



Dispersing disc



Three-blade stirrer

DISSOLVER / DISCOVERY 492



Single milling disc



Double milling disc



DISSOLVER 492 I



DISCOVERY 492 IV

testing equipment for quality management

ERICHSEN
since 1910

Technical Description

**Laboratory High
Speed Stirrer**

Application and purpose

The precisely controlled laboratory high speed stirrers of the **DISSOLVER and DISCOVERY 492** series are suitable to produce colloidal suspensions with very fine solid particles integrated by high speed into fluid, as well as for mixing and dispersing of mill feed material within common paint/lacquer matters (disintegration of clusters of powder-type components by shearing force during the dispersing procedure, to cover in ideal case their primary particles with the fluid phase).

Best results will be achieved by following the guide dimensions as shown in the illustration. The peripheral speed (Tip speed) of the disc should reach 18-22 m/sec. The shaft speed and Tip speed is shown on the display. After premixing raw materials increase the shaft speed till no product is on the vessel wall and the top of the dissolver disc is visible 'Doughnut-flow pattern'.

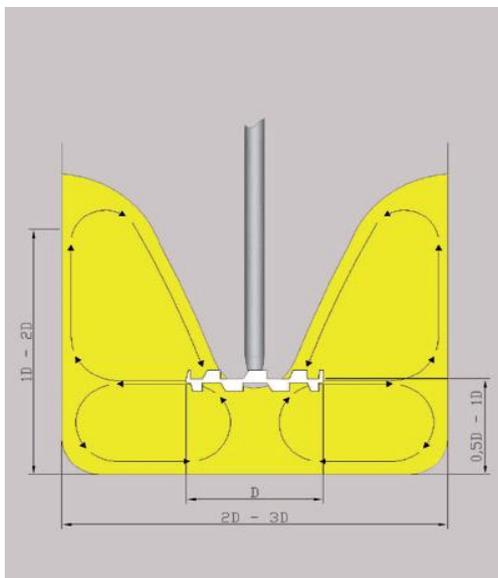


Fig. Flow pattern

Application fields:

Paints, Floor coatings, Ceramics, Colorants, Automotive coatings, Inks, Sealants, PVC liquids, Aerospace coatings, Industrial coatings, Resin, Putties, Decorative coatings, Textile, Additives, Wood coatings, Plasters, Stucco / Wall paints and Adhesives.

Design

The **Laboratory High Speed Stirrer** are equipped with low-noise drive systems with continuous adjustable speed. The used high-tech PID electronic ensures a continuously constant speed, even also when the viscosity changes during the stirring process.

The stand including column is made of stainless steel. An accordingly tared weight sliding up and down inside the stand's column, compensates the weight of motor and stirring unit and guarantees a comfortable smooth action lifting without necessity of spending any high muscular strength.

The stand's bottom end is attached with a quick fixing device, equipped with a safety switch which interrupts the current supply to the motor as soon as the fixing pressure to the stirring vessel is no longer sufficient.



Fig. Stainless steel foot with quick-fit clamping device

A further safety switch is located sidewise at the stand's column, adjustable due to the desired maximum height level of the stirring/milling disc. It interrupts the current supply when the motor/stirring unit is lifted up higher than the top position of the active stirring height range limited by the switch's adjustment.

There is one interchangeable type of dispersing disc already included in the delivery specification (type 492 I disc with dia. 40 mm, type 492 IV disc with dia. 70 mm, type 492 V disc with dia. 90 mm, type 492 VI disc with dia. 100 mm).

The **DISSOLVER 492 I** has primary been created for vessel volume ranges of approx. 0.1 up to 3 liters, and can be operated with a steplessly variable speed of up to 10.000 min^{-1} .

The **DISSOLVER 492 I** is controlled via digital display:

- digital speed display
- digital time indication
- integrated timer (adjustable from 1 up to 100 minutes) with countdown
- automatic stop
- speed control starting from zero
- on/off switch (illuminated)



Fig. Front view model 492 I

The **DISCOVERY serie 492 IV, 492 V and 492 VI** have improved controls to monitor all the processes in one screen (compact 5 inch TFT colour touch panel with data storage function).

The control panel is placed on the right side of the stand (screen in tempered glass, easy to clean).

