

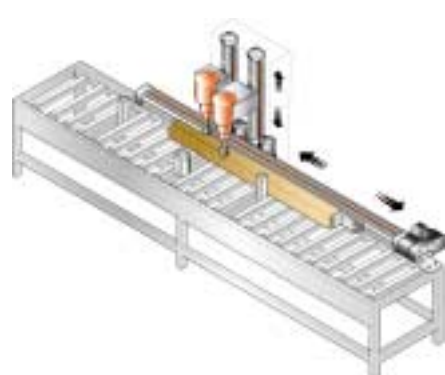
**Profile Cutting Machines**  
Intricate profile movements  
of water jets and lasers



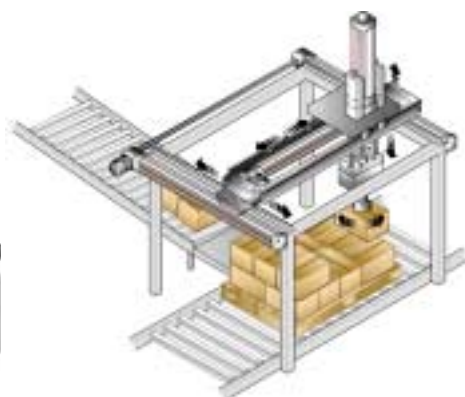
**Slitting Machines**  
High speed traverse applications  
for slicing of materials



**Material Handling Systems**  
Vertical and horizontal transfer  
movements



**Milling Machines**  
Precise slow speed feeding in 2-axes



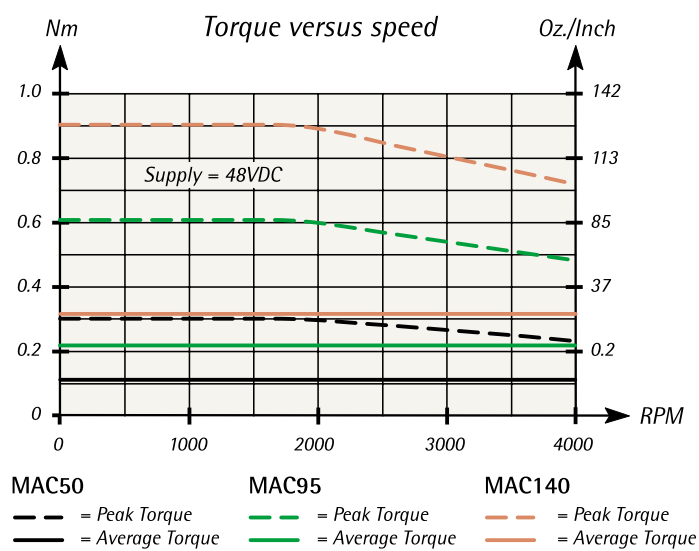
**Auto Handling**  
High speed pick and place  
movements

- Other applications**
- Replacement for pneumatic solutions
  - Replacement of step motors, offering much faster response and speed
  - Conveyor systems
  - Replacement for small frequency inverters
  - Electronic gearing with analogue speed offset
  - $\pm 10V$  speed/torque driver for external controllers
  - Screw and toothed belt pick and place robots
  - Labelling dispensers

# The MAC motor



Technical specifications	MAC50	MAC95	MAC140	Unit
Supply Voltage	12-48	12-48	12-48	VDC
Av. current @48VDC/rated load	1.2	2.4	3.2	ADC
Peak supply current @48VDC	3	6	9	ADC
Speed range (nominal)	0-4000	0-4000	0-4000	RPM
Rated power @4000RPM	46	92	134	W
Cont. torque @tamb.-25°C	0.11	0.22	0.32	Nm
Peak torque @tamb.-25°C	0.32	0.62	0.9	Nm
Rotor inertia	0.075	0.119	0.17	kgcm <sup>2</sup>
Physical dimensions	Ø59x112	Ø59x131	Ø59x153	mm
Weight (without exp. module)	0.6	0.85	1.1	kg
Protection class	IP42 / IP67 optional			



...when motors must be controlled

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the complete  
motion solution



The major advantages of the MAC motor are:

- High performance
- Cost-effective
- Decentral intelligence
- Quiet and maintenance free operation
- High efficiency
- Low operational cost
- Less machine space required
- Low installation cost. Shorter and faster installation
- Fewer possibilities for wiring errors
- Minimum positioning error during operation and halt
- Modular flexibility
- New users can easily set up the system

