

HELISEM[®] Mixers

VRH MODEL

DATA SHEET

The HELISEM[®] series offers 4 distinct models - VDA, VRP, VRH, and FRH - each with a specific impeller, to support a wide range of open tank applications from 10 to 100,000 gallons (50 L to 400 m³) and viscosities up to 1000 mPas (cP) at 1.3 specific gravity.

The VRH model is a gearmotor driven mixer equipped with the HP1 propeller with 3 blades. This is a powerful mixer with an improved hydraulic efficiency to meet the demands of a wide range of applications.

Powerful and compact the VRH model provides energy efficiency in a lightweight mixer with uncompromising results.

General Characteristics:

- Agitator with gearmotor
- Lower shaft provided with a hydrofoil impeller
- Rated power from 0.18 to 3 kW (1/4 to 5 HP)

Applications:

- Suspension
- Dissolution
- Heat Transfer
- Homogenization
- Dilution
- Chemical Reactions

Materials:

- Wetted Parts – Stainless steel 316L
- Painting PU: RAL 1018 on the drive system
- Consult us for any other materials

Features & Benefits:

- Virtually no limitations from the process point of view
- Easy to install and maintain saving valuable manpower and resources
- All VRH mixers can rotate during emptying, filling and can be equipped with a frequency inverter

Mounting Options:

- Direct mounting to gear motor
- Square baseplate

Electrical characteristics*:

- 50Hz 230V 1Phase
 - 60Hz 115/230V 1 Phase
 - 50Hz 200/400V 3Phase
 - 60Hz 230/460V 3Phase
- *Other voltage options available

Options:

