable depending on the model - Easy configuration
Technical information	Power range for 50…60 Hz supply		0.18...4 kW	0.18...15 kW	0.18...15 kW
	Voltage		Single-phase 100…240 V Three-phase 200…240 V	Single-phase 200…240 V Three-phase 200…600 V	Single-phase 200…240 V Three-phase 380…500 V
	Drive/Output frequency		0.5…400 Hz	0.5…500 Hz	0.5…500 Hz
	Motor type	Asynchronous	Yes	Yes	Yes
		Synchronous	No	No	No
Communication	Integrated		Modbus	Modbus and CANopen	Modbus and CANopen
	As an option		–	CANopen Daisy chain, DeviceNet, Profibus DP, Modbus TCP, Fipio	DeviceNet, Ethernet TCP/IP, Fipio, Profibus DP
Standards and certifications			IEC/EN 61800-5-1, IEC/EN 61800-3 (environments 1 and 2, categories C1 to C3) CE, UL, CSA, C-Tick, GOST, NOM		IEC/EN 61800-5-1, IEC/EN 61800-3 (environments 1 and 2, categories C1 to C3) CE, UL, CSA, C-Tick, GOST
Intended use			Machines		

	Complex machines	Complex machines/ Special machines		Pumps and Fans	
	⇨ *Applications:* Industrial machines: hoisting, packaging, material handling, special machines (wood-working machines, metal processing machinery, etc.).	⇨ *Applications:* High performance applications: • Material handling • Hoisting • Wood-working machines • Process machinery • Textile machines • Packaging	⇨ *Applications:* High performance applications: • Material handling • Hoisting • Wood-working machines • Process machinery • Textile machines • Packaging	⇨ *Applications:* Range specifically for high performance pumps and fans for the industrial and building markets.	⇨ *Applications:* Pumping and ventilation machines in harsh environment
	Altivar 32  Variable speed drives for asynchronous motors and open-loop synchronous motors	**Altivar 71**  For three-phase synchronous and asynchronous motors. Constant torque applications.	**Altivar 71Q**  Water-cooled variable speed drives for three-phase synchro-nous and asynchronous motors. Constant torque applications.	**Altivar 61**  Variable speed drives for three-phase asynchronous motors. Variable torque applications.	**Altivar 61Q**  Water-cooled variable speed drives for three-phase asynchro-nous and synchronous motors. Variable torque applications
	• **Compact: "Book"** format • **Integrated Safety function** com-pliant to IEC 61508 **SIL3** and **PL-e** • **Open:** communication cards available as options • **Integrated programmable logic functions** • **Simple** setup · **Energy saving : Control of energy efficient** permanent magnet **synchr onous motors**	• **Wide range** • **Quick start-up** and easy diagnostics: multi-language graphic display terminal • **Open** to most industrial communication buses • **Integrated safety functions** • **Motor control:** high-performance in open-loop and closed loop mode	• **Improved robustness** with water cooling • Efficient cooling system **reduced need of air conditioning** • Long time operation **without maintenance** • Excellent protection against corrosion due to **stainless steel cooling pipes** • **Very high starting torque** for frequent start-up applications	• **Wide range** • **Easy setup and diagnostics** with the multi-language graphic display terminal • **Open** to the main communication buses	• **Improved robustness** with water cooling • Efficient cooling system **reduced need of air conditioning** • Prolonged **maintenance-free** operational life • Excellent protection against corrosion due to **stainless steel cooling pipes**
	0.18...15 kW	0.37...630 kW	90...630 kW	0.37...800 kW	110…800 kW
	Single-phase 200…240 V Three-phase 380…480 V	Single-phase 200…240 V Three-phase 200…690 V	Three-phase 380...480 V Three-phase 500…690 V	Single-phase 200…240 V Three-phase 200…690 V	Three-phase 380...480 V Three-phase 500…690 V
	0.1…599 Hz	0…599 Hz up to 37 kW / 200…240V and 380…480V 0…500 Hz for the rest of the range	0…500 Hz	0.1…599 Hz up to 37 kW / 200…240V and 380…480V 0.1…500 Hz for the rest of the range	0.1…500 Hz
	Yes	Yes	Yes	Yes	Yes
	Yes	Yes	Yes	Yes	Yes
	Modbus and CANopen	Modbus and CANopen	Modbus et CANopen	Modbus and CANopen	Modbus et CANopen
	EtherNet/IP, Modbus TCP, Profibus DP V1, EtherCAT, Devicenet	Modbus TCP, Fipio, Modbus/Uni-Telway, Modbus Plus, EtherNet/IP, DeviceNet, Profibus DP, Profibus DP V1, InterBus S, CC-Link,	Modbus TCP, Fipio, Modbus/Uni-Telway, Modbus Plus, EtherNet/IP, DeviceNet, Profibus DP, Profibus DP V1, InterBus S, CC-Link,	Modbus TCP, Fipio, Modbus/Uni-Telway, Modbus Plus, EtherNet/IP, DeviceNet, Profibus DP, Profibus DP V1, InterBus S, CC-Link, Lonworks, METASYS N2, APO-GEE FLN P1, BACnet	**HVAC protocols :** LonWorks, BACnet, METASYS N2,APOGEE FLN P1 **Industrial protocols:** Modbus TCP, Modbus/Uni-Telway, Fipio, Modbus Plus, Profibus DP, Profibus DP V1, DeviceNet, Ethernet IP, CC-Link, InterBus
	IEC/EN 61800-5-1, IEC/EN 61800-3 (environments 1 and 2, Categories C2 and C3), UL508C, EN 954-1 Category 3, ISO/EN 13849-1/- 2 Category 3 (PLd), IEC 61800-5-2, IEC 61508 (parts 1&2) level SIL1 SIL2 SIL3, draft standard EN 50495E, CE, UL, CSA, C-Tick, GOST, NOM.	IEC/EN 61800-3, EN 55011, EN 55022, CSA, UL, C-TICK, CE, NOM, DNV, GOST	IEC/EN 61800-3, EN 55011, EN 55022, CSA, UL, C-TICK, CE, NOM, DNV, GOST	IEC/EN 61800-3, EN 55011, EN 55022, CSA, UL, C-TICK, CE, NOM, DNV, GOST	IEC/EN 61800-3, EN 55011, EN 55022, CSA, UL, C-TICK, CE, NOM, DNV, GOST
	Machines	Machines, industrial processes and infrastructures	Machines, industrial processes or infrastructures	Buildings and infrastructures	Building or infrastructures

Selection guide

Specialized drives - Low voltage

			HVAC	Lifts
			⇨ *Applications:* Range specifically for HVAC applications (heating, ventilation, air conditioning) in buildings.	⇨ *Applications:* Lifts
			Altivar 212  Variable speed drives for three-phase asynchronous motors. Variable torque building HVAC applications.	**Altivar LIFT**  Variable speed drives for lifts.
Description			• **Compact size**: side-by-side mounting • **Simplicity :** Dedicated HVAC functions and remote graphic keypad option • **Openness :** Integrated communications for building management systems • **EMC filters** built-in • **Reduction of the total harmonic distortion** THDI<30% • **Protection class:** IP21 and IP55	• **Quick start-up** and easy diagnostics with the multi-language graphic display terminal and dedicated Lift configuration menu. • **Dedicated Lift functions** for greater comfort and safety • **High-performance motor control** in open-loop and closed loop mode
Technical information	Power range for 50…60 Hz supply		0.75…75 kW	4…22 kW
	Voltage		Three-phase 200…480 V	Single-phase 200…240 V Three-phase 200…480 V
	Drive/Output frequency		0.5…200 Hz	0...599 Hz
	Number of quadrants		—	—
	Cooling system		—	—
	Protection class		—	—
	Motor type	Asynchronous	Yes	Yes
		Synchronous	No	No
Communication	Integrated		Modbus, METASYS N2, APOGEE FLN P1, BACnet	Modbus and CANopen
	As an option		Lonworks	Modbus TCP, Fipio, Modbus/Uni-Telway, Modbus Plus,EtherNet/IP, DeviceNet, Profibus DP, Profibus DP V1, InterBus S, CC-Link
Standards and certifications			IEC/EN 61800-3, EN 55011, EN 55022, CSA, UL, C-TICK, CE, NOM	IEC/EN 61800-3, EN55011, EN 55022, CSA, UL, C-TICK, CE, NOM et EN81-1 (chap 12.7.3)
Intended use			Buildings	Machines

Integrated variable speed control solutions

Pumps and Fans Low voltage	Pumps and Fans Medium voltage	Complex machines/Special machines Low voltage	Complex machines/Special machines Medium voltage
⇨ *Applications:* • Fans • Pumps • Compressors • Screw feeders	⇨ *Applications:* • Energy: fans, pumps, turbine starters • Oil and gas: pumps, compressors, air blowers, extruders • Mines and Minerals: conveyors, crushers, fans, pumps • Water treatment: pumps, air blowers.	⇨ *Applications:* • Fans • Pumps • Compressors • Screw feeders	⇨ *Applications:* • Energy: fans, pumps, turbine starters • Oil and gas: pumps, compressors, air blowers, extruders • Mines and Minerals: conveyors, crushers, fans, pumps • Water treatment: pumps, air blowers.
Altivar 61 Plus	**Altivar 1100**	**Altivar 71 Plus**	**Altivar 1000**
			
High power low voltage variable speed drives for buildings and infrastructures. **Variable torque**	Medium voltage variable speed drives for asynchronous motors (quotation on request)	High power low voltage variable speed drives for industry. **Constant torque**	Medium voltage variable speed drives for asynchronous motors (quotation on request)
A **simple, open** range: • Greater flexibility: numerous possible options and communication on most industrial networks • Easy configuration • Ready to use **Maximum safety**: the **Altivar Plus** range has a cooling system and components that have been tested in extreme conditions. **Time savings** on: • Creating quotes • Placing orders • Installation and start-up	**Environmentally-friendly and Cost-effective**: • Perfect integration in the line supply • No disturbance of the motor and the driven load • High efficiency **Easy to install and set up** **Compact**	A **simple, open** range: • Greater flexibility: numerous possible options and communication on most industrial networks • Easy configuration • Ready to use **Maximum safety**: the **Altivar Plus** range has a cooling system and components that have been tested in extreme conditions. **Time savings** on: • Creating quotes • Placing orders • Installation and start-up	**High efficiency** For use in **harsh environments** **Open** to all communication networks
90…2400 kW	0.3…10.5 MW	90…2000 kW	0.5…10 MW
Three-phase 380…690 V	3,3 kV 6,6 kV 10 kV	Three-phase 380…690 V	2.4 kV 3.3 kV
0.1…500 Hz	Standard : 0,2…60 Hz Option : 0,2…120 Hz	0…500 Hz	Standard: 5…70 Hz Option: 5…140 Hz
2 and 4	2	2 and 4	2 and 4
Air or water cooled	Air cooled	Air or water cooled	Air or water cooled
IP23/IP54 IP55 (water cooled)	IP31 IP41 (option)	IP23/IP54 IP55 (water cooled)	IP41 (air cooled) IP54 (water cooled)
Yes	Yes	Yes	Yes
Yes	No	Yes	No
Modbus and CANopen	Profibus, Modbus	Modbus and CANopen	Ethernet, Profibus, Modbus
Modbus TCP, Fipio, Modbus/Uni-Telway, Modbus Plus, EtherNet/IP, DeviceNet, Profibus DP, Profibus DP V1, InterBus S, CC-Link, Lonworks, METASYS N2, APOGEE FLN P1, BACnet	Ethernet, Devicenet, CANopen, etc.	Modbus TCP, Fipio, Modbus/Uni-Telway, Modbus Plus, EtherNet/IP, DeviceNet, Profibus DP, Profibus DP V1, InterBus S, CC-Link	Devicenet, CANopen
IEC/EN 61800-5-1, IEC/EN 61800-3 (environments 1 and 2), IEC/EN 61000-4-2, -4-3, -4-5, -4-6 (level 3), IEC/EN 61000-4-4 (level 4), IEC/EN 60529, IEC 60721-3-3 class 3C2 and 3S2, CE. DNV, GOST	IEC/EN 61800-5-1, IEC/EN 61800-4, IEC/EN 61800-3 (environnements 1 and 2, catégories C1 to C3), IEEE 519, IEC/EN 60204-11 and IEC/EN 60529	IEC/EN 61800-5-1, IEC/EN 61800-3 (environments 1 and 2), IEC/EN 61000-4-2, -4-3, -4-5, -4-6 (level 3), IEC/EN 61000-4-4 (level 4), IEC/EN 60529, IEC 60721-3-3 class 3C2 and 3S2, CE. DNV and GOST	IEC/EN 61800-5-1, IEC/EN 61800-4, IEC/EN 61800-3 (environments 1 and 2, categories C1 to C3), CE
Buildings and infrastructures	Infrastructures	Machines, industrial processes and infrastructures	Machines, industrial processes and infrastructures

Dimensions (in mm)		width x height x depth
ATS01	N103FT/N106 FT	22.5 x 100 x 100.4
	N109FT/N112 FT/N125 FT N206●●/N209●●/N212●●	45 x 124 x 130.7
	N222●●/N232●●	45 x 154 x 130.7





Type Motor power						**Soft start units** 0.37 to 11 kW	**Soft start/soft stop units** 0.75 to 15 kW		
Degree of protection						IP20			
Reduction of current peaks						2 controlled phases	2 controlled phases		
Adjustable starting time						1…5 s	1…10 s		
Adjustable deceleration time						No: freewheel stop	Yes: 1... 10 s		
Adjustable breakaway torque						30…80% of DOL motor starting torque			
Logic inputs						–	3 logic inputs (start, stop and startup boost)		
Logic outputs						–	1 logic output		
Relay outputs						–	1 relay output		
Control supply voltage						110... 220 VAC ± 10%, 24 VDC ± 10%	Built into the starter		
Supply voltage						**Single-phase 110…230 V**			
Motor power									
230 V					Nominal current				
kW					(IcL)				
0.37					3 A	**ATS01N103FT**			
0.75					6 A	**ATS01N106FT**			
1.1					9 A	**ATS01N109FT**			
1.5					12 A	**ATS01N112FT**			
2.2					25 A	**ATS01N125FT**			
Supply voltage						**Three-phase 110…480 V**	**Three-phase 200…240 V**	**Three-phase 380…415 V**	**Three-phase 440…480 V**
Motor power									
210 V	**230 V**		**400 V**	**460 V**	Nominal current				
HP	kW	HP	kW	HP	(IcL)				
–	0.37-0.55	0.5/–	1.1	0.5-1.5	3 A	**ATS01N103FT**	**–**	**–**	**–**
0.5	0.75-1.1	1-1.5	2.2-3	2-3	6 A	**ATS01N106FT**	**ATS01N206LU**	**ATS01N206QN**	**ATS01N206RT**
1	1.5	2	4	5	9 A	**ATS01N109FT**	**ATS01N209LU**	**ATS01N209QN**	**ATS01N209RT**
1.5	2.2	3	5.5	7.5	12 A	**ATS01N112FT**	**ATS01N212LU**	**ATS01N212QN**	**ATS01N212RT**
–	4-5.5	5-7.5	7.5-11	10-15	22 A	**–**	**ATS01N222LU**	**ATS01N222QN**	**ATS01N222RT**
2-3	3-4-5.5	5-7.5	7.5-9-11	10-15	25A	**ATS01N125FT**	**–**	**–**	**–**
–	7.5	10	15	20	32 A	**–**	**ATS01N232LU**	**ATS01N232QN**	**ATS01N232RT**

Starters with TeSys model U

Dimensions (in mm)		width x height x depth
ATSU01	N206LT/N209LT/N212LT	45 x 124 x 130.7
	N222LT/N232LT	45 x 154 x 130.7







Type Motor power					**Soft start/soft stop units** 0.75 to 15 kW			
Degree of protection					IP20			
Reduction of current peaks					Yes			
Adjustable starting and stopping times					1…10 s			
Adjustable breakaway torque					30.... 80% of DOL motor starting torque			
Logic inputs					3 logic inputs (start, stop and startup boost)			
Logic outputs					1 logic output			
Relay outputs					1 relay output			
Control supply voltage					24 VDC, 100 mA, ± 10%			
References					**Soft start/soft stop units**	**TeSys starter-controller model U**		**Power connector**
						Power base	Control unit (1)	between ATSU and TeSys model U
Supply voltage					**Three-phase 200…480 V**			
Motor power								
230 V		**400 V**	**460 V**	Nominal				
kW	HP	kW	HP	current (IcL)				
0.75	1	1.5	2	6 A	**ATSU01N206LT**	**LUB12**	**LUC●05BL**	**VW3G4104**
1.1	1.5	2.2/3	3	6 A	**ATSU01N206LT**	**LUB12**	**LUC●12BL**	
1.5	2	–	5	9 A	**ATSU01N209LT**	**LUB12**	**LUC●12BL**	**VW3G4104**
–	–	4	–	9 A	**ATSU01N209LT**	**LUB12**	**LUC●12BL**	
2.2	3	5.5	7.5	12 A	**ATSU01N212LT**	**LUB12**	**LUC●12BL**	**VW3G4104**
3	–	–	–	12 A	**ATSU01N212LT**	**LUB32**	**LUC●18BL**	
4	5	7.5	10	22 A	**ATSU01N222LT**	**LUB32**	**LUC●18BL**	**VW3G4104**
5.5	7.5	11	15	22 A	**ATSU01N222LT**	**LUB32**	**LUC●32BL**	
7.5	10	15	20	32 A	**ATSU01N232LT**	**LUB32**	**LUC●32BL**	**VW3G4104**

(1) To compose your reference, replace ● in the reference with: «**A**» for a standard control unit, «**M**» for a multifunction unit and «**B**» for an advanced unit.



