



EBARA

Looking ahead,
going beyond expectations
Ahead  *Beyond*

Japanese Technology since 1912

Cast Iron In-Line Pumps

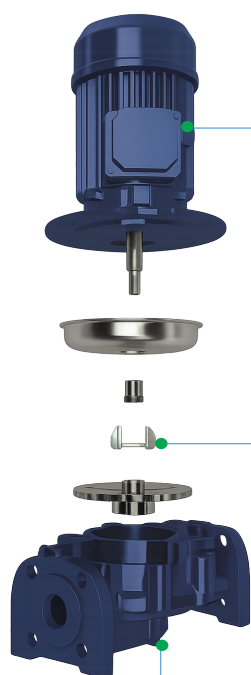
Model **3E/3ES(-K)**



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3E/3ES

Cast iron in-line pump



1 Versatile constructions

3E

Extended shaft motors for compact design

3ES

Standard motor solutions equipped with stub shaft rigid coupling WEG W21 as standard



2 Patented air ventilation system

The rotating "Air-Vent" baffle is EBARA's patented technology for a self-air ventilation system that lubricates the mechanical seal without the needs for an air-vent plug on the pump bracket

The rotating baffle uses centrifugal force to expel trapped air from the mechanical seal chamber

3

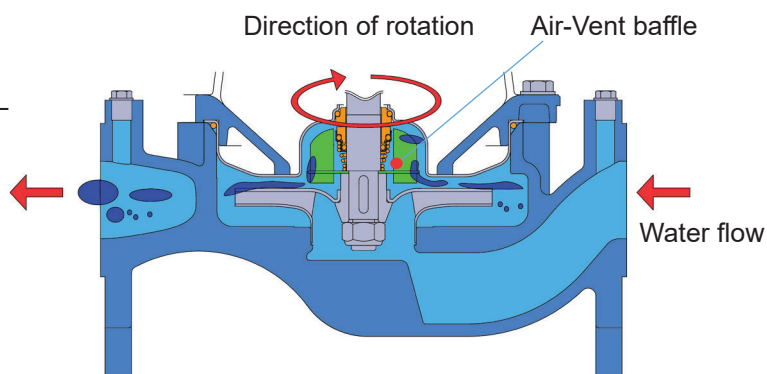
Durable hydraulic design

- Impeller made of stainless steel 304 or 316L
- Pump casing with CED (Cathodic Electro-Deposition)



4 Energy saving

3ES-K is equipped with E-SPD Plus, an inverter that optimises operating points according to the system requirements for energy saving



