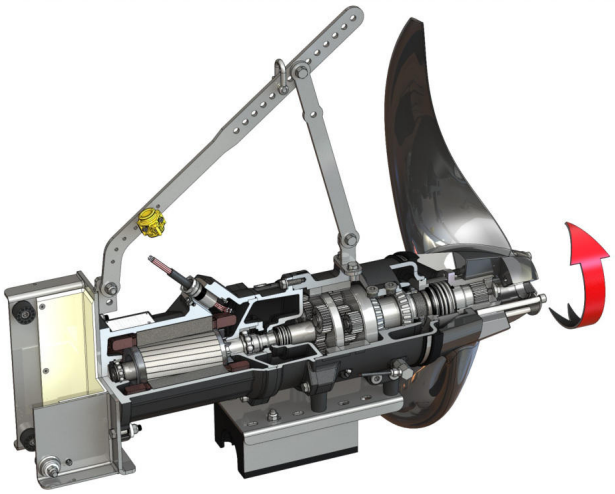
Pioneering for You

# Submersible mixer

## EMU TRE 312.80-6/16



### Unit

| | |
|---|---|
| Power consumption at duty point $P_{1.1}$ | 1.34 hp |
| Max. thrust *F* | 152.9 lbf |
| Thrust to power ratio | 112 lbf/hp |
| Max. weight* *m* | 385.8 lb |
| Explosion protection ATEX *ATEX* | optional |
| Explosion protection FM *FM* | optional |
| Protection class motor | IP68 |

### Propeller

| | |
|---|---|
| Propeller model | 3-blade propeller with self-cleaning hub; clogging- and entwining-free |
| Nominal propeller diameter *Dnom* | 47.2 in (") |
| Propeller speed *n* | 80 RPM |
| Transmission ratio | 14.929 |

### Filling quantities and types

| | |
|---|---|
| Filling prechamber | Gear oil CLP220 |
| Filling volume prechamber *V* | 0.3 US gal |
| Filling gear chamber | Gear oil CLP220 |
| Fill volume gear chamber *V* | 0.2 US gal |
| Filling sealing chamber | White oil |
| Fill volume sealing chamber *V* | 0.3 US gal |

### Motor/electronics

| | |
|---|---|
| Motor type | TE 17-6/16R (Ex) |
| Motor design | Submersible motor – surface-cooled |
| Mains connection | 3~460 V, 60 Hz |
| Rated current $I_N$ | 4.00 A |
| Starting current - direct $I_A$ | 39.00 A |
| Starting current - star-delta $I_A$ | 13.00 A |
| Power consumption $P_{1\ max}$ | 2.8 hp |
| Rated power $P_2$ | 2.4 hp |
| Speed original *n* | 1167 RPM |
| Motor efficiency class | IE3 |
| Efficiency $\eta_M$ | 85.8 % |
| Power factor *cos φ* | 0.66 |
| Min. fluid temperature $T_{min}$ | 37 °F |
| Max. fluid temperature $T_{max}$ | 104 °F |
| Max. immersion depth | 66 ft |
| Insulation class | H |
| Max. switching frequency *t* | 15 rph |
| min. switching break *t* | 3 min |
| Starting torque *M* | 59.0 lbf ft |
| Moment of inertia | 0.49 lb ft² |
| Motor bearings | 2 grooved ball bearing |

### Materials

| | |
|---|---|
| Motor housing | ASTM A48, Class No. 35 |
| Static gaskets | FKM Fluoro rubber |
| Motor shaft | AISI 420 |
| Seal, gear/sealing chamber | SiC/SiC, Q1Q1VGG |
| Gear housing | ASTM A48, Class No. 35 |
| Planetary gear | AISI 5115 |
| Hollow gear | Grade 60 |
| Sun gear | AISI 5115 |
| Output shaft | AISI 329 |
| Seal, gear chamber/prechamber | FKM Fluoro rubber |
| Sealing chamber | ASTM A48, Class No. 35 |
| Seal bushing | AISI 316Ti |
| Propeller hub | AISI 316Ti |
| Propeller | PA6C |

### Gear

| | |
|---|---|
| Gear construction type | m 2.0 as per DIN 780-1:1977-05 /P10 (ISO54: 1996-12); sun and planetary gears case hardened and sanded, internal gear butt-jointed |
| Gear bearings | Six needle roller bearing (planetary), two tapered roller bearings (output shaft adjustable type), gearing permanently fixed |
| Service life $L_{h10}$ | 100,000 operating hours, ISO 281:2007-02 |

*maximum weight including accessories