

Hei-TORQUE Overhead Stirrers

Powerful Stirring

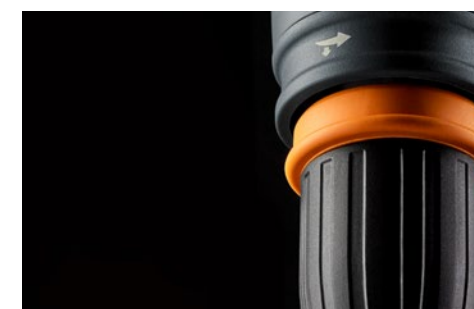
Small and light, easy to use, high torque, precise setting options and an interface for documentation purposes:
The Hei-TORQUE series offers a suitable solution for any requirement.

Ideal for mixing larger quantities, high viscosities or also for applications in reactor systems. Available in different performance classes depending on the model.



Leading Safety Standards

- The individually adjustable start-up reliably prevents splashing, as the speed is slowly ramped up to the selected speed
- The optional stirrer shaft guard protects against accidents due to the fast rotating blade
- The spark-free motors ensure leading safety standards
- To prevent overheating, the motor is switched off in case of continuous overload – important for unattended continuous use
- The safety-oriented start/stop touch function prevents unwanted switching on
- No liquid splashes with the adjustable speed limitation
- Accidental starting up during the tool change is prevented by the opened safety ring of the quick-chuck
- Three audible latching-in sounds confirm the maximum clamping force after tightening and thus the secure fit of the stirring tool





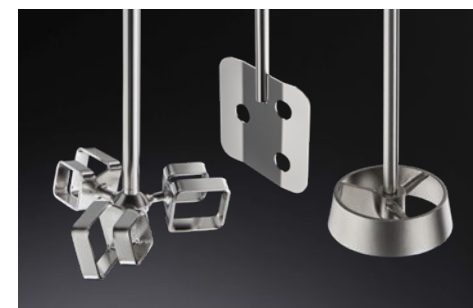
Superior Ease of Use

- The uniquely high torque achieves fast and excellent mixing results even when processing highly viscous media
- The speed is kept constant even when there are strong fluctuations in viscosity
- State-of-the-art motors achieve maximum performance at minimum noise level
- Searching for the chuck key is a thing of the past: With the quick-action chuck, the blades can be easily replaced with just one hand – without the need for tools
- Whether blades made of stainless steel, glass or with Teflon coating: The right solution is also available for special applications. To position the blade correctly at a height of your choice, the stirrer shaft can simply be routed through the housing
- With just one swift move at the optional Telescopic stand, the overhead stirrer can be repositioned
- Stirrer couplings, flexible shafts and seals to enable stirring under vacuum and pressure extend the range of applications
- Outstanding product design with glass display and touch elements for intuitive control and durability, awarded the iF DESIGN AWARD
- The standard RS 232 and USB ports of the Hei-TORQUE Ultimate models enable the process sequence to be documented precisely. The free Hei-Control Software is included in the scope of delivery



Reduced Cost of Ownership

- The sealed housing reliably protects the overhead stirrer from corrosion. On average, this increases the operational lifespan to more than 10 years and reduces maintenance and repair costs
- The high torque ensures top mixing results and also reduces the process times considerably
- Maintenance-free motors avoid downtimes and repair costs
- Special stirring tools, which even mix large quantities of gel, shorten the process times and improve the results
- The sealed glass user interface increases the leak tightness of the housing thus protecting electronics and mechanics
- No unnecessary extra costs: Free software is included with all Hei-TORQUE Ultimate models
- All devices are suitable for continuous operation without time restrictions – even when handling highest viscosity
- Achieve first-class results even in polymer research: high-performance motors are the distinguishing feature of these overhead stirrers



The Hei-TORQUE Series

Small and light, easy to use, high torque, precise setting options and an interface for documentation purposes: The Hei-TORQUE series offers a suitable solution for any requirement.



