

High speed homogenizer

D-500 / D-500 Pro / D-600 / D-600 Pro

Used for homogenizing, emulsifying, and suspending applications. High-performance homogenizer with electronic speed control ranging from 500 to 30,000 rpm. A variety of purpose-engineered dispersing tools are offered.

Features

- > Continuously adjustable speeds for better results
- > Continuously adjustable speed enables precise results
- > Compact and lightweight design for easy operation
- > Triple safety drive protection (overload protection, smooth start function and safety switch)
- > Standard dispersion tools made of SS 316L stainless steel for enhanced corrosion resistance
- > Viscosities up to 10,000 cps
- > D-500 Pro maintains constant motor speed under varying loads via feedback control



D-600

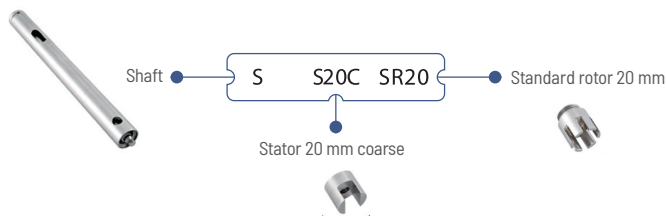
D-600 Pro

Specifications

Model	D-500	D-500 Pro	D-600	D-600 Pro
Order No.	1710500	1710500P	W3050600	W3050601
Speed setting	Knob	Knob	Knob	Knob
Speed display	Scale	LED	LED	LCD
Process Range H ₂ O [mL]	10 ~ 40,000	10 ~ 40,000	10 ~ 40,000	10 ~ 40,000
Speed with Zero-Load [rpm]	10,000 ~ 30,000	500 ~ 30,000	500 ~ 30,000	500 ~ 30,000
Applicable aggregates [mm]	Ø4 ~ Ø23	Ø4 ~ Ø23	Ø4 ~ Ø23	Ø4 ~ Ø23
Sound pressure level with Zero-Load [dB]	72 dB (30,000 rpm)	66 dB (2500 rpm) 72 dB (30,000 rpm)	66 dB (2500 rpm) 72 dB (30,000 rpm)	66 dB (2500 rpm) 72 dB (30,000 rpm)
Motor	AC	AC	AC	AC
Output Power [W]	500	500	600	600
Supply voltage [V]	220 V / 50 ~ 60 Hz	220 V / 50 Hz	220 V / 50 Hz	220 V / 50 Hz
Relative humidity [max.]	80% RH	80% RH	80% RH	80% RH
Operating temperature [°C]	0 ~ 40	0 ~ 40	0 ~ 40	0 ~ 40
Communicate interface	-	-	-	RS232/485
IP Code	IP30	IP30	IP30	IP30
Dimensions [W x D x H (mm)]	Driver, 88x88x361	Driver, 77x163x236	Driver, 100x163x235	Driver, 103x161x234

Standard includes homogenizer only. Shaft and stand need to be ordered separately.

