

50 Hz



TLC, FLC, EFLC, ECOCIRC Series

WET ROTOR CIRCULATORS FOR
HEATING, COOLING AND SANITARY SYSTEMS

Cod. 191007391 Rev.B Ed.12/2011

 **LOWARA**
a xylem brand

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TLC, TLCH, FLC(G), TLCB SERIES PRODUCT RANGE CHART

| TYPE | Version | | Power supply | | Pump coupling | | Temperature of pumped liquid * | | | | | Ambient temperature | Protection class |
|--------------------------------------|---------|------|-----------------------------|----------------------------|---------------|---------|--------------------------------|----------------|---------------|----------------|----------------|---------------------|------------------|
| | Single | Twin | Single-phase 230 V 50 Hz | Three-phase 400 V 50 Hz | Threaded | Flanged | -25°C ÷ +110°C | -15°C ÷ +120°C | -10°C ÷ +95°C | -10°C ÷ +110°C | -10°C ÷ +130°C | +15°C ÷ +90°C | Max 40°C |
| RESIDENTIAL | | | | | | | | | | | | | |
| TLC 15-2.5 | • | | • | | • | | | | • | | | • | • |
| TLC 25-2.5L | • | | • | | • | | | | • | | | • | • |
| TLC 32-2.5L | • | | • | | • | | | | • | | | • | • |
| TLC 15-4 | • | | • | | • | | | | • | | | • | • |
| TLC 25-4 | • | | • | | • | | | | • | | | • | • |
| TLC 25-4L | • | | • | | • | | | | • | | | • | • |
| TLC 32-4L | • | | • | | • | | | | • | | | • | • |
| TLC 15-5 | • | | • | | • | | | | • | | | • | • |
| TLC 25-5 | • | | • | | • | | | | • | | | • | • |
| TLC 25-5L | • | | • | | • | | | | • | | | • | • |
| TLC 32-5L | • | | • | | • | | | | • | | | • | • |
| TLC 15-6 | • | | • | | • | | | | • | | | • | • |
| TLC 25-6 | • | | • | | • | | | | • | | | • | • |
| TLC 25-6L | • | | • | | • | | | | • | | | • | • |
| TLC 32-6L | • | | • | | • | | | | • | | | • | • |
| TLC 15-7 | • | | • | | • | | | | • | | | • | • |
| TLC 25-7L | • | | • | | • | | | | • | | | • | • |
| TLC 32-7L | • | | • | | • | | | | • | | | • | • |
| LIGHT COMMERCIAL / COMMERCIAL | | | | | | | | | | | | | |
| TLCH 25-7L | • | | • | | • | | | | • | | | • | • |
| TLCH 32-7L | • | | • | | • | | | | • | | | • | • |
| TLCH 25-8L | • | | • | | • | | | | • | | | • | • |
| TLCH 32-8L | • | | • | | • | | | | • | | | • | • |
| TLCH 25-10L | • | | • | | • | | | | • | | | • | • |
| TLCH 32-10L | • | | • | | • | | | | • | | | • | • |
| TLCH 25-12L | • | | • | | • | | | | • | | | • | • |
| TLCH 32-12L | • | | • | | • | | | | • | | | • | • |
| FLC (G) 40-5 (T) | • | • | • | • | • | | • | | | | | • | • |
| FLC (G) 40-7 (T) | • | • | • | • | • | | • | | | | | • | • |
| FLC (G) 40-10 (T) | • | • | • | • | • | | • | | | | | • | • |
| FLC (G) 50-5 (T) | • | • | • | • | • | | • | | | | | • | • |
| FLC (G) 50-8 (T) | • | • | • | • | • | | • | | | | | • | • |
| FLC (G) 50-10 (T) | • | • | • | • | • | | • | | | | | • | • |
| FLC 50-13 (T) | • | | • | • | • | | • | | | | | • | • |
| FLC 50-18 T | • | | • | • | • | | • | | | | | • | • |
| FLC (G) 65-7 (T) | • | • | • | • | • | | • | | | | | • | • |
| FLC (G) 65-10 (T) | • | • | • | • | • | | • | | | | | • | • |
| FLC (G) 65-12 (T) | • | • | • | • | • | | • | | | | | • | • |
| FLC (G) 65-16 T | • | • | • | • | • | | • | | | | | • | • |
| FLCG 80-4 (T) | • | • | • | • | • | | • | | | | | • | • |
| FLC (G) 80-8 (T) | • | • | • | • | • | | • | | | | | • | • |
| FLC (G) 80-10 (T) | • | • | • | • | • | | • | | | | | • | • |
| FLC (G) 80-12 T | • | • | • | • | • | | • | | | | | • | • |
| FLC (G) 80-15 T | • | • | • | • | • | | • | | | | | • | • |
| SANITARY | | | | | | | | | | | | | |
| TLCB 15-1.5 | • | | • | | • | | | | • | | | • | • |
| TLCB 20-1.5M | • | | • | | • | | | | • | | | • | • |
| TLCB 25-1.5 | • | | • | | • | | | | • | | | • | • |
| TLCB 15-3 | • | | • | | • | | | | • | | | • | • |
| TLCB 20-3M | • | | • | | • | | | | • | | | • | • |
| TLCB 25-3 | • | | • | | • | | | | • | | | • | • |
| TLCB 15-4 | • | | • | | • | | | | • | | | • | • |
| TLCB 20-4M | • | | • | | • | | | | • | | | • | • |
| TLCB 25-4 | • | | • | | • | | | | • | | | • | • |
| TLCB 25-4L | • | | • | | • | | | | • | | | • | • |
| TLCB 15-6 | • | | • | | • | | | | • | | | • | • |
| TLCB 20-6M | • | | • | | • | | | | • | | | • | • |
| TLCB 25-6L | • | | • | | • | | | | • | | | • | • |

* Non-freezing, non-condensing.

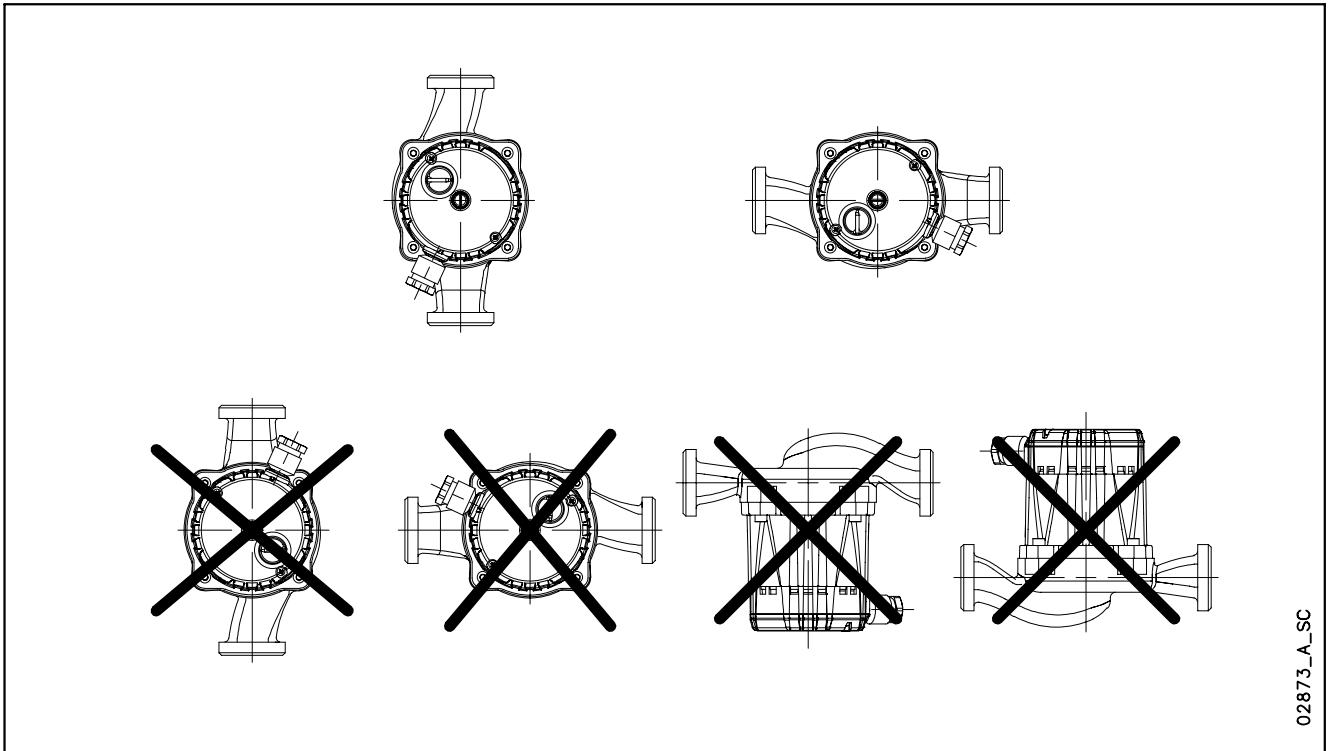
TLCHB, TLCSOL, TLCK, EFLC(G), EA+, EV+, EB (V) SERIES PRODUCT RANGE CHART

| TYPE | Version | | Power supply | | Pump coupling | | Temperature of pumped liquid * | | | | | | Ambient temperature | Protection class |
|--|---------|------|-----------------------------|----------------------------|---------------|---------|--------------------------------|----------------|---------------|----------------|----------------|---------------|---------------------|------------------|
| | Single | Twin | Single-phase 230 V 50 Hz | Three-phase 400 V 50 Hz | Threaded | Flanged | -25°C ÷ +110°C | -15°C ÷ +120°C | -10°C ÷ +95°C | -10°C ÷ +110°C | -10°C ÷ +130°C | +15°C ÷ +90°C | Max 40°C | IP 44 |
| LIGHT COMMERCIAL | | | | | | | | | | | | | | |
| TLCHB 20-7L | • | | • | | • | | | | • | | | • | • | |
| TLCHB 25-7L | • | | • | | • | | | | • | | | • | • | |
| TLCHB 20-8L | • | | • | | • | | | | • | | | • | • | |
| TLCHB 25-8L | • | | • | | • | | | | • | | | • | • | |
| TLCHB 20-10L | • | | • | | • | | | | • | | | • | • | |
| TLCHB 25-10L | • | | • | | • | | | | • | | | • | • | |
| TLCHB 20-12L | • | | • | | • | | | | • | | | • | • | |
| TLCHB 25-12L | • | | • | | • | | | | • | | | • | • | |
| SOLAR | | | | | | | | | | | | | | |
| TLCSOL 15-4 | • | | • | | • | | | | | | • | • | • | |
| TLCSOL 25-4L | • | | • | | • | | | | | | • | • | • | |
| TLCSOL 15-6 | • | | • | | • | | | | | | • | • | • | |
| TLCSOL 25-6L | • | | • | | • | | | | | | • | • | • | |
| COOLING | | | | | | | | | | | | | | |
| TLCK 25-4L | • | | • | | • | | • | | | | | • | • | |
| TLCK 25-6L | • | | • | | • | | • | | | | | • | • | |
| COMMERCIAL ELECTRONIC | | | | | | | | | | | | | | |
| EFLC (G) 40-9 | • | • | • | | | • | | | | | | • | • | |
| EFLC (G) 40-11 | • | • | • | | | • | | | | | | • | • | |
| EFLC (G) 50-12 | • | • | • | | | • | | | | | | • | • | |
| EFLC (G) 65-12 | • | • | • | | | • | | | | | | • | • | |
| EFLC (G) 80-7 | • | • | • | | | • | | | | | | • | • | |
| HIGH EFFICIENCY DOMESTIC ELECTRONIC | | | | | | | | | | | | | | |
| EA+ (EV+) 15-4/130 | | | • | | | | | | • | | | • | • | |
| EA+ (EV+) 20-4/130 | | | • | | | | | | • | | | • | • | |
| EA+ (EV+) 25-4/130 | | | • | | | | | | • | | | • | • | |
| EA+ (EV+) 25-4/180 | | | • | | | | | | • | | | • | • | |
| EA+ (EV+) 32-4/180 | | | • | | | | | | • | | | • | • | |
| EA+ (EV+) 15-6/130 | | | • | | | | | | • | | | • | • | |
| EA+ (EV+) 20-6/130 | | | • | | | | | | • | | | • | • | |
| EA+ (EV+) 25-6/130 | | | • | | | | | | • | | | • | • | |
| EA+ (EV+) 25-6/180 | | | • | | | | | | • | | | • | • | |
| EA+ (EV+) 32-6/180 | | | • | | | | | | • | | | • | • | |
| SANITARY ELECTRONIC | | | | | | | | | | | | | | |
| EB (V) 15-1/65 (R) (U) (RU) | | | • | | | | | | • | | | • | • | |
| EB (V) 15-1/110 (R) (U) (RU) | | | • | | | | | | • | | | • | • | |
| EB 15-3/65 | | | • | | | | | | • | | | • | • | |
| EB 15-3/110 | | | • | | | | | | • | | | • | • | |

* Non-freezing, non-condensing.

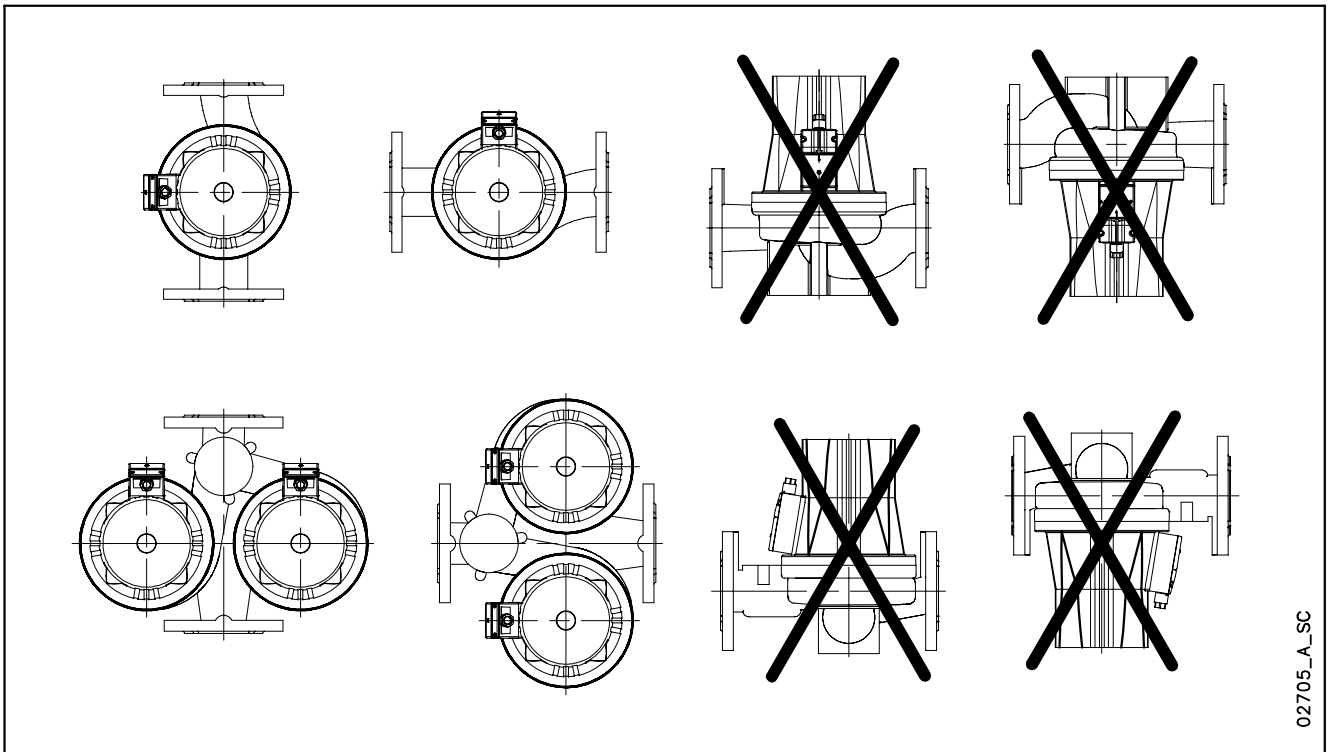
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**TLC SERIES
INSTALLATION POSITIONS**



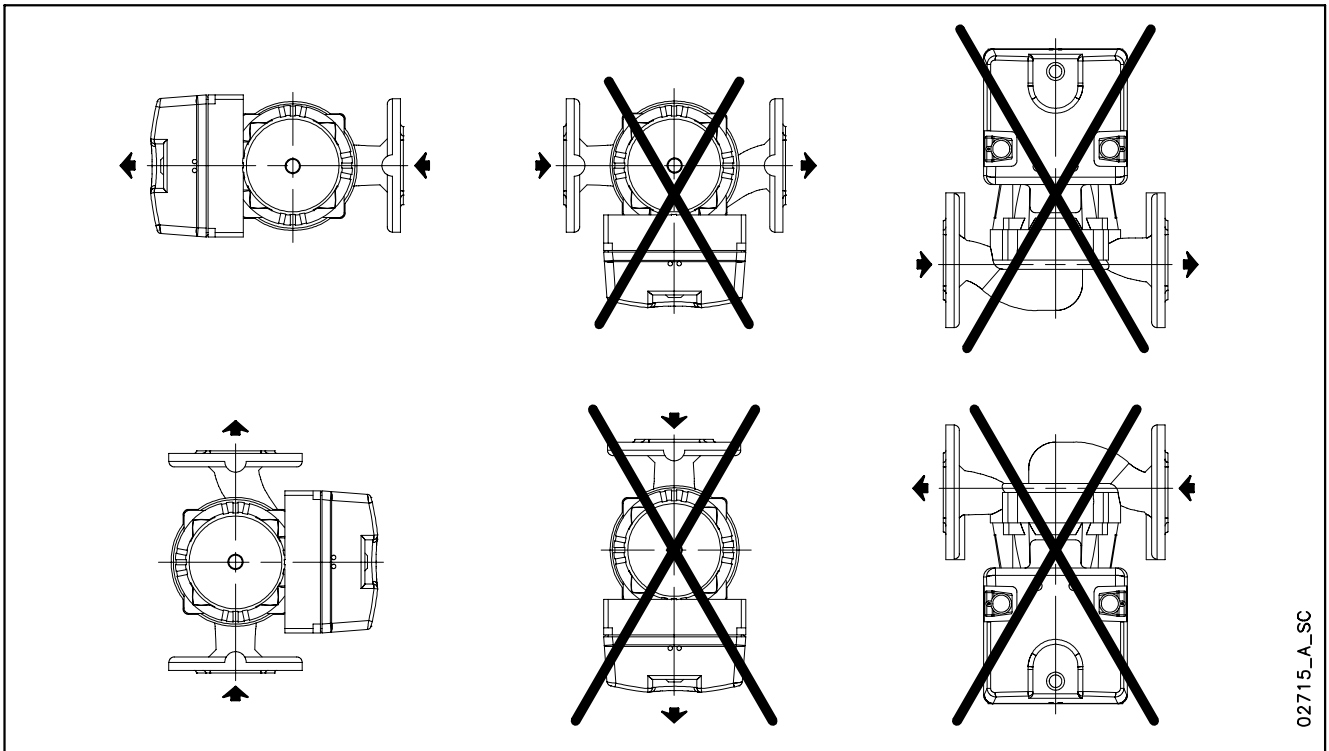
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**FLC, FLCG SERIES
INSTALLATION POSITIONS**



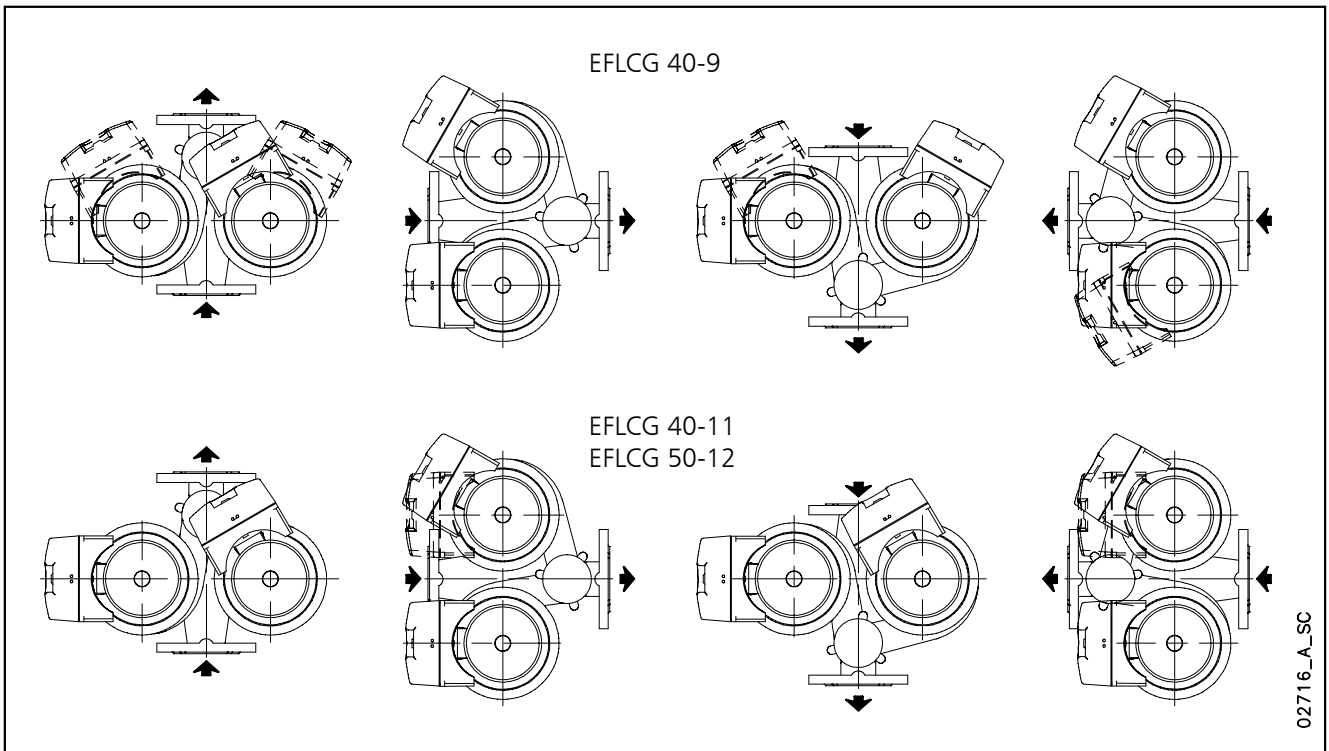
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**EFLC SERIES
INSTALLATION POSITIONS**



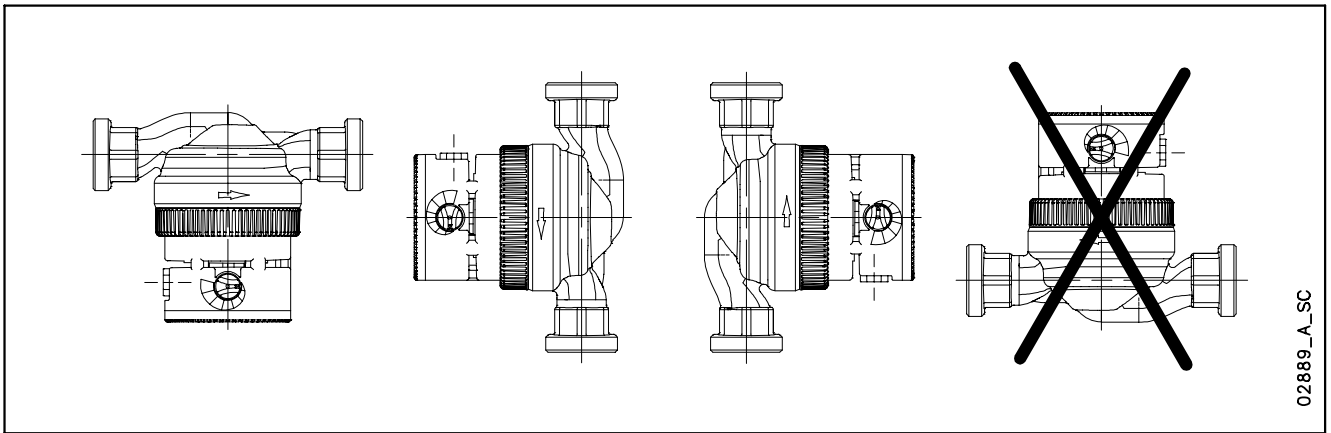
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**EFLCG SERIES
INSTALLATION POSITIONS**



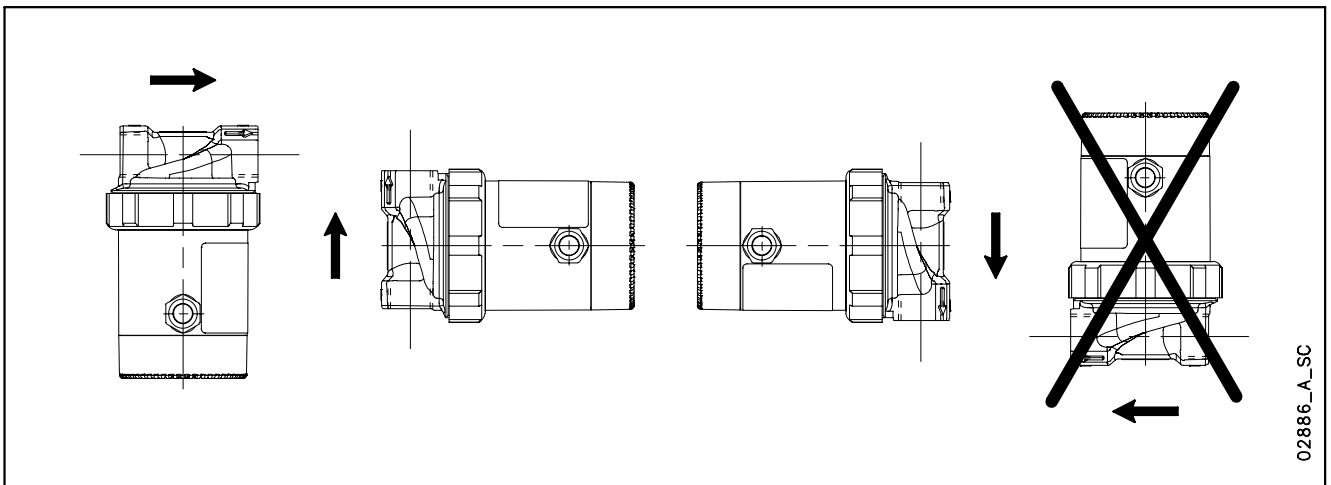
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**EA+, EV+ (ECOCIRC) SERIES
INSTALLATION POSITIONS**



02889_A_SC

**EB (V) (ECOCIRC) SERIES
INSTALLATION POSITIONS**



02886_A_SC

Circulators for residential systems

TLC Series



MARKET SECTORS

RESIDENTIAL.

APPLICATIONS

- Water circulation in heating and air conditioning systems.
- Pumping of hot/cold, chemically and mechanically non-aggressive liquids.

SPECIFICATIONS

PUMP

- **Flow rate:** up to 4 m³/h.
- **Head:** up to 7 m.
- **Temperature of pumped liquid:** -10°C ÷ +110°C.
Non-freezing, non-condensing.
Maximum 20% glycol and water mixture.
For glycol quantities higher than 20%, hydraulic performances must be checked.
- **Maximum operating pressure:** 10 bar (PN 10).
- **Impeller:** made of composite material.
- **Wear ring:** ceramic.

MOTOR

- Wet rotor type, with bearings lubricated by the pumped liquid.
Axial and radial bearings made of ceramic.
- Single-phase 230 V 50 Hz power supply. Terminal box axially integrated in the motor.
- 2-pole, three-speed motor, with manual speed selection.
- According to EN standards 60335-1 and 2-51.
- **Insulation class:** H (180°C).
- **Protection class:** IP 44.

CONSTRUCTION CHARACTERISTICS

- Electric circulator pumps with in-line suction and discharge ports, designed for direct installation onto piping, with 1", 1" ½ and 2" threaded connections.

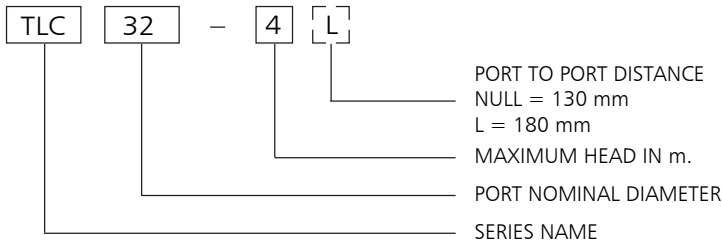
ACCESSORIES

- Pipe unions.
- Insulation shell.

INSTALLATION

- Suitable for installation in horizontal or vertical piping, in any position provided that motor axis is horizontal.

TLC SERIES IDENTIFICATION CODE



EXAMPLE : TCL 32-4L

TCL series circulator, port nominal diameter = 32, max head = 4 m, with port to port distance of 180 mm.

TABLE OF MATERIALS

| PART | MATERIAL |
|--------------|-----------------------------------|
| Pump body | Cast iron cataphoretically coated |
| Impeller | Composite material |
| Shaft | Ceramics |
| Inner jacket | Stainless steel |
| Wear ring | Ceramics |
| Bearings | Ceramics |
| Gaskets | EPDM |

tlc-2p50-en_a_tm

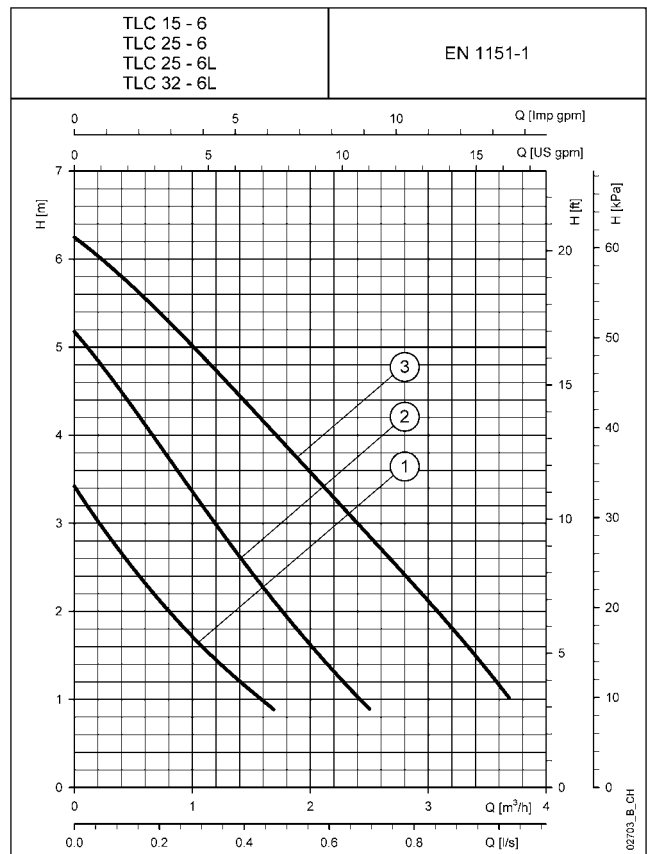
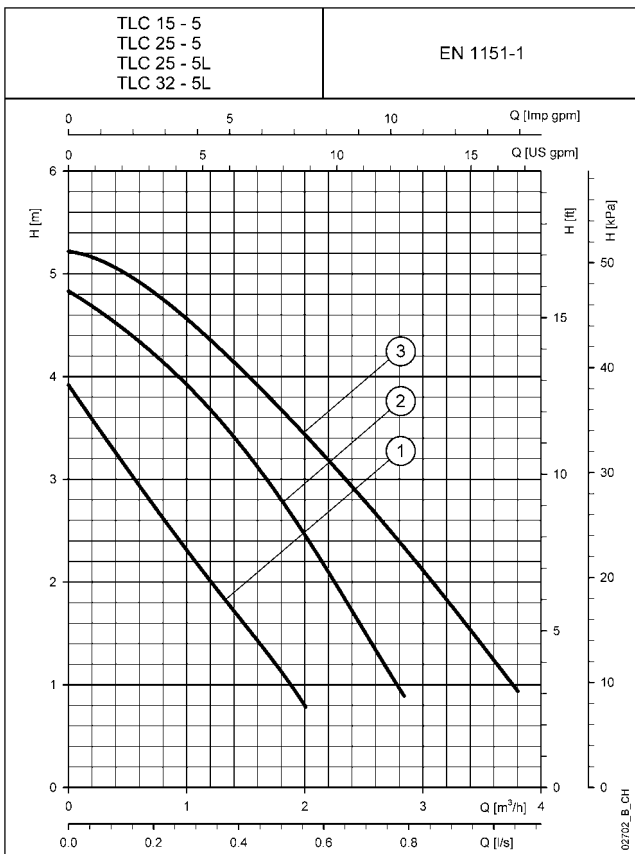
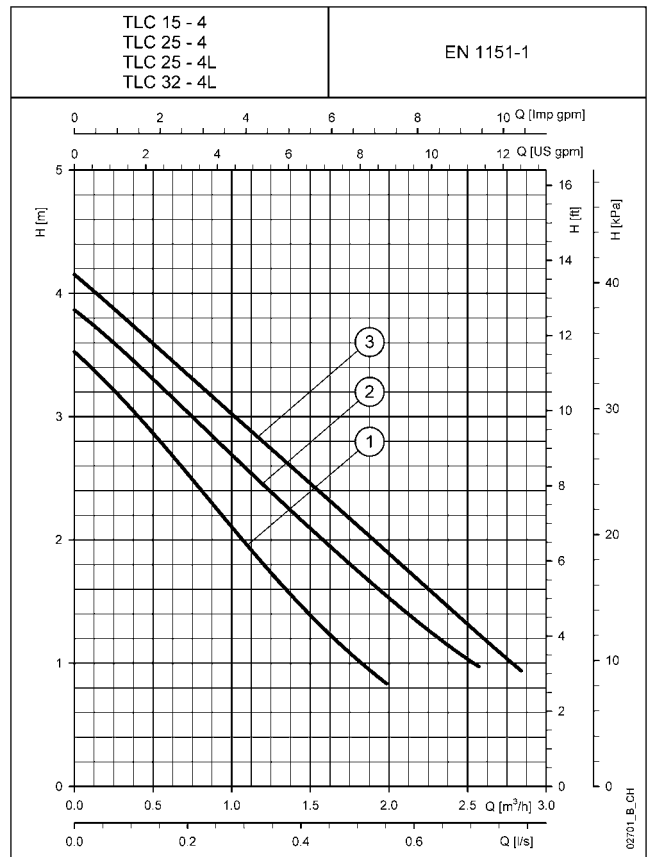
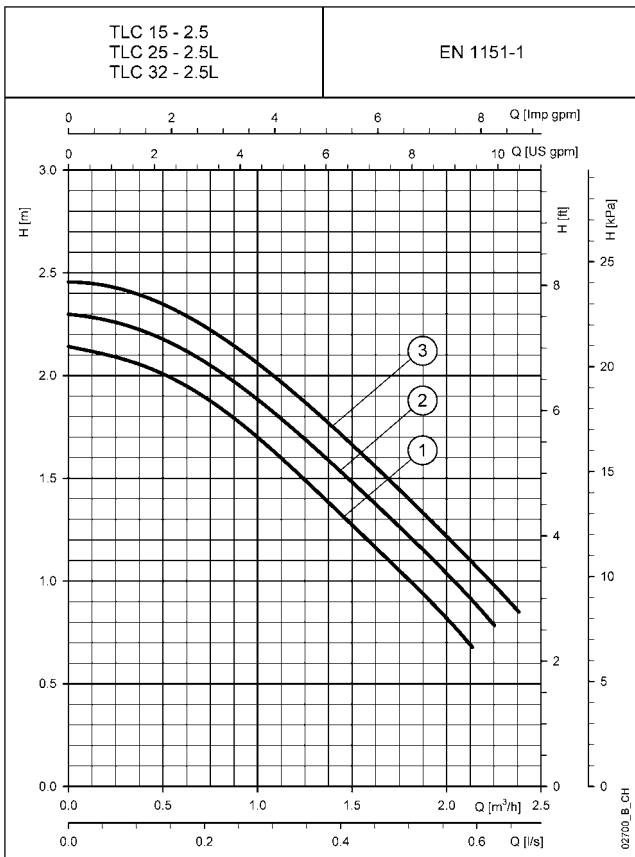
TLC SERIES HYDRAULIC PERFORMANCE TABLE

| PUMP TYPE | MAXIMUM ABSORBED POWER W | MAXIMUM ABSORBED CURRENT A | CAPACITOR | | SPEED | Q = DELIVERY | | | | | | | | |
|--------------|-----------------------------|-------------------------------|-----------|-----|-------|---------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | | | | l/s 0 | 0,2 | 0,3 | 0,5 | 0,6 | 0,7 | 0,8 | 0,9 | 1,1 |
| | | | | | | m ³ /h 0 | 0,6 | 1,2 | 1,7 | 2,0 | 2,4 | 2,8 | 3,2 | 3,9 |
| 230V 50Hz | | | μF | V | | H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | |
| TLC 15-2.5 | 27 | 0,12 | 1,5 | 400 | 1 | 2,1 | 2,0 | 1,5 | 1,1 | 0,8 | | | | |
| TLC 25-2.5L | 32 | 0,14 | | | 2 | 2,3 | 2,1 | 1,7 | 1,3 | 1,1 | | | | |
| TLC 32-2.5L | 35 | 0,15 | | | 3 | 2,5 | 2,3 | 1,9 | 1,5 | 1,2 | 0,9 | | | |
| TLC 15-4 | 33 | 0,14 | 1,5 | 400 | 1 | 3,5 | 2,7 | 1,8 | 1,2 | 0,8 | | | | |
| TLC 25-4 (L) | 39 | 0,17 | | | 2 | 3,9 | 3,2 | 2,4 | 1,9 | 1,6 | 1,1 | | | |
| TLC 32-4L | 44 | 0,19 | | | 3 | 4,2 | 3,5 | 2,8 | 2,2 | 1,9 | 1,5 | 0,9 | | |
| TLC 15-5 | 43 | 0,19 | 2,0 | 400 | 1 | 3,9 | 2,9 | 2,0 | 1,3 | 0,8 | | | | |
| TLC 25-5 (L) | 63 | 0,28 | | | 2 | 4,8 | 4,3 | 3,7 | 3,0 | 2,5 | 1,8 | 0,9 | | |
| TLC 32-5L | 77 | 0,34 | | | 3 | 5,2 | 4,9 | 4,4 | 3,8 | 3,5 | 3,0 | 2,3 | 1,8 | |
| TLC 15-6 | 43 | 0,19 | 2,0 | 400 | 1 | 3,4 | 2,3 | 1,5 | 0,9 | | | | | |
| TLC 25-6 (L) | 65 | 0,28 | | | 2 | 5,2 | 4,1 | 3,0 | 2,1 | 1,7 | 1,1 | | | |
| TLC 32-6L | 80 | 0,34 | | | 3 | 6,2 | 5,6 | 4,7 | 4,0 | 3,6 | 3,0 | 2,4 | 1,8 | |
| TLC 15-7 | 54 | 0,24 | 2,0 | 400 | 1 | 5,4 | 3,6 | 2,5 | 1,7 | 1,4 | 0,9 | 0,4 | | |
| TLC 25-7L | 76 | 0,34 | | | 2 | 6,6 | 5,5 | 4,0 | 2,9 | 2,3 | 1,6 | 1,0 | 0,4 | |
| TLC 32-7L | 89 | 0,39 | | | 3 | 7,1 | 6,6 | 5,9 | 5,2 | 4,7 | 3,9 | 2,9 | 2,0 | 0,4 |

Performances according to standards EN 1151-1

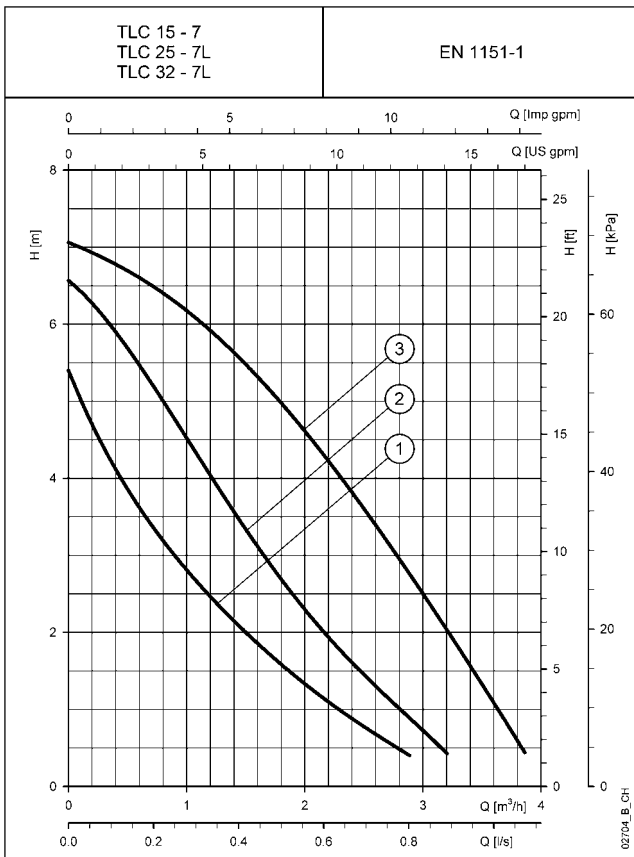
tlc-2p50-en_b_th

**TLC SERIES
SINGLE-PHASE OPERATING CHARACTERISTICS**



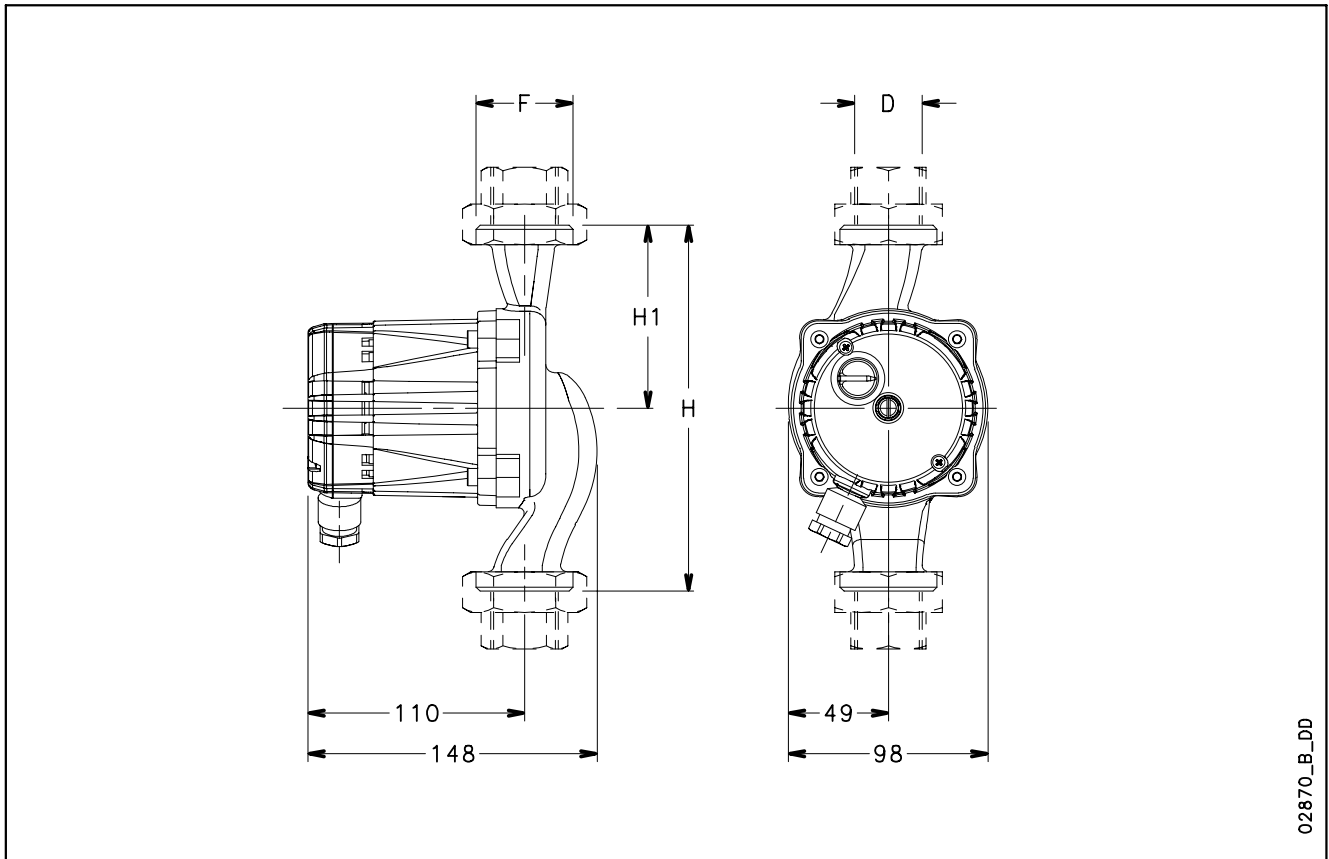
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

**TLC SERIES
SINGLE-PHASE OPERATING CHARACTERISTICS**



These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

TLC SERIES DIMENSIONS AND WEIGHTS



02870_B_DD

DIMENSIONS AND WEIGHTS TABLE

| PUMP TYPE | DIMENSIONS (mm) | | | | | WEIGHT kg |
|-------------|-----------------|----|--------|----------|----|--------------|
| | H | H1 | D | F | DN | |
| TLC 15-2.5 | 130 | 65 | 1/2" | G 1" | 15 | 2,6 |
| TLC 25-2.5L | 180 | 90 | 1" | G 1 1/2" | 25 | 2,7 |
| TLC 32-2.5L | 180 | 90 | 1 1/4" | G 2" | 32 | 2,8 |
| TLC 15-4 | 130 | 65 | 1/2" | G 1" | 15 | 2,6 |
| TLC 25-4 | 130 | 65 | 1" | G 1 1/2" | 25 | 2,7 |
| TLC 25-4L | 180 | 90 | 1" | G 1 1/2" | 25 | 2,7 |
| TLC 32-4L | 180 | 90 | 1 1/4" | G 2" | 32 | 2,8 |
| TLC 15-5 | 130 | 65 | 1/2" | G1" | 15 | 2,6 |
| TLC 25-5 | 130 | 65 | 1" | G 1 1/2" | 25 | 2,7 |
| TLC 25-5L | 180 | 90 | 1" | G 1 1/2" | 25 | 2,7 |
| TLC 32-5L | 180 | 90 | 1 1/4" | G 2" | 32 | 2,8 |
| TLC 15-6 | 130 | 65 | 1/2" | G 1" | 15 | 2,6 |
| TLC 25-6 | 130 | 65 | 1" | G 1 1/2" | 25 | 2,7 |
| TLC 25-6L | 180 | 90 | 1" | G 1 1/2" | 25 | 2,8 |
| TLC 32-6L | 180 | 90 | 1 1/4" | G 2" | 32 | 2,8 |
| TLC 15-7 | 130 | 65 | 1/2" | G 1" | 15 | 2,6 |
| TLC 25-7L | 180 | 90 | 1" | G 1 1/2" | 25 | 2,8 |
| TLC 32-7L | 180 | 90 | 1 1/4" | G 2" | 32 | 2,8 |

tlc-2p50-en_c_td

Circulators for residential systems

TLCH Series



MARKET SECTORS

LIGHT COMMERCIAL.

APPLICATIONS

- Circulation of water in heating and air conditioning high flow/high head systems.
- Pumping of hot/cold, chemically and mechanically non-aggressive liquids.

SPECIFICATIONS

PUMP

- **Flow rate:** up to 12 m³/h.
- **Head:** up to 12 m.
- **Temperature of pumped liquid:** -10°C ÷ +110°C.
Non-freezing, non-condensing.
Maximum of 20% glycol and water mixture.
For glycol quantities higher than 20%, hydraulic performances must be checked.
- **Maximum operating pressure:** 10 bar (PN 10).
- **Impeller:** made of composite material.
- **Wear ring:** ceramic.

MOTOR

- Wet rotor type, with bearings lubricated by the pumped liquid.
Axial and radial bearings made of ceramic.
- Single-phase 230 V 50 Hz power supply.
Terminal box axially integrated in the motor.
- 2-pole, three-speed motor, with manual speed selection.
- According to EN standards 60335-1 and 2-51.
- **Insulation class:** H (180°C).
- **Protection class:** IP 44.

CONSTRUCTION CHARACTERISTICS

- Electric circulator pumps with in-line suction and discharge ports, designed for direct installation onto piping, with 1" 1/2 and 2" threaded connections.

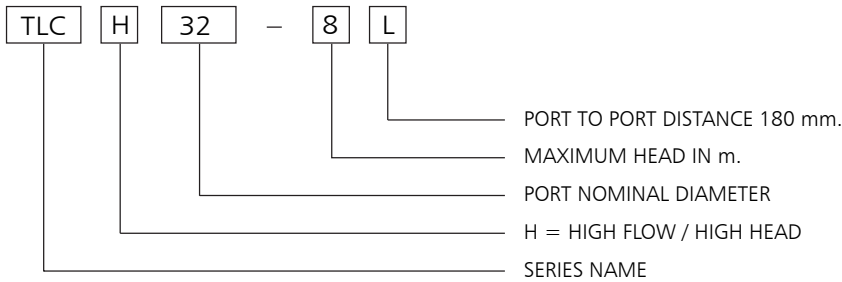
ACCESSORIES

- Pipe unions.
- Insulation shell.

INSTALLATION

- Suitable for installation in horizontal or vertical piping, in any position, provided that motor axis is horizontal.

TLCH SERIES IDENTIFICATION CODE



EXAMPLE : TLCH 32-8L

TLCH series circulator, high flow/head H version, port nominal diameter = 32, max head= 8 m, with port to port distance of 180 mm.