Hei-TORQUE Expert
Clearly laid out and sturdy

Hei-TORQUE Core
The lightweight choice for big tasks

Hei-TORQUE Ultimate
Customized and precise

All Hei-TORQUE models are compatible with the VISCO JET® system.

MADE IN
GERMANY

All Benefits at a Glance

3-year warranty on all devices and an average operational lifespan of 10 years

Powerful Stirring

State-of-the-art motor technology for maximum performance at minimum noise level – below 50 db

The clearly laid out glass display with touch elements simplifies menu navigation

The sealed housing conforms to the high protection class IP 54 and is designed for many years of maintenance-free continuous use in aggressive environments

With the quick-action chuck, the blades can be easily replaced with just one hand – without the need for tools

The overtemperature protection reliably prevents accidents caused by overheating – especially in continuous operation for an unlimited time

Increased safety due to individual performance monitoring: start-up intensity, maximum rotation speed and maximum torque are adjustable

The sealed glass user interface increases the leak tightness of the housing thus protecting electronics and mechanics

Safety-oriented start / stop touch function prevents unwanted switching on

USB and RS 232 interface for process documentation and reproducibility



With free Hei-Control software for all Hei-TORQUE Ultimate models for reliable automation of all processes.

VISCO JET® blades mix media that cannot be mixed with conventional technology – complete circulation is even reached when processing gels

Hei-TORQUE Core

The lightweight choice for big tasks

The exceptionally light and compact design allows for integration in closed systems, such as fume hoods, reactors, or production systems. Suitable for up to 25 l of low- to medium-viscosity media.

Compact design:

- Light weight at 2,300 g
- Dimensions (w/d/h): 70 × 195 × 282 mm

Easy to use:

- Control knob for rotation speed, pushing starts or stops the function
- Timer function
- “Max” button for short-term operation at maximum speed

Performance features

- Torque up to 40 Ncm
- Speed range up to 2,000 rpm
- Viscosity up to 10,000 mPas

The large diameter of the chuck (10.5 mm) also enables the use of large blades and VISCO JET® stirring tools. This facilitates a wide variety of applications, such as homogenizing, dispersing, the dissolving of agglomerates, and many more.

In reactor systems, the torque can alternatively also be deflected via the flexible shaft, so that the overhead stirrer can be placed next to the actual set-up.

Model	P/N	
Hei-TORQUE Core	40 Ncm	501-60410-00

Hei-TORQUE Expert

The reliable overhead stirrer for standard applications

The Hei-TORQUE Expert models are characterized by their clear display and very easy operation. They perform stirring tasks quickly and reliably.

Clearly structured operation:

- Display of torque tendency to detect changes in viscosity
- Modern digital 2.4” display for intuitive operation
- Safety-oriented start / stop touch function to prevent unwanted switching on

Forceful stirring in three performance classes:

- 100 Ncm for up to 60,000 mPas
- 200 Ncm for up to 100,000 mPas
- 400 Ncm for up to 250,000 mPas (2-gear stage design)
- Constant speed even under changing load
- Speed range up to 2,000 rpm
- Minimum noise level at maximum power

The sealed glass user interface increases the leak tightness of the housing thus protecting electronics and mechanics.

Model	P/N	
Hei-TORQUE Expert 100	100 Ncm	501-61010-00
Hei-TORQUE Expert 200	200 Ncm	501-62010-00
Hei-TORQUE Expert 400	400 Ncm	501-64010-00

The optional telescopic stand almost completely compensates for the self-weight of the laboratory stirrer. Makes it easy to change vessels or tools in no time at all.

Hei-TORQUE Ultimate

The professional overhead stirrer for demanding applications

The Hei-TORQUE Ultimate models are particularly suitable for challenging applications that have to be reproducible and documentable. The huge number of additional features allows for perfect adjustment of the stirring operation to your individual application.