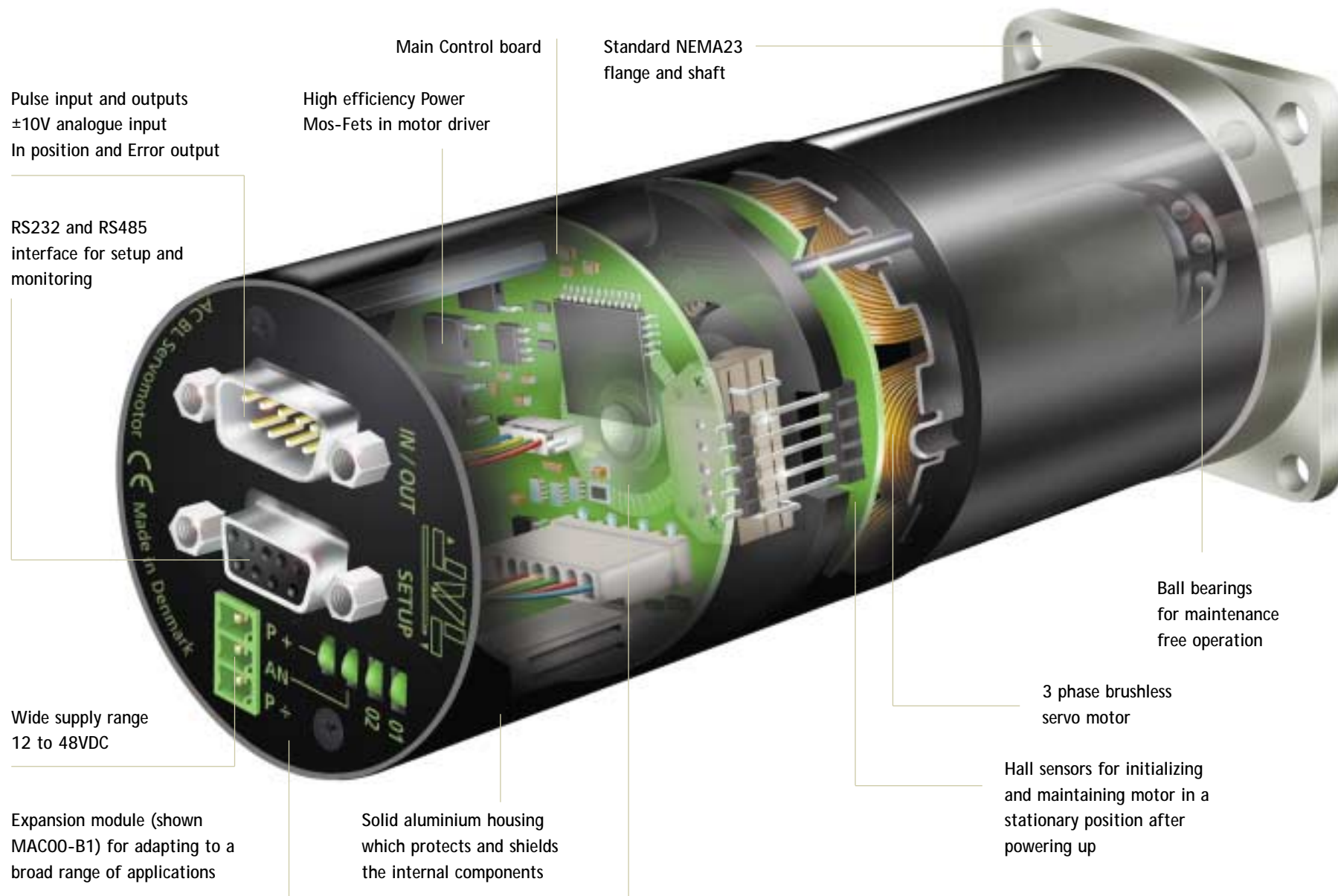
**Main Features**

(basic MAC motor):

- Ideal for high volume applications in harsh industrial environments
- Accepts position and velocity commands sent via 2 serial interfaces
- Genuine AC-servomotor with high torque at high speed
- Wide range of supply voltage 12-48VDC
- Pulse and direction input makes it possible to replace any step motor
- Quadrature output to master controller when used as a  $\pm 10V$  driver
- Great flexibility due to many I/O possibilities and many functions
- 2 outputs for In position and Error indication
- High performance 4th-order position and velocity filter which only needs a single inertia adjustment
- Oscillations due to non-linear mechanical systems are avoided
- Switching technology in motor and power supply
- High performance serial protocol with addressing facilities
- Easy and simple Windows program available for installation /set-up

# The MAC motor - the complete motion solution

Brushless servo motor with integrated controller  
All necessary components in one unit



**MacTalk setup and installation software**



Optical encoder (4096 CPR) for precise positioning and speed regulation

A wide range of planetary and backlash free gears can be provided for the MAC motors



## MAC motor expansion modules

Module with D-Sub connectors  
Type: MAC00-B1

- Ideal for pulse,  $\pm 10V$  input or RS232/422/485 interface
- Home switch input
- LEDs to indicate status Home switch status Input power status
- Sourcing outputs
- Optional with integrated cables



NanoPLC module with D-Sub conn.  
Type: MAC00-R1

- Ideal for stand-alone operation with sequential program execution
- 8/4 Opto isolated in-/out
- Outputs up to 200mA
- LEDs to indicate Output status Home+ power status
- RS232/RS485 interface



NanoPLC with integrated cables  
Type: MAC00-R2

- Ideal for stand-alone operation with sequential program execution
- 8/4 Opto isolated in-/out
- Outputs up to 200mA
- Protection IP67
- Status outputs
- RS232/RS485 interface



Profibus-DP with integrated cables  
Type: MAC00-FP2

- Control and setup via 12Mbit/s Profibus-DP
- Logic I/O's for High speed start/stop In position indication Home switch
- Protection IP67
- RS232/RS485 interface
- Optional with D-Sub conn.



**IP67 Versions**

- Resistant against rough chemicals
- Cost-Effective in harsh wet environment
- Ideal for the food processing, pharmaceutical and chemical industries
- A double shaft seal and leak-proof cable entry provide watertight sealing
- A thick protective layer of epoxy surface treatment is bonded to the motor body



Other MAC motor expansion modules planned  
Ethernet module, CAN-bus module, Devicenet module, Wireless module and Advanced miniPLC module.  
Customer-specific modules on request.