



The ES Series electromagnetic metering pump offers precise chemical injection at an economical cost. Manual or on/off control for simple addition applications. Sophisticated engineering provides effective, reliable performance.



High Speed Operation

Up to 360 pump strokes per minute results in high resolution chemical feed, with the elimination of slug-feed effects.



Double Ball Check Valves

The precision ball, seat and guide assembly ensure tight sealing to prevent loss of prime.



Compact Size

Ideal for OEM applications, ES pumps are small, quiet, and lightweight.

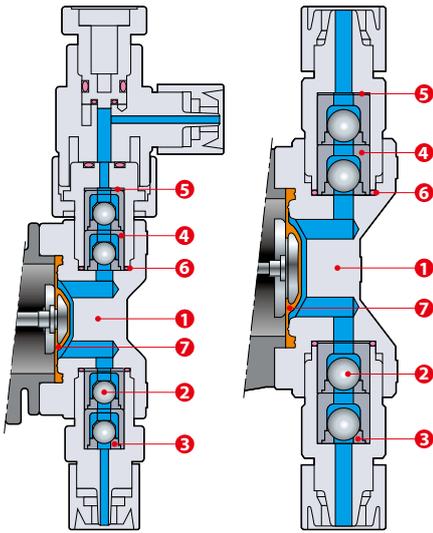


Long Lasting Diaphragm

PTFE coated EPDM is molded onto a solid core. A retainer plate is used to prevent diaphragm deformation and flow rate variation at higher pressures.

B11/16/21, C16/21

B31, C31/36



Wet End Materials

| Material code | VC | VH | VS ^{Note} |
|---------------|-----------------|----------------------------|--------------------|
| 1 Pump head | | PVC | |
| 2 Valve | Alumina ceramic | HASTELLOY® C276 equivalent | SUS316 equivalent |
| 3 Valve seat | FKM | | EPDM |
| 4 Valve guide | | PVC | |
| 5 Gasket | | PTFE | |
| 6 O-ring | FKM | | EPDM |
| 7 Diaphragm | | PTFE coated EPDM | |

Note: ES-B31 and C31, 36 only

Model Identification

| ES - B 16 VC - 230N 1 | |
|------------------------------------|--------------------------------------------------------------------------------------------------|
| 1 | 2 3 4 5 6 |
| 1 Pump series ES Series | 3 Effective diaphragm diameter 11 : 10mm 16 : 15mm 21 : 20mm 31 : 30mm 36 : 35mm |
| 2 Drive unit B : 16W C : 22W | 4 Wet end materials VC, VH, VS |
| | 5 Power voltage 230N : AC230V |
| | 6 Hose size (in mm) 1 : Ø4 × Ø9 2 : Ø4 × Ø6 3 : Ø6 × Ø8 4 : Ø8 × Ø13 5 : Ø9 × Ø12 |

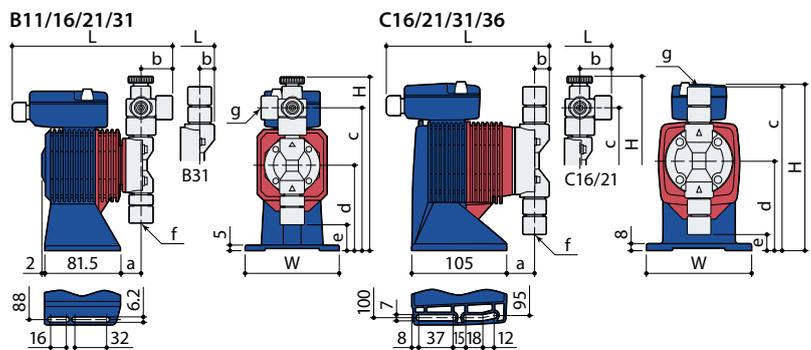
Specifications

| Model | B11 | B16 | B21 | B31 | C16 | C21 | C31 | C36 |
|-------------------------|-----------------------------------------------------------------------------------------|------|------|------|-------------|------|------|------|
| Max. discharge capacity | L/hr | 2.28 | 3.9 | 5.7 | 12 | 4.8 | 7.8 | 24 |
| | mL/min | 38 | 65 | 95 | 200 | 80 | 130 | 400 |
| | mL/shot | 0.11 | 0.18 | 0.26 | 0.56 | 0.23 | 0.37 | 1.13 |
| Max. discharge pressure | MPa | 1.0 | 0.7 | 0.4 | 0.2 | 1.0 | 0.7 | 0.35 |
| Stroke rate | 0 - 360 spm | | | | 0 - 353 spm | | | |
| Power supply | 230VAC 50/60Hz single phase | | | | | | | |
| Current (Input) | 0.5A | | | | 0.6A | | | |
| Insulation type, etc. | B type insulation and built-in thermal protector, with a 2.0m power cable, without plug | | | | | | | |

- The max. discharge capacity in the table above represents the performance measured with clean water at max. discharge pressure, ambient temperature, and rated voltage. Actual discharge may increase if operation is conducted at a lower pressure.
- Set the discharge pressure at 0.12 MPa or higher to prevent over-feeding trouble. (0.05 MPa or higher in the case of B31, C36.)
- If the pressure is to be lower than these levels, make sure to use a check valve or a back pressure valve, which is supplied as an optional item.
- Range of liquid temperature : 0-40°C.
- Range of the ambient temperature : 0-40°C.
- Max. viscosity : Up to 50mPa·s. If the viscosity exceeds 50mPa·s, please contact us.

Dimensions in mm

| Model | W | H | L | a | b | c | d | e | f & g Tubing |
|--------|---------|---------|-------|------|-------|---------|-----|------|--------------|
| ES-B11 | 100 | (184) | (178) | (25) | (37) | (150) | 90 | (26) | 4×9 |
| ES-B16 | | | | | | | | | 4×6 |
| ES-B21 | | | | | | | | | 6×8 |
| ES-B31 | 116 | (172) | (159) | (27) | 16 | — | 100 | (8) | 8×13 |
| ES-C16 | | | | | | | | | 9×12 |
| ES-C21 | | | | | | | | | 4×9 |
| ES-C31 | (186.5) | (177.5) | (29) | (16) | (182) | (181.5) | 100 | (18) | 8×13 |
| ES-C36 | | | | | | | | | 9×12 |
| | | | | | | | | | (177) |



Optional Accessories

Check valve

Mount the check valve at the end of discharge hose for the prevention of over feeding, backflow, and siphon action.



Strainer with a foot valve

Mount the strainer at the end of suction hose. The strainer with a foot valve prevents backflow and foreign matter interfusion. Inlet bore can be selected according to hose bore.



- Please contact us for details and other accessories.

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| | | | | | |
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() Country codes

Caution for safety use: Before use of pump, read instruction manual carefully to use the product correctly. Actual pumps may differ from the photos. Specifications and dimensions are subject to change without prior notice. For further details please contact us.

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