



PLine Mixer

A new plastic mixer built for chemical applications.

DS-000015 EN REV A

Kest Mixer PLine

The Kest Mixer PLine is a new generation of aseptic magnetic coupled mixers in medical grade plastic material. With its state of the art mixing performance and ability to mix to the last drop, it is a perfect choice for high corrosive applications.

The Kest PLine range covers mixing volumes up to 1200 liters and is designed for CIP applications.

The Drive Unit is fan-less and totally enclosed in a hygienic cover - perfectly adapted to a clean room environment.

The DC motor has an efficiency >95% thanks to an advanced

integrated control circuit. The Pro Flow will minimize energy consumption and save both money and environment.

The unique brushless DC motor eliminates the need of a frequency converter to control the motor speed.

The PLine also works with the ProFlow Remote drive unit range and KM remote drive unit range, this eliminates the stress on the plastic tank plate.

The PLine Mixing head can be combined with a stainless-steel tank plate.

Kest Mixer range for various mixing applications

Kest has developed several product lines for various mixing applications and clean room needs. The KM product line was developed for a large volume range and the Rapid

Motion (RM) line for medium shear force generation. See separate data sheets on the other product lines in the Kest Mixer family or contact your reseller for more information.

PHARMASEP

Always by your side

We bring flow to your mixing process

Our mixers and components have one purpose: to make your mixing process flow. 24/7. To ensure predictable and compliant results. To minimize maintenance. To minimize waste. To minimize energy use. To maximize the value created by your mixing process.



✓ Perfect mixing result

After years of experience developing mixers this mixer will deliver a perfect mixing result over and over again.

✓ ZERO particle shedding

The robust bearing combination of Zirconium oxide and SiC and the fine-tuned geometry, ensures no particle generation. *

✓ Sustainable

The advanced motor boosts an impressive energy efficiency of >95%. While saving money, it also helps to reduce your carbon footprint significantly and due to low heat generation there is no need for compensating cooling - you can call it - Green Mixing.

✓ Full integrity of the tank

The magnetic coupling between the mixing head and drive unit ensures total integrity of the tank.

✓ Enhance your workplace

Due to the design of the drive unit it is extremely silent during operation enhancing the environment for the operators.

✓ Mixing to the last drop

The wings fixed position close to the tank bottom and the possibility to run the mixer during emptying of the tank, ensures full product recovery.

✓ Cleanroom optimized

The drive unit does not contain any fans that will interfere with your laminar air flow. It is totally capsuled in a smooth hygienic cover that is easy to keep clean.

✓ Minimal heat transfer

Thanks to the advanced drive unit, the energy is converted to rotation speed and a minimum result in heat. This prevents that heat is transferred into your application.

✓ Integrated speed sensor

The mixer is equipped with an integrated speed sensor that measures the speed of the mixing head, that the mixing head is in place and that it rotates in the right direction.

✓ Minimize downtime

The low weight of the drive unit and our patented Kest-Lock connection ensures quick disconnection from the tank plate during maintenance.



* The external test, according to USP<788> PARTICULATE MATTER IN INJECTIONS, could not detect any particles from the bearing.

The Remote Drive eliminates stress!

The new lines of remote drives from Kest is releasing stress on both the plastic tank plate as well as the operator. You can choose from either our super-efficient ProFlow Remote drive or the KM Remote Drive with a standard AC motor.

PHARMASEP

Always by your side



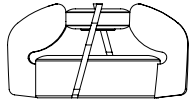
✓ KM Remote Drive

The KM Remote drive has a classical AC motor, the unit can be equipped with our popular integrated speed sensor system for monitoring of the speed of the mixing head and that it rotates in the right direction.

✓ ProFlow Remote Drive

The super-efficient ProFlow mixer is mounted in the power and logic box that can be equipped with a control display. The unit is equipped with our popular integrated speed sensor system for monitoring of the speed of the mixing head and that it rotates in the right direction.

General information



Mixing Head

The Kest PLine Mixer is a magnetically coupled mixer containing 4 modules, Mixing head, Male Post, Tank plate and Drive Unit.

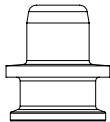
To secure the integrity of the tank, the tank plate is welded into the tank, the mixing head and drive unit couples through the wall of the tank plate with magnetic forces.

To select the appropriate model, use the selection guide in this data-sheet. For complex mixing applications contact your reseller for consultation.

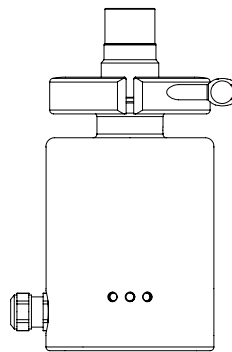
The Power and Logic box contains the logic unit safely mounted in a cabinet. The box comes with size 20/70 and 70/120, the smaller ProFlow units have the logic integrated in the drive unit.



