



Japanese Technology since 1912

EVMS - Vertical Multistage Pumps





Japanese Technology since 1912

www.efmk-ebara.co.kr

Built like a Katana 刀

Katana 300
Katana

가 100
가

'EVMS'

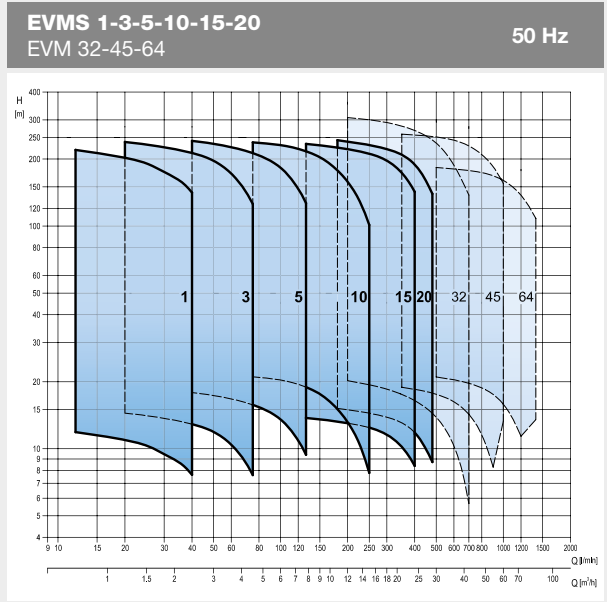
가

'EVMS'
가





- EBARA EVMS
- 1, 3, 5, 10, 15, 20 m³/h flow sizes
- (/)
16 bar or 25 bar / - 30 to + 140 °C
- ()
EVMS (AISI 304), EVMSL (AISI 316), EVMSG (Cast iron)
- Round flange / Loose Flange / Oval flange / Victaulic® / Clamp
- High Efficiency motor IE3 over 0.75 kW, 50 Hz / 60Hz,
/ PTC as standard for the above 1.5 kW



1



Any motor, anywhere.

-
-
- MEI > 0.7
- n.VI2014A000271

/

2



- IE3 0.75 kW EuP 2005/32/EC ErP 2009/125/EC
- VFD EVMS

3

: 가

Material

Round flange DIN
(incl. ANSI depending on models)

Loose Flange DIN
(incl. ANSI depending on models)

Oval Flange

Plug-In connection
(Victaulic®, Clamp)

AISI304/
AISI316



Cast Iron

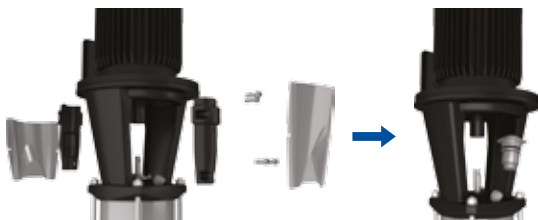


4



- B: Resin impregnated carbon graphite
 - Q: Sintered silicon carbide
 - Qg: Silicon carbide with carbon graphite
- Carbon or graphite inclusions with silicon carbide can be used as **dry lubricant to reduce friction.**
- It's conforming to EN12756 (ex DIN 24960)

5



- 가가
- 가

6



&



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1
Million

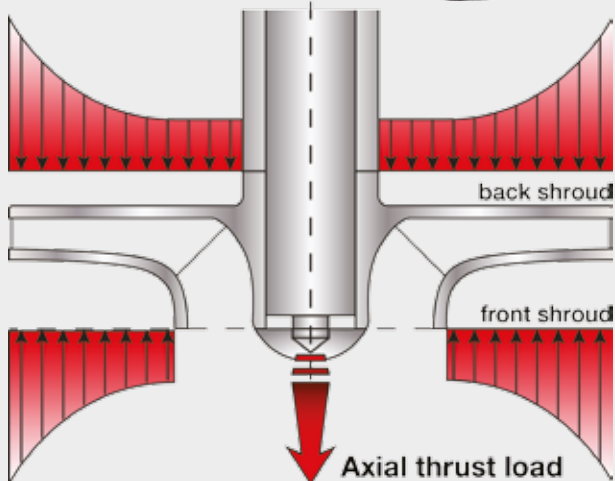
2
Times

3
Times

*

* for main components

**Solve
axial thrust load**



-
-

가

"Shurricane"

EVMS

가

Any motor, anywhere.