Baseplates for 3ES

Baseplates are supplied as standard for 11 kW motors and above

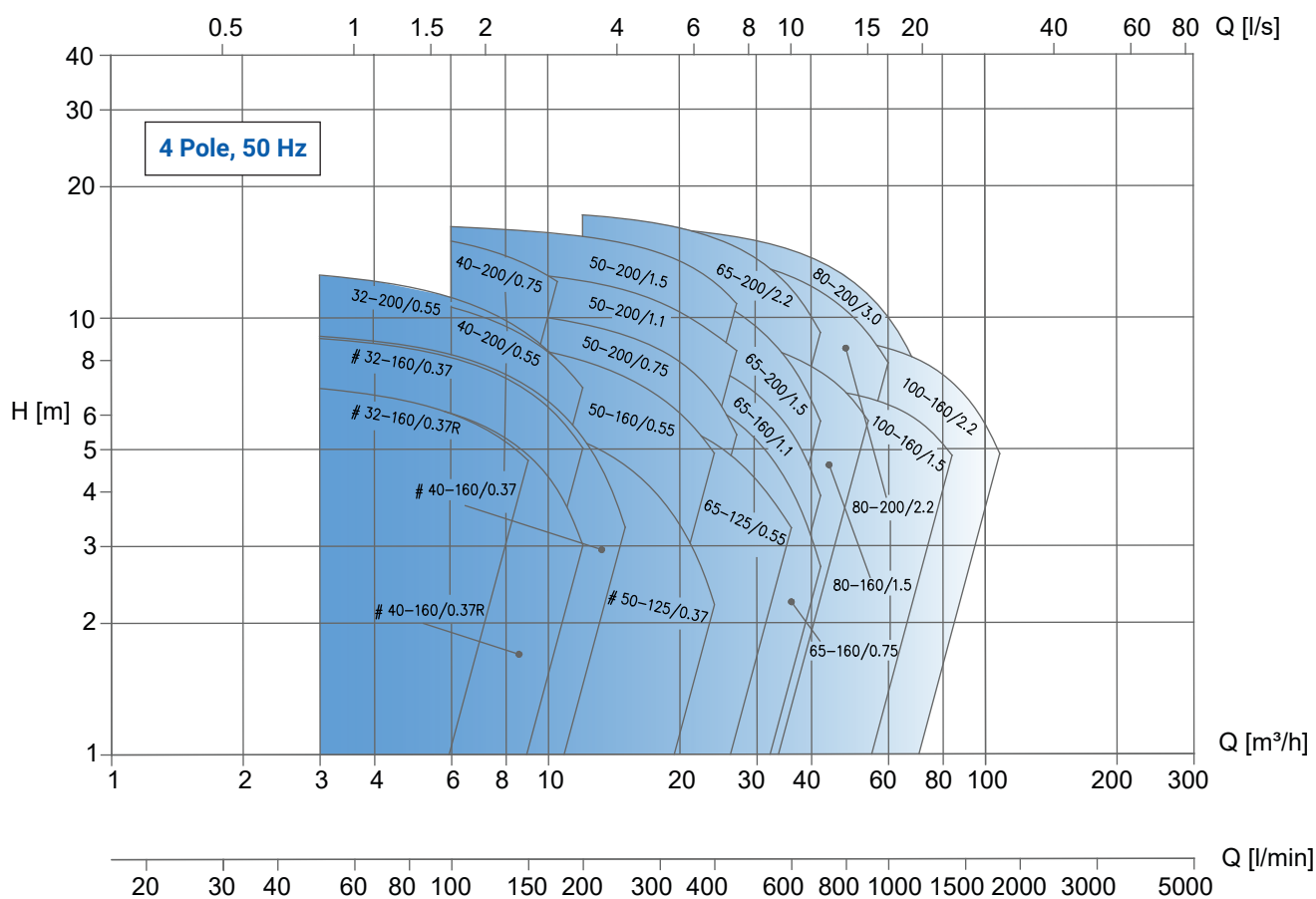
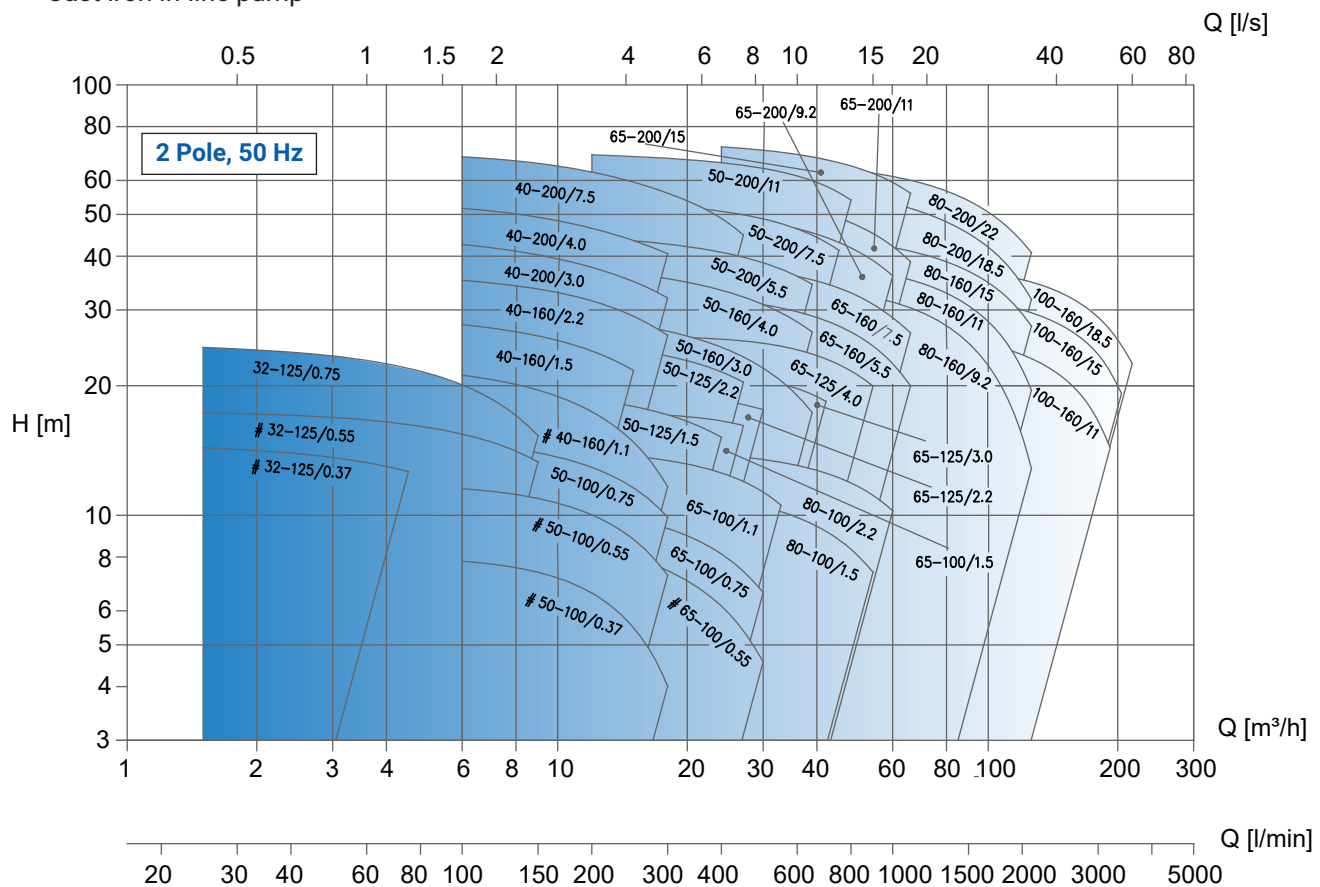
Pump Models	Hexagon head screws
50-200, 65-200	3 x M12
80-160, 80-200, 100-160	4 x M12