- Special motors
- Second impeller



MILTON ROY[®]
Mixing

At the heart of mixing

Single Impeller

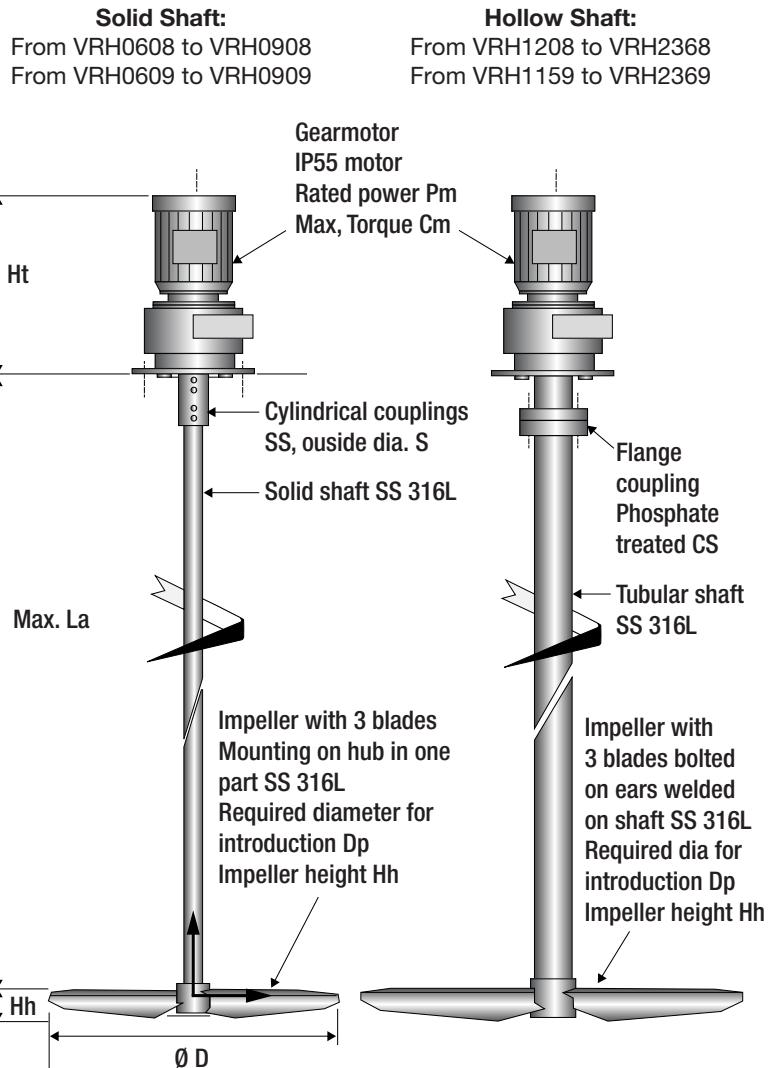
Single Impeller Dim.	50Hz (Metric)												60Hz IEC (Metric)										60Hz NEMA (Imperial)											
	VRH	0608	0808	0908	1208	1408	1418	1608	2008	2018	2358	2368	0609	0809	0909	1159	1409	1459	1609	1959	1969	2359	2369	0609	0809	0909	1159	1409	1459	1609	1959	1969	2359	2369
D	mm (in)	600	800	900	1200	1400	1400	1600	2000	2000	2350	2350	600	800	900	1150	1400	1450	1600	1950	1950	2350	2350	23.6	31.5	35.4	45.3	55.1	57.1	63.0	76.8	76.8	92.5	92.5
N	rpm	76	47	47	28	26	26	25	19	19	16	23	75	46	46	32	27	25	25	20	20	16	22	75	46	46	32	27	25	25	20	20	16	22
Pm	kW (HP)	0.18	0.18	0.25	0.25	0.25	0.37	0.55	0.75	0.75	1.1	3	0.18	0.18	0.25	0.25	0.37	0.37	0.55	0.75	0.75	1.1	3	1/4	1/4	1/3	1/3	1/2	1/2	3/4	1	1	2	5
Cm	Nm (ft-lb)	45	74	102	168	269	267	417	754	739	1276	2460	46	75	105	149	261	285	413	725	708	1335	2550	33.9	55.3	77.4	109.9	192.5	210.2	304.6	534.7	522.2	984.6	1880.8
Weight	kg (lbs)	20	23	55	75	75	140	130	192	255	281	478	20	23	55	73	75	142	130	190	253	281	482	44.1	50.7	121.3	160.9	165.3	313.1	286.6	418.9	557.8	619.5	1062.6
Load	N	400	460	1100	1500	1500	2800	2600	3840	5100	5620	9560	400	460	1100	1460	1500	2840	2600	3800	5060	5620	9640	400	460	1100	1460	1500	2840	2600	3800	5060	5620	9640
Ht	mm (in)	335	335	367	396	396	396	460	524	566	593	767	335	335	367	396	396	396	460	524	566	593	767	13.2	13.2	14.4	15.6	15.6	15.6	18.1	20.6	22.3	23.3	30.2
Hh	mm (in)	70	90	100	135	155	155	175	220	220	260	260	70	90	100	130	155	160	175	215	215	260	260	2.8	3.5	3.9	5.1	6.1	6.3	6.9	8.5	8.5	10.2	10.2
Dp	mm (in)	535	715	805	275	325	360	370	460	460	540	540	535	715	805	265	325	335	370	450	450	540	540	21.1	28.1	31.7	10.4	12.8	13.2	14.6	17.7	17.7	21.3	21.3
Flange		F130	F130	F130	F165	F165	F215	F215	F265	F300	F300	F400	F130	F130	F130	F165	F165	F215	F215	F265	F300	F300	F400	56C	56C	56C	56C	56C	56C	56C	143T	143T	145T	184T
Sq. Plate (option)		P250	P250	P250	P350	P350	P350	P350	P400	P500	P500	P600	P250	P250	P250	P350	P350	P350	P350	P400	P500	P500	P600	P250	P250	P250	P350	P350	P350	P350	P400	P500	P500	P600
Max. La	mm (in)	2100	2400	3600	3900	3000	5700	4300	4400	5750	5100	5100	2100	2400	3600	3700	3000	5700	4300	4400	5750	5100	5100	82.7	94.5	141.7	145.7	118.1	224.4	169.3	173.2	226.4	200.8	200.8