INDUSTRY

- **Water treatment**
reverse osmosis
ultra-filtration
water purification
micro-filtration
softening, ionizing
and demineralising systems
swimming pools
separators
- **Boiler feeding**
steam systems
condensate systems

- **Wash and clean**
vehicle washing systems
industrial part washing
laundry systems
supply of liquids with acids and
bases
supply of chemical liquids
- **Chilling**
handling of refrigerants for cooling
thermal control systems
industrial cooling
laser cooling

- **Machine tooling**
cooling lubricant supply for tooling
machines
- **Pressure boosting**
pressure boosting for industrial use
- **Food & beverage**
food washing systems
bottle wash systems
- **Pharmaceutical industries**
- **Marine applications**
freshwater, deckwash, high fog and
fire fighting on ships



BUILDING SERVICE

- **Pressure boosting**
pressure boosting for buildings
pressure boosting for high rise
buildings/hotels
- **Sprinkler systems**
- **Fire fighting systems**
jockey pump
- **District heating**
- **Heat exchangers / fan heaters**
- **Air conditioning systems**
- **Heating systems**



WATER SUPPLY

- **Water treatment**
water treatment plants filtration
water treatment plants transfer
- **Pressure boosting**
transfer from water treatment plants (mains)
- **Irrigation**
golf course / sport fields irrigation
- **Agriculture**
sprinkler irrigation
drip irrigation



please see the contact list on page 21.

