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## TWISTER SET 3

/// Data Sheet

TWISTER is a universal and compact mixing device with magnetic drive. TWISTER SET 3 is multi-position magnetic stirrer with three drive units.

In the default version, TWISTER is a powerful single-position magnetic stirrer for mixing up to 5 liters at a maximum speed of 3000 rpm and a viscosity of up to 500 mPas.

By connecting additional TWISTER stirring units (available as accessories, ID no. 0020112621), TWISTER can be expanded to a multi-position magnetic stirrer with up to 30 stirring positions.\* The stirring positions can be controlled



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either separately or simultaneously (leader-follower principle).

#### Versatile accessories

With the multi-position stirring attachment TW.IX, the drive is transformed into a magnetic stirrer with 9 stirring positions for efficient mixing of sample vessels with small volumes (8 - 60 ml).

The TW.VX shaker attachment transforms the universal magnetic drive into a vortex or orbital shaker.

#### Innovative operating concept

TWISTER enables a new way of interaction between user and laboratory instrument. Via the intuitive and chemically resistant 360° LED glass display, all information is intuitively conveyed without any alpha-numeric display. During operation, either the speed or the power required for stirring can be displayed. For example, viscosity changes can be observed and displayed as a percentage.

Mixing can be started by pressing a button as well as (thanks to integrated beaker recognition) by placing or touching the beaker.

The reverse function changes the direction of rotation at definable time intervals. This leads to a significant improvement of the mixing result, especially with samples that are difficult to mix.

#### Robust and safe

The high protection class IP 66 allows operation under harsh conditions. TWISTER can thus be cleaned under the tap, for example, or operated in an incubator at temperatures up to 40°C.

The compact and innovative design has already been awarded the reddot Award 2022. It is particularly suitable for use in laboratories with limited space.

\* Depending on the number of devices, a different power supply may have to be used. The included power supply is designed to power up to four devices.



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## Technical Data

Number of stirring positions	3
Stirring position distance [mm]	135
Stirring quantity min. per stirring position (H2O) [l]	0.005
Stirring quantity max. per stirring position (H2O) [l]	5
Motor rating output [W]	5
Direction of rotation	right / left
Speed display set-value	LED
Speed display actual-value	LED
Speed adjustment	Touch key
Speed range [rpm]	100 - 3000
Setting accuracy speed [rpm]	100
Stirring bar length [mm]	10 - 30
Self-heating of the set-up plate by max. stirring (RT:22°C/duration:1h) [K]	+6
Set-up plate material	glass
Set-up plate dimensions [mm]	124 x 124
Automatic reverse rotation	yes
Intermittent mode	optional
Viscosity trend measurement	yes
Break detection stirring bar	optional
Timer	optional
Time setting min. [s]	6
Time setting max. [min]	1
Graph function	optional
Programs	optional
Speed deviation (no load, nominal voltage, at 1500rpm + 25 °C) [%]	±2
Modular expandable stirring system (2-16 units, if more than 4 devices HUB is necessary)	yes
Leader- follower operation (minimum 2 units required, leader unit controls synchronously follower unit)	yes
Vessel detection (optional activated/deactivated)	yes
Motor acceleration rise time adjustment (Only with HUB)	optional
Definition of stirring groups (Control with HUB up to 6 individuell stirring groups)	optional
Dimensions (W x H x D) [mm]	135 x 24 x 135
Weight [kg]	0.6
Permissible ambient temperature [°C]	5 - 40
Permissible relative humidity [%]	80
Protection class according to DIN EN 60529	IP 66
RS 232 interface	optional
USB interface	optional
Bluetooth interface	optional
WiFi Interface	optional
Voltage [V]	100 - 240
Frequency [Hz]	50/60
Power input [W]	10
Power input standby [W]	2
DC Voltage [V=]	24
Current consumption [mA]	400