Digital 3.2" display for precise working:

- Ramp function, favorites memory, interval mode
- Graphical representation of process flow, torque indicator
- Timer/countdown/clock

Forceful stirring in three performance classes:

- 100 Ncm for up to 60,000 mPas
- 200 Ncm for up to 100,000 mPas
- 400 Ncm for up to 250,000 mPas (2-gear stage design)
- Speed range up to 2,000 rpm
- Constant speed even under changing load
- Change of rotational direction of the Ultimate 100/200

Individually adjustable parameters:

- Intensity of start-up from gentle to fast
- Speed limitation – avoids unintentionally high speeds and splashing media
- Torque limitation – prevents breakage of glass stirrers due to overloading
- USB and Standard RS 232 interface for easy process documentation

Optional: Standard RS 232 cable

 The Hei-Control software is included in the scope of supply and is available [here](#) to download for free

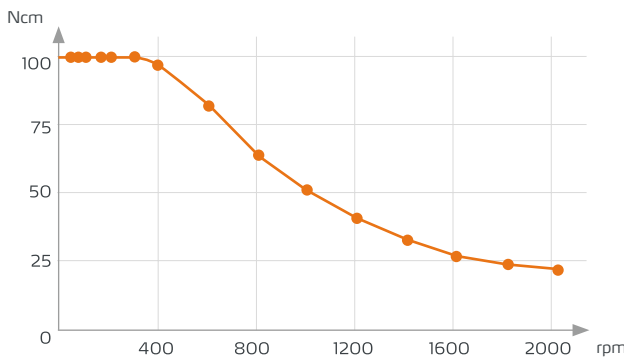
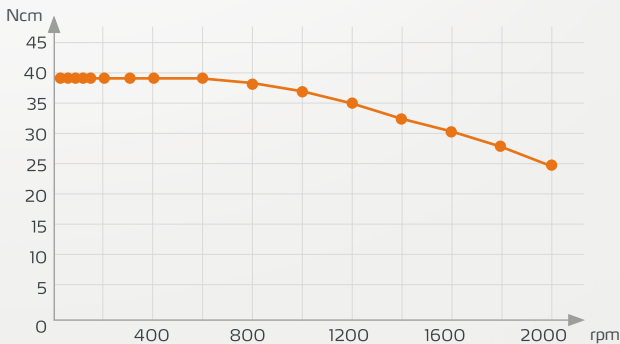
Model		P/N
Hei-TORQUE Ultimate 100	100 Ncm	501-61020-00
Hei-TORQUE Ultimate 200	200 Ncm	501-62020-00
Hei-TORQUE Ultimate 400	400 Ncm	501-64020-00

Performance Ranges

40 Ncm

Power dynamics of the models:

- Hei-TORQUE Core



100 Ncm

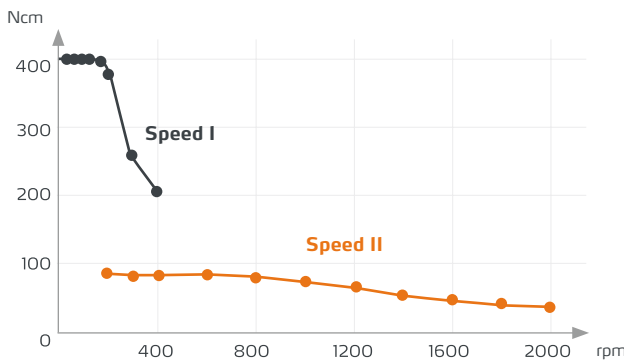
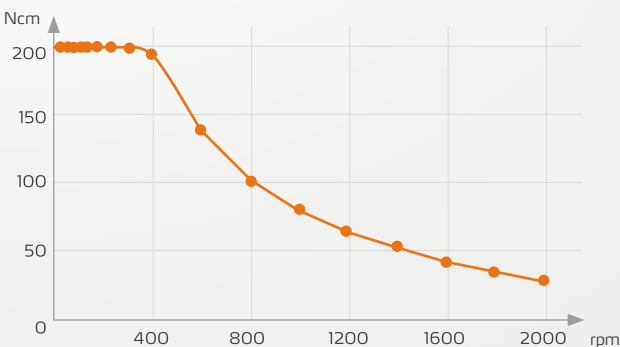
Power dynamics of the models:

- Hei-TORQUE Expert 100
- Hei-TORQUE Ultimate 100

200 Ncm

Power dynamics of the models:

- Hei-TORQUE Expert 200
- Hei-TORQUE Ultimate 200



400 Ncm

Power dynamics of the models:

- Hei-TORQUE Expert 400
- Hei-TORQUE Ultimate 400

A 2-gear stage design ensures a high torque over the entire speed range.

