

Configuration tool Heidolph stirring system

For each impeller the optimal laboratory vessel – for best mixing results

LABORATORY VESSEL				IMPELLER			
Ø vessel (mm)	Ideal ground clearance (mm)	Ideal height (mm)	Ideal volume (ml)	Stirring tool		Ø stirrer shaft (mm)	Ø agitator (mm)
100	5	100	800	BLADE IMPELLERS		8	50 ¹
100	5	100	800			8	50 ¹
120	6	120	1,400			8	60 ¹
140	7	140	2,200			8	70 ¹
180	9	180	4,600			8	90 ¹
145 – 290	29 – 58	145 – 290	2,400 – 19,200	PITCHED-BLADE AND RINGED IMPELLERS		8	58 ¹
83 – 165	17 – 33	83 – 165	400 – 3,500			8	33 ¹
113 – 225	23 – 45	113 – 225	1,100 – 8,900			8	45 ¹
165 – 330	33 – 66	165 – 330	3,500 – 28,200			8	66 ¹
188 – 375	38 – 75	188 – 375	5,200 – 41,400			8	75 ²
80 – 140	14 – 28	80 – 140	400 – 2,200	RADIAL-FLOW IMPELLERS		8	28 ¹
143 – 250	25 – 50	143 – 250	2,300 – 12,300			8	50 ¹
130	7	130	1,700	HALF-MOON/ANCHOR-TYPE IMPELLERS		8	65 ²
67	2	67	200			8	60 ²
80 – 150	21	100 – 150	800 – 2,700	VISCO JET®		10	60 ¹
120 – 200	25	120 – 200	1,900 – 6,300			10	80 ^{1, 3} 80 ¹
160 – 250	32	200 – 300	6,300 – 21,200			10	120 ^{1, 3} 120 ¹
280 – 425	50	280 – 425	17,000 – 60,000			10	170 ¹

Source: Data based on internal reference.

FOR USE IN RESEARCH PURPOSES ONLY – NOT FOR USE IN THE MEDICAL AREA OR PHARMACEUTICAL PRODUCTION!
CALIFORNIA RESIDENTS: IMPORTANT INFORMATION FOR CALIFORNIA RESIDENTS REGARDING PROP 65. PLEASE VISIT WWW.P65WARNINGS.CA.GOV FOR MORE INFORMATION.
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¹ Stainless steel (V4A) ² PTFE ³ POM

Only a perfect designed stirring system enables a homogeneously mixed product.

Not only the performance of the device, but also application parameters like the viscosity of the product, the volume to be mixed and the vessel used play a decisive role in the selection of the perfect system: an overhead stirrer together with an impeller.

[Find here the perfect stirring tool for your viscosity-volume range.](#)

STIRRER SHAFT

10.5 mm

OVERHEAD STIRRERS

Hei-TORQUE Core

Hei-TORQUE Expert 100
Hei-TORQUE Ultimate 100

Hei-TORQUE Expert 200
Hei-TORQUE Ultimate 200

Hei-TORQUE Expert 400
Hei-TORQUE Ultimate 400

ACCESSORIES

Flexible Shaft

incl. chuck

Stirrer guide

Ground PTFE core; suitable for vacuum, perfect guide for stainless steel and glass stirrer shafts

Flex Coupling

with clamping spigot

NOTE: The volume depends on the diameter and the height ratio and can be modified accordingly. $V = \pi \times r^2 \times h$

VISCO JET® stirrer shafts have a diameter of 10 mm and **cannot** be used with every accessory available.

