

Data Sheet

DISPAX-REACTOR® DRS 2000/20

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The DISPAX-REACTOR® DRS is an inline ultra high shear dispersing machine used to achieve the finest micro-emulsions and suspensions. Extremely high shear rates (up to 190,000 s⁻¹) combined with a fine generator geometry enable crushing of droplets and solids particles down to nanoscale. The resulting product has long-term stability which reduces the need for emulsifying agents and thickeners. Because of the extremely high energy density, other dispersing aids can be reduced or possibly eliminated.

The DRS is usually equipped with a two-stage rotor/stator system (generators). The high tip speed of 40 m/s (10,000 fpm) often negates the need for a third stage. The DRS, designed with the same high quality features as the ULTRA-TURRAX® and the DISPAX-REACTOR® DR, is especially well suited for challenging pharmaceutical applications.

The high shear dispersing machine DISPAX-REACTOR® DRS 2000 is available in five sizes. The possible throughput (H₂O) varies from 3 to 175 gpm. All machine sizes work with the same circumferential speed of the rotor which provides for reliable scale-up.

Advantages of the DISPAX-REACTOR® DRS 2000 machine:

- Simple, yet robust design, which is synonymous with long service life
- Improved dispersing performance. Simple speed adjustment by use of a belt drive
- Pharmaceutical execution available
- Explosion protected execution available
- Manufactured according to EHDG guide lines
- 3A-Sanitary conformed and certified
- Easy scale-up of processes
- High-value seals with wear-resistant materials
- High quality surface finishes
- Machine is self-draining and CIP, SIP capable
- All wetted parts are made of 316L stainless steel
- Capable of operating under pressure of up to 16 bar
- Special materials and finishes are available upon request
- Low noise level

IKA engineers and application experts are available to assist you with selection of machine type, execution and dispersing tools as well installation into existing process systems or extension to the new production plants.



Technical Data

Flow rate (max)	30 gpm
Motor power	50 Hp
Motor speed	3,600 rpm
Tip speed	40 m/s
Speed regulation possible	Yes
Dispersing tools	Variable
Single mechanical seal	Yes
Double mechanical seal	Yes
Ex-proof possible	Yes
Process pressure (max)	16 bar
Process Temp. (max)	160° C
Cleaning	Yes, CIP
Sterilization	Yes, SIP
Inlet	3"
Outlet	2 ½"
Ident. No.	DRS 2000/20