Technical Specifications

Overhead stirrer

Model	Hei-TORQUE Core	Hei-TORQUE Expert 100	Hei-TORQUE Expert 200	Hei-TORQUE Expert 400	Hei-TORQUE Ultimate 100	Hei-TORQUE Ultimate 200	Hei-TORQUE Ultimate 400
Power rating Motor input / output	105/75 W	90/50 W	120/80 W	150/90 W	90/50 W	120/80 W	150/90 W
Number of gear stages	1	1	1	2	1	1	2
Speed range	20–2.000 rpm	10–2.000 rpm	10–2.000 rpm	10–400 rpm (gear stage I) 20–2,000 rpm (gear stage II)	10–2.000 rpm	10–2.000 rpm	10–400 rpm (gear stage I) 20–2,000 rpm (gear stage II)
Change of rotation direction	–	–	–	–	yes	yes	–
Rotation speed indicator	digital	digital	digital	digital	digital	digital	digital
Control panel	monochrome 2.4"	monochrome 2.4"	monochrome 2.4"	monochrome 2.4"	color 3.2"	color 3.2"	color 3.2"
Speed control	electronic	electronic	electronic	electronic	electronic	electronic	electronic
Max. torque	40 Ncm*	100 Ncm	200 Ncm	400 Ncm	100 Ncm	200 Ncm	400 Ncm
Torque indicator	Symbol	Symbol	Symbol	Symbol	Value	Value	Value
Behavior in case of overload	Automatic cut-out with display	Automatic cut-out with display	Automatic cut-out with display	Automatic cut-out with display	Automatic cut-out with display	Automatic cut-out with display	Automatic cut-out with display
Motor protection	Temperature monitoring software	Temperature monitoring software	Temperature monitoring software	Temperature monitoring software	Temperature monitoring software	Temperature monitoring software	Temperature monitoring software
Max. viscosity	10,000 mPas	60,000 mPas	100,000 mPas	250,000 mPas	60,000 mPas	100,000 mPas	250,000 mPas
Max. volume H ₂ O	25 L	50 L	50 L	100 L	50 L	50 L	100 L
Analog/digital interface	–	–	–	–	USB and RS 232	USB and RS 232	USB and RS 232
Permissible duty cycle	Continuous operation	Continuous operation	Continuous operation	Continuous operation	Continuous operation	Continuous operation	Continuous operation
Counter/timer	yes	–	–	–	yes	yes	yes
Stirrer shaft Ø max.	10.5 mm	10.5 mm	10.5 mm	10.5 mm	10.5 mm	10.5 mm	10.5 mm
Dimensions device w / d / h	70×195×282 mm**	86×247×340 mm**	86×247×340 mm**	93×247×340 mm**	86×247×340 mm**	86×247×340 mm	93×247×340 mm**
Dimensions support rod Ø × w	13×160 mm	13×160 mm	13×160 mm	13×160 mm	13×160 mm	13×160 mm	13×160 mm
Weight	2.3 kg	4.4 kg	5.1 kg	5.3 kg	4.4 kg	5.1 kg	5.3 kg
Permissible Permissible ambient conditions	5–31 °C at 80 % rel. humidity, 32–40 °C linearly reducing up to max. 50 % rel. humidity	5–31 °C at 80 % rel. humidity, 32–40 °C linearly reducing up to max. 50 % rel. humidity	5–31 °C at 80 % rel. humidity, 32–40 °C linearly reducing up to max. 50 % rel. humidity	5–31 °C at 80 % rel. humidity, 32–40 °C linearly reducing up to max. 50 % rel. humidity	5–31 °C at 80 % rel. humidity, 32–40 °C linearly reducing up to max. 50 % rel. humidity	5–31 °C at 80 % rel. humidity, 32–40 °C linearly reducing up to max. 50 % rel. humidity	5–31 °C at 80 % rel. humidity, 32–40 °C linearly reducing up to max. 50 % rel. humidity
Degree of protection EN 60529	IP 42	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54

Standard supply voltage: 230 V. Other supply voltages on request.

