

CASE FANS OVERVIEW

- Optimised fan design for better airflow
- Push- or Pull-Configuration possible
- Particularly quiet operation through innovative fan blades

F Series

Standard Case Fan



- 3-pin connector is also compatible with 4-pin connector

F Silent Series

Silent Case Fan



- Especially quiet engine, developed in Germany
- 3-pin connector is also compatible with 4-pin connector

F Pro Series

Case Fan with Vibration Absorption



- Maximum operating smoothness due to vibration reducing fan holder
- 3-pin connector is also compatible with 4-pin connector

F TC Series

Temperature Controlled Case Fan



- Temperature sensor regulates fan speed
- 3-pin connector is also compatible with 4-pin connector

F PWM Series

PWM Case Fan



- PWM signal adjusts fan speed
- 4-pin connector

F PWM PST Series

PWM PST Case Fan



- Patented PWM Sharing Technology (PST) regulates fan speed synchronously
- 4-pin connector

F Pro TC Series

Temperature Controlled Case Fan with Vibration Absorption



- Temperature sensor regulates fan speed
- Maximum operating smoothness due to vibration reducing fan holder
- 3-pin connector is also compatible with 4-pin connector

F Pro PWM PST Series

PWM PST Case Fan with Vibration Absorption



- Patented PWM Sharing Technology (PST) regulates fan speed synchronously
- Maximum operating smoothness due to vibration reducing fan holder
- 3-pin connector is also compatible with 4-pin connector

F PWM PST CO Series

PWM PST Case Fan for Continuous Operation



- Patented PWM Sharing Technology (PST) regulates fan speed synchronously
- Dual ball bearing
- 5-times longer lifespan than traditional bearings
- 4-pin connector

FEATURES



	PWM	PST	CO	TC	Pro	Silent
	<p>The PWM function allows the motherboard to run the fan precisely at its necessary speed. This guarantees the required cooling and minimizes the noise level.</p>	<p>The PST assures that all of your fans listen to one control signal. E.g. you share the CPU Cooler's PWM signal and assure that your case fans stand down at low load and spin up whenever necessary.</p>	<p>The premium quality Japanese dual ball bearing allows continuous operation 24/7 without the slightest compromise in performance. The CO case fan's life span is up to 5 times longer compared to models using a generic bearing.</p>	<p>The temperature sensor is on a 40 cm cable and can be placed in the warm areas of your computer. This assures temperatures no higher than 38 °C anywhere in the case and supports the cooling of your CPU or graphics card.</p>	<p>A unique anti-vibration system in combination with the patented fan holder ensure a near-silent operation.</p>	<p>At low fan speed, the motor noise is key. A motor developed in Germany with a new alloy/lubricant combination reduced friction and noise.</p>
						
F8						
F9						
F12						
F14						
F8 Silent						X
F9 Silent						X
F12 Silent						X
F14 Silent						X
F8 Pro					X	
F9 Pro					X	
F12 Pro					X	
F8 TC				X		
F9 TC				X		
F12 TC				X		
F14 TC				X		
F8 PWM	X					
F9 PWM	X					
F12 PWM	X					
F14 PWM	X					
F8 PWM PST	X	X				
F9 PWM PST	X	X				
F12 PWM PST	X	X				
F14 PWM PST	X	X				
F8 Pro TC				X		
F9 Pro TC				X		
F12 Pro TC				X		
F8 Pro PWM PST	X	X				
F9 Pro PWM PST	X	X				
F12 Pro PWM PST	X	X				
F8 PWM PST CO	X	X	X			
F9 PWM PST CO	X	X	X			
F12 PWM PST CO	X	X	X			
F14 PWM PST CO	X	X	X			