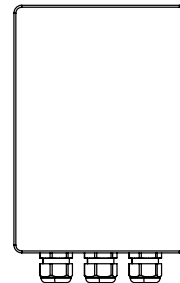
Male Post



Tank Plate



Drive Unit



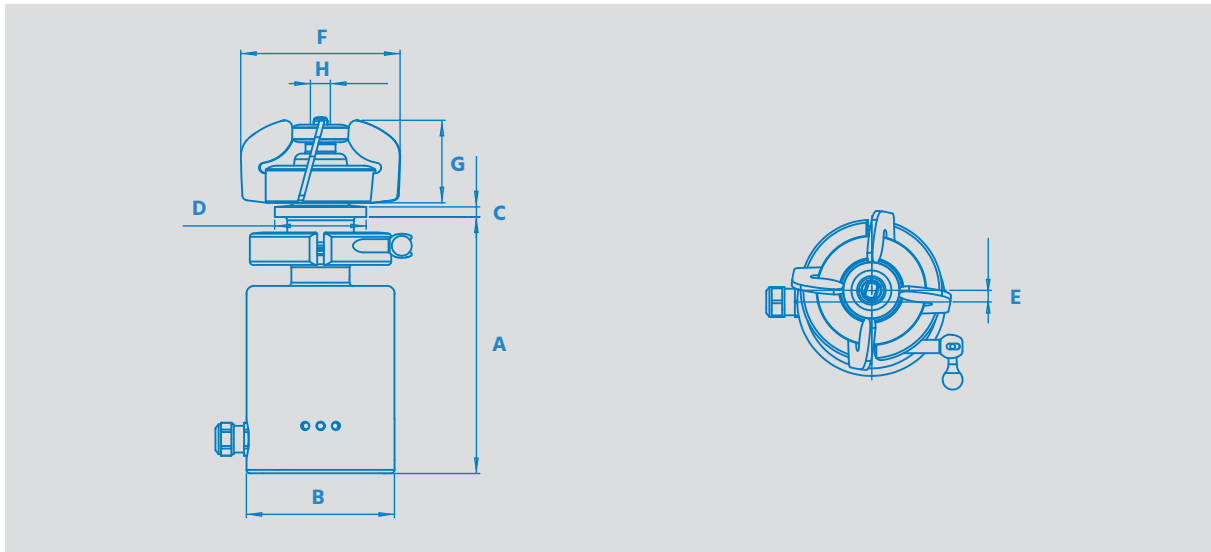
Power & logic box

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Dimensions



SIZE	A mm [in]	B mm [in]	C mm [in]	D mm [in]	E mm [in]	F mm [in]	G mm [in]	H mm [in]
0/3	155 [6.102]	89 [3.504]	8 [0.315]	55 [2.165]	7 [0.276]	82 [3.228]	33 [1.299]	12 [0.472]
3/7	225 [8.858]	89 [3.504]	8 [0.315]	55 [2.165]	7 [0.276]	96 [3.780]	46 [1.811]	12 [0.472]
7/20	241 [9.488]	89 [3.504]	10 [0.394]	84 [3.307]	7 [0.276]	120 [4.724]	56 [2.205]	20 [0.787]
20/70	275 [10.827]	102 [4.016]	12 [0.472]	89 [3.504]	- [-]	142 [5.591]	71 [2.795]	20 [0.787]
70/120	282 [11.102]	102 [4.016]	12 [0.472]	99 [3.898]	- [-]	160 [6.299]	71 [2.795]	20 [0.787]

Note! You can download 3D models of all our mixers from our CAD library at www.kest.se

Specifications



Mixing Head



Male Post



Tank Plate

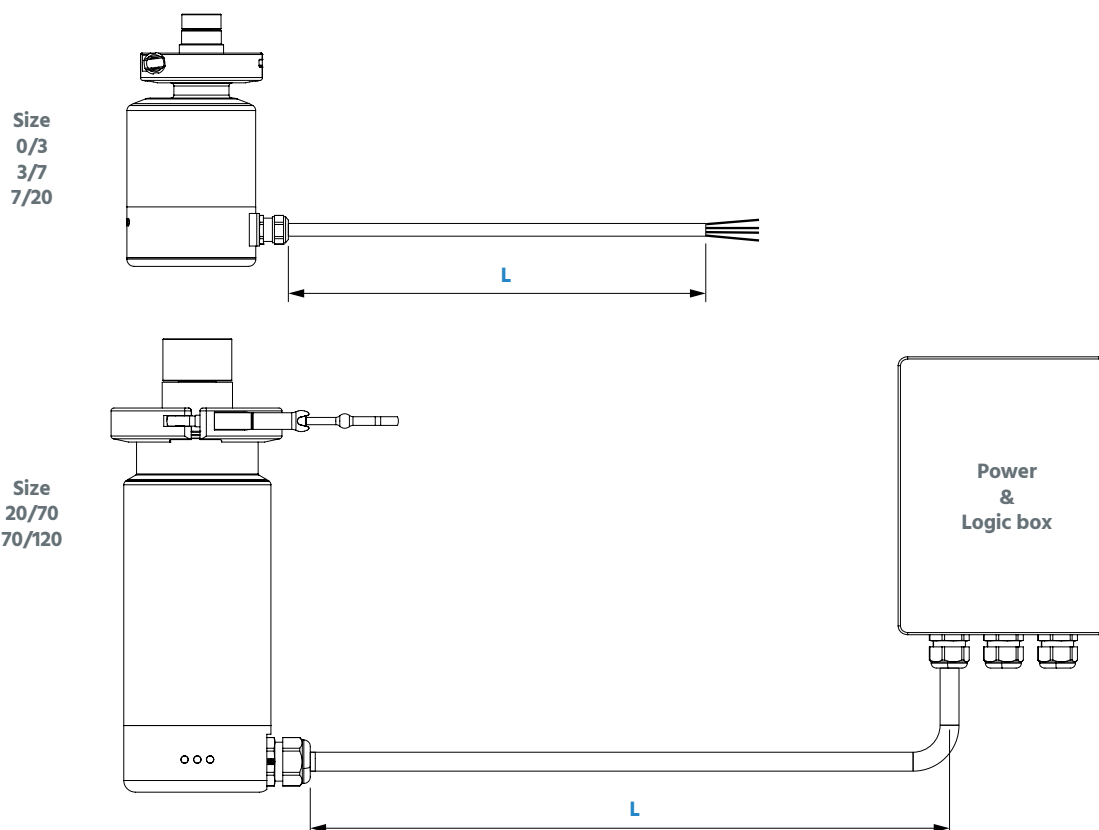
MECHANICAL SPECIFICATIONS

	Mixer head	Male post	Tank plate
Material grade	PP (USP Class VI), Silicon carbide (SiC), EPDM orings (USP Class VI)	Zirconium Oxide (ZrO2)	PP (USP Class VI)
Documentation	Heat Certificate 2.1		
Operating temperature	[0°C to +60°C] [+32°F to +140°F]		
Marking	All parts are marked with ID number.		
Packing	Each item is sealed in vacuum plastic bag, labelled with article code and packed in a box		
Male bearing sealing	EPDM, Silicone or Kalrez, approved acc. FDA regulation CFR 177.2600, USP Class VI		
Quality Assurance	Each product is controlled and tested acc. to Kest Technology quality assurance system		

Weights

SIZE	MIXING HEAD kg / [lb]	MALE POST kg / [lb]	TANK PLATE kg / [lb]	DRIVE UNIT* kg / [lb]	TOTAL* kg / [lb]
0/3	0.2 / [0.44]	0.02 / [0.04]	0.06 / [0.13]	2.5 / [5.5]	2.8 / [6.2]
3/7	0.3 / [0.66]	0.02 / [0.04]	0.07 / [0.15]	3.0 / [6.6]	3.4 / [7.5]
7/20	0.6 / [1.32]	0.04 / [0.09]	0.10 / [0.22]	3.5 / [7.7]	4.3 / [9.5]
20/70	0.8 / [1.76]	0.09 / [0.2]	0.12 / [0.26]	6.2 / [13.7]	7.2 / [15.9]
70/120	1.0 / [2.20]	0.09 / [0.2]	0.15 / [0.33]	6.4 / [14.1]	7.6 / [16.8]

Drive unit specifications



SIZE	MODEL	MOTOR POWER [W]	VOLTAGE DC [V]	CURRENT [A]	GEAR BOX RATIO [i]	SPEED RANGE [RPM]
0/3	KMPF-DU0/3A-0	63	24	3.5	-	50-680
3/7	KMPF-DU3/7A-0	63	24	3.5	1:6	50-490
7/20	KMPF-DU7/20A-0	63	24	3.5	1:6	50-490
20/70	KMPF-DU20/70A-0	754	48	18	1:5	50-490
70/120	KMPF-DU70/120A-0	754	48	18	1:5	50-490

DRIVE UNIT SPECIFICATIONS

Motor	Brushless DC
Design Temperature	[0°C to +40°C] [+32°F to +104°F]
Protection class	IP 65
Capsulation	EN 1.4404, Ra < 0.8 µm, POM (bottom lid and Speed Sensor holder)
Cable	* (L) 3 meter multi wire, open cable end (see drive unit terminal connection configuration)
LED on housing	Green: Power, Yellow: Rotation, Blue: Pulse
Marking	Each item is marked with article code
Packing	Each item is sealed in plastic bag, labelled with article code and packed in a box
Quality Assurance	Each product is controlled and tested acc. to Kest Technology quality assurance system

* Other lengths available on request

Power consumption

The Kest ProFlow mixer is equipped with a very efficient motor. The figures below is mean values based on operation in water (1 cP) with a standard mixing head and can vary depending on viscosity, mixing angle, volume and tank shape.