TABLE OF MATERIALS

| PART | MATERIAL |
|--------------|-----------------------------------|
| Pump body | Cast iron cataphoretically coated |
| Impeller | Composite material |
| Shaft | Ceramics |
| Inner jacket | Stainless steel |
| Wear ring | Ceramics |
| Bearings | Ceramics |
| Gaskets | EPDM |

t1ch-2p50-en_a_tm

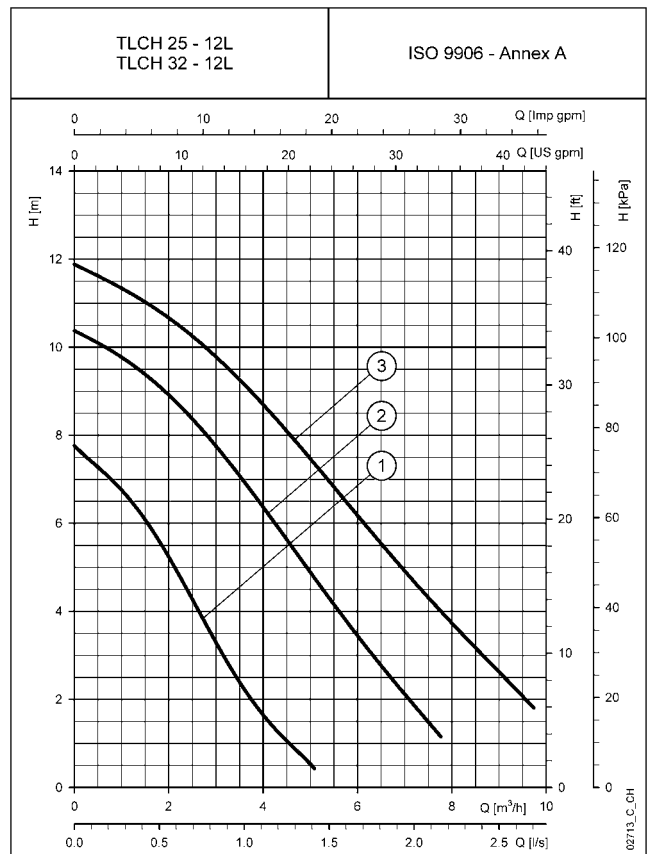
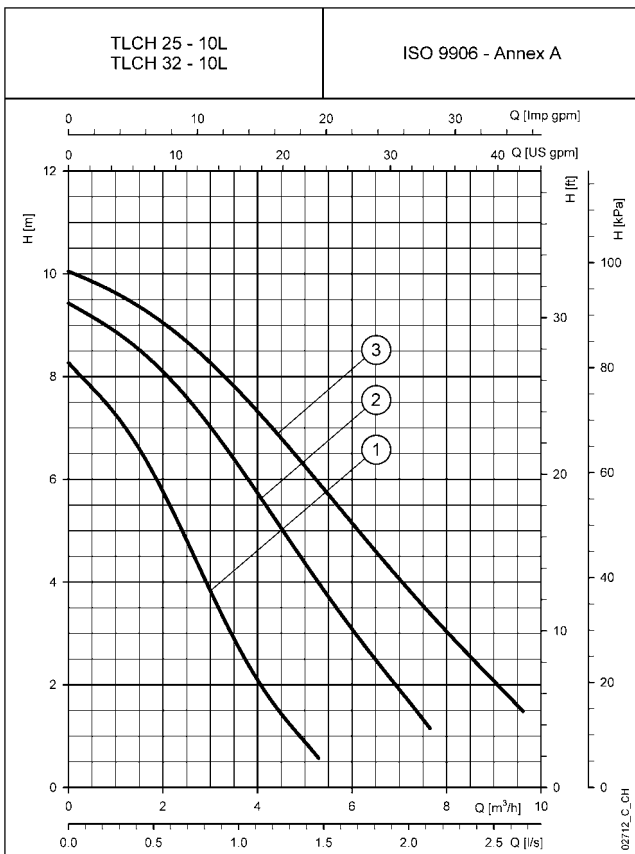
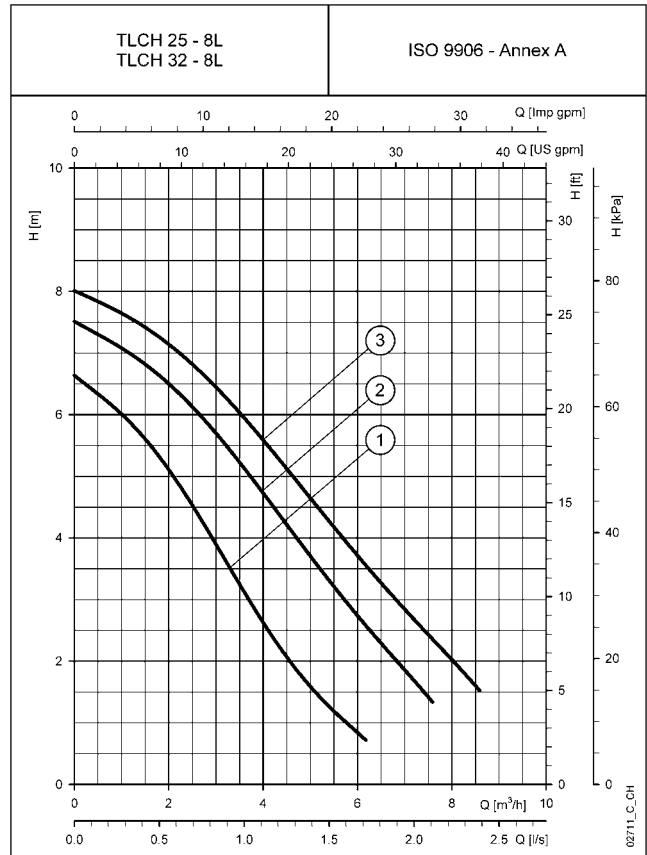
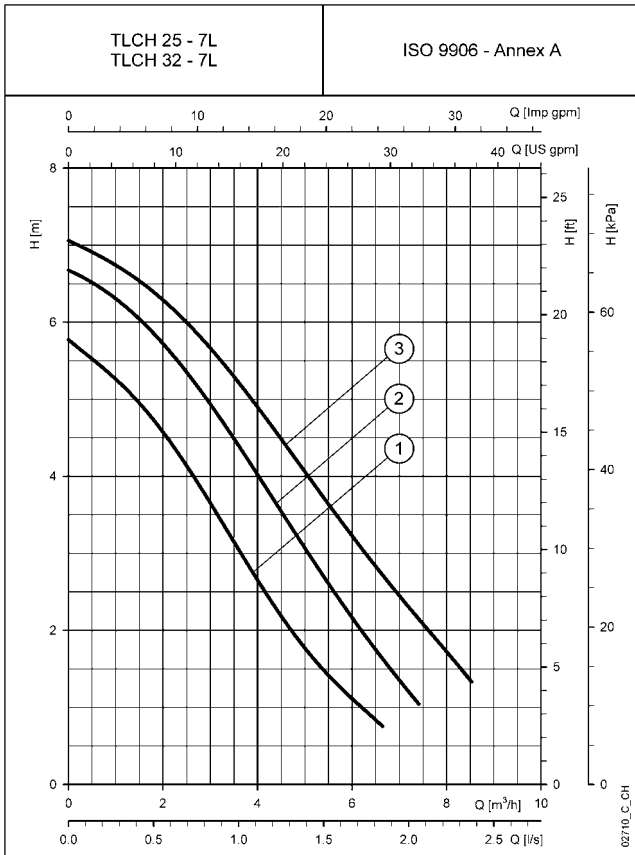
TLCH SERIES HYDRAULIC PERFORMANCE TABLE

| PUMP TYPE | MAXIMUM ABSORBED POWER W | MAXIMUM ABSORBED CURRENT A | CAPACITOR | | SPEED | Q = DELIVERY | | | | | | | | |
|-------------|-----------------------------|-------------------------------|-----------|-----|-------|---------------------------------------|------|------|-----|-----|-----|-----|-----|-----|
| | | | | | | l/s 0 | 0,3 | 0,7 | 1,0 | 1,3 | 1,7 | 2,0 | 2,3 | 2,7 |
| | | | | | | m ³ /h 0 | 1,2 | 2,4 | 3,6 | 4,8 | 6,0 | 7,2 | 8,4 | 9,6 |
| 230V 50Hz | | | μF | V | | H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | |
| TLCH 25-7L | 220 | 1,03 | 8,0 | 400 | 1 | 5,8 | 5,1 | 4,2 | 3,1 | 1,9 | 1,1 | | | |
| TLCH 32-7L | 228 | 1,04 | | | 2 | 6,7 | 6,2 | 5,4 | 4,4 | 3,3 | 2,2 | 1,2 | | |
| | 260 | 1,13 | | | 3 | 7,1 | 6,7 | 6,1 | 5,2 | 4,2 | 3,2 | 2,3 | 1,4 | |
| TLCH 25-8L | 260 | 1,23 | 8,0 | 400 | 1 | 6,6 | 5,9 | 4,7 | 3,1 | 1,8 | 0,8 | | | |
| TLCH 32-8L | 270 | 1,24 | | | 2 | 7,5 | 7,0 | 6,2 | 5,1 | 3,9 | 2,7 | 1,7 | | |
| | 286 | 1,25 | | | 3 | 8,0 | 7,6 | 6,9 | 5,9 | 4,8 | 3,7 | 2,7 | 1,7 | |
| TLCH 25-10L | 283 | 1,35 | 8,0 | 400 | 1 | 8,3 | 7,0 | 5,0 | 2,7 | 1,1 | | | | |
| TLCH 32-10L | 343 | 1,44 | | | 2 | 9,4 | 8,7 | 7,7 | 6,3 | 4,6 | 3,1 | 1,7 | | |
| | 357 | 1,56 | | | 3 | 10,0 | 9,5 | 8,8 | 7,7 | 6,5 | 5,1 | 3,8 | 2,6 | 1,5 |
| TLCH 25-12L | 285 | 1,36 | 8,0 | 400 | 1 | 7,8 | 6,5 | 4,5 | 2,2 | 0,7 | | | | |
| TLCH 32-12L | 372 | 1,69 | | | 2 | 10,4 | 9,6 | 8,5 | 6,9 | 5,2 | 3,4 | 1,9 | | |
| | 400 | 1,73 | | | 3 | 11,9 | 11,2 | 10,3 | 9,2 | 7,7 | 6,2 | 4,7 | 3,3 | 2,0 |

Performances according to standards ISO 9906 - Annex A.

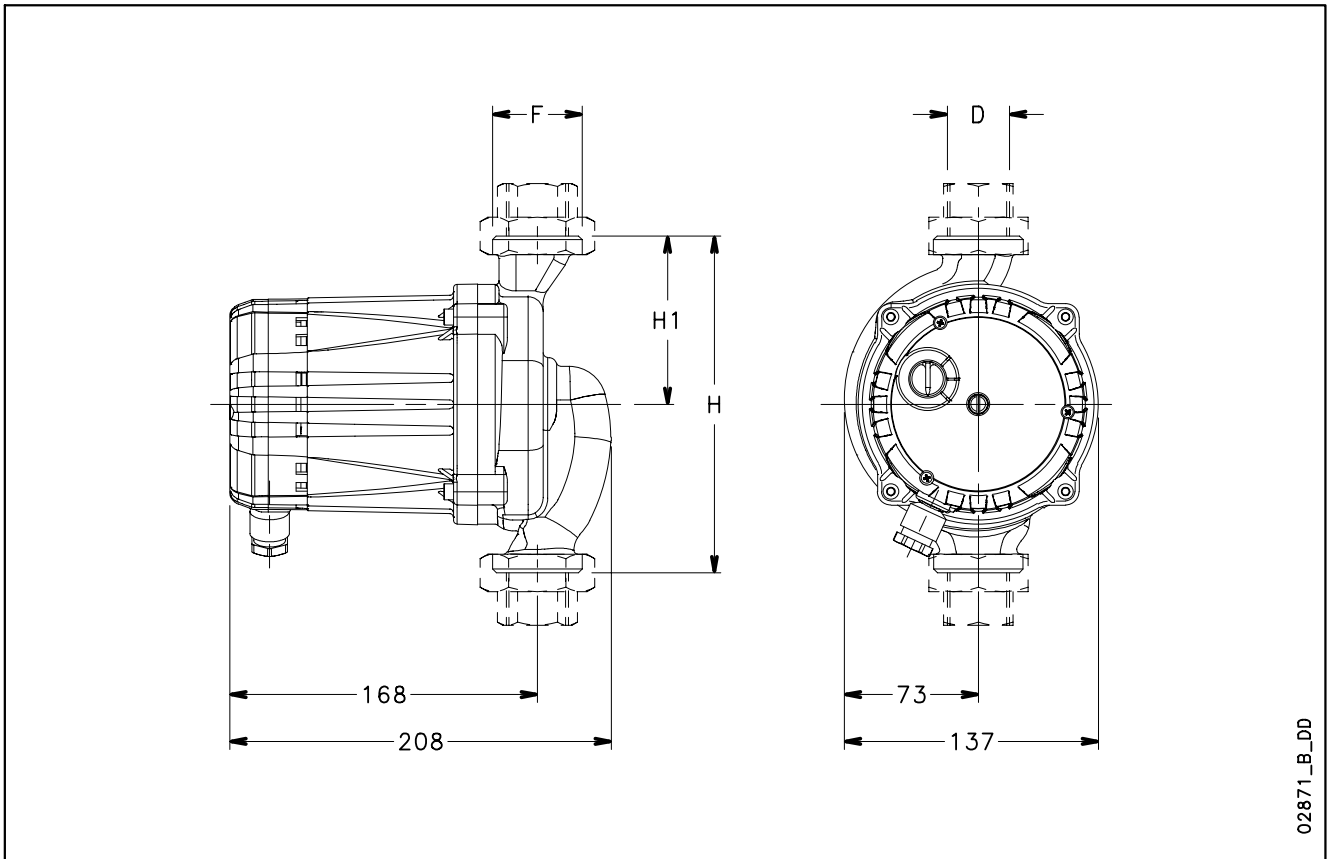
t1ch-2p50-en_c_th

TLCH SERIES SINGLE-PHASE OPERATING CHARACTERISTICS



These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

**TLCH SERIES
DIMENSIONS AND WEIGHTS**



DIMENSIONS AND WEIGHTS TABLE

| PUMP TYPE | DIMENSIONS (mm) | | | | | WEIGHT kg |
|-------------|-----------------|----|--------|----------|----|--------------|
| | H | H1 | D | F | DN | |
| TLCH 25-7L | 180 | 90 | 1" | G 1 1/2" | 25 | 6,5 |
| TLCH 32-7L | 180 | 90 | 1 1/4" | G 2" | 32 | 6,6 |
| TLCH 25-8L | 180 | 90 | 1" | G 1 1/2" | 25 | 6,5 |
| TLCH 32-8L | 180 | 90 | 1 1/4" | G 2" | 32 | 6,6 |
| TLCH 25-10L | 180 | 90 | 1" | G 1 1/2" | 25 | 6,5 |
| TLCH 32-10L | 180 | 90 | 1 1/4" | G 2" | 32 | 6,6 |
| TLCH 25-12L | 180 | 90 | 1" | G 1 1/2" | 25 | 6,5 |
| TLCH 32-12L | 180 | 90 | 1 1/4" | G 2" | 32 | 6,6 |

tlch-2p50-en_c_td

Sanitary Circulators

MARKET SECTORS

RESIDENTIAL.

APPLICATIONS

- Circulation of sanitary hot water.

TLCB Series



SPECIFICATIONS

PUMP

- **Flow rate:** up to 5 m³/h.
- **Head:** up to 6 m.
- **Temperature of pumped liquid:** -10°C ÷ +110°C.
Non-freezing, non-condensing.
- **Maximum operating pressure:** 10 bar (PN 10).
- **Impeller:** made of composite material.
- **Wear ring:** ceramic.

MOTOR

- Wet rotor type, with bearings lubricated by the pumped liquid.
Axial and radial bearings made of ceramic.
- Single-phase 230 V 50 Hz power supply.
Terminal box axially integrated in the motor.
- 2-pole, three-speed motor, with manual speed selection.
- According to EN standards 60335-1 and 2-51.
- **Insulation class:** H (180°C).
- **Protection class:** IP 44.

CONSTRUCTION CHARACTERISTICS

- Electric circulator pumps for sanitary hot water circulation, at a maximum temperature of 65°C, maximum hardness of 25° F and maximum viscosity of 10 mm²/S.
- Bronze pump body designed for direct installation onto copper piping, with 1", 1" ¼ and 1" ½ threaded connections.

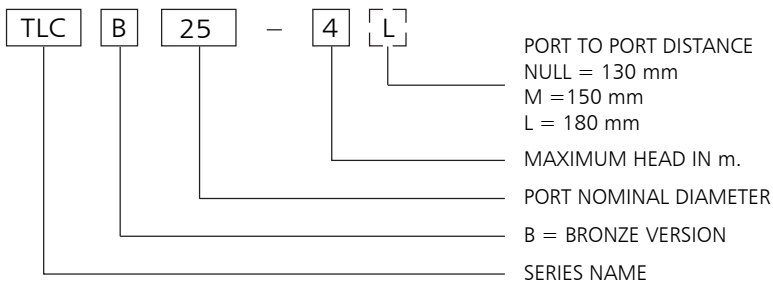
ACCESSORIES

- Pipe unions.
- Insulation shell.

INSTALLATION

- Suitable for installation in horizontal or vertical piping, in any position provided that motor axis is horizontal.

TLCB SERIES IDENTIFICATION CODE



EXAMPLE : TLCB 25-4L

TLC series circulator, bronze B version, port nominal diameter = 25, max head = 4 m, with port to port distance of 180 mm.

TABLE OF MATERIALS

| PART | MATERIAL |
|--------------|--------------------|
| Pump body | Bronze |
| Impeller | Composite material |
| Shaft | Ceramics |
| Inner jacket | Stainless steel |
| Wear ring | Ceramics |
| Bearings | Ceramics |
| Gaskets | EPDM |

tlcb-2p50-en_a_tm

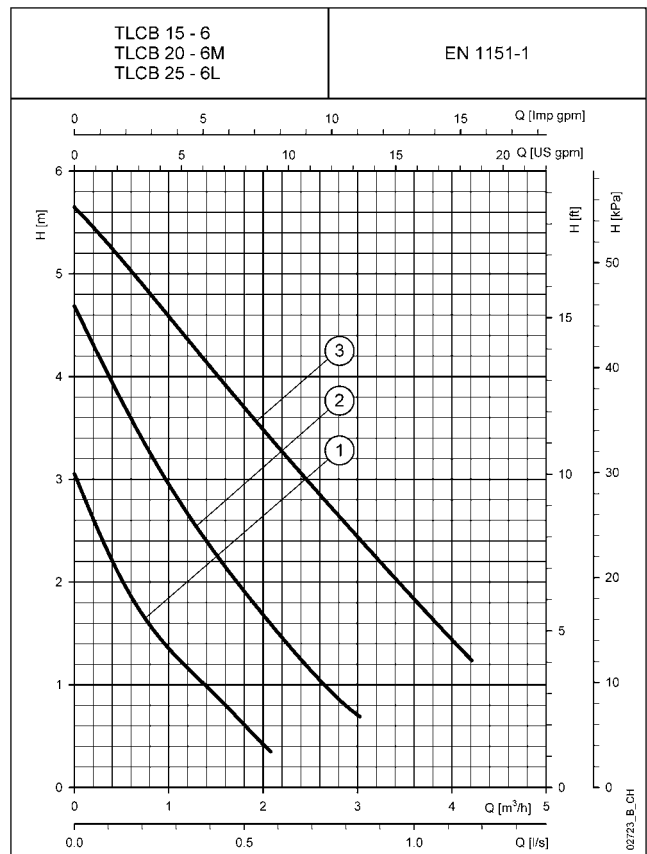
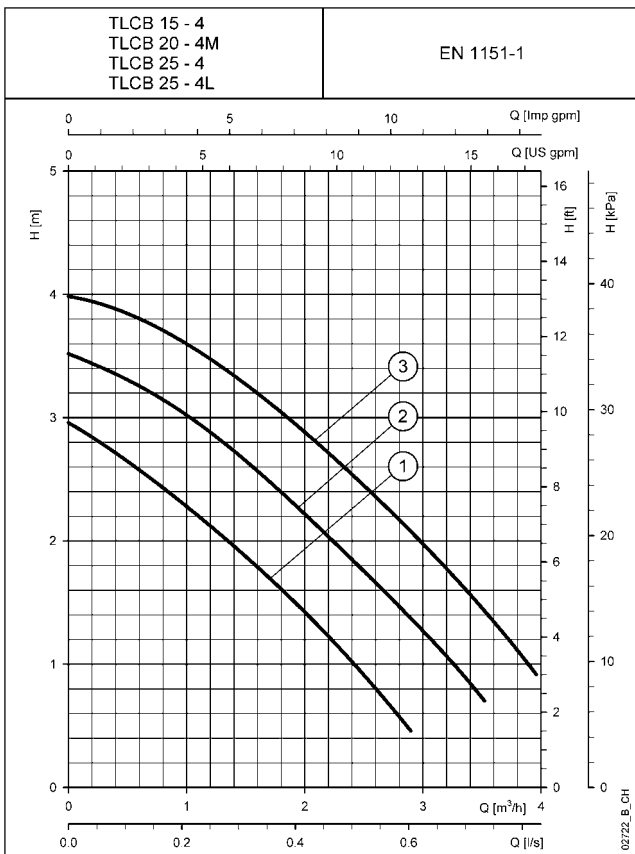
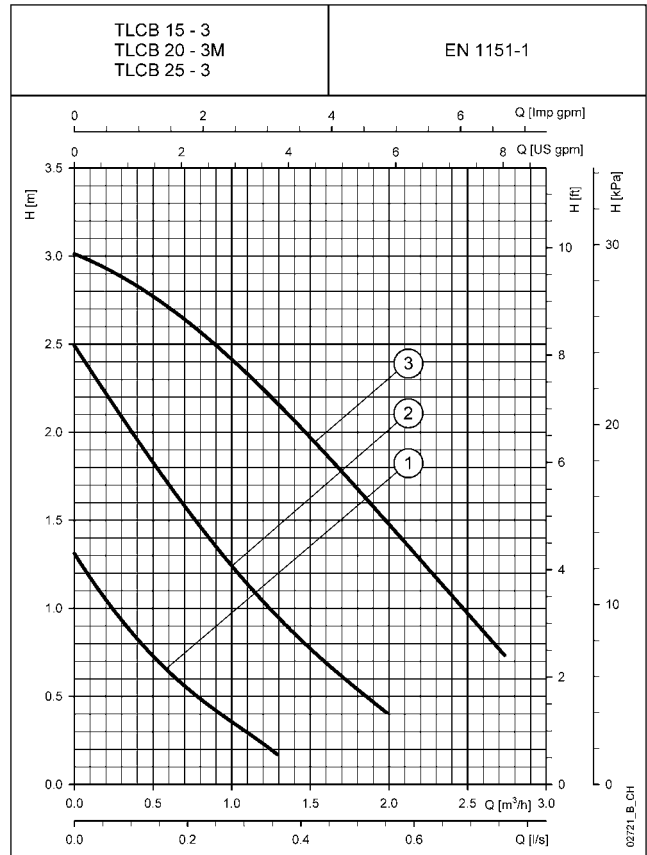
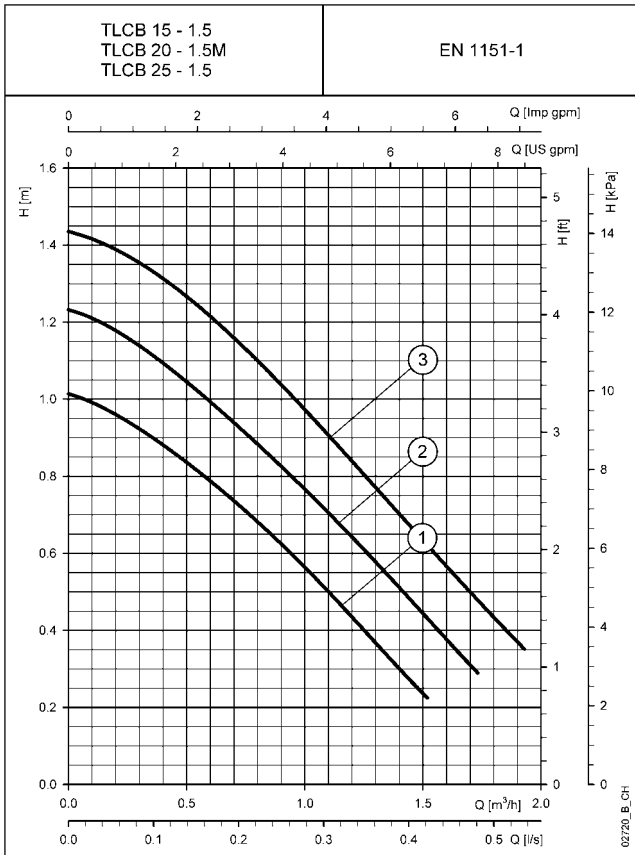
TLCB SERIES HYDRAULIC PERFORMANCE TABLE

| PUMP TYPE | MAXIMUM ABSORBED POWER W | MAXIMUM ABSORBED CURRENT A | CAPACITOR | | SPEED | Q = DELIVERY | | | | | | | | |
|---------------|--------------------------|----------------------------|-----------|-----|-------|---------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | | | | l/s 0 | 0,2 | 0,3 | 0,4 | 0,5 | 0,7 | 0,8 | 1,0 | 1,2 |
| | | | | | | m ³ /h 0 | 0,6 | 1,2 | 1,5 | 1,8 | 2,4 | 3,0 | 3,6 | 4,2 |
| 230V 50Hz | | | μF | V | | H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | |
| TLCB 15-1.5 | 28 | 0,16 | 2,0 | 400 | 1 | 1,0 | 0,8 | 0,4 | 0,2 | | | | | |
| TLCB 20-1.5M | 43 | 0,24 | | | 2 | 1,2 | 1,0 | 0,6 | 0,4 | | | | | |
| TLCB 25-1.5 | 58 | 0,28 | | | 3 | 1,4 | 1,2 | 0,8 | 0,6 | 0,4 | | | | |
| TLCB 15-3 | 33 | 0,17 | 2,0 | 400 | 1 | 1,3 | 0,6 | 0,2 | | | | | | |
| TLCB 20-3M | 48 | 0,25 | | | 2 | 2,5 | 1,7 | 1,0 | 0,8 | 0,5 | | | | |
| TLCB 25-3 | 63 | 0,30 | | | 3 | 3,0 | 2,7 | 2,2 | 2,0 | 1,7 | 1,1 | | | |
| TLCB 15-4 | 40 | 0,19 | 2,0 | 400 | 1 | 3,0 | 2,6 | 2,1 | 1,9 | 1,6 | 1,0 | | | |
| TLCB 20-4M | 59 | 0,28 | | | 2 | 3,5 | 3,3 | 2,9 | 2,7 | 2,4 | 1,8 | 1,3 | | |
| TLCB 25-4 (L) | 70 | 0,33 | | | 3 | 4,0 | 3,8 | 3,5 | 3,3 | 3,0 | 2,5 | 2,0 | 1,3 | |
| TLCB 15-6 | 56 | 0,27 | 3,0 | 400 | 1 | 3,1 | 1,9 | 1,2 | 0,9 | 0,6 | | | | |
| TLCB 20-6M | 83 | 0,37 | | | 2 | 4,7 | 3,6 | 2,7 | 2,3 | 1,9 | 1,2 | 0,7 | | |
| TLCB 25-6L | 100 | 0,44 | | | 3 | 5,6 | 5,0 | 4,4 | 4,0 | 3,7 | 3,1 | 2,4 | 1,8 | 1,2 |

Performances according to standards EN 1151-1

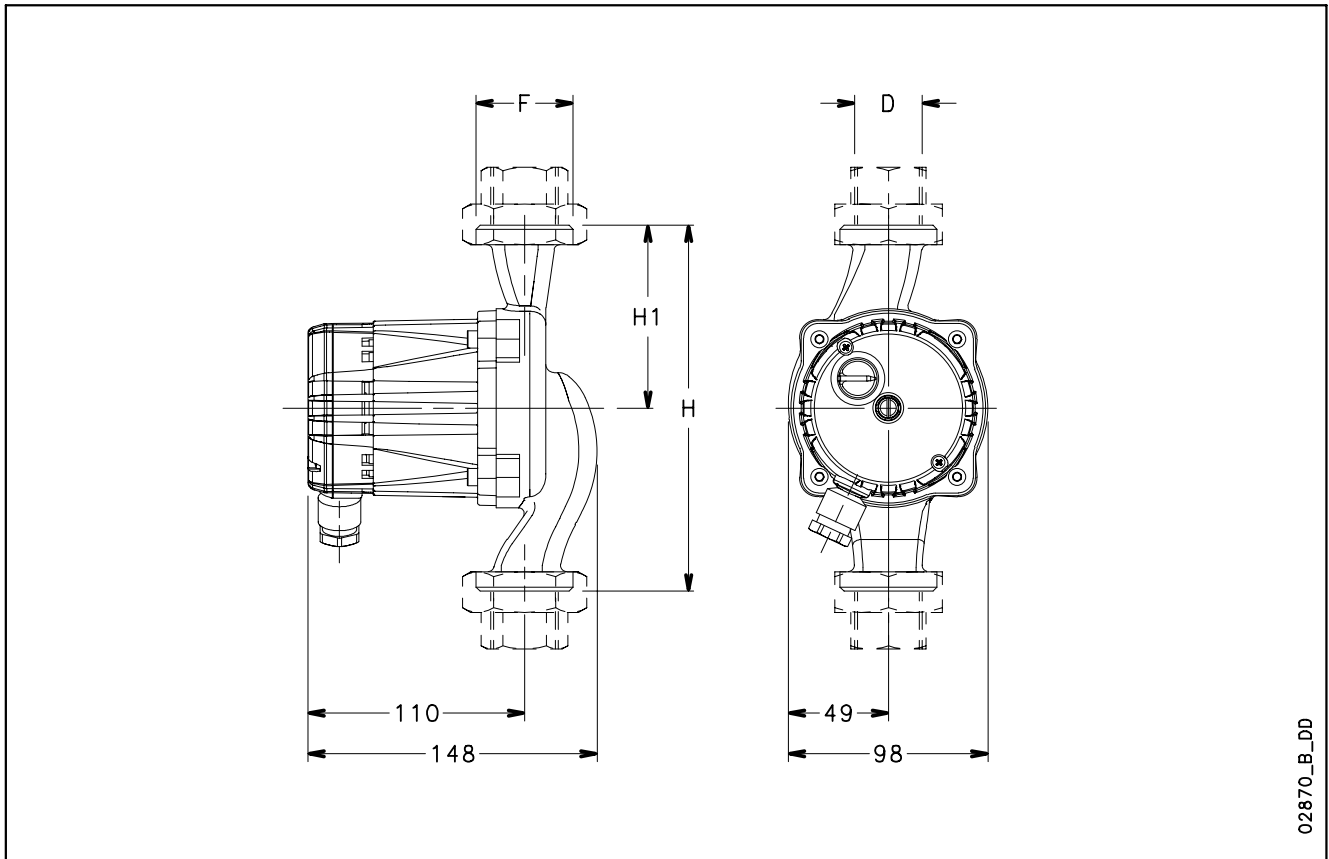
tlcb-2p50-en_b_th

**TLCB SERIES
SINGLE-PHASE OPERATING CHARACTERISTICS**



These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

TLCB SERIES DIMENSIONS AND WEIGHTS



02870_B_DD

DIMENSIONS AND WEIGHTS TABLE

| PUMP TYPE | DIMENSIONS (mm) | | D | F | DN | WEIGHT kg |
|--------------|-----------------|----|--------|----------|----|--------------|
| | H | H1 | | | | |
| TLCB 15-1.5 | 130 | 65 | 1/2" | G 1" | 15 | 2,9 |
| TLCB 20-1.5M | 150 | 75 | 3/4" | G 1 1/4" | 20 | 3 |
| TLCB 25-1.5 | 130 | 65 | 1" | G 1 1/2" | 25 | 3 |
| TLCB 15-3 | 130 | 65 | 1/2" | G 1" | 15 | 2,9 |
| TLCB 20-3M | 150 | 75 | 3/4" | G 1 1/4" | 20 | 3 |
| TLCB 25-3 | 130 | 65 | 1" | G 1 1/2" | 25 | 3 |
| TLCB 15-4 | 130 | 65 | 1/2" | G 1" | 15 | 2,9 |
| TLCB 20-4M | 150 | 75 | 3/4" | G 1 1/4" | 20 | 3 |
| TLCB 25-4 | 130 | 65 | 1" | G 1 1/2" | 25 | 3 |
| TLCB 25-4L | 180 | 90 | 1" | G 1 1/2" | 25 | 3,1 |
| TLCB 15-6 | 130 | 65 | 1/2" | G 1" | 15 | 2,9 |
| TLCB 20-6M | 150 | 75 | R 3/4" | G 1 1/4" | 20 | 3 |
| TLCB 25-6L | 180 | 90 | R 1" | G 1 1/2" | 25 | 3,1 |

tlcB-2p50-en_c_td

Sanitary Circulators

MARKET SECTORS

SANITARY LIGHT COMMERCIAL.

APPLICATIONS

- Circulation of sanitary hot water in high flow/high head installations.

TLCHB Series



SPECIFICATIONS

PUMP

- **Flow rate:** up to 12 m³/h.
- **Head:** up to 12 m.
- **Temperature of pumped liquid:** -10°C ÷ +110°C.
Non-freezing, non-condensing.
- **Maximum operating pressure:** 10 bar (PN 10).
- **Impeller:** made of composite material.
- **Wear ring:** ceramic.

MOTOR

- Wet rotor type, with bearings lubricated by the pumped liquid.
Axial and radial bearings made of ceramic.
- Single-phase 230 V 50 Hz power supply.
Terminal box axially integrated in the motor.
- 2-pole, three-speed motor, with manual speed selection.
- According to EN standards 60335-1 and 2-51.
- **Insulation class:** H (180°C).
- **Protection class:** IP 44.

CONSTRUCTION CHARACTERISTICS

- Electric circulator pumps for sanitary hot water circulation, at a maximum temperature of 65°C , maximum hardness of 25° F.
- Bronze pump body designed for direct installation onto copper piping, with 1" ¼ and 1" ½ threaded connections.

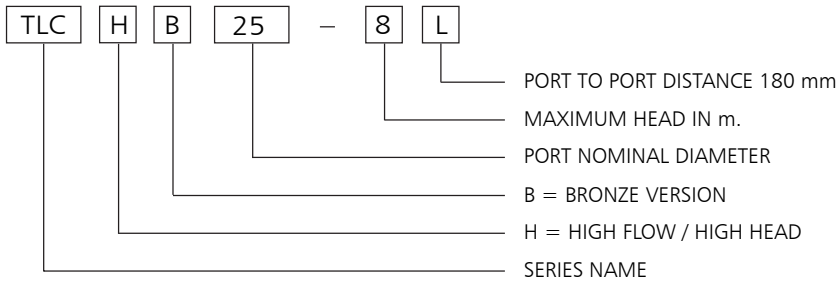
ACCESSORIES

- Pipe unions.
- Insulation shell.

INSTALLATION

- Suitable for installation in horizontal or vertical piping, in any position provided that motor axis is horizontal.

TLCHB SERIES IDENTIFICATION CODE



EXAMPLE : TLCHB 25-8L

TLC series circulator, high flow/head H version, bronze B version, port nominal diameter = 25, max head= 8 m, with port to port distance of 180 mm.

TABLE OF MATERIALS

| PART | MATERIAL |
|--------------|--------------------|
| Pump body | Bronze |
| Impeller | Composite material |
| Shaft | Ceramics |
| Inner jacket | Stainless steel |
| Wear ring | Ceramics |
| Bearings | Ceramics |
| Gaskets | EPDM |

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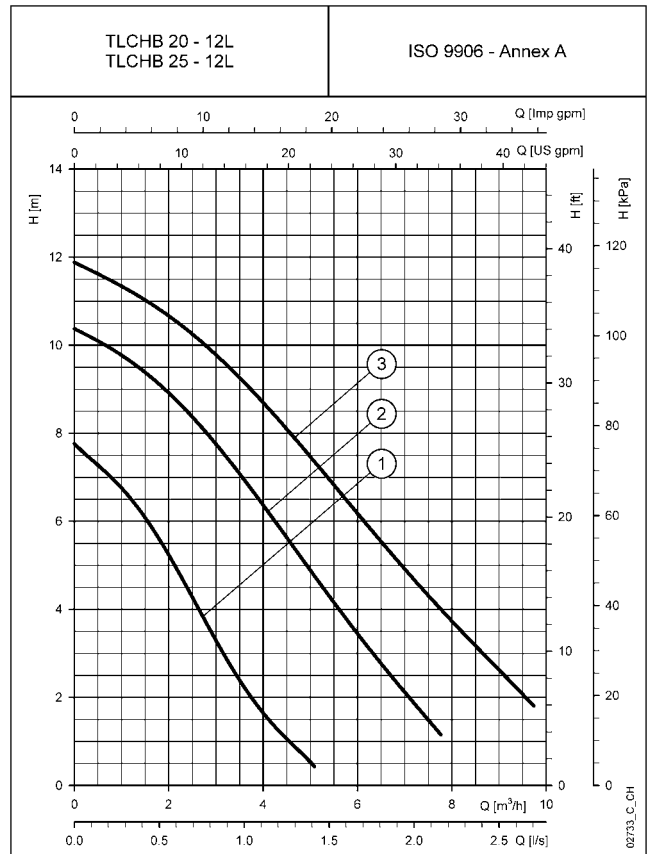
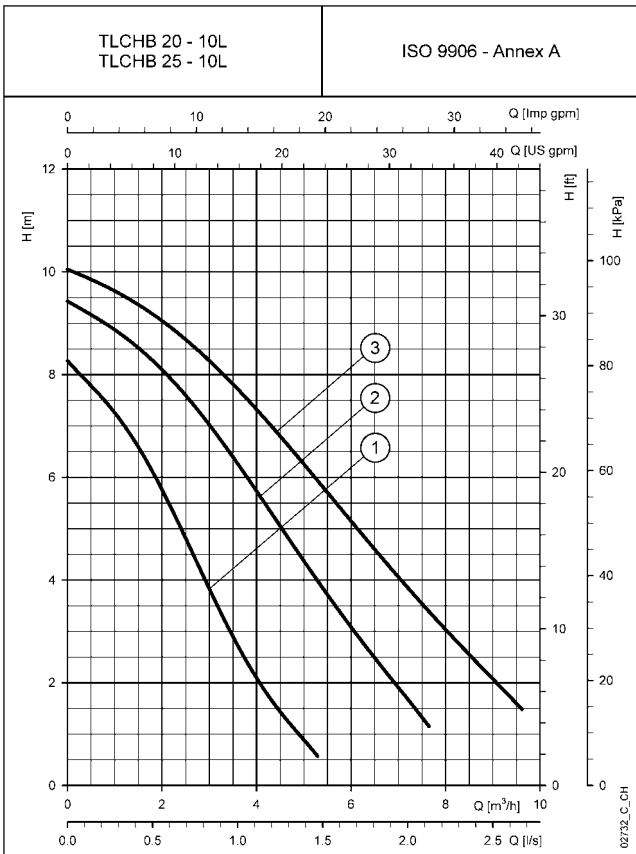
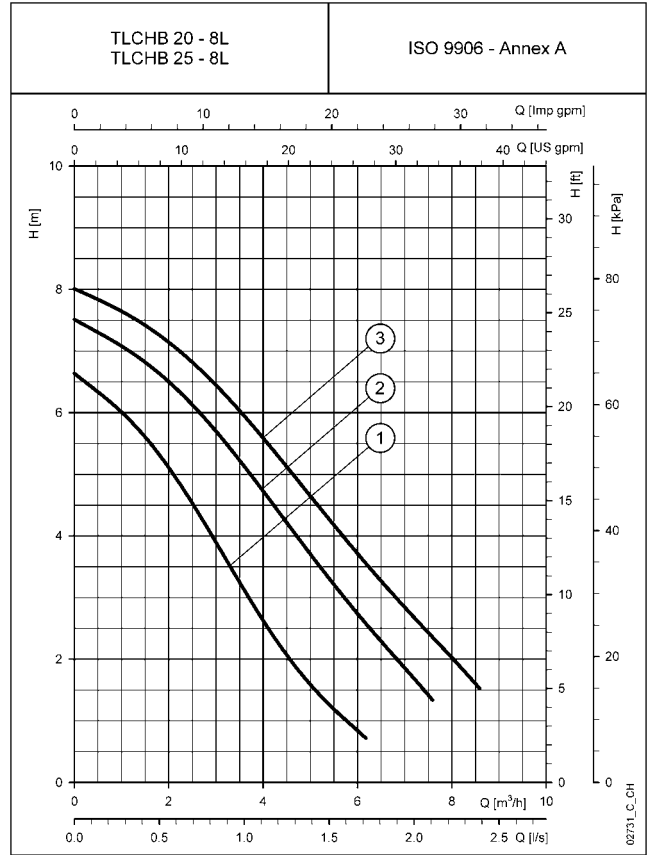
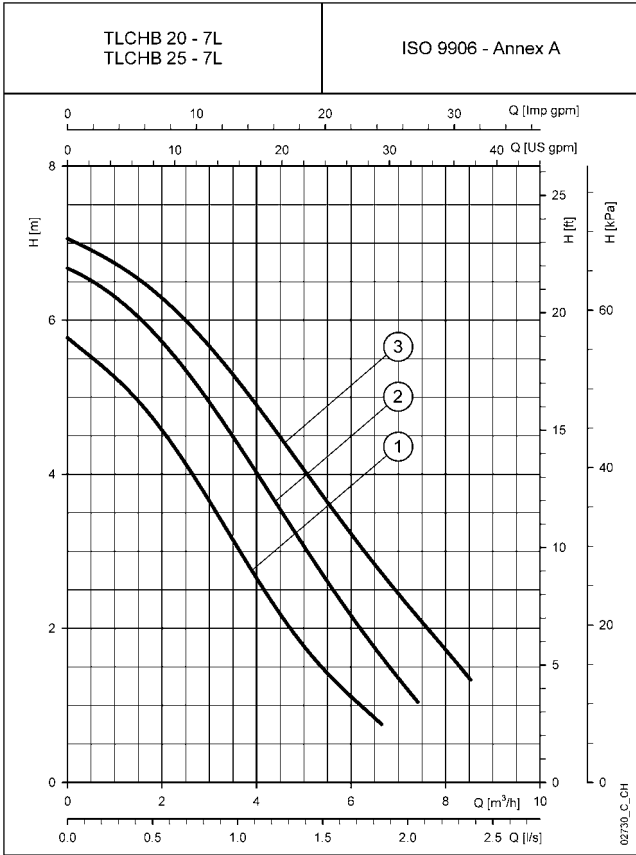
TLCHB SERIES HYDRAULIC PERFORMANCE TABLE

| PUMP TYPE | MAXIMUM ABSORBED POWER W | MAXIMUM ABSORBED CURRENT A | CAPACITOR | | SPEED | Q = DELIVERY | | | | | | | | |
|------------------------------|--------------------------|----------------------------|-----------|-----|-------|---------------------------------------|------|------|-----|-----|-----|-----|-----|-----|
| | | | | | | l/s 0 | 0,3 | 0,7 | 1,0 | 1,3 | 1,7 | 2,0 | 2,3 | 2,7 |
| | | | | | | m ³ /h 0 | 1,2 | 2,4 | 3,6 | 4,8 | 6,0 | 7,2 | 8,4 | 9,6 |
| 230V 50Hz | | | μF | V | | H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | |
| TLCHB 20-7L TLCHB 25-7L | 220 228 260 | 1,03 1,04 1,13 | 8,0 | 400 | 1 | 5,8 | 5,1 | 4,2 | 3,1 | 1,9 | 1,1 | | | |
| | | | | | 2 | 6,7 | 6,2 | 5,4 | 4,4 | 3,3 | 2,2 | 1,2 | | |
| | | | | | 3 | 7,1 | 6,7 | 6,1 | 5,2 | 4,2 | 3,2 | 2,3 | 1,4 | |
| TLCHB 20-8L TLCHB 25-8L | 260 270 286 | 1,23 1,24 1,25 | 8,0 | 400 | 1 | 6,6 | 5,9 | 4,7 | 3,1 | 1,8 | 0,8 | | | |
| | | | | | 2 | 7,5 | 7,0 | 6,2 | 5,1 | 3,9 | 2,7 | 1,7 | | |
| | | | | | 3 | 8,0 | 7,6 | 6,9 | 5,9 | 4,8 | 3,7 | 2,7 | 1,7 | |
| TLCHB 20-10L TLCHB 25-10L | 283 343 357 | 1,35 1,44 1,56 | 8,0 | 400 | 1 | 8,3 | 7,0 | 5,0 | 2,7 | 1,1 | | | | |
| | | | | | 2 | 9,4 | 8,7 | 7,7 | 6,3 | 4,6 | 3,1 | 1,7 | | |
| | | | | | 3 | 10,0 | 9,5 | 8,8 | 7,7 | 6,5 | 5,1 | 3,8 | 2,6 | 1,5 |
| TLCHB 20-12L TLCHB 25-12L | 285 372 400 | 1,36 1,69 1,73 | 8,0 | 400 | 1 | 7,8 | 6,5 | 4,5 | 2,2 | 0,7 | | | | |
| | | | | | 2 | 10,4 | 9,6 | 8,5 | 6,9 | 5,2 | 3,4 | 1,9 | | |
| | | | | | 3 | 11,9 | 11,2 | 10,3 | 9,2 | 7,7 | 6,2 | 4,7 | 3,3 | 2,0 |

Performances according to standards ISO 9906 - Annex A.

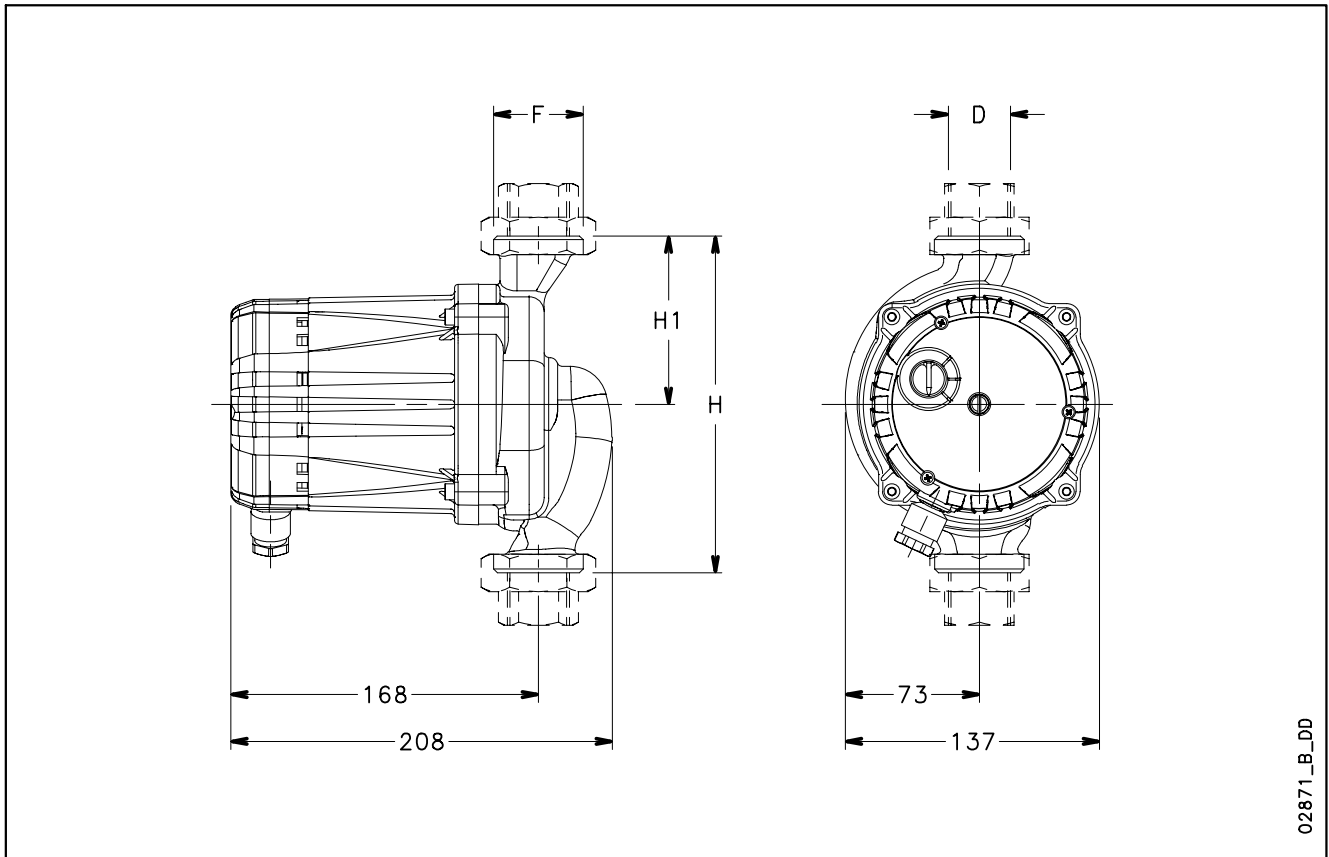
tlchb-2p50-en_c_th

**TLCHB SERIES
SINGLE-PHASE OPERATING CHARACTERISTICS**



These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

TLCHB SERIES DIMENSIONS AND WEIGHTS



DIMENSIONS AND WEIGHTS TABLE

| PUMP TYPE | DIMENSIONS (mm) | | | | | WEIGHT kg |
|--------------|-----------------|----|------|---------|----|--------------|
| | H | H1 | D | F | DN | |
| TLCHB 20-7L | 180 | 90 | 3/4" | G 1 1/4 | 20 | 6,7 |
| TLCHB 25-7L | 180 | 90 | 1" | G 1 1/2 | 25 | 6,7 |
| TLCHB 20-8L | 180 | 90 | 3/4" | G 1 1/4 | 20 | 6,7 |
| TLCHB 25-8L | 180 | 90 | 1" | G 1 1/2 | 25 | 6,7 |
| TLCHB 20-10L | 180 | 90 | 3/4" | G 1 1/4 | 20 | 6,7 |
| TLCHB 25-10L | 180 | 90 | 1" | G 1 1/2 | 25 | 6,7 |
| TLCHB 20-12L | 180 | 90 | 3/4" | G 1 1/4 | 20 | 6,7 |
| TLCHB 25-12L | 180 | 90 | 1" | G 1 1/2 | 25 | 6,7 |

tlchb-2p50-en_c_td

Solar Circulators

MARKET SECTORS

RESIDENTIAL, LIGHT COMMERCIAL.

APPLICATIONS

- Circulation of hot water in solar systems.

TLCSOL Series



SPECIFICATIONS

PUMP

- **Flow rate:** up to 4 m³/h.
- **Head:** up to 6 m.
- **Temperature of pumped liquid:** -10°C ÷ +110°C
+130°C can be reached for max 2h.
Non-freezing, non-condensing.
Maximum of 50% glycol and water mixture.
For glycol quantities higher than 50%, hydraulic performances must be checked.
- **Maximum operating pressure:** 10 bar (PN 10).
- **Impeller:** made of composite material.
- **Wear ring:** ceramic.

MOTOR

- Wet rotor type, with bearings lubricated by the pumped liquid.
Axial and radial bearings made of ceramic.
- Single-phase 230 V 50 Hz power supply.
Terminal box axially integrated in the motor.
- 2-pole, three-speed motor, with manual speed selection.
- According to EN standards 60335-1 and 2-51.
- **Insulation class:** H (180°C).
- **Protection class:** IP 44.

CONSTRUCTION CHARACTERISTICS

- Electric circulator pumps with in-line suction and discharge ports, designed for direct installation onto piping, with 1" and 1" ½ threaded connections.
- Resin-cast stator to avoid water condensation inside the motor.

