

Pioneering for You

wilo

Range Leaflet – Edition 09/2015 – 60 Hz

Wilo-EMU TR(E)

Submersible mixers with two-stage planetary gear



Submersible mixers

2 Submersible mixers with two-stage planetary gear



Wilo-EMU TR 212... – TR(E) 326...

Design

Slow-running submersible mixer reduced by two-stage planetary gear

Model Numbers

Example: **Wilo-EMU TRE 321.38-4/12**

TR	Submersible mixer
E	High-efficiency motor in accordance with premium class (IE3; derived from IEC 60034-30)
3	Number of blades
21	x 100 = nominal propeller diameter in mm
38	Propeller speed in rpm
4	Number of poles
12	x 10 = stator length in mm

Application

- Energetically optimized mixing and circulation of activated sludges
- Generation of flow rates in circulation channels
- Further areas of application in industry

Technical data

- Power connection: 3~460 V, 60 Hz
- Submerged operating mode: Continuous duty (S1)
- Protection class: Submerged under pressure (IP 68)
- Fluid temperature: 37–104 °F (3–40 °C)
- Two-stage planetary gear with exchangeable second planetary gear speed
- Mechanical seal with SiC/SiC combination
- Permanently lubricated roller bearing
- Max. submersion depth: 65 ft (20 m)

Special features/product advantages

- 2-stage planetary gear for adjusting the propeller speed
- Self-cleaning propeller
- Motors with premium class (IE3)
- Propeller blades can be replaced individually (not for TR 212)
- Easy-to-install blades and hub
- Propeller in GRP version
- ATEX, FM and CSA version
- Gear shaft made of 1.4462 material (AISI 329)

Materials

- Housing components: A 48 Class 35/40 B (EN-GJL-250)
- Propeller blades: GRP vinyl ester; TRE 312: PA 6C
- Propeller hub: A 536A 60-40; TRE 312: AISI 316TI (1.4571)
- Screwed connections: AISI 316TI (1.4571)
- Seal bushing: AISI 316TI (1.4571)
- Gear shaft: Stainless steel AISI 329 (1.4462)

Equipment/function

- installation with stand allows free placement in basin
- flexible installation
- Two-stage planetary gear with exchangeable second planetary gear speed

Description/design

Propeller

2- or 3-blade propeller with a nominal propeller diameter of 47 inch (1200 mm) to 102.5 inch (2600 mm).

TRE 312: 2-blade, solid-material propeller with a nominal propeller diameter of 47 inch (1200 mm).

Non-ragging design made possible by backward-curved incoming flow edge.

Motor

Wilo-submersible motor of the T-series with standard connection for an easy and efficient adaptation of the motor output. The motor heat is given off directly to the fluid via the housing. The winding is equipped with a temperature monitor. Large-sized inclined and grooved ball bearings ensure long service life of the motor bearings. TRE units are equipped with the high-efficiency "TE motor" which meets the "Premium classification" (IE3; derived from IEC 60034-30).

Sealing

Sealing is achieved through the use of a 3-chamber system (prechamber, gear chamber and sealing chamber). The large-volume prechamber and sealing chamber collect leakage from the mechanical seal. If desired, the prechamber can be equipped with an external sealing chamber electrode. The sealing between the fluid and the prechamber, as well as between the gear and sealing chamber are realized by a corrosion-resistant and wear-proof mechanical seal made of solid silicon carbide material. The sealing between the prechamber and gear chamber as well as between the sealing chamber and motor are realised by radial sealing rings. A seal bushing ensures long-term corrosion-protected fit of the mechanical seal.

Gear

2-stage planetary gear with exchangeable transmissions. The gear bearings are dimensioned so that the resulting mixing forces are absorbed and are not transferred to the motor bearings.

Cable

The power cable is a type NSSHÖU cable for heavy mechanical loads. The power cable enters the motor housing through a water pressure-tight cable entry with strain relief and bend protection. The individual wires as well as the cable sheath are additionally sealed to keep out fluids.

Options

- Special voltages
- Thermistor temperature sensor
- External sealing chamber control
- Ceram CO coating
- Ex-rated to ATEX, FM or CSA

Scope of delivery

- Submersible mixer with cable per customer request
- TR 212 and TRE 312: Propeller completely assembled
- TR(E) 216, 221, 226-3, 316, 321 and 326-3: pre-mounted hub, Propeller blades - delivered loose, installation on-site
- Accessories per customer request
- Operating and maintenance manual

Configuration

A separate configuration must be carried out for each application to ensure optimum generation of fluid current. Carefully follow the instructions for the supplied configuration when installing the units.

Accessories

- Stand for free placement of units in basin
- Auxiliary hoisting gear
- Optional designs to allow use of a single lifting device for multiple units
- Additional cable anchoring
- Installation sets with anchor bolt

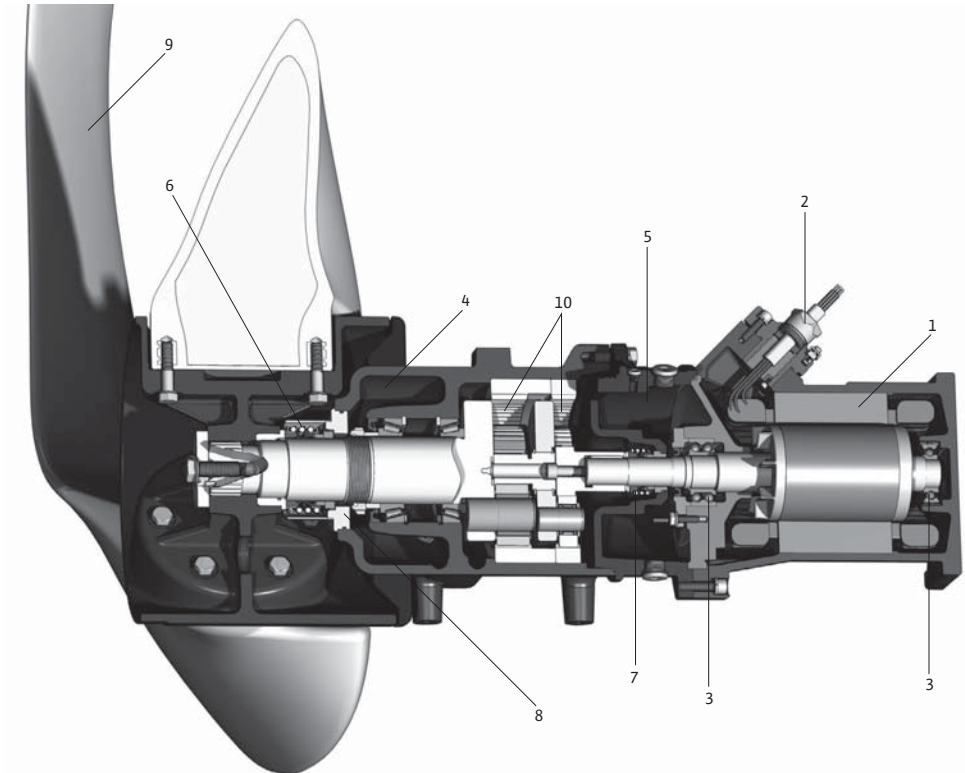
Commissioning

Operating mode S1 - Continuous duty:

The submersible mixer must be immersed when operated. Surfacing the propeller is strictly prohibited. In the case of fluctuating fluid levels, the system should switch off automatically if the degree of water submersion drops below the minimum level. The power cables must be installed in a way that these cannot be drawn into the propeller!