SIZE	50 RPM [W]	100 RPM [W]	200 RPM [W]	300 RPM [W]	400 RPM [W]	490 RPM [W]
0/3	2.7	3.0	4.0	6.3	10.0	15.0
3/7	3.7	5.2	8.7	14.6	21.0	27.3
7/20	5.6	7.8	13.2	20.5	36.0	56.0
20/70	13.0	17.0	31.0	58.5	109.0	179.0
70/120	13.5	18.0	36.5	78.0	155.0	265.0

Terminal connection - Size 0/3, 3/7, 7/20

Drive unit, terminal connection (standard)

If you have chosen to run the mixer with the Kest control unit the wiring on the motor terminal needs to be changed according to table Drive unit, terminal connection (for Control Unit Mixer - CUM).

TERMINAL ID	COLOUR / BASIC CONNECTION	DESCRIPTION	TYPICAL FUNCTION
X1:1	Blue / Yes	Supply ground	- Ground
X1:2	Brown / Yes	Logic supply voltage	+ 24V DC
X2:1	Purple / Yes	Logic ground	- Ground
X2:2	Black / Yes	Control input C - hardware enable	+ 24V DC closing switch (rotation start)
X3:1	-	For CUM	For control unit
X3:2	Pink / Yes	0...10V - Speed control set value input	0-10V variable speed control
X4:1	Grey / If required	10V DC output	10V supply for speed control
X4:2	White / If required	0...10V - analogue speed value output	For converter or display
X5:1	Red / Yes	Speed sensor pulse signal (PNP)	For pulse converter or display
X5:2	Orange / If required	24V PNP closing contact rotation indication	PLC

Drive unit, terminal connection (for Control Unit Mixer - CUM)

TERMINAL ID	COLOUR / BASIC CONNECTION	DESCRIPTION	TYPICAL FUNCTION
X1:1	Blue / Yes	Supply ground	- Ground
X1:2	Brown / Yes	Logic supply voltage	+ 24VDC
X2:1	Purple / Yes	Logic ground	- Ground
X2:2	Black / Yes	Control input C - hardware enable	+ 24VDC closing switch (rotation start)
X3:1	Gray / Yes	For CUM	For control unit
X3:2	Pink / Yes	0...10V - Speed control set value input	0-10V variable speed control
X4:1	White / Yes	10V DC output	10V supply for speed control
X4:2	-	0...10V - analogue speed value output	For converter or display
X5:1	Red / Yes	Speed sensor pulse signal (PNP)	For pulse converter or display
X5:2	Orange / Yes	24V PNP closing contact rotation indication	PLC

Power & Logic box

The power & logic box for the 20/70 and 70/120 size is delivered with a 48V DC input as standard, this means you will supply the cabinet with 48V DC. As option we also have a version there you supply 110-230 V AC, in this optional version we provide an integrated AC to DC converter.

Power & Logic box - 48V DC input (standard)

POWER & LOGIC BOX SPECIFICATIONS	
Material	ABS
Design Temperature	[0°C to +40°C] [+32°F to +104°F]
Protection class	IP 66
Measurement	175 x 250 x 125 mm
Marking	Each item is marked with article code
Packing	Each item is sealed in plastic bag, labelled with article code and packed in a box
Quality Assurance	Each product is controlled and tested acc. to Kest Technology quality assurance system

Power & Logic box terminal connection (standard)

TERMINAL ID	TERMINAL	DESCRIPTION	TYPICAL FUNCTION
X106:3	P1	Supply	+ 48VDC
X106:2	P1	Supply	- 0VDC
≡	P1	Ground	Supply ground
X5:2	P4	24V PNP closing contact rotation indication	Output signal of rotation, Yellow LED. For PLC.
X5:1	P4	Speed sensor pulse signal (PNP)	Output signal Speed pulse, Blue LED. For pulse converter or display
X4:1	P4	10V DC output	10V supply for speed control, if required
X100:4	P4	24V DC output	+ 24VDC supply for closing switch (rotation start), if required
X100:5	P4	Ground	Logic ground
X100:7	P4	Control input C - hardware enable	+ 24VDC closing switch (rotation start), electronic ON/OFF switch. Green LED
X100:11	P4	0...10V - Speed control set value input	0-10V variable speed control
X100:12	P4	Ground	Logic ground

Power & Logic box - 110 - 230 V AC input (optional)

POWER & LOGIC BOX SPECIFICATIONS	
Material	PC, Grey
Design Temperature	[0°C to +40°C] [+32°F to +104°F]
Protection class	IP 66
Measurement	255 x 360 x 152 mm
Marking	Each item is marked with article code
Packing	Each item is sealed in plastic bag, labelled with article code and packed in a box
Quality Assurance	Each product is controlled and tested acc. to Kest Technology quality assurance system

Power & Logic box connection terminal - AC input (option)

TERMINAL ID	TERMINAL	DESCRIPTION	TYPICAL FUNCTION
AC/L	Converter	Supply Phase	+ 110-230 V AC
AC/N	Converter	Supply Neutral	0 V AC
≡	Converter	Ground	Supply ground AC
X5:2	P4	24V PNP closing contact rotation indication	Output signal of rotation, Yellow LED. For PLC.
X5:1	P4	Speed sensor pulse signal (PNP)	Output signal Speed pulse, Blue LED. For pulse converter or display
X4:1	P4	10V DC output	10V supply for speed control, if required
X100:1	P4	-	-
X100:2	P4	-	-
X100:3	P4	-	-
X100:4	P4	24V DC output	+ 24VDC supply for closing switch (rotation start), if required
X100:5	P4	Ground	Logic ground
X100:7	P4	Control input C - hardware enable	+ 24VDC closing switch (rotation start), electronic ON/OFF switch
X100:8	P4	-	-
X100:9	P4	-	-
X100:10	P4	-	-
X100:11	P4	0...10V - Speed control set value input	0-10V variable speed control
X100:12	P4	Ground	Logic ground

Speed Sensor

The Kest Mixer speed sensor unit is a integrated sensor system that enables secure verification of the actual rotation of the mixer head inside the tank.

An integrated function in the Kest Mixers speed sensor also verifies that the mixer head is in place in the tank and that it is rotating in the correct direction, "clockwise".

The unit consists of a sensor, that is located underneath the magnetic rotor, and a converter unit integrated in the drive unit circuit board.

The output signal from the sensor is 1 pulse/rotation as standard, 1 pulse/magnet can be delivered upon request.

For visual indication of the different functions, the speed sensor is connected to the LED's located on the drive unit enclosure:

- **Green LED: Power (steady light)**
- **Yellow LED: Rotation (steady light)**
- **Blue LED: Pulse (pulsing light)**

The sensor and cable are designed for +150°C to withstand the temperatures in the tank plate during sterilization.