Selection chart

3E/3ES

Cast iron in-line pump



[Note] : Models with a "#" are 3E pumps, and the others are 3ES pumps

Operating range	3E	3ES	3ES-K
Flow rate	up to 30 m³/h (2 pole) up to 27 m³/h (4 pole)	up to 216 m³/h (2 pole) up to 108 m³/h (4 pole)	up to 204 m³/h
Total head	up to 18 m (2 pole) up to 9.3 m (4 pole)	up to 68.7 m (2 pole) up to 17.9 m (4 pole)	up to 68.7 m
Suction & Discharge	32 / 40 / 50 / 65	32 / 40 / 50 / 65 / 80 / 100	32 / 40 / 50 / 65 / 80 / 100
Max. working pressure	10 bar	10 / 16 bar	10 / 16 bar
Max. liquid temperature	-10 to 120°C		
Pump Efficiency	MEI ≥ 0.4 to MEI ≥ 0.7 depending on model 3E/3ES		

Material	3E	3ES	3ES-K
Casing	Cast iron with CED (Cathodic Electro-Deposition) coating		
Impeller	304 stainless steel	316L stainless steel or 304 stainless steel	316L stainless steel or 304 stainless steel
Mechanical Seal	SiC/Carbon/EPDM	SiC/SiC/EPDM	SiC/SiC/EPDM

Motors	3E	3ES	3ES-K
Motor brand	EBARA extended shaft motor	WEG W21 (3 ph) TECHTOP (1 ph)	ETM (EBARA IE3 Motor)
Motor efficiency	IE2 (0.37 to 0.55 kW) IE3 (0.75 kw and above)	IE3 (3 ph)	IE3 (3 ph)
Motor size	0.37 to 1.1 kW (3 ph – 2 pole) 0.37 kW (3 ph – 4 pole)	0.37 to 22 kW (3 ph – 2 pole) 0.37 to 3.0 kW (3 ph – 4 pole) 0.37 to 3.0 kW (1 ph – 2 pole)	1.1 to 11 kW (3 ph – 2 pole)
Motor data	IP55, Class F insulation		
Power supply	400 V (3 ph)	400 V (3 ph) 240/480 V (1 ph)	400 V (3 ph)

Inverter	3ES-K
Model	E-SPD Plus MT2200, TT4000, TT11000
Max power rating (Phase in / out)	MT2200:2.2 kW (1 ph / 3 ph) TT4000:4.0 kW (3 ph / 3 ph) TT11000:11 kW (3 ph / 3 ph)

Accessories

- Companion flange sets for all models
- Pressure transmitter for 3ES-K

Application



Commercial Building Service

- HVAC
- District heating/cooling



Industry

- Refrigeration
- Hot water and low-pressure liquids circulation



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