Dimensions (en mm)	width x height x depth
Size A: 130 x 265 x 169	
Size B: 145 x 295 x 207	
Size C: 150 x 356 x 229	
Size D: 206 x 425 x 299	
Size E: 304 x 455 x 340	

Supply voltage		**Three-phase 208…600 V**	**Three-phase 230…440 V**
Protection	Degree of protection	IP20: for ATS 22D17●●●D88 starters IP00: for ATS 22C11●●●C59 starters (protection of terminals available as an option)	
	Motor thermal protection	Class 10, 20 or 30	
Drive	Number of controlled phases	3	
	Types of control	Configurable voltage ramp, torque ramp	
	Operating cycle	Standard	
Functions		Integrated Bypass contactor	
Number of I/O	Analog inputs	1 PTC probe	
	Logic inputs	3	
	Logic outputs	–	
	Analog outputs	–	
	Relay outputs	2	
Dialogue		Integrated display terminal, SoMove Lite setup software	
Communication	Integrated	Modbus	
Standards and certifications		IEC/EN 60947-4-2, class A EMC, CE, UL, CSA, C-Tick, GOST, CCC	
Motor connection			Possible to connect the starter in the motor delta connection

Connection in the motor power supply line Motor				Soft start/soft stop unit 230…440 V - 50/60 Hz	
Power indicated on rating plate					
230 V kW	400 V kW	440 V kW	Nominal current starter (IcL)	Reference	Size
4	7.5	7.5	17	ATS22D17Q	Size A
7.5	15	15	32	ATS22D32Q	Size A
11	22	22	47	ATS22D47Q	Size A
15	30	30	62	ATS22D62Q	Size B
18.5	37	37	75	ATS22D75Q	Size B
22	45	45	88	ATS22D88Q	Size B
30	55	55	110	ATS22C11Q	Size C
37	75	75	140	ATS22C14Q	Size C
45	90	90	170	ATS22C17Q	Size C
55	110	110	210	ATS22C21Q	Size D
75	132	132	250	ATS22C25Q	Size D
90	160	160	320	ATS22C32Q	Size D
110	220	220	410	ATS22C41Q	Size D
132	250	250	480	ATS22C48Q	Size E
160	315	355	590	ATS22C59Q	Size E

Connection in the motor power supply line Motor					Soft start/soft stop unit 230…600 V - 50/60 Hz	
Power indicated on rating plate						
230 V kW	400 V kW	440 V kW	500 V kW	Nominal current starter (IcL)	Reference	Size
4	7.5	7.5	9	17	ATS22D17S6	Size A
7.5	15	15	18.5	32	ATS22D32S6	Size A
11	22	22	30	47	ATS22D47S6	Size A
15	30	30	37	62	ATS22D62S6	Size B
18.5	37	37	45	75	ATS22D75S6	Size B
22	45	45	55	88	ATS22D88S6	Size B
30	55	55	75	110	ATS22C11S6	Size C
37	75	75	90	140	ATS22C14S6	Size C
45	90	90	110	170	ATS22C17S6	Size C
55	110	110	132	210	ATS22C21S6	Size D
75	132	132	160	250	ATS22C25S6	Size D
90	160	160	220	320	ATS22C32S6	Size D
110	220	220	250	410	ATS22C41S6	Size D
132	250	250	315	480	ATS22C48S6	Size E
160	315	355	400	590	ATS22C59S6	Size E

The Altistart 22 soft start/soft stop unit is also available with a 110 VDC control power supply, reference ATS22…S6U

Altistart 48
4…1200 kW

Pumping and ventilation machines
Soft start/soft stop units

Dimensions (in mm)		width x height x depth
ATS48 D17Q to D47Q	**Size A:**	160 x 275 x 190
D62Q to C11Q	**Size B:**	190 x 290 x 235
C14Q to C17Q	**Size C:**	200 x 340 x 265
C21Q to C32Q	**Size D:**	320 x 380 x 265
C41Q to C66Q	**Size E:**	400 x 670 x 300
C79Q to M12Q	**Size F:**	770 x 890 x 315





Supply voltage			**Three-phase 230…415 V** (1)			
Type of application			Standard		Severe (2)	
Starter control supply voltage			**220…415 V**			
Protection		Degree of protection	IP20: ATS48D17● to ATS48C11● starters IP00: ATS48C14● to ATS48M12● starters			
		Motor thermal protection	Class 10		Class 20 and 30	
EMC		Class A	On all starters			
		Class B	On all starters up to 170 A			
Starting mode			Torque control (patented TCS: Torque Control System)			
I/O		Analog inputs	1 PTC probe			
		Logic inputs	4 logic inputs, 2 of which are configurable			
		Logic outputs	2 configurable logic outputs			
		Analog outputs	1 analog output			
		Relay outputs	3 relay outputs, 2 of which are configurable			
Dialogue			Integrated or remote display terminal (in option), PowerSuite software workshop			
Communication		Integrated	Modbus			
		As an option	DeviceNet, Ethernet, Fipio, Profibus DP			
Motor power						
230 V kW	**400 V** kW	Nominal current (IcL)				
3	5.5	12 A	–		**ATS48D17Q**	Size A
4	7.5	17 A	**ATS48D17Q**	Size A	**ATS48D22Q**	Size A
5.5	11	22 A	**ATS48D22Q**	Size A	**ATS48D32Q**	Size A
7.5	15	32 A	**ATS48D32Q**	Size A	**ATS48D38Q**	Size A
9	18.5	38 A	**ATS48D38Q**	Size A	**ATS48D47Q**	Size A
11	22	47 A	**ATS48D47Q**	Size A	**ATS48D62Q**	Size B
15	30	62 A	**ATS48D62Q**	Size B	**ATS48D75Q**	Size B
18.5	37	75 A	**ATS48D75Q**	Size B	**ATS48D88Q**	Size B
22	45	88 A	**ATS48D88Q**	Size B	**ATS48C11Q**	Size B
30	55	110 A	**ATS48C11Q**	Size B	**ATS48C14Q**	Size C
37	75	140 A	**ATS48C14Q**	Size C	**ATS48C17Q**	Size C
45	90	170 A	**ATS48C17Q**	Size C	**ATS48C21Q**	Size D
55	110	210 A	**ATS48C21Q**	Size D	**ATS48C25Q**	Size D
75	132	250 A	**ATS48C25Q**	Size D	**ATS48C32Q**	Size D
90	160	320 A	**ATS48C32Q**	Size D	**ATS48C41Q**	Size E
110	220	410 A	**ATS48C41Q**	Size E	**ATS48C48Q**	Size E
132	250	480 A	**ATS48C48Q**	Size E	**ATS48C59Q**	Size E
160	315	590 A	**ATS48C59Q**	Size E	**ATS48C66Q**	Size E
–	355	660 A	**ATS48C66Q**	Size E	**ATS48C79Q**	Size F
220	400	790 A	**ATS48C79Q**	Size F	**ATS48M10Q**	Size F
250	500	1000 A	**ATS48M10Q**	Size F	**ATS48M12Q**	Size F
355	630	1200 A	**ATS48M12Q**	Size F	–	

(1) Possible to connect the starter in the motor delta connection
(2) Starting time greater than 30 seconds (fans, high inertia machines and compressors)

Soft start/soft stop units

Dimensions (in mm)			width x height x depth
ATS48	D17Y to D47Y	**Size A:**	160 x 275 x 190
	D62Y to C11Y	**Size B:**	190 x 290 x 235
	C14Y to C17Y	**Size C:**	200 x 340 x 265
	C21Y to C32Y	**Size D:**	320 x 380 x 265
	C41Y to C66Y	**Size E:**	400 x 670 x 300
	C79Y to M12Y	**Size F:**	770 x 890 x 315





Supply voltage Type of application												**Three-phase 208…690 V** (1) Standard		Severe (2)	
Starter control supply voltage												**110…230 V**			
Characteristics												Identical to 230…415 V starters			
Motor power											Nominal				
208 V	**230 V**	**460 V**	**575 V**	**230 V**	**400 V**	**440 V**	**500 V**	**525 V**	**660 V**	**690 V**	current				
HP				kW							(IcL)				
2	3	7.5	10	3	5.5	5.5	7.5	7.5	9	11	12 A	–		**ATS48D17Y**	Size A
3	5	10	15	4	7.5	7.5	9	9	11	15	17 A	**ATS48D17Y**	Size A	**ATS48D22Y**	Size A
5	7.5	15	20	5.5	11	11	11	11	15	18.5	22 A	**ATS48D22Y**	Size A	**ATS48D32Y**	Size A
7.5	10	20	25	7.5	15	15	18.5	18.5	22	22	32 A	**ATS48D32Y**	Size A	**ATS48D38Y**	Size A
10	–	25	30	9	18.5	18.5	22	22	30	30	38 A	**ATS48D38Y**	Size A	**ATS48D47Y**	Size A
–	15	30	40	11	22	22	30	30	37	37	47 A	**ATS48D47Y**	Size A	**ATS48D62Y**	Size B
15	20	40	50	15	30	30	37	37	45	45	62 A	**ATS48D62Y**	Size B	**ATS48D75Y**	Size B
20	25	50	60	18.5	37	37	45	45	55	55	75 A	**ATS48D75Y**	Size B	**ATS48D88Y**	Size B
25	30	60	75	22	45	45	55	55	75	75	88 A	**ATS48D88Y**	Size B	**ATS48C11Y**	Size B
30	40	75	100	30	55	55	75	75	90	90	110 A	**ATS48C11Y**	Size B	**ATS48C14Y**	Size C
40	50	100	125	37	75	75	90	90	110	110	140 A	**ATS48C14Y**	Size C	**ATS48C17Y**	Size C
50	60	125	150	45	90	90	110	110	132	160	170 A	**ATS48C17Y**	Size C	**ATS48C21Y**	Size D
60	75	150	200	55	110	110	132	132	160	200	210 A	**ATS48C21Y**	Size D	**ATS48C25Y**	Size D
75	100	200	250	75	132	132	160	160	220	250	250 A	**ATS48C25Y**	Size D	**ATS48C32Y**	Size D
100	125	250	300	90	160	160	220	220	250	315	320 A	**ATS48C32Y**	Size D	**ATS48C41Y**	Size E
125	150	300	350	110	220	220	250	250	355	400	410 A	**ATS48C41Y**	Size E	**ATS48C48Y**	Size E
150	–	350	400	132	250	250	315	315	400	500	480 A	**ATS48C48Y**	Size E	**ATS48C59Y**	Size E
–	200	400	500	160	315	355	400	400	560	560	590 A	**ATS48C59Y**	Size E	**ATS48C66Y**	Size E
200	250	500	600	–	355	400	–	–	630	630	660 A	**ATS48C66Y**	Size E	**ATS48C79Y**	Size F
250	300	600	800	220	400	500	500	500	710	710	790 A	**ATS48C79Y**	Size F	**ATS48M10Y**	Size F
350	350	800	1000	250	500	630	630	630	900	900	1000 A	**ATS48M10Y**	Size F	**ATS48M12Y**	Size F
400	455	1000	1200	355	630	710	800	800	–	–	1200 A	**ATS48M12Y**	Size F	**–**	

(1) Starter connection in the motor delta connection: up to 500 V only, add "**S316**" at the end of the reference

(2) Starting time greater than 30 seconds (fans, high inertia machines and compressors)

Altivar 12
0.18…4 kW

Simple machines
Ultra-compact drives

Dimensions (in mm)	width x height x depth
1C1: 72 x 143 x 102.2	**2F3**: 105 x 143 x 131.2
1C2: 72 x 143 x 102.2	**3F3**: 140 x 184 x 141.2
1C3: 72 x 143 x 121.2	
2C1: 105 x 142 x 156.2	
2C2: 105 x 142 x 156.2	



Type of drive **Supply voltage**			**Single-phase** **120 V**	**Single-phase** **240 V**	**Three-phase** **240 V**
Degree of protection			**IP20**		
Drive	Output frequency		0.5… 400 Hz		
	Type of control	Asynchronous motor	U/F, sensorless flux vector control, quadratic U/F		
	Transient overtorque		150…170		
Speed range			1 to 20		
Functions	Number of functions		40		
	Number of preset speeds		8		
	Number of I/O	Analog inputs	1 configurable analog input		
		Logic inputs	4 assignable logic inputs		
		Analog outputs	1 configurable analog output		
		Relay outputs	1 protected relay logic output		
Dialogue			Integrated or remote display terminal, SoMove software workshop, or mobile phone via Bluetooth©		
Communication	Integrated		Modbus		
Cards (available as an option)					
Reduction of current harmonics					
EMC filter		Integrated		C1 EMC	
		As an option			
Motor power	kW/HP	0.18/0.25	**ATV12H018F1** (1) 1C1	**ATV12H018M2** (1) (2) 1C2	**ATV12H018M3** (1) 1C3
		0.37/0.5	**ATV12H037F1** 1C1	**ATV12H037M2** (2) 1C1	**ATV12H037M3** 1C3
		0.55/0.75	–	**ATV12H055M2** (2) 1C2	–
		0.75/1	**ATV12H075F1** 2C1	**ATV12H075M2** (2) 1C2	**ATV12H075M3** 1C3
		1.5/2	–	**ATV12HU15M2** (2) 2C2	**ATV12H015M3** 2F3
		2.2/3	–	**ATV12HU22M2** (2) 2C2	**ATV12H022M3** 2F3
		3/3	–	–	**ATV12H030M3** 3F3
		4/5	–	–	**ATV12H040M3** 3F3

(1) Because of the low heat dissipation, the ATV12H018.. is only supplied on a base plate

(2) Also exists as a multipack

Altivar 212
0.75…75 kW

Building
Drives for HVAC applications

Dimensions (in mm)	width x height x depth
IP21	**IP55**
T1A: 107 x 143 x 150	**T1**: 215 x 297 x 192
T2A: 142 x 184 x 150	**T2**: 230 x 340 x 208
T3A: 180 x 232 x 170	**T3**: 290 x 560 x 315
T4A: 245 x 329.5 x 190	**T4**: 310 x 665 x 315
T5A: 240 x 420 x 214	**T5**: 284 x 720 x 315
T6A: 320 x 630 x 290	**T5**: 284 x 880 x 343
T7A: 240 x 550 x 266	**T5**: 362 x 1000 x 364
T8A: 320 x 630 x 290	





Type of drive			**IP21**		**IP55**	
Supply voltage	**Three-phase**		**200…240 V**	**380…480 V**	**380…480 V**	
Degree of protection			**IP21** and IP41 on the upper part		**IP55** drive available in two manufacturing variants, ATV212W…N4 C1 EMC or ATV212W…N4C C2 EMC	
Output frequency			0.5…200 Hz			
Type of control			Kn^2 quadratic ratio, sensorless flux vector control, voltage/frequency ratio (2 points), energy saving ratio			
Speed range			1 to 10			
I/O	Analog inputs		1 switch-configurable current or voltage analog input and 1 voltage analog input, configurable as a PTC probe input			
	Logic inputs		3 programmable logic inputs			
	Analog outputs		1 switch-configurable current or voltage analog output			
	Relay outputs		2 relay logic outputs			
Dialogue			Integrated display terminal with local controls (1) or remote display terminal or PC software (3)			
Communication	Integrated		Modbus, APOGEE FLN P1, Metasys N2, BACnet			
(see page 4/11)	As an option		LonWorks			
EMC filter		Integrated	–	C2 EMC	C2 EMC	C1 EMC
		Available as an option	C2 EMC	C1 EMC	–	–
Motor power	kW/HP	0.75/1	**ATV212H075M3X** T1A	**ATV212H075N4** T1A	**ATV212W075N4** T1	**ATV212W075N4C** T1
		1.5/2	**ATV212HU15M3X** T1A	**ATV212HU15N4** T1A	**ATV212WU15N4** T1	**ATV212WU15N4C** T1
		2.2/3	**ATV212HU22M3X** T1A	**ATV212HU22N4** T1A	**ATV212WU22N4** T1	**ATV212WU22N4C** T1
		3/–	**ATV212HU30M3X** T2A	**ATV212HU30N4** T2A	**ATV212WU30N4** T2	**ATV212WU30N4C** T2
		4/5	**ATV212HU40M3X** T2A	**ATV212HU40N4** T2A	**ATV212WU40N4** T2	**ATV212WU40N4C** T2
		5.5/7.5	**ATV212HU55M3X** T3A	**ATV212HU55N4** T2A	**ATV212WU55N4** T2	**ATV212WU55N4C** T2
		7.5/10	**ATV212HU75M3X** T3A	**ATV212HU75N4** T3A	**ATV212WU75N4** T2	**ATV212WU75N4C** T2
		11/15	**ATV212HD11M3X** T4A	**ATV212HD11N4** T3A	**ATV212WD11N4** T3	**ATV212WD11N4C** T3
		15/20	**ATV212HD15M3X** T4A	**ATV212HD15N4** T4A	**ATV212WD15N4** T3	**ATV212WD15N4C** T3
		18.5/25	**ATV212HD18M3X** T4A	**ATV212HD18N4** T4A	**ATV212WD18N4** T4	**ATV212WD18N4C** T4
		22/30	–	**ATV212HD22N4S** T4A	–	–
		22/30	**ATV212HD22M3X** T5A	**ATV212HD22N4** (2) T5A	**ATV212WD22N4** T5	**ATV212WD22N4C** T5
		30/40	**ATV212HD30M3X** T6A	**ATV212HD30N4** (2) T5A	**ATV212WD30N4** T5	**ATV212WD30N4C** T5
		37/50	–	**ATV212HD37N4** T7A	**ATV212WD37N4** T6	**ATV212WD37N4C** T6
		45/60	–	**ATV212HD45N4** T7A	**ATV212WD45N4** T6	**ATV212WD45N4C** T6
		55/75	–	**ATV212HD55N4** T8A	**ATV212WD55N4** T7	**ATV212WD55N4C** T7
		75/100	–	**ATV212HD75N4** T8A	**ATV212WD75N4** T7	**ATV212WD75N4C** T7