MECHANICAL SPECIFICATIONS

	Sensor holder	Cabling
Material grade	POM C	Teflon-FEP
Design Temperature	[0°C to +150°C] [+32°F to +302°F]	
Packing	The Speed sensor is installed on the drive unit before delivery	
Quality Assurance	Each product is controlled and tested acc. to Kest Technology quality assurance system	

Electrical Specifications

Type	Hall effect switch, PNP closing circuit
Voltage	8-30 V DC
Rated Current	200 mA

Model	Standard pulse	Max pulses (on request)
KMPF-0/3	1 pulse / rotation	2 pulses / rotation
KMPF-3/7	1 pulse / rotation	3 pulses / rotation
KMPF-7/20	1 pulse / rotation	3 pulses / rotation
KMPF-20/70	1 pulse / rotation	4 pulses / rotation
KMPF-70/120	1 pulse / rotation	5 pulses / rotation

Control Unit Mixer, CUM (optional)

The Kest control unit is developed for the DC drive units to control and monitor the rotation speed of the mixer.

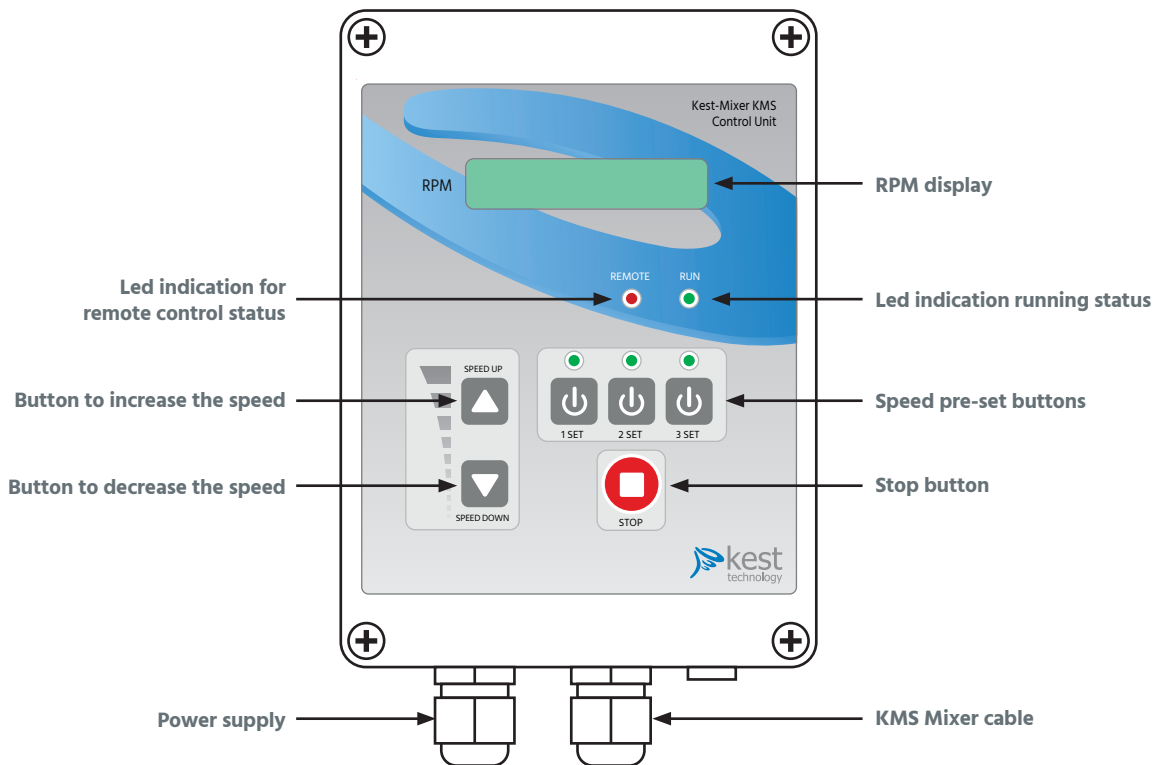
The Kest control unit is powered with 100-240 VAC at 50-60Hz that is transformed to 24 or 48 VDC, feeding the mixer.

The three pre-set buttons is used as quick buttons to set a certain speed value, each can be programmed to a specific RPM.

The unit is pre-programmed with ramping parameters for acceleration and deceleration to prevent the mixer from damage.

The display shows the rotation speed of the mixer and the target speed value. The display is also used when programming the pre-set buttons and for delivering error messages.

If you forgot to mount the mixing head in the tank it will show an error message.



SPECIFICATIONS

Cabinet	
Material grade	Grey ABS
Measurement (HxWxD) mm	24 VDC: 175 x 125 x 75 mm [6.890 x 4.921 x 2.953 in] 48 VDC: 360 x 255 x 152 mm [6.890 x 4.921 x 2.953 in]
Design Temperature	[0°C to +40°C] [+32°F to +104°F]
Packing	Each item is sealed in plastic bag, labelled with article code and packed in a box
Quality Assurance	Each product is controlled and tested acc. to Kest Technology quality assurance system
Electrical Specifications	
Power supply	100 - 240 VAC / 50-60 Hz
Effect	30 W, 100 W & 750 W
Protection class	IP66

Kest ProFlow Remote Drive

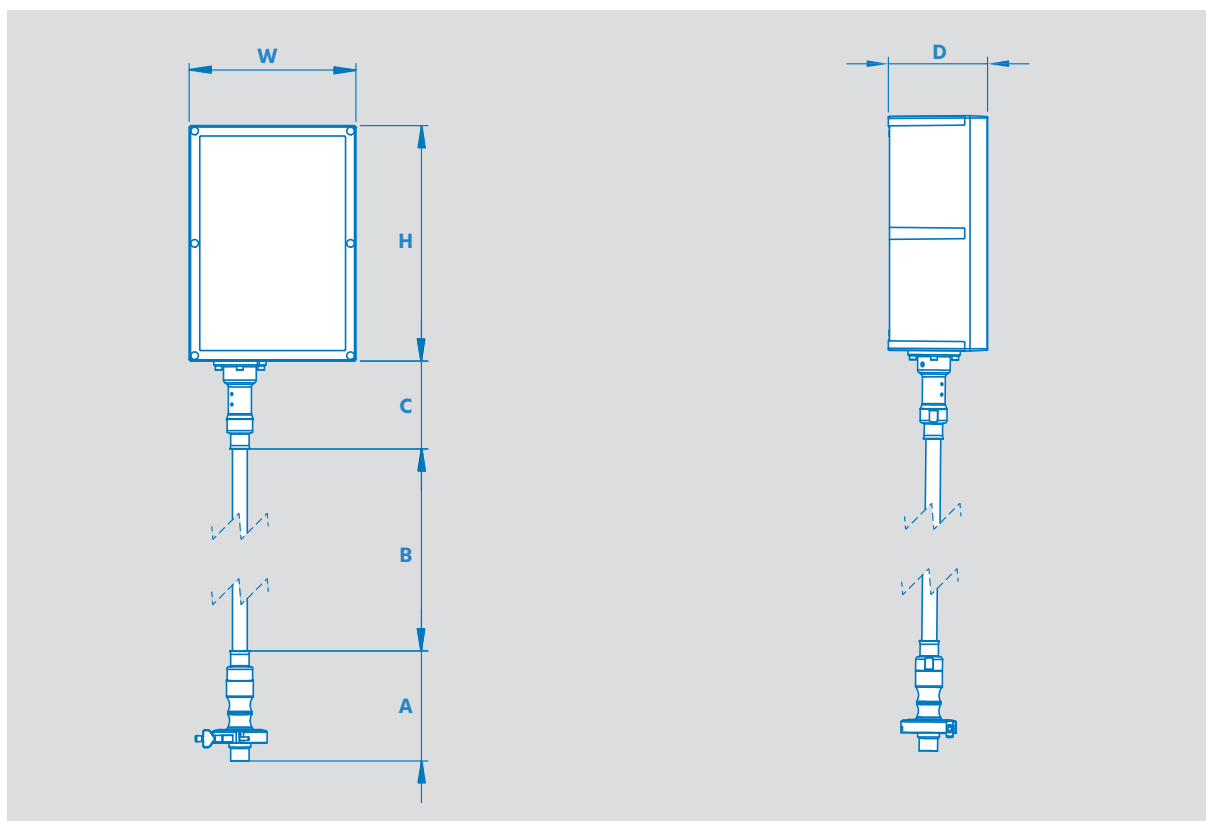
This new innovative drive unit is built upon our super-efficient ProFlow technology. It allows you to get rid of the drive unit from the tank. This is good for saving space and to remove the load upon the tank and tank plate itself, you can even place the drive unit in a different room.