Shaft Selection Guide for High Speed Homogenizer



Shaft 5

Includes the Shaft, PTFE bearing, 5 mm stator, 4 mm rotor



SS20CSR20

Includes the Shaft, PTFE bearing, 20 mm stator, standard rotor SR20



SS20FER20

Includes the Shaft, PTFE bearing, 20 mm stator, emulsification rotor ER20



SS30CSR30

Includes the Shaft, PTFE bearing, 30 mm stator, standard rotor SR30



SS30FER30

Includes the Shaft, PTFE bearing, 30 mm stator, emulsification rotor ER30

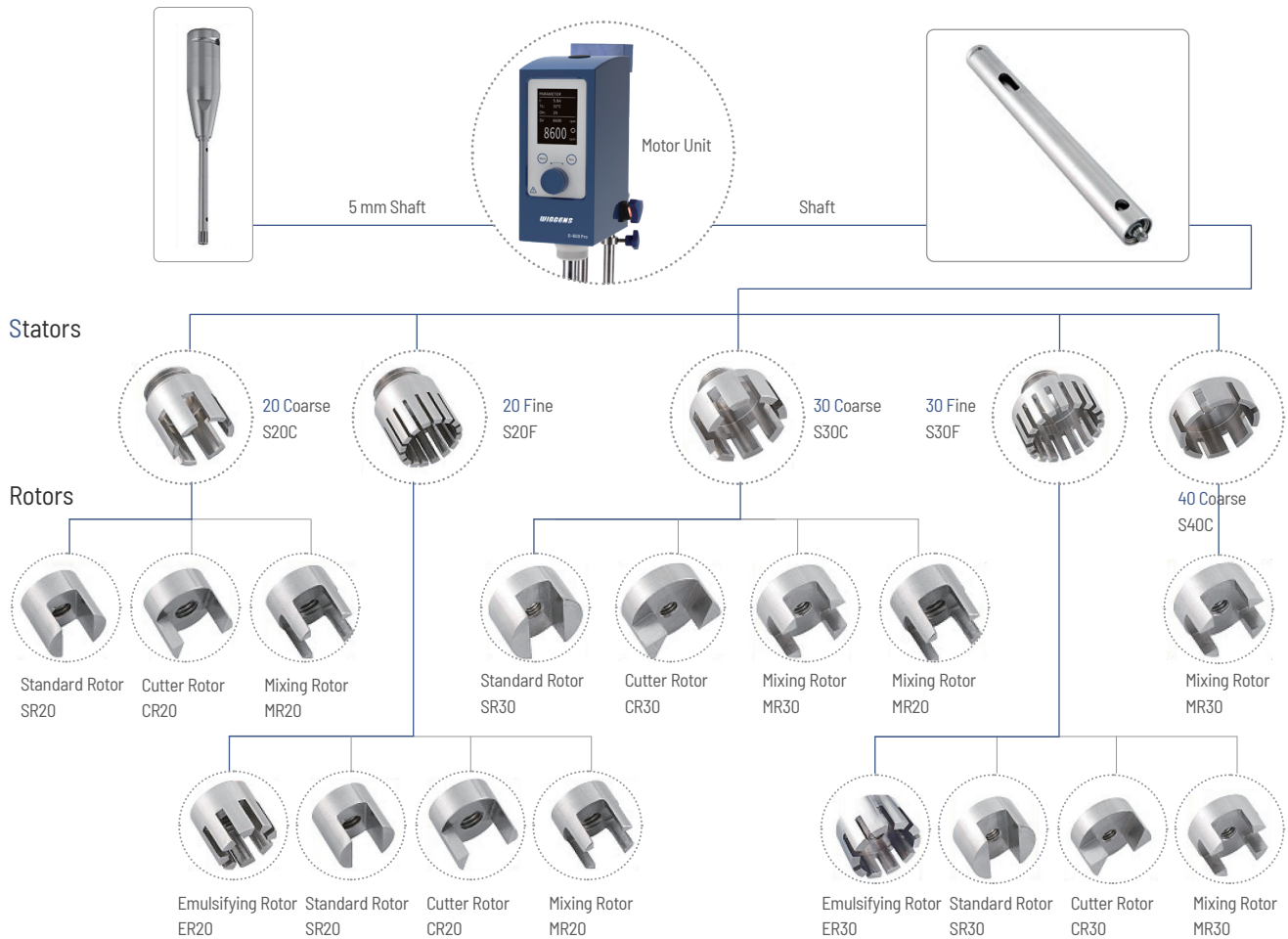


SS40CMR30

Includes the Shaft, PTFE bearing, 40 mm stator, mixing rotor MR30



Composition diagram



Shaft / Order Table

Rotor Name	Function Description	Process Volume	Linear Velocity	Rotor Diameter	Stator Diameter	Min. / Max.	Ultimate Fineness (in microns)		Disinfection Method	Application*
Order No.		[mL]	[m/s]	[mm]	[mm]	Immersion Depth	suspension	emulsion		
SS20CSR20(E)	Solid-Liquid Mixing Material	10-5000	23.5	15	20	40/170	10-50	1-10		P,CI,PC,SD
SS20CCR20(E)	Fiber Material	10-5000	23.5	15	20	40/170	10-50	1-10		SP,M,F,PT,TI
SS20CMR20(E)	Solid-Liquid Mixing Material	10-5000	23.5	15	20	40/170	10-50	1-10		CI,PI
SS20FER20(E)	Latices	10-5000	23.5	15	20	40/170	10-50	1-10		SP,PI,PT,P
SS20FCR20(E)	Fiber Material	10-5000	23.5	15	20	40/170	10-50	1-10		SP,BT,M,F,PT,TI
SS20FMR20(E)	Solid-Liquid Mixing Material	10-5000	23.5	15	20	40/170	10-50	1-10		CI,C,PI,F,PT,PC
SS30CMR20(E)	Stirring Paddle Function	250-20000	36.1	15	30	40/170	High-speed mixer			CI,F,SP
SS30CSR30(E)	Solid-Liquid Mixing Material	100-8000	36.1	23	30	40/170	5-25	1-5		SP,M,F,PT,P