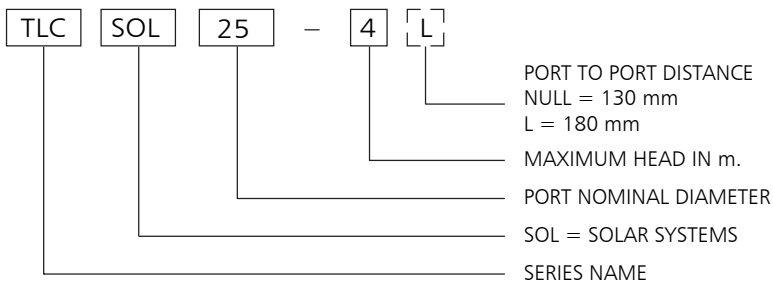
ACCESSORIES

- Pipe unions.
- Insulation shell.

INSTALLATION

- Suitable for installation in horizontal or vertical piping, in any position provided that motor axis is horizontal.

TLCSOL SERIES IDENTIFICATION CODE



EXAMPLE : TLCSOL 25-4L

TLCSOL series circulator, for Solar systems, port nominal diameter = 25, max head = 4 m, with port to port distance of 180 mm.

TABLE OF MATERIALS

| PART | MATERIAL |
|--------------|-----------------------------------|
| Pump body | Cast iron cataphoretically coated |
| Impeller | Composite material |
| Shaft | Ceramics |
| Inner jacket | Stainless steel |
| Wear ring | Ceramics |
| Bearings | Ceramics |
| Gaskets | EPDM |

tlcsol-2p50-en_a_tm

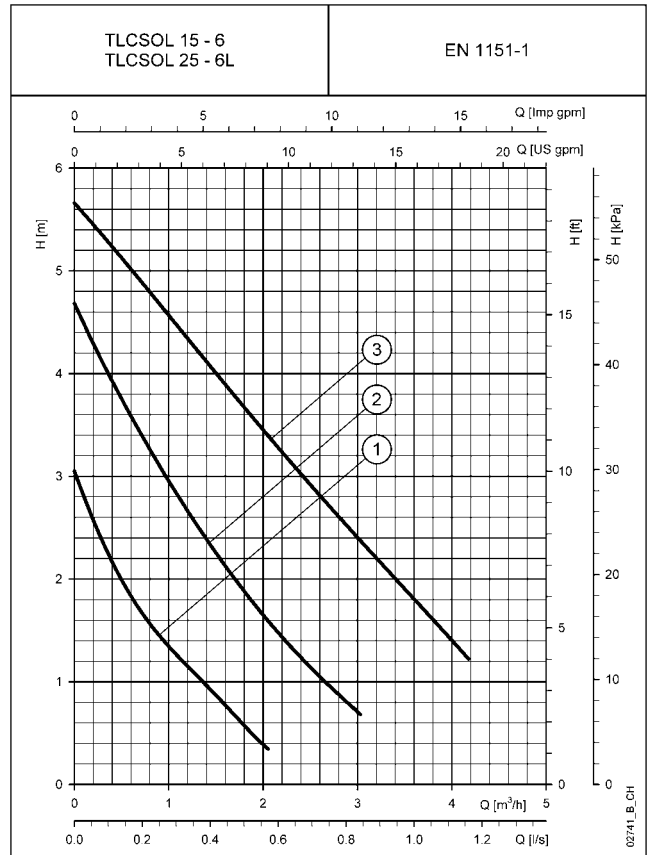
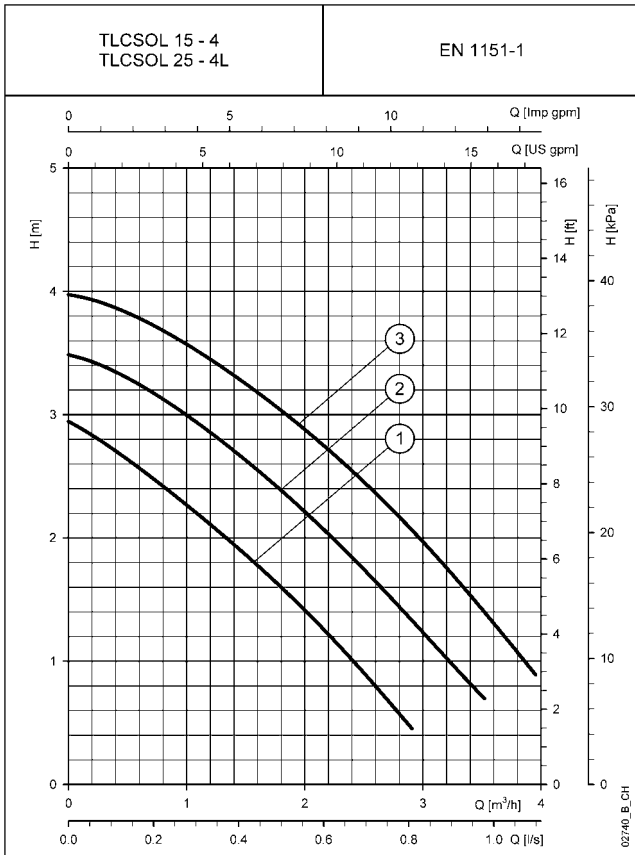
TLCSOL SERIES HYDRAULIC PERFORMANCE TABLE

| PUMP TYPE | MAXIMUM ABSORBED POWER W | MAXIMUM ABSORBED CURRENT A | CAPACITOR | | SPEED | Q = DELIVERY | | | | | | | | | | | |
|--------------|-----------------------------|-------------------------------|-----------|-----|-------|---------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|
| | | | | | | l/s 0 | 0,2 | 0,3 | 0,4 | 0,5 | 0,7 | 0,8 | 1,0 | 1,2 | | | |
| | | | | | | m ³ /h 0 | 0,6 | 1,2 | 1,5 | 1,8 | 2,4 | 3,0 | 3,6 | 4,2 | | | |
| 230V 50Hz | | | μF | V | | H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | | | | |
| TLCSOL 15-4 | 40 | 0,19 | 2,0 | 400 | 1 | 2,9 | 2,6 | 2,1 | 1,9 | 1,6 | 1,0 | | | | | | |
| TLCSOL 25-4L | 59 | 0,28 | | | 2 | 3,5 | 3,2 | 2,9 | 2,6 | 2,4 | 1,8 | 1,2 | | | | | |
| | 70 | 0,33 | | | 3 | 4,0 | 3,8 | 3,4 | 3,3 | 3,0 | 2,5 | 2,0 | 1,3 | | | | |
| TLCSOL 15-6 | 56 | 0,27 | 3,0 | 400 | 1 | 3,0 | 1,8 | 1,2 | 0,9 | 0,6 | | | | | | | |
| TLCSOL 25-6L | 83 | 0,37 | | | 2 | 4,7 | 3,6 | 2,7 | 2,3 | 1,9 | 1,2 | 0,7 | | | | | |
| | 100 | 0,44 | | | 3 | 5,7 | 5,0 | 4,3 | 4,0 | 3,7 | 3,0 | 2,4 | 1,8 | 1,2 | | | |

Performances according to standards EN 1151-1

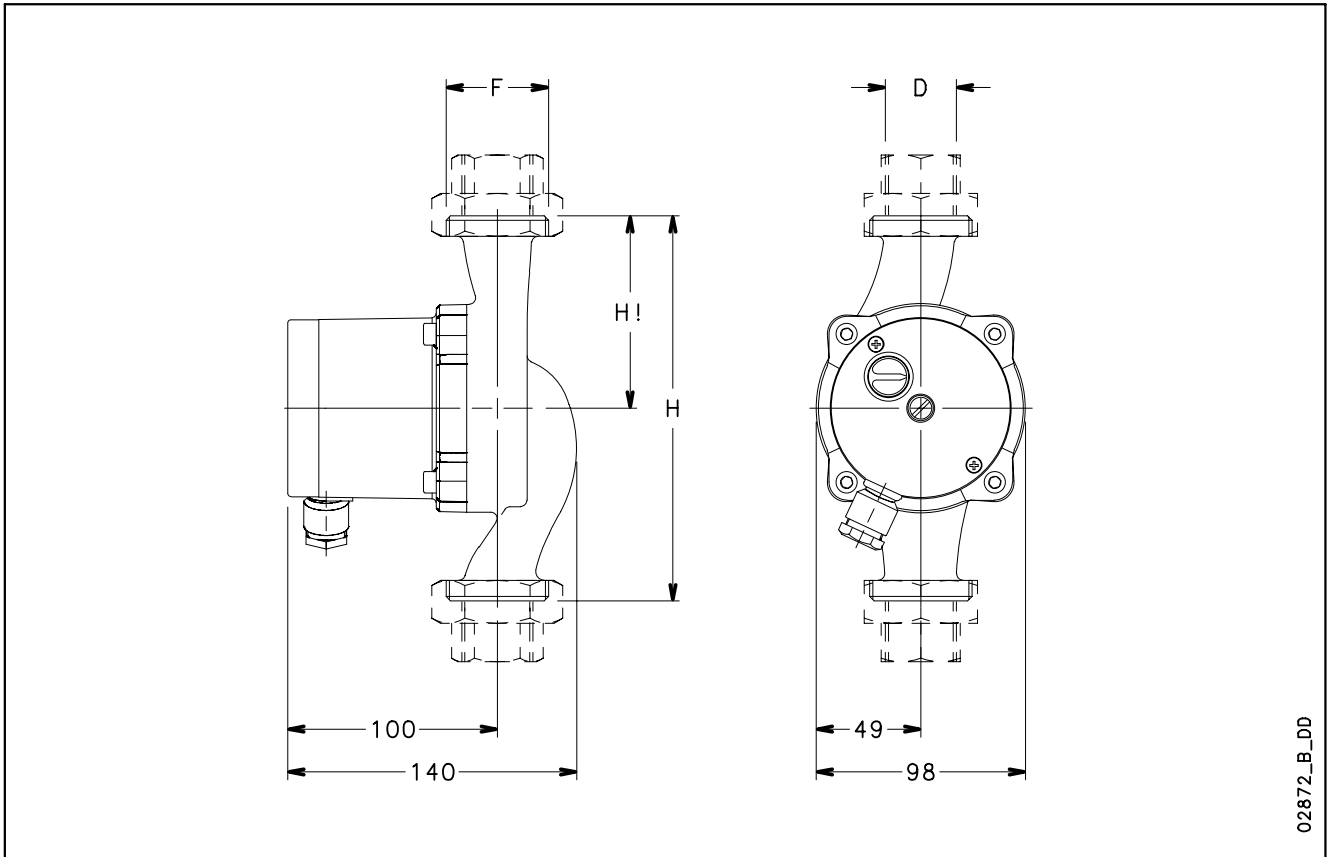
tlcsol-2p50-en_b_th

**TLCSOL SERIES
SINGLE-PHASE OPERATING CHARACTERISTICS**



These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

**TLCSOL SERIES
DIMENSIONS AND WEIGHTS**



02872_B_DD

DIMENSIONS AND WEIGHTS TABLE

| PUMP TYPE | DIMENSIONS (mm) | | D | F | DN | WEIGHT kg |
|--------------|-----------------|----|------|----------|----|--------------|
| | H | H1 | | | | |
| TLCSOL 15-4 | 130 | 65 | 1/2" | G 1" | 15 | 3 |
| TLCSOL 25-4L | 180 | 90 | 1" | G 1 1/2" | 25 | 3 |
| TLCSOL 15-6 | 130 | 65 | 1/2" | G 1" | 15 | 3 |
| TLCSOL 25-6L | 180 | 90 | 1" | G 1 1/2" | 25 | 3 |

tlcsol-2p50-en_c_td

Refrigeration Air-conditioning Circulators

TLCK Series



MARKET SECTORS

RESIDENTIAL, LIGHT COMMERCIAL.

APPLICATIONS

- Circulation of water in air-conditioning and refrigeration systems and geothermal systems.

SPECIFICATIONS

PUMP

- **Flow rate:** up to 5,5 m³/h.
- **Head:** up to 6 m.
- **Temperature of pumped liquid:** -25°C ÷ +110°C.
Non-freezing, non-condensing.
Maximum of 50% glycol and water mixture.
For glycol quantities higher than 50%, hydraulic performances must be checked.
- **Maximum operating pressure:** 10 bar (PN 10).
- **Impeller:** made of composite material.
- **Wear ring:** ceramic.

MOTOR

- Wet rotor type, with bearings lubricated by the pumped liquid.
Axial and radial bearings made of ceramic.
- Single-phase 230 V 50 Hz power supply.
Terminal box axially integrated in the motor.
- 2-pole, three-speed motor, with manual speed selection.
- According to EN standards 60335-1 and 2-51.
- **Insulation class:** H (180°C).
- **Protection class:** IP 44.

CONSTRUCTION CHARACTERISTICS

- Electric circulator pumps with in-line suction and discharge ports, designed for direct installation onto piping, with 1" and 1" ½ threaded connections.
- Resin-cast stator to avoid water condensation inside the motor.

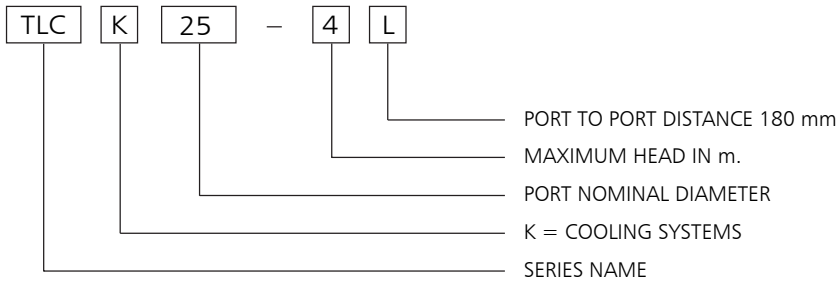
ACCESSORIES

- Pipe unions.
- Insulation shell.

INSTALLATION

- Suitable for installation in horizontal or vertical piping, in any position provided that motor axis is horizontal.

TLCK SERIES IDENTIFICATION CODE



EXAMPLE : TLCK 25-4L

TLCK series circulator, K for cooling systems, port nominal diameter = 25, max head = 4 m, with port to port distance of 180 mm.

TABLE OF MATERIALS

| PART | MATERIAL |
|--------------|-----------------------------------|
| Pump body | Cast iron cataphoretically coated |
| Impeller | Composite material |
| Shaft | Ceramics |
| Inner jacket | Stainless steel |
| Wear ring | Ceramics |
| Bearings | Ceramics |
| Gaskets | EPDM |

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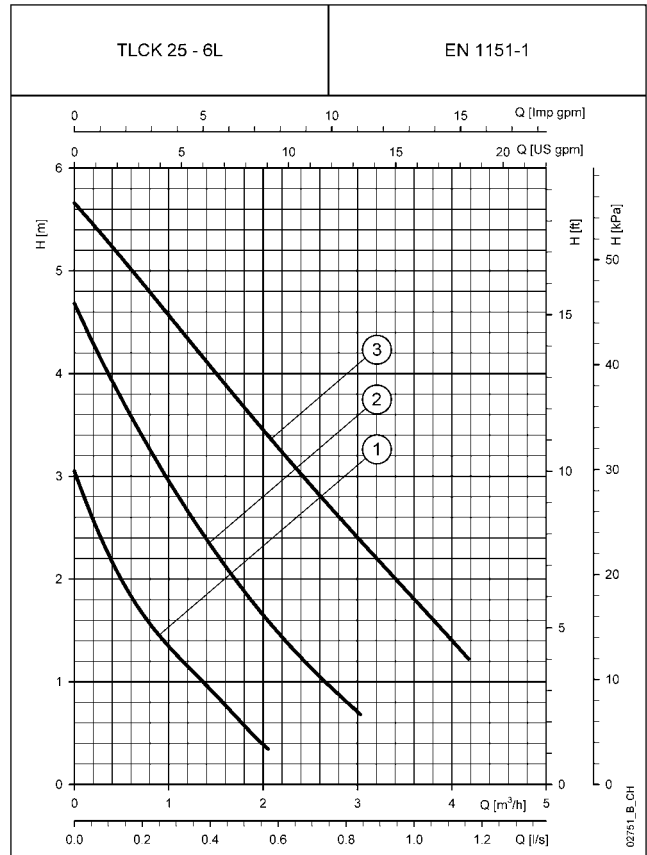
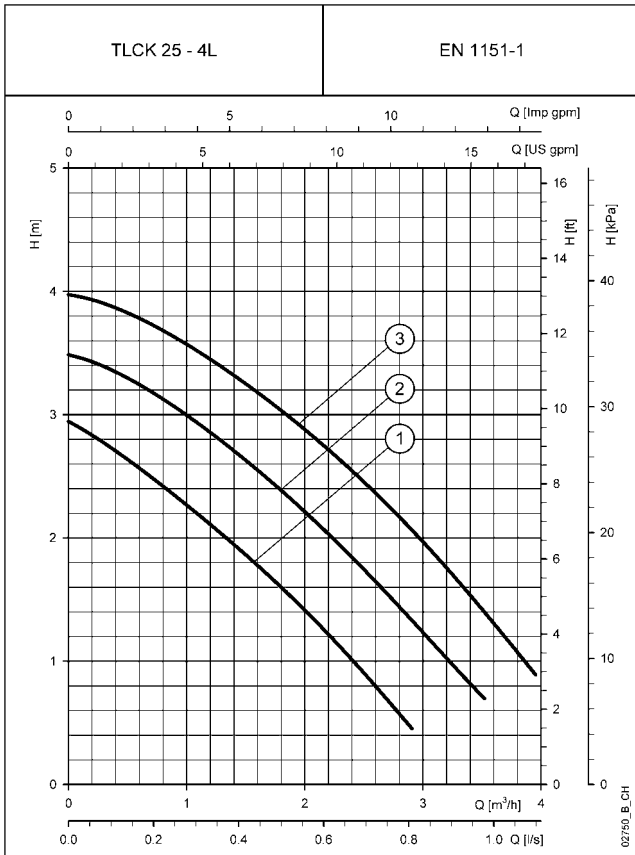
TLCK SERIES HYDRAULIC PERFORMANCE TABLE

| PUMP TYPE | MAXIMUM ABSORBED POWER W | MAXIMUM ABSORBED CURRENT A | CAPACITOR | | SPEED | Q = DELIVERY | | | | | | | | | |
|------------|--------------------------|----------------------------|-----------|-----|-------|---------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | | | | | | l/s 0 | 0,2 | 0,3 | 0,4 | 0,5 | 0,7 | 0,8 | 1,0 | 1,2 | |
| | | | | | | m ³ /h 0 | 0,6 | 1,2 | 1,5 | 1,8 | 2,4 | 3,0 | 3,6 | 4,2 | |
| 230V 50Hz | | | μF | V | | H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | | |
| TLCK 25-4L | 40 | 0,19 | 2,0 | 400 | 1 | 2,9 | 2,6 | 2,1 | 1,9 | 1,6 | 1,0 | | | | |
| | 59 | 0,28 | | | 2 | 3,5 | 3,2 | 2,9 | 2,6 | 2,4 | 1,8 | 1,2 | | | |
| | 70 | 0,33 | | | 3 | 4,0 | 3,8 | 3,4 | 3,3 | 3,0 | 2,5 | 2,0 | 1,3 | | |
| TLCK 25-6L | 56 | 0,27 | 3,0 | 400 | 1 | 3,0 | 1,8 | 1,2 | 0,9 | 0,6 | | | | | |
| | 83 | 0,37 | | | 2 | 4,7 | 3,6 | 2,7 | 2,3 | 1,9 | 1,2 | 0,7 | | | |
| | 100 | 0,44 | | | 3 | 5,7 | 5,0 | 4,3 | 4,0 | 3,7 | 3,0 | 2,4 | 1,8 | 1,2 | |

Performances according to standards EN 1151-1

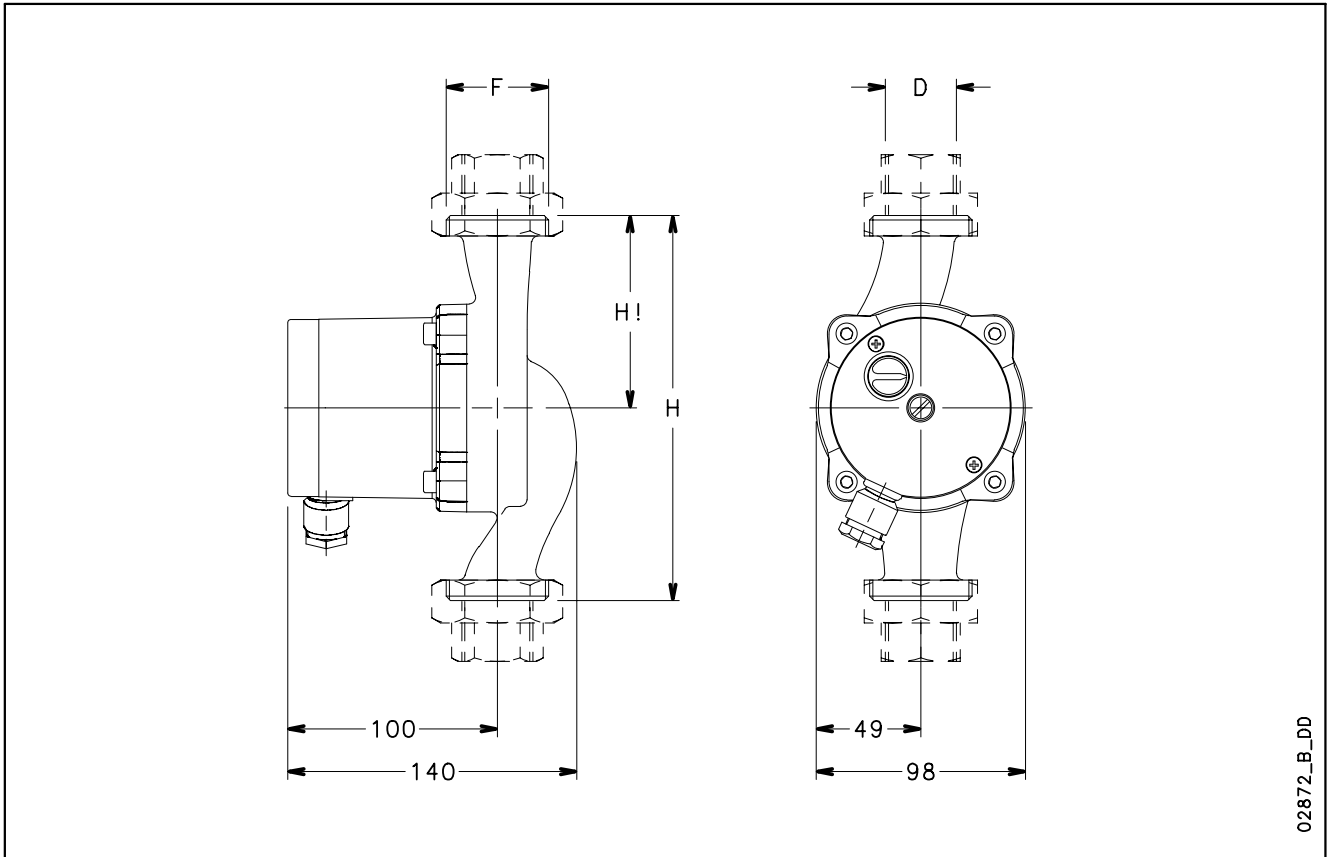
tlck-2p50-en_b_th

**TLCK SERIES
SINGLE-PHASE OPERATING CHARACTERISTICS**



These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

**TLCK SERIES
DIMENSIONS AND WEIGHTS**



02872_B_DD

DIMENSIONS AND WEIGHTS TABLE

| PUMP TYPE | DIMENSIONS (mm) | | D | F | DN | WEIGHT kg |
|------------|-----------------|----|----|----------|----|--------------|
| | H | H1 | | | | |
| TLCK 25-4L | 180 | 90 | 1" | G 1 1/2" | 25 | 3 |
| TLCK 25-6L | 180 | 90 | 1" | G 1 1/2" | 25 | 3 |

tlck-2p50-en_c_td

Circulators for commercial systems

FLC Series



MARKET SECTORS

COMMERCIAL AND INDUSTRIAL.

APPLICATIONS

- Water circulation in heating, air conditioning and cooling systems.
- Pumping of hot/cold, chemically and mechanically non-aggressive liquids.

SPECIFICATIONS

PUMP

- **Flow rate:** up to 80 m³/h. (150 m³/h with both pumps running).
- **Head:** up to 20 m.
- **Temperature of pumped liquid:** -15°C ÷ +120°C.
Non-freezing, non-condensing.
- **Maximum operating pressure:** 10 bar (PN 10).
- **Impeller:** made of cast iron (except models up to FLC(G) 40-7(T), made of composite material).

MOTOR

- Wet rotor type, with bearings lubricated by the pumped liquid. Integrated automatic motor protection. In single-case twin pumps each motor has its own protection.
- Power supply either single-phase 230 V 50 Hz or three-phase 400 V 50 Hz.
- 2-pole and 4-pole motor (FLC 50-5(T), FLCG 50-5(T) and FLCG 80-4(T) models):
 - four speed, with manual selector on the terminal board.
- Terminal board with:
 - set speed;
 - according to EN standard 61000-6-2 (immunity) and EN 61000-6-4 (emissions).
- **Insulation class:** F (155°C).
- **Protection class:** IP 44.

Circulators for commercial systems

FLC Series



CONSTRUCTION CHARACTERISTICS

- Electric circulator pumps with in-line suction and discharge ports, designed for direct installation onto piping, with DN 40, 50, 65 and 80 mounting flanges (with pressure gauge connections).
- Single or twin pump design (with non-return valve on the suction side to allow the hydraulic changeover between the two pumps for the twin version). The two pumps can operate separately or in parallel.
- Rotor shaft made of perforated stainless steel.
By enabling water circulation this design ensures:
 - continuous degassing of the rotor chamber, with no need to perform this operation manually during startup;
 - bearing lubrication.

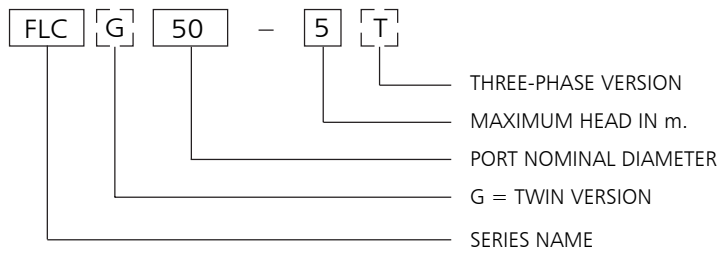
ACCESSORIES

- Blind flanges.
- Counterflanges.

INSTALLATION

- Suitable for installation in horizontal or vertical piping, in any position provided that motor axis is horizontal.
- Never install the circulator with the terminal box under the motor(s) (6 o'clock).
- For the twin design installed on horizontal piping, periodic changeover is recommended in order to prevent the formation of water pockets at the top; as an alternative, install an air bleed valve on the flange.
- For installation onto vertical piping the flow should always be upward. If not it is recommended to install an air venting point in the higher point of the circuit at the suction side.

FLC SERIES IDENTIFICATION CODE



EXAMPLE : FLCG 50-5T

FLC series circulator, twin version, port nominal diameter = 50, max head = 5 m, three-phase version.

TABLE OF MATERIALS

| PART | MATERIAL |
|-------------------------------|--------------------|
| Pump body | Cast iron |
| Impeller up to FLC(G) 40-7(T) | Composite material |
| Impeller from FLC(G) 40-10(T) | Cast iron |
| Shaft | Stainless steel |
| Jacket | Stainless steel |
| Bearings | Graphite |
| Gaskets | EPDM |

flc-2p50-en_a_tm

FLC SERIES (SINGLE VERSION, SINGLE-PHASE) HYDRAULIC PERFORMANCE TABLE

| PUMP TYPE | MAXIMUM ABSORBED POWER | MAXIMUM ABSORBED CURRENT | CAPACITOR | | SPEED | Q = DELIVERY | | | | | | | | | | | | | | | |
|------------|------------------------|--------------------------|-----------|-----|-------|---------------------------------------|------|------|------|------|------|------|------|------|--|--|--|--|--|--|--|
| | | | μF | V | | l/s 0 | 1,4 | 2,8 | 4,9 | 6,9 | 9,0 | 11,1 | 13,2 | 15,3 | | | | | | | |
| | | | | | | m ³ /h 0 | 5,0 | 10,0 | 17,5 | 25,0 | 32,5 | 40,0 | 47,5 | 55,0 | | | | | | | |
| 230V 50Hz | W | A | | | | H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | | | | | | | | |
| * FLC 40-5 | 128 | 0,59 | 6,0 | 400 | 1 | 4,0 | 2,5 | | | | | | | | | | | | | | |
| | 136 | 0,61 | | | 2 | 4,0 | 3,0 | 0,3 | | | | | | | | | | | | | |
| | 143 | 0,63 | | | 3 | 4,1 | 3,2 | 0,4 | | | | | | | | | | | | | |
| | 154 | 0,70 | | | 4 | 4,1 | 3,3 | 0,6 | | | | | | | | | | | | | |
| FLC 40-7 | 288 | 1,30 | 8,0 | 400 | 1 | 7,9 | 3,9 | | | | | | | | | | | | | | |
| | 319 | 1,43 | | | 2 | 8,2 | 5,7 | 1,6 | | | | | | | | | | | | | |
| | 326 | 1,44 | | | 3 | 8,3 | 6,4 | 2,9 | | | | | | | | | | | | | |
| | 326 | 1,43 | | | 4 | 8,3 | 6,7 | 3,6 | | | | | | | | | | | | | |
| FLC 40-10 | 490 | 2,24 | 30,0 | 400 | 1 | 6,8 | 4,8 | 2,5 | | | | | | | | | | | | | |
| | 585 | 2,61 | | | 2 | 8,4 | 6,8 | 4,3 | 0,9 | | | | | | | | | | | | |
| | 679 | 3,02 | | | 3 | 9,3 | 8,1 | 6,1 | 2,3 | | | | | | | | | | | | |
| | 734 | 3,21 | | | 4 | 9,7 | 8,7 | 7,3 | 4,0 | | | | | | | | | | | | |
| FLC 50-5 | 245 | 1,15 | 16,0 | 400 | 1 | 4,2 | 3,3 | 1,9 | | | | | | | | | | | | | |
| | 277 | 1,26 | | | 2 | 4,7 | 4,3 | 3,0 | 0,3 | | | | | | | | | | | | |
| | 296 | 1,36 | | | 3 | 4,9 | 4,6 | 3,5 | 1,0 | | | | | | | | | | | | |
| | 311 | 1,56 | | | 4 | 4,9 | 4,7 | 3,8 | 1,5 | | | | | | | | | | | | |
| FLC 50-8 | 459 | 2,08 | 25,0 | 400 | 1 | 6,6 | 5,2 | 3,1 | 0,9 | | | | | | | | | | | | |
| | 558 | 2,50 | | | 2 | 7,7 | 6,9 | 4,9 | 1,9 | | | | | | | | | | | | |
| | 650 | 2,89 | | | 3 | 8,2 | 7,9 | 6,5 | 3,4 | 0,8 | | | | | | | | | | | |
| | 684 | 3,03 | | | 4 | 8,5 | 8,4 | 7,5 | 4,9 | 1,9 | | | | | | | | | | | |
| FLC 50-10 | 497 | 2,24 | 30,0 | 400 | 1 | 5,6 | 4,1 | 2,6 | 0,7 | | | | | | | | | | | | |
| | 600 | 2,69 | | | 2 | 7,4 | 6,0 | 4,0 | 1,7 | | | | | | | | | | | | |
| | 719 | 3,15 | | | 3 | 8,3 | 7,3 | 5,4 | 2,7 | 0,3 | | | | | | | | | | | |
| | 800 | 3,57 | | | 4 | 9,0 | 8,5 | 7,1 | 4,6 | 1,8 | | | | | | | | | | | |
| FLC 50-13 | 810 | 3,66 | 40,0 | 400 | 1 | 9,6 | 7,9 | 5,7 | 2,8 | | | | | | | | | | | | |
| | 986 | 4,46 | | | 2 | 11,1 | 10,0 | 8,0 | 4,5 | 1,3 | | | | | | | | | | | |
| | 1176 | 5,27 | | | 3 | 11,8 | 11,0 | 9,4 | 6,3 | 2,8 | | | | | | | | | | | |
| | 1306 | 5,88 | | | 4 | 12,4 | 11,9 | 10,8 | 8,5 | 5,4 | 1,4 | | | | | | | | | | |
| FLC 65-7 | 506 | 2,23 | 30,0 | 400 | 1 | 4,5 | 3,5 | 2,5 | 1,3 | | | | | | | | | | | | |
| | 590 | 2,62 | | | 2 | 5,8 | 4,9 | 3,7 | 2,2 | 0,8 | | | | | | | | | | | |
| | 657 | 2,99 | | | 3 | 6,6 | 5,9 | 4,8 | 3,2 | 1,6 | | | | | | | | | | | |
| | 711 | 3,24 | | | 4 | 7,1 | 6,6 | 5,8 | 4,3 | 2,8 | 1,1 | | | | | | | | | | |
| FLC 65-10 | 624 | 2,77 | 30,0 | 400 | 1 | 6,5 | 5,7 | 4,5 | 2,8 | 1,4 | | | | | | | | | | | |
| | 725 | 3,19 | | | 2 | 7,4 | 6,8 | 5,8 | 4,0 | 2,3 | 0,8 | | | | | | | | | | |
| | 826 | 3,66 | | | 3 | 7,8 | 7,5 | 6,6 | 5,0 | 3,2 | 1,5 | | | | | | | | | | |
| | 920 | 4,33 | | | 4 | 8,1 | 8,0 | 7,3 | 5,9 | 4,2 | 2,2 | | | | | | | | | | |
| FLC 65-12 | 801 | 3,61 | 40,0 | 400 | 1 | 8,1 | 6,8 | 5,1 | 3,2 | 1,8 | 0,4 | | | | | | | | | | |
| | 970 | 4,36 | | | 2 | 9,5 | 8,6 | 7,1 | 4,7 | 2,9 | 1,3 | | | | | | | | | | |
| | 1159 | 5,21 | | | 3 | 10,3 | 9,6 | 8,4 | 6,3 | 4,2 | 2,3 | 0,7 | | | | | | | | | |
| | 1296 | 5,74 | | | 4 | 10,8 | 10,5 | 9,7 | 8,1 | 6,3 | 4,3 | 2,1 | | | | | | | | | |
| FLC 80-8 | 650 | 2,80 | 30,0 | 400 | 1 | 3,6 | 3,4 | 3,1 | 2,5 | 1,9 | 1,3 | 0,6 | | | | | | | | | |
| | 729 | 3,15 | | | 2 | 4,3 | 4,2 | 3,8 | 3,3 | 2,6 | 1,9 | 1,1 | | | | | | | | | |
| | 808 | 3,54 | | | 3 | 5,0 | 4,8 | 4,5 | 3,9 | 3,2 | 2,4 | 1,6 | | | | | | | | | |
| | 902 | 4,28 | | | 4 | 5,5 | 5,4 | 5,1 | 4,4 | 3,7 | 2,9 | 2,0 | 1,0 | | | | | | | | |
| FLC 80-10 | 807 | 3,63 | 40,0 | 400 | 1 | 4,6 | 4,4 | 3,9 | 3,1 | 2,2 | 1,6 | 1,0 | | | | | | | | | |
| | 986 | 4,43 | | | 2 | 6,0 | 5,7 | 5,2 | 4,3 | 3,1 | 2,1 | 1,6 | 1,0 | | | | | | | | |
| | 1186 | 5,32 | | | 3 | 7,2 | 6,9 | 6,5 | 5,5 | 4,4 | 3,3 | 2,4 | 1,8 | | | | | | | | |
| | 1330 | 5,87 | | | 4 | 8,1 | 7,9 | 7,6 | 7,0 | 6,1 | 5,1 | 4,1 | 3,1 | 1,9 | | | | | | | |

* Performances according to standards EN 1151-1.

flcm-2p50-en_b_th

Performances according to standards ISO 9906 - Annex A.

FLC40..T - FLC50..T SERIES (SINGLE VERSION, THREE-PHASE) HYDRAULIC PERFORMANCE TABLE

| PUMP TYPE 400V 50Hz | MAXIMUM ABSORBED POWER W | MAXIMUM ABSORBED CURRENT A | SPEED | Q = DELIVERY | | | | | | | | | | | | | | | |
|---------------------------------------|-----------------------------------|-------------------------------------|-------|---------------------|------|------|------|------|------|------|------|------|------|------|------|-----|------|------|--|
| | | | | 1/5 0 | 0,6 | 1,1 | 1,7 | 2,2 | 2,8 | 3,3 | 3,9 | 4,4 | 5,6 | 6,7 | 7,8 | 8,9 | 10,0 | 11,1 | |
| | | | | m ³ /h 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 20 | 24 | 28 | 32 | 36 | 40 | |
| H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | | | | | | | | | | | | |
| * FLC 40-5T | 105 | 0,17 | 1 | 3,6 | 3,1 | 2,5 | 1,6 | 0,7 | | | | | | | | | | | |
| | 118 | 0,21 | 2 | 3,7 | 3,3 | 2,8 | 2,1 | 1,1 | | | | | | | | | | | |
| | 135 | 0,25 | 3 | 3,9 | 3,5 | 3,2 | 2,5 | 1,4 | 0,2 | | | | | | | | | | |
| | 150 | 0,33 | 4 | 3,9 | 3,7 | 3,4 | 2,7 | 1,7 | 0,5 | | | | | | | | | | |
| FLC 40-7T | 209 | 0,33 | 1 | 7,5 | 5,5 | 4,6 | 3,3 | 1,9 | 0,7 | | | | | | | | | | |
| | 252 | 0,40 | 2 | 7,8 | 6,3 | 5,5 | 4,3 | 2,9 | 1,5 | 0,1 | | | | | | | | | |
| | 296 | 0,49 | 3 | 8,1 | 6,9 | 6,3 | 5,4 | 4,1 | 2,5 | 1,0 | | | | | | | | | |
| | 336 | 0,61 | 4 | 8,3 | 7,4 | 7,0 | 6,3 | 5,1 | 3,6 | 2,0 | 0,1 | | | | | | | | |
| FLC 40-10T | 471 | 0,77 | 1 | 7,8 | 7,0 | 6,4 | 5,8 | 5,0 | 4,1 | 3,1 | 2,3 | 1,5 | | | | | | | |
| | 570 | 0,92 | 2 | 8,5 | 7,9 | 7,4 | 6,9 | 6,2 | 5,4 | 4,5 | 3,5 | 2,6 | 0,9 | | | | | | |
| | 645 | 1,03 | 3 | 9,0 | 8,7 | 8,2 | 7,7 | 7,1 | 6,4 | 5,7 | 4,9 | 4,0 | 2,0 | | | | | | |
| | 699 | 1,17 | 4 | 9,5 | 9,2 | 8,8 | 8,4 | 7,9 | 7,3 | 6,6 | 5,9 | 5,0 | 3,1 | 1,0 | | | | | |
| FLC 50-5T | 221 | 0,43 | 1 | 4,3 | 4,1 | 3,8 | 3,3 | 2,8 | 2,2 | 1,6 | 1,0 | 0,2 | | | | | | | |
| | 264 | 0,51 | 2 | 4,5 | 4,5 | 4,2 | 3,8 | 3,4 | 2,9 | 2,4 | 1,7 | 1,0 | | | | | | | |
| | 304 | 0,62 | 3 | 4,7 | 4,8 | 4,6 | 4,2 | 3,9 | 3,5 | 3,0 | 2,4 | 1,7 | | | | | | | |
| | 334 | 0,78 | 4 | 4,8 | 5,0 | 4,8 | 4,5 | 4,2 | 3,8 | 3,4 | 2,8 | 2,2 | 0,5 | | | | | | |
| FLC 50-8T | 495 | 0,80 | 1 | 6,9 | 6,7 | 6,5 | 6,1 | 5,6 | 4,9 | 4,2 | 3,4 | 2,6 | 1,2 | | | | | | |
| | 550 | 0,88 | 2 | 7,6 | 7,5 | 7,3 | 6,9 | 6,4 | 5,8 | 5,1 | 4,4 | 3,6 | 2,1 | 0,7 | | | | | |
| | 621 | 1,00 | 3 | 8,2 | 8,1 | 8,0 | 7,7 | 7,3 | 6,9 | 6,3 | 5,6 | 4,9 | 3,2 | 1,5 | | | | | |
| | 669 | 1,13 | 4 | 8,5 | 8,5 | 8,5 | 8,3 | 8,0 | 7,6 | 7,1 | 6,5 | 5,8 | 4,2 | 2,4 | 0,8 | | | | |
| FLC 50-10T | 508 | 0,83 | 1 | 6,9 | 6,6 | 6,0 | 5,4 | 4,7 | 4,1 | 3,5 | 2,9 | 2,3 | 1,2 | | | | | | |
| | 622 | 1,00 | 2 | 7,9 | 7,7 | 7,3 | 6,7 | 6,1 | 5,5 | 4,8 | 4,2 | 3,5 | 2,2 | 0,9 | | | | | |
| | 724 | 1,17 | 3 | 8,6 | 8,5 | 8,2 | 7,7 | 7,1 | 6,5 | 5,8 | 5,2 | 4,5 | 3,2 | 1,7 | 0,3 | | | | |
| | 822 | 1,39 | 4 | 9,4 | 9,4 | 9,2 | 8,8 | 8,3 | 7,7 | 7,1 | 6,5 | 5,8 | 4,5 | 2,9 | 1,2 | | | | |
| FLC 50-13T | 852 | 1,39 | 1 | 10,6 | 10,2 | 9,7 | 9,1 | 8,4 | 7,7 | 6,9 | 6,2 | 5,5 | 3,9 | | | | | | |
| | 1017 | 1,68 | 2 | 11,6 | 11,4 | 11,0 | 10,5 | 9,9 | 9,3 | 8,6 | 7,8 | 7,0 | 5,4 | 3,7 | 1,8 | | | | |
| | 1180 | 1,94 | 3 | 12,4 | 12,2 | 11,9 | 11,5 | 11,0 | 10,4 | 9,8 | 9,2 | 8,4 | 6,9 | 5,1 | 3,2 | 1,1 | | | |
| | 1338 | 2,40 | 4 | 13,2 | 13,2 | 13,0 | 12,7 | 12,3 | 11,8 | 11,2 | 10,6 | 9,9 | 8,4 | 6,7 | 4,7 | 2,5 | | | |
| FLC 50-18T | 1507 | 2,40 | 1 | 16,5 | 16,6 | 16,2 | 15,6 | 14,9 | 14,1 | 13,2 | 12,3 | 11,4 | 9,4 | 7,1 | 4,4 | 1,6 | | | |
| | 1768 | 2,80 | 2 | 17,8 | 18,0 | 17,8 | 17,4 | 16,8 | 16,1 | 15,3 | 14,4 | 13,6 | 11,7 | 9,6 | 7,0 | 4,1 | 1,0 | | |
| | 2017 | 3,20 | 3 | 18,7 | 19,0 | 19,0 | 18,7 | 18,3 | 17,7 | 17,0 | 16,3 | 15,5 | 13,7 | 11,7 | 9,2 | 6,4 | 3,2 | | |
| | 2232 | 3,66 | 4 | 19,6 | 20,0 | 20,0 | 19,8 | 19,5 | 19,0 | 18,5 | 17,9 | 17,2 | 15,7 | 13,8 | 11,4 | 8,6 | 5,4 | 1,8 | |

* Performances according to standards EN 1151-1.

fict-1-2p50-en_b_th

Performances according to standards ISO 9906 - Annex A.

