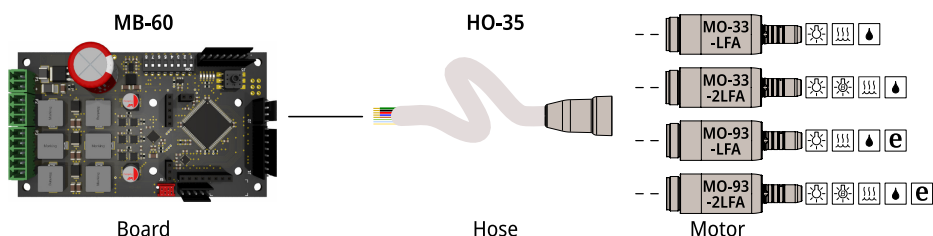


Data Sheet

S-60 Medical Device



The **S-60** medical device, composed of a micromotor (prefix **MO**), an electronic board (prefix **MB**) and a hose connection (prefix **HO**), is intended to drive a straight or contra-angle handpiece as part of a dental treatment unit.

The **S-60** medical device is intended for the following medical indications:

- **General dentistry**: conservative dentistry, caries, etc.
- **Prophylaxis**: hygienist, polishing, etc.
- **Endodontics**: treatment of the inside of the tooth, root canal treatment.

This equipment is intended for professional use and requires installation from qualified personal.

MO-33 & MO-93 electrical motors

The motors convert electrical energy to rotation and transfer rotation to the instrument tool. These brushless motors are able to maintain any speed between 0 and 40 000 rpm with controlled torque and are equipped with air cooling, air & water pipes and powerful white & optional blue lighting. Dassym motors withstand thousands cycles of sterilization.

These motors are especially designed to drive an ISO 14457 & ISO 3964 compliant accessory such as a straight or contra-angle handpiece to which a rotating or oscillating tool is attached.

The external parts of the motors are made of stainless steel (X10CrNiS18).

Technical specifications

Dimensions	MO-33 & MO-93				Unit
Motor length excluding coupling	45				mm
Motor maximum diameter	21.8				mm
Performances	MO-33 & MO-93				Unit
Speed range	0 – 40 000				rpm
Maximum torque	3.5				Ncm
Maximum power	60				W _{MEC}
Characteristics	MO-33 & MO-93				Unit
Nominal cooling air pressure	300				kPa
Cooling air flow consumption	< 40				l/min
Cooling air flow at the nozzle	> 5				l/min
Spray air flow at 250 kPa	> 1.5				l/min
Spray water flow at 250 kPa	> 50				ml/min
Features	MO-33-LFA	MO-33-2LFA	MO-93-LFA	MO-93-2LFA	
Sterilizable without protection	✓	✓	✓	✓	
Full torque down to standstill			✓	✓	
Rocking & auto reverse modes			✓	✓	
Powerful white LED lighting	✓	✓	✓	✓	
Blue LED lighting with mixing		✓		✓	
Air cooling for motor & handpiece	✓	✓	✓	✓	
Sprays with anti retraction valve	✓	✓	✓	✓	
ISO 3964 & INTRAmatic Lux® coupling	✓	✓	✓	✓	

INTRAmatic Lux® is a Kaltenbach & Voigt trade mark.

MB-60 driver board

The driver board receives commands from the dental unit and sends controlled electrical energy to the motor. The board is to be integrated in the dental unit.

The board monitors its working conditions and finely drives the motor speed, torque and lighting. The motor is safeguarded by electronic limitation of its temperature.

Technical specifications

Dimensions	MB-60			Unit
Length × Width × Height	102 × 59 × 25			mm
Fastening holes distance & diameter	95 × 51 ø 3.2			mm
Characteristics	Min	Nominal	Max	Unit
Supply Voltage	24	32 – 36	48	V _{DC}
Maximum Consumption	180	240	360	VA
Features	MB-60			
Full set of digital protocols & analog controls	✓			
Optional pressure speed reference control	✓			
Optional router for two motors connection	✓			

HO-35 hose connection

The hose conveys electrical energy, cooling air and sprays from the driver board to the motor. It allows disconnection of the motor side.

The hose comprises a Dassym proprietary motor connector with its nut and encloses a length of cabling and tubing for dental unit connection.

The external parts of the hose are made of silicone and stainless steel (X10CrNiS18).

Technical specifications

Dimensions	HO-35	Unit
Hose length	1.8	m
Hose mean diameter	9.3	mm
Features	HO-35	
Stranded wires for motor phases and lighting	✓	
Tubing for air spray and water spray	✓	
Tubing for motor and handpiece cooling air	✓	

Main features

- brushless motors of the sturdiest construction manufactured in the Swiss watchmaking area
- speed range from standstill to 40 000 rpm with finely controlled torque up to 3.5 Ncm
- full torque from standstill, rocking & auto reverse modes on patented MO-93 motors
- powerful LED white lighting, mixable blue lighting on MO-33-2LFA & MO-93-2LFA motors
- light, flexible and strong hose with proprietary connector for reliable motor connection
- highly configurable electronic driver board with versatile analog and digital interfaces
- direct and compatible replacement for previous Dassym MB-30 (-2L) & MB-92 (-2L) products
- ready to be installed as a replacement for an air turbine or a brushed DC electric motor
- extensive compliance with the highest international safety and performance standards
- classe IIa medical device in full conformity to the Regulation (EU) 2017 / 745 (MDR)

Orderable parts

UDI-DI	Trade name	Trade mark	Product reference	Composition	Part reference
EDAS1506003010	S-60	Dassym	150.60.331	MO-33-LFA	106.02.200
				MB-60	251.60.000
				HO-35	121.35.005
			150.60.332	MO-33-2LFA	106.15.200
				MB-60	251.60.000
				HO-35	121.35.005
			150.60.931	MO-93-LFA	107.00.200
				MB-60	251.60.000
				HO-35	121.35.005
			150.60.932	MO-93-2LFA	107.03.200
				MB-60	251.60.000
				HO-35	121.35.005



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