* 65 Ncm for short-term overload operation

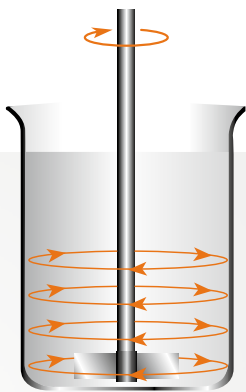
** Height from upper edge of device to lower edge of chuck with jaws completely retracted

Stirring Tools

When using a laboratory stirrer, the correct choice of impeller is decisive. They differ in the type of flow that they cause in the medium, in the speed-dependent operating range and in their execution for different viscosities.

The following applies to stirring tools: Optimum mixing results are achieved when the vessel size and positioning of the impeller are perfectly matched.

Blade / Half-Moon Impellers

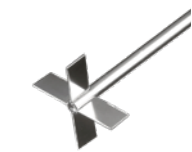


- The primary flow direction is tangential
- The impellers are particularly suitable for medium to high-speed range applications
- For mixing tasks with low to medium viscosity

 To the selection tool for stirring tools

The right impeller for every application

Gassing of liquids	Homogenizing, emulsifying, suspending	Stirring of viscous media
		
Radial-Flow Impellers	Propeller-Type or Blade Impellers	Anchor-Type Impeller PR 39 Pitched-Blade Impeller VISCO JET®
		



BR 10 Cross-blade impeller

Blade size	Material	Length	Ø stirrer shaft	Speed	P/N
50 × 12 mm	Stainless steel (V4A)	400 mm	8 mm	2,000 rpm	509-10000-00



BR 11 Straight-blade impeller

Blade size	Material	Length	Ø stirrer shaft	Speed	P/N
50 × 12 mm	Stainless steel (V4A)	400 mm	8 mm	2,000 rpm	509-11000-00



BR 12 Pivoting-blade impeller

With tilting blades for narrow neck vessels

Blade size	Material	Length	Ø stirrer shaft	Speed	P/N
60 × 15 mm	Stainless steel (V4A)	400 mm	8 mm	2,000 rpm	509-12000-00



BR 13 Square-blade impeller

Blade size	Material	Length	Ø stirrer shaft	Speed	P/N
70 × 70 mm	Stainless steel (V4A)	450 mm	8 mm	800 rpm	509-13000-00



BR 14 Collapsible-blade impeller

With collapsible blades for narrow neck vessels

Blade size	Material	Length	Ø stirrer shaft	Speed	P/N
90 × 10 mm	Stainless steel (V4A)	400 mm	8 mm	800 rpm	509-14000-00



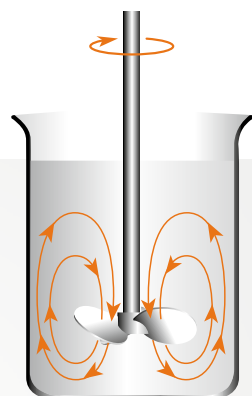
HR 18 Half-moon impeller

Has tiltable blades for narrow-necked vessels, is ideal for stirring in round-bottom flasks

Blade size	Material	Length	Ø stirrer shaft	Speed	P/N
65 × 18 × 3 mm	PTFE	350 mm	8 mm	800 rpm	509-18000-10
Clamping range 6.5 mm					

Pitched-Blade Impellers

- The primary flow direction is axial
- These blades are particularly recommended for applications which require an average to high speed range
- For mixing tasks with low to high viscosity
- Excellent mixing properties for homogenizing and suspending



