FP 6000Q

- **Very high power and channel density –** The four-channel FP 6000Q delivers a total of 6000 W (4 x 1500 W @ 2 ohms) in only 2U.
- **Four-channel flexibility –** Four channels in one cabinet increases efficiency, flexibility and value in powering monitor systems, line arrays, and bi- or tri-amped systems. Adjacent channels bridgeable for 2- or 3-channel operation.
- **Lab.gruppen sound quality –** FP 6000Q amplifiers maintain the impeccable sonic performance standards set by the original fP Series, with the same durability and even greater efficiency.
- **NomadLink® network ready –** Monitoring and control of key functions accessible via the intuitive DeviceControl software and the robust, daisy-chained NomadLink network, as well as by the leading third party control platforms.
- **Patented Class TD amplifier topology –** Road-proven output stage delivers Class B audio quality with Class D efficiency.
- **Regulated Switch Mode Power Supply (R.SMPS™) –** Output power remains constant even with significant drops in the mains voltage.
- **Efficient cooling system –** Unique, lightweight Intercooler® copper cooling system dissipates more heat to allow extended peak output.
- **Adjustable parameters –** Selectable Gain, scalable Voltage Peak Limiter (VPL™), and bridge-mode operation allow custom configuration for any system or application.
- **XLR input connectors**
- **Heavy-duty binding post or speakON® output connectors**
- **Comprehensive protection and warning –** Excessive output current, DC, high temperature, very high frequency (VHF), short circuit, open load, mains fuse protection, and soft start.

A Benchmark For Touring Amplification

Over the past decade, the tight and transparent sound of Lab.gruppen touring amplifiers has earned the praise of renowned FOH engineers and leading sound rental companies worldwide. FP 6000Q, the second four-channel model of the FP+ Series, continues this tradition. At the core of the FP 6000Q's performance is the patented Class TD output stage, a breakthrough amplifier topology that approaches the exceptional efficiency of Class D while retaining the sonic purity of proven Class B designs. Further contributing to the remarkable efficiency of the FP 6000Q is a Regulated Switch Mode Power Supply (R.SMPS), which gives the added benefit of stabilizing rail voltages to the output even with wide fluctuations of mains voltage. A highly refined and updated circuit layout optimizes the interaction of R.SMPS and Class TD to produce the extraordinary power and channel density of the FP 6000Q.

To keep its cool under extreme demands, the FP 6000Q relies on Lab.gruppen's proprietary Intercooler. This innovation uses thousands of copper fins to multiply the exposed heatsink surface's rapid heat dissipation. Also, all output devices are mounted transverse to the airflow for uniform cooling. As a result, the FP 6000Q delivers Lab.gruppen's' trademark "all the power, all the time" with no degradation of sonic performance.

To maximize headroom in any application, the FP 6000Q offers adjustable input gain along with Lab.gruppen's exclusive Voltage Peak Limiter (VPL). Adjustable on a per-channel basis, VPL optimizes the output for any load, from a single massive subwoofer to a series of HF compression drivers.

The comprehensive warning and protection features on the FP 6000Q safeguard output circuits and connected loads while also extending amplifier life and minimizing the chance of service interruptions. Whether it's a matter of faulty wiring, improper use, or extreme ambient temperatures, the FP 6000Q gives clear indication of any problems. Automatic protection measures engage only at critical thresholds, and conditions are re-checked every six seconds with normal operation resumed when measurements return to nominal.

The FP 6000Q is shipped with a NomadLink network interface as standard. In conjunction with DeviceControl software, or the leading third party control platforms, NomadLink network allows monitoring of all key amplifier parameters and remote control of power on/off, channel mutes, and channel solo functions. (NomadLink requires the separate NLB 60E NomadLink Bridge & Network Controller).