SS30CCR30(E)	Fiber Material	100-8000	36.1	23	30	40/170	5-25	1-5		SP,M,F,PT,P
SS30CMR30(E)	Solid-Liquid Mixing	100-8000	36.1	23	30	40/170	5-25	1-5	all methods	CI,PI
SS30FSR30(E)	Solid-Liquid Mixing Material	100-8000	36.1	23	30	40/170	5-25	1-5		SP,PI,PT,P
SS30FER30(E)	Latices	100-8000	36.1	23	30	40/170	5-25	1-5		SP,PI,PT,P
SS30FCR30(E)	Fiber Material	100-8000	36.1	23	30	40/170	5-25	1-5		SP,PI,PT,P
SS30FMR30(E)	Solid-Liquid Mixing Material	100-8000	36.1	23	30	40/170	5-25	1-5		CI,C,P,F,DT,TI
SS40CMR30(E)	Stirring Paddle	1000-40000	36.1	23	40	40/170	High-speed mixer			CI,F,SP
Shaft 5(E)	Solid-Liquid Mixing Material	0.2-50	6.3	4	5	40/60	10-50	1-10		BT,M
Shaft 10 (E)	Solid-Liquid Mixing Material	1-250	6.3	9	10	10/60	10-50	1-10		BT,M
Shaft 14(E)	Solid-Liquid Mixing Material	100-1000	6.3	13	14	10/60	10-50	1-10		BT,M

Note! BT = Biology; F = Food Industry; P = Pharmaceutical Industry; C = Cosmetic Industry; M = Medical Analysis; PC = Petrochemical Industry; PT = Paper Production Industry; SP = Wastewater Analysis; CI = Ceramic Industry; CH = Chemical Industry; PI = Paint Industry; TI = Tabacco Industry (E)E for D-600Pro

Dispersing Vessel

WIGGENS vessels with deep baffles simplify the mixing process. The baffles reduce vortex formation at high dispersing speeds by interrupting radial flow and increasing opposing forces, resulting in enhanced turbulence in the liquid.

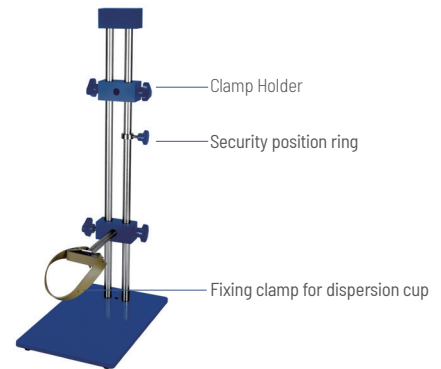


Model	Dim. (mm) Ø / H	Working Vol.	Shape	Material	Features	Order No.
DV500	80 / 200	500 mL	Cloverleaf shaped	Borosilicate glass	Top open without cover	W3050100