(1) Drive with local controls, Run/Stop, Loc/Rem. keys
(2) For references ATV212HD22N4 and ATV212HD30N4, please refer to the Schneider Electric catalogue.
(3) PC Software is available as a free download from www.schneider-electric.com

Altivar 312
0.18…15 kW

Simple industrial machines
High performance drives





Dimensions (in mm)	width x height x depth
T 1: 72 x 145 x 122	**T 6**: 107 x 143 x 152
T 2: 72 x 145 x 132	**T 7:** 142 x 184 x 152
T 3: 72 x 145 x 132	**T 8:** 180 x 232 x 172
T 4: 72 x 145 x 142	**T 9:** 245 x 330 x 192
T 5: 105 x 143 x 132	

Type of drive **Supply voltage**			**Single-phase 240 V** with integrated EMC filters	**Three-phase 240 V** without EMC filter	**Three-phase 500V** with integrated EMC filters	**Three-phase 600V** without EMC filter
Degree of protection			**IP20**			
Drive	Output frequency		0.5…500 Hz			
	Type of control	Asynchronous motor	Standard (voltage / frequency) - Performance (sensorless flux vector control) Energy saving ratio			
	Transient overtorque		170 ... 200% of the nominal motor torque			
Speed range			1 to 50			
Functions	Number of functions		50			
	Number of preset speeds		16			
	Number of I/O	Analog inputs	3			
		Logic inputs	6			
		Analog outputs	1			
		Logic outputs	–			
		Relay outputs	2			
Dialogue			Integrated 4-digit display, remote terminals (IP54 or IP65), Altivar 61/71 remote graphic display terminal			
Communication	Integrated		Modbus and CANopen			
	As an option		CANopen Daisy chain, Modbus TCP, DeviceNet, Profibus DP, Fipio			
Reduction of current harmonics						
EMC filter		Integrated	C2 EMC	External as an option	Integrated C2(1) or C3 EMC	External as an option
		As an option	C1 EMC	–	–	–
Motor power	kW/HP	0.18/0.25	**ATV312H018M2** T3	**ATV312H018M3** T1	–	–
		0.37/0.5	**ATV312H037M2** T3	**ATV312H037M3** T1	**ATV312H037N4** T5	–
		0.55/0.75	**ATV312H055M2** T4	**ATV312H055M3** T2	**ATV312H055N4** T5	–
		0.75/1	**ATV312H075M2** T4	**ATV312H075M3** T2	**ATV312H075N4** T6	**ATV312H075S6** T6
		1.1/1.5	**ATV312HU11M2** T6	**ATV312HU11M3** T5	**ATV312HU11N4** T6	–
		1.5/2	**ATV312HU15M2** T6	**ATV312HU15M3** T5	**ATV312HU15N4** T6	**ATV312HU15S6** T6
		2.2/3	**ATV312HU22M2** (2) T7	**ATV312HU22M3** T6	**ATV312HU22N4** T7	**ATV312HU22S6** T7
		3/-	–	**ATV312HU30M3** T7	**ATV312HU30N4** T7	–
		4/5	–	**ATV312HU40M3** T7	**ATV312HU40N4** T7	**ATV312HU40S6** T7
		5.5/7.5	–	**ATV312HU55M3** T8	**ATV312HU55N4** T8	**ATV312HU55S6** T8
		7.5/10	–	**ATV312HU75M3** T8	**ATV312HU75N4** T8	**ATV312HU75S6** T8
		11/15	–	**ATV312HD11M3** T9	**ATV312HD11N4** T9	**ATV312HD11S6** T9
		15/20	–	**ATV312HD15M3** T9	**ATV312HD15N4** T9	**ATV312HD15S6** T9

(1) C2 up to 4 kW

(2) Supplied with integrated C3 EMC filter

Other versions: **please consult our Customer Care Centre.**

Dimensions (in mm)	width x height x depth
Size 1: 210 x 240 x 163 /	**Size 2**: 215 x 297 x 192
Size 3: 230 x 340 x 208 /	**Size 4**: 320 x 512 x 282
Size 5: 440 x 625 x 282	





Supply voltage			**Single-phase 200…240 V**		**Three-phase 380…500 V**	
Degree of protection			**IP55**			
Description			Enclosure equipped with an Altivar 31 drive with external heatsink. Removable covers for adding 1 switch-disconnector or 1 circuit-breaker, 3 buttons and/or LEDs, 1 potentiometer			
Motor power	kW/HP	0.18/0.25	**ATV31C018M2**	Size 1	–	
		0.37/0.5	**ATV31C037M2**	Size 1	**ATV31C037N4**	Size 2
		0.55/0.75	**ATV31C055M2**	Size 1	**ATV31C055N4**	Size 2
		0.75/1	**ATV31C075M2**	Size 1	**ATV31C075N4**	Size 2
		1.1/1.5	**ATV31CU11M2**	Size 2	**ATV31CU11N4**	Size 2
		1.5/2	**ATV31CU15M2**	Size 2	**ATV31CU15N4**	Size 2
		2.2/3	**ATV31CU22M2**	Size 3	**ATV31CU22N4**	Size 3
		3/–	–		**ATV31CU30N4**	Size 3
		4/5	–		**ATV31CU40N4**	Size 3
		5.5/7.5	–		**ATV31CU55N4** (1)	Size 4
		7.5/10	–		**ATV31CU75N4** (1)	Size 4
		11/15	–		**ATV31CD11N4** (1)	Size 5
		15/20	–		**ATV31CD15N4** (1)	Size 5

(1) Drive in metal enclosure without cover.

Dimensions (in mm)	width x height x depth
T1: 45 x 317 x 245	
T2: 60 x 317 x 245	
T4: 150 x 308 x 232 (EMC plate installed) **T4**: 150 x 232 x 232 (EMC plate not installed)	
T5: 180 x 404 x 232 (EMC plate installed) **T5**: 180 x 330 x 232 (EMC plate not installed)	





Type of drive				**Single-phase 240 V with integrated EMC filter**		**Three-phase 500 V with integrated EMC filter**	
Degree of protection				**IP20**			
Drive	Output frequency			0.1…599 Hz			
	Type of control	Asynchronous motor		Standard (voltage/frequency) Performance (sensorless flux vector control) Pump/fan (Kn² quadratic ratio) Energy saving ratio			
		Synchronous motor		Profile for open loop synchronous motor			
	Transient overtorque			170...200% of the nominal motor torque			
Speed range				1 to 50			
Functions	Number of functions			150			
	Number of I/O	Analog inputs		3 - Response time : 3ms, resolution 10 bits			
		Logic inputs		6 - Response time : 8 ms, configurable in PTC and IN pwm			
		Analog outputs		1 - Updating time : 2 ms			
		Logic outputs		1 - Sampling time : 2 ms, configurable as voltage (0-10 V) or current (0-20 mA)			
		Relay outputs		2			
Dialogue				4-digit display, remote display terminal (IP54 or IP55), remote graphic display terminal, SoMove setup software and SoMove Mobile application for mobile phone.			
Communication	Integrated			Modbus and CANopen - Bluetooth® link			
	As an option			DeviceNet, Profibus DP V1, EtherNet/IP, Modbus TCP, EtherCat			
Reduction of current harmonics							
EMC filter		Integrated		C2 EMC			
		As an option		C1 EMC			
Motor power		kW	HP				
		0.18	1/4	**ATV32H018M2**	T1	–	
		0.37	1/2	**ATV32H037M2**	T1	**ATV32H037N4**	T1
		0.55	3/4	**ATV32H055M2**	T1	**ATV32H055N4**	T1
		0.75	1	**ATV32H075M2**	T1	**ATV32H075N4**	T1
		1.1	11/2	**ATV32HU11M2**	T2	**ATV32HU11N4**	T1
		1.5	2	**ATV32HU15M2**	T2	**ATV32HU15N4**	T1
		2.2	3	**ATV32HU22M2**	T2	**ATV32HU22N4**	T2
		3	-	–		**ATV32HU30N4**	T2
		4	5	–		**ATV32HU40N4**	T2
		5.5	71/2	–		**ATV32HU55N4**	T4
		7.5	10	–		**ATV32HU75N4**	T4
		11	15	–		**ATV32HD11N4**	T5
		15	20	–		**ATV32HD15N4**	T5

Altivar 61
0.37…800 kW

Pumping and ventilation machines
Drives for industry and infrastructure

Dimensions (in mm)	width x height x depth		
T2	: 130 x 230 x 175	**T3**	: 155 x 260 x 187
T4	: 175 x 295 x 187	**T5A**	: 210 x 295 x 213
T5B	: 230 x 400 x 213	**T6**	: 240 x 420 x 236
T7A	: 240 x 550 x 266	**T7B**	: 320 x 550 x 266
T8	: 320 x 630 x 290	**T9**	: 320 x 920 x 377
T10	: 360 x 1022 x 377	**T11**	: 340 x 1190 x 377
T12	: 440 x 1190 x 377	**T13**	: 595 x 1190 x 377
T14	: 890 x 1390 x 377	**T15**	: 1120 x 1390 x 377







Type of drive Supply voltage			**Single-phase** 200…240 V	**Three-phase** 200…240 V	**Three-phase** 380…480 V
Degree of protection			**IP20** for unprotected drives and IP41 on the upper part		
Drive	Output frequency		0.1…599 Hz up to 37 kW; 0.1…500 Hz from 45 to 800 kW		
	Type of control	Asynchronous motor	Kn^2 quadratic ratio, flux vector control with or without sensor, voltage/frequency ratio (2 or 5 points), energy saving ratio		
		Synchronous motor	Vector control without speed feedback		
	Transient overtorque		120…130% of the nominal drive current for 60 seconds		
Speed range			1…100 in open loop mode		
Functions	Number of functions		> 150		
	Number of preset speeds		16		
	Number of I/O		Analog inputs 2…4/Logic inputs 6…20		
			Analog outputs 1…3/Logic outputs 0…8		
			Relay outputs 2…4		
			Safety input 1		
Dialogue			Remote graphic display terminal, SoMove setup software (3)		
Communication	Integrated		Modbus and CANopen		
	As an option		**HVAC protocols:** LonWorks, BACnet, METASYS N2, APOGEE FLN P1 **Industrial protocols:** Modbus TCP Daisy Chain, Modbus/Uni-Telway, EtherNet/IP, EtherCAT, DeviceNet, Profibus DP V0 and V1, InterBus, CC-Link		
Cards (available as an option)			Multi-pump cards, I/O extension cards, “Controller Inside” programmable card		
Reduction of current harmonics			DC choke integrated or supplied with the drive or AFE Altivar (Active Front End)		
EMC filter		Integrated	C2 EMC	C2 EMC up to 7.5 kW	C2 EMC up to 4 kW C3 EMC from 5.5 to 630 kW
		As an option	C1 EMC	C1 EMC	C1 EMC from 0.75 to 630 kW
Motor power	kW/HP	0.37/0.5	**ATV61H075M3** T2	–	–
		0.75/1	**ATV61HU15M3** T2	**ATV61H075M3** T2	**ATV61H075N4** T2
		1.5/2	**ATV61HU22M3** T3	**ATV61HU15M3** T2	**ATV61HU15N4** T2
		2.2/3	**ATV61HU30M3** T3	**ATV61HU22M3** T3	**ATV61HU22N4** T2
		3/–	**ATV61HU40M3** (1) T3	**ATV61HU30M3** T3	**ATV61HU30N4** T3
		4/5	**ATV61HU55M3** (1) T4	**ATV61HU40M3** T3	**ATV61HU40N4** T3
		5.5/7.5	**ATV61HU75M3** (1) T5A	**ATV61HU55M3** T4	**ATV61HU55N4** T4
		7.5/10	–	**ATV61HU75M3** T5A	**ATV61HU75N4** T4
		11/15	–	**ATV61HD11M3X**(2) T5B	**ATV61HD11N4** T5A
		15/20	–	**ATV61HD15M3X**(2) T5B	**ATV61HD15N4** T5B
		18.5/25	–	**ATV61HD18M3X**(2) T6	**ATV61HD18N4** T5A
		22/30	–	**ATV61HD22M3X**(2) T6	**ATV61HD22N4** T6
		30/40	–	**ATV61HD30M3X**(2) T7B	**ATV61HD30N4** T7A
		37/50	–	**ATV61HD37M3X**(2) T7B	**ATV61HD37N4** T7A
		45/60	–	**ATV61HD45M3X**(2) T7B	**ATV61HD45N4** T8
		55/75	–	**ATV61HD55M3X**(2) T9	**ATV61HD55N4** T8
		75/100	–	**ATV61HD75M3X**(2) T9	**ATV61HD75N4** T8
		90/125	–	**ATV61HD90M3X**(2) T10	**ATV61HD90N4** T9
		110/150	–	–	**ATV61HC11N4** T9
		132/200	–	–	**ATV61HC13N4** T10
		160/250	–	–	**ATV61HC16N4** T11
		220/350	–	–	**ATV61HC22N4** T12
		250/400	–	–	**ATV61HC25N4** T13
		315/500	–	–	**ATV61HC31N4** T13
		400/600	–	–	**ATV61HC40N4** T14
		500/700	–	–	**ATV61HC50N4** T14
		630/900	–	–	**ATV61HC63N4** T15

(1) Must be used with a line choke, refer to the Schneider Electric catalogue.
(2) Drive supplied without EMC filter
(3) SoMove setup software : available from 2011. Altivar 61 is also supported by Powersuite software workshop.

For all other variants, please refer to the Schneider Electric catalogue.



Dimensions (in mm)	width x height x depth
T6	: 240 x 420 x 236
T8	: 320 x 630 x 290
T11	: 340 x 1190 x 377
T13	: 595 x 1190 x 377
T15	: 1120 x 1390 x 377

Type of drive Supply voltage					**Three-phase** 500...690 V	
Degree of protection					**IP20** and IP41 on the upper part	
Drive	Output frequency				0.1…599 Hz up to 37 kW; 0.1…500 Hz from 45 to 800 kW	
	Type of control	Asynchronous motor			Kn^2 quadratic ratio, flux vector control with or without sensor, voltage/frequency ratio (2 or 5 points), energy saving ratio	
		Synchronous motor			Vector control without speed feedback	
	Transient overtorque				120…130% of the nominal drive current for 60 seconds	
Speed range					1…100 in open loop mode	
Functions	Number of functions				> 150	
	Number of preset speeds				16	
	Number of I/O				Analog inputs 2…4/Logic inputs 6…20	
					Analog outputs 1…3/Logic outputs 0…8	
					Relay outputs 2…4	
					Safety input 1	
Dialogue					Remote graphic display terminal, SoMove setup software (1)	
Communication	Integrated				Modbus and CANopen	
	As an option				**HVAC protocols:** LonWorks, BACnet, METASYS N2, APOGEE FLN P1 **Industrial protocols:** Modbus TCP Daisy Chain, Modbus/Uni-Telway, EtherNet/IP, EtherCAT, DeviceNet, PROFIBUS DP V0 et V1, INTERBUS, CC-Link	
Cards (available as an option)					Multi-pump cards, I/O extension cards, “Controller Inside” programmable card	
Reduction of current harmonics					DC choke integrated or supplied with the product or AFE Altivar (Active Front End)	
EMC filter		Integrated			C3 EMC	
Motor power	kW/HP	500 V kW	575 V HP	690 V kW		
		2.2	3	3	**ATV61HU30Y**	T6
		3	–	4	**ATV61HU40Y**	T6
		4	5	5.5	**ATV61HU55Y**	T6
		5.5	7.5	7.5	**ATV61HU75Y**	T6
		7.5	10	11	**ATV61HD11Y**	T6
		11	15	15	**ATV61HD15Y**	T6
		15	20	18.5	**ATV61HD18Y**	T6
		18.5	25	22	**ATV61HD22Y**	T6
		22	30	30	**ATV61HD30Y**	T6
		30	40	37	**ATV61HD37Y**	T8
		37	50	45	**ATV61HD45Y**	T8
		45	60	55	**ATV61HD55Y**	T8
		55	75	75	**ATV61HD75Y**	T8
		75	100	90	**ATV61HD90Y**	T8
		90	125	110	**ATV61HC11Y**	T11
		110	150	132	**ATV61HC13Y**	T11
		132	–	160	**ATV61HC16Y**	T11
		160	200	200	**ATV61HC20Y**	T11
		200	250	250	**ATV61HC25Y**	T13
		250	350	315	**ATV61HC31Y**	T13
		315	450	400	**ATV61HC40Y**	T13
		400	550	500	**ATV61HC50Y**	T15
		500	700	630	**ATV61HC63Y**	T15
		630	800	800	**ATV61HC80Y**	T15

(1) SoMove setup software : available from 2011. Altivar 61 is also supported by Powersuite software workshop.

For all other variants, please refer to the Schneider Electric catalogue.