FLC65..T - FLC80..T SERIES (SINGLE VERSION, THREE-PHASE) HYDRAULIC PERFORMANCE TABLE

| PUMP TYPE 400V 50Hz | MAXIMUM ABSORBED POWER W | MAXIMUM ABSORBED CURRENT A | SPEED | Q = DELIVERY | | | | | | | | | | | | | | | | |
|---------------------------------------|-----------------------------------|-------------------------------------|-------|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|--|
| | | | | 1/5 0 | 1,4 | 2,8 | 4,2 | 5,6 | 6,9 | 8,3 | 9,7 | 11,1 | 12,5 | 13,9 | 15,3 | 16,7 | 19,4 | 22,2 | | |
| | | | | m ³ /h 0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 70 | 80 | | |
| H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | | | | | | | | | | | | | |
| FLC 65-7T | 458 | 0,73 | 1 | 5,3 | 4,5 | 3,6 | 2,7 | 1,8 | 0,8 | | | | | | | | | | | |
| | 547 | 0,89 | 2 | 5,9 | 5,2 | 4,2 | 3,3 | 2,4 | 1,3 | | | | | | | | | | | |
| | 628 | 1,02 | 3 | 6,5 | 6,0 | 5,1 | 4,2 | 3,2 | 2,1 | 0,9 | | | | | | | | | | |
| | 702 | 1,22 | 4 | 7,0 | 6,6 | 5,9 | 5,0 | 4,0 | 2,9 | 1,6 | | | | | | | | | | |
| FLC 65-10T | 640 | 1,04 | 1 | 7,1 | 6,3 | 5,2 | 4,2 | 3,2 | 2,1 | 1,0 | | | | | | | | | | |
| | 761 | 1,24 | 2 | 7,8 | 7,2 | 6,2 | 5,2 | 4,2 | 3,0 | 1,8 | 0,6 | | | | | | | | | |
| | 874 | 1,45 | 3 | 8,4 | 8,0 | 7,1 | 6,1 | 5,0 | 3,8 | 2,6 | 1,2 | | | | | | | | | |
| | 1020 | 1,97 | 4 | 9,0 | 8,7 | 7,9 | 6,9 | 5,9 | 4,7 | 3,4 | 2,0 | | | | | | | | | |
| FLC 65-12T | 892 | 1,43 | 1 | 9,1 | 8,3 | 7,1 | 5,9 | 4,8 | 3,6 | 2,4 | 1,2 | | | | | | | | | |
| | 1070 | 1,70 | 2 | 10,1 | 9,6 | 8,6 | 7,4 | 6,2 | 5,0 | 3,8 | 2,4 | 1,0 | | | | | | | | |
| | 1229 | 1,96 | 3 | 10,9 | 10,5 | 9,6 | 8,5 | 7,4 | 6,2 | 4,9 | 3,5 | 2,0 | | | | | | | | |
| | 1385 | 2,32 | 4 | 11,8 | 11,6 | 10,9 | 9,9 | 8,7 | 7,6 | 6,3 | 4,9 | 3,3 | 1,6 | | | | | | | |
| FLC 65-16T | 1424 | 2,26 | 1 | 13,0 | 12,4 | 11,4 | 10,2 | 8,8 | 7,4 | 5,9 | 4,3 | 2,6 | 0,8 | | | | | | | |
| | 1651 | 2,61 | 2 | 14,0 | 13,6 | 12,8 | 11,7 | 10,5 | 9,0 | 7,5 | 6,0 | 4,2 | 2,4 | | | | | | | |
| | 1862 | 2,95 | 3 | 14,8 | 14,6 | 13,9 | 13,0 | 11,8 | 10,5 | 9,0 | 7,4 | 5,6 | 3,7 | 1,5 | | | | | | |
| | 2029 | 3,37 | 4 | 15,3 | 15,4 | 14,9 | 14,0 | 12,9 | 11,6 | 10,2 | 8,7 | 6,9 | 5,0 | 2,8 | | | | | | |
| FLC 80-8T | 629 | 1,03 | 1 | 4,0 | 3,9 | 3,6 | 3,2 | 2,8 | 2,3 | 1,9 | 1,4 | 0,9 | | | | | | | | |
| | 765 | 1,23 | 2 | 4,9 | 4,8 | 4,5 | 4,1 | 3,6 | 3,1 | 2,6 | 2,0 | 1,5 | 0,9 | | | | | | | |
| | 884 | 1,46 | 3 | 5,5 | 5,4 | 5,1 | 4,7 | 4,2 | 3,7 | 3,2 | 2,6 | 2,1 | 1,4 | | | | | | | |
| | 1033 | 1,97 | 4 | 6,2 | 6,1 | 5,8 | 5,4 | 4,9 | 4,3 | 3,8 | 3,2 | 2,6 | 1,9 | 1,2 | | | | | | |
| FLC 80-10T | 889 | 1,45 | 1 | 6,1 | 5,9 | 5,5 | 5,0 | 4,4 | 3,9 | 3,3 | 2,7 | 2,1 | 1,4 | | | | | | | |
| | 1086 | 1,73 | 2 | 7,1 | 7,0 | 6,6 | 6,2 | 5,6 | 5,1 | 4,5 | 3,9 | 3,3 | 2,6 | 1,8 | | | | | | |
| | 1238 | 1,99 | 3 | 7,9 | 7,8 | 7,5 | 7,1 | 6,5 | 6,0 | 5,3 | 4,7 | 4,1 | 3,4 | 2,7 | 2,0 | | | | | |
| | 1390 | 2,35 | 4 | 8,8 | 8,7 | 8,5 | 8,1 | 7,6 | 7,0 | 6,4 | 5,8 | 5,1 | 4,4 | 3,7 | 2,9 | 2,0 | | | | |
| FLC 80-12T | 1393 | 2,21 | 1 | 8,8 | 8,5 | 8,1 | 7,6 | 7,0 | 6,5 | 5,8 | 5,2 | 4,5 | 3,8 | 3,1 | 2,4 | 1,7 | | | | |
| | 1611 | 2,54 | 2 | 9,7 | 9,4 | 9,1 | 8,7 | 8,2 | 7,7 | 7,0 | 6,4 | 5,7 | 4,9 | 4,2 | 3,4 | 2,6 | | | | |
| | 1806 | 2,88 | 3 | 10,5 | 10,3 | 10,0 | 9,6 | 9,1 | 8,6 | 8,0 | 7,3 | 6,7 | 5,9 | 5,2 | 4,3 | 3,5 | 1,6 | | | |
| | 2005 | 3,35 | 4 | 11,4 | 11,3 | 11,0 | 10,7 | 10,2 | 9,7 | 9,1 | 8,4 | 7,7 | 6,9 | 6,1 | 5,3 | 4,4 | 2,3 | | | |
| FLC 80-15T | 1647 | 2,62 | 1 | 10,2 | 9,7 | 9,2 | 8,7 | 8,1 | 7,4 | 6,7 | 6,0 | 5,3 | 4,6 | 4,0 | 3,3 | 2,7 | | | | |
| | 1959 | 3,09 | 2 | 11,4 | 11,0 | 10,7 | 10,2 | 9,7 | 9,1 | 8,5 | 7,7 | 7,0 | 6,2 | 5,5 | 4,7 | 4,0 | 2,5 | | | |
| | 2263 | 3,58 | 3 | 12,5 | 12,2 | 11,9 | 11,6 | 11,1 | 10,6 | 10,0 | 9,3 | 8,5 | 7,7 | 6,9 | 6,1 | 5,4 | 3,8 | | | |
| | 2537 | 4,15 | 4 | 13,5 | 13,4 | 13,2 | 12,9 | 12,6 | 12,2 | 11,6 | 11,0 | 10,3 | 9,5 | 8,7 | 7,8 | 7,0 | 5,2 | 3,3 | | |

Performances according to standards ISO 9906 - Annex A.

fict-2-2p50-en_b_th

FLCG SERIES (TWIN VERSION, SINGLE-PHASE) HYDRAULIC PERFORMANCE TABLE (SINGLE OPERATION)

| PUMP TYPE | MAXIMUM ABSORBED POWER | MAXIMUM ABSORBED CURRENT | CAPACITOR | | SPEED | Q = DELIVERY | | | | | | | | | | | | |
|-------------|------------------------|--------------------------|-----------|-----|-------|---------------------------------------|------|-----|------|------|------|------|------|------|--|--|--|--|
| | | | | | | l/s 0 | 1,1 | 2,2 | 3,3 | 5,0 | 6,9 | 9,7 | 12,5 | 15,3 | | | | |
| | | | | | | m ³ /h 0 | 4,0 | 8,0 | 12,0 | 18,0 | 25,0 | 35,0 | 45,0 | 55,0 | | | | |
| 230V 50Hz | W | A | μF | V | | H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | | | | | |
| * FLCG 40-5 | 123 | 0,56 | 6,0 | 400 | 1 | 3,9 | 2,9 | 1,0 | | | | | | | | | | |
| | 130 | 0,58 | | | 2 | 4,0 | 3,2 | 1,4 | | | | | | | | | | |
| | 139 | 0,61 | | | 3 | 4,0 | 3,4 | 1,7 | | | | | | | | | | |
| | 147 | 0,67 | | | 4 | 4,0 | 3,5 | 1,8 | | | | | | | | | | |
| FLCG 40-7 | 273 | 1,28 | 8,0 | 400 | 1 | 7,3 | 4,8 | 1,3 | | | | | | | | | | |
| | 293 | 1,38 | | | 2 | 7,6 | 5,9 | 2,7 | 0,4 | | | | | | | | | |
| | 303 | 1,39 | | | 3 | 7,7 | 6,5 | 4,1 | 1,2 | | | | | | | | | |
| | 303 | 1,37 | | | 4 | 7,8 | 6,8 | 4,7 | 1,7 | | | | | | | | | |
| FLCG 40-10 | 498 | 2,23 | 30,0 | 400 | 1 | 6,5 | 5,1 | 3,2 | 1,6 | | | | | | | | | |
| | 599 | 2,65 | | | 2 | 8,0 | 6,9 | 5,2 | 3,1 | | | | | | | | | |
| | 671 | 3,08 | | | 3 | 8,8 | 8,0 | 6,7 | 5,0 | 2,0 | | | | | | | | |
| | 730 | 3,34 | | | 4 | 9,0 | 8,4 | 7,4 | 6,1 | 3,6 | | | | | | | | |
| FLCG 50-5 | 245 | 1,15 | 16,0 | 400 | 1 | 4,2 | 3,5 | 2,3 | 0,9 | | | | | | | | | |
| | 267 | 1,25 | | | 2 | 4,7 | 4,3 | 3,2 | 1,7 | | | | | | | | | |
| | 298 | 1,34 | | | 3 | 4,9 | 4,6 | 3,8 | 2,6 | 0,2 | | | | | | | | |
| | 307 | 1,55 | | | 4 | 4,9 | 4,7 | 4,0 | 2,9 | 0,4 | | | | | | | | |
| FLCG 50-8 | 459 | 2,06 | 25,0 | 400 | 1 | 6,6 | 5,1 | 3,4 | 2,1 | 0,4 | | | | | | | | |
| | 548 | 2,44 | | | 2 | 7,8 | 6,8 | 5,0 | 3,4 | 1,3 | | | | | | | | |
| | 606 | 2,72 | | | 3 | 8,4 | 7,8 | 6,5 | 5,0 | 2,7 | | | | | | | | |
| | 633 | 2,83 | | | 4 | 8,6 | 8,3 | 7,3 | 6,0 | 3,8 | 0,7 | | | | | | | |
| FLCG 50-10 | 497 | 2,23 | 30,0 | 400 | 1 | 5,7 | 4,2 | 2,9 | 1,8 | 0,1 | | | | | | | | |
| | 595 | 2,65 | | | 2 | 7,7 | 6,2 | 4,5 | 3,1 | 1,0 | | | | | | | | |
| | 702 | 3,11 | | | 3 | 8,7 | 7,5 | 6,0 | 4,4 | 2,1 | | | | | | | | |
| | 774 | 3,42 | | | 4 | 9,3 | 8,6 | 7,5 | 6,2 | 4,0 | 0,8 | | | | | | | |
| FLCG 65-7 | 489 | 2,20 | 30,0 | 400 | 1 | 3,6 | 3,0 | 2,4 | 1,8 | 0,9 | | | | | | | | |
| | 592 | 2,62 | | | 2 | 4,8 | 4,3 | 3,6 | 2,9 | 1,8 | 0,5 | | | | | | | |
| | 684 | 3,01 | | | 3 | 5,6 | 5,1 | 4,5 | 3,8 | 2,6 | 1,2 | | | | | | | |
| | 740 | 3,25 | | | 4 | 6,1 | 5,8 | 5,3 | 4,8 | 3,7 | 2,2 | | | | | | | |
| FLCG 65-10 | 634 | 2,82 | 30,0 | 400 | 1 | 5,6 | 5,0 | 4,2 | 3,3 | 2,1 | 0,8 | | | | | | | |
| | 746 | 3,36 | | | 2 | 6,5 | 6,0 | 5,2 | 4,3 | 3,0 | 1,5 | | | | | | | |
| | 882 | 3,97 | | | 3 | 7,0 | 6,8 | 6,1 | 5,3 | 4,0 | 2,4 | | | | | | | |
| | 994 | 4,68 | | | 4 | 7,4 | 7,3 | 6,8 | 6,1 | 5,0 | 3,5 | 1,0 | | | | | | |
| FLCG 65-12 | 812 | 3,68 | 40,0 | 400 | 1 | 6,8 | 5,9 | 4,7 | 3,6 | 2,3 | 0,9 | | | | | | | |
| | 997 | 4,53 | | | 2 | 8,5 | 7,8 | 6,6 | 5,3 | 3,5 | 1,8 | | | | | | | |
| | 1208 | 5,46 | | | 3 | 9,4 | 9,0 | 8,1 | 6,9 | 5,1 | 3,0 | 0,5 | | | | | | |
| | 1389 | 6,19 | | | 4 | 10,2 | 10,0 | 9,4 | 8,6 | 7,3 | 5,6 | 2,7 | | | | | | |
| FLCG 80-4 | 533 | 2,41 | 30,0 | 400 | 1 | 3,7 | 3,5 | 3,2 | 3,0 | 2,5 | 1,8 | 0,9 | | | | | | |
| | 569 | 2,56 | | | 2 | 4,1 | 4,0 | 3,8 | 3,6 | 3,2 | 2,6 | 1,6 | | | | | | |
| | 587 | 2,66 | | | 3 | 4,2 | 4,1 | 4,0 | 3,8 | 3,5 | 3,0 | 2,0 | 0,8 | | | | | |
| | 595 | 2,85 | | | 4 | 4,3 | 4,2 | 4,1 | 4,0 | 3,7 | 3,3 | 2,4 | 1,2 | | | | | |
| FLCG 80-8 | 639 | 2,88 | 30,0 | 400 | 1 | 3,0 | 2,9 | 2,7 | 2,5 | 2,1 | 1,5 | | | | | | | |
| | 765 | 3,42 | | | 2 | 3,8 | 3,7 | 3,5 | 3,2 | 2,8 | 2,2 | 1,1 | | | | | | |
| | 881 | 3,97 | | | 3 | 4,6 | 4,5 | 4,2 | 3,9 | 3,5 | 2,9 | 1,7 | | | | | | |
| | 973 | 4,62 | | | 4 | 5,4 | 5,3 | 5,0 | 4,6 | 4,1 | 3,4 | 2,3 | 1,0 | | | | | |
| FLCG 80-10 | 805 | 3,60 | 40,0 | 400 | 1 | 4,3 | 4,1 | 3,7 | 3,2 | 2,7 | 2,1 | 1,1 | | | | | | |
| | 962 | 4,30 | | | 2 | 5,6 | 5,3 | 4,8 | 4,3 | 3,6 | 3,0 | 2,1 | 0,9 | | | | | |
| | 1144 | 5,08 | | | 3 | 6,6 | 6,4 | 5,9 | 5,4 | 4,7 | 4,0 | 2,9 | 1,5 | | | | | |
| | 1263 | 5,61 | | | 4 | 7,8 | 7,6 | 7,2 | 6,8 | 6,1 | 5,3 | 4,2 | 2,7 | 1,0 | | | | |

* Performances according to standards EN 1151-1.

flcgm-2p505-en_b_th

Performances according to standards ISO 9906 - Annex A.

FLCG SERIES (TWIN VERSION, SINGLE-PHASE) HYDRAULIC PERFORMANCE TABLE (PARALLEL OPERATION)

| PUMP TYPE | MAXIMUM ABSORBED POWER W* | MAXIMUM ABSORBED CURRENT A* | CAPACITOR | | SPEED | Q = DELIVERY | | | | | | | | |
|--------------|------------------------------|--------------------------------|-----------|-----|-------|---------------------------------------|------|------|------|------|------|------|------|-------|
| | | | μF | V | | l/s 0 | 2,8 | 4,2 | 5,6 | 9,7 | 13,9 | 18,8 | 22,2 | 27,8 |
| | | | | | | m ³ /h 0 | 10,0 | 15,0 | 20,0 | 35,0 | 50,0 | 67,5 | 80,0 | 100,0 |
| 230V 50Hz | | | | | | H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | |
| ** FLCG 40-5 | 123 | 0,56 | 6,0 | 400 | 1 | 3,9 | 2,3 | 1,0 | | | | | | |
| | 130 | 0,58 | | | 2 | 4,0 | 2,7 | 1,4 | | | | | | |
| | 139 | 0,61 | | | 3 | 4,0 | 2,9 | 1,6 | | | | | | |
| | 147 | 0,67 | | | 4 | 4,0 | 3,0 | 1,7 | 0,1 | | | | | |
| FLCG 40-7 | 273 | 1,28 | 8,0 | 400 | 1 | 7,3 | 3,3 | 1,1 | 0,2 | | | | | |
| | 293 | 1,38 | | | 2 | 7,6 | 4,9 | 2,5 | 0,9 | | | | | |
| | 303 | 1,39 | | | 3 | 7,7 | 5,8 | 3,9 | 1,9 | | | | | |
| | 303 | 1,37 | | | 4 | 7,8 | 6,2 | 4,5 | 2,4 | | | | | |
| FLCG 40-10 | 498 | 2,23 | 30,0 | 400 | 1 | 6,5 | 4,0 | 2,6 | 1,4 | | | | | |
| | 599 | 2,65 | | | 2 | 8,0 | 6,0 | 4,5 | 2,9 | | | | | |
| | 671 | 3,08 | | | 3 | 8,8 | 7,4 | 6,2 | 4,8 | 0,3 | | | | |
| | 730 | 3,34 | | | 4 | 9,0 | 7,9 | 7,0 | 5,9 | 1,9 | | | | |
| FLCG 50-5 | 245 | 1,15 | 16,0 | 400 | 1 | 4,2 | 3,1 | 2,2 | 1,2 | | | | | |
| | 267 | 1,25 | | | 2 | 4,7 | 3,9 | 3,1 | 2,1 | | | | | |
| | 298 | 1,34 | | | 3 | 4,9 | 4,3 | 3,8 | 3,0 | | | | | |
| | 307 | 1,55 | | | 4 | 4,9 | 4,5 | 4,0 | 3,3 | | | | | |
| FLCG 50-8 | 459 | 2,06 | 25,0 | 400 | 1 | 6,6 | 4,4 | 3,3 | 2,4 | | | | | |
| | 548 | 2,44 | | | 2 | 7,8 | 6,1 | 4,9 | 3,8 | 0,9 | | | | |
| | 606 | 2,72 | | | 3 | 8,4 | 7,3 | 6,4 | 5,4 | 2,2 | | | | |
| | 633 | 2,83 | | | 4 | 8,6 | 8,0 | 7,2 | 6,4 | 3,3 | | | | |
| FLCG 50-10 | 497 | 2,23 | 30,0 | 400 | 1 | 5,7 | 3,6 | 2,8 | 2,1 | 0,5 | | | | |
| | 595 | 2,65 | | | 2 | 7,7 | 5,5 | 4,4 | 3,4 | 0,5 | | | | |
| | 702 | 3,11 | | | 3 | 8,7 | 6,9 | 5,8 | 4,7 | 1,5 | | | | |
| | 774 | 3,42 | | | 4 | 9,3 | 8,2 | 7,3 | 6,5 | 3,2 | | | | |
| FLCG 65-7 | 489 | 2,20 | 30,0 | 400 | 1 | 3,6 | 2,6 | 2,0 | 1,5 | | | | | |
| | 592 | 2,62 | | | 2 | 4,8 | 3,8 | 3,1 | 2,5 | 0,5 | | | | |
| | 684 | 3,01 | | | 3 | 5,6 | 4,6 | 4,0 | 3,3 | 1,2 | | | | |
| | 740 | 3,25 | | | 4 | 6,1 | 5,4 | 5,0 | 4,4 | 2,2 | | | | |
| FLCG 65-10 | 634 | 2,82 | 30,0 | 400 | 1 | 5,6 | 4,8 | 4,3 | 3,7 | 2,2 | 0,8 | | | |
| | 746 | 3,36 | | | 2 | 6,5 | 5,8 | 5,3 | 4,7 | 3,1 | 1,5 | | | |
| | 882 | 3,97 | | | 3 | 7,0 | 6,6 | 6,2 | 5,7 | 4,1 | 2,4 | 0,5 | | |
| | 994 | 4,68 | | | 4 | 7,4 | 7,2 | 6,9 | 6,5 | 5,1 | 3,5 | 1,3 | | |
| FLCG 65-12 | 812 | 3,68 | 40,0 | 400 | 1 | 6,8 | 5,6 | 4,8 | 4,1 | 2,3 | 0,7 | | | |
| | 997 | 4,53 | | | 2 | 8,5 | 7,5 | 6,7 | 5,9 | 3,5 | 1,6 | | | |
| | 1208 | 5,46 | | | 3 | 9,4 | 8,7 | 8,1 | 7,4 | 5,1 | 2,8 | 0,6 | | |
| | 1389 | 6,19 | | | 4 | 10,2 | 9,9 | 9,5 | 9,0 | 7,3 | 5,4 | 2,8 | 0,9 | |
| FLCG 80-4 | 533 | 2,41 | 30,0 | 400 | 1 | 3,7 | 3,4 | 3,2 | 3,0 | 2,3 | 1,5 | 0,6 | | |
| | 569 | 2,56 | | | 2 | 4,1 | 3,9 | 3,8 | 3,7 | 3,1 | 2,3 | 1,3 | 0,4 | |
| | 587 | 2,66 | | | 3 | 4,2 | 4,1 | 4,0 | 3,8 | 3,4 | 2,7 | 1,6 | 0,8 | |
| | 595 | 2,85 | | | 4 | 4,3 | 4,2 | 4,1 | 4,0 | 3,6 | 3,0 | 2,1 | 1,2 | |
| FLCG 80-8 | 639 | 2,88 | 30,0 | 400 | 1 | 3,0 | 2,8 | 2,7 | 2,5 | 2,0 | 1,2 | | | |
| | 765 | 3,42 | | | 2 | 3,8 | 3,6 | 3,5 | 3,3 | 2,7 | 2,0 | 0,9 | | |
| | 881 | 3,97 | | | 3 | 4,6 | 4,4 | 4,2 | 4,0 | 3,4 | 2,6 | 1,4 | 0,7 | |
| | 973 | 4,62 | | | 4 | 5,4 | 5,2 | 5,0 | 4,7 | 3,9 | 3,1 | 2,0 | 1,0 | |
| FLCG 80-10 | 805 | 3,60 | 40,0 | 400 | 1 | 4,3 | 3,9 | 3,6 | 3,3 | 2,5 | 1,8 | 0,8 | 0,6 | |
| | 962 | 4,30 | | | 2 | 5,6 | 5,1 | 4,8 | 4,4 | 3,4 | 2,7 | 1,7 | 0,9 | |
| | 1144 | 5,08 | | | 3 | 6,6 | 6,2 | 5,9 | 5,5 | 4,5 | 3,7 | 2,5 | 1,5 | 1,2 |
| | 1263 | 5,61 | | | 4 | 7,8 | 7,4 | 7,1 | 6,8 | 5,9 | 5,0 | 3,8 | 2,7 | 0,8 |

* Electric data refer to single motor.

** Performances according to standards EN 1151-1.

Performances according to standards ISO 9906 - Annex A.

flcgm-2p50P-en_b_th

FLCG40..T - FLCG50..T SERIES (TWIN VERSION, THREE-PHASE) HYDRAULIC PERFORMANCE TABLE (SINGLE OPERATION)

| PUMP TYPE 400V 50Hz | MAXIMUM ABSORBED POWER W | MAXIMUM ABSORBED CURRENT A | SPEED | Q = DELIVERY | | | | | | | | | | | | | | | |
|---------------------------------------|-----------------------------------|-------------------------------------|-------|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | | | | l/s 0 | 0,6 | 1,1 | 1,7 | 2,2 | 2,8 | 3,3 | 3,9 | 4,4 | 5,0 | 5,6 | 6,1 | 6,7 | 7,2 | 7,8 | |
| | | | | m ³ /h 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | |
| H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | | | | | | | | | | | | |
| * FLCG 40-5T | 100 | 0,17 | 1 | 3,6 | 3,1 | 2,5 | 1,6 | 0,7 | | | | | | | | | | | |
| | 114 | 0,20 | 2 | 3,7 | 3,4 | 2,8 | 2,0 | 1,0 | | | | | | | | | | | |
| | 129 | 0,25 | 3 | 3,9 | 3,6 | 3,2 | 2,4 | 1,4 | 0,2 | | | | | | | | | | |
| | 143 | 0,33 | 4 | 4,0 | 3,8 | 3,4 | 2,7 | 1,6 | 0,4 | | | | | | | | | | |
| FLCG 40-7T | 183 | 0,30 | 1 | 6,4 | 5,2 | 4,2 | 2,9 | 1,6 | 0,4 | | | | | | | | | | |
| | 215 | 0,36 | 2 | 6,8 | 5,8 | 4,9 | 3,7 | 2,4 | 1,0 | | | | | | | | | | |
| | 249 | 0,44 | 3 | 7,2 | 6,4 | 5,7 | 4,6 | 3,2 | 1,8 | 0,1 | | | | | | | | | |
| | 265 | 0,57 | 4 | 7,4 | 6,8 | 6,2 | 5,3 | 4,0 | 2,4 | 0,7 | | | | | | | | | |
| FLCG 40-10T | 468 | 0,78 | 1 | 7,3 | 6,8 | 6,1 | 5,3 | 4,5 | 3,6 | 2,8 | 2,0 | 1,2 | 0,5 | | | | | | |
| | 575 | 0,93 | 2 | 7,9 | 7,5 | 7,0 | 6,3 | 5,6 | 4,9 | 4,0 | 3,2 | 2,3 | 1,5 | 0,7 | | | | | |
| | 666 | 1,06 | 3 | 8,5 | 8,2 | 7,8 | 7,3 | 6,6 | 6,0 | 5,2 | 4,4 | 3,6 | 2,7 | 1,8 | 0,9 | | | | |
| | 731 | 1,22 | 4 | 8,9 | 8,7 | 8,3 | 7,9 | 7,4 | 6,8 | 6,1 | 5,4 | 4,6 | 3,7 | 2,8 | 1,9 | 0,9 | | | |
| FLCG 50-5T | 224 | 0,44 | 1 | 4,3 | 4,0 | 3,5 | 2,9 | 2,4 | 1,8 | 1,1 | 0,3 | | | | | | | | |
| | 266 | 0,51 | 2 | 4,6 | 4,4 | 4,1 | 3,6 | 3,1 | 2,5 | 1,8 | 1,0 | 0,2 | | | | | | | |
| | 308 | 0,62 | 3 | 4,9 | 4,7 | 4,5 | 4,1 | 3,7 | 3,1 | 2,4 | 1,7 | 0,9 | | | | | | | |
| | 335 | 0,78 | 4 | 5,1 | 4,9 | 4,7 | 4,4 | 4,0 | 3,5 | 2,9 | 2,2 | 1,4 | 0,5 | | | | | | |
| FLCG 50-8T | 440 | 0,71 | 1 | 7,0 | 6,7 | 6,1 | 5,4 | 4,7 | 4,0 | 3,3 | 2,6 | 2,0 | 1,2 | | | | | | |
| | 514 | 0,83 | 2 | 7,7 | 7,5 | 7,0 | 6,4 | 5,7 | 5,1 | 4,4 | 3,7 | 3,0 | 2,2 | 1,4 | | | | | |
| | 579 | 0,94 | 3 | 8,3 | 8,2 | 7,8 | 7,3 | 6,7 | 6,1 | 5,5 | 4,8 | 4,0 | 3,2 | 2,4 | 1,5 | | | | |
| | 626 | 1,07 | 4 | 8,7 | 8,6 | 8,4 | 7,9 | 7,4 | 6,9 | 6,2 | 5,6 | 4,9 | 4,1 | 3,3 | 2,4 | 1,4 | | | |
| FLCG 50-10T | 479 | 0,78 | 1 | 7,3 | 6,7 | 6,0 | 5,3 | 4,7 | 4,0 | 3,4 | 2,7 | 2,0 | 1,3 | 0,5 | | | | | |
| | 581 | 0,98 | 2 | 8,1 | 7,7 | 7,1 | 6,6 | 6,0 | 5,3 | 4,6 | 3,9 | 3,2 | 2,4 | 1,5 | 0,7 | | | | |
| | 674 | 1,09 | 3 | 8,8 | 8,5 | 8,0 | 7,4 | 6,8 | 6,2 | 5,6 | 4,9 | 4,2 | 3,4 | 2,5 | 1,5 | 0,6 | | | |
| | 767 | 1,31 | 4 | 9,6 | 9,4 | 9,0 | 8,5 | 8,0 | 7,4 | 6,8 | 6,2 | 5,4 | 4,6 | 3,7 | 2,7 | 1,6 | 0,6 | | |

* Performances according to standards EN 1151-1.

flcgt-1-2p50S-en_b_th

Performances according to standards ISO 9906 - Annex A.

FLCG65..T - FLCG80..T SERIES (TWIN VERSION, THREE-PHASE) HYDRAULIC PERFORMANCE TABLE (SINGLE OPERATION)

| PUMP TYPE 400V 50Hz | MAXIMUM ABSORBED POWER W | MAXIMUM ABSORBED CURRENT A | SPEED | Q = DELIVERY | | | | | | | | | | | | | | | |
|------------------------------|-----------------------------------|-------------------------------------|-------|---------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|
| | | | | l/s 0 | 1,4 | 2,8 | 4,2 | 5,6 | 6,9 | 8,3 | 9,7 | 11,1 | 12,5 | 13,9 | 15,3 | 16,7 | 19,4 | 22,2 | |
| | | | | m ³ /h 0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 70 | 80 | |
| | | | | H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | | | | | | | | |
| FLCG 65-7T | 475 | 0,77 | 1 | 4,7 | 4,0 | 3,1 | 2,2 | 1,4 | | | | | | | | | | | |
| | 578 | 0,93 | 2 | 5,3 | 4,6 | 3,7 | 2,8 | 1,9 | | | | | | | | | | | |
| | 668 | 1,08 | 3 | 5,9 | 5,4 | 4,6 | 3,7 | 2,7 | 1,7 | 0,5 | | | | | | | | | |
| | 807 | 1,39 | 4 | 6,3 | 5,9 | 5,0 | 4,1 | 3,1 | 2,0 | 0,8 | | | | | | | | | |
| FLCG 65-10T | 673 | 1,08 | 1 | 6,3 | 5,8 | 4,6 | 3,6 | 2,6 | 1,6 | 0,5 | | | | | | | | | |
| | 803 | 1,29 | 2 | 7,2 | 6,7 | 5,8 | 4,7 | 3,6 | 2,4 | 1,2 | | | | | | | | | |
| | 930 | 1,52 | 3 | 7,8 | 7,4 | 6,6 | 5,5 | 4,4 | 3,2 | 2,0 | 0,7 | | | | | | | | |
| | 1079 | 2,02 | 4 | 8,5 | 8,3 | 7,4 | 6,4 | 5,3 | 4,1 | 2,8 | 1,4 | | | | | | | | |
| FLCG 65-12T | 863 | 1,42 | 1 | 7,9 | 7,1 | 6,0 | 4,9 | 3,9 | 2,8 | 1,6 | 0,5 | | | | | | | | |
| | 1044 | 1,68 | 2 | 8,8 | 8,1 | 7,2 | 6,2 | 5,1 | 4,0 | 2,8 | 1,5 | | | | | | | | |
| | 1205 | 1,95 | 3 | 9,4 | 8,9 | 8,1 | 7,1 | 6,1 | 5,0 | 3,8 | 2,4 | 1,0 | | | | | | | |
| | 1353 | 2,30 | 4 | 10,1 | 9,7 | 9,0 | 8,1 | 7,2 | 6,1 | 4,9 | 3,5 | 2,1 | | | | | | | |
| FLCG 65-16T | 1511 | 2,40 | 1 | 11,6 | 11,0 | 9,8 | 8,6 | 7,3 | 6,0 | 4,7 | 3,1 | 1,4 | | | | | | | |
| | 1760 | 2,80 | 2 | 12,7 | 12,3 | 11,3 | 10,1 | 8,9 | 7,6 | 6,3 | 4,7 | 2,9 | 1,1 | | | | | | |
| | 2002 | 3,16 | 3 | 13,5 | 13,4 | 12,5 | 11,4 | 10,2 | 9,0 | 7,7 | 6,2 | 4,5 | 2,5 | | | | | | |
| | 2152 | 3,60 | 4 | 14,4 | 14,3 | 13,6 | 12,6 | 11,5 | 10,3 | 9,0 | 7,6 | 5,9 | 3,9 | 1,8 | | | | | |
| FLCG 80-4T | 396 | 0,74 | 1 | 3,7 | 3,5 | 3,2 | 2,9 | 2,6 | 2,1 | 1,7 | 1,2 | 0,6 | | | | | | | |
| | 439 | 0,86 | 2 | 4,0 | 3,8 | 3,6 | 3,3 | 3,0 | 2,6 | 2,1 | 1,6 | 1,0 | | | | | | | |
| | 497 | 1,04 | 3 | 4,2 | 4,0 | 3,8 | 3,6 | 3,3 | 2,9 | 2,4 | 1,9 | 1,3 | | | | | | | |
| | 530 | 1,32 | 4 | 4,3 | 4,2 | 4,1 | 3,9 | 3,6 | 3,2 | 2,7 | 2,2 | 1,6 | 0,9 | | | | | | |
| FLCG 80-8T | 649 | 1,05 | 1 | 4,2 | 3,9 | 3,5 | 3,0 | 2,6 | 2,2 | 1,7 | 1,1 | 0,6 | | | | | | | |
| | 774 | 1,26 | 2 | 5,0 | 4,7 | 4,2 | 3,8 | 3,3 | 2,8 | 2,3 | 1,7 | 1,1 | | | | | | | |
| | 888 | 1,48 | 3 | 5,7 | 5,4 | 4,9 | 4,3 | 3,8 | 3,4 | 2,8 | 2,3 | 1,6 | 0,9 | | | | | | |
| | 1043 | 1,98 | 4 | 6,4 | 6,2 | 5,7 | 5,1 | 4,6 | 4,0 | 3,5 | 2,9 | 2,3 | 1,5 | | | | | | |
| FLCG 80-10T | 839 | 1,34 | 1 | 5,7 | 5,2 | 4,8 | 4,4 | 4,0 | 3,5 | 3,0 | 2,4 | 1,8 | 1,2 | | | | | | |
| | 987 | 1,58 | 2 | 6,7 | 6,2 | 5,7 | 5,3 | 4,9 | 4,4 | 3,8 | 3,2 | 2,6 | 1,9 | 1,2 | | | | | |
| | 1109 | 1,79 | 3 | 7,4 | 6,9 | 6,5 | 6,1 | 5,6 | 5,1 | 4,6 | 3,9 | 3,3 | 2,6 | 1,8 | | | | | |
| | 1259 | 2,12 | 4 | 8,4 | 7,8 | 7,4 | 7,0 | 6,5 | 6,0 | 5,4 | 4,8 | 4,1 | 3,3 | 2,5 | 1,6 | | | | |
| FLCG 80-12T | 1380 | 2,15 | 1 | 8,6 | 8,4 | 7,9 | 7,2 | 6,6 | 6,0 | 5,4 | 4,8 | 4,2 | 3,3 | 2,5 | 1,6 | | | | |
| | 1553 | 2,46 | 2 | 9,9 | 9,5 | 9,0 | 8,4 | 7,8 | 7,2 | 6,6 | 5,9 | 5,2 | 4,4 | 3,5 | 2,6 | 1,8 | | | |
| | 1739 | 2,77 | 3 | 10,8 | 10,3 | 9,8 | 9,3 | 8,8 | 8,2 | 7,5 | 6,8 | 6,1 | 5,3 | 4,4 | 3,5 | 2,6 | | | |
| | 1931 | 3,24 | 4 | 11,6 | 11,2 | 10,7 | 10,3 | 9,8 | 9,2 | 8,5 | 7,8 | 7,0 | 6,2 | 5,3 | 4,3 | 3,3 | | | |
| FLCG 80-15T | 1780 | 2,84 | 1 | 10,2 | 9,5 | 9,0 | 8,4 | 7,8 | 7,2 | 6,5 | 5,8 | 5,0 | 4,3 | 3,5 | 2,7 | 1,8 | | | |
| | 2117 | 3,36 | 2 | 11,5 | 11,0 | 10,5 | 10,0 | 9,4 | 8,8 | 8,2 | 7,5 | 6,7 | 5,9 | 5,1 | 4,2 | 3,3 | | | |
| | 2463 | 3,89 | 3 | 12,7 | 12,2 | 11,8 | 11,3 | 10,8 | 10,3 | 9,7 | 9,0 | 8,3 | 7,5 | 6,7 | 5,8 | 4,8 | 2,8 | | |
| | 2735 | 4,92 | 4 | 13,9 | 13,5 | 13,1 | 12,7 | 12,2 | 11,7 | 11,2 | 10,6 | 10,0 | 9,2 | 8,4 | 7,5 | 6,6 | 4,4 | 2,1 | |

Performances according to standards ISO 9906 - Annex A.

flcgt-2-2p50S-en_b_th

FLCG40..T - FLCG50..T SERIES (TWIN VERSION, THREE-PHASE) HYDRAULIC PERFORMANCE TABLE (PARALLEL OPERATION)

| PUMP TYPE 400V 50Hz | MAXIMUM ABSORBED POWER W* | MAXIMUM ABSORBED CURRENT A* | SPEED | Q = DELIVERY | | | | | | | | | | | | | | | |
|---------------------------------------|------------------------------|--------------------------------|-------|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|--|
| | | | | l/s 0 | 0,6 | 1,1 | 1,7 | 2,2 | 2,8 | 3,9 | 5,0 | 6,1 | 7,2 | 8,3 | 9,4 | 10,6 | 11,7 | 12,8 | |
| | | | | m ³ /h 0 | 2 | 4 | 6 | 8 | 10 | 14 | 18 | 22 | 26 | 30 | 34 | 38 | 42 | 46 | |
| H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | | | | | | | | | | | | |
| ** FLCG 40-5T | 100 | 0,17 | 1 | 3,6 | 3,3 | 3,1 | 2,7 | 2,3 | 1,8 | 0,8 | | | | | | | | | |
| | 114 | 0,20 | 2 | 3,7 | 3,6 | 3,4 | 3,1 | 2,7 | 2,2 | 1,2 | | | | | | | | | |
| | 129 | 0,25 | 3 | 3,9 | 3,8 | 3,6 | 3,4 | 3,0 | 2,6 | 1,5 | 0,3 | | | | | | | | |
| | 143 | 0,33 | 4 | 4,0 | 3,9 | 3,8 | 3,6 | 3,3 | 2,9 | 1,8 | 0,5 | | | | | | | | |
| FLCG 40-7T | 183 | 0,30 | 1 | 6,4 | 5,7 | 5,1 | 4,6 | 4,0 | 3,3 | 1,8 | 0,5 | | | | | | | | |
| | 215 | 0,36 | 2 | 6,8 | 6,2 | 5,8 | 5,3 | 4,7 | 4,1 | 2,6 | 1,1 | | | | | | | | |
| | 249 | 0,44 | 3 | 7,2 | 6,7 | 6,3 | 6,0 | 5,5 | 4,9 | 3,4 | 1,8 | 0,1 | | | | | | | |
| | 265 | 0,57 | 4 | 7,4 | 7,0 | 6,8 | 6,5 | 6,1 | 5,6 | 4,2 | 2,5 | 0,7 | | | | | | | |
| FLCG 40-10T | 468 | 0,78 | 1 | 7,3 | 7,0 | 6,6 | 6,2 | 5,7 | 5,2 | 4,1 | 3,1 | 2,1 | 1,1 | 0,2 | | | | | |
| | 575 | 0,93 | 2 | 7,9 | 7,7 | 7,4 | 7,0 | 6,7 | 6,3 | 5,3 | 4,3 | 3,3 | 2,2 | 1,2 | | | | | |
| | 666 | 1,06 | 3 | 8,5 | 8,3 | 8,1 | 7,8 | 7,5 | 7,2 | 6,4 | 5,5 | 4,5 | 3,4 | 2,3 | 1,2 | 0,2 | | | |
| | 731 | 1,22 | 4 | 8,9 | 8,8 | 8,6 | 8,4 | 8,1 | 7,8 | 7,2 | 6,4 | 5,5 | 4,5 | 3,4 | 2,2 | 1,0 | | | |
| FLCG 50-5T | 224 | 0,44 | 1 | 4,3 | 4,2 | 4,0 | 3,7 | 3,4 | 3,1 | 2,5 | 1,8 | 1,1 | 0,3 | | | | | | |
| | 266 | 0,51 | 2 | 4,6 | 4,5 | 4,4 | 4,2 | 4,0 | 3,8 | 3,2 | 2,6 | 1,8 | 1,0 | 0,1 | | | | | |
| | 308 | 0,62 | 3 | 4,9 | 4,8 | 4,7 | 4,6 | 4,4 | 4,3 | 3,8 | 3,2 | 2,5 | 1,7 | 0,8 | | | | | |
| | 335 | 0,78 | 4 | 5,1 | 5,0 | 4,9 | 4,8 | 4,7 | 4,5 | 4,1 | 3,6 | 2,9 | 2,1 | 1,3 | 0,3 | | | | |
| FLCG 50-8T | 440 | 0,71 | 1 | 7,0 | 6,9 | 6,6 | 6,4 | 6,0 | 5,7 | 5,0 | 4,3 | 3,6 | 2,9 | 2,2 | 1,5 | 0,7 | | | |
| | 514 | 0,83 | 2 | 7,7 | 7,6 | 7,4 | 7,2 | 7,0 | 6,7 | 6,0 | 5,3 | 4,6 | 3,9 | 3,2 | 2,4 | 1,6 | 0,8 | | |
| | 579 | 0,94 | 3 | 8,3 | 8,3 | 8,2 | 8,0 | 7,8 | 7,5 | 7,0 | 6,4 | 5,7 | 5,0 | 4,2 | 3,5 | 2,6 | 1,7 | | |
| | 626 | 1,07 | 4 | 8,7 | 8,7 | 8,6 | 8,5 | 8,3 | 8,1 | 7,7 | 7,1 | 6,5 | 5,8 | 5,1 | 4,3 | 3,5 | 2,6 | | |
| FLCG 50-10T | 479 | 0,78 | 1 | 7,3 | 7,0 | 6,6 | 6,2 | 5,9 | 5,5 | 4,7 | 4,0 | 3,3 | 2,5 | 1,7 | 0,9 | | | | |
| | 581 | 0,98 | 2 | 8,1 | 7,9 | 7,6 | 7,3 | 7,0 | 6,7 | 6,0 | 5,3 | 4,5 | 3,7 | 2,8 | 1,9 | 0,9 | | | |
| | 674 | 1,09 | 3 | 8,8 | 8,7 | 8,5 | 8,2 | 7,9 | 7,6 | 6,9 | 6,2 | 5,5 | 4,7 | 3,9 | 2,9 | 1,9 | 0,8 | | |
| | 767 | 1,31 | 4 | 9,6 | 9,5 | 9,3 | 9,1 | 8,9 | 8,6 | 8,0 | 7,4 | 6,7 | 6,0 | 5,1 | 4,1 | 3,0 | 1,9 | | |

* Electric data refer to single motor.

flcgt-1-2p50P-en_b_th

** Performances according to standards EN 1151-1.

Performances according to standards ISO 9906 - Annex A.

FLCG65..T - FLCG80..T SERIES (TWIN VERSION, THREE-PHASE) HYDRAULIC PERFORMANCE TABLE (PARALLEL OPERATION)

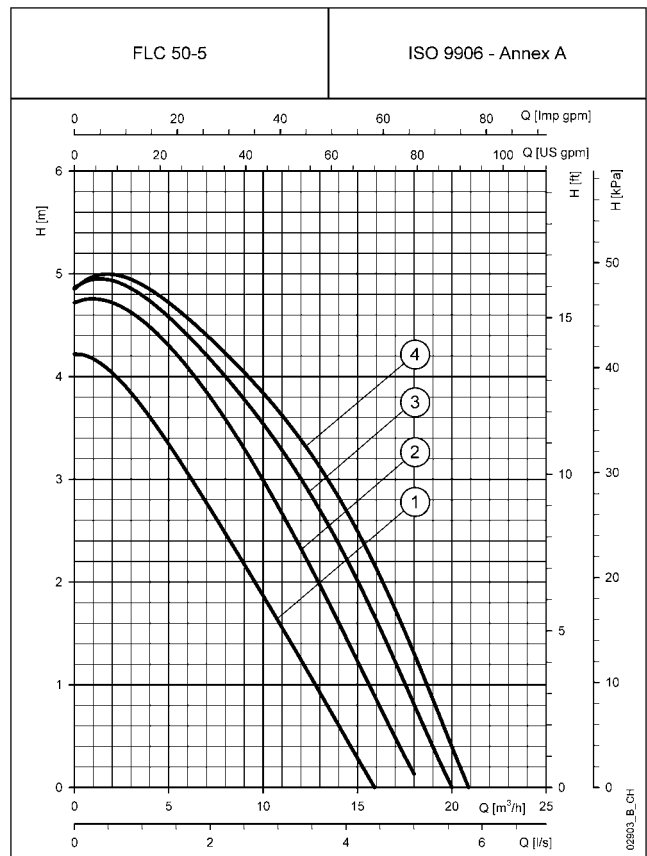
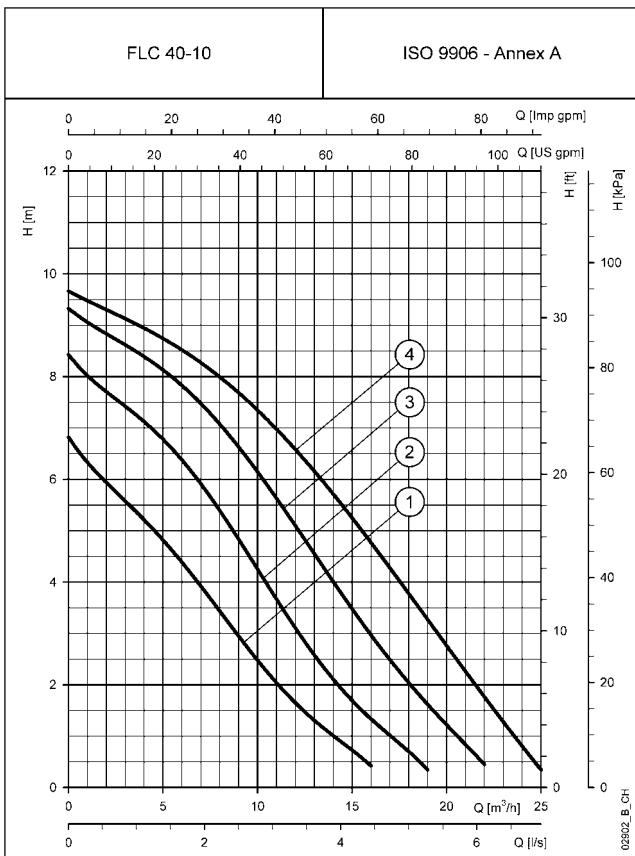
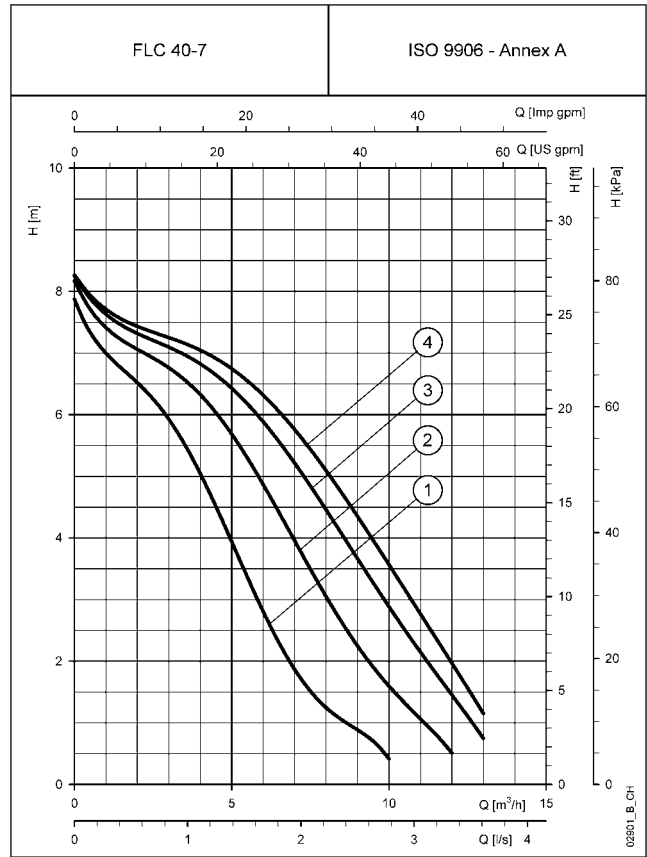
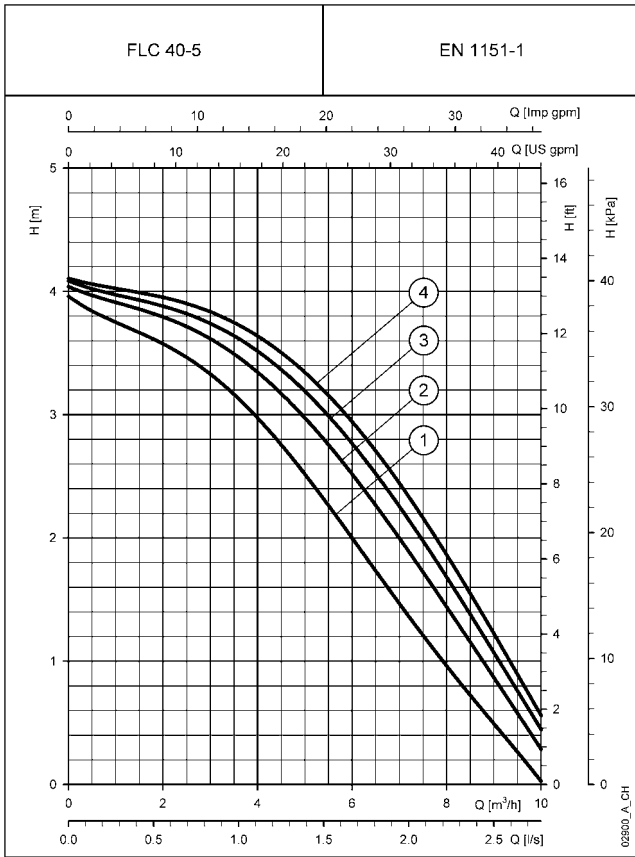
| PUMP TYPE 400V 50Hz | MAXIMUM ABSORBED POWER W* | MAXIMUM ABSORBED CURRENT A* | SPEED | Q = DELIVERY | | | | | | | | | | | | | | |
|---------------------------------------|------------------------------------|--------------------------------------|-------|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | | | | l/s 0 | 1,4 | 2,8 | 4,2 | 5,6 | 6,9 | 8,3 | 11,1 | 13,9 | 16,7 | 19,4 | 25,0 | 30,6 | 36,1 | 41,7 |
| | | | | m ³ /h 0 | 5 | 10 | 15 | 20 | 25 | 30 | 40 | 50 | 60 | 70 | 90 | 110 | 130 | 150 |
| H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | | | | | | | | | | | |
| FLCG 65-7T | 475 | 0,77 | 1 | 4,7 | 4,4 | 4,0 | 3,5 | 3,1 | 2,6 | 2,2 | 1,3 | | | | | | | |
| | 578 | 0,93 | 2 | 5,3 | 5,0 | 4,6 | 4,2 | 3,7 | 3,2 | 2,7 | 1,8 | | | | | | | |
| | 668 | 1,08 | 3 | 5,9 | 5,7 | 5,4 | 5,0 | 4,6 | 4,1 | 3,6 | 2,6 | 1,5 | 0,4 | | | | | |
| | 807 | 1,39 | 4 | 6,3 | 6,2 | 5,9 | 5,5 | 5,0 | 4,5 | 4,0 | 3,0 | 1,9 | 0,6 | | | | | |
| FLCG 65-10T | 673 | 1,08 | 1 | 6,3 | 6,2 | 5,7 | 5,1 | 4,5 | 3,9 | 3,4 | 2,4 | 1,3 | 0,2 | | | | | |
| | 803 | 1,29 | 2 | 7,2 | 7,1 | 6,7 | 6,2 | 5,6 | 5,1 | 4,5 | 3,3 | 2,1 | 0,9 | | | | | |
| | 930 | 1,52 | 3 | 7,8 | 7,7 | 7,4 | 7,0 | 6,5 | 5,9 | 5,3 | 4,1 | 2,9 | 1,6 | 0,2 | | | | |
| | 1079 | 2,02 | 4 | 8,5 | 8,5 | 8,2 | 7,8 | 7,3 | 6,8 | 6,2 | 5,1 | 3,8 | 2,4 | 0,9 | | | | |
| FLCG 65-12T | 863 | 1,42 | 1 | 7,9 | 7,5 | 7,0 | 6,5 | 5,9 | 5,4 | 4,8 | 3,8 | 2,6 | 1,4 | 0,3 | | | | |
| | 1044 | 1,68 | 2 | 8,8 | 8,5 | 8,1 | 7,6 | 7,2 | 6,7 | 6,1 | 5,0 | 3,9 | 2,6 | 1,3 | | | | |
| | 1205 | 1,95 | 3 | 9,4 | 9,2 | 8,9 | 8,5 | 8,0 | 7,6 | 7,1 | 6,0 | 4,8 | 3,6 | 2,2 | | | | |
| | 1353 | 2,30 | 4 | 10,1 | 10,0 | 9,7 | 9,4 | 9,0 | 8,5 | 8,1 | 7,1 | 5,9 | 4,7 | 3,3 | | | | |
| FLCG 65-16T | 1511 | 2,40 | 1 | 11,6 | 11,4 | 10,9 | 10,4 | 9,8 | 9,1 | 8,5 | 7,2 | 5,9 | 4,4 | 2,8 | | | | |
| | 1760 | 2,80 | 2 | 12,7 | 12,6 | 12,3 | 11,8 | 11,3 | 10,7 | 10,0 | 8,8 | 7,5 | 6,0 | 4,4 | 0,6 | | | |
| | 2002 | 3,16 | 3 | 13,5 | 13,6 | 13,4 | 13,0 | 12,5 | 11,9 | 11,3 | 10,1 | 8,8 | 7,5 | 5,9 | 2,0 | | | |
| | 2152 | 3,60 | 4 | 14,4 | 14,5 | 14,3 | 14,0 | 13,6 | 13,1 | 12,5 | 11,4 | 10,1 | 8,8 | 7,3 | 3,5 | | | |
| FLCG 80-4T | 396 | 0,74 | 1 | 3,7 | 3,6 | 3,5 | 3,3 | 3,2 | 3,0 | 2,9 | 2,4 | 2,0 | 1,4 | 0,9 | | | | |
| | 439 | 0,86 | 2 | 4,0 | 3,8 | 3,7 | 3,6 | 3,5 | 3,4 | 3,3 | 2,9 | 2,4 | 1,8 | 1,2 | | | | |
| | 497 | 1,04 | 3 | 4,2 | 4,1 | 4,0 | 3,9 | 3,8 | 3,7 | 3,6 | 3,2 | 2,7 | 2,2 | 1,5 | | | | |
| | 530 | 1,32 | 4 | 4,3 | 4,2 | 4,2 | 4,1 | 4,0 | 3,9 | 3,8 | 3,4 | 3,0 | 2,4 | 1,9 | 0,2 | | | |
| FLCG 80-8T | 649 | 1,05 | 1 | 4,2 | 4,1 | 3,9 | 3,6 | 3,4 | 3,1 | 2,9 | 2,4 | 1,9 | 1,3 | 0,6 | | | | |
| | 774 | 1,26 | 2 | 5,0 | 4,9 | 4,7 | 4,4 | 4,1 | 3,9 | 3,6 | 3,1 | 2,6 | 1,9 | 1,2 | | | | |
| | 888 | 1,48 | 3 | 5,7 | 5,6 | 5,4 | 5,1 | 4,8 | 4,5 | 4,2 | 3,6 | 3,1 | 2,5 | 1,7 | 0,4 | | | |
| | 1043 | 1,98 | 4 | 6,4 | 6,3 | 6,1 | 5,9 | 5,6 | 5,3 | 4,9 | 4,3 | 3,7 | 3,1 | 2,4 | 0,8 | | | |
| FLCG 80-10T | 839 | 1,34 | 1 | 5,7 | 5,3 | 5,1 | 4,8 | 4,5 | 4,2 | 3,9 | 3,2 | 2,5 | 1,7 | 0,7 | | | | |
| | 987 | 1,58 | 2 | 6,7 | 6,3 | 6,0 | 5,7 | 5,4 | 5,2 | 4,8 | 4,1 | 3,3 | 2,4 | 1,4 | | | | |
| | 1109 | 1,79 | 3 | 7,4 | 7,1 | 6,8 | 6,5 | 6,2 | 5,9 | 5,5 | 4,8 | 4,0 | 3,1 | 2,1 | | | | |
| | 1259 | 2,12 | 4 | 8,4 | 8,0 | 7,6 | 7,4 | 7,1 | 6,8 | 6,5 | 5,7 | 4,8 | 3,9 | 2,8 | | | | |
| FLCG 80-12T | 1380 | 2,15 | 1 | 8,6 | 8,6 | 8,4 | 8,1 | 7,8 | 7,5 | 7,1 | 6,4 | 5,8 | 5,2 | 4,5 | 2,8 | 1,2 | | |
| | 1553 | 2,46 | 2 | 9,9 | 9,7 | 9,4 | 9,2 | 8,9 | 8,6 | 8,3 | 7,7 | 7,0 | 6,3 | 5,6 | 3,9 | 2,0 | | |
| | 1739 | 2,77 | 3 | 10,8 | 10,5 | 10,3 | 10,0 | 9,7 | 9,5 | 9,2 | 8,6 | 8,0 | 7,3 | 6,5 | 4,8 | 2,8 | 0,8 | |
| | 1931 | 3,24 | 4 | 11,6 | 11,4 | 11,2 | 10,9 | 10,7 | 10,4 | 10,2 | 9,6 | 9,0 | 8,3 | 7,5 | 5,7 | 3,6 | 1,4 | |
| FLCG 80-15T | 1780 | 2,84 | 1 | 10,2 | 9,8 | 9,5 | 9,2 | 8,9 | 8,6 | 8,3 | 7,6 | 6,8 | 6,0 | 5,2 | 3,5 | 1,5 | | |
| | 2117 | 3,36 | 2 | 11,5 | 11,2 | 10,9 | 10,7 | 10,4 | 10,1 | 9,8 | 9,2 | 8,5 | 7,7 | 6,9 | 5,1 | 3,1 | 0,9 | |
| | 2463 | 3,89 | 3 | 12,7 | 12,4 | 12,2 | 11,9 | 11,7 | 11,4 | 11,2 | 10,6 | 9,9 | 9,2 | 8,5 | 6,7 | 4,6 | 2,3 | |
| | 2735 | 4,92 | 4 | 13,9 | 13,7 | 13,4 | 13,2 | 13,0 | 12,8 | 12,5 | 12,0 | 11,5 | 10,8 | 10,1 | 8,4 | 6,3 | 3,9 | 1,3 |