Submersible mixers

4 Submersible mixers with two-stage planetary gear



1 = motor; 2 = cable entry; 3 = motor bearing, 4 = prechamber; 5 = sealing chamber; 6 = mechanical seal on fluid side; 7 = mechanical seal on motor side; 8 = seal bushing, 9 = propeller blade; 10 = 2-stage planetary gear

Technical data									
Wilо-EMU...	Power Consumed		Propeller speed	Transmission ratio	Max. thrust	Weight of unit		Max. weight*	
	hp	$P_{1.1}$ kW	n rpm		F N	lbs	kg	m lbs	kg
TR 212.68-4/8V	1.2	0.9	68	46.500	480	300	136	337	153
TR 212.74-4/8V	1.5	1.1	74	46.500	550	300	136	337	153
TR 212.80-4/8V	1.6	1.2	80	40.740	680	300	136	337	153
TR 212.86-4/8V	1.7	1.3	86	36.425	760	300	136	337	153
TR 212.96-4/8V	2.3	1.7	96	40.740	960	300	136	337	153

* = maximum weight including accessories

Motor data											
Wilо-EMU...	Rated motor power		Maximum power consumption		Full load amps	Starting current - direct	Starting current - star-delta	Rated speed	Explosion protection according to		
	hp	P_2 kW	hp	P_1 kW	I_N	A	I_A	n rpm	FM	ATEX	CSA
T 17-4/8V (Ex)	4.4	3.3	6.2	4.6	6.7	33	11	1680	o	-	o

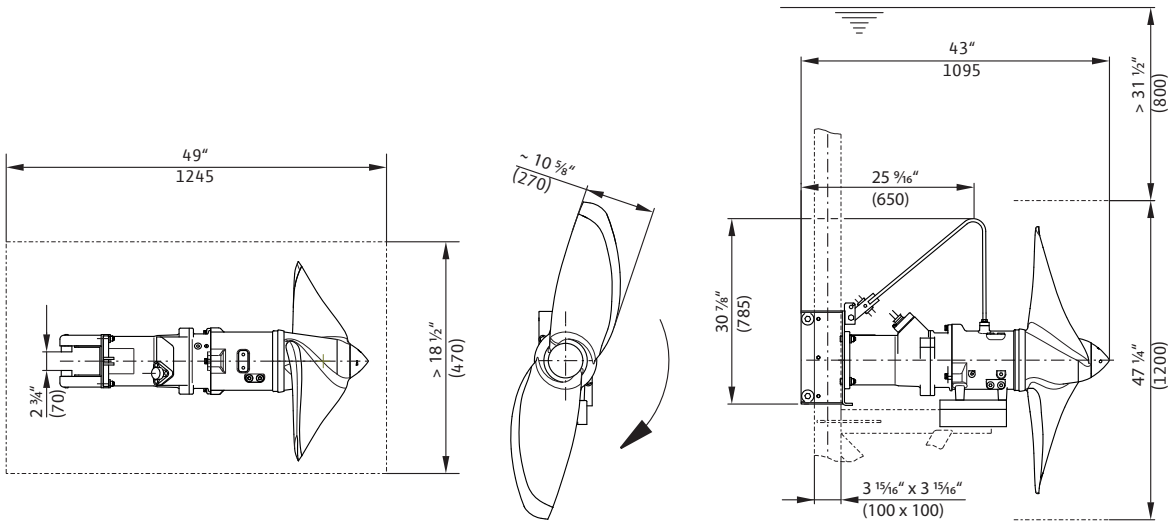
The value $P_{1.1}$ is equivalent to the electrical power consumption at the duty point. P_1 refers to the max. electrical power consumption.

All of the data applies to 3~460 V, 60 Hz and a specific gravity of 1.0.

Thrust and power measurement in accordance with ISO 21630.

* = available, - = not available; o = optional

Dimension drawing Wilо-EMU TR 212



Wastewater treatment

6 Submersible mixers with two-stage planetary gear

Technical data									
Wilo-EMU...	Power Consumed		Propeller speed	Transmission ratio	Max. thrust	Weight of unit		Max. weight*	
	hp	$P_{1.1}$ kW	n rpm		F N	lbs	kg	lbs	kg
TR 216.34-6/8	0.9	0.7	34	33.046	460	366	166	430	195
TR 216.40-6/8	1.1	0.9	40	29.227	690	366	166	430	195
TR 216.46-4/8V	1.6	1.2	46	46.500	950	366	166	430	195
TR 216.55-4/8V	2.6	2.0	55	40.740	1350	366	166	430	195
TR 216.59-4/8V	3.1	2.3	59	36.425	1600	366	166	430	195
TR 216.66-4/8	4.0	3.0	66	34.658	1950	366	166	430	195
TR 216.72-4/8	5.1	3.8	72	34.658	2300	366	166	430	195
TR 216.77-4/12	6.0	4.4	77	33.046	2600	388	176	441	200

* = maximum weight including accessories

Motor data												
Wilo-EMU...	Rated motor power		Maximum power consumption		Full load amps	Starting current - direct	Starting current - star-delta	Rated speed	Explosion protection according to			
	hp	P_2 kW	hp	P_1 kW	I_N	I_A	n rpm	FM	ATEX	CSA		
T 17-4/8R (Ex)	5.6	4.2	7.2	5.4	8	33	11	1690	o	-	o	
T 17-4/8V (Ex)	4.4	3.3	6.2	4.6	6.7	33	11	1680	o	-	o	
T 17-4/12R (Ex)	7.4	5.5	9.5	7.1	10.3	45	15	1680	o	-	o	
T 17-6/8R (Ex)	2.7	2.0	3.9	2.9	4.5	26	9	1080	o	-	o	

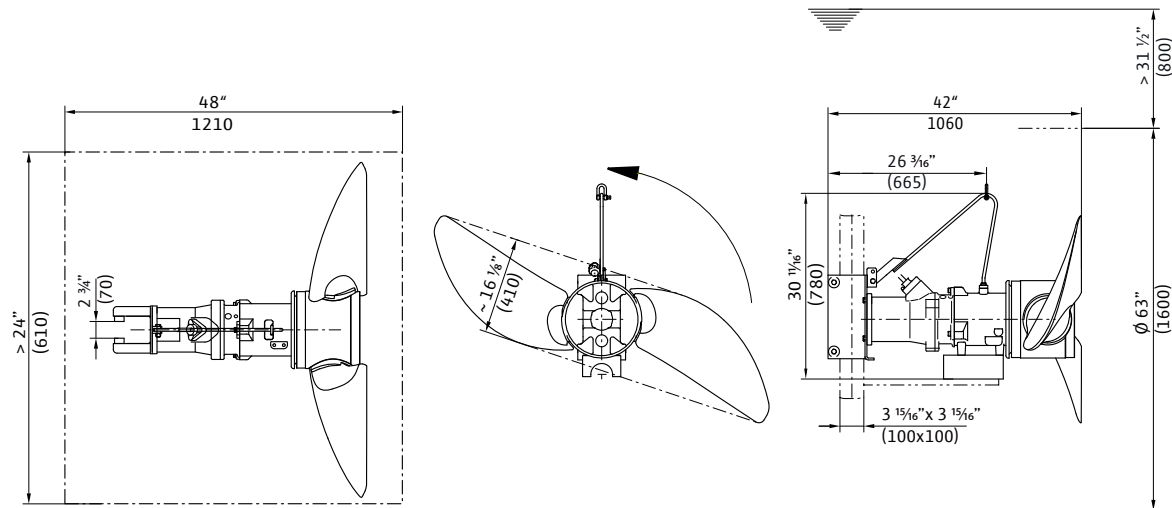
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Thrust and power measurement in accordance with ISO 21630.