Altivar 61
0.75…90 kW

Pumping and ventilation machines
IP54 drives





Dimensions (in mm) **ATV61W...**	width x height x depth
TA2 : 235 x 490 x 272	**TD** : 310 x 665 x 315
TA3 : 235 x 490 x 286	**TE** : 284 x 720 x 315
TB : 255 x 525 x 286	**TF** : 284 x 880 x 343
TC : 290 x 560 x 315	**TG** : 362 x 1000 x 364

Type of drive			**Three-phase 380…480 V**			
Degree of protection			**Type 12** (1) **/ IP54**			
Drive	Output frequency		0.1…599 Hz up to 37 kW; 0.1…500 Hz from 45 to 800 kW			
	Type of control	Asynchronous motor	Kn^2 quadratic ratio, flux vector control with or without sensor, voltage/frequency ratio (2 or 5 points), energy saving ratio			
		Synchronous motor	Vector control without speed feedback			
	Transient overtorque		120…130% of the nominal drive current for 60 seconds			
Speed range			1…100 in open loop mode			
Functions	Number of functions		> 150			
	Number of preset speeds		16			
	Number of I/O		Analog inputs 2…4/Logic inputs 6…20			
			Analog outputs 1…3/Logic outputs 0…8			
			Relay outputs 2…4			
			Safety input 1			
Dialogue			Remote graphic display terminal, SoMove setup software (2)			
Communication	Integrated		Modbus and CANopen			
	As an option		**HVAC protocols:** LonWorks, BACnet, METASYS N2, APOGEE FLN P1 **Industrial protocols:** Modbus TCP Daisy Chain, Modbus/Uni-Telway, EtherNet/IP, EtherCAT, DeviceNet, Profibus DP V0 and V1, InterBus, CC-Link			
Cards (available as an option)			Multi-pump cards, I/O extension cards, “Controller Inside” programmable card			
Reduction of current harmonics			Integrated DC choke			
EMC filter		Integrated	C2 EMC			
		As an option	–		–	
Motor power	kW/HP	0.75/1	**ATV61W075N4**	TA2	**ATV61E5075N4**	TA2
		1.5/2	**ATV61WU15N4**	TA2	**ATV61E5U15N4**	TA2
		2.2/3	**ATV61WU22N4**	TA2	**ATV61E5U22N4**	TA2
		3/–	**ATV61WU30N4**	TA3	**ATV61E5U30N4**	TA3
		4/5	**ATV61WU40N4**	TA3	**ATV61E5U40N4**	TA3
		5.5/7.5	**ATV61WU55N4**	TB	**ATV61E5U55N4**	TB
		7.5/10	**ATV61WU75N4**	TB	**ATV61E5U75N4**	TB
		11/15	**ATV61WD11N4**	TC	**ATV61E5D11N4**	TC
		15/20	**ATV61WD15N4**	TD	**ATV61E5D15N4**	TD
		18.5/25	**ATV61WD18N4**	TD	**ATV61E5D18N4**	TD
		22/30	**ATV61WD22N4**	TE	**ATV61E5D22N4**	TE
		30/40	**ATV61WD30N4**	TF	**ATV61E5D30N4**	TF
		37/50	**ATV61WD37N4**	TF	**ATV61E5D37N4**	TF
		45/60	**ATV61WD45N4**	TG	**ATV61E5D45N4**	TG
		55/75	**ATV61WD55N4**	TG	**ATV61E5D55N4**	TG
		75/100	**ATV61WD75N4**	TG	**ATV61E5D75N4**	TG
		90/125	**ATV61WD90N4**	TG	**ATV61E5D90N4**	TG

Drive with integrated C1 filter: add the letter **C** at the end of the reference For example, ATV61W075N4 becomes ATV61W075N4**C**
For other variants, please refer to the Schneider Electric catalogue**.**
(1) For ATV61W... range only.
(2) SoMove setup software : available from 2011. Altivar 61 is also supported by Powersuite software workshop.

Pumping and ventilation machines

IP54 Altivar 61 kit with preassembled enclosure



Drive	Kit
ATV61HC11N4	**VW3A9541**
ATV61HC13N4	**VW3A9542**
ATV61HC16N4	**VW3A9543**
ATV61HC22N4	**VW3A9544**
ATV61HC25N4	**VW3A9545**
ATV61HC31N4	
ATV61HC25N4	**VW3A9546**
ATV61HC31N4	
ATV61HC40N4	**VW3A9547**
ATV61HC50N4	
ATV61HC63N4	**VW3A9548**
VW3A7102 braking unit	**VW3A9549**
Additional empty enclosure (600 mm)	**VW3A9550**
Additional empty enclosure (800 mm)	**VW3A9551**

Altivar 61Q
110…800 kW

Pumping and ventilation machines
Water-cooled drives for harsh environments





Dimensions (in mm)	width x height x depth
T11	: 330 x 950 x 377
T13	: 585 x 950 x 377
T15	: 1110 x 1150 x 377

Type of drive Supply voltage			**Three-phase** 380...480 V		**Three-phase** 500...690 V	
Degree of protection			Sideways and front **IP31** - Top **IP20** - Bottom **IP00**			
Drive	Output frequency		0.1...500Hz			
	Type of control	Asynchronous motor	Kn^2 quadratic ratio, flux vector control with or without sensor, voltage/frequency ratio (2 or 5 points), energy saving ratio			
		Synchronous motor	Vector control without speed feedback			
	Transient overtorque		120…130% of the nominal drive current for 60 seconds			
Speed range			1…100 in open loop mode			
Functions	Number of functions		> 150			
	Number of preset speeds		16			
	Number of I/O		Analog inputs 2…4/Logic inputs 6…20			
			Analog outputs 1…3/Logic outputs 0…8			
			Relay outputs 2…4			
			Safety input 1			
Dialogue			Remote graphic display terminal, SoMove setup software (2)			
Communication	Integrated		Modbus and CANopen			
	As an option		**HVAC protocols:** LonWorks, BACnet, METASYS N2, APOGEE FLN P1 **Industrial protocols:** Modbus TCP, Modbus/Uni-Telway, Fipio, Modbus Plus, Profbus DP, Profbus DP V1, DeviceNet, EthernetIP, CC-Link, InterBus			
Cards (available as an option)			Multi-pump cards, I/O extension cards, “Controller Inside” programmable card			
Reduction of current harmonics			Optional AC choke, Altivar AFE (Active Front End)			
EMC filter		Integrated	C3 EMC			
		As an option	C1 EMC			
Motor power	kW/HP	110/150	**ATV61QC11N4**	T11	–	
		132/200	**ATV61QC13N4**	T11	–	
		160/250	**ATV61QC16N4**	T11	–	
		200/300	**ATV61QC20N4**	T13	–	
		250/400	**ATV61QC25N4**	T13	–	
		315/500	**ATV61QC31N4**	T13	–	
		400/600	**ATV61QC40N4**	T15	–	
		500/700	**ATV61QC50N4**	T15	–	
		630/900	**ATV61QC63N4**	T15	–	

500 V kW	575 V HP	690 V kW			
110	150	132	–	**ATV61QC13Y**	T11
132	–	160	–	**ATV61QC16Y**	T11
160	200	200	–	**ATV61QC20Y**	T11
200	250	250	–	**ATV61QC25Y**	T13
250	350	315	–	**ATV61QC31Y**	T13
315	450	400	–	**ATV61QC40Y**	T13
400	550	500	–	**ATV61QC50Y**	T15
500	700	630	–	**ATV61QC63Y**	T15
630	800	800	–	**ATV61QC80Y**	T15

(1) SoMove setup software : available during 2011. Altivar 61 also works with the PowerSuite software workshop.

Altivar 61 Plus
90…2400 kW

Pumping and ventilation machines
Solutions in IP23 and IP54 ready-assembled enclosures

Dimensions (in mm)	width x height x depth
ATV61EXC2C…	
E1	: 616 x 2159 x 659
E2	: 816 x 2159 x 659
E3	: 1016 x 2159 x 659
E4	: 1220 x 2159 x 659



Enclosure types			**Three-phase 380…480 V - 500 V - 690 V** (1)
Degree of protection			**IP23, IP54**
Drive	Output frequency		0.1…599 Hz up to 37 kW; 0.1…500 Hz from 45…2400 kW
	Type of control	Asynchronous motor	Kn^2 quadratic ratio, flux vector control with or without sensor, voltage/frequency ratio (2 or 5 points), energy saving ratio
		Synchronous motor	Vector control without speed feedback
	Transient overtorque		120…130% of the nominal drive current for 60 seconds
Speed range			1…100 in open loop mode
Functions	Number of functions		> 150
	Number of preset speeds		16
	Number of I/O		Analog inputs 2…4/Logic inputs 6…20
			Analog outputs 1…3/Logic outputs 0…8
			Relay outputs 2…4
			Safety input 1
Dialogue			Remote graphic display terminal, SoMove setup software (2)
Communication	Integrated		Modbus and CANopen
	As an option		**HVAC protocols:** LonWorks, BACnet, METASYS N2, APOGEE FLN P1 **Industrial protocols:** Modbus TCP, Modbus/Uni-Telway, EtherNet/IP, EtherCAT, DeviceNet, Profibus DP V0 and V1, InterBus, CC-Link.
Cards (available as an option)			Multi-pump cards, I/O extension cards, “Controller Inside” programmable card
Reduction of current harmonics			DC choke or Integrated AC choke, variant 12 pulse, AFE Altivar (Active Front End)
EMC filter		Integrated	C3 EMC
Equipment			A wide range of options listed in the catalogue provides add-ons for the standard offer as required. As well as the options listed in the catalogue, it is possible to customise the equipment. Just contact our teams of experts directly. - Water cooling solution - Integration of specific options



IP23	**Three-phase 380…415 V**		**Three-phase 500 V**		**Three-phase 690 V**	
	kW/HP	Dimensions	kW	Dimensions	kW	Dimensions
		–	90	ATV61 EXC2D90N E1		–
	110/150	ATV61EXC2C11N4 E1	110	ATV61 EXC2C11N E1	110	ATV61 EXC2C11Y E1
	132/200	ATV61EXC2C13N4 E1	132	ATV61 EXC2C13N E1	132	ATV61 EXC2C13Y E1
	160/250	ATV61EXC2C16N4 E1	160	ATV61 EXC2C16N E1	160	ATV61 EXC2C16Y E1
	220/350	ATV61EXC2C22N4 E1	200	ATV61 EXC2C20N E2	200	ATV61 EXC2C20Y E1
	250/400	ATV61EXC2C25N4 E2	250	ATV61 EXC2C25N E2	250	ATV61 EXC2C25Y E2
	315/500	ATV61EXC2C31N4 E2	315	ATV61 EXC2C31N E2	315	ATV61 EXC2C31Y E2
	400/600	ATV61EXC2C40N4 E3	400	ATV61 EXC2C40N E4	400	ATV61 EXC2C40Y E2
	500/700	ATV61EXC2C50N4 E3	500	ATV61 EXC2C50N E4	500	ATV61 EXC2C50Y E4
	630/900	ATV61EXC2C63N4 E4	630	ATV61 EXC2C63N E4	630	ATV61 EXC2C63Y E4
					800	ATV61 EXC2C80Y E4

(1) The Altivar 61 range in ready-assembled enclosure consists of: an ATV61H… drive, a switch and fast-acting fuses, an IP65 remote mounting kit for graphic display terminal
(2) SoMove setup software : available from 2011. Altivar 61 is also supported by Powersuite software workshop.

IP23 offer available up to 2400 kW. For ratings above 800 kW, please consult your Regional Sales Office.

Dimensions (in mm) width x height x depth **ATV61EX...**	
E5 : 616 x 2264 x 659	**E9** : 616 x 2359 x 659
E6 : 816 x 2264 x 659	**E10** : 816 x 2359 x 659
E7 : 1016 x 2264 x 659	**E11** : 608 x 2359 x 659
E8 : 1216 x 2264 x 659	**E12** : 808 x 2359 x 6590
	E13 : 1008 x 2359 x 659
	E14 : 1208 x 2359 x 659

IP54 (1)	**Three-phase 380…415 V**		**Three-phase 500 V**		**Three-phase 690 V**	
Compact floor-standing enclosure	kW/HP	Dimensions	kW	Dimensions	kW	Dimensions
		–	90	ATV61EXC5D90N E5		–
	110/150	ATV61EXC5C11N4 E5	110	ATV61EXC5C11N E5	110	ATV61EXC5C11Y E5
	132/200	ATV61EXC5C1 3N4 E5	132	ATV61EXC5C13N E5	132	ATV61EXC5C13Y E5
	160/250	ATV61EXC5C16N4 E5	160	ATV61EXC5C16N E5	160	ATV61EXC5C16Y E5
	220/350	ATV61EXC5C22N4 E5	200	ATV61EXC5C20N E6	200	ATV61EXC5C20Y E5
	250/400	ATV61EXC5C25N4 E6	250	ATV61EXC5C25N E6	250	ATV61EXC5C25Y E6
	315/500	ATV61EXC5C31N4 E6	315	ATV61EXC5C31N E6	315	ATV61EXC5C31Y E6
	400/600	ATV61EXC5C40N4 E7	400	ATV61EXC5C40N E8	400	ATV61EXC5C40Y E6
	500/700	ATV61EXC5C50N4 E7	500	ATV61EXC5C50N E8	500	ATV61EXC5C50Y E8
	630/900	ATV61EXC5C63N4 E8	630	ATV61EXC5C63N E8	630	ATV61EXC5C63Y E8
					800	ATV61EXC5C80Y E8

(1) The IP54 offer is available for power ratings up to 800 kW. For higher power ratings up to 2400 kW, consult your customer care centre.

IP54 (2)	**Three-phase 380…415 V**		**Three-phase 500 V**		**Three-phase 690 V**	
Separate air flow	kW/HP	Dimensions	kW	Dimensions	kW	Dimensions
		–	90	ATV61EXS5D90N E11		–
	110/150	ATV61EXS5C11N4 E9	110	ATV61EXS5C11N E11	110	ATV61EXS5C11Y E11
	132/200	ATV61EXS5C13N4 E9	132	ATV61EXS5C13N E11	132	ATV61EXS5C13Y E11
	160/250	ATV61EXS5C16N4 E9	160	ATV61EXS5C16N E11	160	ATV61EXS5C16Y E11
	220/350	ATV61EXS5C22N4 E9	200	ATV61EXS5C20N E12	200	ATV61EXS5C20Y E11
	250/400	ATV61EXS5C25N4 E10	250	ATV61EXS5C25N E12	250	ATV61EXS5C25Y E12
	315/500	ATV61EXS5C31N4 E10	315	ATV61EXS5C31N E12	315	ATV61EXS5C31Y E12
	400/600	ATV61EXS5C40N4 E13	400	ATV61EXS5C40N E14	400	ATV61EXS5C40Y E12
	500/700	ATV61EXS5C50N4 E13	500	ATV61EXS5C50N E14	500	ATV61EXS5C50Y E14
	630/900	ATV61EXS5C63N4 E14	630	ATV61EXS5C63N E14	630	ATV61EXS5C63Y E14
					800	ATV61EXS5C80Y E14

(2) The IP54 offer with separate air flow is available for power ratings upt o 800 kW. For higher power ratings up to 2400 kW, consult your customer care centre.

I/O extension and specific cards



Type of card	I/O extension	
	Logic	Extended
Description	1 relay logic output (“C/O” contact) 4 x 24 VDC positive or negative logic inputs 2 x 24 VDC open collector positive or negative logic outputs 1 input for PTC probes	1 x 0…20 mA differential current analog input 1 software-configurable voltage (0…10 VDC) or current (0…20 mA) analog input 2 software-configurable voltage (±10V, 0…10 VDC) or current (0…20 mA) analog inputs 1 relay logic output (“C/O” contact) 4 x 24 VDC positive or negative logic inputs 2 x 24 VDC open collector positive or negative logic outputs 1 input for PTC probes 1 frequency control input
Reference	**VW3A3201**	**VW3A3202**

"Controller Inside" programmable card



Type of card	Programmable “Controller Inside”
Description	10 logic inputs, 2 of which can be used for 2 counters or 4 of which can be used for 2 incremental encoders 2 analog inputs, 6 logic outputs, 2 analog outputs, a master port for the CANopen bus, a PC port for programming with the PS 1131 software workshop.
Reference	**VW3A3501**

Multi-pump cards



Type of card		Multi-pump
Description	The pump switching card ensures compatibility of applications developed on the Altivar 38.	This card is specific to pump switching. It ensures optimum flow for an impeccable quality of service. Its algorithm both saves energy and prolongs equipment service life.
Reference		**VW3A3502**
Description	The VWA3503 “Water Solution” card can be used to support all multi-pump applications.	This card offers all the functions needed to manage a pumping, booster, irrigation station, etc with the operational safety of a control and monitoring system.
Reference		**VW3A3503**

Accessories and options
Braking resistors



The network braking unit can be used to restore the following to the line supply:
- The energy from the motor
- The energy from the motors controlled by several drives connected on the same DC bus