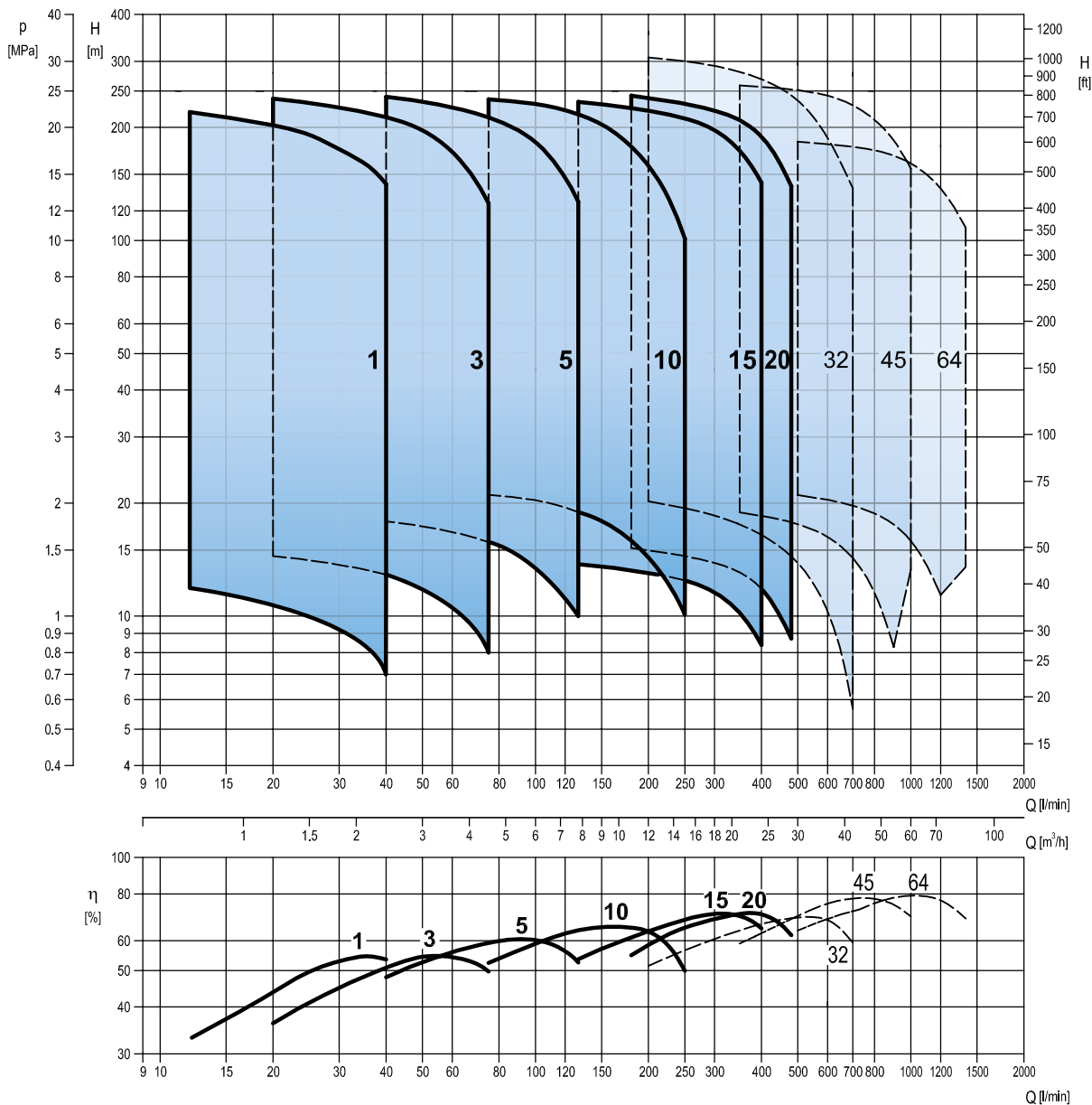
EVMS



50Hz

EVMS 1-3-5-10-15-20

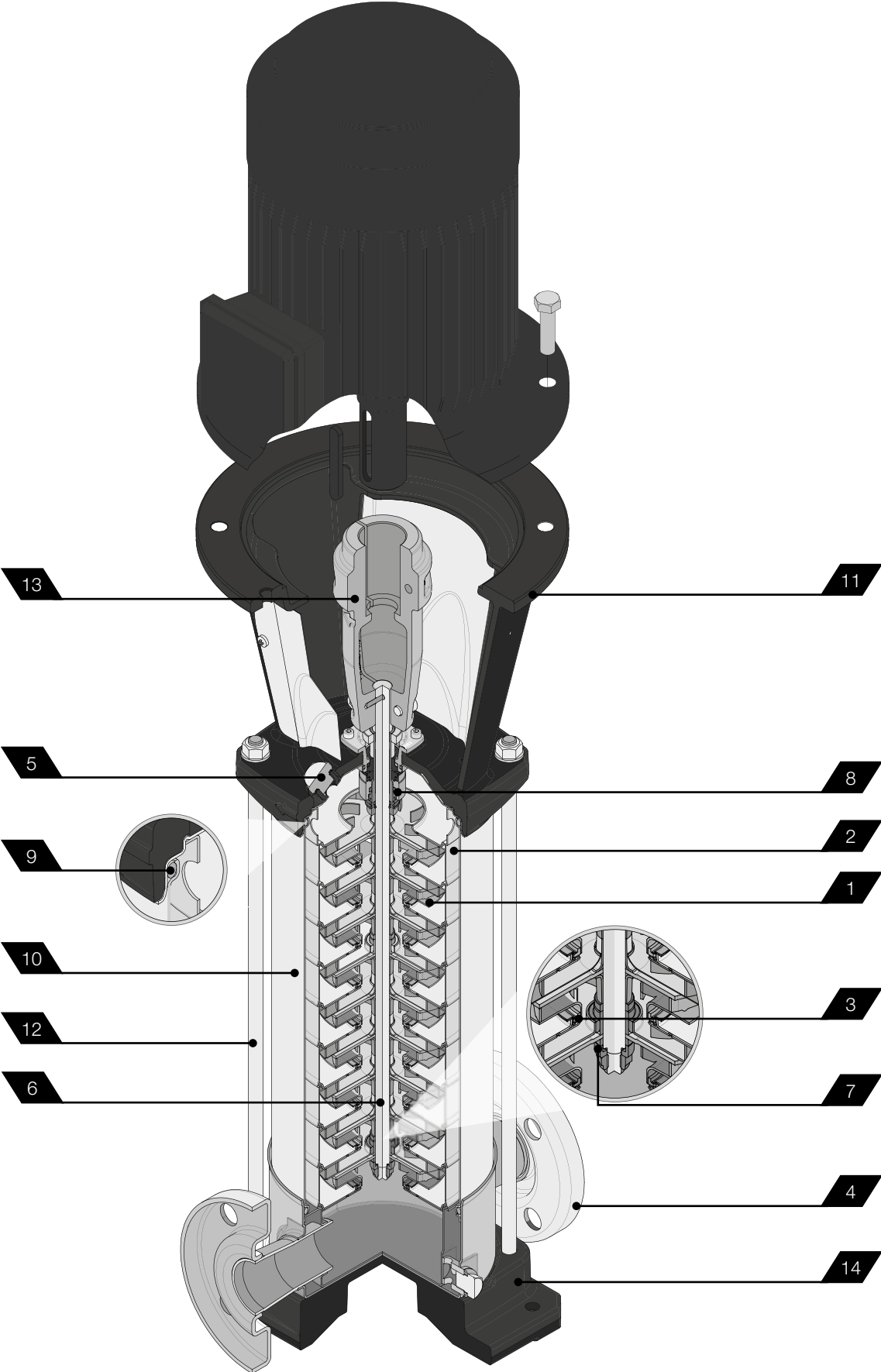
EVM 32-45-64



Minimum efficiency index (MEI)

| Pump type | MEI |
|-----------|--------|
| EVMS(.)1 | > 0.70 |
| EVMS(.)3 | > 0.70 |
| EVMS(.)5 | > 0.70 |
| EVMS(.)10 | > 0.70 |
| EVMS(.)15 | > 0.70 |
| EVMS(.)20 | > 0.70 |