PR 30 Pitched-blade impeller

Ø propeller	Material	Length	Ø stirrer shaft	max. rpm	P/N
58 mm	Stainless steel (V4A)	400 mm	8 mm	2,000 rpm	509-30000-00



PR 31 Ringed pitched-blade impeller

Ø propeller	Material	Length	Ø stirrer shaft	max. rpm	P/N
33 mm	Stainless steel (V4A)	400 mm	8 mm	2,000 rpm	509-31000-00



PR 32 Ringed pitched-blade impeller

Ø propeller	Material	Length	Ø stirrer shaft	max. rpm	P/N
45 mm	Stainless steel (V4A)	400 mm	8 mm	2,000 rpm	509-32000-00



PR 33 Ringed pitched-blade impeller

Ø propeller	Material	Length	Ø stirrer shaft	max. rpm	P/N
66 mm	Stainless steel (V4A)	400 mm	8 mm	800 rpm	509-33000-00



PR 39 Pitched-blade impeller

Perfect mixing results even at high viscosity

Ø propeller	Material	Length	Ø stirrer shaft	max. rpm	P/N
75 mm	PTFE	350 mm	8 mm	800 rpm	509-39000-10

Radial-Flow Impellers

- The primary flow direction is radial
- These blades are particularly recommended for applications which require an average to high speed range
- For mixing tasks with low to medium viscosity
- Ideal for gassing of liquids and for emulsifying



TR 20 Radial-flow impeller

Ø turbine	Material	Length	Ø stirrer shaft	Speed	P/N
28 mm	Stainless steel (V4A)	400 mm	8 mm	2,000 rpm	509-20000-00

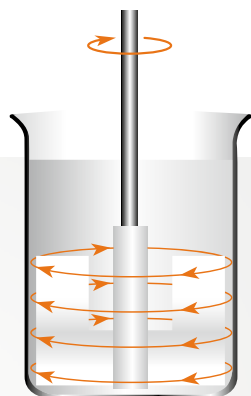


TR 21 Radial-flow impeller

Ø turbine	Material	Length	Ø stirrer shaft	Speed	P/N
50 mm	Stainless steel (V4A)	400 mm	8 mm	2,000 rpm	509-21000-00

Anchor-Type Impeller

- The primary flow direction is tangential
- This blade is particularly recommended for applications which require a low to average speed range
- Axial primary flow
- For mixing tasks with high viscosity