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Dimension drawing Wilo-EMU TR 216



Technical data									
Wilo-EMU...	Power Consumed		Propeller speed	Transmission ratio	Max. thrust	Weight of unit		Max. weight*	
	$P_{1.1}$		n		F	m			
	hp	kW	rpm		N	lbs	kg	lbs	kg
TR 221.25-8/8	1.1	0.8	25	34.658	650	392	178	441	200
TR 221.28-8/8	1.2	0.9	28	33.046	730	392	178	441	200
TR 221.30-8/8	1.3	1.0	30	29.227	950	392	178	441	200
TR 221.34-8/8	1.7	1.3	34	26.350	1250	392	178	441	200
TR 221.36-6/8	1.9	1.4	36	33.046	1550	392	178	441	200
TR 221.38-6/8	2.5	1.9	38	29.227	1600	392	178	441	200
TR 221.40-4/8V	2.5	1.9	40	46.500	1700	392	178	441	200
TR 221.44-4/8V	3.8	2.8	44	40.740	2200	392	178	441	200
TR 221.47-4/8V	3.9	2.9	47	36.425	2300	392	178	441	200
TR 221.49-4/8V	4.3	3.2	49	34.658	2400	392	178	441	200
TR 221.50-4/8	4.8	3.6	50	34.658	2600	392	178	441	200
TR 221.53-4/8	5.2	3.9	53	33.046	2900	392	178	441	200
TR 221.54-4/12	5.8	4.3	54	33.046	3100	414	188	452	205
TR 221.58-4/12	7.4	5.5	58	29.227	3600	414	188	452	205

* = maximum weight including accessories

Motor data											
Wilo-EMU...	Rated motor power		Maximum power consumption		Full load amps	Starting current - direct	Starting current - star-delta	Rated speed	Explosion protection according to		
	P_2		P_1		I_N	I_A	n	FM	$ATEX$	CSA	
	hp	kW	hp	kW	A	A	rpm				
T 17-4/8V (Ex)	4.4	3.3	6.2	4.6	6.7	33	11	1680	o	-	o
T 17-4/8R (Ex)	5.6	4.2	7.2	5.4	8	33	11	1690	o	-	o
T 17-4/12R (Ex)	7.4	5.5	9.5	7.1	10.3	45	15	1680	o	-	o
T 17-6/8R (Ex)	2.7	2.0	3.9	2.9	4.5	26	9	1080	o	-	o
T 17-8/8R (Ex)	1.7	1.3	2.7	2.0	3.6	18	6	840	o	-	o

The value $P_{1.1}$ is equivalent to the electrical power consumption at the duty point. P_1 refers to the max. electrical power consumption.

All of the data applies to 3~460 V, 60 Hz and a specific gravity of 1.0.

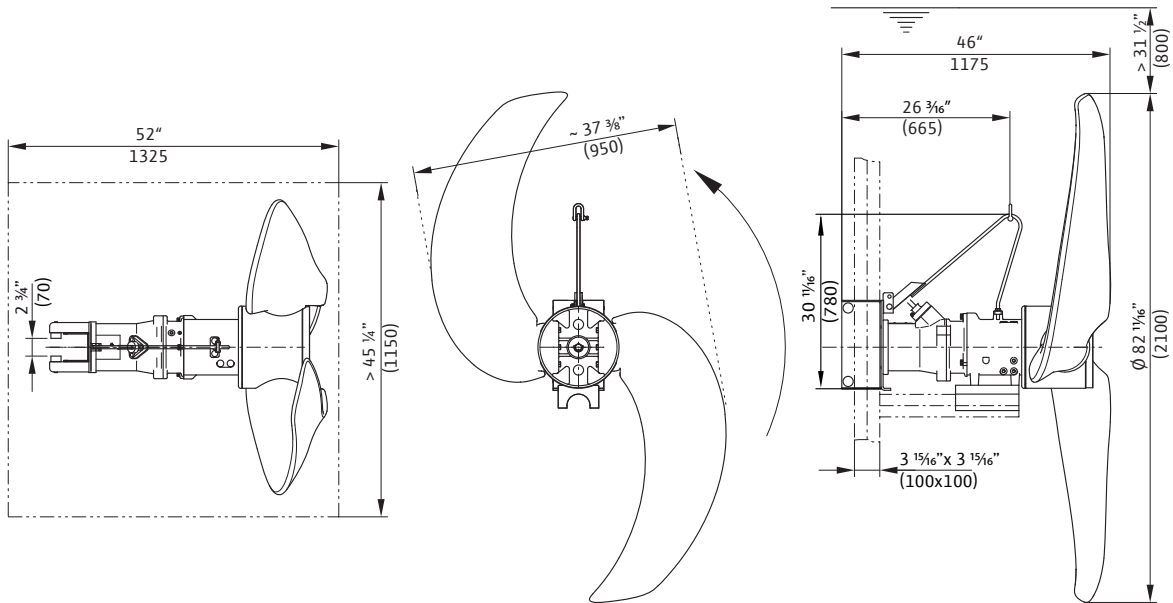
Thrust and power measurement in accordance with ISO 21630.

• = available, - = not available; o = optional

Wastewater treatment

8 Submersible mixers with two-stage planetary gear

Dimension drawing Wilo-EMU TR 221



Technical data									
Wilo-EMU...	Power Consumed		Propeller speed	Transmission ratio	Max. thrust	Weight of unit		Max. weight*	
	$P_{1.1}$					n rpm	F N	m	
	hp	kW	lbs	kg					
TRE 221.26-6/16	0.9	0.7	26	46.500	630	425	193	463	210
TRE 221.29-6/16	1.2	0.9	29	40.740	830	425	193	463	210
TRE 221.31-6/16	1.3	1.0	31	38.440	900	425	193	463	210
TRE 221.32-6/16	1.5	1.1	32	36.425	1060	425	193	463	210
TRE 221.34-6/16	1.6	1.2	34	34.658	1160	425	193	463	210
TRE 221.36-6/16	1.7	1.3	36	33.046	1270	425	193	463	210
TRE 221.37-6/16	1.9	1.4	37	31.651	1380	425	193	463	210
TRE 221.38-4/12	1.9	1.5	38	46.500	1400	443	201	481	218
TRE 221.39-6/16	2.0	1.5	39	30.380	1430	425	193	463	210
TRE 221.40-6/16	2.2	1.6	40	29.227	1600	425	193	463	210
TRE 221.44-4/12	2.3	1.8	44	40.740	1700	443	201	481	218
TRE 221.46-4/12	3.2	2.4	46	38.440	2400	443	201	481	218
TRE 221.49-4/12	3.5	2.7	49	36.425	2450	443	201	481	218
TRE 221.51-4/12	4.2	3.1	51	34.658	2600	443	201	481	218
TRE 221.54-4/12	4.6	3.4	54	33.046	2800	443	201	481	218
TRE 221.56-4/17	4.9	3.7	56	31.651	3000	461	209	498	226

* = maximum weight including accessories

Motor data											
Wilo-EMU...	Rated motor power		Maximum power consumption		Full load amps	Starting current - direct	Starting current - star-delta	Rated speed	Explosion protection according to		
	P_2		P_1						I_N	I_A	n rpm
	hp	kW	hp	kW	A						
TE 17-6/16R	2.3	1.8	2.8	2.0	3.9	39	13	1167	-	-	-
TE 20-4/12R	4.7	3.5	5.2	3.9	6.1	49	16	1765	-	-	-
TE 20-4/17R	6.0	4.5	6.8	5.1	8.2	74	24	1770	-	-	-

The value $P_{1.1}$ is equivalent to the electrical power consumption at the duty point. P_1 refers to the max. electrical power consumption.

All of the data applies to 3~460 V, 60 Hz and a specific gravity of 1.0.