The drive magnet is connected to a flexible cord and with the Kest-Lock connection it is very easy to connect and disconnect it from the tank. The weight of the handle and drive magnet is significantly lower than the entire motor and gearbox, which improves ergonomics.

The ProFlow Remote drive is equipped with our popular integrated speed sensor system that measures the actual speed of the mixing head as well as securing the correct rotation direction.

The cabinet is offered in a standard version, you feed the cabinet with DC power and connect the inputs and out puts to your automation system, see page 9 & 10 Terminal connection standard.

You can also get the cabinet in a standalone version with a control panel integrated, you then feed the cabinet with AC power and control the mixer from the panel, see page 13.



SIZE	Standard							Control panel		
	A mm [in]	B* mm [in]	MIN BEND RADIUS** mm [in]	C mm [in]	H mm [in]	W mm [in]	D mm [in]	H mm [in]	W mm [in]	D mm [in]
0/3	169 [6.653]	1500 [59]	100 [3.937]	135 [5.315]	175 [6.890]	175 [6.890]	100 [3.937]	360 [6.890]	255 [4.921]	152 [2.953]
3/7	169 [6.653]	1500 [59]	100 [3.937]	135 [5.315]	175 [6.890]	175 [6.890]	100 [3.937]	360 [6.890]	255 [4.921]	152 [2.953]
7/20	190 [7.480]	1500 [59]	140 [5.512]	145 [5.709]	175 [6.890]	175 [6.890]	100 [3.937]	360 [6.890]	255 [4.921]	152 [2.953]
20/70	205 [8.071]	1500 [59]	240 [9.449]	155 [6.102]	380 [14.961]	380 [14.961]	210 [8.268]	380 [14.961]	380 [14.961]	210 [8.268]
70/120	210 [8.268]	1500 [59]	240 [9.449]	155 [6.102]	380 [14.961]	380 [14.961]	210 [8.268]	380 [14.961]	380 [14.961]	210 [8.268]

*For other lengths contact Kest or your reseller.

** The bend radius cannot be smaller than this value.

Kest Mixer ProFlow, Remote Drive unit specifications

SPECIFICATIONS		
	Cabinet standard	Cabinet with control panel
Material grade cabinet	Size 0/3, 3/7 & 7/20; Grey ABS* Size 20/70 & 70/120; EN 1.4404/316L	Size 0/3, 3/7 & 7/20; Grey ABS* Size 20/70 & 70/120; EN 1.4404/316L
Material grade handle	1.4404/316L	1.4404/316L
Cover on flexible shaft	PVC	PVC

Electrical Specifications		
Power supply	Size 0/3, 3/7 & 7/20; 24 VDC Size 20/70 & 70/120; 48 VDC	100 - 240 VAC / 50-60 Hz
Effect AC to DC converter	-	Size 0/3 & 3/7; 30 W Size 7/20; 100 W Size 20/70 & 70/120; 750 W
Protection class	IP66	IP66

*Other materials on request.

SIZE	MOTOR POWER [W]	VOLTAGE DC [V]	CURRENT [A]	GEAR BOX RATIO[1]	SPEED RANGE [RPM]
0/3	63	24	3.5	-	50-680
3/7	63	24	3.5	1:6	50-490
7/20	63	24	3.5	1:6	50-490
20/70	754	48	18	1:5	50-490
70/120	754	48	18	1:5	50-490

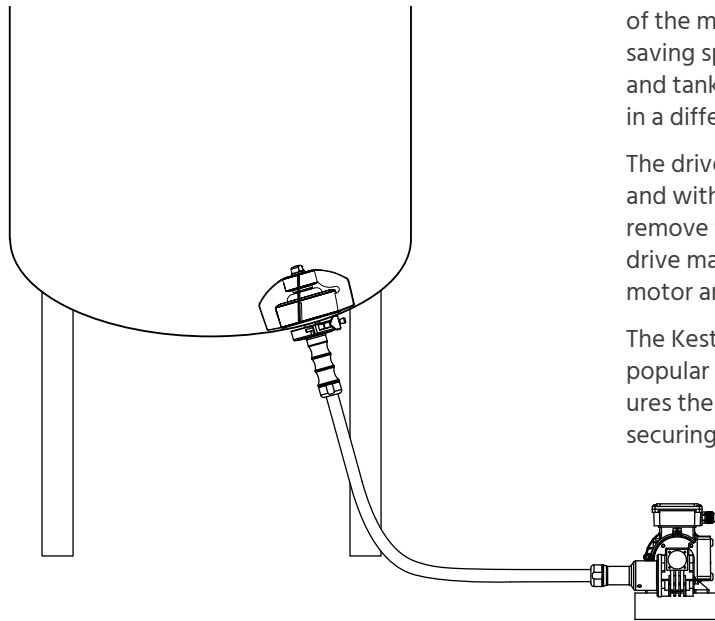
DRIVE UNIT SPECIFICATIONS	
Motor	Brushless DC
Design Temperature	[0°C to +40°C] [+32°F to +104°F]
Protection class	IP 65
LED in cabinet	Green: Power, Yellow: Rotation, Blue: Pulse
Marking	Each item is marked with article code
Packing	Each item is sealed in plastic bag, labelled with article code and packed in a box
Quality Assurance	Each product is controlled and tested acc. to Kest Technology quality assurance system

Power consumption

The figures below is mean values based on operation in water (1 cP) with a standard mixing head and can vary depending on viscosity, mixing angle, volume and tank shape.