* Electric data refer to single motor.

flcgt-2-2p50P-en_b_th

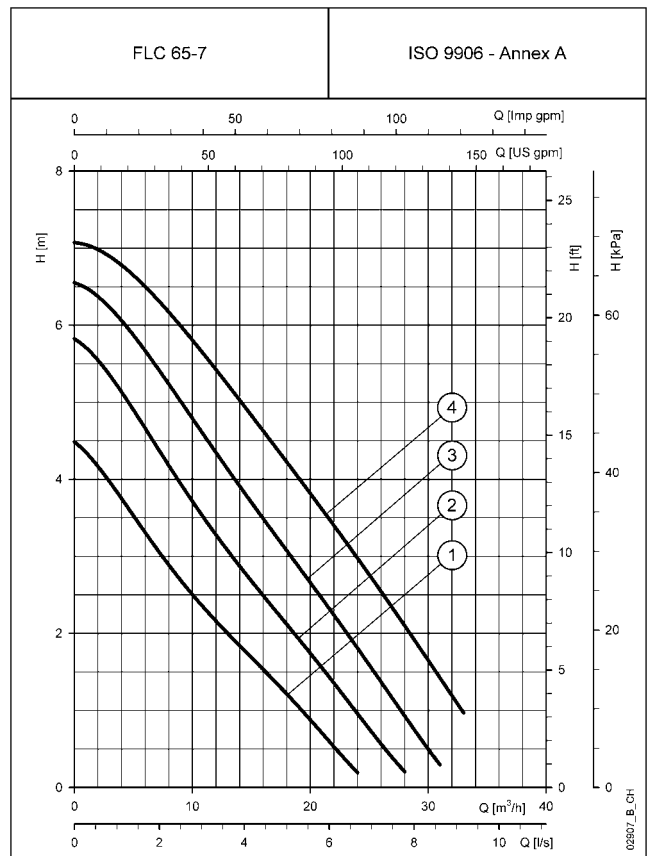
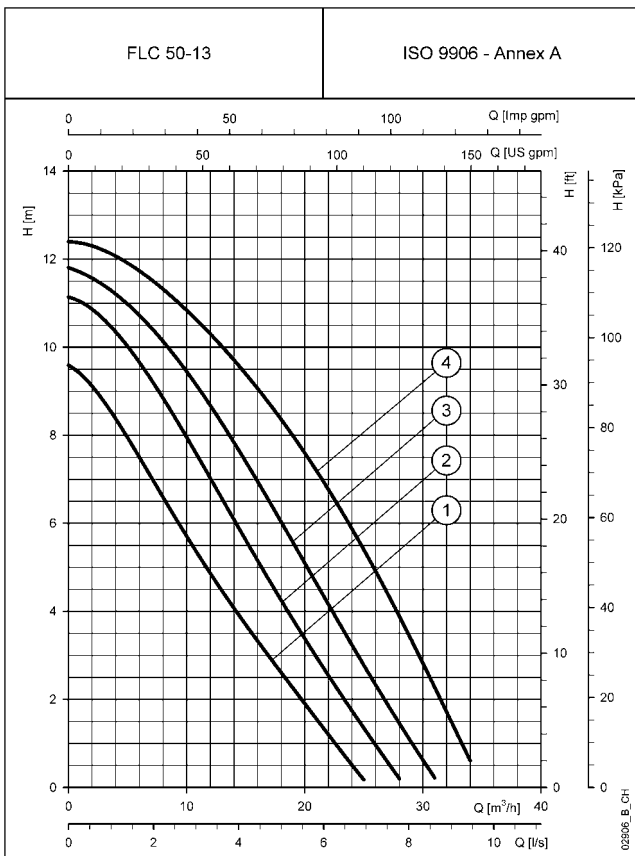
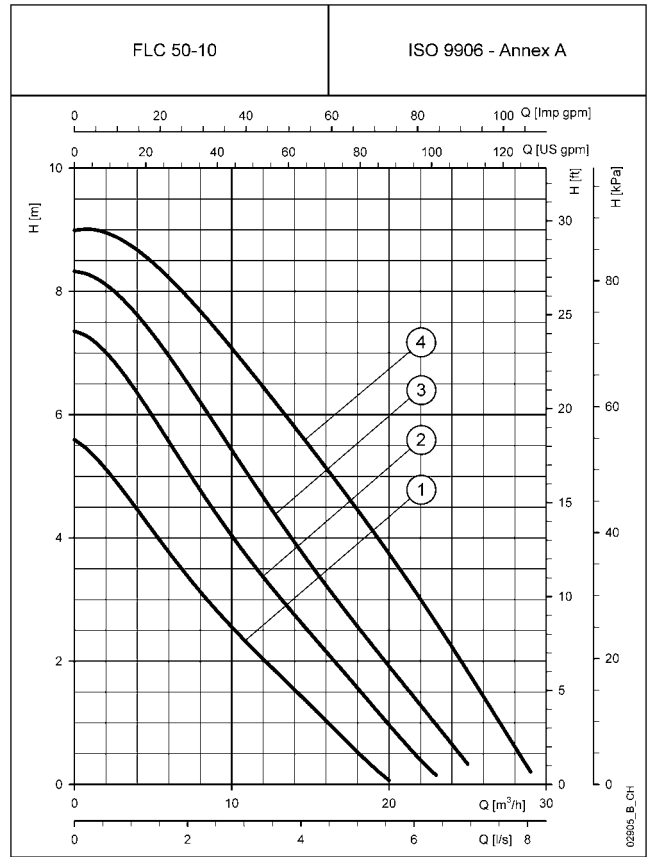
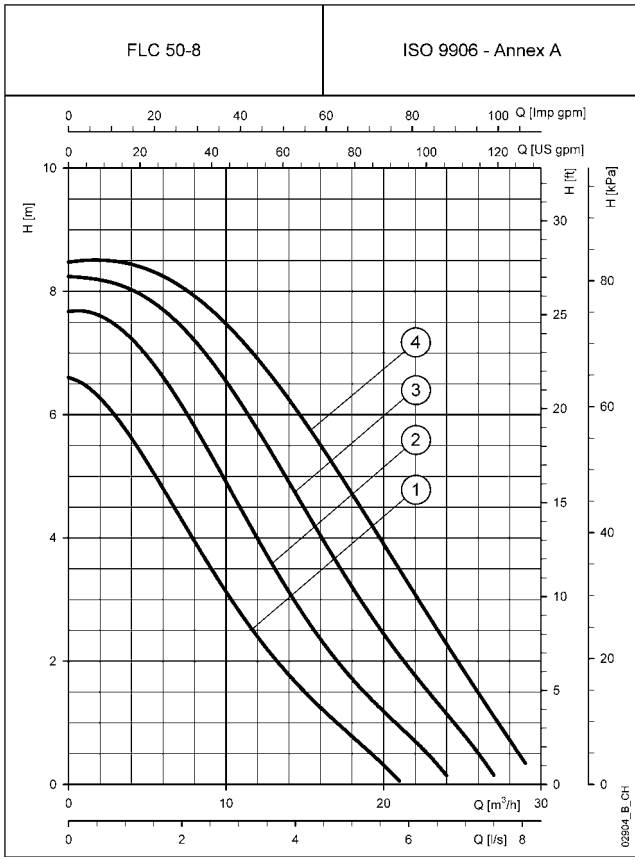
Performances according to standards ISO 9906 - Annex A.

**FLC SERIES
SINGLE-PHASE OPERATING CHARACTERISTICS**



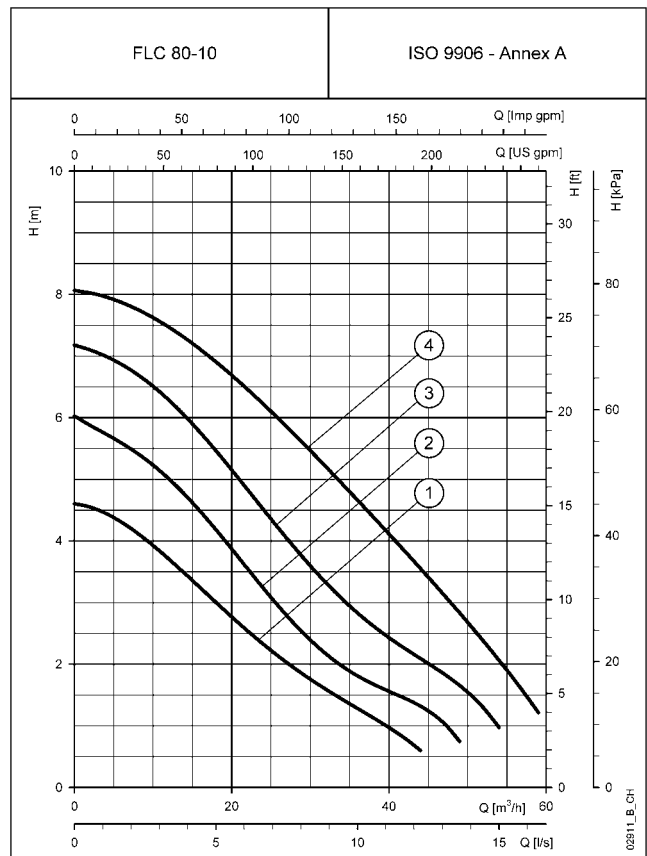
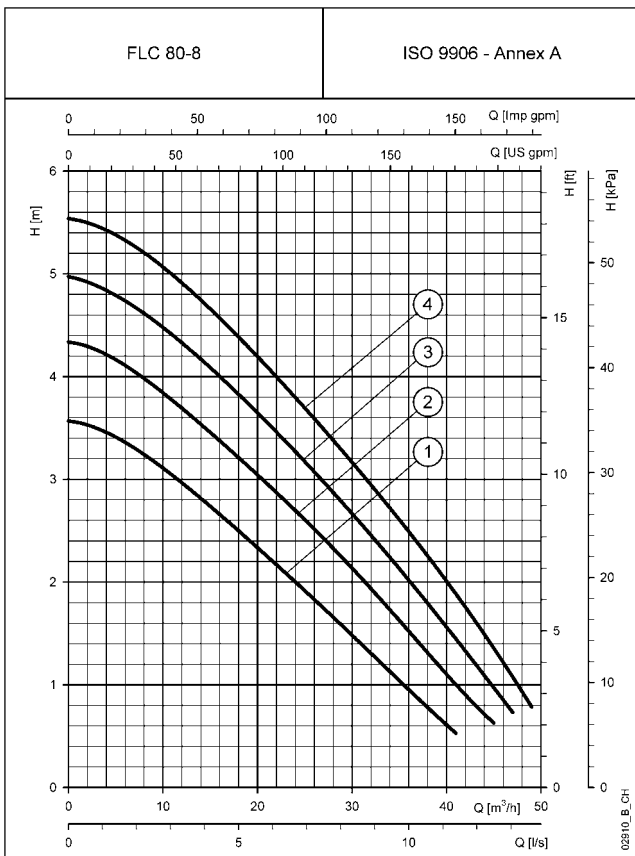
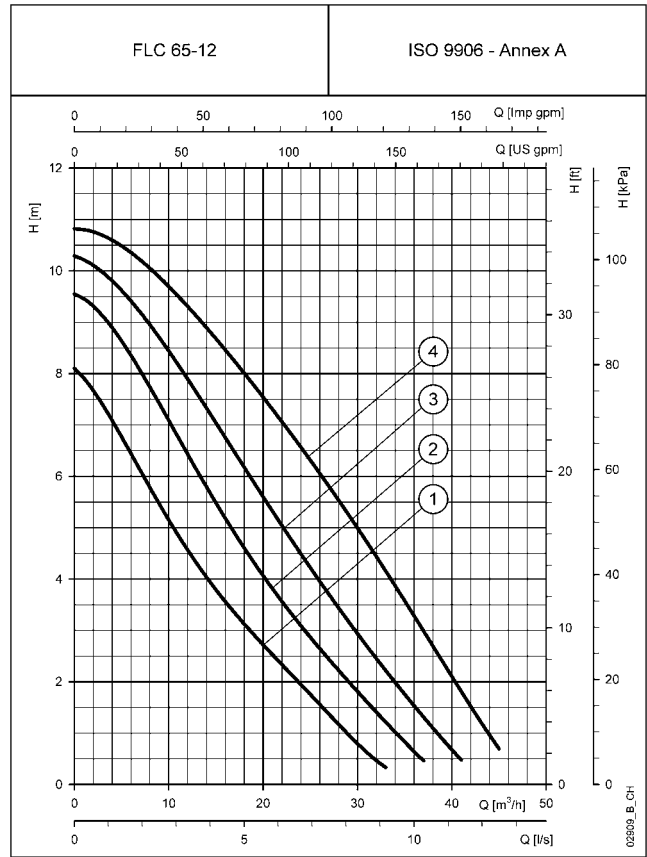
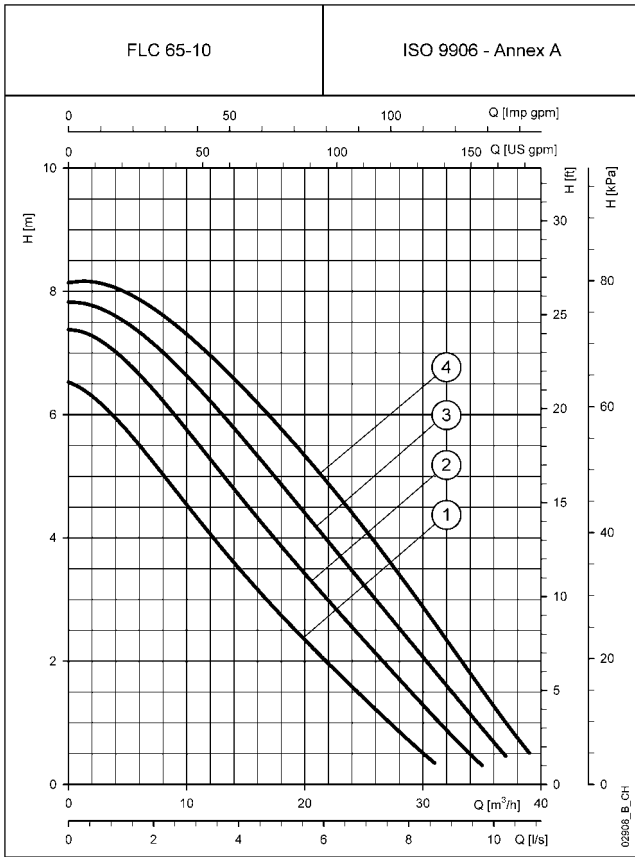
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

**FLC SERIES
SINGLE-PHASE OPERATING CHARACTERISTICS**



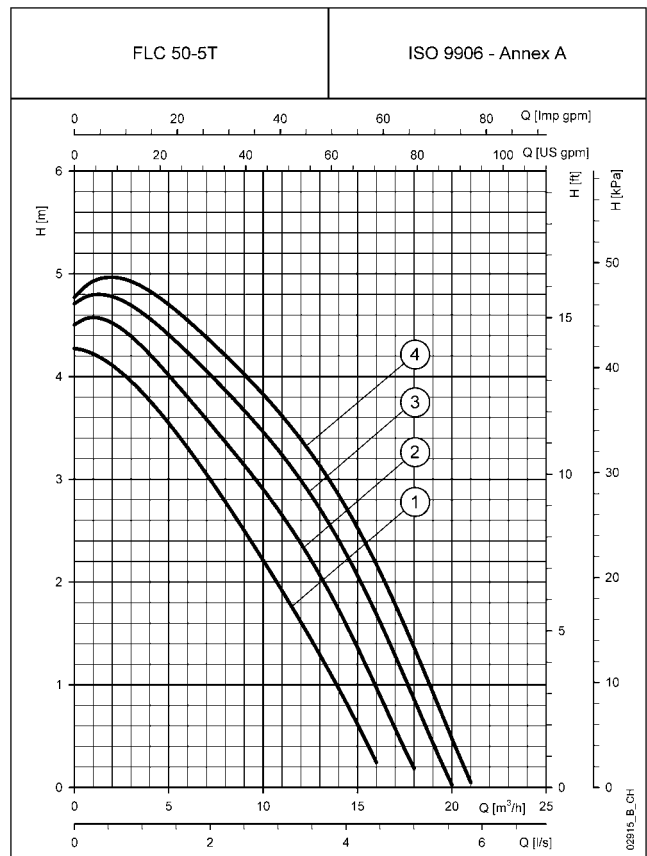
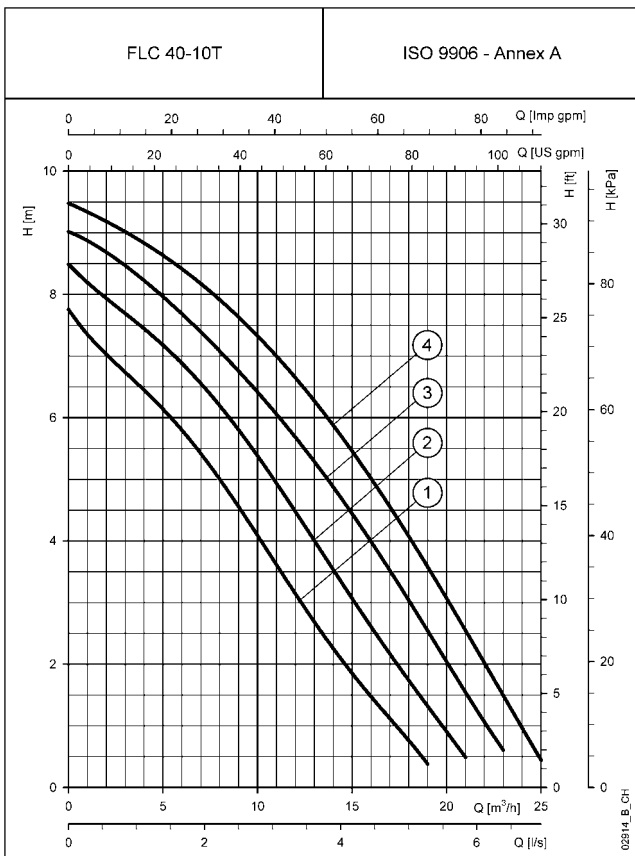
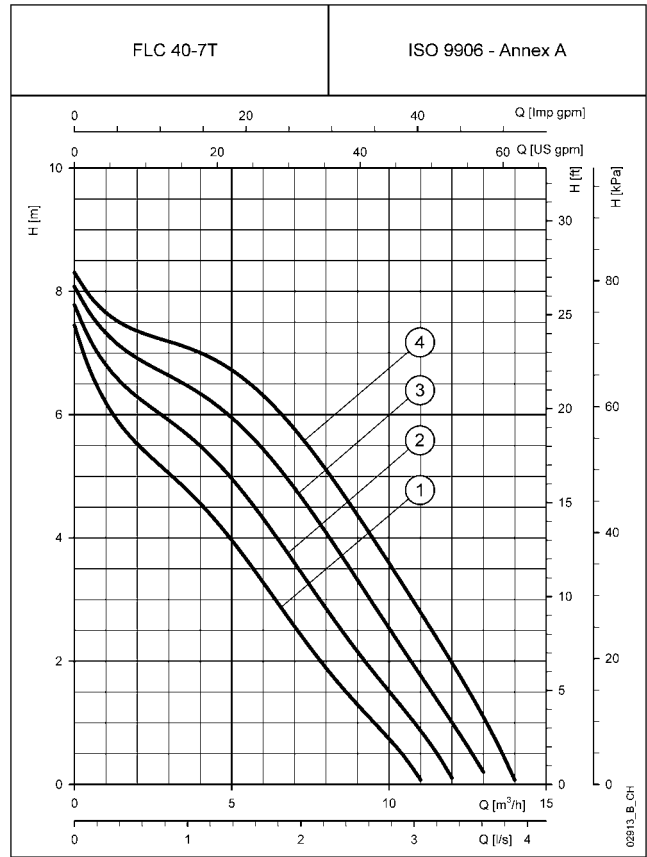
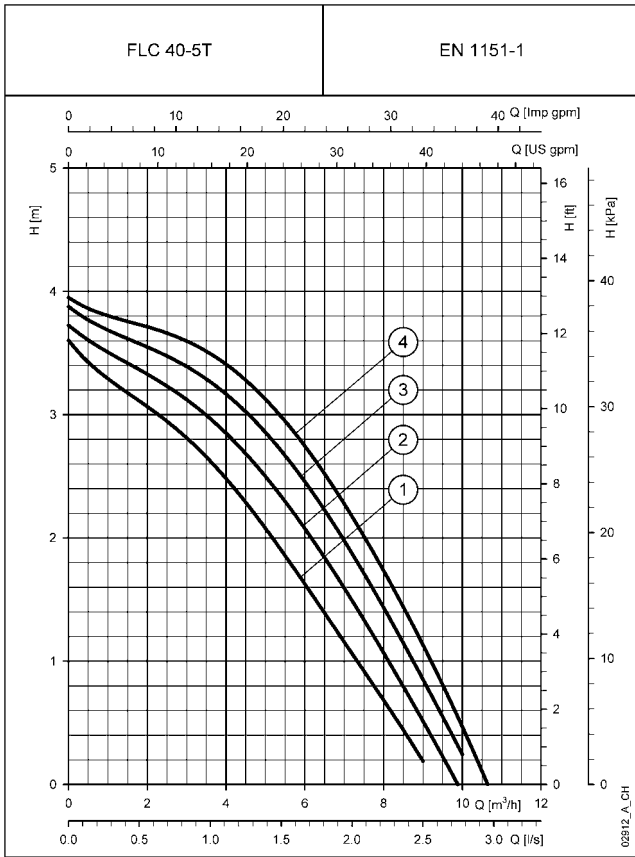
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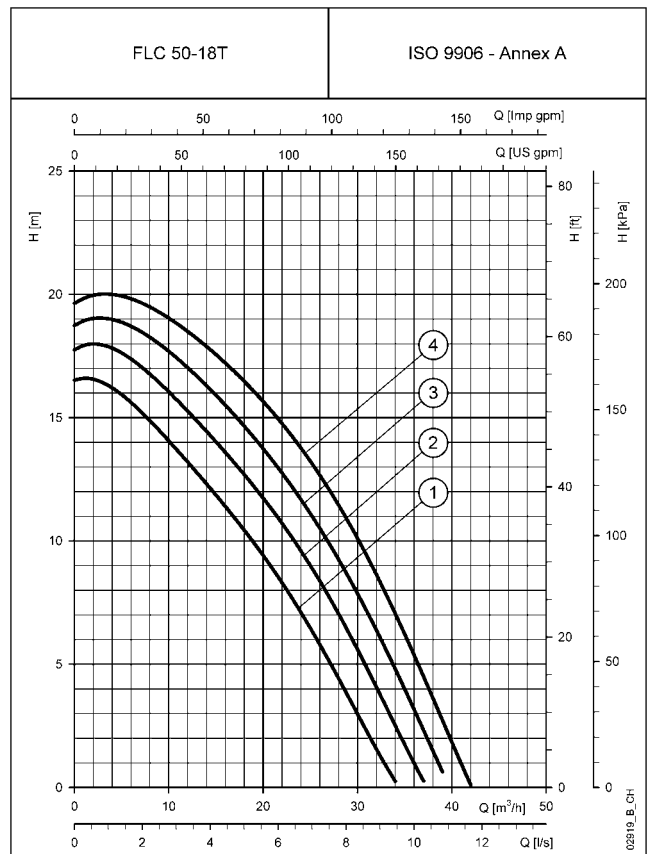
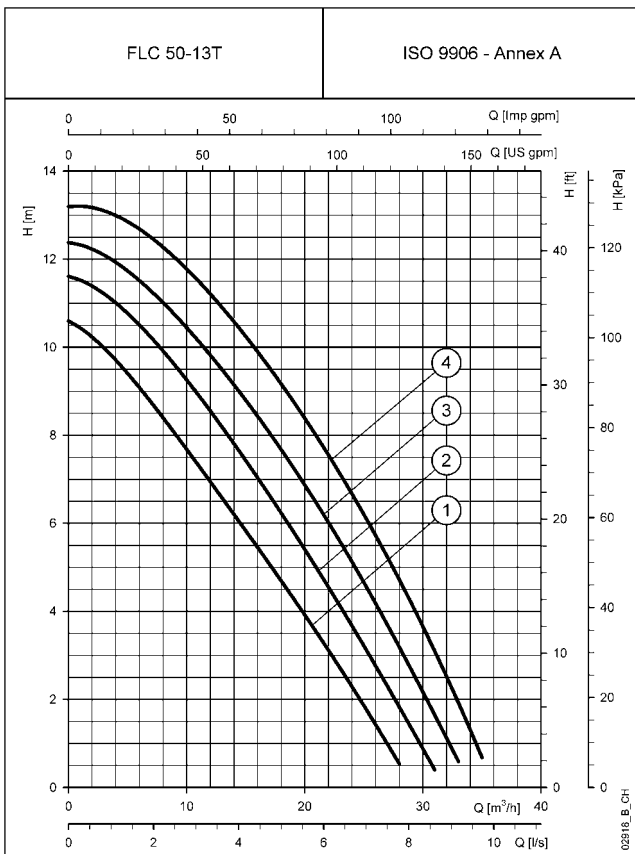
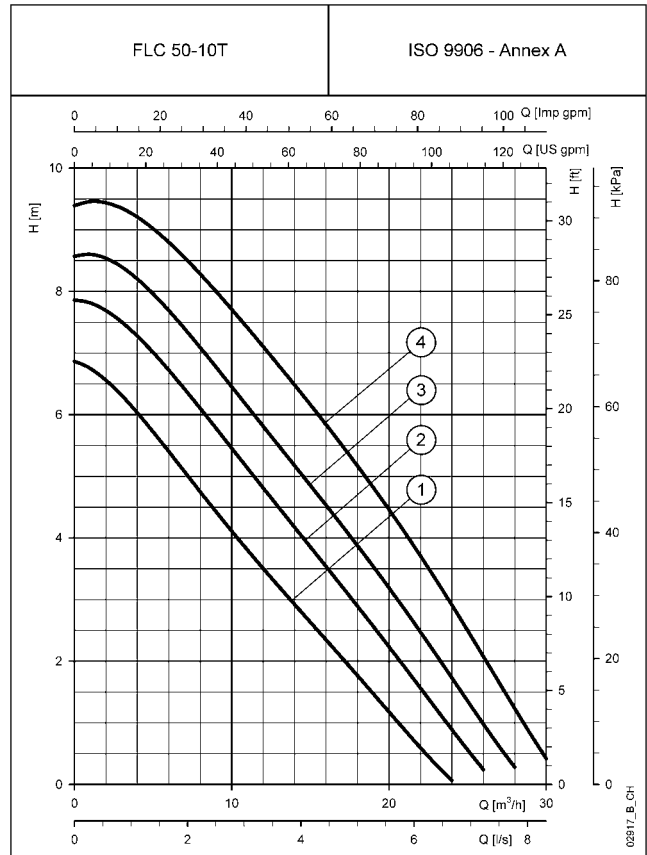
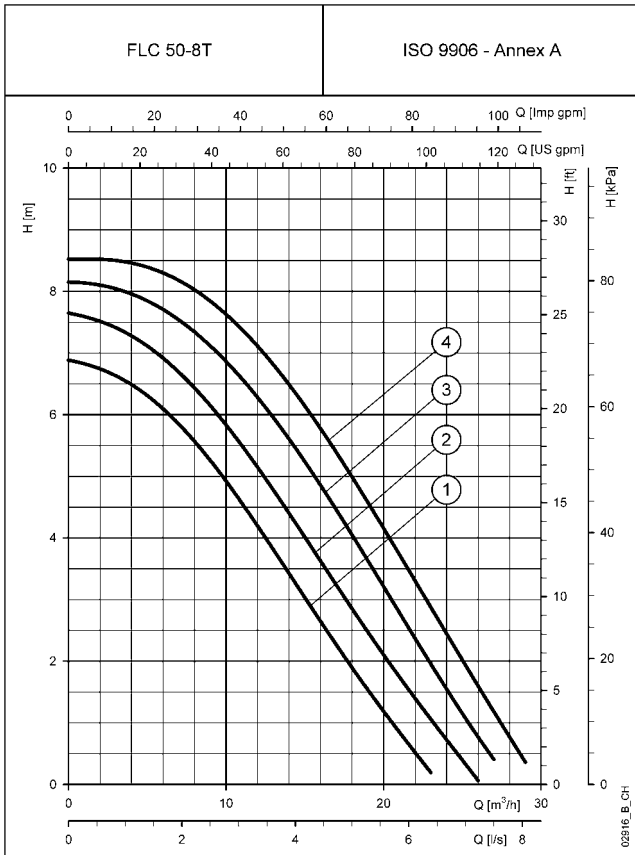
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**FLC..T SERIES
THREE-PHASE OPERATING CHARACTERISTICS**



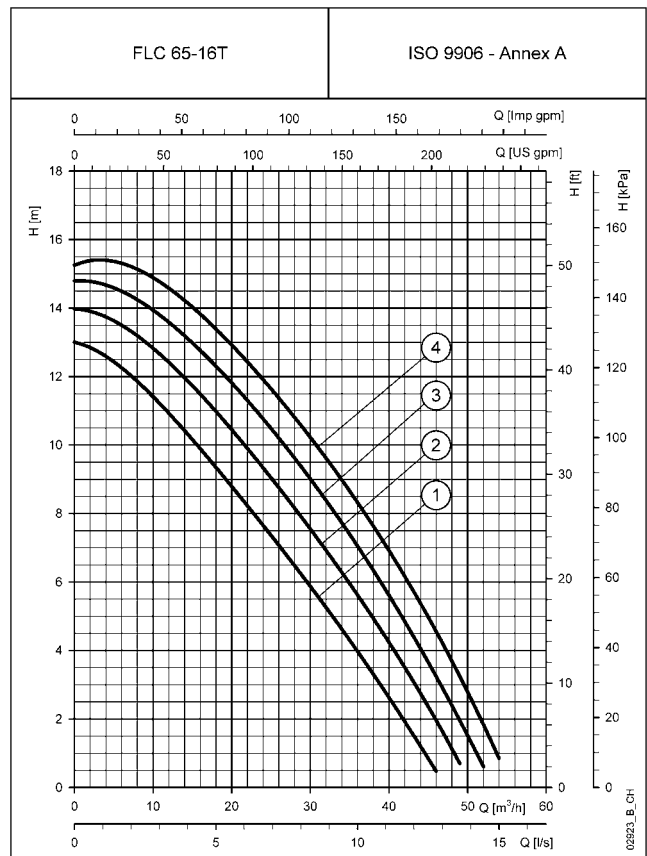
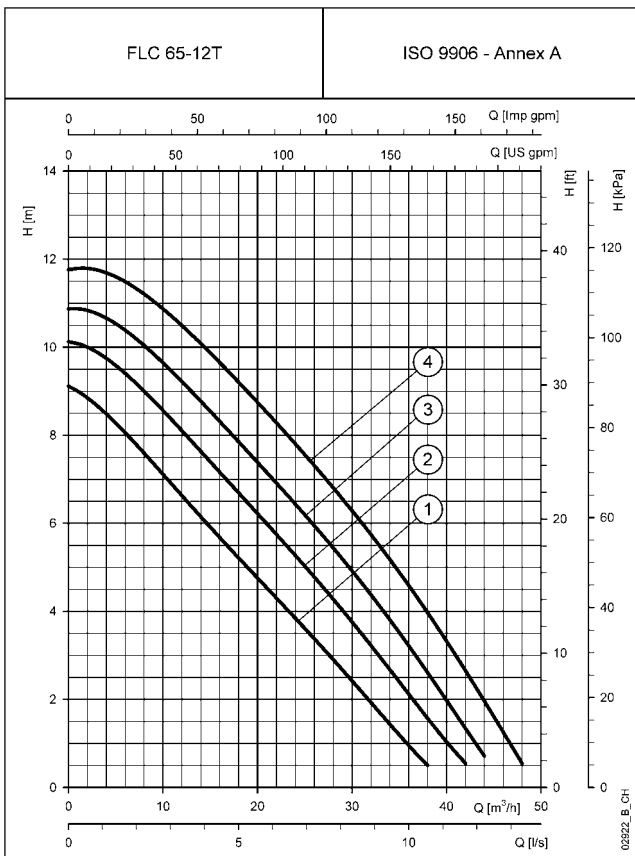
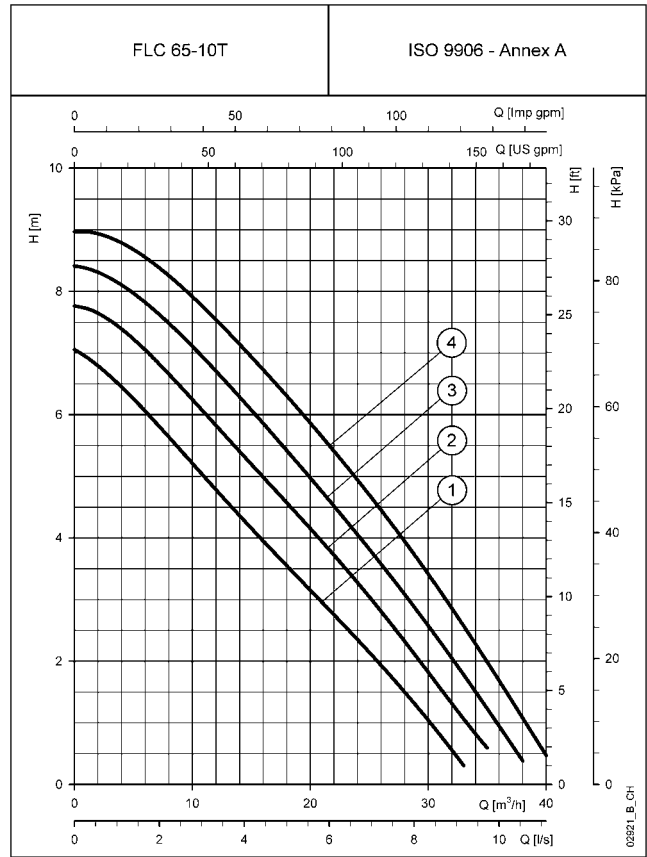
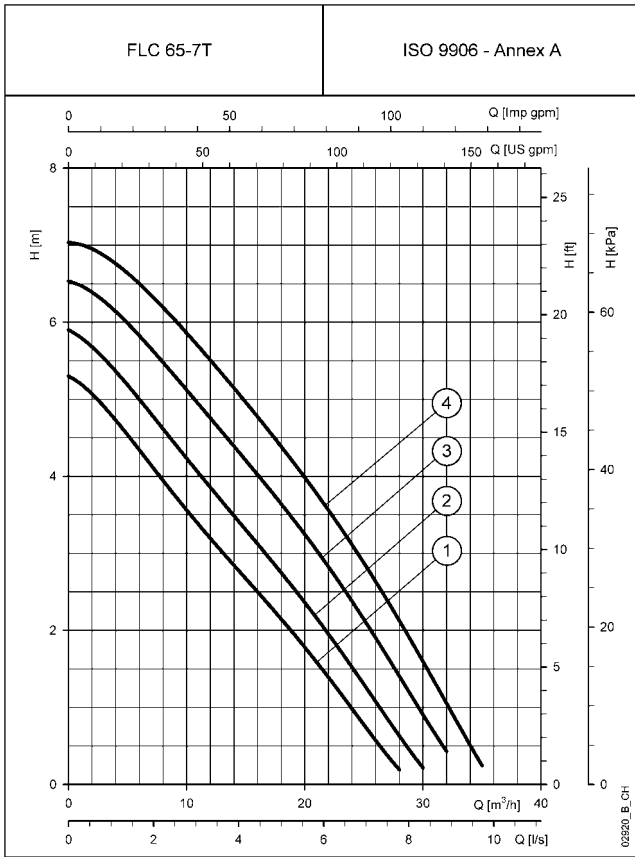
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**FLC..T SERIES
THREE-PHASE OPERATING CHARACTERISTICS**



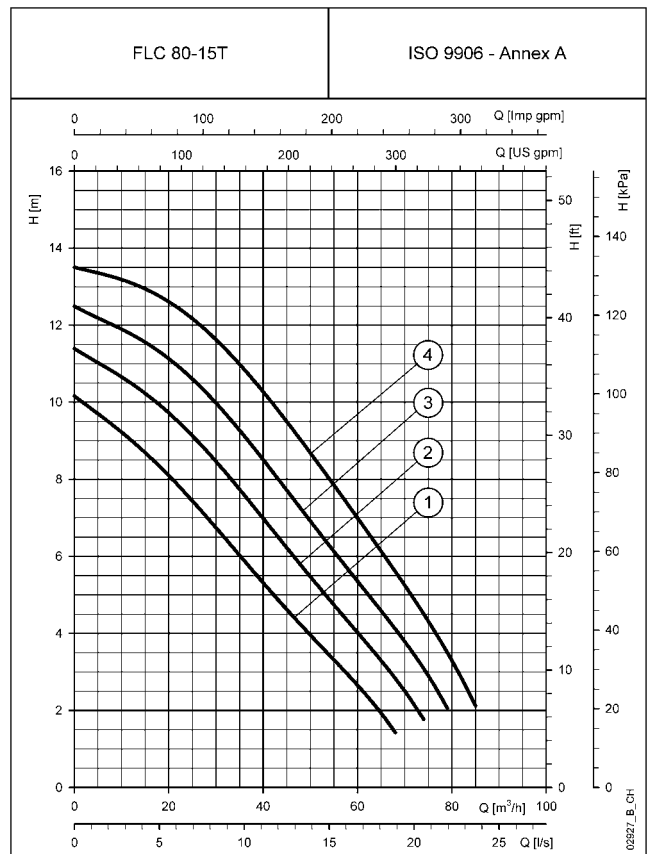
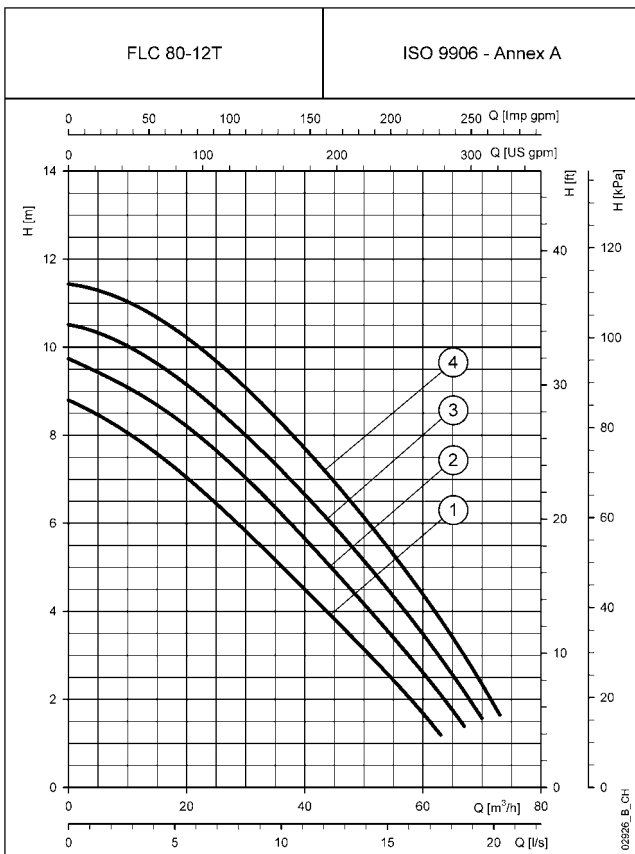
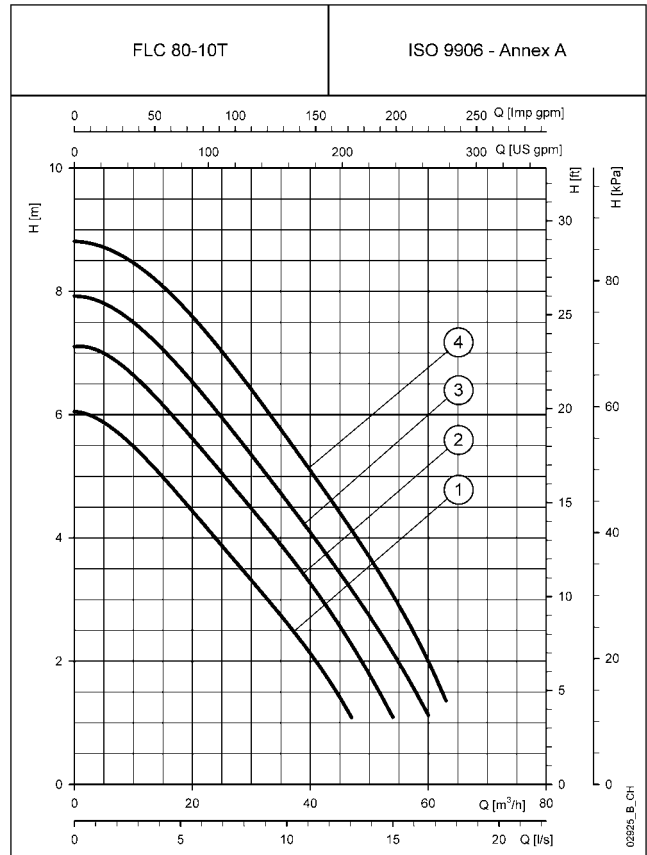
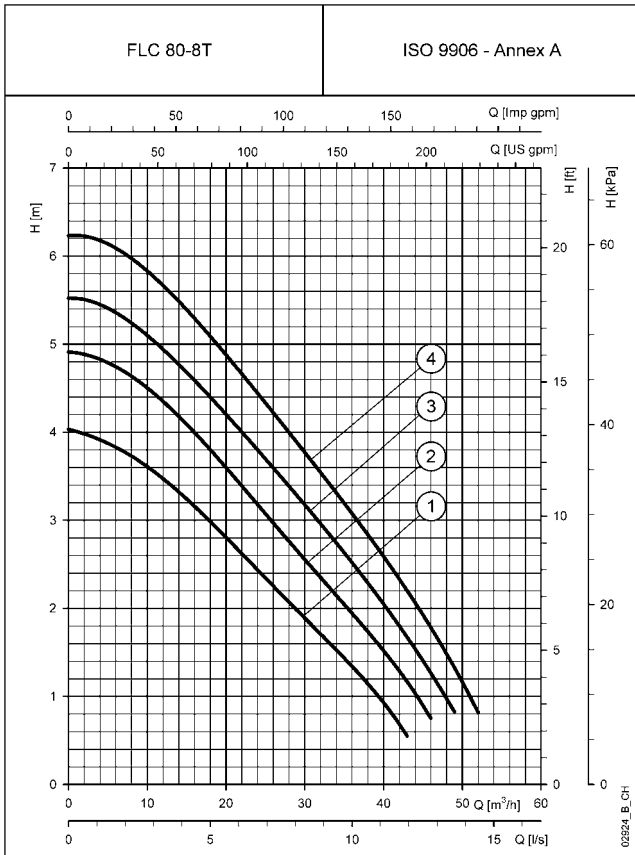
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

**FLC..T SERIES
THREE-PHASE OPERATING CHARACTERISTICS**



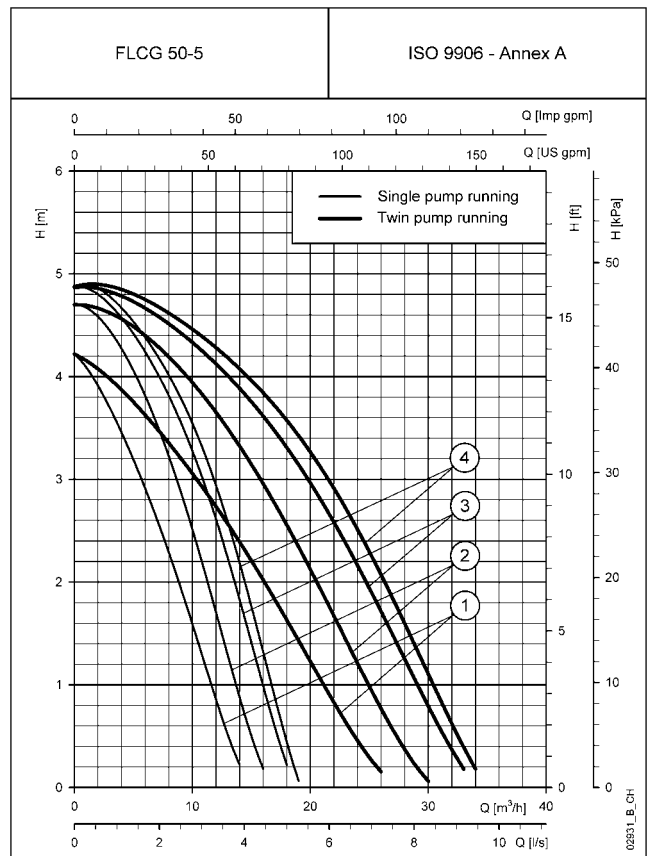
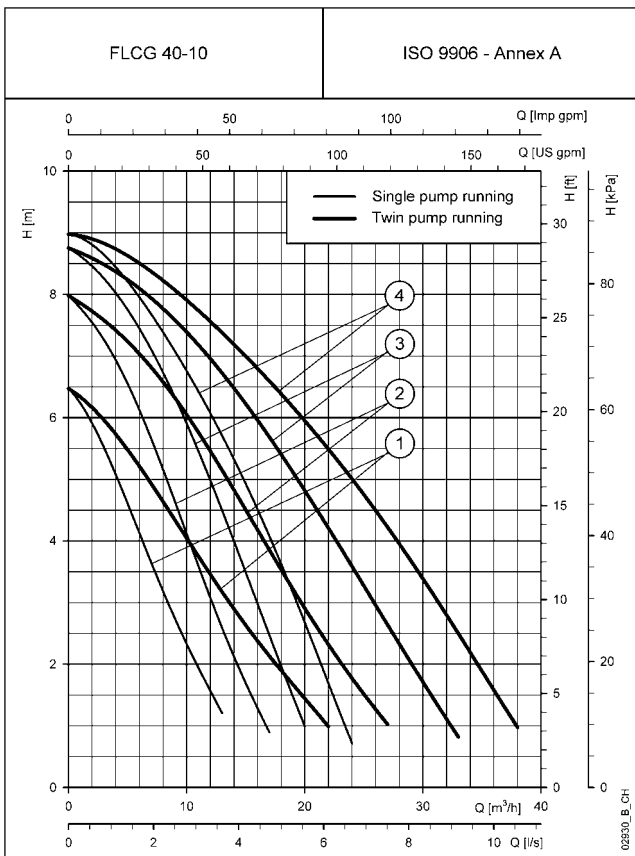
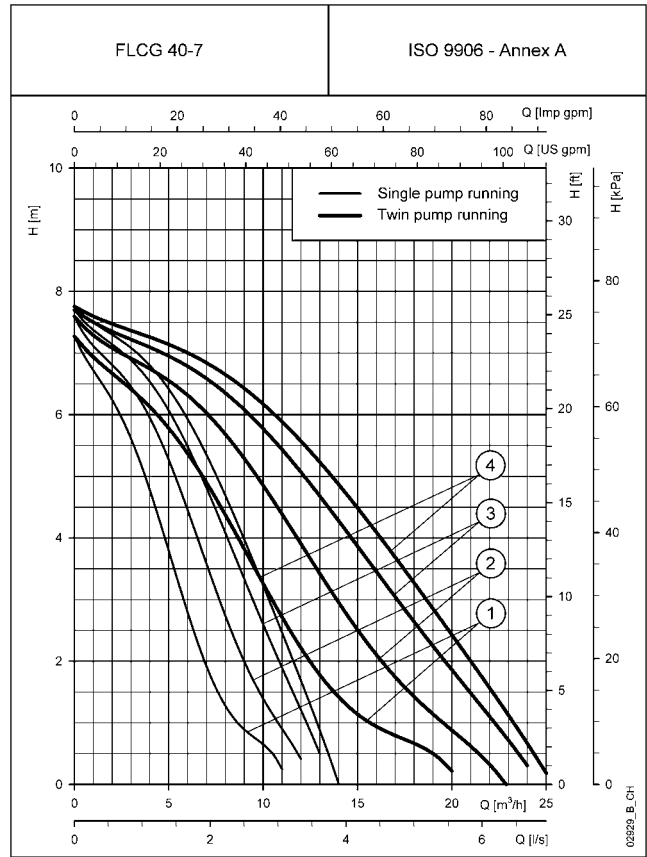
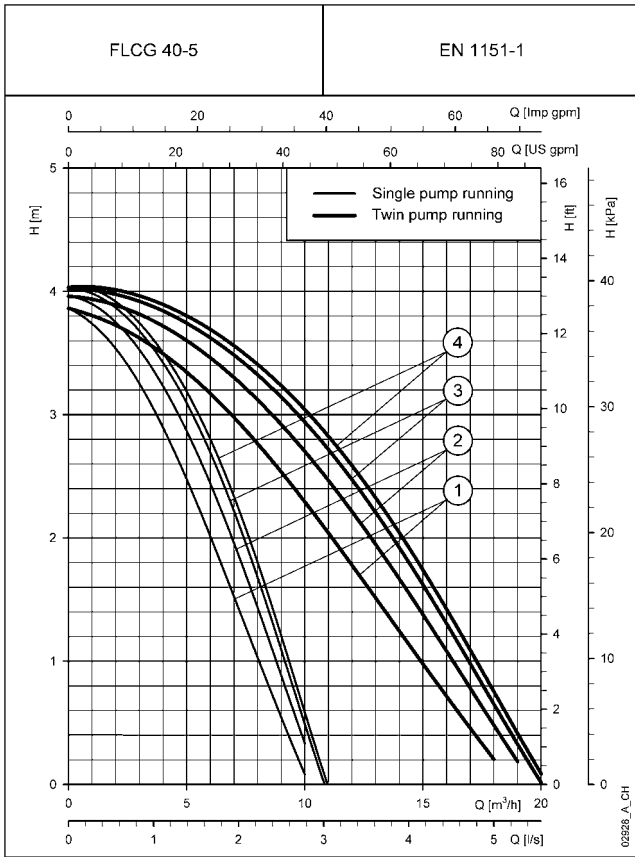
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