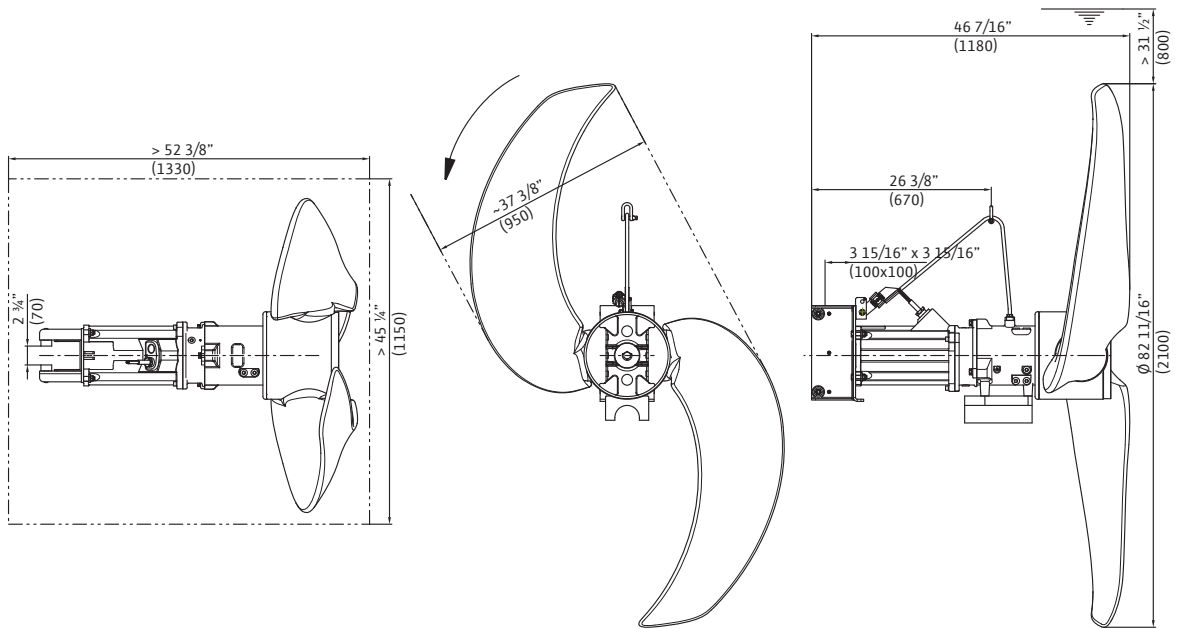
Thrust and power measurement in accordance with ISO 21630.

• = available, - = not available; o = optional

Wastewater treatment

10 Submersible mixers with two-stage planetary gear

Dimension drawing Wilo-EMU TRE 221



Technical data									
Wilo-EMU...	Power Consumed		Propeller speed <i>n</i> rpm	Transmission ratio	Max. thrust <i>F</i> N	Weight of unit		Max. weight*	
	<i>P_{1,1}</i>					<i>m</i>			
	hp	kW				lbs	kg	lbs	kg
TR 226-3.19-8/8	0.9	0.7	19	46.500	700	390	177	441	200
TR 226-3.22-8/8	1.1	0.8	22	40.740	800	390	177	441	200
TR 226-3.23-8/8	1.1	0.9	23	38.440	900	390	177	441	200
TR 226-3.24-8/8	1.2	0.9	24	36.425	1050	390	177	441	200
TR 226-3.29-8/8	1.7	1.3	29	30.380	1400	390	177	441	200
TR 226-3.30-8/8	1.8	1.4	30	29.227	1500	390	177	441	200
TR 226-3.32-6/8	2.2	1.6	32	36.425	1950	390	177	441	200
TR 226-3.34-6/8	2.5	1.9	34	34.658	2150	390	177	441	200
TR 226-3.35-6/8	2.8	2.1	35	33.046	2300	390	177	441	200
TR 226-3.38-6/8	3.5	2.6	38	30.380	2670	390	177	441	200
TR 226-3.39-6/8	3.6	2.7	39	29.227	2750	390	177	441	200
TR 226-3.43-4/8V	4.6	3.4	43	40.740	3300	390	177	441	200
TR 226-3.45-4/8V	5.1	3.8	45	38.440	3500	390	177	441	200
TR 226-3.48-4/8V	5.6	4.2	48	36.425	3800	390	177	441	200
TR 226-3.50-4/8	6.2	4.6	50	34.658	4100	390	177	441	200

* = maximum weight including accessories

Motor data											
Wilo-EMU...	Rated motor power		Maximum power consumption		Full load amps <i>I_N</i>	Starting current - direct <i>I_A</i>	Starting current - star-delta	Rated speed <i>n</i> rpm	Explosion protection according to		
	<i>P₂</i>		<i>P₁</i>								
	hp	kW	hp	kW		A			FM	ATEX	CSA
T 17-4/8R (Ex)	5.6	4.2	7.2	5.4	8	33	11	1690	o	-	o
T 17-4/8V (Ex)	4.4	3.3	6.2	4.6	6.7	33	11	1680	o	-	o
T 17-6/8R (Ex)	2.7	2.0	3.9	2.9	4.5	26	9	1080	o	-	o
T 17-8/8R (Ex)	1.7	1.3	2.7	2.0	3.6	18	6	840	o	-	o

The value *P_{1,1}* is equivalent to the electrical power consumption at the duty point. *P₁* refers to the max. electrical power consumption.

All of the data applies to 3~460 V, 60 Hz and a specific gravity of 1.0.

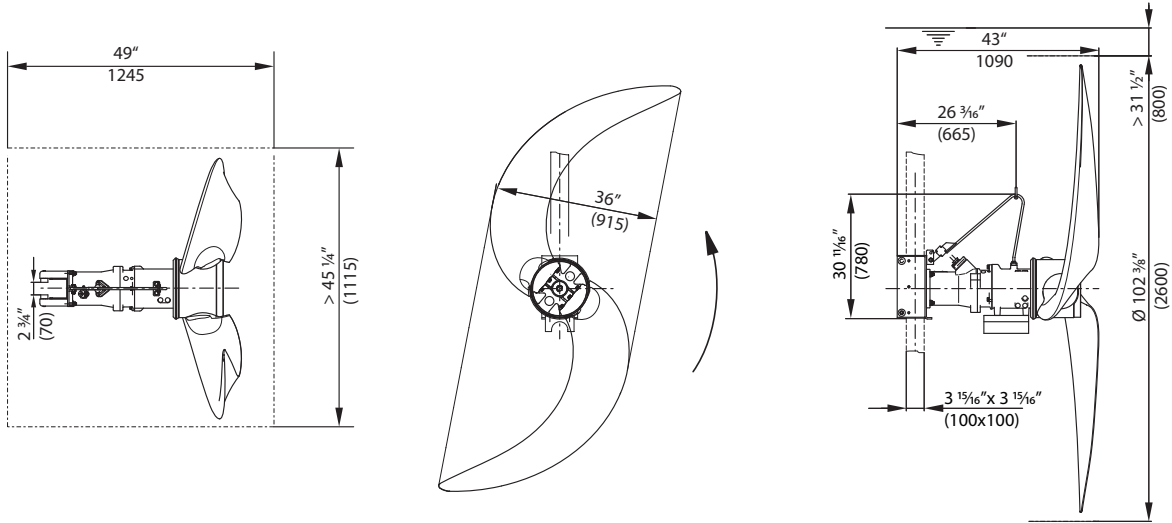
Thrust and power measurement in accordance with ISO 21630.