SIZE	50 RPM [W]	100 RPM [W]	200 RPM [W]	300 RPM [W]	400 RPM [W]	490 RPM [W]
0/3	2.7	3.0	4.0	6.3	10.0	15.0
3/7	3.7	5.2	8.7	14.6	21.0	27.3
7/20	5.6	7.8	13.2	20.5	36.0	56.0
20/70	13.0	17.0	31.0	58.5	109.0	179.0
70/120	13.5	18.0	36.5	78.0	155.0	265.0

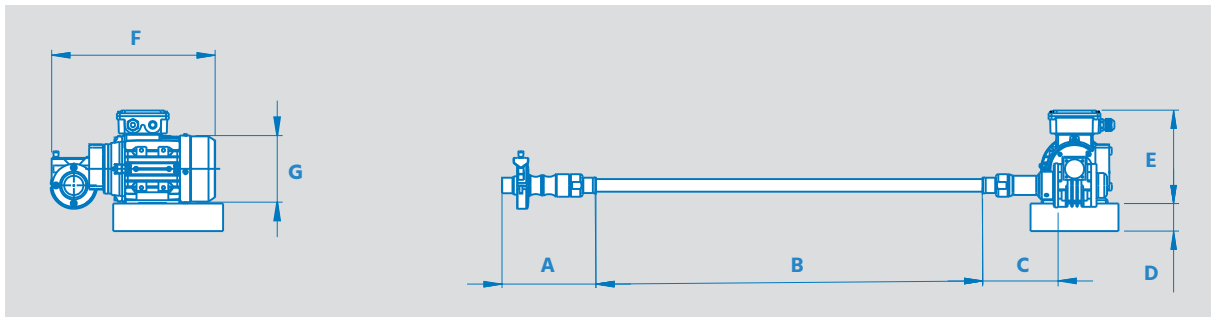
Kest KM Remote Drive



This new innovative drive unit allow you to get rid of the motor/gearbox from the tank. This is good for saving space and to remove the load upon the tank and tank plate itself, you can even place the drive unit in a different room.

The drive magnet is connected to a flexible cord and with the Kest-Lock connection it is very easy to remove from the tank. The weight of the handle and drive magnet is significantly lighter than the entire motor and gearbox, which improves ergonomics.

The Kest Remote drive can be equipped with our popular integrated speed sensor system that measures the actual speed of the mixing head as well as securing the correct rotation direction.

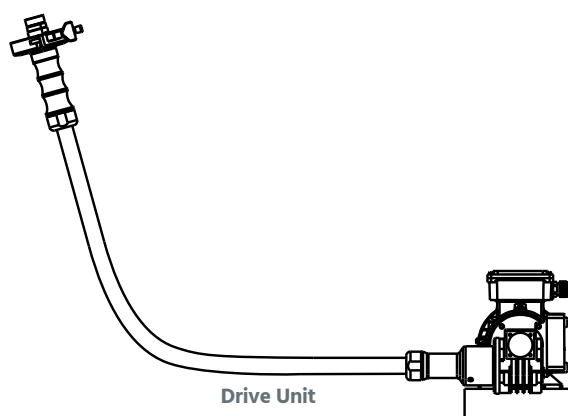


SIZE	A mm [in]	B* mm [in]	MIN BEND RADIUS** mm [in]	C mm [in]	D mm [in]	E mm [in]	F mm [in]	G mm [in]
0/3	169 [6.653]	1500 [59]	100 [3.937]	135 [5.315]	50 [1.969]	172 [6.772]	300 [11.811]	123 [4.843]
3/7	169 [6.653]	1500 [59]	100 [3.937]	135 [5.315]	50 [1.969]	172 [6.772]	300 [11.811]	123 [4.843]
7/20	190 [7.480]	1500 [59]	140 [5.512]	145 [5.709]	50 [1.969]	172 [6.772]	300 [11.811]	123 [4.843]
20/70	205 [8.071]	1500 [59]	240 [9.449]	155 [6.102]	50 [1.969]	172 [6.772]	300 [11.811]	123 [4.843]
70/120	210 [8.268]	1500 [59]	240 [9.449]	155 [6.102]	50 [1.969]	185 [7.283]	340 [13.386]	138 [5.433]

*For other lengths contact Kest or your reseller.

** The bend radius cannot be smaller than this value.

Kest Mixer KMR, Drive unit specifications



SIZE	MOTOR POWER 50/60Hz kW [hp]	FREQUENCY [Hz]	CURRENT 230/400V [A]	GEAR BOX RATIO [i]	SPEED RANGE [RPM]
0/3	0.25/0.30 [0.34/0.4]	50/60	1.3/0.75	1:7	50-490
3/7	0.25/0.30 [0.34/0.4]	50/60	1.3/0.75	1:7	50-490
7/20	0.25/0.30 [0.34/0.4]	50/60	1.3/0.75	1:7	50-490
20/70	0.25/0.30 [0.34/0.4]	50/60	1.3/0.75	1:7	50-490
70/120	0.55/0.68 [0.74/0.91]	50/60	2.4/1.4	1:7	50-490

DRIVE UNIT SPECIFICATIONS

Motor	CE - Standards EN60 034-1 , 3-phase AC
Motor protection	One thermo element as standard
Design Temperature	[0°C to +40°C] [+32°F to +104°F]
Protection class	IP 55
Paint	The flange, motor and gearbox are painted - RAL 7015
Gear box oil	AGIP TELIUM VSF 320
Material grade handle	1.4404/316L
Cover on flexible shaft	PVC
Marking	Each item is marked with article code
Packing	Each item is sealed in plastic bag, labelled with article code and packed in a box
Quality Assurance	Each product is controlled and tested acc. to Kest Technology quality assurance system