AR 19 Anchor-type impeller

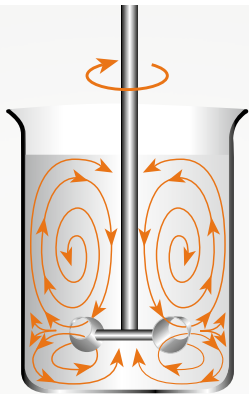
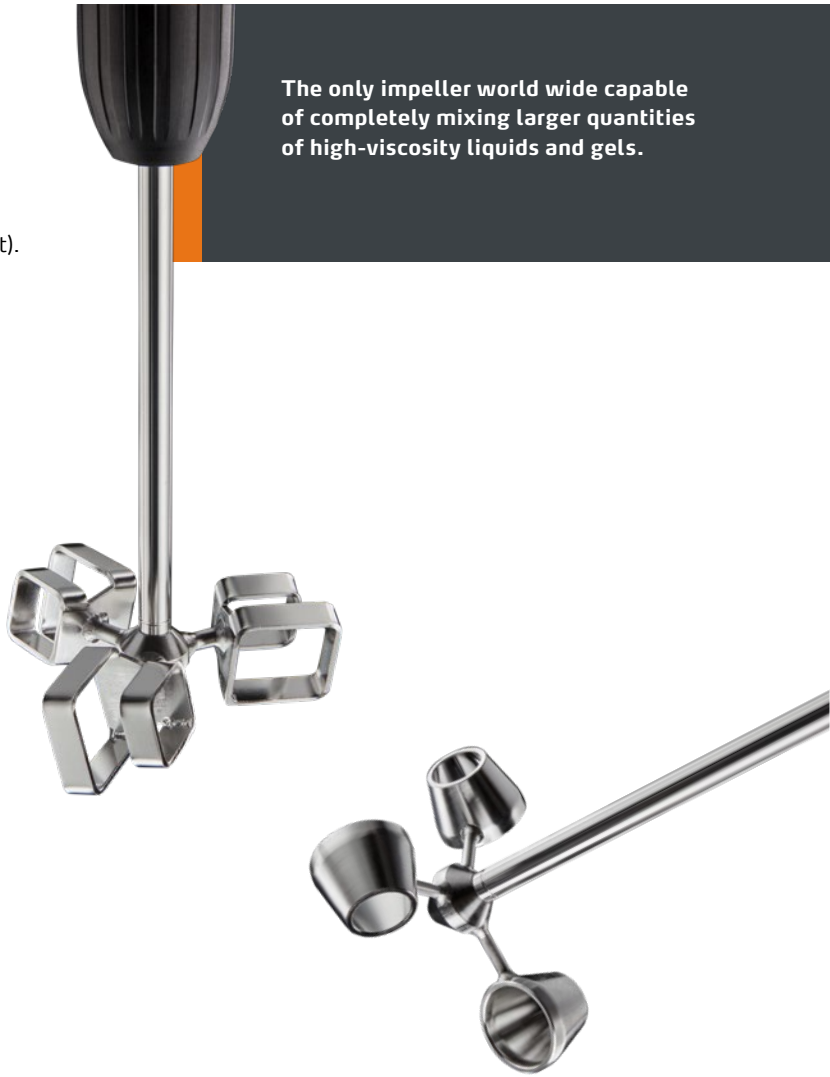
Blade size	Material	Length	Ø stirrer shaft	Speed	P/N
60 × 40 × 5 mm	PTFE	350 mm	8 mm	800 rpm	509-19000-10

VISCO JET® Stirring System

The all-rounder for thick and thin

The VISCO JET® stirring system from VISCO JET Rührsysteme GmbH is based on the so-called cone principle. Turbulences are generated by the dynamic pressure at the displacer inlet and by the accelerated flow within the displacer (so-called nozzle effect). These turbulences collide during the circular movement of the stirring tool and lead to the revolutionary mixing movement.

- Reduced process times with clearly improved mixing results
- The stirring principle achieves complete degassing of the medium – foaming and air ingress are effectively prevented
- Even with media that cannot be mixed with conventional blades, complete circulation is achieved
- Even at low speeds, the special shape triggers a unique flow with its own inherent dynamics
- A system for virtually any stirring task involving low to high viscosity media
- Also compatible with the compact Hei-TORQUE Core, as it also features a large-diameter chuck (10 mm)



Ranges of application

- Beverage production, dairy products
- Food, sugar and confectionery production
- Chemistry, petrochemistry, ceramics, water treatment
- Pharmaceuticals, cosmetics production
- Paint and varnish production
- and many more

VISCO JET® Stirrers



VISCO JET® – 60 mm Ø

Material	Length	Ø stirrer shaft	Ø vessel	Speed	P/N
Stainless steel (V4A)	500 mm	10 mm	80–150 mm	200–800 rpm	509-16060-00



VISCO JET® – 80 mm Ø

Material	Length	Ø stirrer shaft	Ø vessel	Speed	P/N
Stainless steel (V4A)	500 mm	10 mm	115–200 mm	200–700 rpm	509-16080-00



VISCO JET® – 120 mm Ø

Material	Length	Ø stirrer shaft	Ø vessel	Speed	P/N
Stainless steel (V4A)	500 mm	10 mm	170–300 mm	120–500 rpm	509-16120-00



VISCO JET® – 80 mm Ø (POM)

Material	Length	Ø stirrer shaft	Ø vessel	Speed	P/N
POM*	500 mm	10 mm	115–200 mm	200–700 rpm	509-16081-00