Stand

- > Strong base for optimal weight distribution
- > Base made of cast iron and shafts made of stainless steel
- > High quality clamp and fixing set included in the package of stand

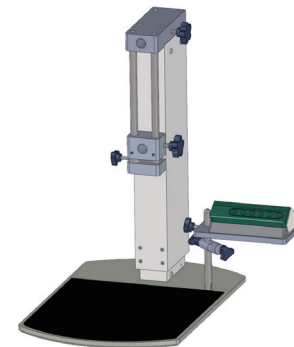
Order No.	Description	Suitable for
WF11-D	Extendable flat bracket (double rod design)	D-500 / 600
11045011	Vessel holder (without boss head clamp) for WF11-D	WF11-D, WH11-D
11045030	Safety ring for stand WF	WF11-D, WH11-D



Electric stand

Electric stand with lifting telescopic bar for more ease of use. The controller can directly control the lifting and lowering, and it also supports preset positions for one-touch lift/lower operation.



Model	WF20
Container area [W x D (mm)]	270x260
Height range	454 ~ 734 mm (With the top mounting position) 258 ~ 698 mm (With slide rail mounting position) 160 mm (slide rail adjustable range)
Maximum Load [kg]	15
Dimensions [W x D x H (mm)]	300x475x500 (not include the controller)
Net weight [kg]	10
Power supply	100 ~ 240 VAC, 50 / 60 Hz








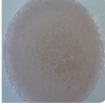




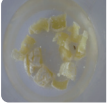


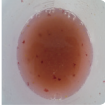


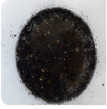

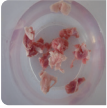



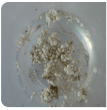
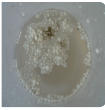
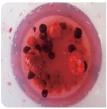

Dispersing tests

No.	Material	Amount	Pregrinded	Liquid	Vessel	Speed	Duration	Result	Test okay? Yes/no	Sample before Dispersing	Sample after Dispersing
1	Rose flower	0.2 g	no	5mL water	10mL Conical Tube	level 4	4 min	homogeneous suspension	yes		
2	Rose flower	0.2 g	no	5mL water	10mL Conical Tube	level 6	3 min	homogeneous suspension	yes		
3	Rose flower	0.1 g	no	5mL water	10mL Conical Tube	level 4	1 min	homogeneous suspension	yes		
4	Rose flower	0.1 g	no	5mL water	10mL Conical Tube	level 4	1 min	homogeneous suspension	yes		
5	Rose stamens	0.05 g	no	1.5mL water	2mL Conical Tube	level 4	1 min	homogeneous suspension	yes		
6	Rose stamens	0.1 g	no	2mL water	10mL Conical Tube	level 4	2 min	homogeneous suspension	yes		