Type of drive	Three-phase	
Supply voltage	200…240 V 50/60 Hz	380…480 V 50/60 Hz
ATV61H075M3	**VW3A7701**	–
ATV61HU15M3, HU22M3	**VW3A7702**	–
ATV61HU30M3, HU40M3	**VW3A7703**	–
ATV61HU55M3, HU75M3	**VW3A7704**	–
ATV61HD11M3X	**VW3A7705**	–
ATV61HD15M3X	**VW3A7706**	–
ATV61HD18M3X, HD22M3X	**VW3A7707**	–
ATV61HD30M3X	**VW3A7708**	–
ATV61HD37M3X, HD45M3X	**VW3A7709**	–
ATV61HD55M3X, HD75M3X	**VW3A7713**	–
ATV61HD90M3X	**VW3A7714**	–
ATV61H075N4…HU40N4, ATV61W075N4…WU55N4, ATV61W075N4C…WU55N4C	–	**VW3A7701**
ATV61HU55N4, HU75N4, ATV61WU75N4, WD11N4, ATV61WU75N4C, WD11N4C	–	**VW3A7702**
ATV61HD11N4, HD15N4, ATV61WD15N4, WD18N4, ATV61WD15N4C, WD18N4C	–	**VW3A7703**
ATV61HD18N4…HD30N4, ATV61WD22N4…WD37N4, ATV61WD22N4C…WD37N4C	–	**VW3A7704**
ATV61HD37N4, ATV61WD45N4, WD45N4C	–	**VW3A7705**
ATV61WD55N4…WD90N4, ATV61WD55N4C…WD90N4C	–	**VW3A7706**
ATV61HD45N4…HD75N4	–	**VW3A7707**
ATV61HD90N4, HC11N4	–	**VW3A7710**
ATV61HC13N4, HC16N4, E5C16N4	–	**VW3A7711**
ATV61HC22N4	–	**VW3A7712**
ATV61HC25N4	–	**VW3A7715**
ATV61HC31N4	–	**VW3A7716**
ATV61HC40N4, HC50N4, E5C50N4	–	**VW3A7717**
ATV61HC63N4	–	**VW3A7718**

Other accessories (see references in the Schneider Electric Catalogue)

> Resistance braking units (integrated in ATV61 drives up to 220 kW)
> Additional EMC input filters
> AC line chokes
> Optional DC chokes
> Passive filters
> Sinus filters
> Motor chokes
> Altivar AFE (Active Front End)
> Regenerative network braking unit

Altivar 71
0.37…630 kW

Complex, high-power machines
High performance drives

Dimensions (in mm)	width x height x depth
T2 : 130 x 230 x 175	**T3** : 155 x 260 x 187
T4 : 175 x 295 x 187	**T5A** : 210 x 295 x 213
T5B : 230 x 400 x 213	**T6** : 240 x 420 x 236
T7A : 240 x 550 x 266	**T7B** : 320 x 550 x 266
T8 : 320 x 630 x 290	**T9** : 320 x 920 x 377
T10 : 360 x 1022 x 377	**T11** : 340 x 1190 x 377
T12 : 440 x 1190 x 377	**T13** : 595 x 1190 x 377
T14 : 890 x 1390 x 377	**T15** : 1120 x 1390 x 377







Type of drive Supply voltage			**Single-phase** 200…240 V (3)		**Three-phase** 200…240 V (3)		**Three-phase** 380…480 V (3)	
Degree of protection			**IP20** for unprotected drives and IP41 on the upper part					
Drive	Output frequency		0…599 Hz up to 37 kW - 0…500 Hz from 45…630 kW					
	Type of control	Asynchronous motor	Flux vector control with or without sensor, voltage/frequency ratio (2 or 5 points), ENA System					
		Synchronous motor	Vector control with and without speed feedback (4)					
	Transient overtorque		220% of nominal motor torque for 2 seconds, and 170% for 60 seconds					
Speed range			1…1000 in closed loop mode with encoder feedback, 1…100 in open loop mode					
Functions	Number of functions		> 150					
	Number of preset speeds		16					
	Number of I/O	Analog inputs	2…4					
		Logic inputs	6…20					
		Analog outputs	1…3					
		Logic outputs	0…8					
		Relay outputs	2…4					
		Safety input	1					
Dialogue			Remote graphic display terminal, SoMove setup software (5)					
Communication	Integrated		Modbus and CANopen					
	As an option		Modbus TCP, Modbus/Uni-Telway, EtherNet/IP, EtherCAT, DeviceNet, Profibus DP V0 and V1, InterBus, CC-Link.					
Cards (available as an option)			Encoder interface cards, I/O extension cards, “Controller Inside” programmable card					
Reduction of current harmonics			DC choke integrated or supplied with the product or Altivar AFE (Active Front End).					
EMC filter		Integrated	C2 EMC up to 4 kW, C3 EMC from 5,5 to 500 kW					
		As an option	C1 EMC from 0.75 to 500 kW					
Motor power	kW/HP	0.37/0.5	**ATV71H075M3**	T2	**ATV71H037M3**	T2	–	
		0.75/1	**ATV71HU15M3**	T2	**ATV71H075M3**	T2	**ATV71H075N4**	T2
		1.5/2	**ATV71HU22M3**	T3	**ATV71HU15M3**	T2	**ATV71HU15N4**	T2
		2.2/3	**ATV71HU30M3**	T3	**ATV71HU22M3**	T3	**ATV71HU22N4**	T2
		3/–	**ATV71HU40M3** (1)	T3	**ATV71HU30M3**	T3	**ATV71HU30N4**	T3
		4/5	**ATV71HU55M3** (1)	T4	**ATV71HU40M3**	T3	**ATV71HU40N4**	T3
		5.5/7.5	**ATV71HU75M3** (1)	T5A	**ATV71HU55M3**	T4	**ATV71HU55N4**	T4
		7.5/10	–		**ATV71HU75M3**	T5A	**ATV71HU75N4**	T4
		11/15	–		**ATV71HD11M3X** (2)	T5B	**ATV71HD11N4**	T5A
		15/20	–		**ATV71HD15M3X** (2)	T5B	**ATV71HD15N4**	T5B
		18.5/25	–		**ATV71HD18M3X** (2)	T6	**ATV71HD18N4**	T5B
		22/30	–		**ATV71HD22M3X** (2)	T6	**ATV71HD22N4**	T6
		30/40	–		**ATV71HD30M3X** (2)	T7B	**ATV71HD30N4**	T7A
		37/50	–		**ATV71HD37M3X** (2)	T7B	**ATV71HD37N4**	T7A
		45/60	–		**ATV71HD45M3X** (2)	T7B	**ATV71HD45N4**	T8
		55/75	–		**ATV71HD55M3X** (2)	T9	**ATV71HD55N4**	T8
		75/100	–		**ATV71HD75M3X** (2)	T10	**ATV71HD75N4**	T8
		90/125	–		–		**ATV71HD90N4**	T9
		110/150	–		–		**ATV71HC11N4**	T10
		132/200	–		–		**ATV71HC13N4**	T11
		160/250	–		–		**ATV71HC16N4**	T12
		200/300	–		–		**ATV71HC20N4**	T13
		220/350	–		–		**ATV71HC25N4**	T13
		280/450	–		–		**ATV71HC28N4**	T13
		315/500	–		–		**ATV71HC31N4**	T14
		355/–	–		–		**ATV71HC40N4**	T14
		500/700	–		–		**ATV71HC50N4**	T15

(1) Must be used with a line choke, Refer to the Schneider Electric catalogue.
(2) Drive supplied without EMC filter.
(3) A three-phase 380...480 V range on base plate is available from 0.75 to 11 kW. Please refer to the Schneider Electric catalogue.
(4) Vector control with speed feedback for synchronous motors is supported by the S383 variant of the Altivar 71.
(5) SoMove setup software : available from 2011. Altivar 71 is also supported by Powersuite software workshop.

Schneider Electric

Other versions: **please consult our Customer Care Centre.**

Altivar 71
0.37…630 kW

Complex, high-power machines
High performance drives

Dimensions (in mm)	width x height x depth
T2 : 130 x 230 x 175	**T3** : 155 x 260 x 187
T4 : 175 x 295 x 187	**T5A** : 210 x 295 x 213
T5B : 230 x 400 x 213	**T6** : 240 x 420 x 236
T7A : 240 x 550 x 266	**T7B** : 320 x 550 x 266
T8 : 320 x 630 x 290	**T9** : 320 x 920 x 377
T10 : 360 x 1022 x 377	**T11** : 340 x 1190 x 377
T12 : 440 x 1190 x 377	**T13** : 595 x 1190 x 377
T14 : 890 x 1390 x 377	**T15** : 1120 x 1390 x 377



Type of drive Supply voltage					**Three-phase** 500... 690 V	
Degree of protection					**IP20** for unprotected drives and IP41 on the upper part	
Drive	Output frequency				0…599 Hz up to 37 kW - 0…500 Hz from 45…630 kW	
	Type of control	Asynchronous motor			Flux vector control with or without sensor, voltage/frequency ratio (2 or 5 points), ENA System	
		Synchronous motor			Vector control with and without speed feedback (1)	
	Transient overtorque				220% of nominal motor torque for 2 seconds, and 170% for 60 seconds	
Speed range					1…1000 in closed loop mode with encoder feedback, 1…100 in open loop mode	
Functions	Number of functions				> 150	
	Number of preset speeds				16	
	Number of I/O	Analog inputs			2…4	
		Logic inputs			6…20	
		Analog outputs			1…3	
		Logic outputs			0…8	
		Relay outputs			2…4	
		Safety input			1	
Dialogue					Remote graphic display terminal, SoMove setup software (2)	
Communication	Integrated				Modbus and CANopen	
	As an option				Modbus TCP, Modbus/Uni-Telway, EtherNet/IP, EtherCAT, DeviceNet, Profibus DP V0 and V1, InterBus, CC-Link.	
Cards (available as an option)					Encoder interface cards, I/O extension cards, “Controller Inside” programmable card	
Reduction of current harmonics					DC choke integrated or DC choke optional or AFE Altivar (Active Front End)	
EMC filter		Integrated			C3 EMC	
Motor power	kW/HP	500 V kW	575 V HP	690 V kW		
		1.5	2	2.2	ATV71HU22Y	T6
		2.2	3	3	ATV71HU30Y	T6
		3	–	4	ATV71HU40Y	T6
		4	5	5.5	ATV71HU55Y	T6
		5.5	7.5	7.5	ATV71HU75Y	T6
		7.5	10	11	ATV71HD11Y	T6
		11	15	15	ATV71HD15Y	T6
		15	20	18.5	ATV71HD18Y	T6
		18.5	25	22	ATV71HD22Y	T6
		22	30	30	ATV71HD30Y	T6
		30	40	37	ATV71HD37Y	T8
		37	50	45	ATV71HD45Y	T8
		45	60	55	ATV71HD55Y	T8
		55	75	75	ATV71HD75Y	T8
		75	100	90	ATV71HD90Y	T8
		90	125	110	ATV71HC11Y	T11
		110	150	132	ATV71HC13Y	T11
		132	–	160	ATV71HC16Y	T11
		160	200	200	ATV71HC20Y	T13
		200	250	250	ATV71HC25Y	T13
		250	350	315	ATV71HC31Y	T13
		315	450	400	ATV71HC40Y	T15
		400	550	500	ATV71HC50Y	T15
		500	700	630	ATV71HC63Y	T15

(1) Vector control with speed feedback for synchronous motors is supported by the S383 variant of the Altivar 71.
(2) SoMove setup software : available from 2011. Altivar 71 is also supported by Powersuite software workshop..

For all other variants, please refer to the Schneider Electric catalogue.

Altivar 71
0.75…75 kW

Complex, high-power machines
IP54 drives





Dimensions (in mm) **ATV71W…, ATV71E5…** up to 75 kW	width x height x depth
TA2 : 235 x 490 x 272	**TD** : 310 x 665 x 315
TA3 : 235 x 490 x 286	**TE** : 284 x 720 x 315
TB : 255 x 525 x 286	**TF** : 284 x 880 x 343
TC : 290 x 560 x 315	**TG** : 362 x 1000 x 364

Type of drive			**Three-phase 380…480 V**			
					With switch	
Degree of protection			**UL Type 12** (1) **/ IP54**			
Drive	Output frequency		0…599 Hz up to 37 kW - 0…500 Hz from 45…75 kW			
	Type of control	Asynchronous motor	Flux vector control with or without sensor, voltage/frequency ratio (2 or 5 points), ENA System			
		Synchronous motor	Vector control without speed feedback			
	Transient overtorque		220% of nominal motor torque for 2 seconds, and 170% for 60 seconds			
Speed range			1…1000 in closed loop mode with encoder feedback, 1…100 in open loop mode			
Functions	Number of functions		> 150			
	Number of preset speeds		16			
	Number of I/O	Analog inputs	2…4			
		Logic inputs	6…20			
		Analog outputs	1…3			
		Logic outputs	0…8			
		Relay outputs	2…4			
		Safety input	1			
Dialogue			Remote graphic display terminal, SoMove setup software (2)			
Communication	Integrated		Modbus and CANopen			
	As an option		Modbus TCP, Modbus/Uni-Telway, EtherNet/IP, EtherCAT, DeviceNet, Profibus DP V0 et V1, InterBus, CC-Link.			
Cards (available as an option)			Encoder interface cards, I/O extension cards, “Controller Inside” programmable card			
Reduction of current harmonics			Optional chokes and passive filters			
EMC filter		Integrated	C2 EMC			
		As an option	External C1 EMC			
Motor power	kW/HP	0.75/1	**ATV71W075N4**	TA2	**ATV71E5075N4**	TA2
		1.5/2	**ATV71WU15N4**	TA2	**ATV71E5U15N4**	TA2
		2.2/3	**ATV71WU22N4**	TA2	**ATV71E5U22N4**	TA2
		3/–	**ATV71WU30N4**	TA3	**ATV71E5U30N4**	TA3
		4/5	**ATV71WU40N4**	TA3	**ATV71E5U40N4**	TA3
		5.5/7.5	**ATV71WU55N4**	TB	**ATV71E5U55N4**	TB
		7.5/10	**ATV71WU75N4**	TB	**ATV71E5U75N4**	TB
		11/15	**ATV71WD11N4**	TC	**ATV71E5D11N4**	TC
		15/20	**ATV71WD15N4**	TD	**ATV71E5D15N4**	TD
		18.5/25	**ATV71WD18N4**	TD	**ATV71E5D18N4**	TD
		22/30	**ATV71WD22N4**	TD	**ATV71E5D22N4**	TD
		30/40	**ATV71WD30N4**	TF	**ATV71E5D30N4**	TF
		37/50	**ATV71WD37N4**	TF	**ATV71E5D37N4**	TF
		45/60	**ATV71WD45N4**	TG	**ATV71E5D45N4**	TG
		55/75	**ATV71WD55N4**	TG	**ATV71E5D55N4**	TG
		75/100	**ATV71WD75N4**	TG	**ATV71E5D75N4**	TG

(1) For ATV71W... range only.
(2) SoMove setup software : available from 2011. Altivar 71 is also supported by Powersuite software workshop.

Complex, high-power machines

IP54 Altivar 71 kit with preassembled enclosure



Drive		Kit
ATV71HD90N4		**VW3A9541**
ATV71HC11N4		**VW3A9542**
ATV71HC13N4		**VW3A9543**
ATV71HC16N4		**VW3A9544**
ATV71HC20N4		**VW3A9545**
ATV71HC25N4		
ATV71HC28N4		
ATV71HC20N4	With VW3A7101 braking unit	**VW3A9546**
ATV71HC25N4	With VW3A7101 braking unit	
ATV71HC28N4	With VW3A7101 braking unit	
ATV71HC31N4	Without braking unit	**VW3A9547**
ATV71HC40N4		
ATV71HC50N4		**VW3A9548**
	VW3A7102 braking unit	**VW3A9549**
	Additional empty enclosure (600 mm)	**VW3A9550**
	Additional empty enclosure (800 mm)	**VW3A9551**

Altivar 71Q
90…630 kW

Complex, high-power machines
Water-cooled drives for harsh environments

Dimensions (in mm)	width x height x depth
T11	: 330 x 950 x 377
T13	: 585 x 950 x 377
T15	: 1110 x 1150 x 377





Type of drive Supply voltage			**Three-phase** 380...480 V		**Three-phase** 500...690 V
Degree of protection			Sideways and front **IP31** - Top **IP20** - Bottom **IP00**		
Drive	Output frequency		0.1...500Hz		
	Type of control	Asynchronous motor	Flux vector control with or without sensor, voltage/frequency ratio (2 or 5 points), ENA System		
		Synchronous motor	Vector control without speed feedback		
	Transient overtorque		220% of nominal motor torque for 2 seconds, and 170% for 60 seconds		
Speed range			1…1000 in closed loop mode with encoder feedback, 1…100 in open loop mode		
Functions	Number of functions		> 150		
	Number of preset speeds		16		
	Number of I/O	Analog inputs	2…4		
		Logic inputs	6…20		
		Analog outputs	1…3		
		Logic outputs	0…8		
		Relay outputs	2…4		
		Safety input	1		
Dialogue			Remote graphic display terminal, SoMove setup software (1)		
Communication	Integrated		Modbus and CANopen		
	As an option		Modbus TCP, Modbus/Uni-Telway, Fipio, Modbus Plus, Profbus DP, Profbus DP V1, DeviceNet, EthernetIP, CC-Link, INTERBUS		
Cards (available as an option)			Multi-pump cards, I/O extension cards, “Controller Inside” programmable card		
Reduction of current harmonics			Optional AC choke, Altivar AFE (Active Front End)		
EMC filter		Integrated	C3 EMC		
		As an option	C1 EMC		
Motor power	kW/HP	90/125	**ATV71QD90N4**	T11	–
		110/150	**ATV71QC11N4**	T11	–
		132/200	**ATV71QC13N4**	T11	–
		160/250	**ATV71QC16N4**	T13	–
		200/300	**ATV71QC20N4**	T13	–
		250/400	**ATV71QC25N4**	T13	–
		315/500	**ATV71QC31N4**	T15	–
		400/600	**ATV71QC40N4**	T15	–
		500/700	**ATV71QC50N4**	T15	–

	500 V	575 V	690 V			
	kW	HP	kW			
	90	125	110	–	**ATV71QC11Y**	T11
	110	150	132	–	**ATV71QC13Y**	T11
	132	-	160	–	**ATV71QC16Y**	T11
	160	200	200	–	**ATV71QC20Y**	T13
	200	250	250	–	**ATV71QC25Y**	T13
	250	350	315	–	**ATV71QC31Y**	T13
	315	450	400	–	**ATV71QC40Y**	T15
	400	550	500	–	**ATV71QC50Y**	T15
	500	700	630	–	**ATV71QC63Y**	T15

(1) SoMove setup software : available during 2011. Altivar 71 also works with the PowerSuite software workshop.