Specifications FP 6000Q

General				
Number of channels	4			
Peak total output both channels driven	6000 W			
Peak output voltage per channel	101 V			
Max. output current per channel	38 A peak			
Max. Output Power	**2 ohms**	**4 ohms**	**8 ohms**	**16 ohms**
Per ch. (both ch.'s driven)	1500 W	1250 W	625 W	320 W
Bridged per ch.	n.r. [1]	3000 W	2500 W	1250 W
Performance with Gain: 35 dB and VPL: 101 V				
THD 20 Hz - 20 kHz for 1 W	<0.1%			
THD at 1 kHz and 1 dB below clipping	<0.05%			
Signal To Noise Ratio	>112 dBA			
Channel separation (Crosstalk) at 1 kHz	>70 dB			
Frequency response (1 W into 8 ohms) +0/-3 dB	6.8 Hz - 34 kHz			
Input impedance	20 kOhm			
Common Mode Rejection (CMR)	>54 dB, 20Hz to 20 kHz			
Output impedance @ 100 Hz	32 mOhm			
Voltage Peak Limiter (VPL), max. peak output				
VPL, selectable per ch.	101, 83, 70, 56, 47, 38 V			
VPL, selectable when bridged [2]	202, 166, 140, 112, 94, 76 V			
Voltage Peak Limiter mode (per ch.)	Hard / Soft			
Gain and Level				
Amplifier gain selectable (all channels) [2] – rear-panel switches	23, 26, 29, 32, 35, 38, 41, 44 dB			
Default gain	35 dB			
Level adjustment (per ch.)	Front-panel potentiometer, 31 position detented from -inf to 0 dB			
Connectors and Switches				
Input connectors (per ch.)	3-pin XLR, electronically balanced			
Output connectors (per ch.)	Neutrik speakON® or Binding Posts (must be specified upon order)			
Output bridge mode per two ch.'s	A+B - Ch. A is signal input source			
NomadLink network	On board, 2 x RJ45 etherCON® connectors, IN and OUT			
Intelligent fans (on/off)	Yes, depending on presence of output signal			
Power on/off and Remote enable on/off	Individual switches on front-panel			
Cooling	Two fans, front-to-rear airflow, temperature controlled speed			
Front-panel indicators:				
Common	NomadLink network; Power Average Limiter (PAL) [4]; Power on			
Per channel	Signal present / High-impedance; -20 dB, -15 dB, -10 dB and -4 dB output signal; Voltage Peak Limiter (VPL); Current Peak Limiter (CPL); Very High Frequency (VHF); High temperature; Fault; Mute			
Power				
Operating voltage, 230 V / 115 V nominal [3]	130-265 V / 65-135 V			
Minimum power-up voltage, 230 V / 115 V	171 V / 85 V			
Power Average Limiter (PAL) [4]	Yes			
Soft start / Inrush Current Draw	Yes / max. 5 A			
Mains connector	230 V CE: 16 A, CEE7; 115 V ETL: 30 A Twist lock			
Dimensions	W: 483 mm (19"), H: 88 mm (2 U), Overall D: 396 mm (15.6"), Mounting D: 358 mm (14.1")			
Weight	12 kg (26.4 lbs.)			
Finish	Black painted steel chassis with black painted steel / aluminum front			
Approvals	CE, ANSI/UL 60065 (ETL), CSA C22.2 NO. 60065, FCC			

Note 1): Regarding n.r. (not recommended) notes: The amplifier will be fully operational in bridge-mode into 2 ohm and high impedance (Hi-Z) loads, but due to physical constraints in the construction, the max. output power will not be significantly higher than running individual channels and therefore this mode of operation is not recommended.
Note 2): Automatic -6 dB gain compensation when bridging channels.
Note 3): Separate 230 V or 115 V versions available. Not selectable on the amplifier.
Note 4): PAL can reduce the maximum output power to keep the power supply operating safely, and/or to prevent excessive current draw tripping the mains breaker. Refer to the FP+ Operation Manual section 7.5.8 Power Average Limiter (PAL) for more information.

All specifications are subject to change without notice.