• = available, - = not available; o = optional

Wastewater treatment

12 Submersible mixers with two-stage planetary gear

Dimension drawing Wilo-EMU TR 226-3



Technical data									
Wilo-EMU...	Power Consumed		Propeller speed	Transmission ratio	Max. thrust	Weight of unit		Max. weight*	
	$P_{1,1}$		n		F	m			
	hp	kW	rpm		N	lbs	kg	lbs	kg
TRE 226-3.25-6/16	1.3	1.0	25	46.500	1280	437	198	474	215
TRE 226-3.29-6/16	1.7	1.3	29	40.740	1650	437	198	474	215
TRE 226-3.31-6/16	1.9	1.4	31	38.440	1700	437	198	474	215
TRE 226-3.32-6/16	2.2	1.6	32	36.425	1970	437	198	474	215
TRE 226-3.34-6/16	2.5	1.9	34	34.658	2200	437	198	474	215
TRE 226-3.38-4/12	3.2	2.4	38	46.500	2700	454	206	492	223
TRE 226-3.44-4/12	4.6	3.4	44	40.740	3450	454	206	492	223
TRE 226-3.46-4/12	4.8	3.6	46	38.440	3580	454	206	492	223
TRE 226-3.49-4/17	5.6	4.2	49	36.425	4050	472	214	509	231

* = maximum weight including accessories

Motor data											
Wilo-EMU...	Rated motor power		Maximum power consumption		Full load amps	Starting current - direct	Starting current - star-delta	Rated speed	Explosion protection according to		
	P_2		P_1		I_N	I_A	n	FM	$ATEX$	CSA	
	hp	kW	hp	kW	A	A	rpm				
TE 17-6/16R	2.3	1.8	2.8	2.0	3.9	39	13	1167	-	-	-
TE 20-4/12R	4.7	3.5	5.2	3.9	6.1	49	16	1765	-	-	-
TE 20-4/17R	6.0	4.5	6.8	5.1	8.2	74	24	1770	-	-	-

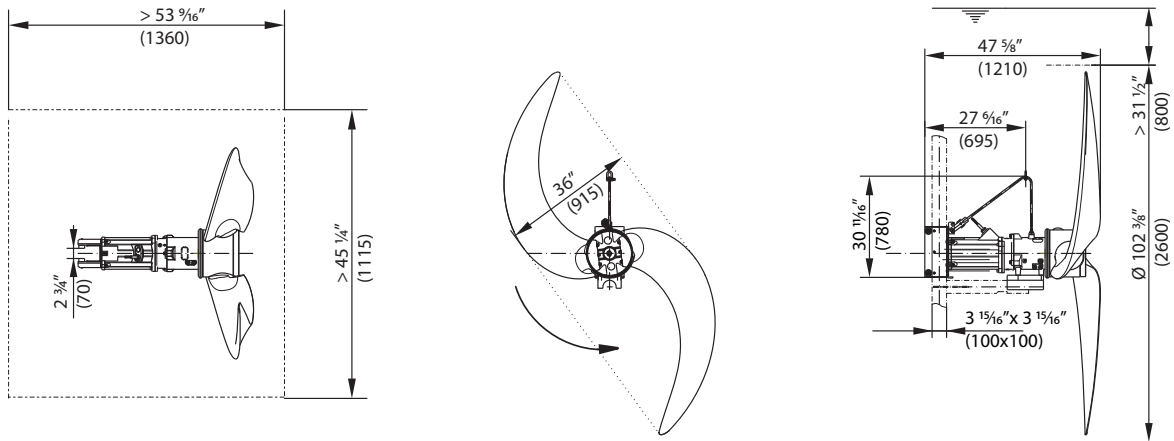
The value $P_{1,1}$ is equivalent to the electrical power consumption at the duty point. P_1 refers to the max. electrical power consumption.

All of the data applies to 3~460 V, 60 Hz and a specific gravity of 1.0.

Thrust and power measurement in accordance with ISO 21630.

• = available, - = not available; o = optional

Dimension drawing Wilo-EMU TRE 226-3



Technical data									
Wilo-EMU...	Power Consumed		Propeller speed	Transmission ratio	Max. thrust	Weight of unit		Max. weight*	
	hp	$P_{1.1}$ kW	n rpm		F N	lbs	kg	m lbs	kg
TRE 312.64-6/16	0.9	0.7	64	18.606	430	348	158	386	175
TRE 312.71-6/16	1.1	0.8	71	16.880	530	348	158	386	175
TRE 312.80-6/16	1.3	1.0	80	14.929	680	348	158	386	175
TRE 312.88-6/16	1.5	1.1	88	13.460	850	348	158	386	175
TRE 312.96-6/16	1.8	1.4	96	12.288	1000	348	158	386	175
TRE 312.104-6/16	2.0	1.5	104	11.401	1100	348	158	386	175
TRE 312.110-6/16	2.5	1.9	110	10.654	1250	348	158	386	175
TRE 312.119-4/12	3.0	2.2	119	14.929	1430	359	163	397	180
TRE 312.132-4/12	3.8	2.8	132	13.460	1690	359	163	397	180
TRE 312.144-4/17	4.7	3.5	144	12.288	2050	377	171	414	188
TRE 312.155-4/17	5.7	4.3	155	11.401	2340	377	171	414	188

* = maximum weight including accessories

Motor data											
Wilo-EMU...	Rated motor power		Maximum power consumption		Full load amps	Starting current - direct	Starting current - star-delta	Rated speed	Explosion protection according to		
	hp	P_2 kW	hp	P_1 kW	I_N	A	I_A	n rpm	FM	ATEX	CSA
TE 17-6/16R	2.3	1.8	2.8	2.0	3.9	39	13	1167	-	-	-
TE 20-4/12R	4.7	3.5	5.2	3.9	6.1	49	16	1765	-	-	-
TE 20-4/17R	6.0	4.5	6.8	5.1	8.2	74	24	1770	-	-	-

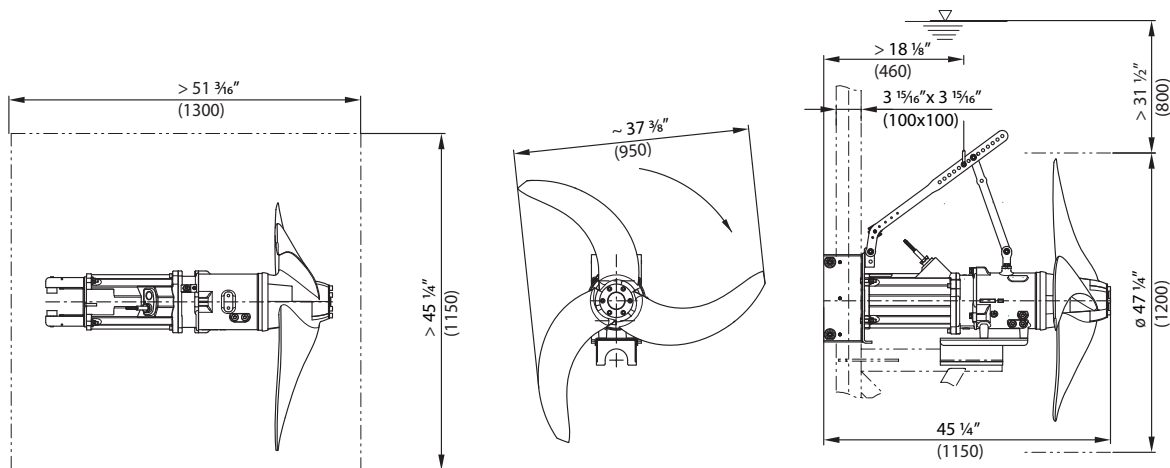
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Thrust and power measurement in accordance with ISO 21630.

• = available, - = not available; o = optional

Dimension drawing Wilo-EMU TRE 312



Technical data									
Wilo-EMU...	Power Consumed		Propeller speed	Transmission ratio	Max. thrust	Weight of unit		Max. weight*	
	$P_{1.1}$		n		F	m			
	hp	kW	rpm		N	lbs	kg	lbs	kg
TR 316.43-6/8	1.7	1.3	43	33.046	1050	399	181	452	205
TR 316.48-6/8	2.3	1.8	48	29.227	1270	399	181	452	205
TR 316.50-4/8V	2.8	2.0	50	46.500	1420	399	181	452	205
TR 316.57-4/8V	3.8	2.8	57	40.740	1750	399	181	452	205
TR 316.64-4/8V	5.3	4.0	64	36.425	2450	399	181	452	205
TR 316.71-4/8	6.5	4.8	71	34.658	2800	399	181	452	205

* = maximum weight including accessories

Motor data												
Wilo-EMU...	Rated motor power		Maximum power consumption		Full load amps	Starting current - direct	Starting current - star-delta	Rated speed	Explosion protection according to			
	P_2		P_1		I_N	I_A		n	FM	ATEX	CSA	
	hp	kW	hp	kW	A	A		rpm				
T 17-4/8R (Ex)	5.6	4.2	7.2	5.4	8	33	11	1690	o	-	o	
T 17-4/8V (Ex)	4.4	3.3	6.2	4.6	6.7	33	11	1680	o	-	o	
T 17-6/8R (Ex)	2.7	2.0	3.9	2.9	4.5	26	9	1080	o	-	o	