Schneider Electric

Other versions: **please consult our Customer Care Centre.**

Altivar 71 Plus
90…2000 kW

Complex, high-power machines
Solutions in IP23 and IP54 ready-assembled enclosures



Dimensions (in mm) width x height x depth **ATV71EXC2C…**	
E1 : 616 x 2159 x 659	**E3** : 1016 x 2159 x 659
E2 : 816 x 2159 x 659	**E4** : 1216 x 2159 x 659

Type of drive			**Three-phase 380…480 V** (1)
Degree of protection			**IP23 et IP54**
Drive	Output frequency		0…500 Hz
	Type of control	Asynchronous motor	Flux vector control with or without sensor, voltage/frequency ratio (2 or 5 points), ENA System
		Synchronous motor	Vector control without speed feedback
	Transient overtorque		220% of nominal motor torque for 2 seconds, and 170% for 60 seconds
Speed range			1…1000 in closed loop mode with encoder feedback, 1…100 in open loop mode
Functions	Number of functions		> 150
	Number of preset speeds		16
	Number of I/O	Analog inputs	2…4
		Logic inputs	6…20
		Analog outputs	1…3
		Logic outputs	0…8
		Relay outputs	2…4
		Safety input	1
Dialogue			Remote graphic display terminal, SoMove setup software (2)
Communication	Integrated		Modbus and CANopen
	As an option		Modbus TCP, Modbus/Uni-Telway, EtherNet/IP, EtherCAT, DeviceNet, Profibus DP V0 et V1, InterBus, CC-Link.
Cards (available as an option)			Encoder interface cards, I/O extension cards, “Controller Inside” programmable card,
Reduction of current harmonics			DC choke or Integrated AC choke, variant 12 pulse, AFE Altivar (Active Front End)
EMC filter		Integrated	C3 EMC
		As an option	External C1 EMC
Equipment			A wide range of options listed in the catalogue provides add-ons for the standard offer as required. As well as the options listed in the catalogue, it is possible to customise the equipment. Just contact our teams of experts direct. - Water cooling solution - Integration of specific options

IP23	**Three-phase 380…415 V**			**Three-phase 500 V**			**Three-phase 690 V**		
	kW/HP	Dimensions		kW	Dimensions		kW	Dimensions	
	90/125	**ATV71EXC2D90N4**	E1	90	**ATV71 EXC2D90N**	E1		–	
	110/150	**ATV71EXC2C11N4**	E1	110	**ATV71 EXC2C11N**	E1	110	**ATV71 EXC2C11Y**	E1
	132/200	**ATV71EXC2C13N4**	E1	132	**ATV71 EXC2C13N**	E1	132	**ATV71 EXC2C13Y**	E1
	160/250	**ATV71EXC2C16N4**	E1	160	**ATV71 EXC2C16N**	E2	160	**ATV71 EXC2C16Y**	E1
	200/300	**ATV71EXC2C20N4**	E2	200	**ATV71 EXC2C20N**	E2	200	**ATV71 EXC2C20Y**	E2
	250/400	**ATV71EXC2C25N4**	E2	250	**ATV71 EXC2C25N**	E2	250	**ATV71 EXC2C25Y**	E2
	280/450	**ATV71EXC2C28N4**	E2		–			–	
	315/500	**ATV71EXC2C31N4**	E3	315	**ATV71 EXC2C31N**	E4	315	**ATV71 EXC2C31Y**	E2
	400/600	**ATV71EXC2C40N4**	E3	400	**ATV71 EXC2C40N**	E4	400	**ATV71 EXC2C40Y**	E4
	500/700	**ATV71EXC2C50N4**	E4	500	**ATV71 EXC2C50N**	E4	500	**ATV71 EXC2C50Y**	E4

(1) The Altivar 71 range in ready-assembled enclosure consists of:
– An ATV71H… drive
– A switch and fast-acting fuses
– An IP65 remote mounting kit for graphic display terminal
(2) SoMove setup software : available from 2011. Altivar 71 is also supported by Powersuite software workshop.

IP23 offer available up to 2000 kW. For ratings above 630 kW, please consult your Customer Care Centre.

Altivar 71 Plus
90…2000 kW

Complex, high-power machines
Solutions in IP23 and IP54 ready-assembled enclosures

Dimensions (in mm) width x height x depth **ATV71EX...**	
E5 : 616 x 2264 x 659	**E9** : 616 x 2359 x 659
E6 : 816 x 2264 x 659	**E10** : 816 x 2359 x 659
E7 : 1016 x 2264 x 659	**E11** : 608 x 2359 x 659
E8 : 1216 x 2264 x 659	**E12** : 808 x 2359 x 6590
	E13 : 1008 x 2359 x 659
	E14 : 1208 x 2359 x 659



IP54 (1)	**Three-phase 380…415 V**		**Three-phase 500 V**		**Three-phase 690 V**	
Compact floor-standing enclosure	kW/HP	Dimensions	kW	Dimensions	kW	Dimensions
	90/125	**ATV71EXC5D90N4** E5	90	**ATV71EXC5D90N** E5		–
	110/150	**ATV71EXC5C11N4** E5	110	**ATV71EXC5C11N** E5	110	**ATV71EXC5C11Y** E5
	132/200	**ATV71EXC5C13N4** E5	132	**ATV71EXC5C13N** E5	132	**ATV71EXC5C13Y** E5
	160/250	**ATV71EXC5C16N4** E5	160	**ATV71EXC5C16N** E6	160	**ATV71EXC5C16Y** E5
	220/350	**ATV71EXC5C20N4** E6	200	**ATV71EXC5C20N** E6	200	**ATV71EXC5C20Y** E6
	250/400	**ATV71EXC5C25N4** E6	250	**ATV71EXC5C25N** E6	250	**ATV71EXC5C25Y** E6
	280/450	**ATV71EXC5C28N4** E6		–		–
	315/500	**ATV71EXC5C31N4** E7	315	**ATV71EXC5C31N** E8	315	**ATV71EXC5C31Y** E6
	400/600	**ATV71EXC5C40N4** E7	400	**ATV71EXC5C40N** E8	400	**ATV71EXC5C40Y** E8
	500/700	**ATV71EXC5C50N4** E8	500	**ATV71EXC5C50N** E8	500	**ATV71EXC5C50Y** E8
					630	**ATV71EXC5C63Y** E8

(1) The IP54 offer is available for power ratings up to 630 kW. For higher power ratings up to 2000 kW, consult your customer care centre.

IP54 (2)	**Three-phase 380…415 V**		**Three-phase 500 V**		**Three-phase 690 V**	
Separate air flow	kW/HP	Dimensions	kW	Dimensions	kW	Dimensions
	90/125	**ATV71EXS5D90N4** E9	90	**ATV71EXS5D90N** E11		–
	110/150	**ATV71EXS5C11N4** E9	110	**ATV71EXS5C11N** E11	110	**ATV71EXS5C11Y** E11
	132/200	**ATV71EXS5C13N4** E9	132	**ATV71EXS5C13N** E11	132	**ATV71EXS5C13Y** E11
	160/250	**ATV71EXS5C16N4** E9	160	**ATV71EXS5C16N** E12	160	**ATV71EXS5C16Y** E11
	220/350	**ATV71EXS5C20N4** E10	200	**ATV71EXS5C20N** E12	200	**ATV71EXS5C20Y** E12
	250/400	**ATV71EXS5C25N4** E10	250	**ATV71EXS5C25N** E12	250	**ATV71EXS5C25Y** E12
	280/450	**ATV71EXS5C28N4** E10		–		–
	315/500	**ATV71EXS5C31N4** E13	315	**ATV71EXS5C31N** E14	315	**ATV71EXS5C31Y** E12
	400/600	**ATV71EXS5C40N4** E13	400	**ATV71EXS5C40N** E14	400	**ATV71EXS5C40Y** E14
	500/700	**ATV71EXS5C50N4** E14	500	**ATV71EXS5C50N** E14	500	**ATV71EXS5C50Y** E14
					630	**ATV71EXS5C63Y** E14

(2) The IP54 offer with separate air flow is available for power ratings up to 630 kW. For higher power ratings up to 2000 kW, consult your customer care centre.

Altivar LIFT
4…22 kW

Complex, high-power machines
Drives for lifts

Dimensions (in mm) width x height x depth **without remote graphic terminal**	
T4 : 175 x 295 x 161	**T6** : 240 x 420 x 210
T5A : 210 x 295 x 187	**T7** : 240 x 550 x 230
T5B : 230 x 400 x 187	



Type of drive Supply voltage			**Three-phase** **200...240 V**		**Three-phase** **380...480 V**	
Degree of protection			**IP20** for unprotected drives and IP41 on the upper part			
Drive	Output frequency		0...599 Hz			
	Type of control	Asynchronous motor	Flux vector control with or without sensor, voltage/frequency ratio			
		Synchronous motor	Vector control with and without speed feedback			
	Transient overtorque		220% of nominal motor torque for 2 seconds, and 170% for 60 seconds			
Speed range			1…1000 in closed loop mode with encoder feedback, 1…100 in open loop mode			
Functions	Number of functions		> 150			
	Number of preset speeds		16			
	Number of I/O	Analog inputs	2…4			
		Logic inputs	6…20			
		Analog outputs	1…3			
		Logic outputs	0…8			
		Relay outputs	2…4			
		Safety input	1			
Dialogue			Remote graphic display terminal, SoMove setup software (1)			
Communication	Integrated		Modbus and CANopen			
	As an option		Fipio, Ethernet, Modbus Plus, Profibus DP, DeviceNet, Uni-Telway, InterBus			
Cards (available as an option)			Encoder interface cards, I/O extension cards, “Controller Inside” programmable card, Encoder emulation card			
Reduction of current harmonics			Integrated DC choke or supplied with the product			
EMC filter		Integrated	C2 EMC up to 5.5 kW			
		As an option	External C2 EMC from 7.5 kW			
Motor power	kW / HP / A	4 / 5 / 10	–		**ATV71LD10N4Z**	T4
		5,5 / 7,5 / 14	–		**ATV71LD14N4Z**	T4
		5,5 / 7,5 / 27	**ATV71LD27M3Z**	T5B	–	
		7,5 / 10 / 17	–		**ATV71LD17N4Z**	T5A
		7,5 / 10 / 33	**ATV71LD33M3Z**	T5B	–	
		11 / 15 / 27	–		**ATV71LD27N4Z**	T5B
		11 / 15 / 54	**ATV71LD54M3Z**	T6	–	
		15 / 20 / 33	–		**ATV71LD33N4Z**	T5B
		15 / 20 / 66	**ATV71LD66M3Z**	T6	–	
		22 / 30 / 48	–		**ATV71LD48N4Z**	T7

(1) SoMove setup software : available from 2011. Altivar LIFT is also supported by Powersuite software workshop.

Complex, high-power machines

I/O extension and specific cards



Type of card	I/O extension	
	Logic	Extended
Description	1 relay logic output (“C/O” contact) 4 x 24 VDC positive or negative logic inputs 2 x 24 VDC open collector positive or negative logic outputs 1 input for PTC probes	1 x 0…20 mA differential current analog input 1 software-configurable voltage (0…10 VDC) or current (0…20 mA) analog input 2 software-configurable voltage (±10V, 0…10 VDC) or current (0…20 mA) analog inputs 1 relay logic output (“C/O” contact) 4 x 24 VDC positive or negative logic inputs 2 x 24 VDC open collector positive or negative logic outputs, 1 input for PTC probes, 1 frequency control input
Reference	**VW3A3201**	**VW3A3202**

"Controller Inside" programmable card



Type of card	Programmable “Controller Inside”
Description	10 logic inputs, 2 of which can be used for 2 counters or 4 of which can be used for 2 incremental encoders 2 analog inputs, 6 logic outputs, 2 analog outputs, a master port for the CANopen bus, a PC port for programming with the PS 1131 software workshop
Reference	**VW3A3501**

Other versions: **please consult our Customer Care Centre.**

Encoder interface cards



Type of card		Encoder interface with		
		Differential outputs (RS422)	Open collector outputs (NPN)	Push-pull outputs
Operating frequency		300 kHz		
Reference	5 V	**VW3A3401**	–	–
	12 V	–	**VW3A3403**	**VW3A3405**
	15 V	**VW3A3402**	**VW3A3404**	**VW3A3406**
	24 V	–	–	**VW3A3407**

Type of card (1)	**Resolver**	**Universal**	**Sincos Absolute**	**Incremental with emulation**
Speed feedback resolution	12 bits	16 bits	16 bits	10,000
Encoder type supported	Resolver with 2, 4, 6 or 8 poles	"SinCos, SinCosHiperface EnDat, SSI"	Sincos Absolute	"Incremental RS 422 - 5 V or 15 V"
References	**VW3A3408**	**VW3A3409**	**VW3A3410**	**VW3A3411**

Supported by Altivar LIFT and Altivar71 with S383 firmware version

Accessories Options

Selection guide
For Altistart and Altivar range





Communication tools	Remote display terminal (IP54 & IP65)	Remote graphic display terminal	Multi-loader	Simple Loader	Dongle Bluetooth® (TM)
Altistart 01					
Altistart 22	x				x
Altistart 48	x				
Altivar 12	x		x	x	x
Altivar 212		x	x	x	x
Altivar 312	x	x	x	x	x
Altivar 31C	x			x	x
Altivar 32	x	x	x	x	
Altivar LIFT		x	x	x	x
Altivar 61		x	x	x	x
Altivar 71		x	x	x	x
Altivar 61 Plus		x	x	x	x
Altivar 71 Plus		x	x	x	x
Altivar 61Q (Water Cooled)		x	x	x	x
Altivar 71Q (Water Cooled)		x	x	x	x

Accessories & Options	ALTISTART			ALTIVAR												
	01	22	48	12	21	212	312	31C	32	61	71	LIFT	61 Plus	71 Plus	61Q	71Q
Panel cut-out adaptor for mounting control unit at 90°									x							
Ferrite suppressors for downstream contactor opening				x			x	x								
Additional EMC filter				x	x		x	x	x	x	x		x	x	x	x
Passive filters										x	x		x	x	x	x
Sinus filters										x	x		x	x	x	x
Line choke			x	x			x	x	x	x	x		x	x	x	x
Motor chokes				x				x	x	x	x		x	x	x	x
EMC conformity kit				x												
UL Type 1 conformity kit							x				x					
DNV kit			x								x					
Mechanical base kit for mounting GV2 circuit-breaker									x							
Mounting plates				x			x		x	x	x		x		x	
Braking resistors for vertical movements											x					
Braking resistors and braking units				x			x		x	x	x		x	x	x	x
References	If options or accessories not listed, please refer to the Schneider Electric catalogue.															

For Altivar 1000 or 1100, please consult our Customer Care Centre.





Industrial protocols	ALTISTART			ALTIVAR													
	01	22	48	12	212	312	31C	32	61	71	LIFT	61 Plus	71 Plus	61Q	71Q	1000	1100
Canopen						●	●	●	●	●	●	●	●	●	●	○	
CANopen Daisy chain						○											
CC-Link									○	○	○	○	○	○	○		
DeviceNet			Δ			○	○	○	○	○	○	○	○	○	○	○	
EtherCAT								○	●	●							
Ethernet			Δ													●	
Ethernet IP								○	○	○	○	○	○	○	○		
Ethernet TCP/IP							○			○							
Fipio			○			○	○		○	○	○	○	○	○	○		
InterBus S									○	○	○	○	○	○	○		
Modbus		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Modbus Plus									○	○	○	○	○	○	○		
Modbus TCP						○		○	○	○	○	○	○	○	○		
Modbus/ Unitelway									○	○	○	○	○	○	○		
Profibus DP			Δ			○	○	○	○	○	○	○	○	○	○	●	●
Profibus DP V0								○	○	○	○	○	○	○	○		
Profibus DP V1								○	○	○	○	○	○	○	○		
References	Please refer to the Schneider Electric catalogue or consult our Customer Care Centre.																

HVAC protocols	ALTISTART			ALTIVAR													
	01	22	48	12	212	312	31C	32	61	71	LIFT	61 Plus	71 Plus	61Q	71Q	1000	1100
Lonworks					○				○			○		○			
Metasys N2					●				○			○		○			
Apogee FLN					●				○			○		○			
BACnet					●				○			○		○			
References	Please refer to the Schneider Electric catalogue or consult our Customer Care Centre.																