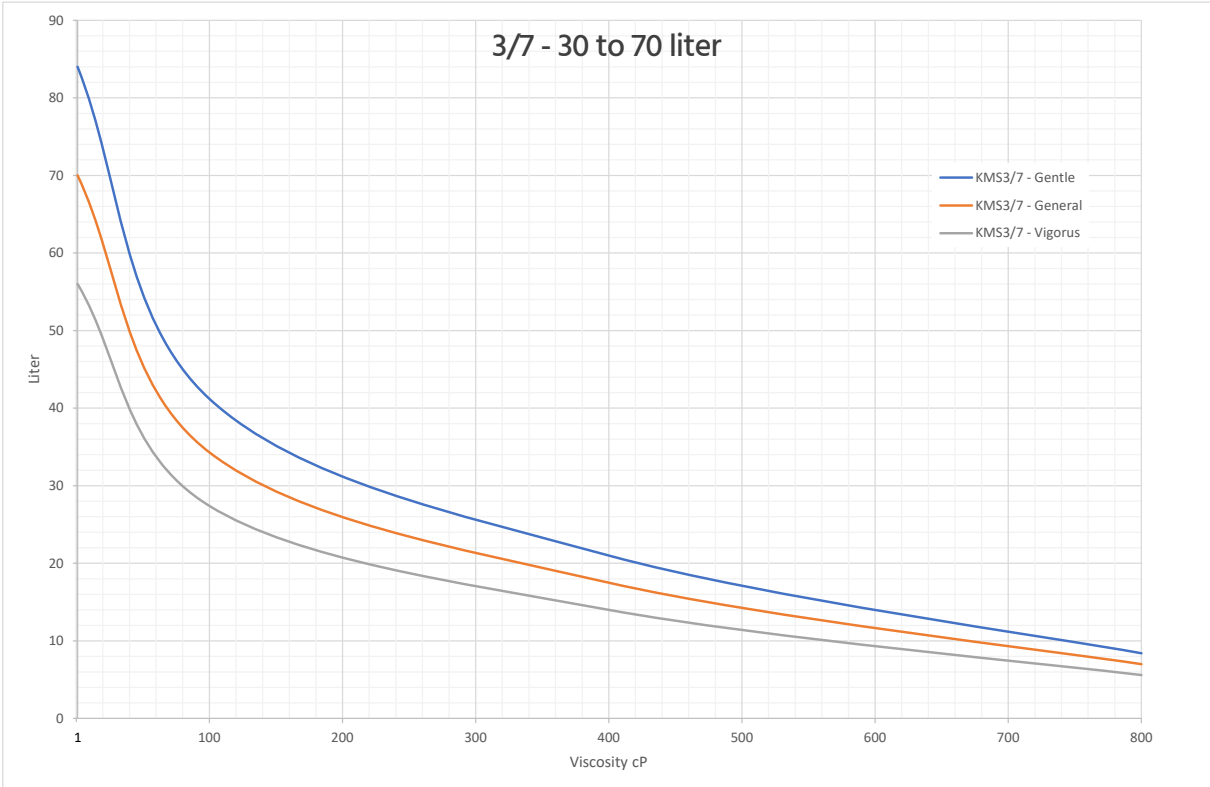
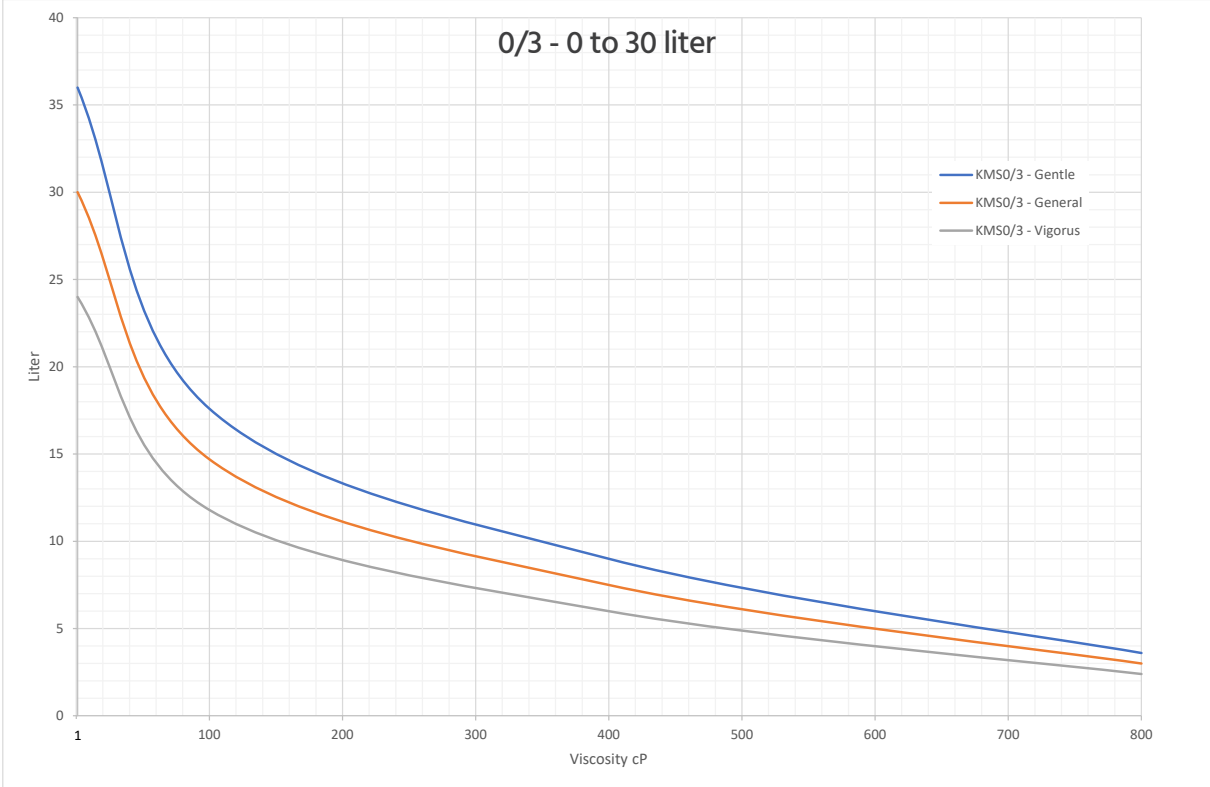
Power consumption

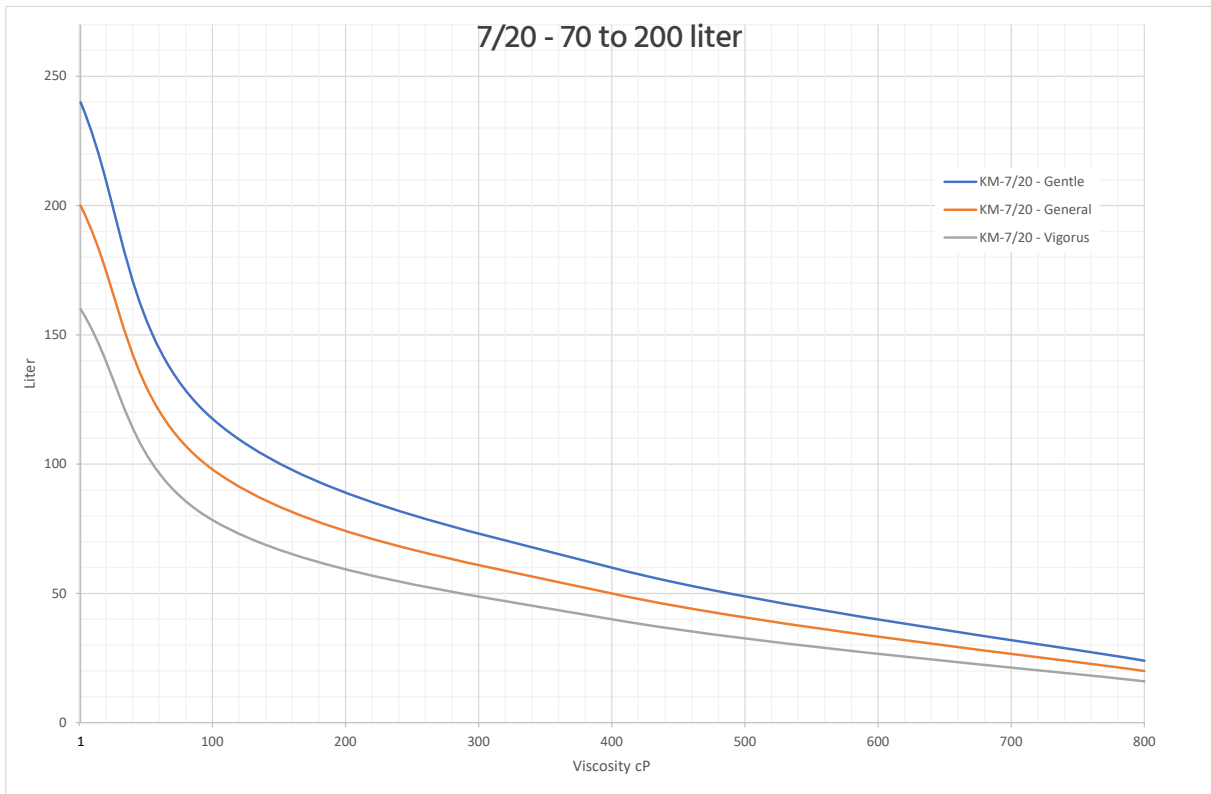
The figures below is mean values based on operation in water (1 cP) with a standard mixing head and can vary depending on viscosity, mixing angle, volume and tank shape.