Model	Size	Fan Speed	Noise Level @1200 RPM	Control Type	Bearing	Warranty
F8	80x80x25 mm	2000 RPM	0.3 Sone	Fixed Speed	Fluid Dynamic Bearing	6 Years
F9	92x92x25 mm	1800 RPM	0.4 Sone	Fixed Speed	Fluid Dynamic Bearing	6 Years
F12	120x120x25 mm	1350 RPM	0.3 Sone	Fixed Speed	Fluid Dynamic Bearing	6 Years
F14	140x140x25 mm	1300 RPM	0.5 Sone	Fixed Speed	Fluid Dynamic Bearing	6 Years
F8 Silent	80x80x25 mm	400 - 1200 RPM	0.08 Sone	Fixed Speed	Fluid Dynamic Bearing	6 Years
F9 Silent	92x92x25 mm	390 - 1000 RPM	0.08 Sone	Fixed Speed	Fluid Dynamic Bearing	6 Years
F12 Silent	120x120x25 mm	360 - 800 RPM	0.08 Sone	Fixed Speed	Fluid Dynamic Bearing	6 Years
F14 Silent	140x140x27 mm	800 RPM RPM	0.08 Sone	Fixed Speed	Fluid Dynamic Bearing	6 Years
F8 Pro	80x80x25 mm	2000 RPM	0.3 Sone	Fixed Speed	Fluid Dynamic Bearing	6 Years
F9 Pro	92x92x25 mm	2000 RPM	0.4 Sone	Fixed Speed	Fluid Dynamic Bearing	6 Years
F12 Pro	120x120x25 mm	1500 RPM	0.3 Sone	Fixed Speed	Fluid Dynamic Bearing	6 Years
F8 TC	80x80x25 mm	500 - 2000 RPM	0.3 Sone	Temperature Control	Fluid Dynamic Bearing	6 Years
F9 TC	92x92x25 mm	400 - 1800 RPM	0.4 Sone	Temperature Control	Fluid Dynamic Bearing	6 Years
F12 TC	120x120x25 mm	300 - 1350 RPM	0.3 Sone	Temperature Control	Fluid Dynamic Bearing	6 Years
F14 TC	140x140x27 mm	960 - 1350 RPM	0.3 Sone	Temperature Control	Fluid Dynamic Bearing	6 Years
F8 PWM	80x80x25 mm	850 - 2000 RPM	0.3 Sone	PWM	Fluid Dynamic Bearing	6 Years
F9 PWM	92x92x25 mm	550 - 1800 RPM	0.4 Sone	PWM	Fluid Dynamic Bearing	6 Years
F12 PWM	120x120x25 mm	600 - 1350 RPM	0.3 Sone	PWM	Fluid Dynamic Bearing	6 Years
F14 PWM	140x140x27 mm	1350 RPM	0.3 Sone	PWM	Fluid Dynamic Bearing	6 Years
F8 PWM PST	80x80x25 mm	700 - 2000 RPM	0.3 Sone	PST	Fluid Dynamic Bearing	6 Years
F9 PWM PST	92x92x25 mm	600 - 1800 RPM	0.4 Sone	PST	Fluid Dynamic Bearing	6 Years
F12 PWM PST	120x120x25 mm	300 - 1350 RPM	0.3 Sone	PST	Fluid Dynamic Bearing	6 Years
F14 PWM PST	140x140x25 mm	550 - 1300 RPM	0.5 Sone	PST	Fluid Dynamic Bearing	6 Years
F8 Pro TC	80x80x34 mm	2000 RPM	0.3 Sone	Temperature Control	Fluid Dynamic Bearing	6 Years
F9 Pro TC	92x92x34 mm	2000 RPM	0.4 Sone	Temperature Control	Fluid Dynamic Bearing	6 Years
F12 Pro TC	120x120x37.5 mm	1500 RPM	0.3 Sone	Temperature Control	Fluid Dynamic Bearing	6 Years
F8 Pro PWM PST	80x80x34 mm	2000 RPM	0.3 Sone	PST	Fluid Dynamic Bearing	6 Years
F9 Pro PWM PST	92x92x34 mm	2000 RPM	0.4 Sone	PST	Fluid Dynamic Bearing	6 Years
F12 Pro PWM PST	120x120x37.5 mm	1500 RPM	0.5 Sone	PST	Fluid Dynamic Bearing	6 Years
F8 PWM PST CO	80x80x25 mm	700 - 200 RPM	0.3 Sone	PST	Dual Ball Bearing	6 Years
F9 PWM PST CO	92x92x25 mm	600 - 1800 RPM	0.4 Sone	PST	Dual Ball Bearing	6 Years
F12 PWM PST CO	120x120x25 mm	300 - 1350 RPM	0.3 Sone	PST	Dual Ball Bearing	6 Years
F14 PWM PST CO	140x140x27 mm	1350 RPM	0.3 Sone	PST	Dual Ball Bearing	6 Years