● Embedded ○ Option Δ Gateway

Communication modules





Altistart 48/Altivar 31 starters/drives		Ethernet/ Modbus	DeviceNet/ Modbus	Fipio/Modbus	Profibus DP/Modbus	
Parameter setting		–	–	–	Standard configurator	ABC configurator program
References	Bridge	**TSXETG100**	–	–	–	–
	Gateway	–	**LUFP9**	**LUFP1**	**LA9P307**	**LUFP7**
Cable references	L = 0.3 m	–	VW3A8306R03	VW3A8306R03	–	VW3A8306R03
	L = 1 m	–	VW3A8306R10	VW3A8306R10	VW3P07306R10	VW3A8306R10
	L = 3 m	VW3A8306D30	VW3A8306R30	VW3A8306R30	–	VW3A8306R30

Selection guide

	⇨ *Applications :* Lexium 32 is the perfect drive system for applications involving high-precision, dynamic positioning.		⇨ *Applications :* Lexium SDx stepper drives and motors are used for short-distance positioning applications requiring maximum accuracy and high torque.	
	Servo Drives	**Servo Motors**	**Stepper Drives**	**Stepper Motors**
	Lexium 32 	**Lexium BMH** 	**Lexium SD2** 	**Lexium BRS2** 
		Lexium BSH 	**Lexium SD3** 	**Lexium BRS3** 
Machines	Packaging machines Material handling machines Material working machines Assembling machines		Printing machines Labelling machines Screen printing machines	
Description	The Lexium 32 servo range consists of three high-performance book-size servo drive models – Lexium 32 Compact, Lexium 32 Advanced and Lexium 32 Modular – and two motor families – the versatile medium-inertia Lexium BMH and the dynamic low-inertia Lexium BSH.		The Lexium SDx stepper motor drive range consists of two high-precision stepper drive lines – the three-phase stepper drives Lexium SD3 and the two-phase stepper drives Lexium SD2. These drive lines are complemented by two perfectly matched stepper motor families – Lexium BRS3 three-phase stepper motors and Lexium BRS2 two-phase stepper motors.	
Power range	0.15…7 kW		up to 750 W	
Voltage range	115…240 VAC, 400…480 VAC		24…48 VDC, 115…240 VAC	
Speed	up to 8000 rpm		up to 1000 rpm	
Torque	up to 84 Nm		up to 16.5 Nm	
Communication interfaces	CANopen, CANmotion, PROFIBUS DP, DeviceNet, EtherNet/IP		CANopen, CANmotion, PROFIBUS DP or Pulse/Direction	
	Safety function (STO) on board Enhanced Safety Module (SS1, SS2, SLS, SOS) Encoder module for digital and analog encoders and resolvers		**Safety function** (STO) on board (Lexium SD3 28)	

⇨ *Applications :*

Lexium Integrated Drives allow for extremely space-saving decentralised motion solutions.

⇨ *Applications :*

The Lexium Linear Motion products are designed for maximum flexibility, performance and cost-effectiveness. This range offers products for all linear movements in the automation industry from single-axis to multi-axis systems.

Integrated Drives

Lexium ILA



Lexium ILE



Lexium ILS



Lexium ILP / ILT



Linear Motion

Lexium PAS



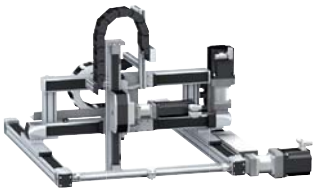
Lexium CAS



Lexium TAS



Lexium MAX



Format adjustment
Printing machines
Material handling machines

Material handling machines
Material working machines
On-the-fly working machines
Assembling machines

The Lexium ILx Integrated Drives comprise motor, positioning controller, power electronics, fieldbus and “Safe Torque Off” safety function in an extremely compact single device. Lexium ILx Integrated Drives are available with all important motor technologies (servo, brushless DC, stepper).

Lexium Linear Motion is a comprehensive linear motion range comprising Lexium PAS portal axes, Lexium TAS linear tables, Lexium CAS cantilever and telescopic axes and Lexium MAX multi-axis systems.

100…370 W
24…48 VDC, 115 to 240 VAC
up to 9000 rpm
up to 12 Nm
RS485, CANopen, PROFIBUS DP, DeviceNet, EtherNet/IP, EtherCAT, Ethernet POWERLINK, Modbus TCP, Pulse/Direction

Safety function (STO) on board
(Lexium ILA, Lexium ILE, Lexium ILS)

Stand-alone device with controller inside (Lexium ILP)

Single axes:
Stroke up to 5.5 m
Load up to 150 kg
Speed up to 8 m/s

Multi axes:
Stroke up to 5.5 m
Load up to 130 kg
Speed up to 4 m/s
Available as individual components or completely pre-assembled, customised systems with drives and motors

Selection guide

⇨ *Applications :*

Lexium Motion Controllers can be used as a stand-alone motion and automation controllers for machines without a PLC or as pure motion controllers for machines in which a PLC takes care of automation control.

Axis controller

Lexium Motion Controllers



Machines	Packaging machines Material handling machines Material working machines Assembling machines
Description	The compact LMC Lexium Motion Controllers are used to control multiple synchronised axes via a motion bus and feature high performance coupled with economy.
Technical information	Synchronisation of up to 4 axes in 2 ms Synchronisation of up to 8 axes in 4 ms PLCopen function blocks single / multi axis control Application function blocks (Rotary knife, Flying shear, Clamping, Grouping/Ungrouping)
Communication interfaces	Modbus, CANmotion, Profibus DP, DeviceNet, Ethernet TCP/IP (for programming)

Motion controller






Controller type		Optimised	Standard	Extended	
Drive synchronisation	Up to 4 axes	2 ms			
CAN Motion bus	Up to 8 axes	4 ms			
Interpolation of drive position loops		250 µs			
Internal memory	RAM	1 MB			
	Flash Eeprom	1 MB			
	Protected RAM	60 Kb			
Expert application	Application function blocks	yes			
	Single-axis PLCopen control	yes			
	Multi-axis PLCopen control	yes			
	2D interpolation	yes			
Number of logic inputs		8 + 4 Fast inputs			
Number of logic outputs		8	8		
Communication	Modbus	yes	yes	yes	yes
	CANopen automation	–	yes	yes	yes
	Ethernet TCP/IP	–	yes	yes	yes
	Profibus DP V1	–	–	yes	–
	Device Net	–	–	–	yes
Reference		**LMC10**	**LMC20**	**LMC20A1307**	**LMC20A1309**

Software solutions



Easy Motion… for configuring motion control functions

- Axis parameter setting
- Drive and controller adjustment and diagnostics
- Creation of position registers via the Teach function
- Management of axis operating modes and manual control
- Configuration of positioning tasks
- Editing cam profiles
- Application back up and restore



Motion Pro… for configuring and *programming* motion control functions

- Retains the same benefits as Easy Motion mode for motion control
- Creates the whole application, control system function and motion control function, using the programming editor conforming to standard IEC 61131
- Saves the machine signature
- Protection of application programs

Lexium 32 Servo Drives and Motors





Main functions		Lexium 32 Compact	Lexium 32 Advanced	Lexium 32 Modular
Communication	Integrated	Modbus serial link Pulse train	Modbus serial link CANopen, CANmotion machine bus	Modbus serial link Pulse train
	As an option	–	–	CANopen, CANmotion machine bus, DeviceNet, EtherNet/IP, PROFIBUS DP
	Operating modes	Manual mode (JOG) Electronic gearbox Speed control Current control	Homing Manual mode (JOG) Speed control Current control Position control	Homing Manual mode (JOG) Motion sequence Electronic gearbox Speed control Current control Position control
	Functions	Auto-tuning, monitoring, stopping, conversion		
		–	Stop window Rapid entry of position values	Stop window Rapid entry of position values Rotary axes Position register
24 V ⎓ logic inputs		6, reassignable	3, reassignable	4, reassignable
24 V ⎓ capture inputs *(1) (2)*		–	1	2
24 V ⎓ logic outputs *(1)*		5, reassignable	2, reassignable	3, reassignable
Analog inputs		2	–	
Pulse control input		1, configurable as: RS 422 link 5 V or 24 V push-pull 5 V or 24 V open collector		
ESIM PTO output		RS 422 link		
Safety functions	Integrated	"Safe Torque Off" STO		
	As an option	–		Safe Stop 1 (SS1) and Safe Stop 2 (SS2) Safe Operating Stop (SOS) Safe Limited Speed (SLS)
Sensor	Integrated	SinCos Hiperface® sensor		
	As an option	–		Resolver encoder Analog encoder Digital encoder
Architecture		Control via: Logic or analog I/O	Control via: Motion controller via CANopen and CANmotion machine bus	Control via: Schneider Electric or third-party PLCs via communication buses and networks
Type of servo drive		**LXM 32C**	**LXM 32A**	**LXM 32M**

Other versions: **please consult our Customer Care Centre.**





Main functions

Application type		High load, With robust adjustment of the movement	High dynamic range, Power density
Flange size		70, 100, 140 and 205 mm	55, 70, 100 and 140 mm
Continuous stall torque		1.2 to 84 Nm	0.5 to 33.4 Nm
Encoder type		Single turn SinCos: 32,768 points/turn and 131,072 points/turn Multiturn SinCos: 32,768 points/turn x 4096 turns and 131,072 points/turn x 4096 turns	Single turn SinCos: 131,072 points/turn Multiturn SinCos: 131,072 points/turn x 4096 turns
Degree of protection	Casing	IP 65 (IP 67 conformity kit as an option)	
	Shaft end	IP 50 or IP 65 (IP 67 conformity kit as an option)	
Type of servo motor		**Lexium BMH**	**Lexium BSH**

Lexium 32 motion control

Servo drive/servo motor combinations







Lexium 32 servo drive/BMH or BSH servo motor combinations

Servo motors				Lexium 32C, 32A and 32M servo drives 100…120 V single-phase supply voltage with integrated EMC filter			
BMH (IP50, IP65 or IP67)		BSH (IP50, IP65 or IP67)		LXM 32●U90M2 Continuous output current: 3 A rms			
				Nominal operating point			Stall torques
Type of servo motor	Rotor inertia	Type of servo motor	Rotor inertia	Nominal torque	Nominal speed	Nominal power	M_0/M_{max}
	kgcm²		kgcm²	Nm	rpm	W	Nm/Nm
		BSH 0551T	0.06	0.49	3000	150	0.5/1.5
		BSH 0552T	0.10	0.77	3000	250	0.8/1.9
		BSH 0553T	0.13				
BMH 0701T	0.59						
		BSH 0701T	0.25				
		BSH 0702T	0.41				
BMH 0702T	1.13						
BMH 0703T	1.67						
		BSH 1001T	1.40				
BMH1001T	3.2						
BMH1002T	6.3						







Lexium 32 servo drive/BMH or BSH servo motor combinations

Servo motors				Lexium 32C, 32A and 32M servo drives 200…240 V single-phase supply voltage with integrated EMC filter			
BMH (IP50, IP65 or IP67)		BSH (IP 50, IP65 or IP67)		LXM 32●U45M2 Continuous output current: 1.5 A rms			
				Nominal operating point			Stall torques
Type of servo motor	Rotor inertia	Type of servo motor	Rotor inertia	Nominal torque	Nominal speed	Nominal power	M_0/M_{max}
	kgcm²		kgcm²	Nm	rpm	W	Nm/Nm
		BSH 0551T	0.06	0.45	6000	300	0.5/1.4
		BSH 0552T	0.10				
		BSH 0553T	0.13				
		BSH 0701T	0.25				
BMH 0701T	0.59						
		BSH 0702T	0.41				
		BSH 0703T	0.58				
BMH 0702T	1.13						
		BSH 1001T	1.40				
BMH 0703T	1.67						
BMH 1001T	3.2						
		BSH 1002T	2.31				
BMH 1002T	6.3						
BMH 1003T	9.4						
BMH 1401P	16.5						

	LXM 32●U18M2 Continuous output current: 6 A rms				LXM 32●D30M2 Continuous output current: 10 A rms			
	Nominal operating point			Stall torques	Nominal operating point			Stall torques
	Nominal torque	Nominal speed	Nominal power	M_0/M_{max}	Nominal torque	Nominal speed	Nominal power	M_0/M_{max}
	Nm	rpm	W	Nm/Nm	Nm	rpm	W	Nm/Nm
	1.14	3000	350	1.2/3.3				
	1.35	2500	350	1.4/4.2				
	1.36	2500	350	1.4/3.5				
					2.07	2500	550	2.2/6.1
					2.3	2500	600	2.5/6.4
					3.1	2000	650	3.4/8.7
					2.75	2500	700	3.3/6.3
					3.3	2000	700	3.4/8.9
					3.5	2000	750	6/10.3

	LXM 32●U90 M2 Continuous output current: 3 A rms				LXM 32●D18M2 Continuous output current: 6 A rms				LXM 32●D30M2 Continuous output current: 10 A rms			
	Nominal operating point			Stall torques	Nominal operating point			Stall torques	Nominal operating point			Stall torques
	Nominal torque	Nominal speed	Nominal power	M_0/M_{max}	Nominal torque	Nominal speed	Nominal power	M_0/M_{max}	Nominal torque	Nominal speed	Nominal power	M_0/M_{max}
	Nm	rpm	W	Nm/Nm	Nm	rpm	W	Nm/Nm	Nm	rpm	W	Nm/Nm
	0.74	6000	450	0.8/2.5								
	0.84	6000	550	1.2/3								
	0.94	5000	500	1.3/3.5								
	1.1	4000	450	1.4/4								
					1.8	5000	950	2.2/7.2				
					2.1	4000	900	2.6/7.4				
					2.1	4000	900	2.5/7.4				
					2.2	4000	900	2.7/7.5				
					2.9	3000	900	3.4/10.2				
					2.8	3000	900	3.4/10.2				
									3.7	4000	1500	5.8/16.4
									4.6	3000	1450	6/18.4
									5.6	2500	1450	8.2/22.8
									6.9	2000	1450	10.3/30.8

Lexium 32 motion control

Servo drive/servo motor combinations







Lexium 32 servo drive/BMH or BSH servo motor combinations

Servo motors				Lexium 32C, 32A and 32M servo drives 380…480 V three-phase supply voltage with integrated EMC filter							
BMH (IP50, IP65 or IP67)		BSH (IP50, IP 65 or IP67)		LXM 32●U60N4 Continuous output current: 1.5 A rms				LXM 32●D12N4 Continuous output current: 3 A rms			
				Nominal operating point			Stall torques	Nominal operating point			Stall torques
Type of servo motor	Rotor inertia	Type of servo motor	Rotor inertia	Nominal torque	Nominal speed	Nominal power	M_0/M_{max}	Nominal torque	Nominal speed	Nominal power	M_0/M_{max}
	kgcm²		kgcm²	Nm	rpm	W	Nm/Nm	Nm	rpm	W	Nm/Nm
		BSH 0551P	0.06	0.48	6000	300	0.5/1.5				
		BSH 0552P	0.10	0.65	6000	400	0.8/2.5				
		BSH 0553P	0.13	0.65	6000	400	1.05/3.5				
BMH 0701P	0.59			1.1	3000	350	1.2/4.2				
BMH 0701P	0.59							1.3	5000	700	1.4/4.2
		BSH 0701P	0.25					1.32	5000	700	1.4/3.5
		BSH 0702P	0.41					1.64	5000	850	2.2/7.6
BMH 1001P	3.2							1.9	4000	800	3.3/10.8
BMH 0702P	1.13							2.2	3000	700	2.5/7.4
BMH 0703P	1.67										
		BSH 0703P	0.58								
		BSH 1001P	1.40								
BMH 1001P	3.2										
BMH 1002P	6.3										
		BSH 1002P	2.31								
BMH 1003P	9.4										
		BSH 1003P	3.2								
BMH 1401P	16.5										
		BSH 1004P	4.2								
		BSH 1401P	7.4								
BMH 1402P	32.0										
		BSH 1402T	12.7								
		BSH 1403T	17.9								
BMH 1403P	47.5										
		BSH 1404P	23.7								
BMH 2051P	71.4										
BMH 2052P	129										
BMH 2053P	190										

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Other versions: **please consult our Customer Care Centre.**

	LXM 32●D18N4 Continuous output current: 6 A rms				LXM 32●D30N4 Continuous output current: 10 A rms				LXM 32●D72N4 Continuous output current: 24 A rms			
	Nominal operating point			Stall torques	Nominal operating point			Stall torques	Nominal operating point			Stall torques
	Nominal torque	Nominal speed	Nominal power	M_0/M_{max}	Nominal torque	Nominal speed	Nominal power	M_0/M_{max}	Nominal torque	Nominal speed	Nominal power	M_0/M_{max}
	Nm	rpm	W	Nm/Nm	Nm	rpm	W	Nm/Nm	Nm	rpm	W	Nm/Nm
	2.4	5000	1300	3.4/10.2								
	2.44	5000	1300	3.1/11.3								
	2.7	4000	1100	3.3/9.6								
	3.1	4000	1300	3.4/10.2								
	3.9	4000	1600	6.2/18.4								
	4	4000	1700	5.8/18.3								
					6.2	4000	2600	8.4/25.1				
					6.3	3000	2000	8/28.3				
					7.6	3000	2400	10.3/30.8				
					8.3	2500	2100	10/37.9				
					9.5	2500	2500	11.1/27				
									12.1	3000	3800	16.8/50.3
									12.3	3000	3900	19.5/59.3
									12.9	3000	4100	27.8/90.2
									14.2	3000	4500	24/71.8
									19	2500	5000	33.4/103.6
									25.8	2000	5400	34.4/103.4
									41.6	1500	6500	62.5/170
									52.2	1200	6500	84/232

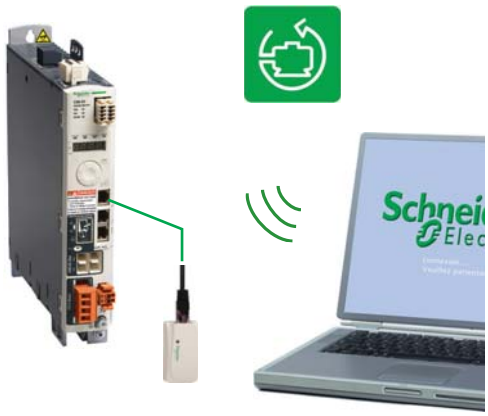


	Multi-Loader configuration tool
Use	For downloading configurations from a PC or drive and duplicating them on another drive. The drives do not need to be powered-up. Supplied with: 1 cordset equipped with 2 RJ45 connectors 1 cordset equipped with one type A USB connector and one mini B USB connector 1 x 2 GB SD memory card 1 x female/female RJ 45 adaptor 4 AA 1.5 V LR6 round batteries
Reference	**VW3 A8 121**



	Single memory card	Pack of 25 memory cards
Use	Used to store parameters of the Lexium 32 servo drive. Another Lexium 32 servo drive can be commissioned immediately if the application is undergoing maintenance or duplication.	
Reference	**VW3 M8 705**	**VW3 M8 704**

	Memory card recorder
Use	Writes data from the Lexium 32 servo drive to the memory card. This recorder is not supplied by Schneider Electric.
Reference	See the User's manual



SoMove setup software

The SoMove setup software is used to configure, adjust, debug and maintain the Lexium 32 servo drive, as for all other Schneider Electric variable speed drives and starters.
It communicates via Bluetooth® wireless link with the servo drive, which is equipped with the Modbus-Bluetooth® adaptor (VW3 A8 114).