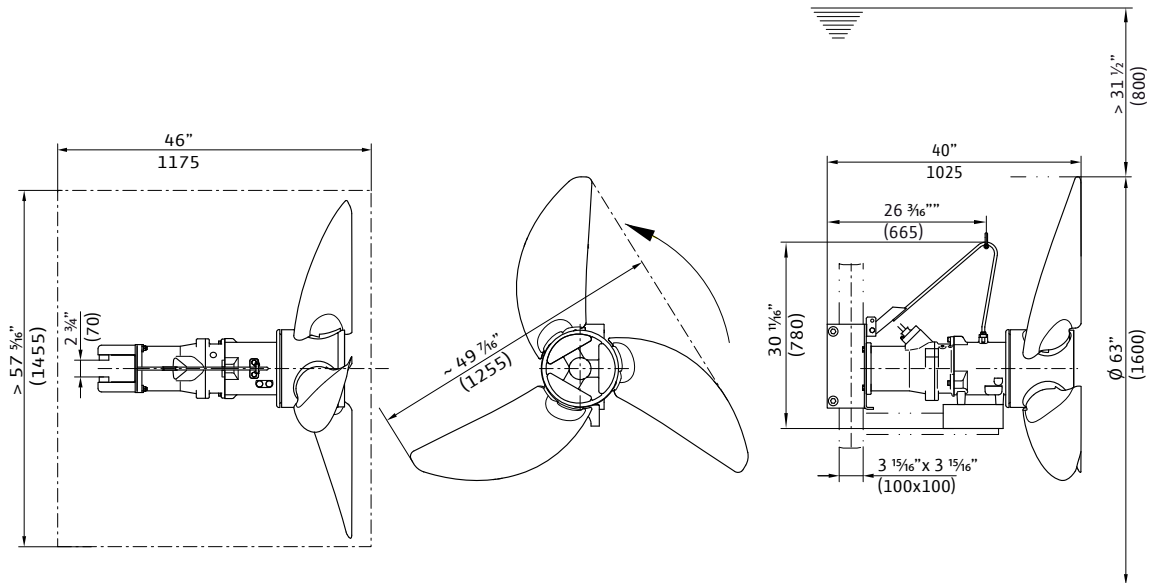
The value $P_{1.1}$ is equivalent to the electrical power consumption at the duty point. P_1 refers to the max. electrical power consumption.

All of the data applies to 3~460 V, 60 Hz and a specific gravity of 1.0.

Thrust and power measurement in accordance with ISO 21630.

• = available, - = not available; o = optional

Dimension drawing Wilo-EMU TR 316



Wastewater treatment

16 Submersible mixers with two-stage planetary gear

Technical data									
Wilo-EMU...	Power Consumed		Propeller speed	Transmission ratio	Max. thrust	Weight of unit		Max. weight*	
	$P_{1.1}$		n		F	m			
	hp	kW	rpm		N	lbs	kg	lbs	kg
TR 321.24-8/8	1.1	0.8	24	34.658	720	439	199	474	215
TR 321.27-8/8	1.2	0.9	27	33.046	750	439	199	474	215
TR 321.30-8/8	1.3	1.0	30	29.227	950	439	199	474	215
TR 321.31-8/8	1.9	1.4	31	26.350	1250	439	199	474	215
TR 321.32-6/8	2.0	1.5	32	34.658	1400	439	199	474	215
TR 321.35-6/8	2.5	1.9	35	33.046	1500	439	199	474	215
TR 321.38-6/8	2.7	2.0	38	29.227	1650	439	199	474	215
TR 321.39-4/8V	3.8	2.8	39	46.500	2200	439	199	474	215
TR 321.43-4/8V	3.9	2.9	43	40.740	2300	439	199	474	215
TR 321.46-4/8V	4.3	3.2	46	36.425	2600	439	199	474	215
TR 321.48-4/8	5.8	4.3	48	34.658	3100	439	199	474	215
TR 321.54-4/12	7.1	5.3	54	33.046	3500	461	209	485	220

* = maximum weight including accessories

Motor data												
Wilo-EMU...	Rated motor power		Maximum power consumption		Full load amps	Starting current - direct	Starting current - star-delta	Rated speed	Explosion protection according to			
	P_2		P_1		I_N	I_A	n	FM	$ATEX$	CSA		
	hp	kW	hp	kW	A	A	rpm					
T 17-4/8V (Ex)	4.4	3.3	6.2	4.6	6.7	33	11	1680	o	-	o	
T 17-4/8R (Ex)	5.6	4.2	7.2	5.4	8	33	11	1690	o	-	o	
T 17-4/12R (Ex)	7.4	5.5	9.5	7.1	10.3	45	15	1680	o	-	o	
T 17-6/8R (Ex)	2.7	2.0	3.9	2.9	4.5	26	9	1080	o	-	o	
T 17-8/8R (Ex)	1.7	1.3	2.7	2.0	3.6	18	6	840	o	-	o	

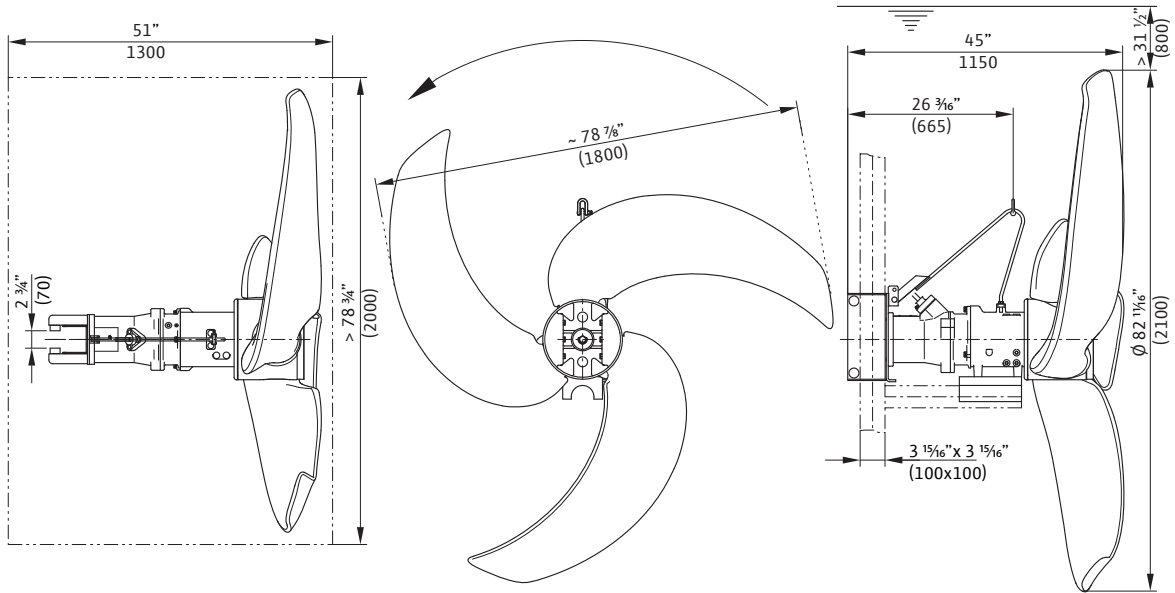
The value $P_{1.1}$ is equivalent to the electrical power consumption at the duty point. P_1 refers to the max. electrical power consumption.

All of the data applies to 3~460 V, 60 Hz and a specific gravity of 1.0.

Thrust and power measurement in accordance with ISO 21630.