50 Hz Single Impeller

60 Hz Single Impeller

TYPE	Model	Shaft length (mm)
VRH0608	VRH0608S210	2100
	VRH0608S170	1700
	VRH0608S150	1500
	VRH0608S120	1200
VRH0808	VRH0808S240	2400
	VRH0808S220	2200
	VRH0808S180	1800
VRH0908	VRH0908S360	3600
	VRH0908S300	3000
	VRH0908S240	2400
	VRH0908S180	1800
VRH1208	VRH1208S390	3900
	VRH1208S320	3200
	VRH1208S300	3000
	VRH1208S240	2400
VRH1408	VRH1408S300	3000
	VRH1408S280	2800
	VRH1408S240	2400
	VRH1408S200	2000
VRH1418	VRH1418S570	5700
	VRH1418S470	4700
	VRH1418S410	4100
	VRH1418S350	3500
VRH1608	VRH1608S430	4300
	VRH1608S400	4000
	VRH1608S360	3600
	VRH1608S300	3000
VRH2008	VRH2008S440	4400
	VRH2008S380	3800
	VRH2008S330	3300
	VRH2008S280	2800
VRH2018	VRH2018S575	5750
	VRH2018S520	5200
VRH2358	VRH2358S510	5100
	VRH2358S460	4600
	VRH2358S420	4200
	VRH2358S380	3800
	VRH2358S320	3200
	VRH2358S300	3000
VRH2368	VRH2368S510	5100
	VRH2368S460	4600
	VRH2368S420	4200

TYPE	Model	Shaft length (mm)	Shaft length (in)
VRH0609	VRH0609S210	2100	82.7
	VRH0609S170	1700	66.9
	VRH0609S150	1500	59.1
	VRH0609S120	1200	47.2
VRH0809	VRH0809S240	2400	94.5
	VRH0809S220	2200	86.6
	VRH0809S180	1800	70.9
VRH0909	VRH0909S360	3600	141.7
	VRH0909S300	3000	118.1
	VRH0909S240	2400	94.5
	VRH0909S180	1800	70.9
VRH1159	VRH1159S370	3700	145.7
	VRH1159S330	3300	129.9
	VRH1159S300	3000	118.1
	VRH1159S240	2400	94.5
VRH1409	VRH1159S200	2000	78.7
	VRH1159S180	1800	70.9
	VRH1409S300	3000	118.1
	VRH1409S280	2800	110.2
VRH1459	VRH1409S240	2400	94.5
	VRH1409S200	2000	78.7
	VRH1459S570	5700	224.4
	VRH1459S470	4700	185.0
VRH1609	VRH1459S410	4100	161.4
	VRH1459S350	3500	137.8
	VRH1609S430	4300	169.3
	VRH1609S400	4000	157.5
VRH1959	VRH1609S360	3600	141.7
	VRH1609S300	3000	118.1
	VRH1609S250	2500	98.4
	VRH1959S440	4400	173.2
VRH1969	VRH1959S380	3800	149.6
	VRH1959S330	3300	129.9
	VRH1959S280	2800	110.2
	VRH1969S575	5750	226.4
VRH2359	VRH1969S520	5200	204.7
	VRH1969S470	4700	185.0
	VRH2359S510	5100	200.8
	VRH2359S460	4600	181.1
	VRH2359S420	4200	165.4
	VRH2359S380	3800	149.6
VRH2369	VRH2359S320	3200	126.0
	VRH2359S300	3000	118.1
	VRH2369S510	5100	200.8
	VRH2369S460	4600	181.1