Hei-TORQUE overhead stirrers – perfect mixing for any application

The perfect stirring tool for your individual viscosity-volume range

VISCOSITY	60 – 100 mPas (vegetal oil)														
VOLUME	40 l		25 l						5.5 l						
Stirring tool	PR 39	VJ 170	PR 30	PR 33	PR 39	VJ 120	VJ 120 Crack	VJ 170	BR 14	PR 30	PR 32	PR 33	PR 39	VJ 80	VJ 80 Crack
Overhead Stirrer															
Hei-TORQUE Expert 100 Hei-TORQUE Ultimate 100	✓✓	✓✓✓	✓	✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓
Hei-TORQUE Core	✓✓	✓✓✓	✓	✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓

Suitability of the stirring tool (tested):	
✓✓✓	very good
✓✓	good
✓	acceptable

VISCOSITY	1000 – 1.500 mPas (glycerin)																							
VOLUME	40 l	25 l						5.5 l							2.0 l						0.8 l			
Stirring tool	VJ 170	PR 30	PR 33	PR 39	VJ 120	VJ 120 Crack	VJ 170	BR 14	PR 30	PR 32	PR 33	PR 39	VJ 80	VJ 80 Crack	BR 12	BR 13	PR 30	PR 31	PR 32	VJ 60	BR 10	BR 11	PR 31	VJ 60
Overhead Stirrer																								
Hei-TORQUE Expert 100 Hei-TORQUE Ultimate 100	✓✓✓	✓	✓✓	✓	✓✓✓	✓✓	✓✓✓	✓	✓✓	✓✓	✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓
Hei-TORQUE Core			✓	✓	✓✓✓	✓✓	✓✓✓	✓	✓✓	✓✓	✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓

VISCOSITY	3,000 mPas (silicon oil)								
VOLUME	5.5 l				2.0 l				0.8 l
Stirring tool	PR 30	PR 39	VJ 80	VJ 80 Crack	BR 13	PR 30	PR 39	VJ 60	VJ 60
Overhead Stirrer									
Hei-TORQUE Expert 100 Hei-TORQUE Ultimate 100	✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓
Hei-TORQUE Core	✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓

VISCOSITY	10,000 mPas (silicon oil)										
VOLUME	5.5 l				2.0 l						0,8 l
Stirring tool	PR 30	PR 39	VJ 80	VJ 80 Crack	BR 13	PR 30	PR 39	VJ 60	VJ 80	VJ 80 Crack	VJ 60
Overhead Stirrer											
Hei-TORQUE Expert 100 Hei-TORQUE Ultimate 100	✓✓	✓✓✓	✓✓	✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓	✓✓✓	✓✓✓
Hei-TORQUE Core	✓	✓✓✓	✓	✓	✓	✓✓✓	✓✓✓	✓✓✓	✓	✓✓	✓✓✓

Depending on the setup, the viscosity of your stirring medium, the vessel or the overhead stirrer, the results may differ from the references listed here.

We can help you with the selection of your ideal configuration; feel free to get in touch with your contact person.

Visco Jet® – speed ranges and configuration

Speed range of the impellers depending on the viscosity

Speed range of the impellers depending on the viscosity			
Diameter (Ø in mm)	LOW VISCOSITY Circumferential speed 1.5 – 2 m/s	MEDIUM VISCOSITY Circumferential speed 2 – 3 m/s	HIGH VISCOSITY Circumferential speed 3 – 4 m/s
60	725 – 967 rpm	967 – 1,451 rpm	1,451 – 1,934 rpm
80	512 – 682 rpm	682 – 1023 rpm	1,023 – 1,364 rpm
120	322 – 429 rpm	429 – 644 rpm	644 – 858 rpm
170	231 – 308 rpm	308 – 462 rpm	462 – 616 rpm

Configuration			
	LOW VISCOSITY	MEDIUM VISCOSITY	HIGH VISCOSITY
Viscosity ranges for yield points	$\eta < 500$ mPas	$\eta = 500 - 5,000$ mPas	$\eta > 5,000$ mPas
Diameter ratio (Ø stirring element : Ø vessel) preset	0.25 – 0.4	0.4 – 0.5	0.5 – 0.65
Required circumferential speed	1.5 – 2 m/s	2 – 3 m/s	3 – 4 m/s