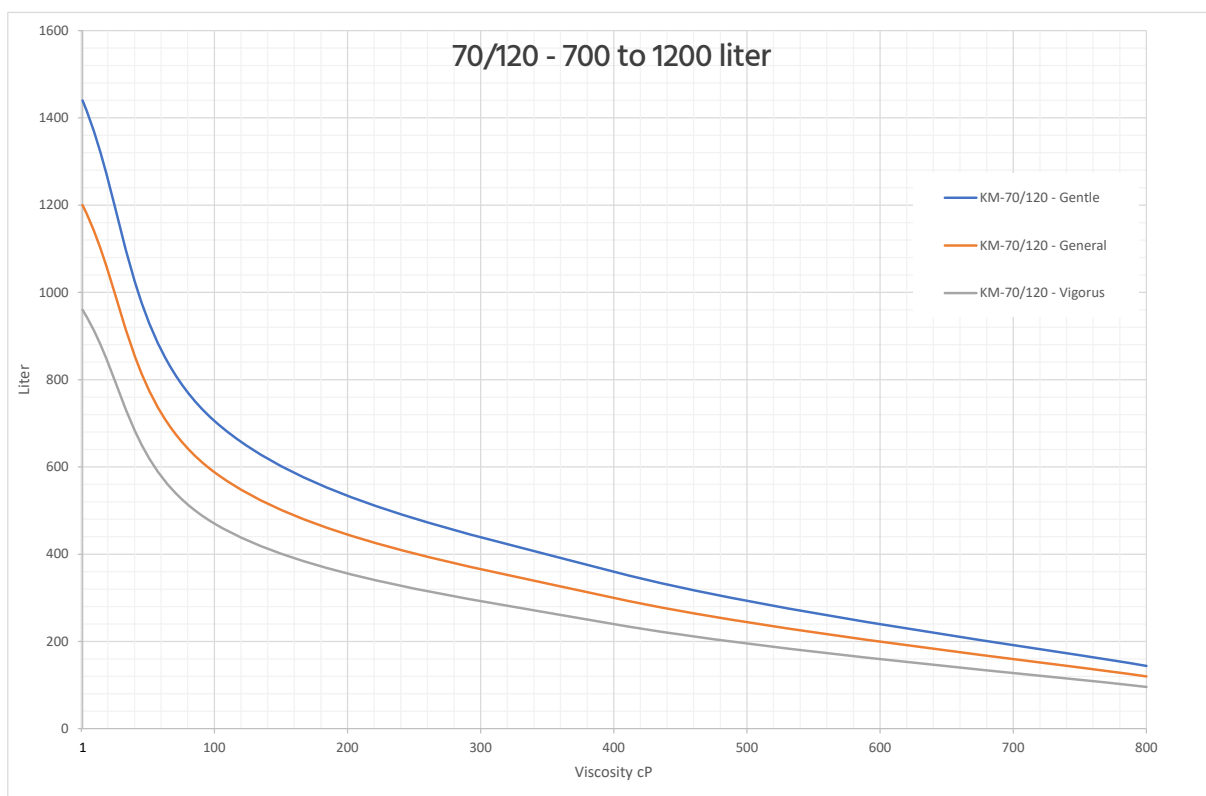
SIZE	50 RPM [W]	100 RPM [W]	200 RPM [W]	300 RPM [W]	400 RPM [W]	490 RPM [W]
0/3	24	36	58	88	110	132
3/7	25	38	65	92	118	140
7/20	29	48	86	130	180	197
20/70	31	54	101	160	226	290
70/120	42	60	109	181	290	435

Selection guide

The mixer is selected after volume and desired mixing type based on the viscosity of the media. The different mixer sizes are targeting a specific volume range based on viscosity of 1 cP. Depending on the viscosity you might need to go for a larger size even if you are in the target volume. The characteristics of the General, Gentle and Vigorous mixing is subjective and built on experience. See example in the end of the selection guide on how to select correct mixer size.







Example:

You want to select a mixer that shall generate General mixing

The max mixing volume is 30 liters

The viscosity of the media is 100 cP.

Size 0/3 has the range of 0-30 liter at 1 cP, but since the viscosity is 100 cP the capacity for General mixing is decreased to around 15 liters, see 0/3 graph at 100cP, orange line.

The next size is 3/7 with a range of 30-70 liter at 1 cP. That mixer can handle 34 liters of media at viscosity 100 cP, see 3/7 graph at 100cP, orange line.

For this application you need size 3/7.

For higher viscosities you might need to go up several sizes to find a mixer with the sufficient volume capacity.

Test centre

Mixing can be simple and complex, this selection guide sizes the mixer to the correct capacity. Mixing performance can be affected by many different factors, if you need support with your mixing application, we have long experience and an in-house fully equipped test centre. Do not hesitate to contact us with your mixing application.

Kest Mixer PLine ProFlow, Ref.No list

SIZE	MIXING HEAD	MALE POST	TANK PLATE	DRIVE UNIT	MULTICABLE*
0/3	103000	100562	103001	102691	101290
3/7	102987	100562	102988	102692	101290
7/20	102990	103008	102991	102963	101290
20/70	102993	100415	102888	102673	102694
70/120	103002	100415	103003	102674	102694

*The multicable article is setup as 1 meter (3.3 ft), when ordering you specify the length of the cable you need by adding articles. If you order 3 articles you will get a 3 meter cable. For the 20/70 and the 70/120 the cable length specified is between the motor and the power and logic box. If you don't specify anything your mixer will be shipped with the standard cable length, see drive unit specification.

Kest Mixer PLine ProFlow, options - Ref.No list

SIZE	POWER & LOGIC BOX 110-230V AC	CONTROL CABINET	ATTRACTOR*	MULTI TOOL*	WELDING TOOL
0/3	-	100669	101620	101006	100446
3/7	-	100669	101620	101006	100923
7/20	-	102373	101436	101342	100802
20/70	102971	102904	100571	100655	100802
70/120	102971	102904	-	100655	100780

*See separate data sheet

Kest Mixer PLine Remote Drive, Ref.No list

SIZE	PROFLOW REMOTE DRIVE	PROFLOW REMOTE DRIVE WITH CONTROL PANEL	KM REMOTE DRIVE	KM REMOTE DRIVE WITH SPEED SENSOR
0/3	103004	103005	102912	102913
3/7	102989	102995	102914	102915
7/20	102992	102996	102916	102917
20/70	102994	102997	102918	102919
70/120	103006	103007	102920	102921



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