Dual Impeller

Dual Impeller Dim.		50Hz (Metric)										60Hz IEC (Metric)										60Hz NEMA (Imperial)									
VR2H		0608	0708	0908	1058	1308	1708	1958	2008	2358	2368	0609	0759	0959	1059	1409	1709	1959	1969	2359	2409	0609	0759	0959	1059	1409	1709	1959	1969	2359	2409
D	mm (in)	600	700	900	1050	1300	1700	1950	2000	2350	2350	600	750	950	1050	1400	1700	1950	1950	2350	2400	23.6	29.5	37.4	41.3	55.1	66.9	76.8	76.8	92.5	94.5
N	rpm	60	54	37	34	28	16	16	15	13	18	58	46	33	36	22	17	16	16	13	17	58	46	33	36	22	17	16	16	13	17
Pm	kW (HP)	0.18	0.25	0.25	0.37	0.55	0.55	0.75	0.75	1.1	3	0.18	0.25	0.25	0.37	0.37	0.55	0.75	0.75	1.1	3	1/4	1/3	1/3	1/2	1/2	3/4	1	1	2	5
Cm	Nm (ft-lb)	57	88	130	208	379	648	880	984	1630	3102	59	105	147	198	318	628	901	905	1666	3304	43.5	77.4	108.4	146.0	234.5	463.2	664.5	667.5	1228.8	2436.9
Weight	kg (lbs)	24	55	67	75	146	220	224	302	417	630	24	57	69	75	154	220	224	297	417	637	52.9	125.7	152.1	165.3	339.5	485.0	493.8	654.8	919.3	1404.3
Load	N	480	1100	1340	1500	2920	4400	4480	6040	8340	12600	480	1140	1380	1500	3080	4400	4480	5940	8340	12740	160	161	162	163	164	165	166	167	168	169
Ht	mm (in)	335	367	367	396	460	489	524	566	593	767	335	367	367	395.5	395.5	488.5	523.5	566	592.5	766.5	13.2	14.4	14.4	15.6	15.6	19.2	20.6	22.3	23.3	30.2
Hh	mm (in)	70	80	100	115	145	185	215	220	260	260	70	85	105	115	155	185	215	215	260	265	2.8	3.3	4.1	4.5	6.1	7.3	8.5	8.5	10.2	10.4
Dp	mm (in)	535	625	805	245	360	390	450	460	540	540	535	670	845	245	360	390	450	450	540	550	21.1	26.4	33.3	9.6	14.2	15.4	17.7	17.7	21.3	21.7
Flange		F130	F130	F130	F165	F215	F265	F265	F300	F300	F400	F130	F130	F130	F165	F215	F265	F265	F300	F300	F400	56C	56C	56C	56C	56C	56C	143T	143T	145T	184T
Sq. Plate (option)		P250	P250	P250	P350	P350	P400	P400	P500	P500	P600	P250	P250	P250	P350	P350	P400	P400	P500	P500	P600	P250	P250	P250	P350	P350	P400	P400	P500	P500	P600
Max. La	mm (in)	2300	3500	3900	3100	4800	5400	3900	5750	5650	5750	2300	3500	3900	3100	5200	5400	3900	5750	5650	5750	90.6	137.8	153.5	122.0	204.7	212.6	153.5	226.4	222.4	226.4
Hd	mm (in)	600	700	900	1050	1300	1700	1600	2000	2300	2300	600	750	950	1050	1400	1700	1600	1950	2300	2300	23.6	29.5	37.4	41.3	55.1	66.9	63.0	76.8	90.6	90.6