• = available, - = not available; o = optional

Dimension drawing Wilo-EMU TR 321



Wastewater treatment

18 Submersible mixers with two-stage planetary gear

Technical data									
Wilo-EMU...	Power Consumed		Propeller speed	Transmission ratio	Max. thrust	Weight of unit		Max. weight*	
	hp	$P_{1.1}$ kW	n rpm		F N	lbs	kg	m lbs	kg
TRE 321.26-6/16	1.1	0.9	26	46.500	800	463	210	500	227
TRE 321.29-6/16	1.5	1.1	29	40.740	1000	463	210	500	227
TRE 321.31-6/16	1.6	1.2	31	38.440	1230	463	210	500	227
TRE 321.32-6/16	1.7	1.3	32	36.425	1380	463	210	500	227
TRE 321.34-6/16	2.0	1.5	34	34.658	1460	463	210	500	227
TRE 321.36-6/16	2.2	1.6	36	33.046	1610	463	210	500	227
TRE 321.37-6/16	2.3	1.8	37	31.651	1700	463	210	500	227
TRE 321.38-4/12	2.7	2.0	38	46.500	1950	481	218	518	235
TRE 321.39-6/16	2.6	2.0	39	30.380	1840	463	210	500	227
TRE 321.43-4/12	3.5	2.6	43	40.740	2300	481	218	518	235
TRE 321.46-4/12	4.2	3.1	46	38.440	2600	481	218	518	235
TRE 321.49-4/12	4.3	3.2	49	36.425	2700	481	218	518	235
TRE 321.51-4/17	5.2	3.9	51	34.658	3150	498	226	536	243
TRE 321.54-4/17	6.0	4.5	54	33.046	3300	498	226	536	243

* = maximum weight including accessories

Motor data											
Wilo-EMU...	Rated motor power		Maximum power consumption		Full load amps	Starting current - direct	Starting current - star-delta	Rated speed	Explosion protection according to		
	hp	P_2 kW	hp	P_1 kW	I_N	A	I_A	n rpm	FM	ATEX	CSA
TE 17-6/16R	2.3	1.8	2.8	2.0	3.9	39	13	1167	-	-	-
TE 20-4/12R	4.7	3.5	5.2	3.9	6.1	49	16	1765	-	-	-
TE 20-4/17R	6.0	4.5	6.8	5.1	8.2	74	24	1770	-	-	-

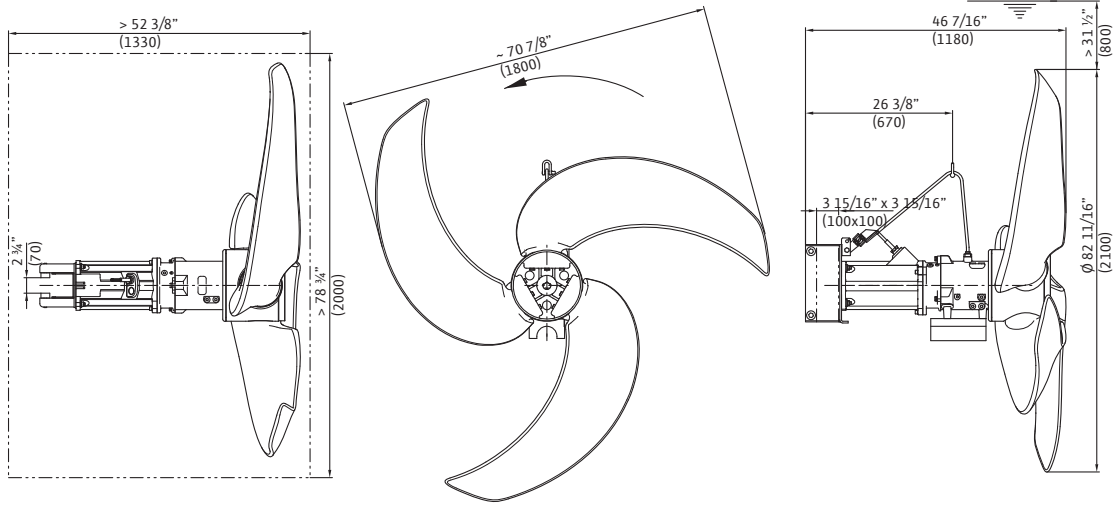
The value $P_{1.1}$ is equivalent to the electrical power consumption at the duty point. P_1 refers to the max. electrical power consumption.

All of the data applies to 3~460 V, 60 Hz and a specific gravity of 1.0.

Thrust and power measurement in accordance with ISO 21630.

• = available, - = not available; o = optional

Dimension drawing Wilo-EMU TRE 321



Technical data									
Wilo-EMU...	Power Consumed		Propeller speed	Transmission ratio	Max. thrust	Weight of unit		Max. weight*	
	hp	$P_{1.1}$ kW	n rpm		F N	lbs	kg	m lbs	kg
TR 326-3.25-6/8	1.7	1.3	25	46.500	1550	439	199	474	215
TR 326-3.29-6/8	2.4	1.8	29	40.740	2040	439	199	474	215
TR 326-3.32-6/8	3.2	2.3	32	36.425	2450	439	199	474	215
TR 326-3.33-6/8	3.3	2.5	33	34.658	2550	439	199	474	215
TR 326-3.37-4/8	4.7	3.5	37	46.500	3400	439	199	474	215
TR 326-3.43-4/8	6.0	4.5	43	40.740	4150	439	199	474	215

* = maximum weight including accessories

Motor data												
Wilo-EMU...	Rated motor power		Maximum power consumption		Full load amps	Starting current - direct	Starting current - star-delta	Rated speed	Explosion protection according to			
	hp	P_2 kW	hp	P_1 kW	I_N	I_A	n rpm	FM	ATEX	CSA		
T 17-4/8R (Ex)	5.6	4.2	7.2	5.4	8	33	11	1690	o	-	o	
T 17-6/8R (Ex)	2.7	2.0	3.9	2.9	4.5	26	9	1080	o	-	o	

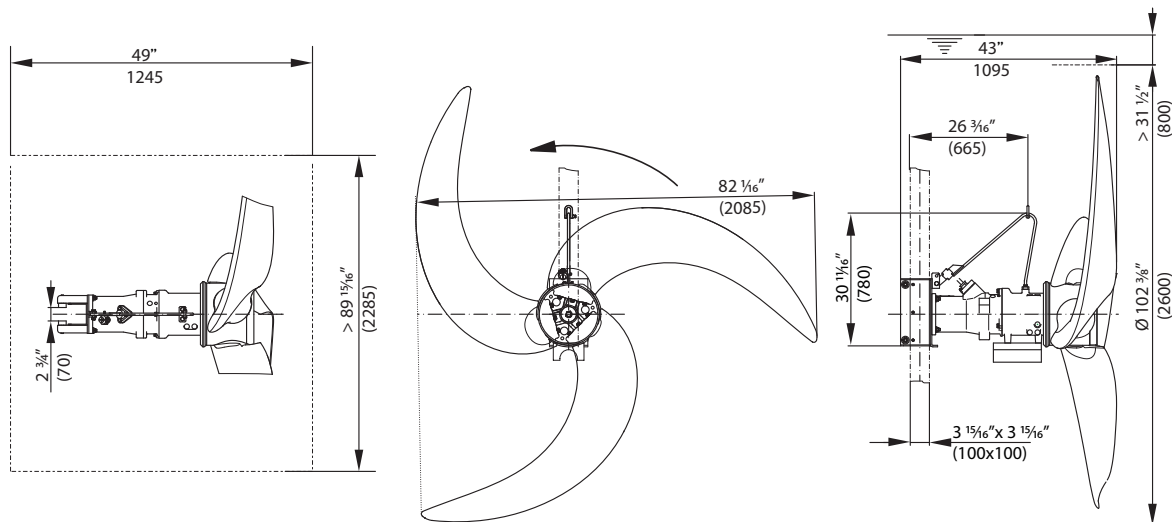
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All of the data applies to 3~460 V, 60 Hz and a specific gravity of 1.0.