In front of the panel is a rotary knob (multi-jog wheel) to allow the user faster menu accessing (speed/time/disc/settings alarms):

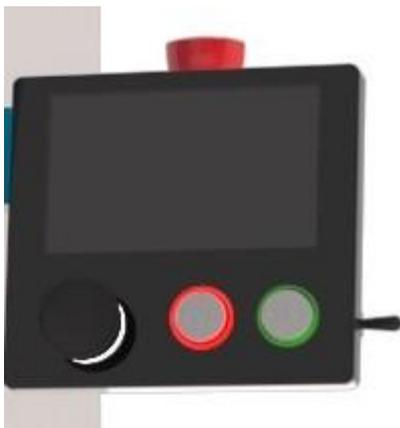


Fig. Front view model 492 IV up to 492 VI

Readout

True shaft speed, constant rpm

- adjustable timer from 1 minute till 10 hours. with automatic stop after preselected time
- Power consumption in Watt
- Torque
- Size dispersing disc in mm.
- Tipspeed / calculation of peripheral speed in m/sec.
- Temperature in °C or °F with optional PT100 temperature sensor
- Safety program of setpoint temperature with automatic stop
- Acoustic alarm
- Readout of actual position of the dissolver disc measured from the table till dispersing disc. (height measurement) in mm

The emergency stop switch is located on the control panel.

The **DISCOVERY serie** has been created for a higher vessel volume range of approx. 0.1 up to 25 liters (depending of the model), and can be operated with a steplessly variable speed of up to 12.000 min⁻¹ (depending of the model).

Accessories

Various accessories like mixing and dispersing discs made of stainless steel with different diameter sizes as well as single and double milling discs made of polypropylene for using with grinding media are available.



Fig. Dispersing discs



Fig. Single milling disc



Fig. Double milling disc

Additionally, the accessory range includes also some stainless steel dispersing vessel types with different volumes



Fig. Dispersing vessel

Jacketed vessel (with cooling ability) with lid and quick fit couplings (different volumes) are available at option:



Fig. Jacketed vessel with lid

PT100 sensor, including adjustable holder (necessary for readout the product temperature).



Fig. PT 100

For the **DISCOVERY serie** also three-blade stirrer made (type "marine propeller") as well as "Butterfly" mixing elements made of stainless steel are part of its accessory range.



Fig. Stirrer type „marine propeller“/type „Butterfly“

Other accessories, such as for example grinding heads, or vacuum systems for various volumes are available on request.

Technical Data

Power supply	Type 492 I	230 V, 50/60 Hz, 1~
	Type 492 IV	230 V, 50/60 Hz, 1~
	Type 492 V	400 V, 50/60 Hz, 3~
	Type 492 VI	400 V, 50/60 Hz, 3~
Power:	Type 492 I	0.3 kW (0.4 HP)
	Type 492 IV	0.75 kW (1.0 HP)
	Type 492 V	1.5 kW (2.0 HP)
	Type 492 VI	2.2 kW (3.0 HP)
Speed:	Type 492 I	0 - 10.000 rpm
	Type 492 IV	0 - 12.000 rpm
	Type 492 V	0 - 10.000 rpm
	Type 492 VI	0 - 4.500 rpm
Torque:	Type 492 I	0.5 Nm
	Type 492 IV	1.3 Nm
	Type 492 V	2.7 Nm
	Type 492 VI	7.6 Nm
Vessel size:	Type 492 I	0.1 - 3 Liter
	Type 492 IV	0.1 - 10 Liter
	Type 492 V	0.25 - 25 Liter
	Type 492 VI	0.25 - 25 Liter
Weight:	Type 492 I	net approx. 26 kg
	Type 492 IV	net approx. 55 kg
	Type 492 V	net approx. 68 kg
	Type 492 VI	net approx. 70 kg

Order Information	
Ord.-No.	Product Description
04920151	Laboratory High Speed Stirrer DISSOLVER 492 I , incl. complete stand with quick fixing device and dispersing disc (dia. 40 mm)
04920451	Laboratory High Speed Stirrer DISCOVERY 492 IV , incl. complete stand with quick fixing device and dispersing disc (dia. 70 mm)
04920551	Laboratory High Speed Stirrer DISCOVERY 492 V , incl. complete stand with quick fixing device and dispersing disc (dia. 90 mm)
04920651	Laboratory High Speed Stirrer DISCOVERY 492 VI , incl. complete stand with quick fixing device and dispersing disc (dia. 100 mm)

For further information please refer to our price list no. 492.

The right of technical modifications is reserved.
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