50 Hz Dual Impeller

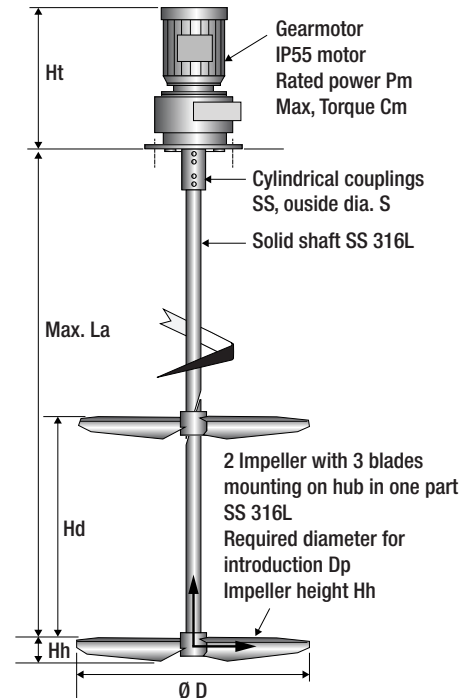
Type	Model	Shaft length (mm)	Clearance between propellers (mm)
VR2H0608	VR2H0608S230	2300	600
	VR2H0608S200	2000	600
	VR2H0608S170	1700	600
	VR2H0608S140	1400	600
	VR2H0608S120	1200	500
VR2H0708	VR2H0708S350	3500	700
	VR2H0708S320	3200	700
	VR2H0708S290	2900	700
	VR2H0708S250	2500	700
	VR2H0708S220	2200	700
VR2H0908	VR2H0908S390	3900	900
	VR2H0908S320	3200	900
	VR2H0908S290	2900	900
	VR2H0908S260	2600	900
	VR2H0908S220	2200	900
VR2H1058	VR2H1058S310	3100	1050
	VR2H1058S290	2900	1050
	VR2H1058S260	2600	1050
	VR2H1058S230	2300	950
	VR2H1308	VR2H1308S480	4800
VR2H1708	VR2H1708S540	5400	1700
	VR2H1708S500	5000	1700
	VR2H1708S440	4400	1700
	VR2H1708S390	3900	1600
VR2H1958	VR2H1958S390	3900	1600
	VR2H1958S350	3500	1400
	VR2H1958S320	3200	1300
VR2H2008	VR2H2008S575	5750	2000
	VR2H2008S520	5200	2000
	VR2H2008S470	4700	1900
	VR2H2008S420	4200	1700
VR2H2358	VR2H2358S565	5650	2300
	VR2H2358S510	5100	2050
	VR2H2358S450	4500	1800
	VR2H2358S400	4000	1600
VR2H2368	VR2H2368S575	5750	2300
	VR2H2368S520	5200	2100
	VR2H2368S460	4600	1850
	VR2H2368S400	4000	1600

60 Hz Dual Impeller

Type	Model	Shaft length (mm)	Clearance between propellers (mm)	Shaft length (in)	Clearance between propellers (in)
VR2H0608	VR2H0608S230	2300	600	90.6	23.6
	VR2H0608S200	2000	600	78.7	23.6
	VR2H0608S170	1700	600	66.9	23.6
	VR2H0608S140	1400	600	55.1	23.6
	VR2H0608S120	1200	500	47.2	19.7
VR2H0708	VR2H0708S350	3500	700	137.8	27.6
	VR2H0708S320	3200	700	126.0	27.6
	VR2H0708S290	2900	700	114.2	27.6
	VR2H0708S250	2500	700	98.4	27.6
	VR2H0708S220	2200	700	86.6	27.6
VR2H0908	VR2H0908S390	3900	900	153.5	35.4
	VR2H0908S320	3200	900	126.0	35.4
	VR2H0908S290	2900	900	114.2	35.4
	VR2H0908S260	2600	900	102.4	35.4
	VR2H0908S220	2200	900	86.6	35.4
VR2H1058	VR2H1058S310	3100	1050	122.0	41.3
	VR2H1058S290	2900	1050	114.2	41.3
	VR2H1058S260	2600	1050	102.4	41.3
	VR2H1058S230	2300	950	90.6	37.4
	VR2H1308	VR2H1308S480	4800	1300	189.0
VR2H1308S420		4200	1300	165.4	51.2
VR2H1308S370		3700	1300	145.7	51.2
VR2H1308S320		3200	1300	126.0	51.2
VR2H1708	VR2H1708S540	5400	1700	212.6	66.9
	VR2H1708S500	5000	1700	196.9	66.9
	VR2H1708S440	4400	1700	173.2	66.9
	VR2H1708S390	3900	1600	153.5	63.0
	VR2H1708S330	3300	1350	129.9	53.1
VR2H1958	VR2H1958S390	3900	1600	153.5	63.0
	VR2H1958S350	3500	1400	137.8	55.1
	VR2H1958S320	3200	1300	126.0	51.2
VR2H2008	VR2H2008S575	5750	2000	226.4	78.7
	VR2H2008S520	5200	2000	204.7	78.7
	VR2H2008S470	4700	1900	185.0	74.8
	VR2H2008S420	4200	1700	165.4	66.9
VR2H2358	VR2H2358S565	5650	2300	222.4	90.6
	VR2H2358S510	5100	2050	200.8	80.7
	VR2H2358S450	4500	1800	177.2	70.9
	VR2H2358S400	4000	1600	157.5	63.0
VR2H2368	VR2H2368S575	5750	2300	226.4	90.6
	VR2H2368S520	5200	2100	204.7	82.7
	VR2H2368S460	4600	1850	181.1	72.8
	VR2H2368S400	4000	1600	157.5	63.0