VISCO JET® – 120 mm Ø (POM)

Material	Length	Ø stirrer shaft	Ø vessel	Speed	P/N
POM*	500 mm	10 mm	170–300 mm	120–500 rpm	509-16121-00

* Stirring tool: plastic (POM), hub: brass, shaft: polyamide-coated



VISCO JET® CRACK – 80 mm Ø

Material	Length	Ø stirrer shaft	Ø vessel	Speed	P/N
Stainless steel (V4A)	500 mm	10 mm	115–200 mm	200–700 rpm	509-17080-00

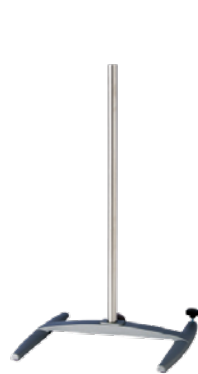


VISCO JET® CRACK – 120 mm Ø

Material	Length	Ø stirrer shaft	Ø vessel	Speed	P/N
Stainless steel (V4A)	500 mm	10 mm	170–300 mm	120–500 rpm	509-17120-00

One stirrer shaft is always included in the scope of delivery.

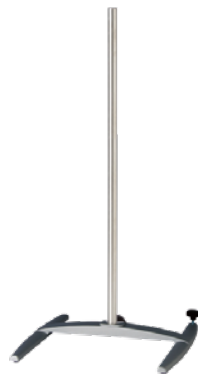
Further Accessories



Universal stand S2

Ø stand tube 25 mm,
height 700 mm,
foot spacing 370 mm,
weight 5.8 kg

P/N 570-12000-00



Stand S2 XXL

Ø stand tube 25 mm,
height 1,000 mm
foot spacing 370 mm,
weight 6.0 kg

P/N 570-12200-00



Telescopic stand

Ø stand tube 32 mm,
height 725 to 1,025 mm,
foot spacing 370 mm,
weight 7.7 kg

P/N 570-12100-00



Clamp

for universal stand S2,
stand S2 XXL and
telescopic stand, Ø 13 – 32 mm

P/N 570-22000-00



Flex coupling

With clamping spigot,
for stirrer shafts
with Ø 10 mm

P/N 509-03000-00



Stirrer guide (NS 29/32)

For stirrer shafts with Ø 8 mm,
ground PTFE core; suitable for vacuum,
perfect guide for stainless steel and
glass stirrer shafts

P/N 509-09000-00



Shaft guard

For Hei-TORQUE, made of PMMA,
incl. adapter set, height-adjustable
from approx. 187 – 312 mm

P/N 509-08100-00



Flexible shaft

incl. chuck,
1,300 mm overall length

P/N509-07000-00



RS 232 cable

9-pin, for Hei-PLATE Mix 'n' Heat
Ultimate and Hei-TORQUE Ultimate
models

P/N 14-007-040-72

Adapter set (not illustrated)
For fixing the stirrer shaft guard on the Hei-TORQUE overhead stirrer

P/N 11-002-501-02

Packages

Hei-TORQUE

To offer a perfect complete solution for powerful stirring
and easy operation in the laboratory, the Hei-TORQUE
series was expanded by various product packages.



HEI-TORQUE GOLD 1 PACKAGE

- Hei-TORQUE Ultimate 100
- Telescopic stand
- Clamp

P/N 501-61029-00

HEI-TORQUE GOLD 2 PACKAGE

- Hei-TORQUE Ultimate 200
- Telescopic stand
- Clamp

P/N 501-62029-00

HEI-TORQUE PLATINUM PACKAGE

- Hei-TORQUE Ultimate 400
- Telescopic stand
- Clamp

P/N 501-64029-00

Each Hei-TORQUE package
contains a telescopic stand and
a corresponding clamp to ensure
ideal use on laboratory benches.

HEI-TORQUE SILVER PACKAGE

- Hei-TORQUE Expert 100
- Telescopic stand
- Clamp

P/N 501-61019-00