

Pioneering for You

Submersible mixer

Flumen OPTI-TR 60-3.31-4/12



Unit

| | |
|---|-----------|
| Power consumption at duty point $P_{1,1}$ | 5.70 hp |
| Max. thrust F | 292.3 lbf |
| Thrust to power ratio | 51 lbf/hp |
| Max. weight* m | 363.8 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 |
| Propeller speed n | 312 RPM |
| Transmission ratio | 5.590 |

Filling quantities and types

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|---------------------------------|-----------------|
| Filling prechamber | Gear oil CLP220 |
| Filling volume prechamber V | 0.3 US gal |
| Filling gear chamber | Gear oil CLP220 |
| Fill volume gear chamber V | 0.1 US gal |
| Filling sealing chamber | White oil |
| Fill volume sealing chamber V | 0.3 US gal |

Motor/electronics

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|-------------------------------------|---|
| Motor type | T 17-4/12R (Ex) |
| Motor design | Submersible motor – surface-cooled |
| Mains connection | 3~460 V, 60 Hz |
| Rated current I_N | 10.30 A |
| Starting current – direct I_A | 45.00 A |
| Starting current – star-delta I_A | 15.00 A |
| Power consumption $P_{1\ max}$ | 9.5 hp |
| Rated power P_2 | 7.4 hp |
| Speed original n | 1680 RPM |
| Motor efficiency class | – |
| Efficiency η_M | 78.0 % |
| Power factor $\cos \varphi$ | 0.86 |
| 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 | 49.4 lbf ft |
| Moment of inertia | 0.26 lb ft ² |
| Motor bearings | 1 grooved ball bearing, 1 two-row inclined ball bearing |

Materials

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|-------------------------------|------------------------|
| 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 | AISI 316 |

Gear

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|------------------------|---|
| 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 | Three needle roller bearing (planetary), one two-row inclined ball bearing and one grooved ball bearing (output shaft) |
| Service life L_{h10} | 100,000 operating hours, ISO 281:2007-02 |

*maximum weight including accessories