SoMove Mobile application for mobile phone

The SoMove Mobile software converts any compatible mobile phone into a remote graphic display terminal, offering an identical Human-Machine Interface.
Particularly suitable for on-site or remote maintenance operations, the SoMove Mobile software can be used to print out and save configurations, import them from a PC and export them to a PC, or to a servo drive equipped with the Modbus adaptor via the Bluetooth® wireless link.



		Communication modules
Lexium 32M can be connected to the following communication buses and networks: CANopen and CANmotion, DeviceNet, Profibus DP V1, EtherNet/IP		
Reference	CANopen / CANmotion module with 2 * RJ 45 connectors	VW3 A3 608
	CANopen / CANmotion module with SUB-D 9 connector	VW3 A3 618
	DeviceNet module	VW3 M3 301
	Profibus DP V1 module	VW3 A3 607
	EtherNet/IP module	VW3 A3 616
	Module CANopen / CANmotion avec bornier 5 points de vis	VW3 A3 628
	Module EtherCAT with 5 points screw terminal	VW3 A3 601



		Second encoder modules		
			Machine	**Motor**
Lexium 32M has an input for an additional encoder to connect third party motor (motor encoder) or to improve positioning accuracy (machine encoder)				
Reference	Module for resolver encoder	VW3 M3 401		x
	Module for digital encoder (A/B/I, BiSS, EndDat 2.2, SSI)	VW3 M3 402	x	
	Module for analog encoder (1 Vpp/Hall, 1 Vpp, Hiperface)	VW3 M3 403	x (Hiperface only)	x



		Safety module
eSM safety module allows Lexium 32M servo drives to access additionnal IEC/EN 61800-5-2 safety functions: SS1, SS2, SLS, SOS		
Reference	eSM safety module allows	VW3 M3 501

Connection elements

	Power cordsets		
Description	Cables equipped with one M23 industrial connector (servo motor end)		Cables equipped with one M40 industrial connector (servo motor end)
From servo motor	BMH 070●●, BMH 100●●, BMH 1401P, BSH 055●●, BSH 070●●, BSH 100●●, BSH 1401P	BMH 1402P, BMH 1403P	BMH 205●P, BSH 1402T, BSH 1403T, BSH 1404P
To servo drive	LXM 32●●●●●●	LXM 32●D72N4	LXM 32●D72N4
Composition	[(4 x 1.5 mm²) + (2 x 1 mm²)]	[(4 x 2.5 mm²) + (2 x 1 mm²)]	[(4 x 4 mm²) + (2 x 1 mm²)]
Length	3 m	3 m	3 m
Reference	**VW3 M5 101 R30**	**VW3 M5 102 R30**	**VW3 M5 103 R30**

	Encoder cordsets
Description	**SinCos Hiperface® encoder cables equipped with an M23 industrial connector** (servo motor end) **and an RJ45 connector** with 8 + 2 contacts (servo drive end)
From servo motor	BMH ●●●●●, BSH ●●●●●
To servo drive	LXM 32●●●●●●
Composition	[3 x (2 x 0.14 mm²) + (2 x 0.34 mm²)]
Length	3 m
Reference	**VW3 M8 102 R30**

Stepper drives and stepper motors







Assignment of BRS2 2-phase stepper motors and SD2 stepper motor drives

BRS2 2-phase stepper motors	SD21●●U20C	SD21●●U50C
	24…48 V; 3 A	24…48 V; 5 A
BRS236	0.07 Nm	–
BRS242	0.23…0.53 Nm	–
BRS257	0.64…1.69 Nm	0.64…1.69 Nm
BRS285	–	2.96…9.20 Nm











Assignment of BRS3 3-phase stepper motors and SD3 stepper motor drives

BRS3 3-phase stepper motors	SD326●U25	SD328●U25	SD326●U68	SD328●U68
	115 V / 230 V; 2.5 A; including mains filter		115 V / 230 V; 6.8 A; including mains filter and fan	
BRS368	1.7 Nm / 1.5 Nm		–	
BRS397	2.3 Nm / 2.0 Nm		–	
BRS39A	4.5 Nm / 4.0 Nm		–	
BRS39B	6.8 Nm / 6.0 Nm		–	
BRS3AC	–		13.5 Nm / 12.0 Nm	
BRS3AD	–		19.7 Nm / 16.5 Nm	



Assignment of stepper motors, stepper motor drives SD3 15

3-phase stepper motors	SD3 15
	24…48 VDC; max. 10 A
Motors with F winding	
BRS 364F	0.46 Nm / 0.40 Nm
BRS 366F	0.92 Nm / 0.80 Nm
BRS 368F	1.50 Nm / 1.30 Nm
BRS 397F	2.00 Nm / 1.85 Nm
BRS 39AF	4.20 Nm / 3.40 Nm
BRS 39BF	5.55 Nm / 4.80 Nm
Motors with H winding	
BRS 364H	0.51 Nm / 0.45 Nm
BRS 366H	1.02 Nm / 0.90 Nm
BRS 368F	1.70 Nm / 1.50 Nm
BRS 397H	2.26 Nm / 2.00 Nm
BRS 39AH	4.80 Nm / 4.00 Nm
BRS 39BH	6.50 Nm / 5.75 Nm






Integrated Drives		Lexium ILA	Lexium ILE	Lexium ILS	Lexium ILP / ILT
Type of process		Dynamic process and accurate positioning	Automatic format adjustement	Short distance movements with accurate positioning	
Type of technology		Integrated drive with servo motor	Integrated drive with dc brushless motor	Integrated drive with three-phase stepper motor	Integrated drive with two-phase stepper motor
Main characteristics		Highly dynamic Compact Integrated holding brake in option	Hight holding torque without power Integrated gearbox in option	Hight torque at low speed	
Dynamic		★★★★	★★	★★★	★★★
Precision and stability		★★★★	★★	★★★★	★★★★
Energy saving		★★★★★	★★★★	★★	★★
Motor inertia		Medium			
Control interface	Control signals	Input/output		Pulse/direction Input/output	Pulse/direction Input/output
	Bus and networks	CANopen, PROFIBUS DP, RS 485 serial link, DeviceNet, EtherCAT, Modbus TCP, Ethernet Powerlink, EtherNet/IP			CANopen, RS485
	Motion bus	–			
Association	Nominal power	150...305W	100...350W	100...350W	100...350W
Drive/motor	Nominal speed	500...9000 min^{-1}	1500...7000 min^{-1}	0...1000 min^{-1}	0...1000 min^{-1}
combinations	Nominal torque	0.26...0.78 Nm	0.18...0.5 Nm	0.45...6 Nm	0.11...5.87 Nm
Drive characteristics	Safety function	“Safe Torque Off”			
Motor characteristics	Type of sensor (resolution) (1)	Single turn SinCos encoder (16.384 increments/turn) Multiturn SinCos encoder (16.384 increments/turn × 4096 turns)	Absolute value encoder (12...1380 increments/turn)	Index pulse monitoring	Index pulse monitoring
	Motor flange size	57	66	57, 85	36, 42, 57, 85
Accessories		Cable, Connector kits, Installation sets, Commissioning tools, Planetary gearboxes			Cable, Connector kits, Installation sets, Commissioning tools
References		**ILA**	**ILE**	**ILS**	**ILP** / **ILT**



Lexium ILA with Servo Motor	Nominal Torque (Nm)	Maximum Torque (Nm)	Nominal Speed (Rpm)	Maximum Speed (Rpm)	Nominal Power (W)
ILS1 for CANopen, PROFIBUS DP, RS485, Pulse-Direction, Motion Sequence Mode					
ILA1●571P	0.26	0.6	5500	7500	150
ILA1●571T	0.26	0.43	7500	11500	200
ILA1●572P	0.45	0.72	4300	6200	200
ILA1●572T	0.41	0.61	5000	7500	215
ILA2 for DeviceNet, EtherCAT, EtherNet/IP, Modbus TCP, Ethernet Powerlink					
ILA2●571P	0.44	0.62	5100	7000	235
ILA2●571T	0.31	0.45	7000	9000	255
ILA2●572P	0.78	1.62	3400	4300	275
ILA2●572T	0.57	0.85	5100	6800	305

Lexium ILE with included spurwheel gearbox.
Ratios:18:1, 38:1, 54:1, 115:1

Lexium ILE with included worm gearbox with hollow shaft.
Ratios: 24:1, 54:1, 92:1, 115:1



Lexium ILE with Brushless DC Motor	Nominal Torque (Nm)	Detent Torque (Nm)	Nominal Speed (Rpm)	Maximum Speed (Rpm)
ILE1 for CANopen, PROFIBUS DP, RS485				
ILE1●661	0.24	0.08	4800	5000
ILE1●661 spurwheel gearing	up to 11.0	up to 8.0	44	44
ILE1●661 worm gearing	up to 10.6	up to 16.7	44	44
ILA2 for DeviceNet, EtherCAT, EtherNet/IP, Modbus TCP, Ethernet Powerlink				
ILE2●661	0.26	0.08	6000	7000
ILE2●661 spurwheel gearing	up to 12	up to 9.19	44	44
ILE2●661 worm gearing	up to 10.6	up to 16.7	44	44
ILE2●662	0.5	0.106	5000	7000



Lexium ILS with three-phase Stepper Motor	Maximum Torque (Nm)	Holding Torque (Nm)	Speed (Rpm)
ILS1 for CANopen, PROFIBUS DP, RS485, Pulse-Direction, Motion Sequence Mode			
ILS1●571●	0.45	0.51	1000
ILS1●572●	0.9	1.02	600
ILS1●573●	1.5	1.7	450
ILS1●851●	2.0	2.0	450
ILS1●852●	4.0	4.0	200
ILS1●853P	6.0	6.0	120
ILS1●853T	4.5	4.5	300
ILS1 for CANopen, PROFIBUS DP, RS485, Pulse-Direction, Motion Sequence Mode			
ILS2●571●	0.45	0.51	1100
ILS2●572●	0.9	1.02	900
ILS2●573●	1.5	1.7	600
ILS2●851●	2.0	2.0	600
ILS2●852●	4.0	4.0	380
ILS2●853P	6.0	6.0	200
ILS2●853T	4.5	4.5	300



Lexium ILP, Lexium ILT with two-phase Stepper Motor	Nominal Torque (Nm)	Holding Torque (Nm)	Maximum Speed (Rpm)
ILP for RS485 with programmable interface			
ILP2R361	0.11	0.11	1800
ILP2R421	0.19	0.19	1500
ILP2R422	0.33	0.33	1500
ILP2R423	0.39	0.39	1500
ILP2R571	0.63	0.63	1500
ILP2R572	0.86	0.86	1500
ILP2R573	1.44	1.44	1500
ILP2R574	1.77	1.77	1500
ILP2R851	2.13	2.13	1000
ILP2R852	3.12	3.12	1000
ILP2R853	5.87	5.87	1000
ILT for Pulse/Direction, CANopen			
ILT2●361	0.11	0.11	1800
ILT2●421	0.19	0.19	1500
ILT2●422	0.33	0.33	1500
ILT2●423	0.39	0.39	1500
ILT2●571	0.63	0.63	1500
ILT2●572	0.86	0.86	1500
ILT2●573	1.44	1.44	1500
ILT2●574	1.77	1.77	1500
ILT2●851	2.13	2.13	1000
ILT2●852	3.12	3.12	1000
ILT2●853	5.87	5.87	1000

Linear axes





Product		Lexium PAS B	Lexium PAS S
Axis type		Portal axes	
Movement	Number of directions	1	
	Movement type	Typically horizontal	
	Position of the load	On carriage	
Drive		Toothed belt	Ballscrew
Type of guide		Ball or roller	Ball
Main characteristics		High dynamic response, Long stroke length, High positioning speed	High precision movement (positioning, repeatability, guiding), High feed forces, High rigidity
Dynamic response		★★★★★	★★★
Precision		★★★	★★★★★
Maximum payload		100 kg	100 kg
Maximum driving force		2600 N	4520 N
Maximum speed of movement of the load		8 m/s	1.25 m/s
Maximum working stroke		5500 mm	3000 mm
Repeatability		± 0.05 mm	± 0.02 mm
Options		Choice of guide type: Ball (for applications requiring high forces and torques) or roller (simple, cost-effective solution), Wide range of sensors, Choice of carriage type for adapting to the load, Option to add carriages, Protective metal strip.	Choice of pitch , Protective metal strip, Wide range of sensors, Choice of carriage type for adapting to the load, Option to add carriages, Option to add ballscrew supports for longer axes
Reference		**PAS 4●B**	**PAS 4●S**

Multi-axis systems



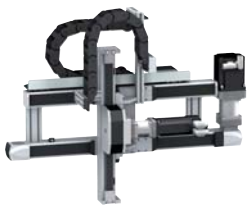


Product		Lexium MAX H	Lexium MAX S
Axis type		**Double portal axes**	
Movement	Number of directions	1	
	Movement type 	Combination of two parallel axes	
	Position of the load	On two parallel carriages	
Multi-axis system type		PAS 4●B axes + PAS 4●H support axis (driven by the load)	PAS 4●B + PAS 4●B axes (shaft-driven)
Drive		Toothed belt on one axis	Toothed belt on both axes
Type of guide		Ball or roller	Ball or roller
Main characteristics		Long stroke length, High dynamic response, High precision movement (positioning, guiding)	Long stroke length, High precision movement (positioning, guiding), High feed forces
Maximum payload		250 kg	300 kg
Maximum working stroke	On the X-axis	5500 mm	
	On the Y-axis	–	
	On the Z-axis	–	
Options		Choice of guide type: Ball (for applications requiring high forces and torques) or roller (simple, cost-effective solution), Protective metal strip, Anti-corrosion version, Anti-static belt, Wide range of sensors, Several different motor mounting options, Variable distance between the two axes	
Reference		**MAX H**	**MAX S**






	Lexium TAS	Lexium CAS 4	Lexium CAS 3	Lexium CAS 2
	Linear tables	Cantilever axes with mobile structure on profile	Cantilever axes with mobile structure on parallel rods	Telescopic axes
	1			
	Typically horizontal	Typically vertical		Typically horizontal
	On carriage	On the side of the profile or on the 2 end blocks	On the 2 end blocks	On carriage
	Ballscrew	Toothed belt	Toothed belt or rack	Toothed belt
	Double, ball	Ball or roller	Ball	Ball or roller
	High precision movement (positioning, repeatability, guiding), High feed forces, High rigidity, Feed movement without mechanical backlash	Long stroke length, High feed forces, Option to mount the load on the side of the profile or on the end blocks, High rigidity	Compact, Mobile structure with light travel weight	Long stroke length from a compact unit, High rigidity, High dynamic response
	★★	★★★★	★★★★	★★★★
	★★★★★★	★★★	★★★	★★
	150 kg	50 kg	18 kg	35 kg
	2580 N	2150 N	705 N	1500 N
	1 m/s	3 m/s	3 m/s	3 m/s
	1500 mm	1200 mm	500 mm	2400 mm
	± 0.02 mm	± 0.05 mm	± 0.05 mm	± 0.1 mm
	Choice of pitch , Several different motor mounting options	Choice of guide type: Ball (for applications requiring high forces and torques) or roller (simple, cost-effective solution), Protective metal strip, Anti-corrosion version, Wide range of sensors	Anti-corrosion version, Anti-static belt	Choice of guide type: Ball (for applications requiring high forces and torques) or roller (simple, cost-effective solution), Choice of carriage type for adapting to the load
	TAS 4	**CAS 4**	**CAS 3**	**CAS 2**





	Lexium MAX P	Lexium MAX R2	Lexium MAX R3
	Linear positioners	Portal robots	
	2		3
	Horizontal and vertical: Combination of one X-axis and one Z-axis	Horizontal: Combination of two perpendicular axes X and Y	Horizontal and vertical: Combination of two perpendicular axes X and Y and one Z-axis
	On the side or on the end blocks of the Z-axis profile	On the Y-axis carriage	On the side or on the end blocks of the Z-axis profile
	MAX S + CAS 4 axes MAX S + CAS 3 axes	MAX S + MAX H axes MAX S + PAS 4●B axes	MAX S + MAX H + CAS 4 axes MAX S + MAX H + CAS 3 axes
	Toothed belt on each axis		
	Ball or roller		
	Dynamic load positioning	Long stroke length on both axes	Long stroke length on three axes
	50 kg	130 kg	50 kg
	5500 mm		
	–	1500 mm	1500 mm
	1200 mm	–	1200 mm
	Choice of guide type: Ball (for applications requiring high forces and torques) or roller (simple, cost-effective solution), Wide range of sensors Supplied as standard: Protective metal strip , Anti-corrosion version		
	MAX P	**MAX R●2**	**MAX R●3**

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