FLC..T SERIES THREE-PHASE OPERATING CHARACTERISTICS



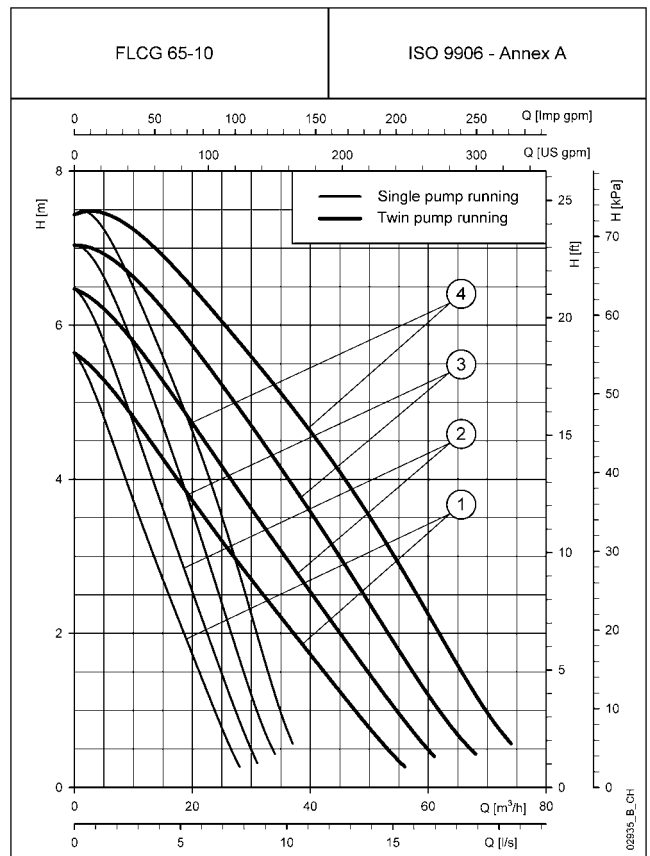
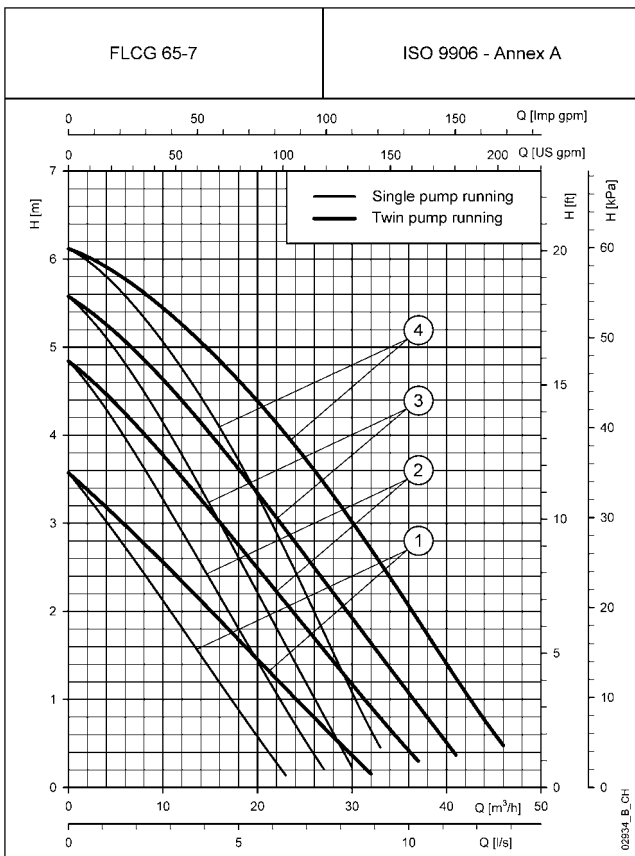
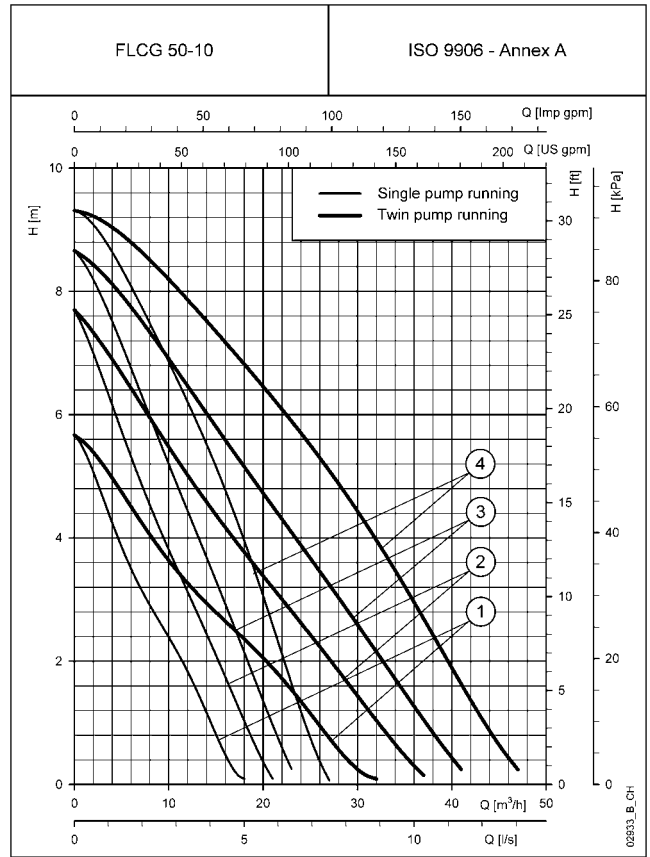
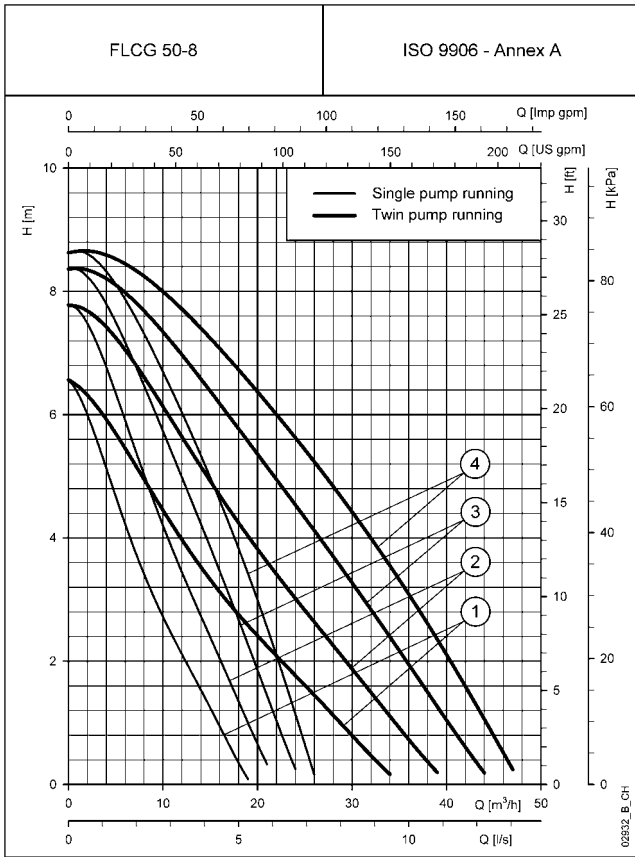
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

FLCG SERIES SINGLE-PHASE OPERATING CHARACTERISTICS



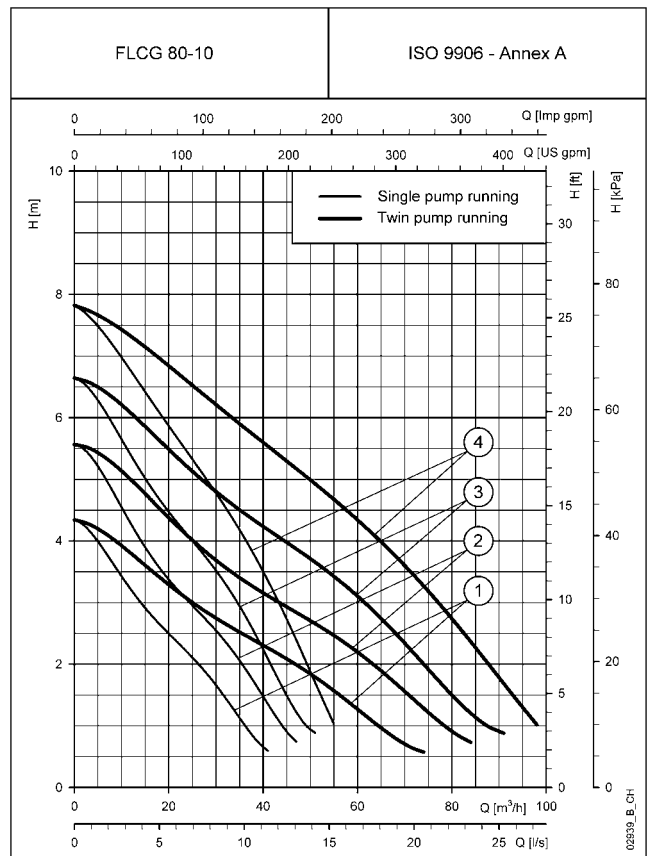
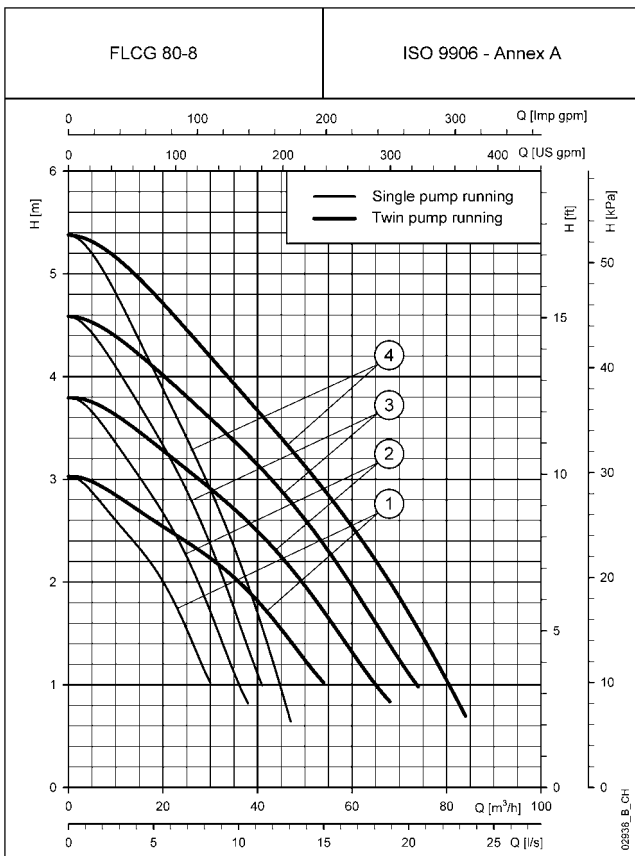
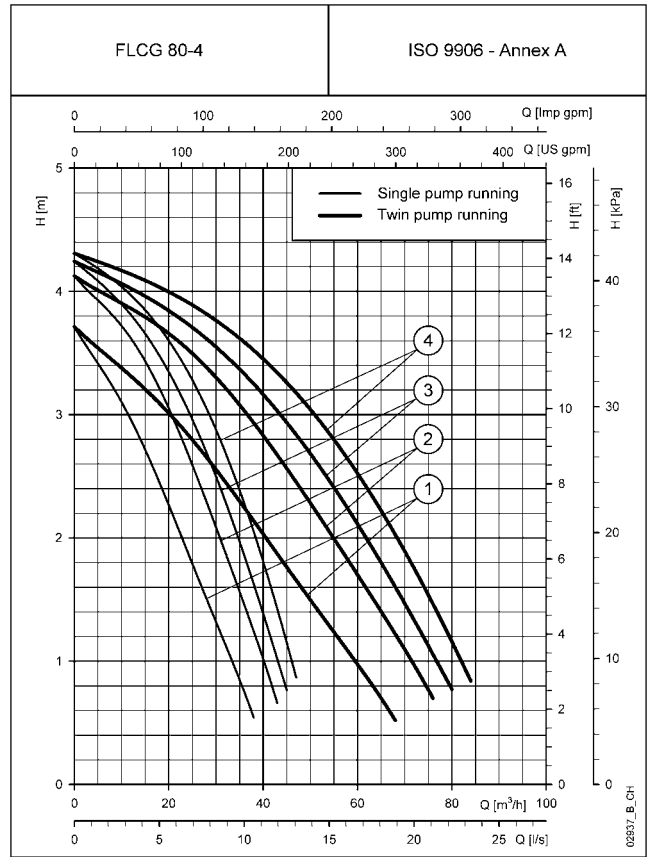
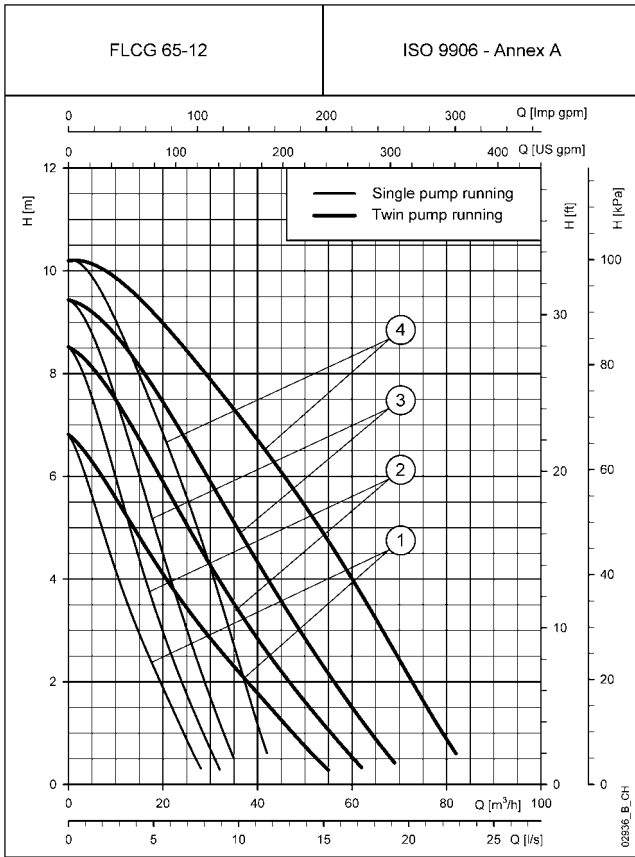
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**FLCG SERIES
SINGLE-PHASE OPERATING CHARACTERISTICS**



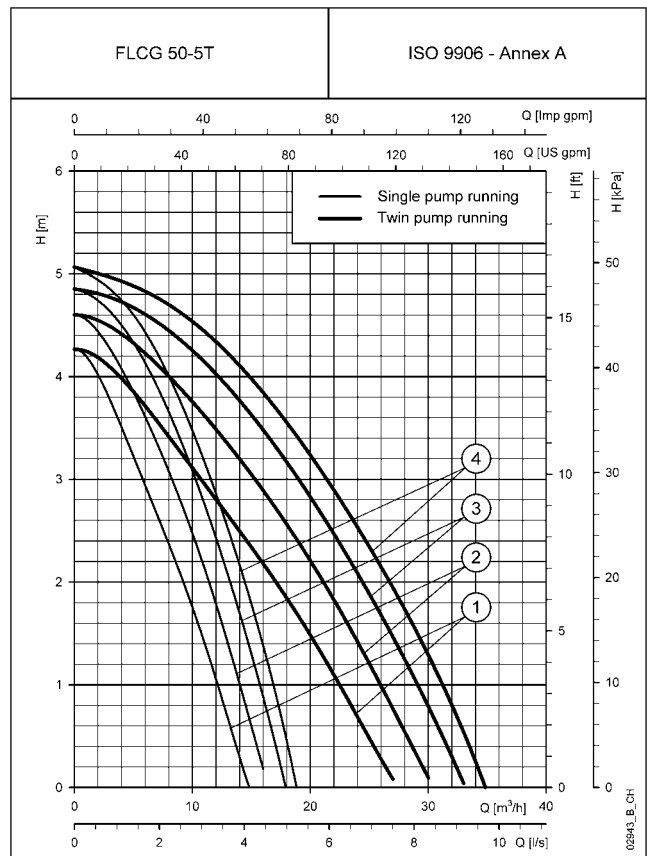
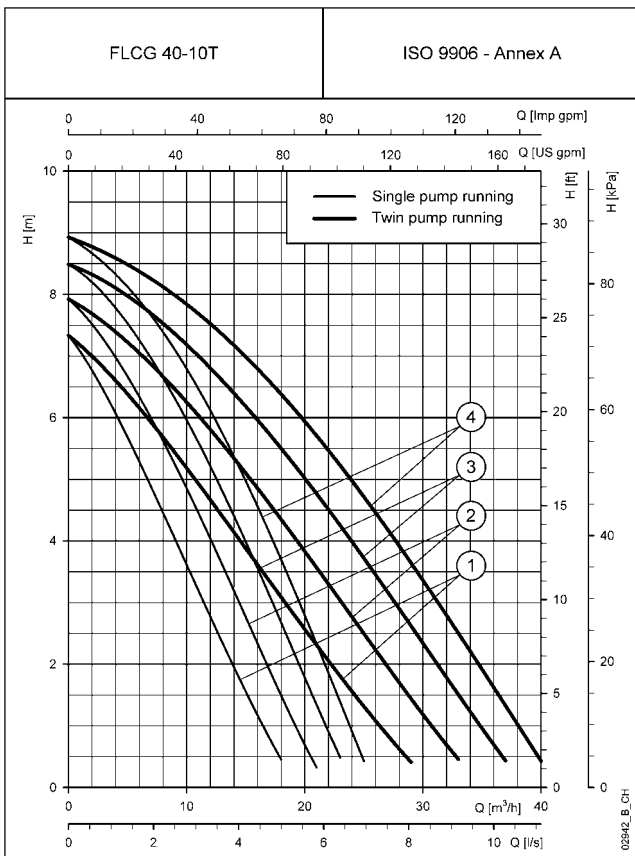
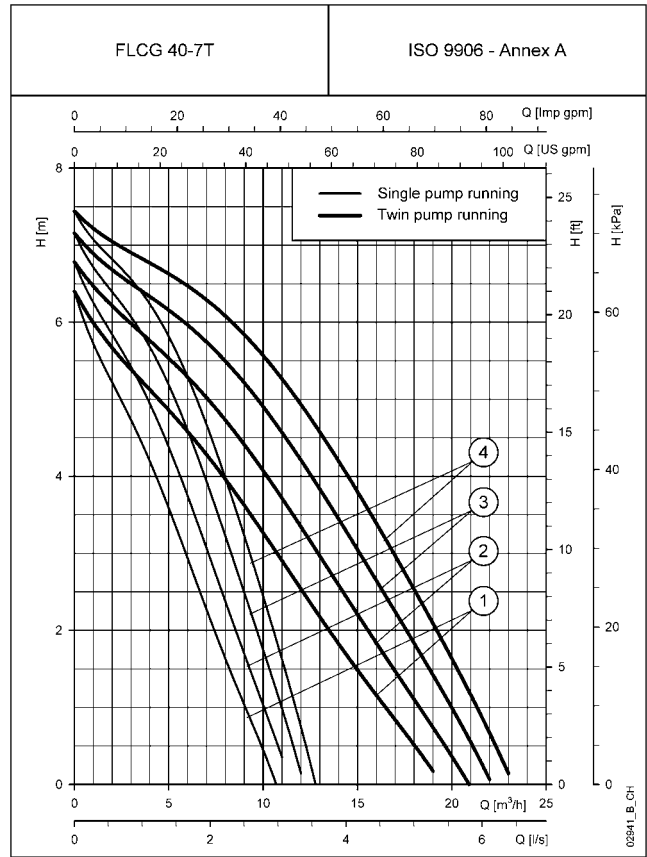
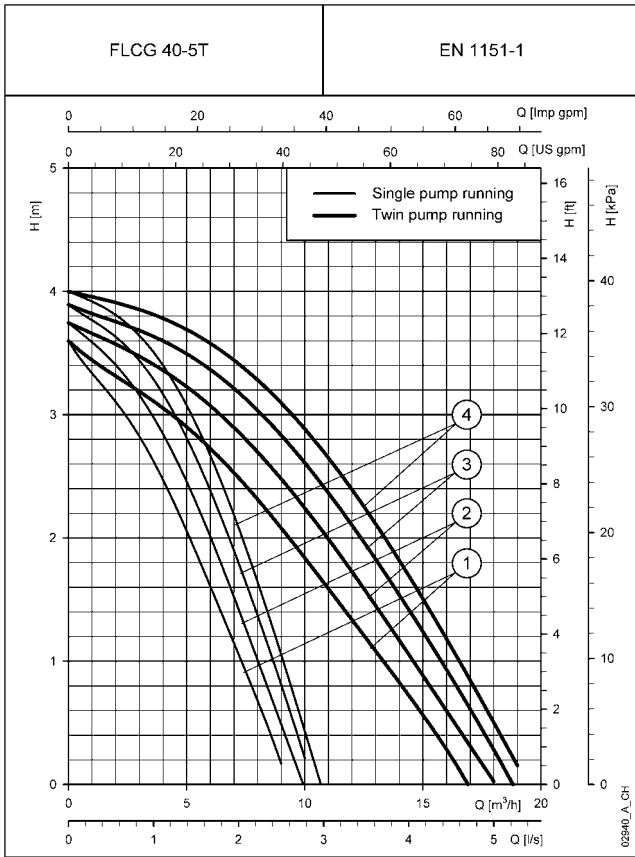
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**FLCG SERIES
SINGLE-PHASE OPERATING CHARACTERISTICS**



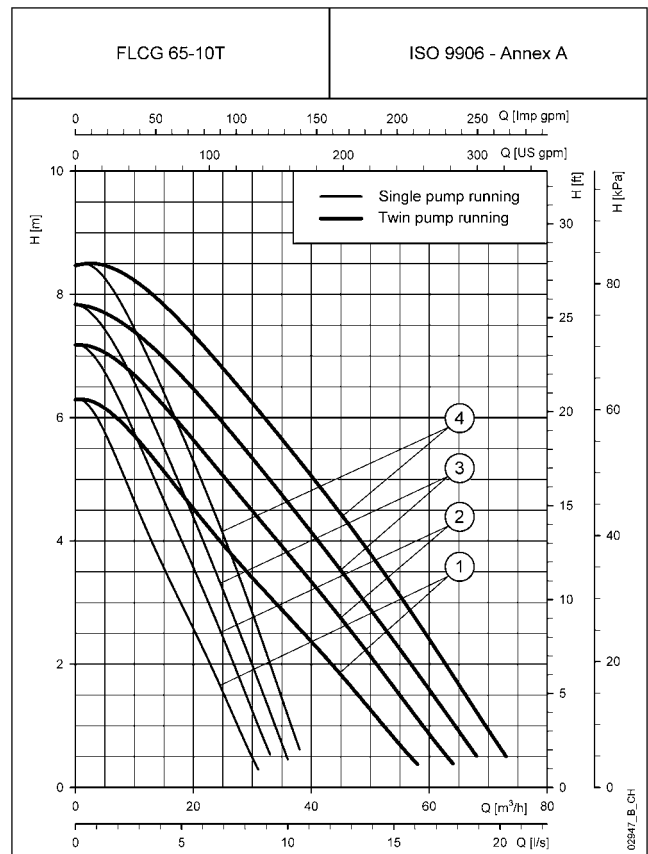
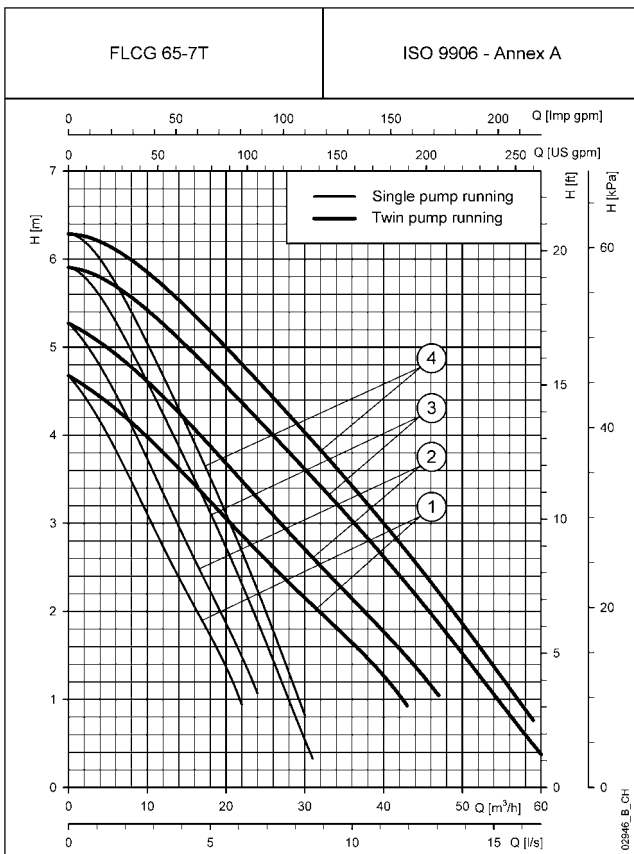
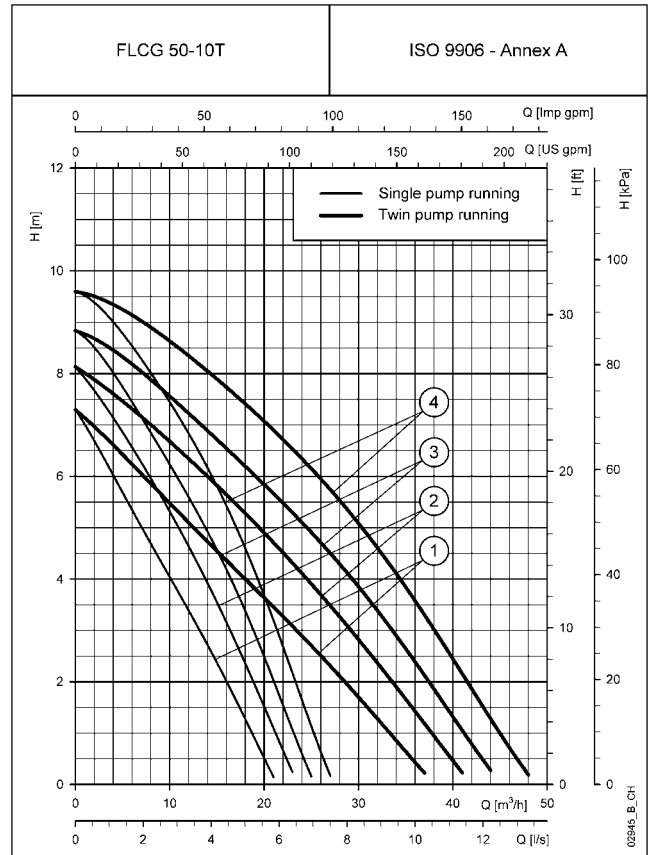
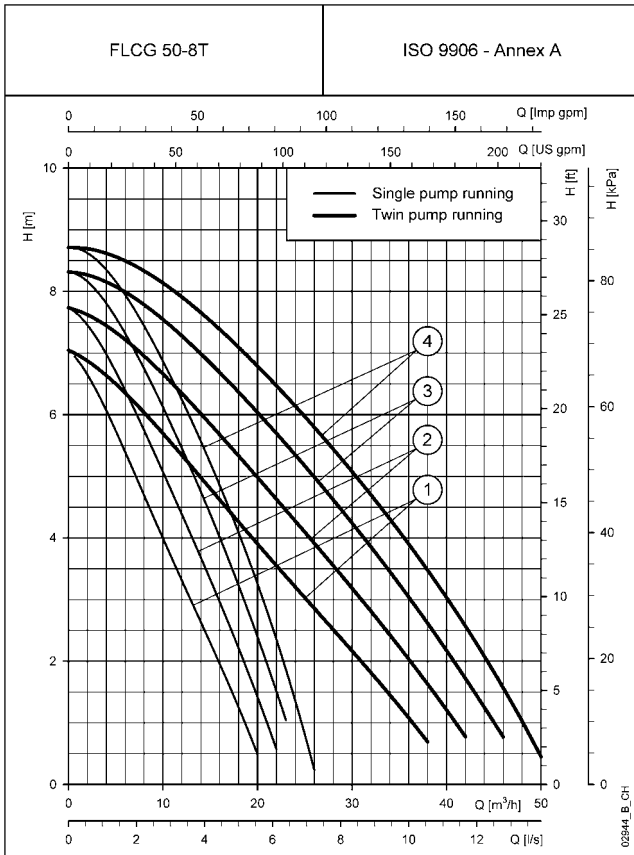
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**FLCG..T SERIES
THREE-PHASE OPERATING CHARACTERISTICS**



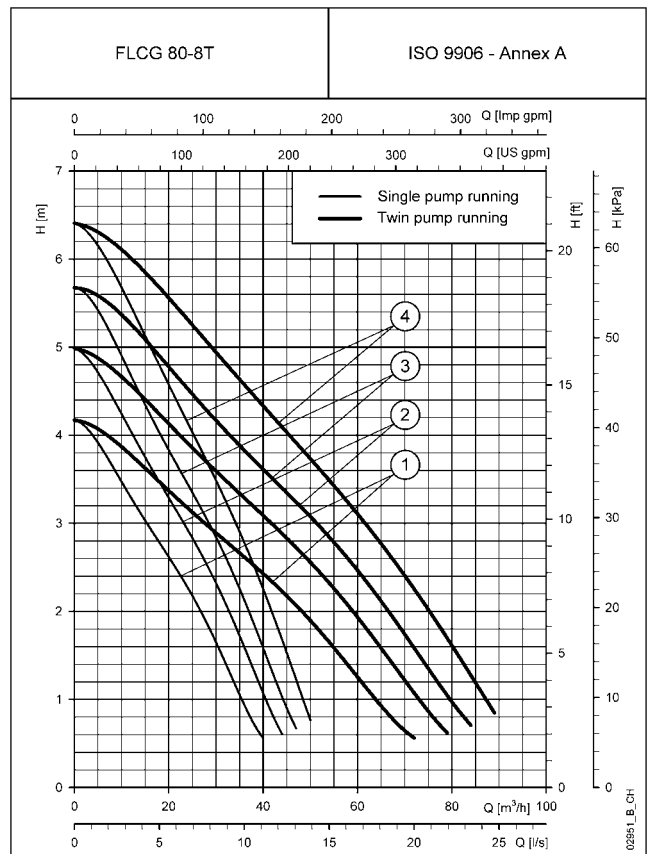
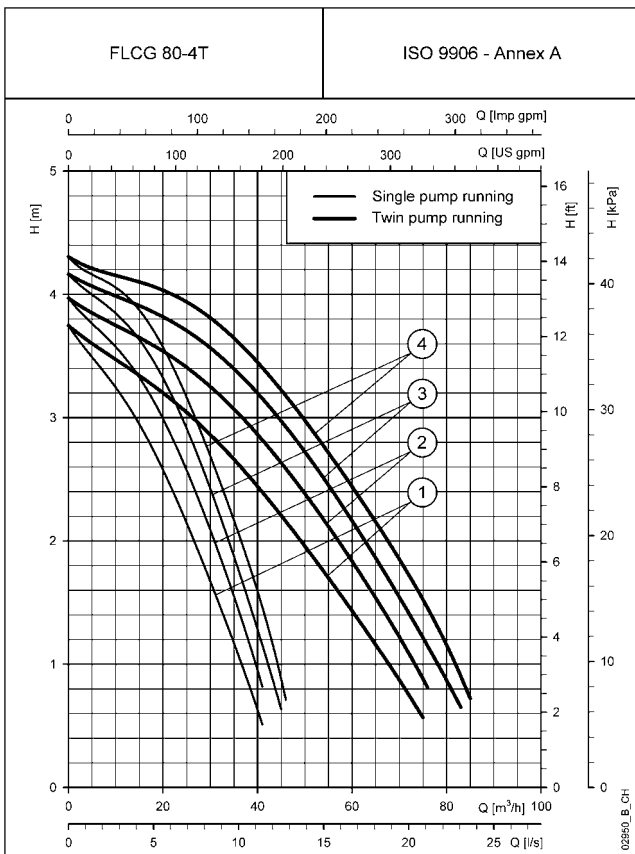
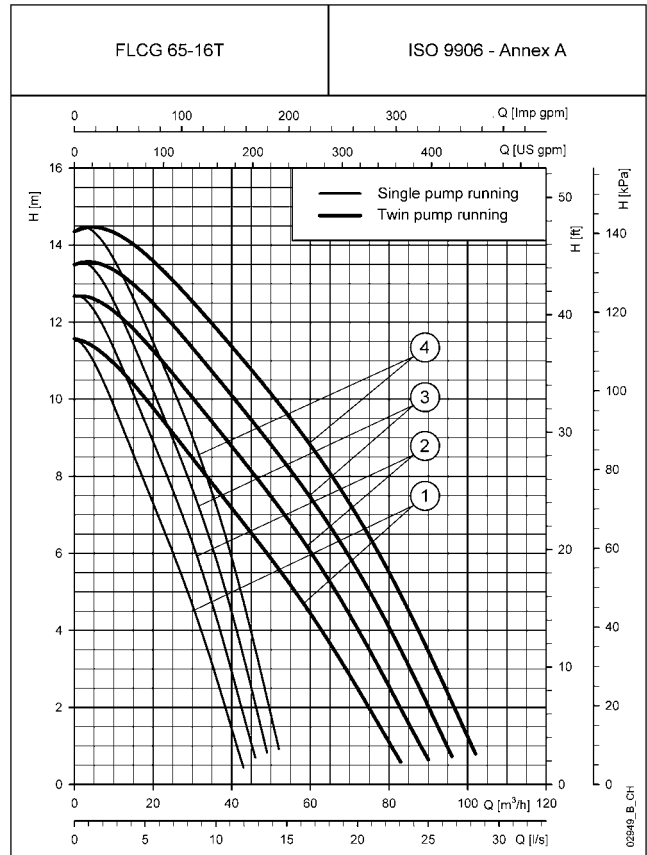
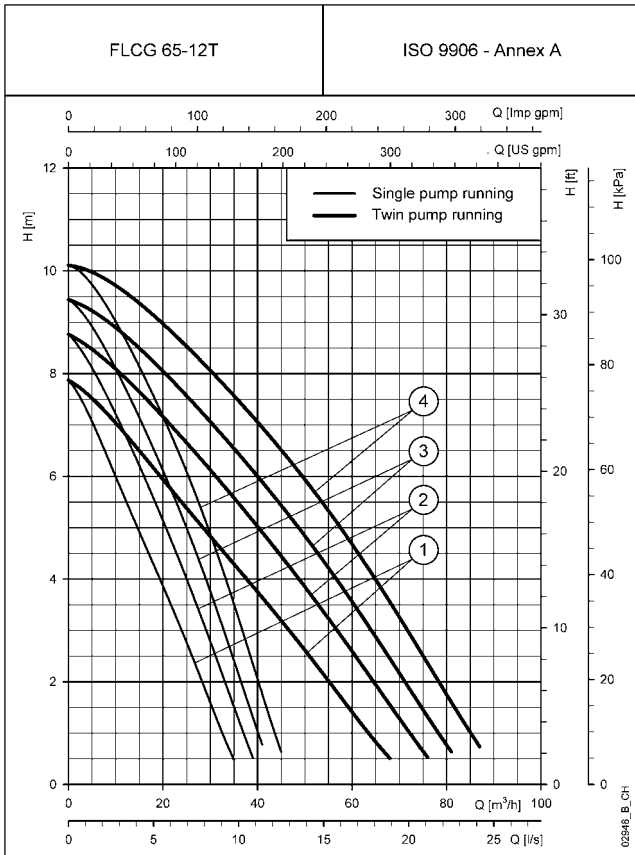
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

FLCG..T SERIES THREE-PHASE OPERATING CHARACTERISTICS



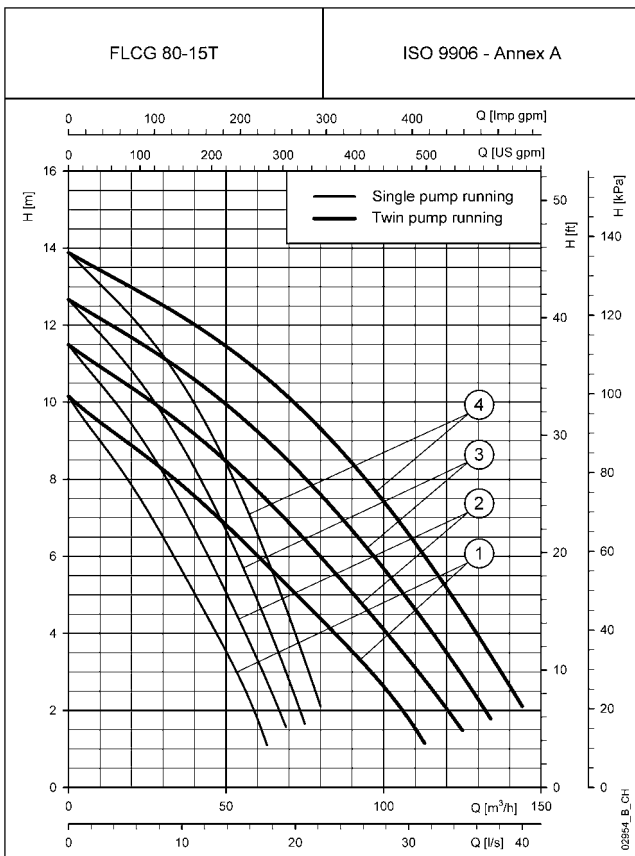
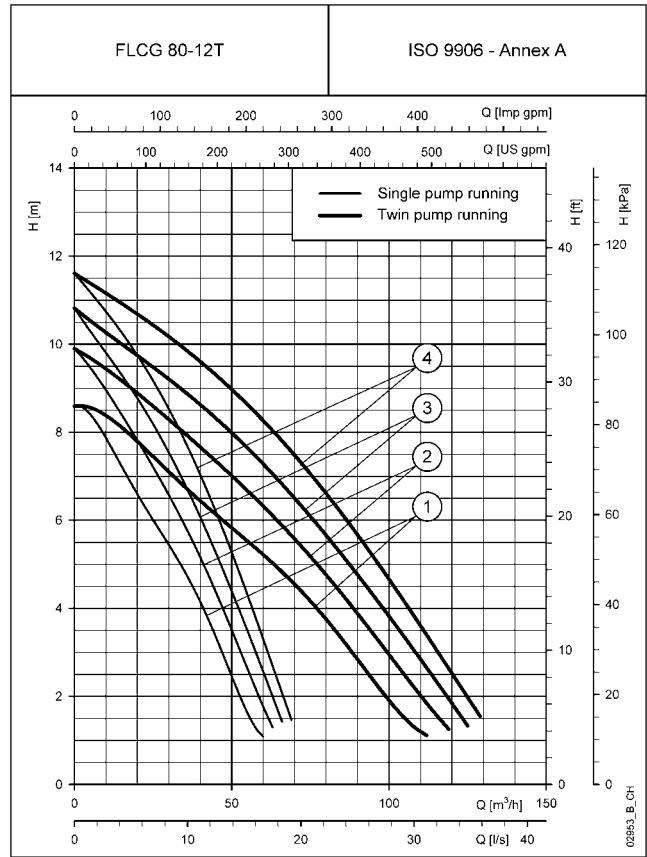
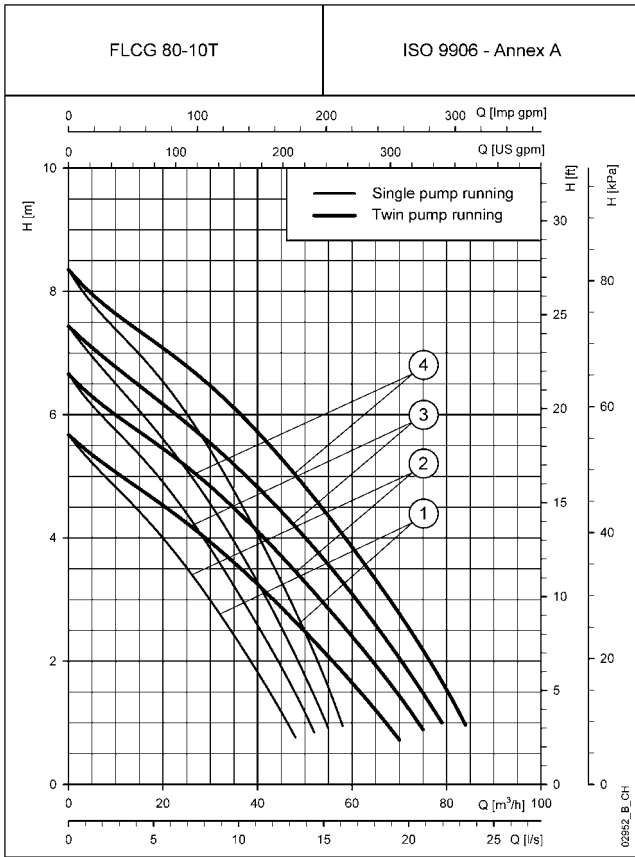
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FLCG..T SERIES THREE-PHASE OPERATING CHARACTERISTICS



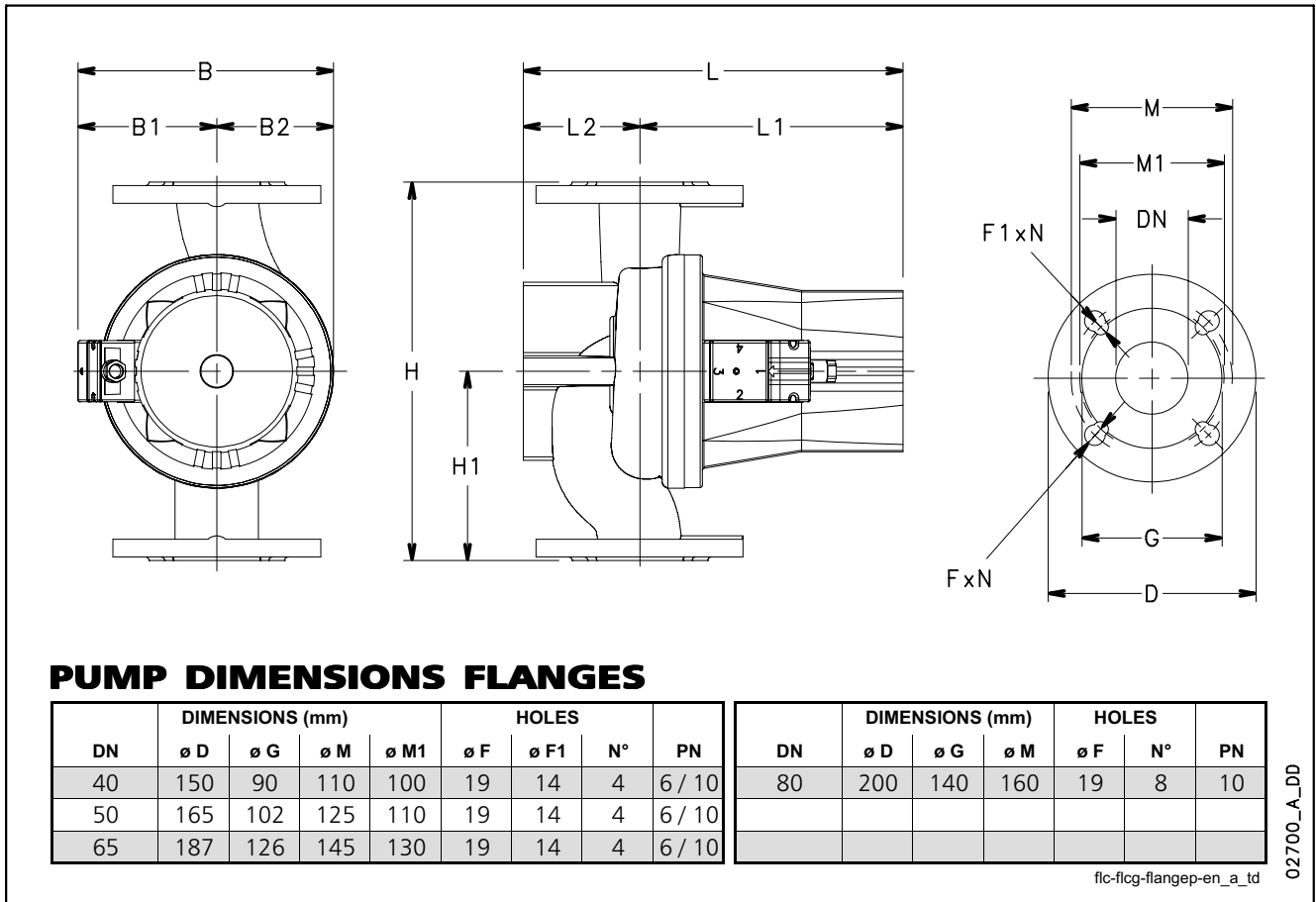
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FLCG..T SERIES
THREE-PHASE OPERATING CHARACTERISTICS



These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

FLC SERIES DIMENSIONS AND WEIGHTS

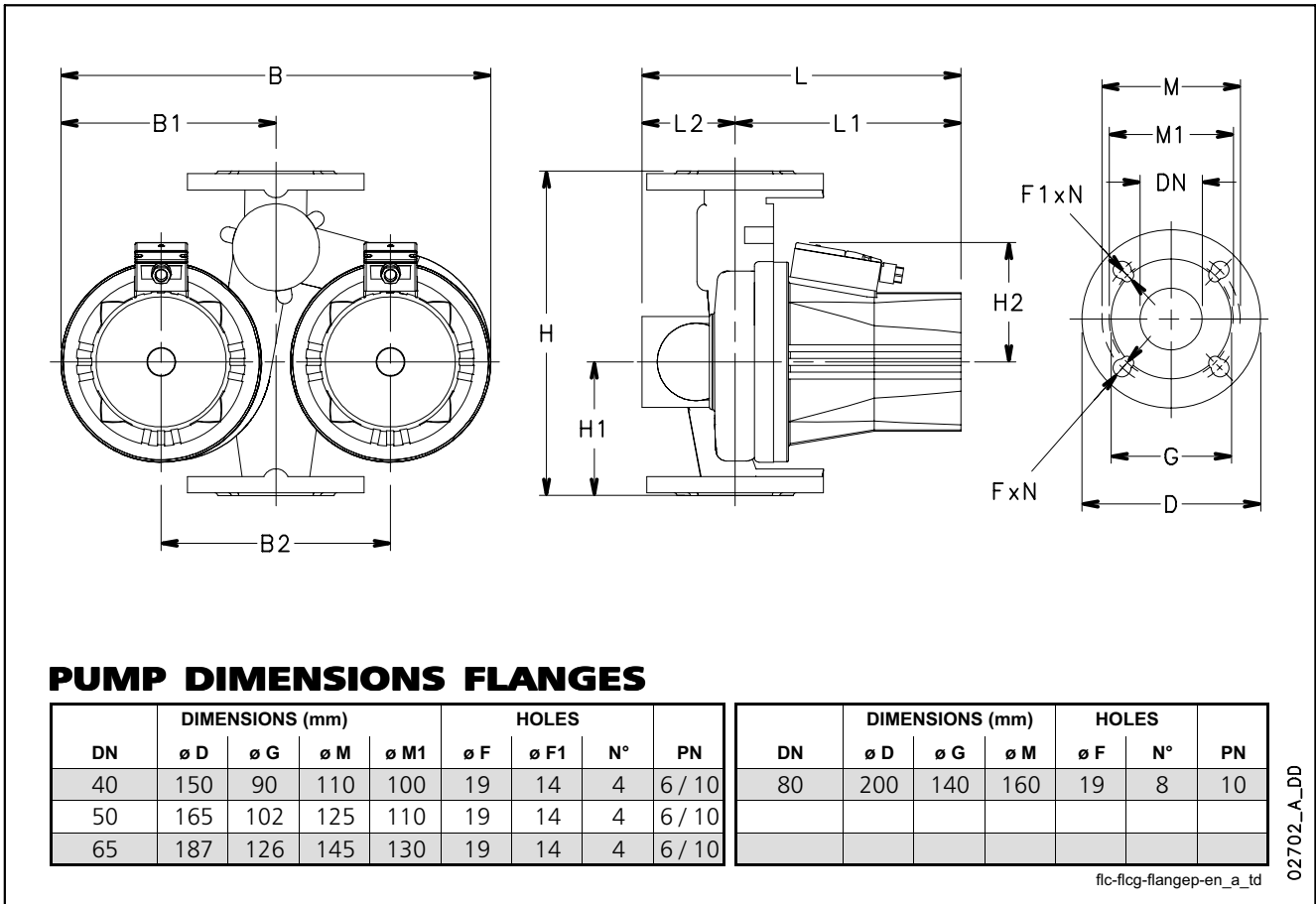


DIMENSIONS AND WEIGHTS TABLE

| PUMP TYPE | | DIMENSIONS (mm) | | | | | | | | | WEIGHT | |
|--------------|-------------|-----------------|-----|-----|-----|-----|-----|-----|-----|----|--------|--|
| SINGLE-PHASE | THREE-PHASE | B | B1 | B2 | H | H1 | L | L1 | L2 | DN | kg | |
| FLC 40-5 | FLC 40-5T | 180 | 105 | 75 | 250 | 125 | 236 | 166 | 70 | 40 | 11 | |
| FLC 40-7 | FLC 40-7T | 180 | 105 | 75 | 250 | 125 | 245 | 175 | 70 | 40 | 11 | |
| FLC 40-10 | FLC 40-10T | 168 | 93 | 75 | 250 | 125 | 276 | 201 | 75 | 40 | 14 | |
| FLC 50-5 | FLC 50-5T | 173 | 83 | 90 | 280 | 140 | 279 | 194 | 85 | 50 | 18 | |
| FLC 50-8 | FLC 50-8T | 173 | 83 | 90 | 280 | 140 | 279 | 194 | 85 | 50 | 18 | |
| FLC 50-10 | FLC 50-10T | 200 | 110 | 90 | 280 | 140 | 312 | 232 | 80 | 50 | 22 | |
| FLC 50-13 | FLC 50-13T | 200 | 110 | 90 | 280 | 140 | 312 | 232 | 80 | 50 | 25 | |
| - | FLC 50-18T | 230 | 110 | 120 | 280 | 140 | 360 | 275 | 82 | 50 | 29 | |
| FLC 65-7 | FLC 65-7T | 225 | 125 | 100 | 340 | 170 | 345 | 255 | 90 | 65 | 29 | |
| FLC 65-10 | FLC 65-10T | 225 | 125 | 100 | 340 | 170 | 345 | 255 | 90 | 65 | 28 | |
| FLC 65-12 | FLC 65-12T | 225 | 125 | 100 | 340 | 170 | 345 | 255 | 90 | 65 | 30 | |
| - | FLC 65-16T | 195 | 95 | 100 | 340 | 170 | 394 | 304 | 90 | 65 | 35 | |
| FLC 80-8 | FLC 80-8T | 310 | 135 | 175 | 360 | 180 | 346 | 241 | 105 | 80 | 34 | |
| FLC 80-10 | FLC 80-10T | 310 | 135 | 175 | 360 | 180 | 346 | 241 | 105 | 80 | 36 | |
| - | FLC 80-12T | 310 | 135 | 175 | 360 | 180 | 351 | 246 | 105 | 80 | 40 | |
| - | FLC 80-15T | 310 | 135 | 175 | 360 | 180 | 351 | 246 | 105 | 80 | 41 | |

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FLCG SERIES DIMENSIONS AND WEIGHTS



DIMENSIONS AND WEIGHTS TABLE

| PUMP TYPE | | DIMENSIONS (mm) | | | | | | | | | | WEIGHT | |
|--------------|-------------|-----------------|-----|-----|-----|-----|-----|-----|-----|----|----|--------|--|
| SINGLE-PHASE | THREE-PHASE | B | B1 | B2 | H | H1 | H2 | L | L1 | L2 | DN | kg | |
| FLCG 40-5 | FLCG 40-5T | 344 | 172 | 200 | 250 | 110 | 110 | 222 | 147 | 75 | 40 | 19 | |
| FLCG 40-7 | FLCG 40-7T | 344 | 172 | 200 | 250 | 110 | 110 | 222 | 147 | 75 | 40 | 19 | |
| FLCG 40-10 | FLCG 40-10T | 348 | 172 | 200 | 250 | 110 | 110 | 265 | 190 | 75 | 40 | 26 | |
| FLCG 50-5 | FLCG 50-5T | 387 | 187 | 200 | 280 | 120 | 92 | 280 | 197 | 83 | 50 | 32 | |
| FLCG 50-8 | FLCG 50-8T | 387 | 187 | 200 | 280 | 120 | 92 | 280 | 197 | 83 | 50 | 33 | |
| FLCG 50-10 | FLCG 50-10T | 400 | 200 | 200 | 280 | 125 | 120 | 310 | 225 | 85 | 50 | 41 | |
| FLCG 65-7 | FLCG 65-7T | 450 | 120 | 240 | 340 | 140 | 120 | 329 | 236 | 93 | 65 | 49 | |
| FLCG 65-10 | FLCG 65-10T | 450 | 120 | 240 | 340 | 140 | 120 | 329 | 236 | 93 | 65 | 50 | |
| FLCG 65-12 | FLCG 65-12T | 450 | 120 | 240 | 340 | 140 | 120 | 329 | 236 | 93 | 65 | 53 | |
| - | FLCG 65-16T | 450 | 120 | 240 | 340 | 140 | 120 | 378 | 285 | 93 | 65 | 63 | |
| FLCG 80-4 | FLCG 80-4T | 513 | 245 | 275 | 360 | 160 | 175 | 341 | 258 | 83 | 80 | 62 | |
| FLCG 80-8 | FLCG 80-8T | 513 | 245 | 275 | 360 | 160 | 175 | 341 | 258 | 83 | 80 | 60 | |
| FLCG 80-10 | FLCG 80-10T | 513 | 245 | 275 | 360 | 160 | 175 | 341 | 258 | 83 | 80 | 63 | |
| - | FLCG 80-12T | 513 | 245 | 275 | 360 | 160 | 175 | 390 | 307 | 83 | 80 | 77 | |
| - | FLCG 80-15T | 513 | 245 | 275 | 360 | 160 | 175 | 390 | 307 | 83 | 80 | 73 | |

flcg-2p50-en_a_td

Variable speed circulators for commercial systems

EFLC Series



MARKET SECTORS

COMMERCIAL AND INDUSTRIAL

APPLICATIONS

- Water circulation in heating and cooling systems.
- Pumping of hot/cold, chemically and mechanically non-aggressive liquids.