Dispersing tests D-500 / D-500Pro / D-600

No.	Material	Amount	Pregrinded	Liquid	Vessel	Speed	Duration	Result	Remarks	Recommended or not	Sample before Dispersing	Sample after Dispersing
1	Rape oil	5 mL	no	80 mL water	100mL measuring cylinder	max.	1 min	stable emulsion		yes		
2	Liver	20 g	10 mm pieces	200 mL water	500 mL beaker	max.	30 s	homogeneous suspension	sample completely homogenized	yes		
3	Rice	20 g	no	80 mL water	100mL measuring cylinder	max.	1 min	homogeneous suspension	only small pieces of rice left	yes		
4	Basil leaf	10 pieces	10 mm pieces	200 mL water	500 mL beaker	max.	1 min	homogeneous suspension	only small pieces of leaves left	yes		
5	Spelt flakes	25 g	no	80 mL water	100mL measuring cylinder	max.	1 min	homogeneous Pulp		yes		
6	Cooked ham	20 g	1 cm pieces	200 mL water	500 mL beaker	max.	30 s	homogeneous suspension	only very small pieces of fibres left	yes		
7	Confetti	about 200 pieces	no	70 mL water	100mL measuring cylinder	max.	1 min	homogeneous cellulose suspension	a very small part stick between the rotor and the stator	yes		
8	Wood	5 toothpicks	1 cm pieces	200 mL water	500 mL beaker	max.	1 min	about 60 % of the picks were grinded	some psrts of the Picks are not grinded and stick	yes		
9	Tobacco	1 cigarette	no	150 mL water	250 mL beaker	max.	1 min	bad homogenizing Most of the tobacco floats ungrinded on the surface	a few fibres stick in the gaps between the rotor and the stator	no		
10	Cloves	30 pieces	no	200 mL water	500 mL beaker	max.	1 min	homogeneous suspension	all cloves were grinded	yes		
11	Mustard seeds	10 g	no	150 mL water	500 mL beaker	max.	1 min	homogeneous suspension	all seeds were grinded	yes		
12	Herbal tea	2 g	no	500 mL water	2 l beaker	max.	1 min	homogeneous suspension	the herbal tea was completely Grinded	yes		
13	Sunflower seeds	20 g	no	150 mL water	500 mL beaker	max.	1 min	homogeneous suspension	all seeds were grinded	yes		
14	Dragees	5 pieces	no	60 mL water	100mL measuring cylinder	max.	1 min	homogeneous suspension	the dragee was completely grinded	yes		

Dispersing tests D-500 / D-500Pro / D-600

No.	Material	Amount	Pregrinded	Liquid	Vessel	Speed	Duration	Result	Remarks	Recommended or not	Sample before Dispersing	Sample after Dispersing
15	Chicken meat	10 g	10 mm pieces	200 mL water	500 mL beaker	max.	20 s	homogeneous suspension	part of tendons wrapped around the rotor	yes		
16	Ivy	10 leaves	10 mm pieces	200 mL water	500 mL beaker	max.	2 min	homogeneous suspension	only very small pieces of leaves left	yes		
17	Rose blossom	10 leaves	10 mm pieces	200 mL water	500 mL beaker	max.	2 min	homogeneous suspension	only very small pieces of leaves left	yes		
18	Whole grain Bread	20 g	10 mm pieces	200 mL water	500 mL beaker	max.	2 min	homogeneous suspension	the vessel must be moved	yes		
19	Carrot	10 g	10 mm pieces	200 mL water	500 mL beaker	max.	2 min	homogeneous suspension	the vessel must be moved	yes		
20	Harzer cheese	20 g	10 mm pieces	200 mL water	500 mL beaker	max.	20 s	homogeneous suspension	the vessel must be moved	yes		
21	Rapes with Kernels	5 pieces	10 mm pieces	200 mL water	500 mL beaker	max.	1 min	homogeneous suspension	only very small pieces of rapes left	yes		
22	Coffee beans	10 pieces	no	60 mL water	100 mL measuring cylinder	max.	1 min	homogeneous suspension	only very small pieces of coffee left	yes		
23	Soil sample	20 g	no	200 mL water	500 mL beaker	max.	1 min	homogeneous suspension	only very small pieces of stones left	yes		
24	Pork meat (fat and sinewy)	10 g	10 mm pieces	200 mL water	500 mL beaker	max.	1 min	homogeneous suspension	part of tendons wrapped around the rotor	yes		
25	Pet food	20 g	10 mm pieces	200 mL water	500 mL beaker	max.	30 s	homogeneous suspension	part of tendons wrapped around the rotor	yes		
26	Styrofoam	2 cm ³	10 mm pieces	200 mL water	500 mL beaker	max.	1 min	no grinding effect		no		
27	Berries mix	20 g	no	200 mL water	500 mL beaker	max.	30 s	homogeneous suspension	all berries were grinded	yes		
28	Tomatoes	50 g	10 mm pieces	without	250 mL beaker	max.	2 min	homogeneous tomato pulp	the vessel must be moved	yes	