

# Flygt 4220

ADAPTIVE SUBMERSIBLE COMPACT MIXER

The Flygt 4220 presents a new level in mixing performance. Thanks to the integrated power electronics and remote operation capabilities of the Flygt Dirigo™ technology platform, you can easily make adjustments to the mixer's output for complete control.



## IMPROVE PROCESS RESILIENCY

Whether through the user-friendly Flygt Operator Panel (FOP) or integration into a plant-wide SCADA system, the Flygt 4220 puts you in complete control of your mixer's output, so you can react quickly and efficiently to achieve the desired mixing results.



## SPEND LESS ON ENERGY

The integrated power electronics can be controlled to deliver only the thrust required - and nothing more - which results in total energy savings of up to 50%. And with a super premium efficient motor and large propeller diameter at lower speed, the Flygt 4220 offers market leading ISO 21630 efficiency.



## REDUCE MIXER INVENTORY

Thanks to a wide range of duty points the Flygt 4220 can be redeployed across different tanks and applications enabling lower capital investment in parts and spare mixers.



## INCREASE MIXER UPTIME

With the Flygt 4220, you know exactly what is going on without having to touch the mixer - or even leave your control room. When overload conditions are imminent, the Flygt 4220 automatically senses the danger and adjusts output to protect the motor. Integrated monitoring functions include speed, power, alarms, running time and energy consumption.



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# Flygt 4220

Submersible compact mixer with adjustable speed and integrated motor control. Intended for wastewater, sludge and similar applications containing fibres and solids.

## Motor data

Type	Synchronous permanent magnet motor
Efficiency	IE4 level according to IEC/TS 60034-30-2 Ed. 1
Frequency	50-60 Hz
Voltage	380-480 V
Speed, max	800 rpm
Insulation class	H (180°C, 356°F)

## Materials

Wetted metal parts	ASTM 316L
Propeller shaft	ASTM/AISI 431
Oil	Paraffin oil ISO VG32
O-rings	Fluorinated rubber

## Cable

Screened Flygt SUBCAB® with integrated control leads 10 or 20 m (30 or 60 ft)

## Weight and dimensions

Weight, max	70 kg (154 lb)
Length, excl. bracket	660 mm (26.0 in.)
Propeller diameter	580 mm (22.8 in.), Option: 370 mm (14.5 in.)
Guide bar bracket	50×50 mm (2×2 in.) 50×100 mm (2×4 in.) 60×60 mm (2.4×2.4 in.) 80×80 mm (3×3 in.) 100×100 mm (4×4 in.)

## Application data

Liquid temperature, max	40°C (104°F)
Liquid density, max	1,100 kg/m <sup>3</sup> (9.2 lb per US gal)
pH-range of mixed liquid	1-12
Depth of immersion, max	20 m (65 ft)

## Mixer approvals

CE, CSA, UL

## Gateway - FPG 415

The gateway enables monitoring and control of mixer performance and status, including speed, power, alarms, running time and energy consumption, via operator panel or remote communications.

Communication	Modbus RTU / TCP, 4-20 mA
Standard Input/Output Ports	4 × DO, 4 × DI, 1 × AO, 1 × AI
Environment class	USB, RS485, Ethernet, operator panel, mixer IP 20, operation temperature -20°C to +65°C
Power supply	24 VDC
Size (W×L×H)	45×100×100 mm, DIN mount
Approvals	CE, UL, CSA, RCM

## Jog wheel operator panel - FOP 315

Screen	3.5" monochrome LCD
Environment class	Handheld: IP 20 Door mount. Front: IP 54; Back: IP21 Operation temp: -20°C to +70°C (-4°F to 158°F)
Power supply	24 VDC
Size (W×L×H)	205×33×110 mm, DIN mount
Approvals	CE, UL

## Touch screen operator panel - FOP 402

Screen	7" color touch screen
Environment class	Front: IP65; Back: IP20 Operation temp: -20°C to +60°C (-4°F to 140°F)
Power supply	24 VDC
Size (W×L×H)	197×42×140 mm
Approvals	CE, UL



FPG 415



FOP 315



FOP 402

## Performance

Rated power 50/60 Hz	1.1 kW (1.5 hp)	1.5 kW (2.0 hp)	2.2 kW (3.0 hp)	3.0 kW (4.0 hp)
Propeller diameter, mm (in.)	370 or 580 (14.5 or 22.8)	370 or 580 (14.5 or 22.8)	370 or 580 (14.5 or 22.8)	370 (14.5)
<b>Max thrust, N</b>				
Propeller diameter 370 mm (14.5 in.)	390	540	710	830
Propeller diameter 580 mm (22.8 in.)	450	720	940	N/A
<b>Max efficiency, N/kW*</b>				
Propeller diameter 370 mm (14.5 in.)	470	470	470	440
Propeller diameter 580 mm (22.8 in.)	530	590	590	N/A
Current, rated and starting, A (380 V)	2.9	3.5	4.7	5.8

\*according to ISO 21630:2007