SPECIFICATIONS

PUMP

- **Flow rate:** up to 50 m³/h. (90 m³/h with both pumps running).
- **Head:** up to 12 m.
- **Temperature of pumped liquid:** +15°C ÷ +90°C. Non-freezing, non-condensing.
- **Maximum operating pressure:** 10 bar (PN 10).
- **Impeller:** made of cast iron (except for EFLC(G) 40-9, made of composite material).

MOTOR

- Wet rotor type, with bearings lubricated by the pumped liquid. Built-in automatic motor protection with isothermal probes (with external relay, terminals accessible from the terminal board).
- Single-phase 230 V 50 Hz power supply.
- Motor-mounted inverter, with selector switch for mode and operating parameter selection and terminal board for cable connection.
- According to EN standards 61000-6-2 (immunity) and EN 61000-6-3 (emissions).
- **Insulation class:** F (155°C).
- **Protection class:** IP 44.

ACCESSORIES

- Blind flanges.
- Counterflanges.

INSTALLATION

- Suitable for installation in horizontal or vertical piping, in any position provided that motor axis is horizontal.
- Never install the circulator with the terminal box under the motor(s) (6 o'clock).
- For the twin design installed on horizontal piping, periodic changeover is recommended in order to prevent the formation of water pockets at the top; as an alternative, install an air bleed valve on the flange.
- For installation onto vertical piping the flow should always be upward. If not it is recommended to install an air venting point in the higher point of the circuit at the suction side.

Variable speed circulators for commercial systems

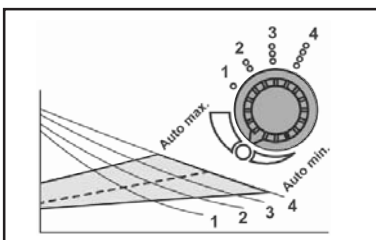
EFLC Series



SERIES CHARACTERISTICS

- Electric circulator pumps with in-line suction and discharge ports, designed for direct installation onto piping, DN 40, 50, 65 and 80 mounting flanges.
- Single or twin pump design. The two pumps can operate separately or in parallel in the following manner:
 - Separately: both differential pressure and controlled speed can be selected.
 - Parallel: controlled speed regulation only (speed selection from 1 to 4).
- Rotor shaft made of perforated stainless steel. By enabling water circulation this design ensures:
 - continuous degassing of the rotor chamber, with no need to perform this operation manually during startup;
 - bearing lubrication.
- 2 modes of regulation:
 - Differential pressure.
 - Controlled speed.
- On the terminal box 2 LED indicate the running status:
 - Green LED: normal operation.
 - Red LED: failure detected by the electronics. The light will flash approximately every minute for a specific number of times depending on the error type.

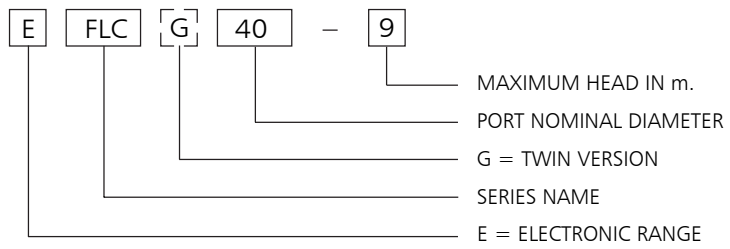
CONTROL MODES



Control:

1. Differential pressure
Thanks to the losses compensation system of the electronics, the controller adjusts the circulator's differential pressure to match the required flow.
2. Controlled speed
The motor running speed is fixed at the value set with the selector between 1 and 4.

EFLC SERIES IDENTIFICATION CODE



EXAMPLE : EFLCG 40-9

EFLC series electronic circulator, twin version, port nominal diameter = 40, max head = 9 m.

TABLE OF MATERIALS

| PART | MATERIAL |
|-----------------------------|--------------------|
| Pump body | Cast iron |
| Impeller EFLC(G) 40-9 | Composite material |
| Impeller from EFLC(G) 40-11 | Cast iron |
| Shaft | Stainless steel |
| Jacket | Stainless steel |
| Bearings | Carbon |

eflc-2p50-en_a_tm

EFLC SERIES (SINGLE VERSION, SINGLE-PHASE) HYDRAULIC PERFORMANCE TABLE

| PUMP TYPE | POWER ABSORBED | | CURRENT ABSORBED | | SPEED | Q = DELIVERY | | | | | | | | | | |
|--------------|-------------------|----------|---------------------|----------|-------|---------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|------|------|
| | MIN W | MAX W | MIN A | MAX A | | 1/5 0 | 1,4 | 2,2 | 2,8 | 4,2 | 5,6 | 6,9 | 8,3 | 9,7 | 11,1 | 13,9 |
| | | | | | | m ³ /h 0 | 5 | 8 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 50 |
| 230V 50Hz | | | | | | H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | | | |
| EFLC 40-9 | 25 | 300 | 0,25 | 1,80 | 1 | 5,2 | 3,2 | 2,0 | | | | | | | | |
| | | | | | 2 | 6,3 | 4,0 | 2,6 | | | | | | | | |
| | | | | | 3 | 7,3 | 4,7 | 3,2 | 2,1 | | | | | | | |
| | | | | | 4 | 10,5 | 6,0 | 3,8 | 2,4 | | | | | | | |
| | | | | | max | 4,8 | 6,0 | 3,8 | | | | | | | | |
| EFLC 40-11 | 40 | 650 | 0,35 | 3,70 | 1 | 5,2 | 4,6 | 4,0 | 3,5 | 1,6 | | | | | | |
| | | | | | 2 | 6,4 | 5,7 | 5,2 | 4,6 | 2,8 | | | | | | |
| | | | | | 3 | 7,7 | 7,1 | 6,4 | 5,8 | 4,0 | 1,6 | | | | | |
| | | | | | 4 | 12,0 | 9,5 | 8,1 | 7,1 | 4,6 | 2,1 | | | | | |
| | | | | | max | 5,1 | 6,1 | 6,7 | 7,1 | 4,6 | | | | | | |
| EFLC 50-12 | 50 | 750 | 0,35 | 3,50 | 1 | 5,2 | 5,0 | 4,5 | 4,1 | 2,7 | | | | | | |
| | | | | | 2 | 6,7 | 6,2 | 5,8 | 5,4 | 4,0 | 2,3 | | | | | |
| | | | | | 3 | 8,1 | 7,5 | 7,1 | 6,7 | 5,3 | 3,6 | 1,5 | | | | |
| | | | | | 4 | 12,7 | 10,6 | 9,3 | 8,5 | 6,4 | 4,3 | 2,2 | | | | |
| | | | | | max | 5,3 | 6,6 | 7,3 | 7,7 | 6,4 | 4,3 | | | | | |
| EFLC 65-12 | 90 | 1090 | 0,70 | 7,70 | 1 | 5,1 | 4,6 | 4,3 | 4,1 | 3,4 | 2,5 | 1,4 | | | | |
| | | | | | 2 | 6,5 | 6,0 | 5,7 | 5,4 | 4,7 | 3,8 | 2,6 | 1,3 | | | |
| | | | | | 3 | 8,0 | 7,5 | 7,2 | 6,9 | 6,1 | 5,2 | 4,0 | 2,7 | 1,2 | | |
| | | | | | 4 | 12,5 | 10,7 | 9,8 | 9,2 | 7,7 | 6,2 | 4,8 | 3,5 | 2,2 | | |
| | | | | | max | 6,4 | 6,8 | 7,1 | 7,3 | 7,7 | 6,2 | 4,8 | | | | |
| EFLC 80-7 | 120 | 1080 | 1,20 | 8,00 | 1 | 3,7 | 3,5 | 3,4 | 3,2 | 2,9 | 2,5 | 2,1 | 1,6 | 1,0 | | |
| | | | | | 2 | 4,8 | 4,6 | 4,5 | 4,4 | 4,0 | 3,6 | 3,1 | 2,6 | 1,9 | 1,2 | |
| | | | | | 3 | 6,0 | 5,7 | 5,5 | 5,4 | 5,0 | 4,6 | 4,1 | 3,6 | 3,0 | 2,4 | 1,0 |
| | | | | | 4 | 6,9 | 6,6 | 6,3 | 6,2 | 5,7 | 5,3 | 4,7 | 4,1 | 3,5 | 2,9 | 1,7 |
| | | | | | max | 4,0 | 4,4 | 4,7 | 4,9 | 5,4 | 5,3 | 4,7 | 4,1 | 3,5 | | |

Performances according to standards ISO 9906 - Annex A.

eflc-2p50-en_c_th

EFLCG SERIES (TWIN VERSION, SINGLE-PHASE) HYDRAULIC PERFORMANCE TABLE (SINGLE OPERATION)

| PUMP TYPE | POWER ABSORBED | | CURRENT ABSORBED | | SPEED | Q = DELIVERY | | | | | | | | | | |
|-------------|----------------|------|------------------|------|-------|---------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|------|------|
| | MIN | MAX | MIN | MAX | | l/s 0 | 1,4 | 2,2 | 2,8 | 4,2 | 5,6 | 6,9 | 8,3 | 9,7 | 11,1 | 13,9 |
| | | | | | | m ³ /h 0 | 5 | 8 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 50 |
| 230V 50Hz | W | W | A | A | | H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | | | |
| EFLCG 40-9 | 25 | 300 | 0,25 | 1,80 | 1 | 5,2 | 3,2 | 2,0 | | | | | | | | |
| | | | | | 2 | 6,3 | 4,0 | 2,6 | | | | | | | | |
| | | | | | 3 | 7,3 | 4,7 | 3,2 | 2,1 | | | | | | | |
| | | | | | 4 | 10,5 | 6,0 | 3,8 | 2,4 | | | | | | | |
| | | | | | max | 4,8 | 6,0 | 3,8 | | | | | | | | |
| EFLCG 40-11 | 40 | 650 | 0,35 | 3,70 | 1 | 5,2 | 4,6 | 4,0 | 3,5 | 1,6 | | | | | | |
| | | | | | 2 | 6,4 | 5,7 | 5,2 | 4,6 | 2,8 | | | | | | |
| | | | | | 3 | 7,7 | 7,1 | 6,4 | 5,8 | 4,0 | 1,6 | | | | | |
| | | | | | 4 | 12,0 | 9,5 | 8,1 | 7,1 | 4,6 | 2,1 | | | | | |
| | | | | | max | 5,1 | 6,1 | 6,7 | 7,1 | 4,6 | | | | | | |
| EFLCG 50-12 | 50 | 750 | 0,35 | 3,50 | 1 | 5,2 | 5,0 | 4,5 | 4,1 | 2,7 | | | | | | |
| | | | | | 2 | 6,7 | 6,2 | 5,8 | 5,4 | 4,0 | 2,3 | | | | | |
| | | | | | 3 | 8,1 | 7,5 | 7,1 | 6,7 | 5,3 | 3,6 | 1,5 | | | | |
| | | | | | 4 | 12,7 | 10,6 | 9,3 | 8,5 | 6,4 | 4,3 | 2,2 | | | | |
| | | | | | max | 5,3 | 6,6 | 7,3 | 7,7 | 6,4 | 4,3 | | | | | |
| EFLCG 65-12 | 90 | 1090 | 0,70 | 7,70 | 1 | 5,1 | 4,6 | 4,3 | 4,1 | 3,4 | 2,5 | 1,4 | | | | |
| | | | | | 2 | 6,5 | 6,0 | 5,7 | 5,4 | 4,7 | 3,8 | 2,6 | 1,3 | | | |
| | | | | | 3 | 8,0 | 7,5 | 7,2 | 6,9 | 6,1 | 5,2 | 4,0 | 2,7 | 1,2 | | |
| | | | | | 4 | 12,5 | 10,7 | 9,8 | 9,2 | 7,7 | 6,2 | 4,8 | 3,5 | 2,2 | | |
| | | | | | max | 6,4 | 6,8 | 7,1 | 7,3 | 7,7 | 6,2 | 4,8 | | | | |
| EFLCG 80-7 | 120 | 1080 | 1,20 | 8,00 | 1 | 3,7 | 3,5 | 3,4 | 3,2 | 2,9 | 2,5 | 2,1 | 1,6 | 1,0 | | |
| | | | | | 2 | 4,8 | 4,6 | 4,5 | 4,4 | 4,0 | 3,6 | 3,1 | 2,6 | 1,9 | 1,2 | |
| | | | | | 3 | 6,0 | 5,7 | 5,5 | 5,4 | 5,0 | 4,6 | 4,1 | 3,6 | 3,0 | 2,4 | 1,0 |
| | | | | | 4 | 6,9 | 6,6 | 6,3 | 6,2 | 5,7 | 5,3 | 4,7 | 4,1 | 3,5 | 2,9 | 1,7 |
| | | | | | max | 4,0 | 4,4 | 4,7 | 4,9 | 5,4 | 5,3 | 4,7 | 4,1 | 3,5 | | |

Performances according to standards ISO 9906 - Annex A.

eflcg-2p50S-en_d_th

EFLCG SERIES (TWIN VERSION, SINGLE-PHASE) HYDRAULIC PERFORMANCE TABLE (PARALLEL OPERATION)

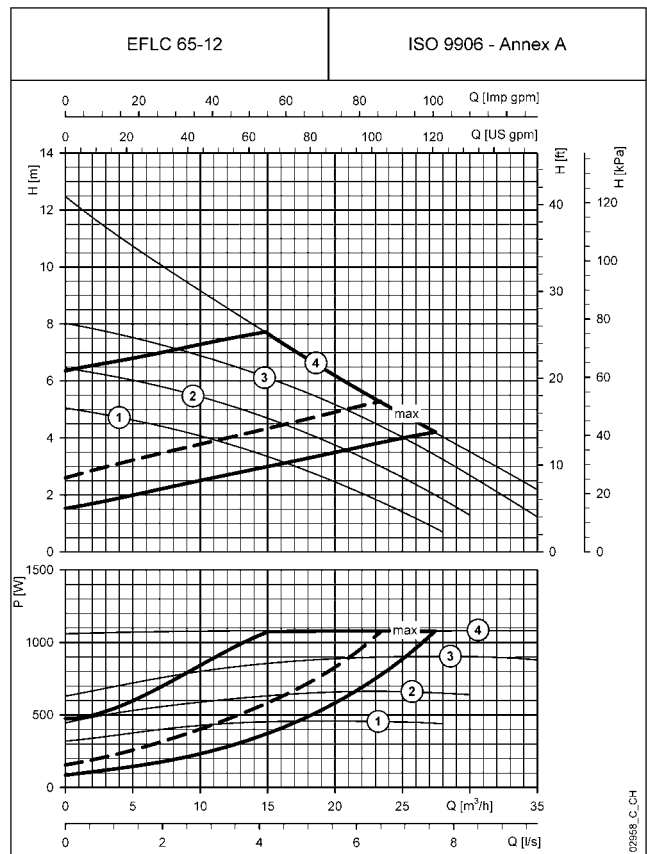
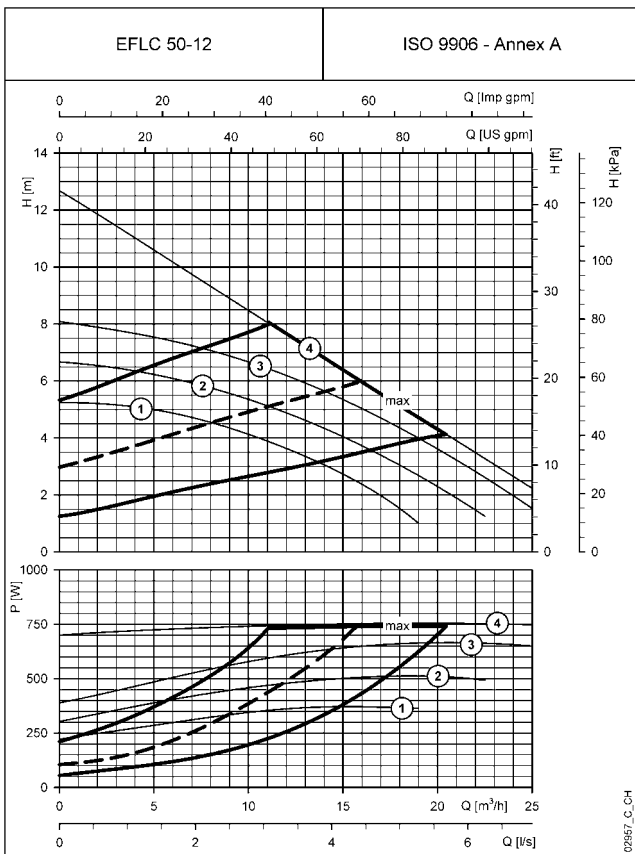
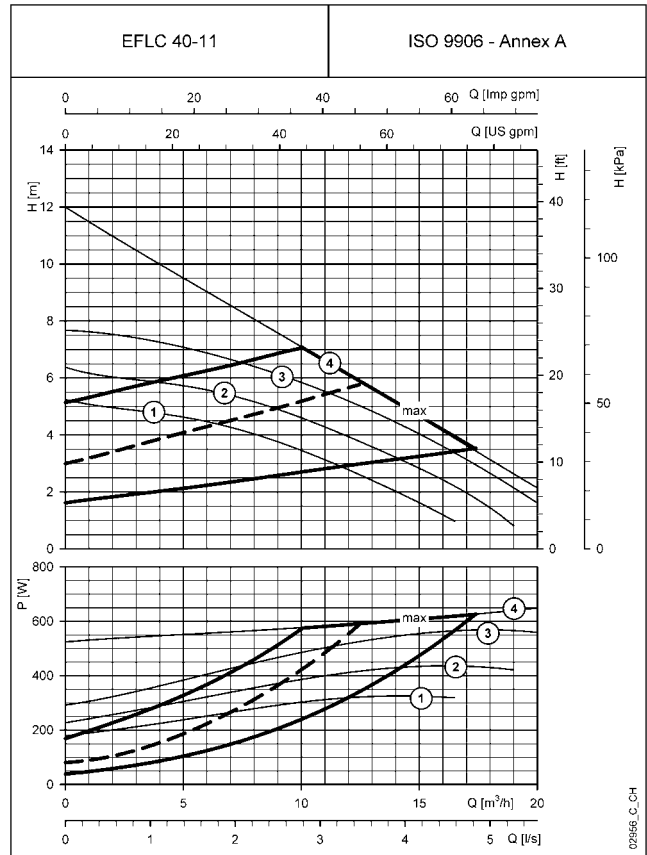
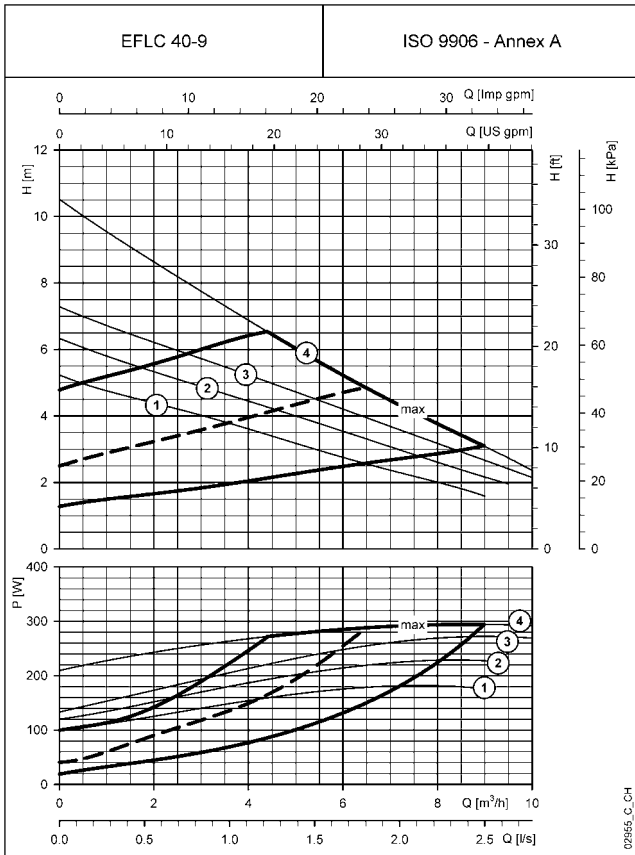
| PUMP TYPE | POWER ABSORBED | | CURRENT ABSORBED | | SPEED | Q = DELIVERY | | | | | | | | | | |
|-------------|----------------|------|------------------|------|-------|---------------------------------------|------|------|-----|-----|------|------|------|------|------|------|
| | MIN | MAX | MIN | MAX | | l/s 0 | 1,4 | 2,8 | 5,0 | 8,3 | 11,1 | 13,9 | 16,7 | 19,4 | 22,2 | 25,0 |
| | | | | | | m ³ /h 0 | 5 | 10 | 18 | 30 | 40 | 50 | 60 | 70 | 80 | 90 |
| 230V 50Hz | W* | W* | A* | A* | | H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | | | |
| EFLCG 40-9 | 25 | 300 | 0,25 | 1,80 | 1 | 5,2 | 4,1 | 2,9 | | | | | | | | |
| | | | | | 2 | 6,3 | 5,0 | 3,7 | | | | | | | | |
| | | | | | 3 | 7,3 | 5,8 | 4,4 | 2,1 | | | | | | | |
| | | | | | 4 | 10,5 | 7,9 | 5,6 | 2,4 | | | | | | | |
| | | | | | max | 4,8 | 5,9 | 5,6 | | | | | | | | |
| EFLCG 40-11 | 40 | 650 | 0,35 | 3,70 | 1 | 5,2 | 4,8 | 4,4 | 3,0 | | | | | | | |
| | | | | | 2 | 6,4 | 5,9 | 5,5 | 4,2 | 1,0 | | | | | | |
| | | | | | 3 | 7,7 | 7,4 | 6,8 | 5,4 | 2,3 | | | | | | |
| | | | | | 4 | 12,0 | 10,4 | 8,9 | 6,5 | 2,8 | | | | | | |
| | | | | | max | 5,2 | 5,8 | 6,4 | 6,5 | | | | | | | |
| EFLCG 50-12 | 50 | 750 | 0,35 | 3,50 | 1 | 5,2 | 5,2 | 4,9 | 4,1 | 1,9 | | | | | | |
| | | | | | 2 | 6,7 | 6,5 | 6,1 | 5,3 | 3,3 | | | | | | |
| | | | | | 3 | 8,1 | 7,8 | 7,4 | 6,6 | 4,7 | 2,5 | | | | | |
| | | | | | 4 | 12,7 | 11,5 | 10,3 | 8,4 | 5,5 | 3,1 | | | | | |
| | | | | | max | 5,3 | 6,0 | 6,7 | 7,7 | 5,5 | | | | | | |
| EFLCG 65-12 | 90 | 1090 | 0,70 | 7,70 | 1 | 5,1 | 4,8 | 4,6 | 4,1 | 3,1 | 2,0 | 0,8 | | | | |
| | | | | | 2 | 6,5 | 6,2 | 6,0 | 5,4 | 4,4 | 3,3 | 1,9 | | | | |
| | | | | | 3 | 8,0 | 7,8 | 7,5 | 6,9 | 5,8 | 4,7 | 3,3 | 1,7 | | | |
| | | | | | 4 | 12,5 | 11,5 | 10,6 | 9,2 | 7,2 | 5,6 | 4,1 | 2,6 | | | |
| | | | | | max | 6,3 | 6,6 | 6,9 | 7,3 | 7,2 | 5,6 | | | | | |
| EFLCG 80-7 | 120 | 1080 | 1,20 | 8,00 | 1 | 3,7 | 3,6 | 3,5 | 3,3 | 2,8 | 2,4 | 1,9 | 1,3 | | | |
| | | | | | 2 | 4,8 | 4,7 | 4,6 | 4,4 | 3,9 | 3,5 | 2,9 | 2,3 | 1,5 | | |
| | | | | | 3 | 6,0 | 5,9 | 5,7 | 5,4 | 4,9 | 4,4 | 3,9 | 3,3 | 2,7 | 2,0 | 1,2 |
| | | | | | 4 | 6,9 | 6,7 | 6,5 | 6,2 | 5,6 | 5,1 | 4,5 | 3,9 | 3,2 | 2,5 | 1,8 |
| | | | | | max | 4,0 | 4,2 | 4,5 | 4,9 | 5,5 | 5,1 | 4,5 | | | | |

* Electric data refer to single motor.

eflcg-2p50P-en_d_th

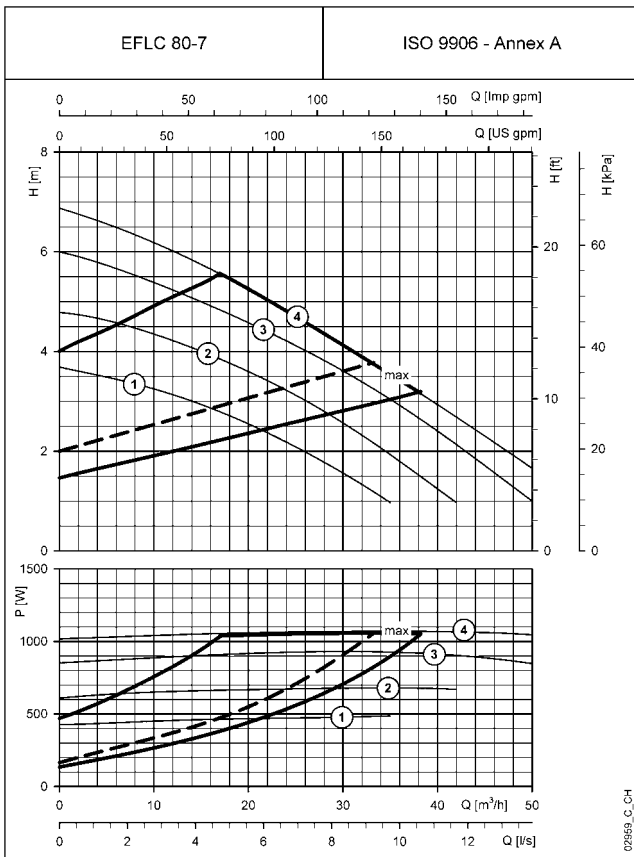
Performances according to standards ISO 9906 - Annex A.

EFLC SERIES SINGLE-PHASE OPERATING CHARACTERISTICS



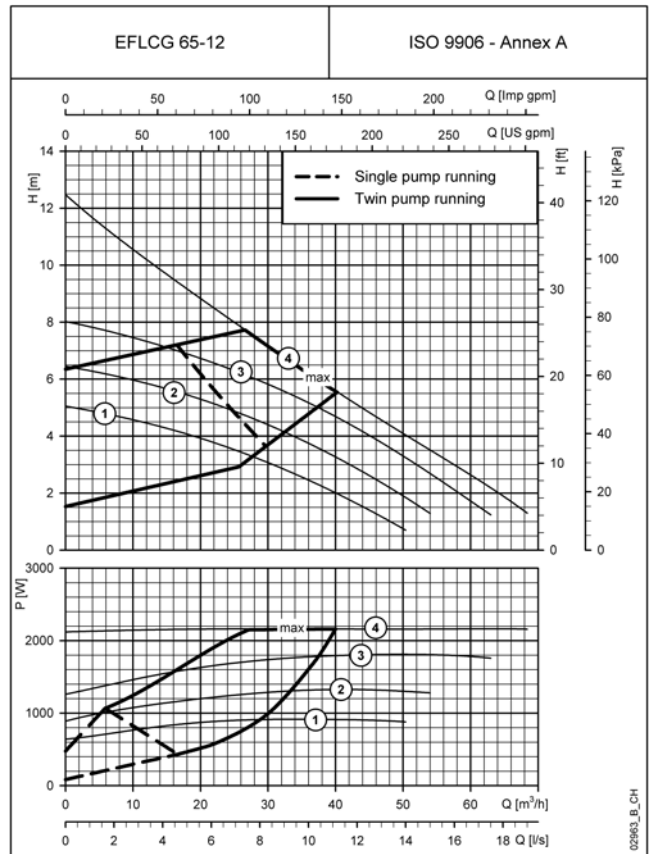
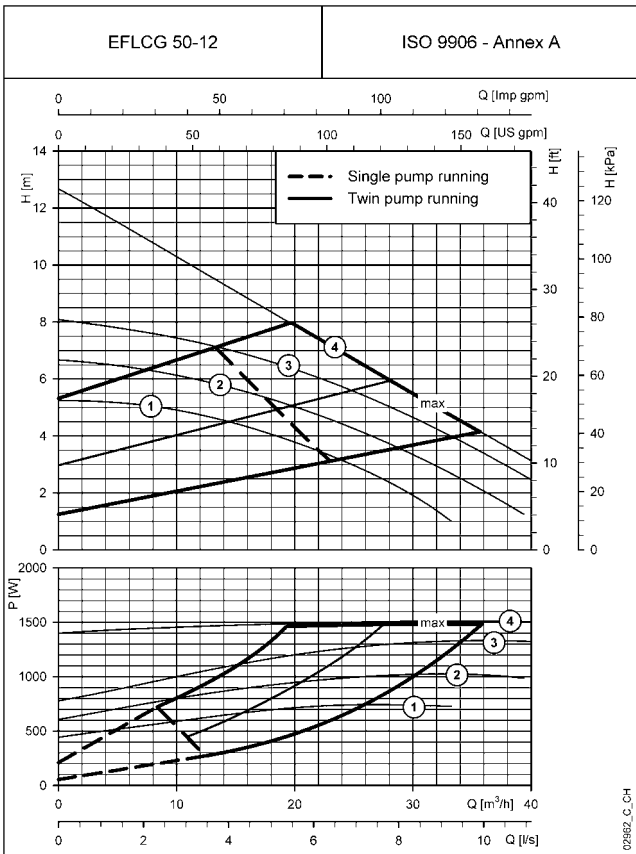
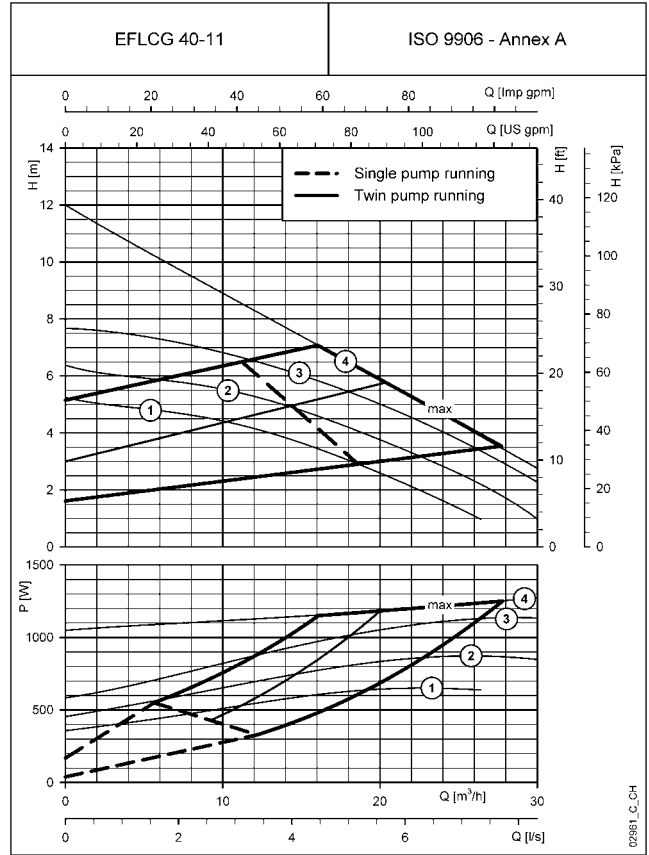
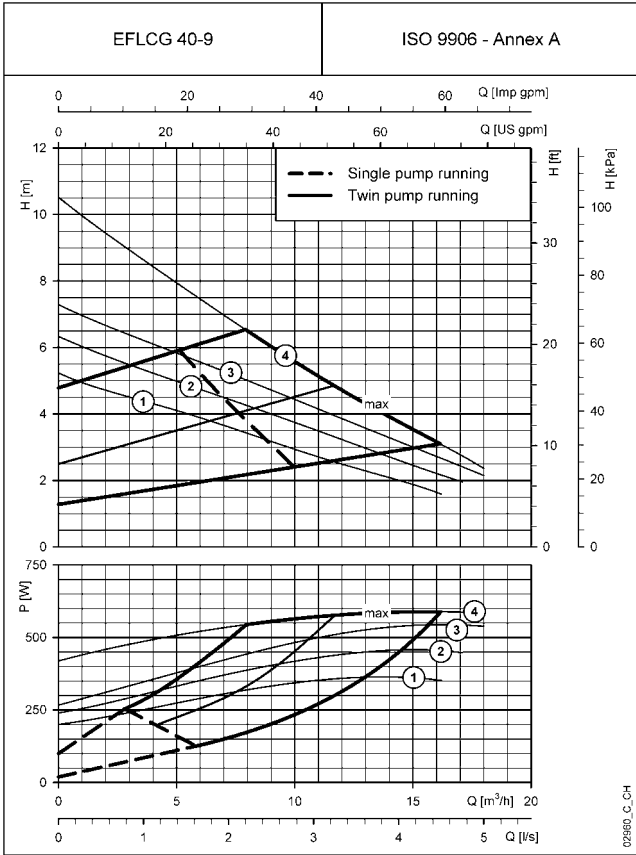
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

**EFLC SERIES
SINGLE-PHASE OPERATING CHARACTERISTICS**



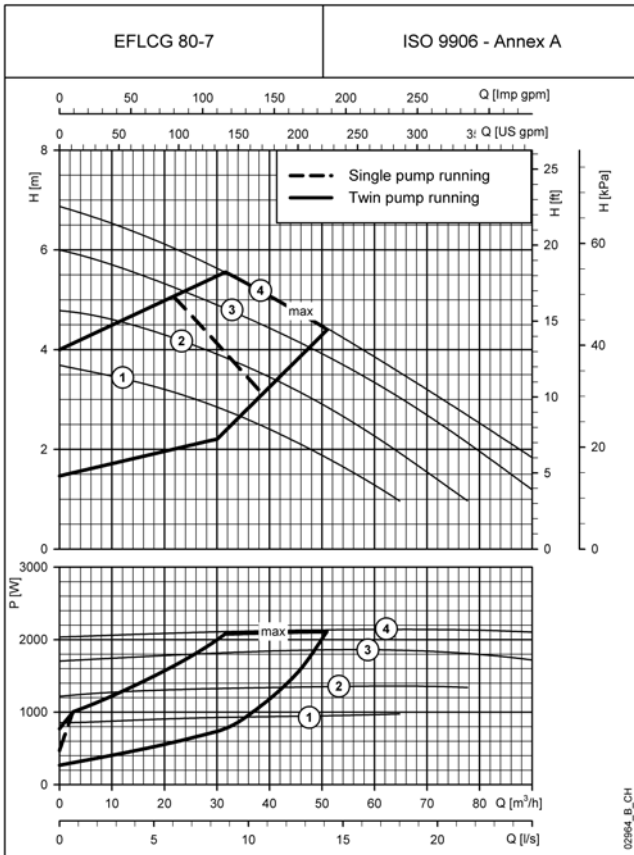
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

EFLCG SERIES SINGLE-PHASE OPERATING CHARACTERISTICS



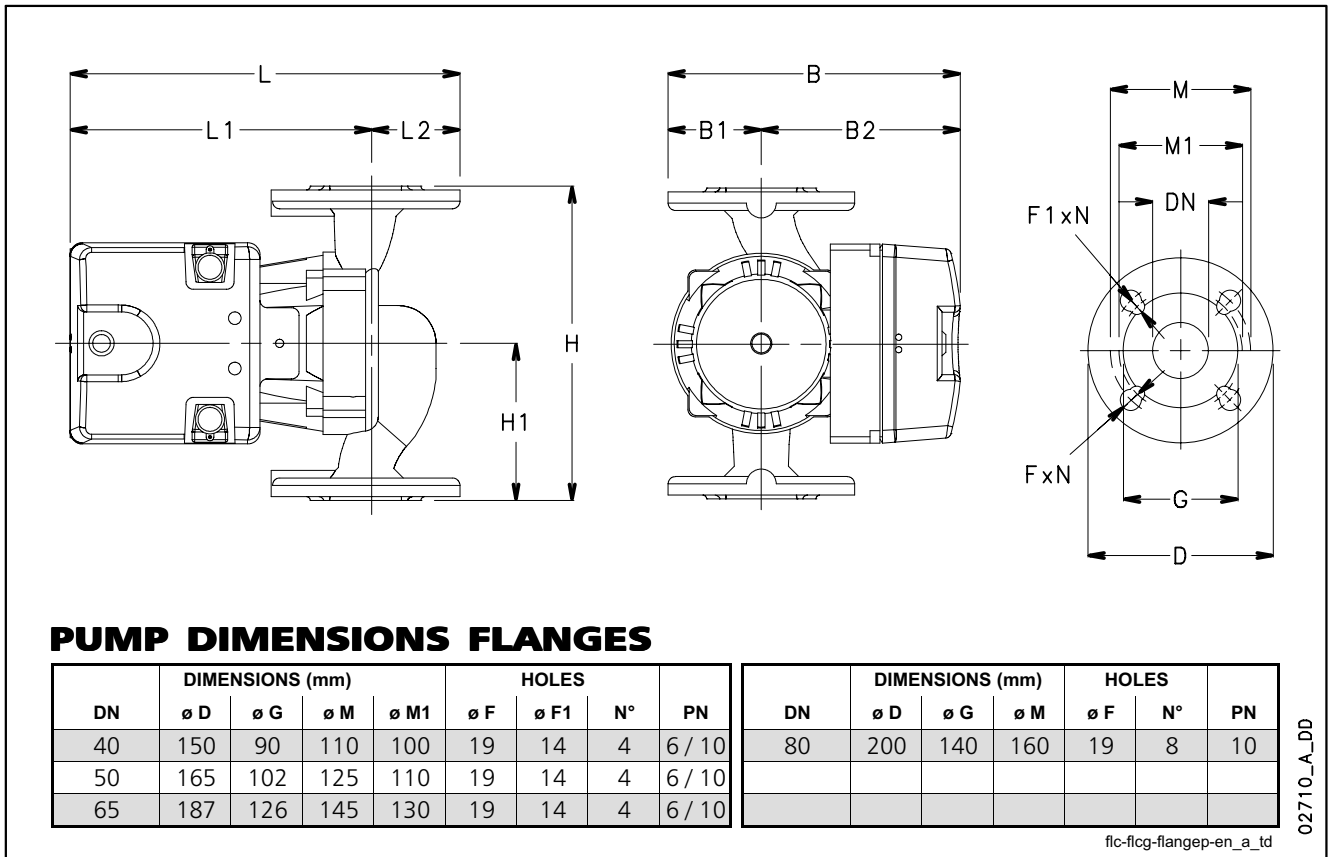
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.
For single pump running, refer to EFLC corresponding curves.

**EFLCG SERIES
SINGLE-PHASE OPERATING CHARACTERISTICS**



These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.
For single pump running, refer to EFLC corresponding curves.

EFLC SERIES DIMENSIONS AND WEIGHTS

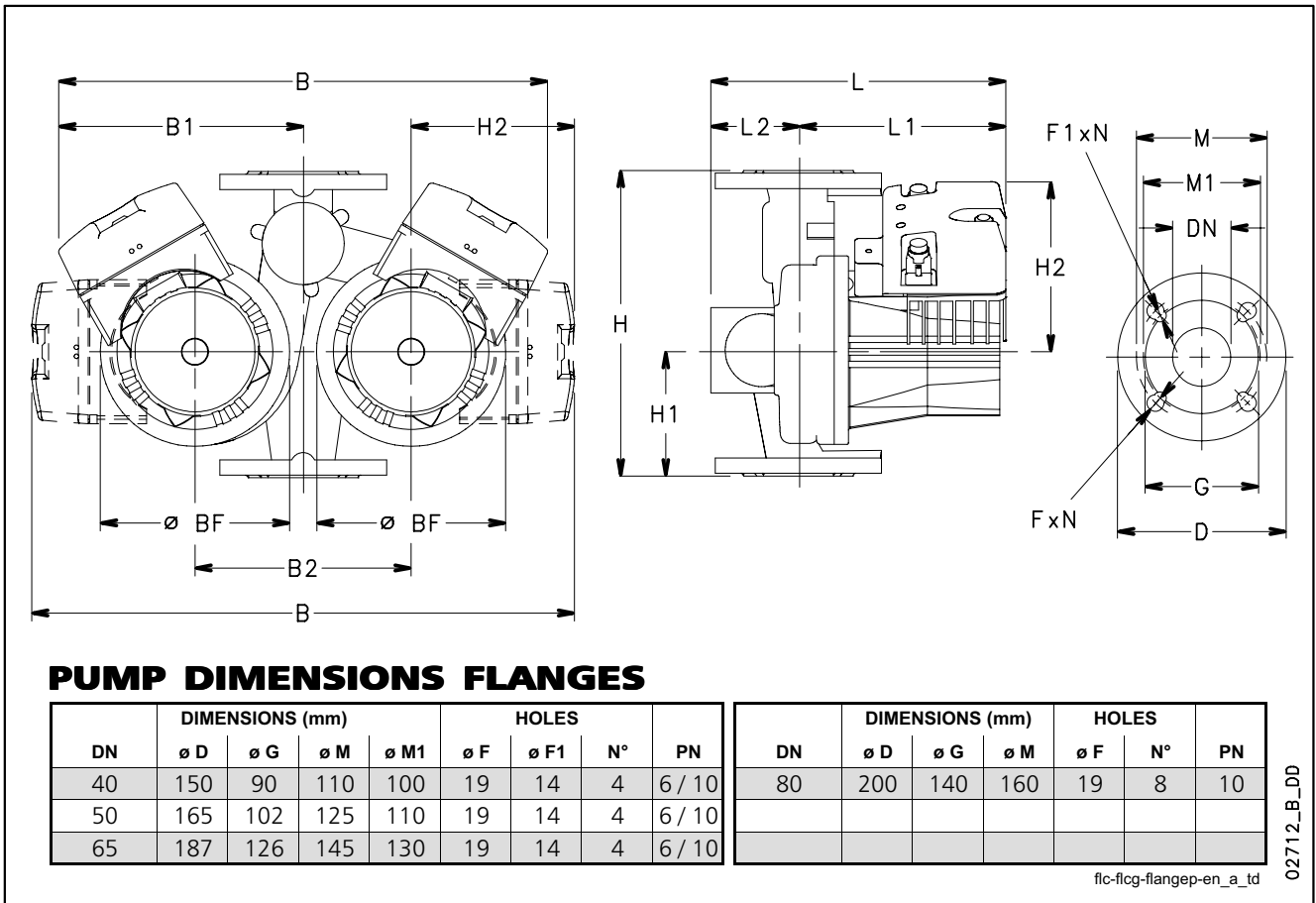


DIMENSIONS AND WEIGHTS TABLE

| PUMP TYPE | DIMENSIONS (mm) | | | | | | | | | WEIGHT |
|------------|-----------------|-----|-----|-----|-----|-----|-----|-----|----|--------|
| | B | B1 | B2 | H | H1 | L | L1 | L2 | DN | |
| EFLC 40-9 | 235 | 75 | 160 | 250 | 125 | 300 | 230 | 70 | 40 | 13 |
| EFLC 40-11 | 235 | 75 | 160 | 250 | 125 | 310 | 235 | 75 | 40 | 16 |
| EFLC 50-12 | 248 | 83 | 165 | 280 | 140 | 315 | 230 | 85 | 50 | 20 |
| EFLC 65-12 | 275 | 100 | 175 | 340 | 170 | 346 | 256 | 90 | 65 | 30 |
| EFLC 80-7 | 285 | 110 | 175 | 360 | 180 | 351 | 246 | 105 | 80 | 36 |

efc-2p50-en_a_td

EFLCG SERIES DIMENSIONS AND WEIGHTS



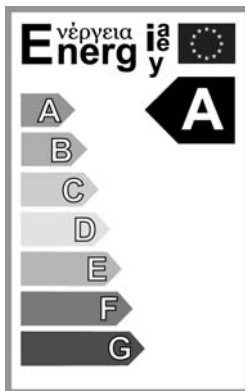
DIMENSIONS AND WEIGHTS TABLE

| PUMP TYPE | DIMENSIONS (mm) | | | | | | | | | | | WEIGHT | |
|-------------|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|------|----|--------|--|
| | B | B1 | B2 | H | H1 | H2 | L | L1 | L2 | ø BF | DN | kg | |
| EFLCG 40-9 | 436 | 218 | 200 | 250 | 105 | 170 | 287 | 212 | 75 | 135 | 40 | 22 | |
| EFLCG 40-11 | 520 | 265 | 200 | 250 | 105 | 165 | 304 | 229 | 75 | 135 | 40 | 29 | |
| EFLCG 50-12 | 490 | 245 | 200 | 280 | 120 | 170 | 317 | 198 | 83 | 161 | 50 | 35 | |
| EFLCG 65-12 | 528 | 300 | 275 | 340 | 140 | 180 | 328 | 235 | 93 | 210 | 65 | 54 | |
| EFLCG 80-7 | 660 | 340 | 275 | 360 | 100 | 180 | 342 | 240 | 102 | 210 | 80 | 70 | |

eflcf-2p50-en_c_td

**"A Class"
High
efficiency
variable speed
circulators**

**EA+ Series
(Ecocirc+ Auto)**



MARKET SECTORS

RESIDENTIAL.

APPLICATIONS

- Water circulation in heating and air conditioning systems.
- Refurbishment or extension of existing systems.
- Recommended for facilities fitted with thermostatic valves.
- Single-family houses or apartment buildings.
- Floor heating systems.

SPECIFICATIONS

PUMP

- **Flow rate:** up to 3 m³/h.
- **Head:** up to 5,5 m.
- **Maximum power consumption:** 28 W (for the 4 m model) and 50 W (for the 6 m model).
- **Temperature of pumped liquid:** -10°C ÷ +95°C.
Non-freezing, non-condensing.
Maximum 20% glycol and water mixture.
For glycol quantities higher than 20%, hydraulic performances must be checked.
- **Maximum operating pressure:** 10 bar (PN 10).
- **Rotor assembly group:** made of stainless steel/composite material/carbon.

MOTOR

- Permanent magnet EC (Electronically Commutated) type motor with spherical rotor/stator.
- Wet rotor with a single spherical ceramic/carbon bearing.
- Integrated motor protection; no external protection required.
- Single-phase 220-240 V, 50-60 Hz power supply.
- Variable-speed motor, with automatic speed adjustment based on system requirement.
- **Insulation class:** F (155°C).
- **Protection class:** IP 44.