EVMS 1-3-5-10-15-20



Pump

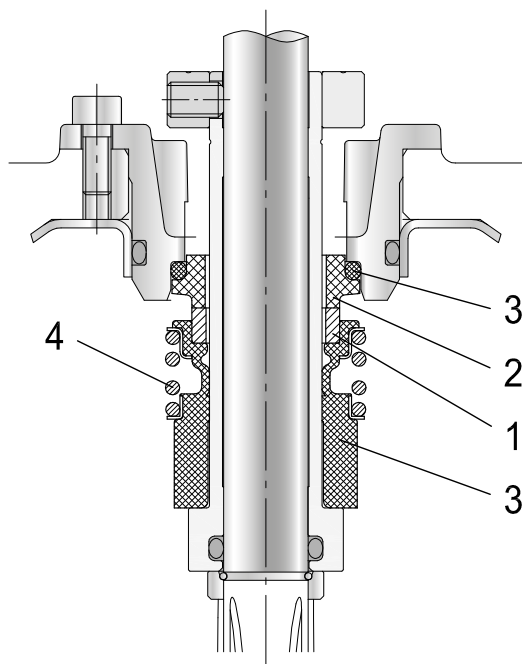
| Version | | EVMSG | | | | | | EVMS | | | | | | EVMSL | | | | | | |
|--------------------------|--|---|--|---|----------------------|----|--------------------|----------------------------|---|---|----|----|----|-------|---|---|----|----|----|---|
| Operating range | Nominal flow rate (m³/h) | 1 | 3 | 5 | 10 | 15 | 20 | 1 | 3 | 5 | 10 | 15 | 20 | 1 | 3 | 5 | 10 | 15 | 20 | |
| | Maximum working pressure | 1.6/2.5 MPa (16 bar/25 bar) | | | | | | | | | | | | | | | | | | |
| | Maximum liquid temperature range | -30° to 140°C | | | | | | | | | | | | | | | | | | |
| Key Components Materials | 1. Impeller | EN 1.4301 (AISI 304) | | | | | | EN 1.4401 (AISI 316) | | | | | | | | | | | | |
| | 2. Intermediate casing | EN 1.4301 (AISI 304) | | | | | | EN 1.4401 (AISI 316) | | | | | | | | | | | | |
| | 3. Liner ring | EN 1.4301 (AISI 304) + PPS | | | | | | EN 1.4401 (AISI 316) + PPS | | | | | | | | | | | | |
| | 4. Bottom casing | Cast Iron | | | EN 1.4301 (AISI 304) | | | EN 1.4401 (AISI 316) | | | | | | | | | | | | |
| | 5. Casing cover | EN 1.4301 (AISI 304) | | | | | | EN 1.4401 (AISI 316) | | | | | | | | | | | | |
| | 6. Shaft | EN 1.4301 (AISI 304) | EVMS(G) 1-3-10 EVMSG 5-15-20 (depend on models) | | | | | | | | | | | | | | | | | |
| | | EN 1.4404 (AISI 316L) | EVMSL 1-3-10 EVMSL5-15-20 (depend on models) | | | | | | | | | | | | | | | | | |
| | | EN 1.4460 (AISI 329A) | EVMS(G)(L) 5-15-20 (depend on models) | | | | | | | | | | | | | | | | | |
| | 7. Shaft sleeve bearing | Tungsten carbide | | | | | | | | | | | | | | | | | | |
| | 8. Shaft seal | Please see the shaft seal options on page 18. | | | | | | | | | | | | | | | | | | |
| | 9. O ring | EPDM | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | | FPM | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | 10. Outer casing | EN 1.4301 (AISI 304) | | | | | | EN 1.4404 (AISI 316L) | | | | | | | | | | | | |
| | 11. Motor bracket | Cast Iron | | | | | | | | | | | | | | | | | | |
| 12. Tie rod | Galvanized steel 6.8 strength class ISO 898/1 | | | | | | | | | | | | | | | | | | | |
| 13. Coupling | Die cast aluminium (up to 4 kW), Cast iron (from 5.5 kW) | | | | | | | | | | | | | | | | | | | |
| 14. Base | Cast iron | | | | | | Die cast aluminium | | | | | | | | | | | | | |
| Pipe Connection | Oval flange up to 16 bar | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| | Round flange DIN (EVMS(L)1-3-5 DIN/ANSI) up to 16 bar | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | | from 16 bar to 25 bar | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | Loose Flange DIN (EVMS(L)1-3-5 DIN/ANSI) up to 16 bar | | | | | | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | | from 16 bar to 25 bar | | | | | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| Victaulic® up to 25 bar | | | | | | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | |
| Clamp up to 25 bar | | | | | | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | |

Legend: ● Standard ○ Options

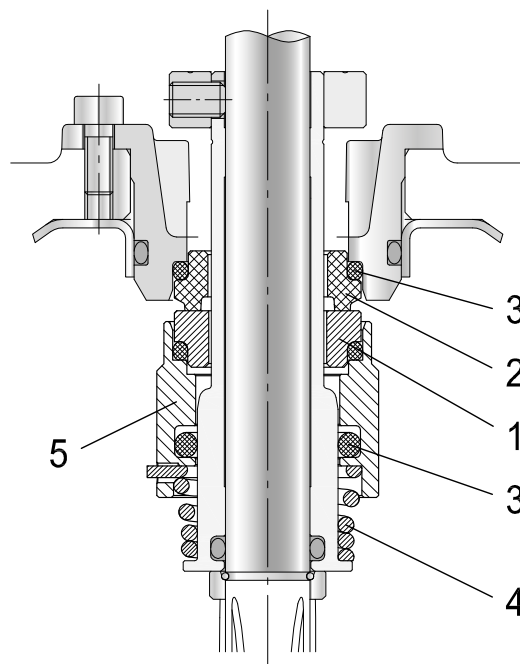
Motor

| | | | | | | | |
|--------------|--------------------------|---|---|--|---|---|--|
| Power Source | Frequency | 50 Hz | | | 60 Hz | | |
| | Phase | Single Phase | | Three Phase | | Three Phase | |
| | Rotation Speed | ~ 2900 min ⁻¹ | | | ~ 3500 min ⁻¹ | | |
| | Power Rating | 0.37 ÷ 2.2 kW | | 0.37 ÷ 18.5 kW | | 0.37 ÷ 18.5 kW | |
| | | 0.5 ÷ 3.0 HP | | 0.5 ÷ 25 HP | | 0.5 ÷ 25 HP | |
| Voltage | 230 ± 10% | | 230/400 ± 10% (up to 4kW) 400/690 ± 10% (above 5.5 kW) | | 220/380 ± 10% V (up to 4kW) 380/660 ± 10% V (above 5.5 kW) | | |
| | | | | | 265/460 ± 10% V (up to 4kW) 460 ± 10% V (above 5.5 kW) | | |
| Type | Type | Electric - TEFC | | | Electric - TEFC | | |
| | Efficiency | from 0.37 to 2.2 kW | | from 0.37 to 0.55 kW IE3 from 0.75 to 18.5 kW | | from 0.37 kW to 0.55 kW IE2/IE3 from 0.75 to 18.5 kW | |
| | No° of poles | 2 | | | 2 | | |
| | Protection Degree | IP 55 | | | IP 55 | | |
| | Insulation Class | F (temperature rise class B) | | | F (temperature rise class B) | | |
| Others | Thermal Protection | PTC as standard for the above 1.5 kW | | | PTC as standard for the above 1.5 kW | | |
| | Casing Material | Aluminium | | | Aluminium | | |
| | Flange Mount (IEC motor) | IM B14 (up to 4 kW) IM B5 (above 5.5 kW) | | | IM B14 (up to 4 kW) IM B5 (above 5.5 kW) | | |

EVMS 1-3-5-10-15-20



up to 16 bar



from 16 bar to 25 bar

Legend: ● Standard ○ Options () Type key

| Pump model | Max liquid temperature range | Shaft seal type Cartridge | | Shaft seal material | | | | | Type key |
|-----------------------|------------------------------|---------------------------|----------|-------------------------------------|-----------------------|--------------|-------------|----------|-----------------------------------|
| | | Unbalanced | Balanced | 1 Rotating Part | 2 Stationary Part | 3 Elastomers | 4 Spring | 5 Collar | |
| up to 16 bar | - 30°C to + 120°C | ● | | SiC (Q ₁) | Carbon (B) | EPDM (E) | AISI316 (G) | | Q ₁ BEG |
| | - 30°C to + 80°C | ○ | | SiC (Q ₁) | Carbon (B) | FPM (V) | AISI316 (G) | | Q ₁ BVG |
| | - 30°C to + 140°C | | ○ | SiC with graphite (Q _g) | SiC (Q ₁) | EPDM (E) | AISI316 (G) | | HQ _g Q ₁ EG |
| | - 30°C to + 80°C | | ○ | SiC with graphite (Q _g) | SiC (Q ₁) | FPM (V) | AISI316 (G) | | HQ _g Q ₁ VG |
| | - 30°C to + 140°C | | ○ | SiC (Q ₁) | Carbon (B) | EPDM (E) | AISI316 (G) | | HQ ₁ BEG |
| from 16 bar to 25 bar | - 30°C to + 140°C | | ● | SiC (Q ₁) | Carbon (B) | EPDM (E) | AISI316 (G) | | HQ ₁ BEG |
| | - 30°C to + 80°C | | ○ | SiC (Q ₁) | Carbon (B) | FPM (V) | AISI316 (G) | | HQ ₁ BVG |
| | - 30°C to + 140°C | | ○ | SiC with graphite (Q _g) | SiC (Q ₁) | EPDM (E) | AISI316 (G) | | HQ _g Q ₁ EG |
| | - 30°C to + 80°C | | ○ | SiC with graphite (Q _g) | SiC (Q ₁) | FPM (V) | AISI316 (G) | | HQ _g Q ₁ VG |

For further information



Data book



Instruction Manual



Kensaku
system for spare parts selection



Pump Selector
www.efmk-ebara.com

VISIT MORE INFORMATION
www.efmk-ebara.com

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