

# Configuration tool Heidolph stirring system

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

LABORATORY VESSEL			
Ø vessel (mm)	Ideal ground clearance (mm)	Ideal height (mm)	Ideal volume (ml)
100	5	100	800
100	5	100	800
120	6	120	1,400
140	7	140	2,200
180	9	180	4,600
145 – 290	29 – 58	145 – 290	2,400 – 19,200
83 – 165	17 – 33	83 – 165	400 – 3,500
113 – 225	23 – 45	113 – 225	1,100 – 8,900
165 – 330	33 – 66	165 – 330	3,500 – 28,200
188 – 375	38 – 75	188 – 375	5,200 – 41,400
80 – 140	14 – 28	80 – 140	400 – 2,200
143 – 250	25 – 50	143 – 250	2,300 – 12,300
130	7	130	1,700
67	2	67	200
80 – 150	21	100 – 150	800 – 2,700
120 – 200	25	120 – 200	1,900 – 6,300
160 – 250	32	200 – 300	6,300 – 21,200
280 – 425	50	280 – 425	17,000 – 60,000

IMPELLER				
	Stirring tool		Ø stirrer shaft (mm)	Ø agitator (mm)
BLADE IMPELLERS		BR 10	8	50 <sup>1</sup>
		BR 11	8	50 <sup>1</sup>
		BR 12	8	60 <sup>1</sup>
		BR 13	8	70 <sup>1</sup>
		BR 14	8	90 <sup>1</sup>
PITCHED-BLADE AND RINGED IMPELLERS		PR 30	8	58 <sup>1</sup>
		PR 31	8	33 <sup>1</sup>
		PR 32	8	45 <sup>1</sup>
		PR 33	8	66 <sup>1</sup>
		PR 39	8	75 <sup>2</sup>
		PR 39	8	75 <sup>2</sup>
RADIAL-FLOW IMPELLERS		TR 20	8	28 <sup>1</sup>
		TR 21	8	50 <sup>1</sup>
HALF-MOON/ANCHOR-TYPE IMPELLERS		HR 18	8	65 <sup>2</sup>
		AR 19	8	60 <sup>2</sup>
VISCO JET®		VJ 60	10	60 <sup>1</sup>
		VJ 80	10	80 <sup>1, 3</sup>
		VJ 80 Crack	10	80 <sup>1</sup>
		VJ 120	10	120 <sup>1, 3</sup>
		VJ 120 Crack	10	120 <sup>1</sup>
		VJ 170	10	170 <sup>1</sup>

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

8 mm

10 mm

**OVERHEAD STIRRERS**

**Hei-TORQUE Core**

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

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

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

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**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.

Source: Data based on internal reference.

<sup>1</sup> Stainless steel (V4A) <sup>2</sup> PTFE <sup>3</sup> POM

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](http://WWW.P65WARNINGS.CA.GOV) FOR MORE INFORMATION.  
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# 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
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	
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	
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	
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