Thrust and power measurement in accordance with ISO 21630.

• = available; - = not available; o = optional

Dimension drawing Wilo-EMU TR 326-3



Technical data									
Wilo-EMU...	Power Consumed		Propeller speed	Transmission ratio	Max. thrust	Weight of unit		Max. weight*	
	$P_{1.1}$		n		F	m			
	hp	kW	rpm		N	lbs	kg	lbs	kg
TRE 326-3.25-6/16	1.7	1.3	25	46.500	1650	481	218	518	235
TRE 326-3.29-6/16	2.3	1.7	29	40.740	2040	481	218	518	235
TRE 326-3.31-6/16	2.7	2.0	31	38.440	2300	481	218	518	235
TRE 326-3.38-4/12	4.6	3.4	38	46.500	3550	498	226	536	243
TRE 326-3.43-4/17	5.9	4.4	43	40.740	4300	509	231	547	248

* = maximum weight including accessories

Motor data												
Wilo-EMU...	Rated motor power		Maximum power consumption		Full load amps	Starting current - direct	Starting current - star-delta	Rated speed	Explosion protection according to			
	P_2		P_1		I_N	I_A		n	FM	ATEX	CSA	
	hp	kW	hp	kW	A	A		rpm				
TE 17-6/16R	2.3	1.8	2.8	2.0	3.9	39	13	1167	-	-	-	
TE 20-4/12R	4.7	3.5	5.2	3.9	6.1	49	16	1765	-	-	-	
TE 20-4/17R	6.0	4.5	6.8	5.1	8.2	74	24	1770	-	-	-	

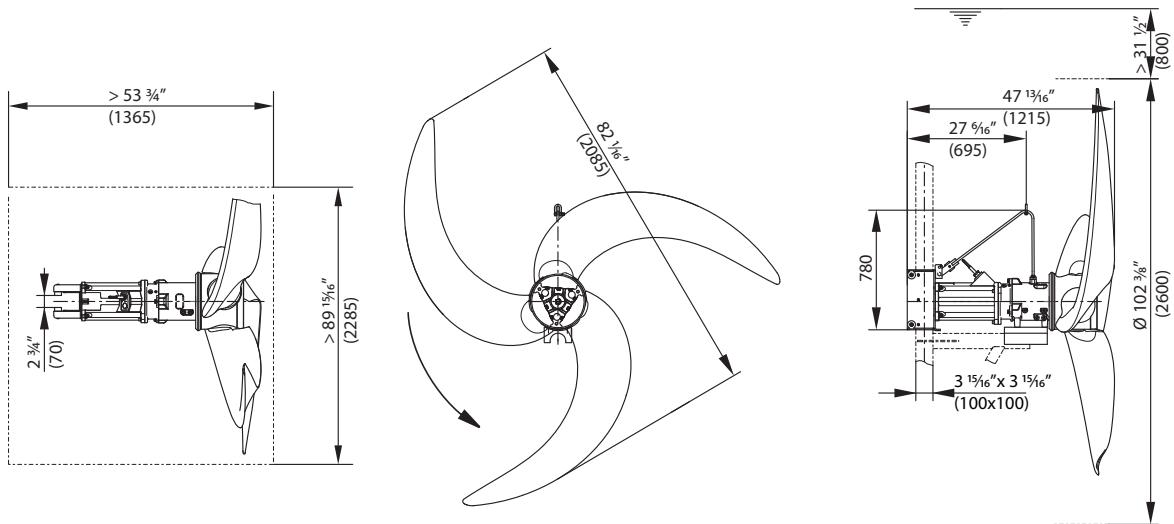
The value $P_{1.1}$ is equivalent to the electrical power consumption at the duty point. P_1 refers to the max. electrical power consumption.

All of the data applies to 3~460 V, 60 Hz and a specific gravity of 1.0.

Thrust and power measurement in accordance with ISO 21630.

• = available, - = not available; o = optional

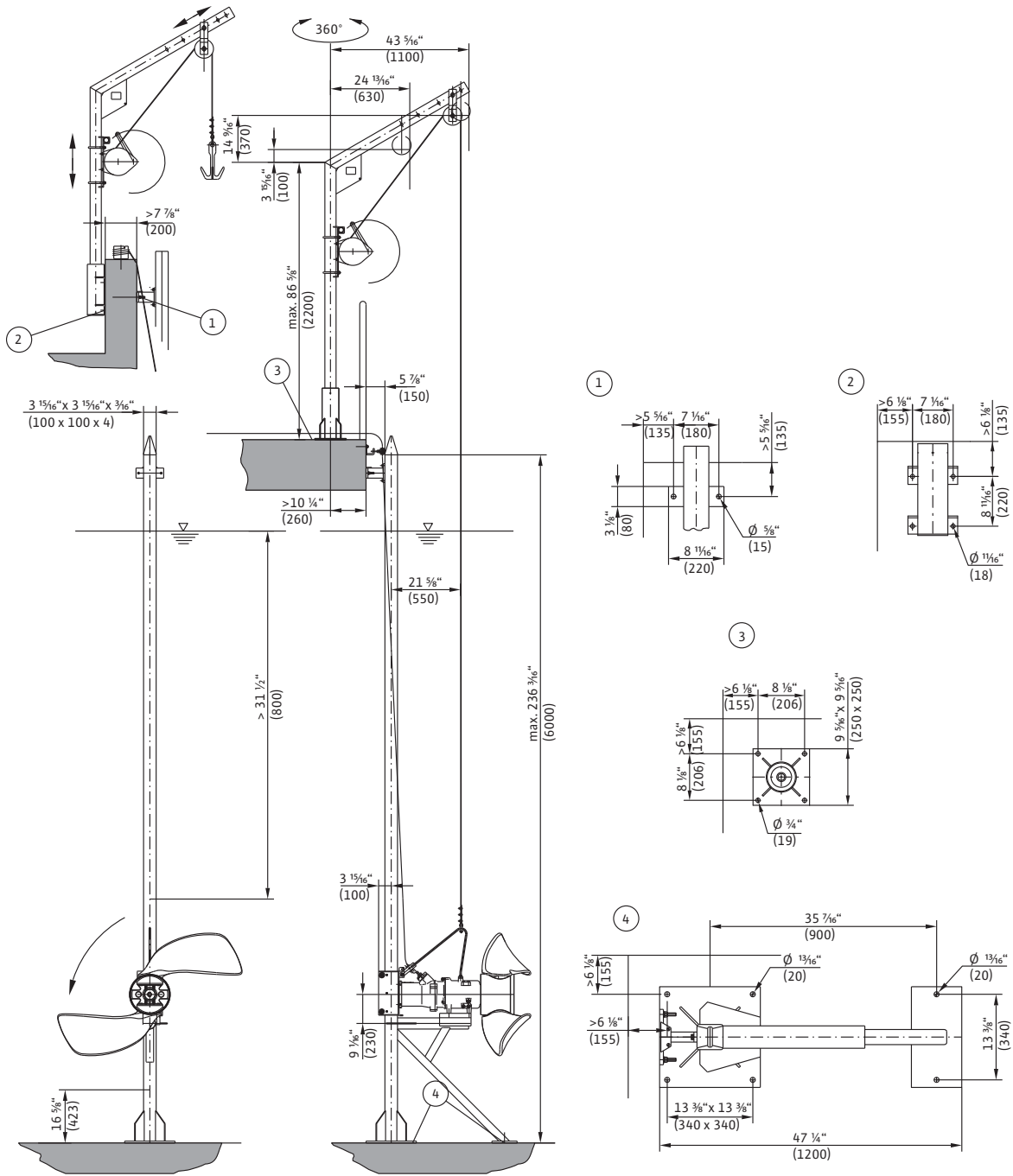
Dimension drawing Wilo-EMU TRE 326-3



Submersible mixers

22 Submersible mixers with two-stage planetary gear

Wilo-EMU Maxiprop mixer with guide rail system AVMSH





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