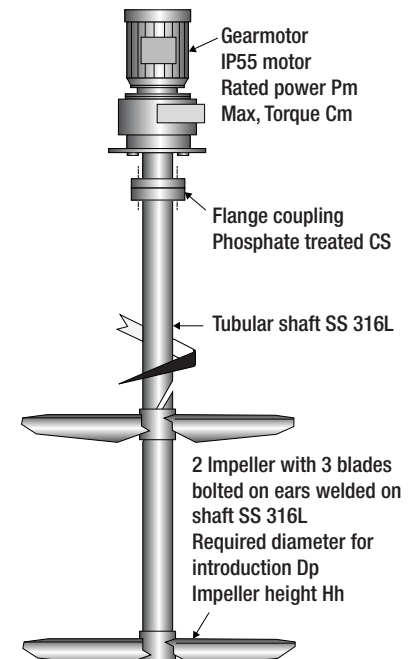
Solid Shaft:

From VR2H0608 to VR2H0908
From VR2H0609 to VR2H0959



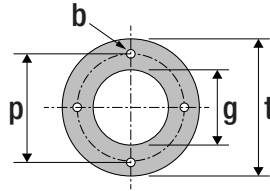
Hollow Shaft:

From VR2H1058 to VR2H2368
From VR2H1059 to VR2H2409



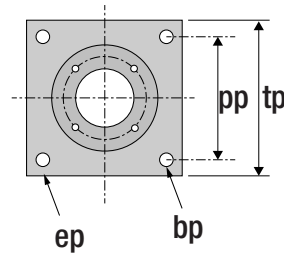
Mounting:

Motor Flange



Type	Metric (mm)						Imperial (in)					Imperial (in)		
	F130	F165	F215	F265	F300	F400	F130	F165	F130	F165	F165	56C	143T/145T	184T
b	9	11	13.5	14	18	18	0.35	0.43	0.53	0.55	0.71	3/8-16 UNC	3/8-16 UNC	1/2-13 UNC
t	160	200	250	300	350	450	6.30	7.87	9.84	11.81	13.78	-	-	-
p	130	165	215	265	300	400	5.12	6.50	8.46	10.43	11.81	5.875	5.875	7.25
g	110	130	180	230	250	350	4.33	5.12	7.09	9.06	9.84	4.5	4.5	8.5
e	10	12	15	16	22	22	0.39	0.47	0.59	0.63	0.87	-	-	-

Square Support Plate (optional)



Type	Metric (mm)					Imperial (in)				
	P250	P350	P400	P500	P600	P250	P350	P400	P500	P600
bp	14	14	16	18	18	0.6	0.6	0.6	0.7	0.7
pp	190	1280	320	420	500	7.5	50.4	12.6	16.5	19.7
tp	250	350	400	500	600	9.8	13.8	15.7	19.7	23.6
ep	15	15	15	20	20	0.6	0.6	0.6	0.8	0.8

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