SFC Series Features

Optimised for cooling tower use

1. Selection Criteria

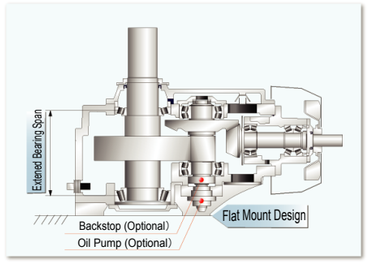
- The SFC Series was specifically designed for the cooling tower environment.
- Use the chart to find the correct size based on motor size and reduction ratio.

Motor Size vs. Fan Speed — Input Speed 1800r/min

Fan Speed r/min	285	253	225	200	180	160	144	128	112	100
Reduction Ratio	6.3	7.1	8	9	10	11.2	12.5	14	16	18
Motor (kW) 55										
75										
90										
110										
132										
160										
200										
250										
280										
Gearbox Size	SFC045	SFC055	SFC060	SFC065	SFC070	SFC075				

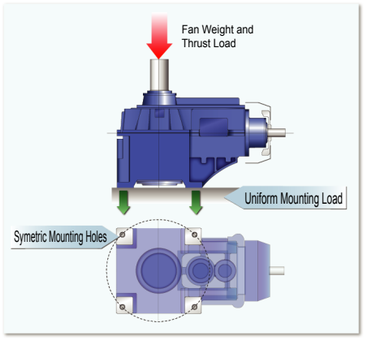
2. Low Vibration Design

- Extended Bearing Span
  Even if the cooling fan is balanced , excess vibration can occur during operation. Using an extended fan drive shaft (gearbox low speed shaft), run-out due to fan operation is significantly reduced.
- Balanced Mounting Load
  By arranging the mounting bolt holes uniformly about the fan drive shaft, the load to the gearbox mounting base is transmitted uniformly.



3. Flat Mount Design

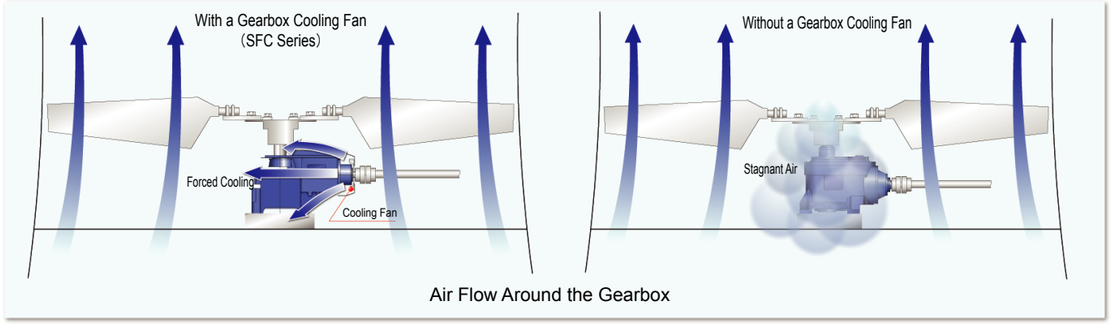
The SFC gearbox is designed without protrusions beneath the mounting surface, leading to simple mounting base design and construction.
The design also takes into account the use of an optional backstop and pump to be added without protruding beneath the mounting surface.



4. Thermally Efficient Design

Due to the gearbox location in a cooling tower, minimal airflow from the cooling tower fan reaches it.
The SFC gearbox is designed with maximum heat dissipation in mind.

- Maximized Surface Area
- High Efficiency Gearbox Cooling Fan

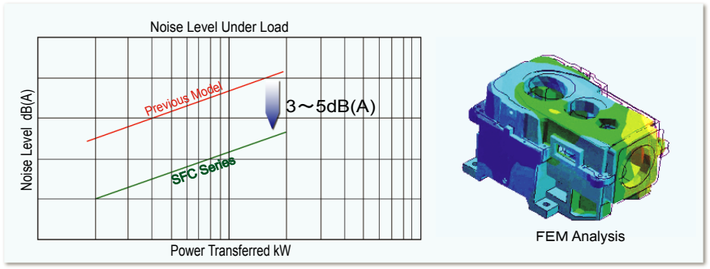


Air Flow Around the Gearbox

Low Noise

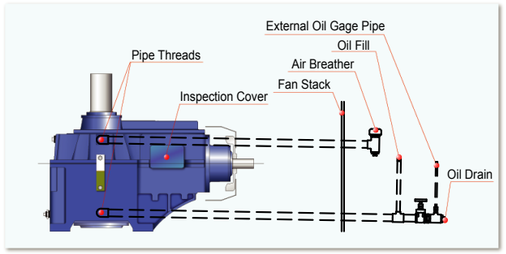
3～5dB(A) Noise Reduction From Previous Series

Shaft speed reduction achieved using optimised gear pairs, reducing gear noise.
Using FEM analysis, deflection under load is minimized and proper gear tooth contact is maintained.
FEM modal analysis is also performed to minimize natural frequency oscillation.



Ease of Maintanence

- 1 Year Maintenance free operation.
- Gearbox is drilled and tapped for attachment of external air breather and oil fill/drain.
- Internal gearbox inspection possible without draining oil due to inspection cover location above operating oil level.
- Using internal splash oil lubrication, use of an oil pump and its periodic replacement is not required.

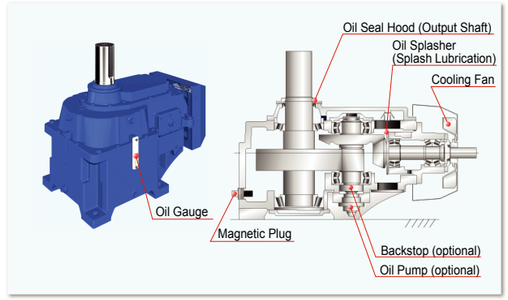


Available Accessories

Cooling Tower specific accessories are standard eqiupment.

Standard Equipment	Options
Integral Cooling Fan	Backstop*
Oil Seal Hood (Output Shaft)	Oil Heater
Oil Gauge	Oil Pump
Magnetic Plug	Flow Switch
	Oil Level Switch
	Dust-free Air Breather
	Vibration Sensor Seat

* Use of a backstop (optional) is to prevent reverse rotation of the cooling fan. Backstop uses the internal gear oil for lubrication. Grease lubrication type is also available.



Inverter Controlled Motors

Due to the recent application of inverter controlled motors, SFC series is designed for continuous lubrication in variable speed environments.