**“A Class”
High
efficiency
variable speed
circulators**

**EA+ Series
(Ecocirc+ Auto)**



SERIES CHARACTERISTICS

- Electric circulator pumps with in-line suction and discharge ports, designed for direct installation into piping, for threaded union connections.
- The design is based on spherical rotor/stator technology. This means that:
 - The only moving part is the spherical rotor/impeller unit that turns on a hard ceramic ball.
 - Shaft seals or conventional bearing bushings with a shaft have been eliminated for a single self realigning spherical bearing.
- Blockage free rotor: the spherical motor principle does not require a manual unblocking device thanks to the small touching surface of the bearing on the ball. The starting torque required is minimal.
- Automatic regulation by setting a single selector switch placed on the motor housing. This ensures considerable energy. The control adapts the pump steplessly and automatically to the system requirements, i.e. the running speed varies automatically based on load fluctuations.
- The LED in the transparent knob gives information about the operational status of the pump and troubleshooting.
- 3-core pre-mounted cable for main power supply single-phase 230 V / 50 Hz, 2 m length.
- Overtemperature protection feature that slows down the circulator in case the temperature of the electronic module is too high and shuts it down when temperature rises above the safety limit. The circulator will automatically restart after having cooled down.

ADVANTAGES

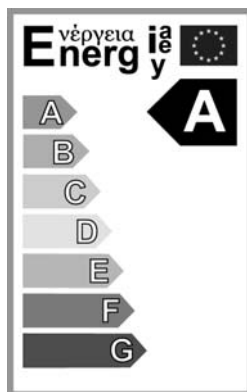
- Energy saving.
- Blockage free.
- Minimal maintenance.
- Easy and quick installation.
- Noise reduction.

INSTALLATION

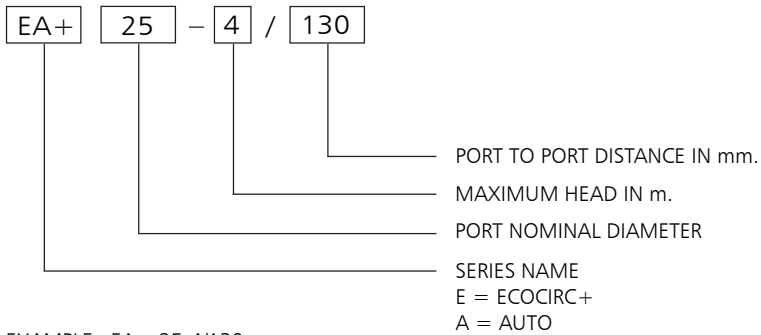
- Suitable for installation in vertical or horizontal piping, in this last case not with the motor housing upward.

CONTROL MODES

- Automatic regulation: the pump automatically adjusts the working conditions based on the requirement of the system. When the pump detects a decrease in the flow, the inverter reduces the differential pressure of the pump until it reaches the required head.



EA+ SERIES IDENTIFICATION CODE



EXAMPLE : EA+ 25-4/130

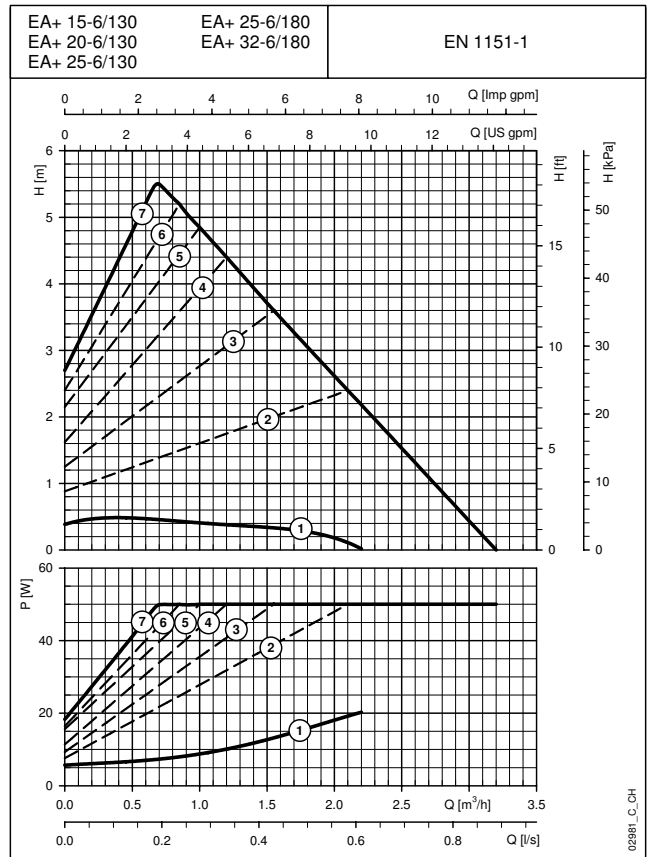
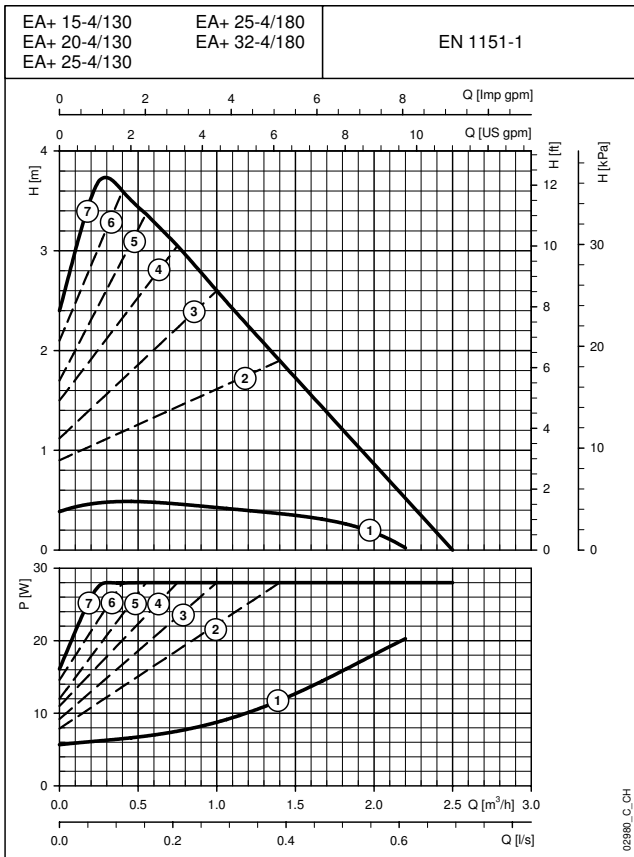
A class electronic circulator of the EA+ series, port nominal diameter = 25, max head = 4 m, with port to port distance 130 mm.

TABLE OF MATERIALS

| PART | MATERIAL |
|----------------------|---|
| Pump body | Cast iron (EN-GJL-200) cataphoretically coated |
| Rotor assembly group | Stainless steel |
| | Composite material |
| | Carbon |
| Bearing | Ceramics |
| Gaskets | EPDM Rubber |
| Motor housing | Aluminum (AlSi11Cu2) |
| Screw ring | Aluminum (AlMgSi05) |

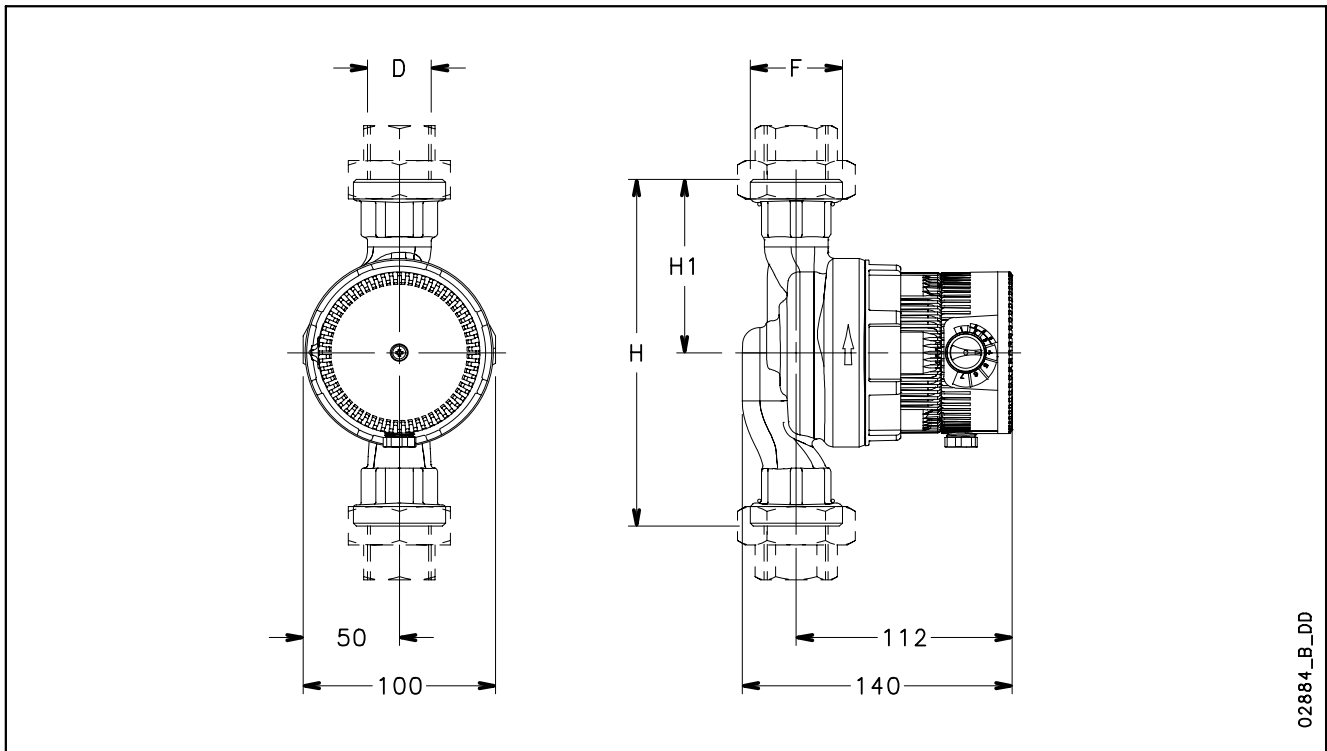
ea-50-en_c_tm

**EA+ SERIES
SINGLE-PHASE OPERATING CHARACTERISTICS**



These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.
Pump operates steplessly. Lines correspond to knob settings and are for reference only.

EA+ SERIES DIMENSIONS AND WEIGHTS



DIMENSIONS AND WEIGHTS TABLE

| PUMP TYPE | DIMENSIONS (mm) | | | | | WEIGHT kg |
|--------------|-----------------|----|--------|----------|----|--------------|
| | H | H1 | D | F | DN | |
| EA+ 15-4/130 | 130 | 65 | 1/2" | G 1" | 15 | 1,1 |
| EA+ 20-4/130 | 130 | 65 | 3/4" | G 1 1/4" | 20 | 1,2 |
| EA+ 25-4/130 | 130 | 65 | 1" | G 1 1/2" | 25 | 1,3 |
| EA+ 25-4/180 | 180 | 90 | 1" | G 1 1/2" | 25 | 1,6 |
| EA+ 32-4/180 | 180 | 90 | 1 1/4" | G 2" | 32 | 1,6 |
| EA+ 15-6/130 | 130 | 65 | 1/2" | G 1" | 15 | 1,1 |
| EA+ 20-6/130 | 130 | 65 | 3/4" | G 1 1/4" | 20 | 1,2 |
| EA+ 25-6/130 | 130 | 65 | 1" | G 1 1/2" | 25 | 1,3 |
| EA+ 25-6/180 | 180 | 90 | 1" | G 1 1/2" | 25 | 1,6 |
| EA+ 32-6/180 | 180 | 90 | 1 1/4" | G 2" | 32 | 1,6 |

ea-2p50-en_c_td

HYDRAULIC PERFORMANCE TABLE

| PUMP TYPE | POWER ABSORBED | | CURRENT ABSORBED | | SPEED | Q = DELIVERY | | | | | | | | | | |
|--|-------------------|----------|---------------------|----------|-------|---------------------------------------|------|------|------|------|------|------|------|------|------|------|
| | MIN W | MAX W | MIN A | MAX A | | l/s 0 | 0,06 | 0,11 | 0,17 | 0,22 | 0,28 | 0,33 | 0,44 | 0,56 | 0,69 | 0,83 |
| | | | | | | m ³ /h 0 | 0,2 | 0,4 | 0,6 | 0,8 | 1,0 | 1,2 | 1,6 | 2,0 | 2,5 | 3,0 |
| 230V 50Hz | | | | | | H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | | | |
| EA+ 15-4/130 EA+ 20-4/130 EA+ 25-4/130 | 6 | 28 | 0,10 | 0,28 | min | 0,4 | 0,5 | 0,5 | 0,5 | 0,5 | 0,4 | 0,4 | 0,3 | 0,2 | | |
| EA+ 25-4/180 EA+ 32-4/180 | | | | | max | 2,4 | 3,6 | 3,6 | 3,3 | 3,0 | 2,6 | 2,3 | 1,6 | 0,9 | | |
| EA+ 15-6/130 EA+ 20-6/130 EA+ 25-6/130 | 6 | 50 | 0,10 | 0,43 | min | 0,4 | 0,5 | 0,5 | 0,5 | 0,5 | 0,4 | 0,4 | 0,3 | 0,2 | | |
| EA+ 25-6/180 EA+ 32-6/180 | | | | | max | 2,7 | 3,6 | 4,4 | 5,2 | 5,3 | 4,8 | 4,4 | 3,5 | 2,6 | 1,5 | 0,4 |

Performances according to standards EN 1151-1

ea-50-en_d_th

High efficiency variable speed circulators

EV+ Series (Ecocirc+ Vario)



MARKET SECTORS

RESIDENTIAL.

APPLICATIONS

- Water circulation in heating and air conditioning systems.
- Solar panel heating systems.
- Closed loop cooling.
- Single-family houses or apartment buildings.

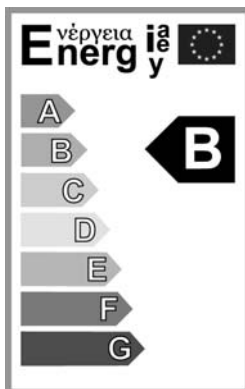
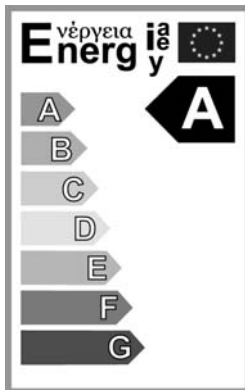
SPECIFICATIONS

PUMP

- **Flow rate:** up to 3 m³/h.
- **Head:** up to 5,5 m.
- **Maximum power consumption:** 28 W (for the 4 m model) and 50 W (for the 6 m model).
- **Temperature of pumped liquid:** -10°C ÷ +95°C.
Non-freezing, non-condensing.
Maximum 20% glycol and water mixture.
For glycol quantities higher than 20%, hydraulic performances must be checked.
- **Maximum operating pressure:** 10 bar (PN 10).
- **Rotor assembly group:** made of stainless steel/composite material/carbon.
- **Energy efficiency class:** "A" for EV+ ...-4 versions and "B" for EV+ ...-6 versions.

MOTOR

- Permanent magnet EC (Electronically Commutated) type motor with spherical rotor/stator.
- Wet rotor with a single spherical ceramic/carbon bearing.
- Integrated motor protection; no external protection required.
- Single-phase 220-240 V, 50-60 Hz power supply.
- Variable-speed motor.
- **Insulation class:** F (155°C).
- **Protection class:** IP 44.



High efficiency variable speed circulators

EV+ Series (Ecocirc+ Vario)



SERIES CHARACTERISTICS

- Electric circulator pumps with in-line suction and discharge ports, designed for direct installation onto piping, for threaded union connections.
- The design is based on spherical rotor/stator technology.
This means that:
 - The only moving part is the spherical rotor/impeller block group that turns on a hard ceramic ball bearing.
 - Shaft seals or conventional bearing bushings with a shaft have been eliminated for a single self realigning spherical bearing.
- Blockage free rotor: the spherical motor principle does not require a manual unblocking device thanks to the small touching surface of the bearing on the ball. The starting torque required is minimal.
- The speed is controlled through the selector in the motor housing. Setting the appropriate performance is facilitated by 7 reference points on the dial of the speed adjuster knob.
- The LED in the transparent knob gives information about the operational status of the pump and troubleshooting.
- 3-core pre-mounted cable for main power supply single-phase 230 V / 50 Hz, 2 m length.
- Overtemperature protection feature that slows down the circulator in case the temperature of the electronic module is too high and shuts it down when temperature rises above the safety limit. The circulator will automatically restart after having cooled down.

ADVANTAGES

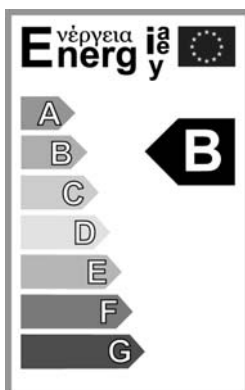
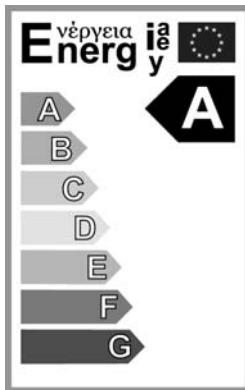
- Energy saving.
- Blockage free.
- Minimal maintenance.
- Easy and quick installation.

INSTALLATION

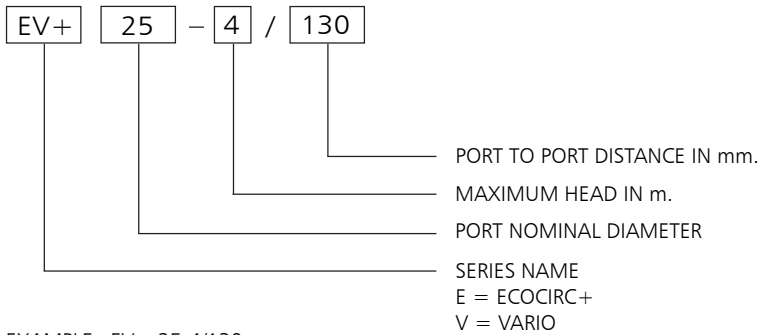
- Suitable for installation in vertical or horizontal piping, in this last case not with the motor housing upward.

CONTROL MODES

- The speed of the pump can be manually regulated to meet the requirements of the system. The software enables a choice from an infinite number of performance curves available.



EV+ SERIES IDENTIFICATION CODE



EXAMPLE : EV+ 25-4/130

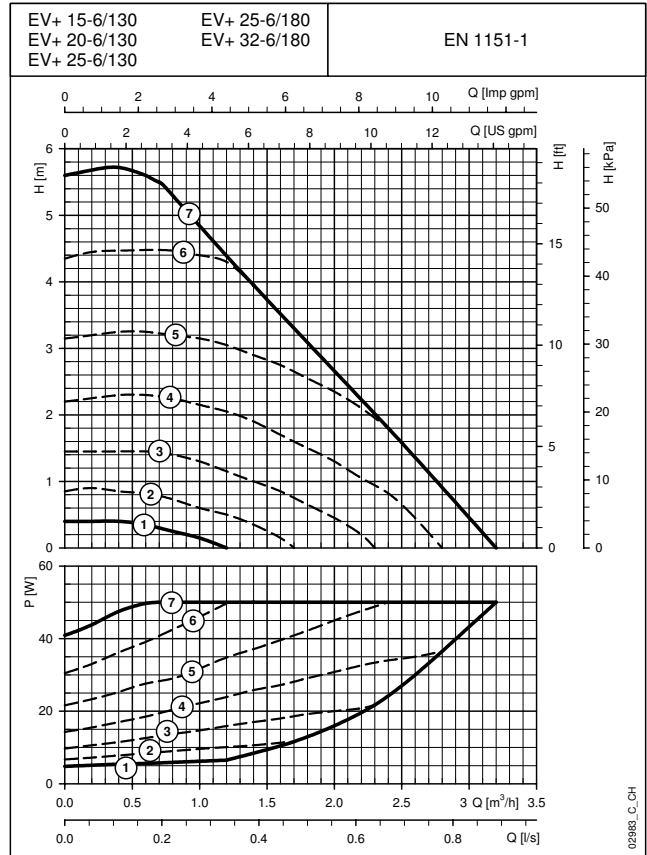
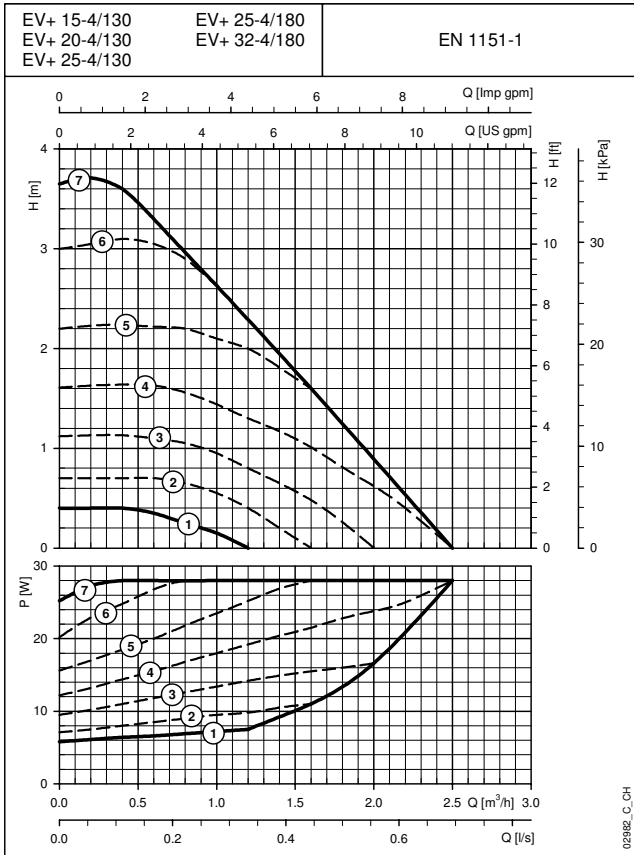
A class electronic circulator of the EV+ series, port nominal diameter = 25, max head = 4 m, with port to port distance 130 mm.

TABLE OF MATERIALS

| PART | MATERIAL |
|----------------------|---|
| Pump body | Cast iron (EN-GJL-200) cataphoretically coated |
| Rotor assembly group | Stainless steel |
| | Composite material |
| | Carbon |
| Bearing | Ceramics |
| Gaskets | EPDM Rubber |
| Motor housing | Aluminum (AlSi11Cu2) |
| Screw ring | Aluminum (AlMgSi05) |

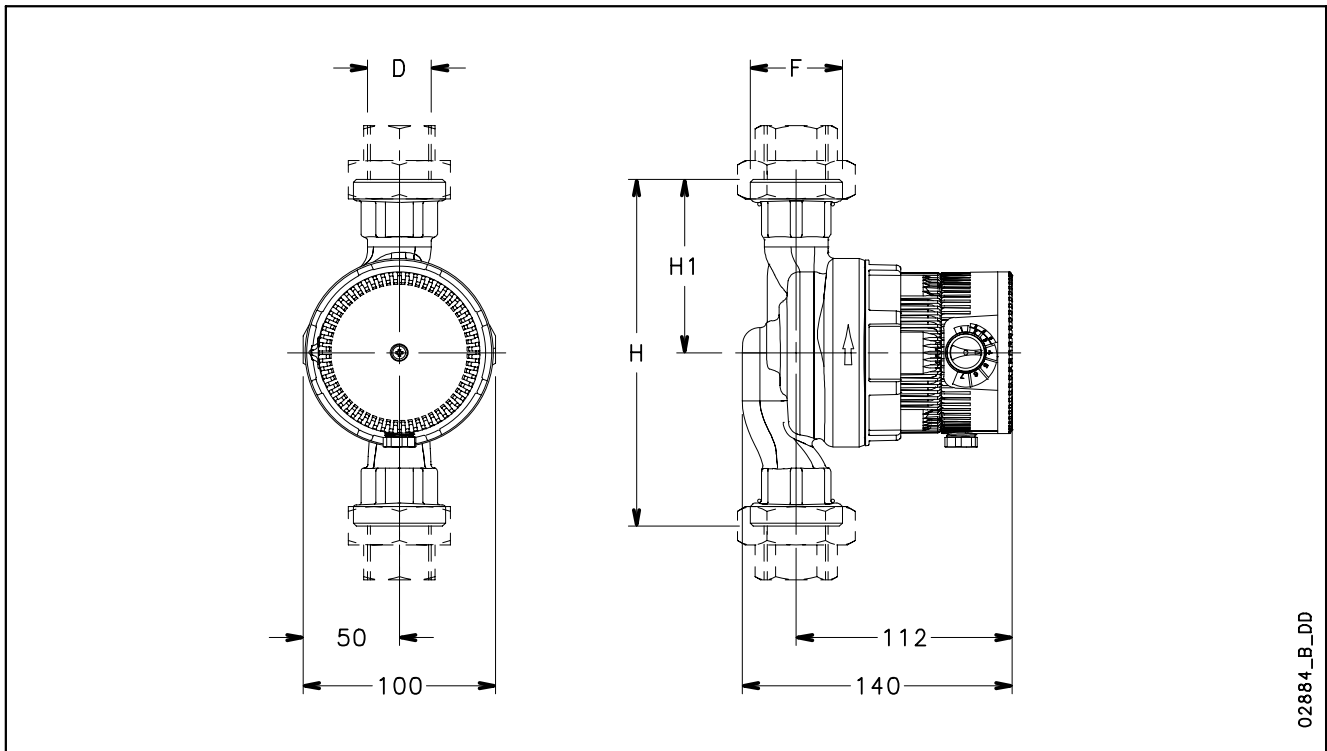
ev-50-en_c_tm

EV+ SERIES
SINGLE-PHASE OPERATING CHARACTERISTICS



These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.
Pump operates steplessly. Lines correspond to knob settings and are for reference only.

EV+ SERIES DIMENSIONS AND WEIGHTS



02884_B_DD

DIMENSIONS AND WEIGHTS TABLE

| PUMP TYPE | DIMENSIONS (mm) | | | | | WEIGHT kg |
|--------------|-----------------|----|--------|----------|----|--------------|
| | H | H1 | D | F | DN | |
| EV+ 15-4/130 | 130 | 65 | 1/2" | G 1" | 15 | 1,1 |
| EV+ 20-4/130 | 130 | 65 | 3/4" | G 1 1/4" | 20 | 1,2 |
| EV+ 25-4/130 | 130 | 65 | 1" | G 1 1/2" | 25 | 1,3 |
| EV+ 25-4/180 | 180 | 90 | 1" | G 1 1/2" | 25 | 1,6 |
| EV+ 32-4/180 | 180 | 90 | 1 1/4" | G 2" | 32 | 1,6 |
| EV+ 15-6/130 | 130 | 65 | 1/2" | G 1" | 15 | 1,1 |
| EV+ 20-6/130 | 130 | 65 | 3/4" | G 1 1/4" | 20 | 1,2 |
| EV+ 25-6/130 | 130 | 65 | 1" | G 1 1/2" | 25 | 1,3 |
| EV+ 25-6/180 | 180 | 90 | 1" | G 1 1/2" | 25 | 1,6 |
| EV+ 32-6/180 | 180 | 90 | 1 1/4" | G 2" | 32 | 1,6 |

ev-2p50-en_c_td

HYDRAULIC PERFORMANCE TABLE

| PUMP TYPE | POWER ABSORBED | | SPEED | Q = DELIVERY | | | | | | | | | | |
|--------------|----------------|-------|-------|---------------------------------------|------|------|------|------|------|------|------|------|------|------|
| | | | | l/s 0 | 0,06 | 0,11 | 0,17 | 2,22 | 0,28 | 0,33 | 0,44 | 0,56 | 0,69 | 0,83 |
| | MIN W | MAX W | | m ³ /h 0 | 0,2 | 0,4 | 0,6 | 8,0 | 1,0 | 1,2 | 1,6 | 2,0 | 2,5 | 3,0 |
| 230V 50Hz | | | | H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | | | |
| EV+ 15-4/130 | 6 | 28 | min | 0,4 | 0,4 | 0,4 | 0,4 | 0,3 | 0,2 | | | | | |
| EV+ 20-4/130 | | | | 0,4 | 0,4 | 0,4 | 0,4 | 0,3 | 0,2 | | | | | |
| EV+ 25-4/130 | | | max | 3,7 | 3,7 | 3,6 | 3,3 | 3,0 | 2,6 | 2,3 | 1,6 | 0,9 | | |
| EV+ 25-4/180 | | | | 5,6 | 5,7 | 5,7 | 5,6 | 5,3 | 4,8 | 4,4 | 3,5 | 2,7 | 1,6 | 0,4 |
| EV+ 32-4/180 | | | | | | | | | | | | | | |
| EV+ 15-6/130 | 6 | 50 | min | 0,4 | 0,4 | 0,4 | 0,4 | 0,3 | 0,2 | | | | | |
| EV+ 20-6/130 | | | | 0,4 | 0,4 | 0,4 | 0,4 | 0,3 | 0,2 | | | | | |
| EV+ 25-6/130 | | | max | 5,6 | 5,7 | 5,7 | 5,6 | 5,3 | 4,8 | 4,4 | 3,5 | 2,7 | 1,6 | 0,4 |
| EV+ 25-6/180 | | | | | | | | | | | | | | |
| EV+ 32-6/180 | | | | | | | | | | | | | | |

Performances according to standards EN 1151-1

ev-50-en_d_th

High efficiency electronic circulators for hot water recirculation

EB (V) Series



MARKET SECTORS

RESIDENTIAL.

APPLICATIONS

- Hot water recirculation.
- Boiler feeding.

SPECIFICATIONS

PUMP

- **Flow rate:** up to 1 m³/h.
- **Head:** up to 3 m.
- **Temperature of pumped liquid:** -10°C ÷ +95°C.
Non-freezing, non-condensing.
- **Maximum operating pressure:** 10 bar (PN 10).
- **Rotor assembly group:** made of stainless steel/composite material/carbon.

MOTOR

- Permanent magnet EC (Electronically Commutated) type motor with spherical rotor/stator.
- Wet rotor with a single spherical ceramic/carbon ball bearing.
- Integrated motor protection; no external protection required.
- Single-phase 220-240 V, 50-60 Hz power supply.
- Variable speed motor for standard version and version with the timer.
Single fixed speed motor for version with thermostat and version with timer and thermostat.
- **Insulation class:** F (155°C).
- **Protection class:** IP 44.

High efficiency electronic circulators for hot water recirculation

EB (V) Series



SERIES CHARACTERISTICS

- Electric circulator pumps with in-line suction and discharge ports, designed for direct installation onto piping, for threaded union connections.
- The design is based on spherical rotor/stator technology. This means that:
 - The only moving part is the spherical rotor/impeller unit that turns on a hard ceramic ball.
 - Shaft seals or conventional bearing bushings with a shaft have been eliminated for a single self realigning spherical bearing.
- Blockage free rotor: the spherical motor principle does not require a manual unblocking device thanks to the small touching surface of the bearing on the ball. The starting torque required is minimal.
- The following versions are available:
 - variable speed (EBV version) for performance optimization based on real requirements of the system. The speed is regulated through the selector knob placed on the motor housing. The selection of the speed is facilitated by 7 reference points on the selector. In positions 2 and 3 (ECO) the consumption is particularly optimized. EBV version is also available with timer to limit the operation to the required daily hours.
 - fixed speed (EB version).
- EB version is also available:
 - with thermostat to maintain the water at the desired temperature. The pump switches off automatically when the water is warm enough. The temperature can be set between 20°C and 70°C through the knob placed on the motor housing.
 - with thermostat and timer for a even higher energy saving.
- both versions are also available with integrated ball and check valve (EB(V)..-/110).

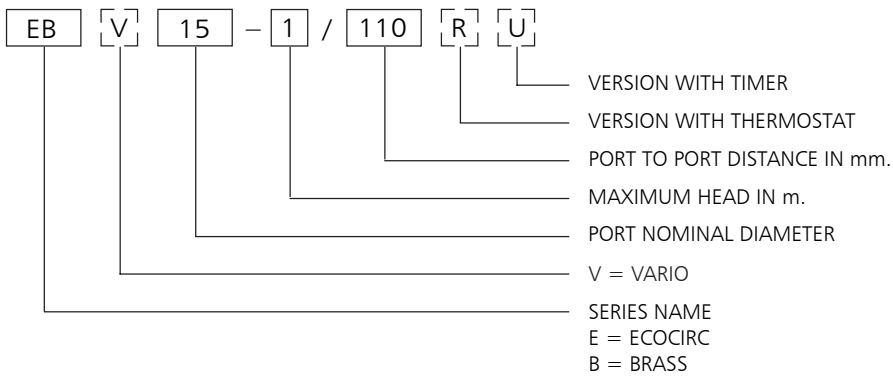
ADVANTAGES

- Energy saving.
- Blockage free.
- Minimal maintenance.
- Easy and quick installation.

INSTALLATION

- Suitable for installation in vertical or horizontal piping, in this last case not with the motor housing upward.

EB SERIES IDENTIFICATION CODE



EXAMPLE : EB 15-1/110 RU

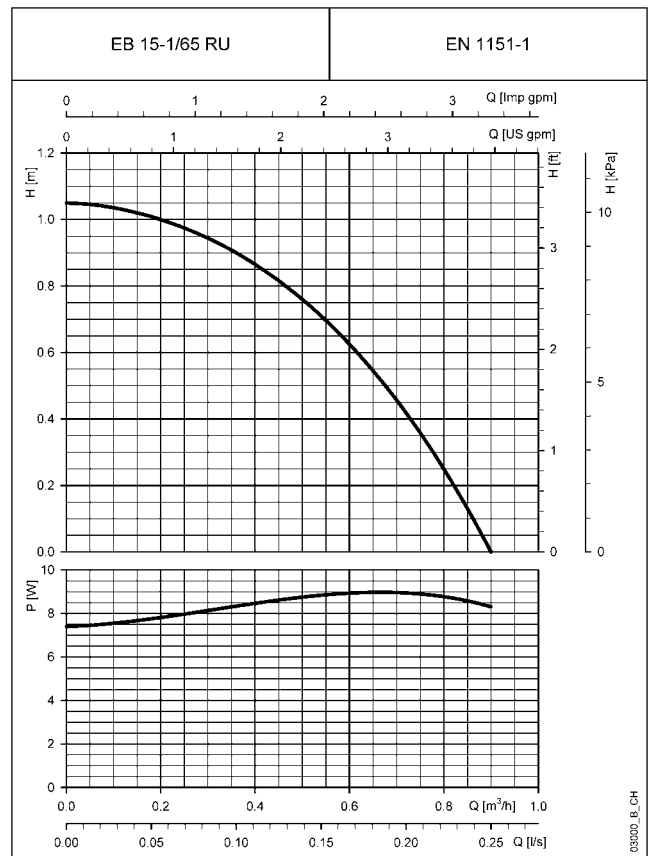
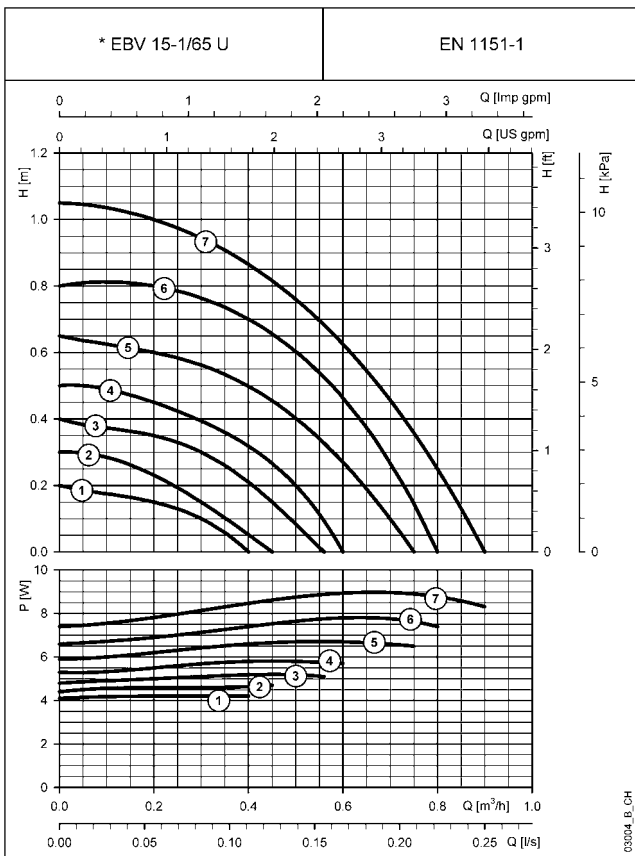
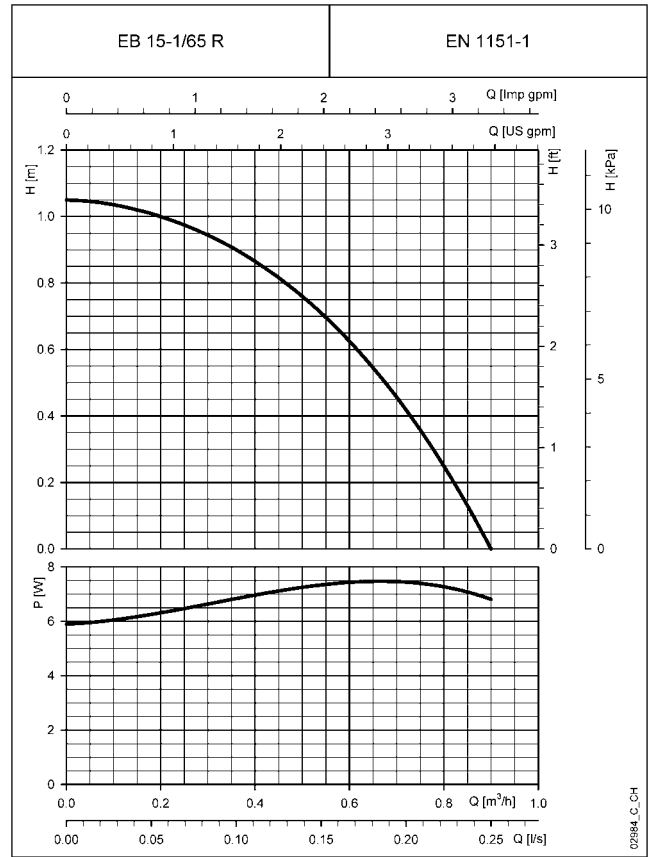
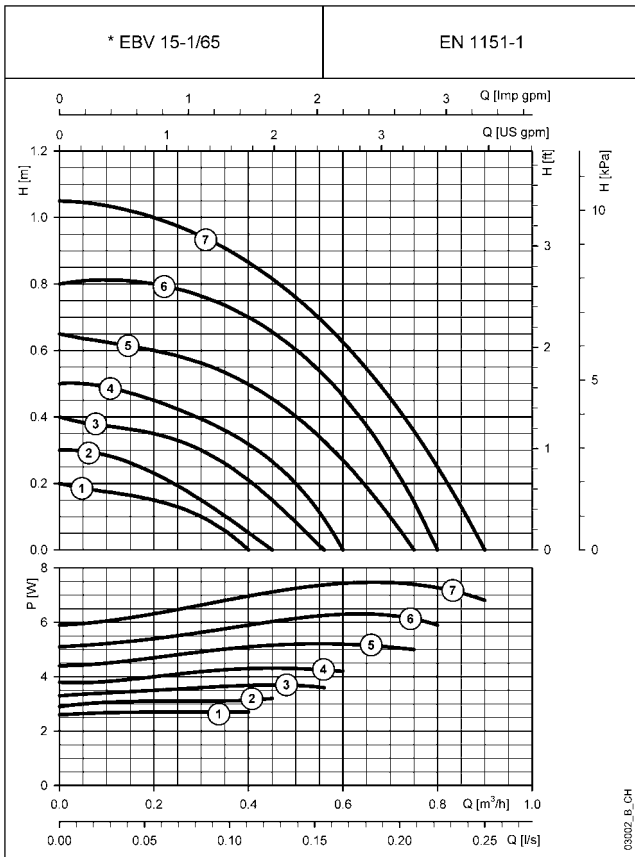
Electronic circulator of the EB series, port nominal diameter = 15,
max head = 1 m, port to port distance 110 mm, with temperature probes and timer.

TABLE OF MATERIALS

| PART | MATERIAL |
|----------------------|--------------------|
| Pump body | Brass |
| Rotor assembly group | Stainless steel |
| | Composite material |
| Bearing | Carbon |
| | Ceramic |
| Gaskets | EPDM |

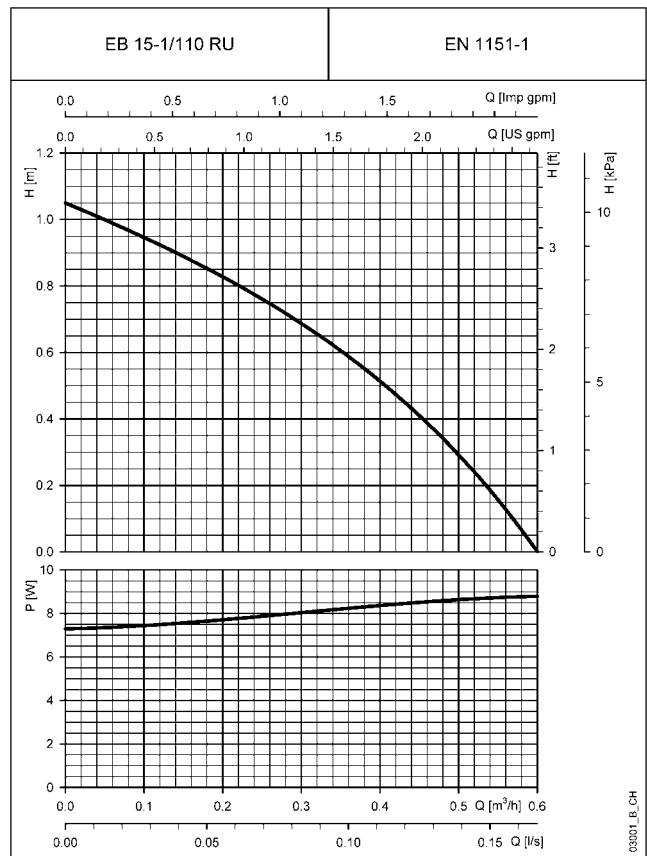
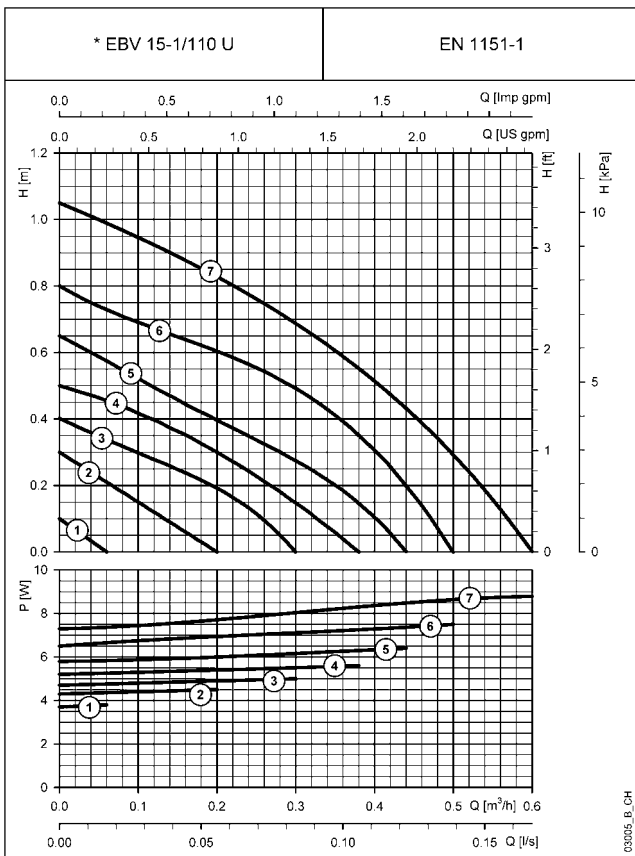
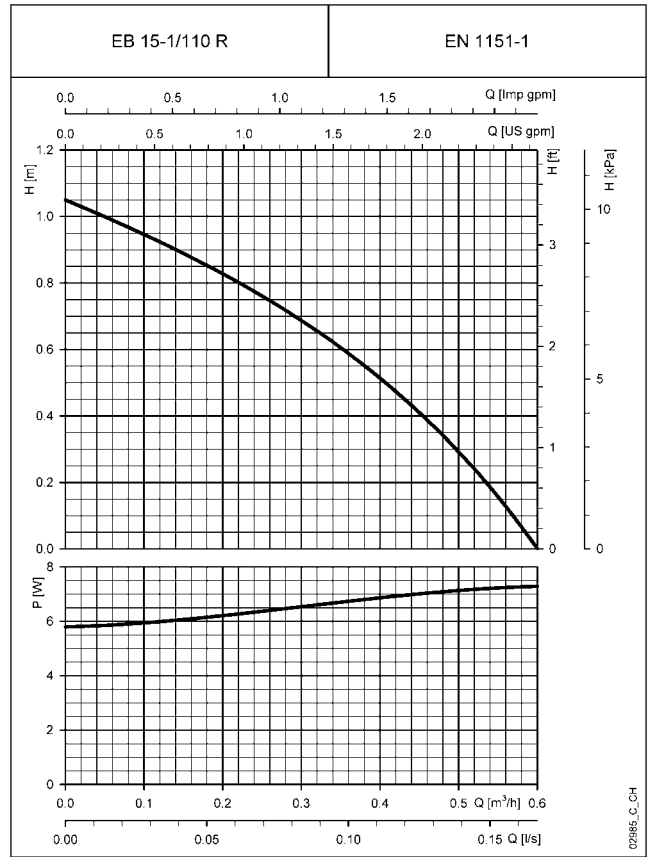
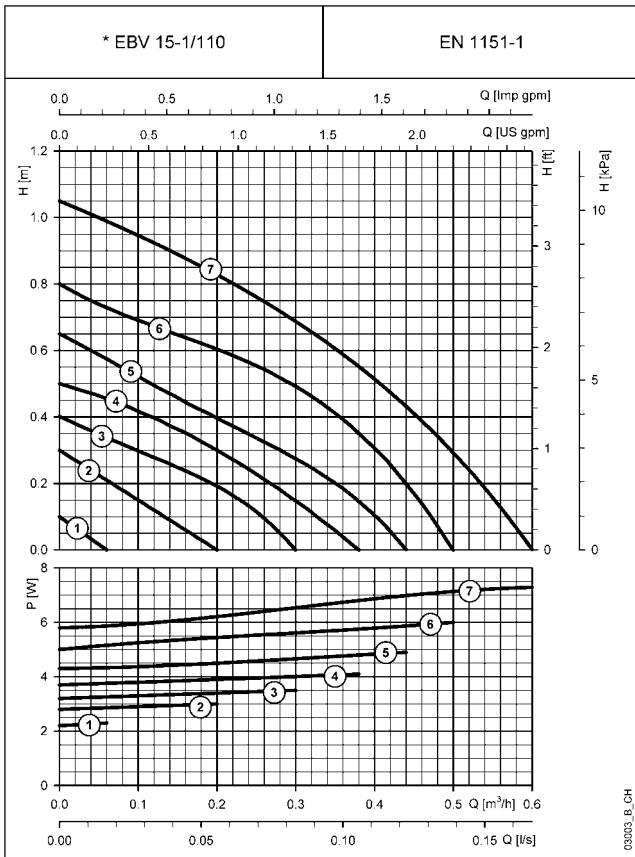
eb-50-en_b_tm

EB (V) SERIES SINGLE-PHASE OPERATING CHARACTERISTICS



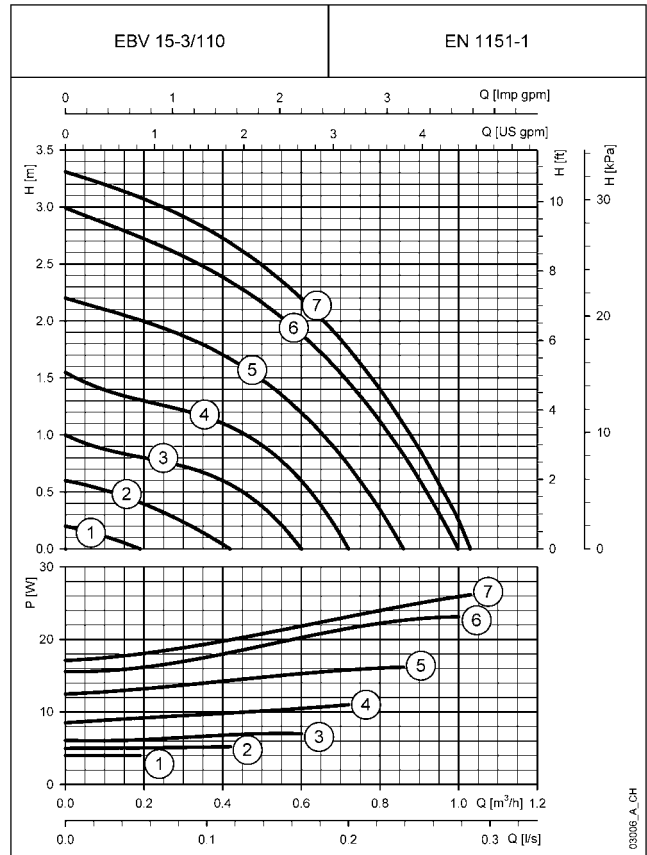
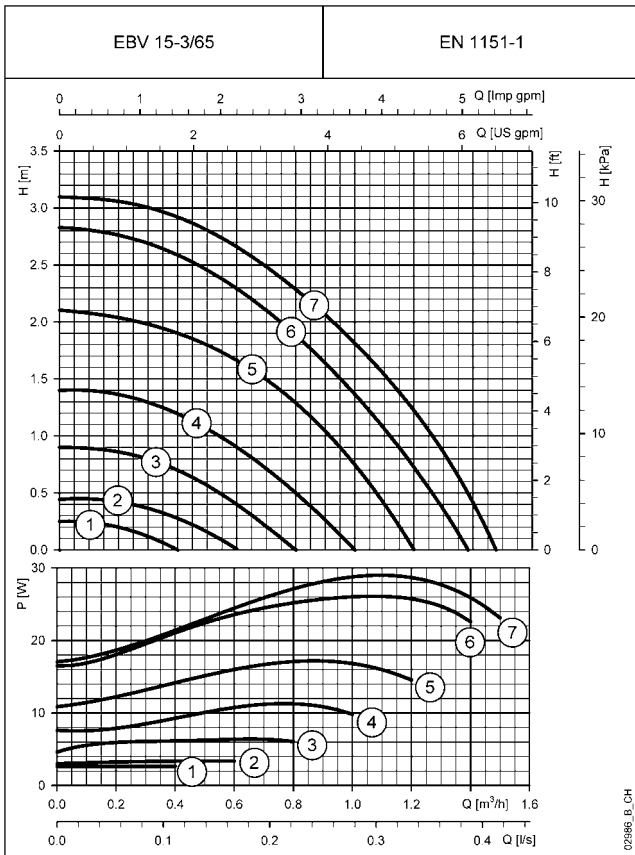
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.
* Pump operates steplessly. Lines correspond to knob settings and are for reference only.

**EB (V) SERIES
SINGLE-PHASE OPERATING CHARACTERISTICS**



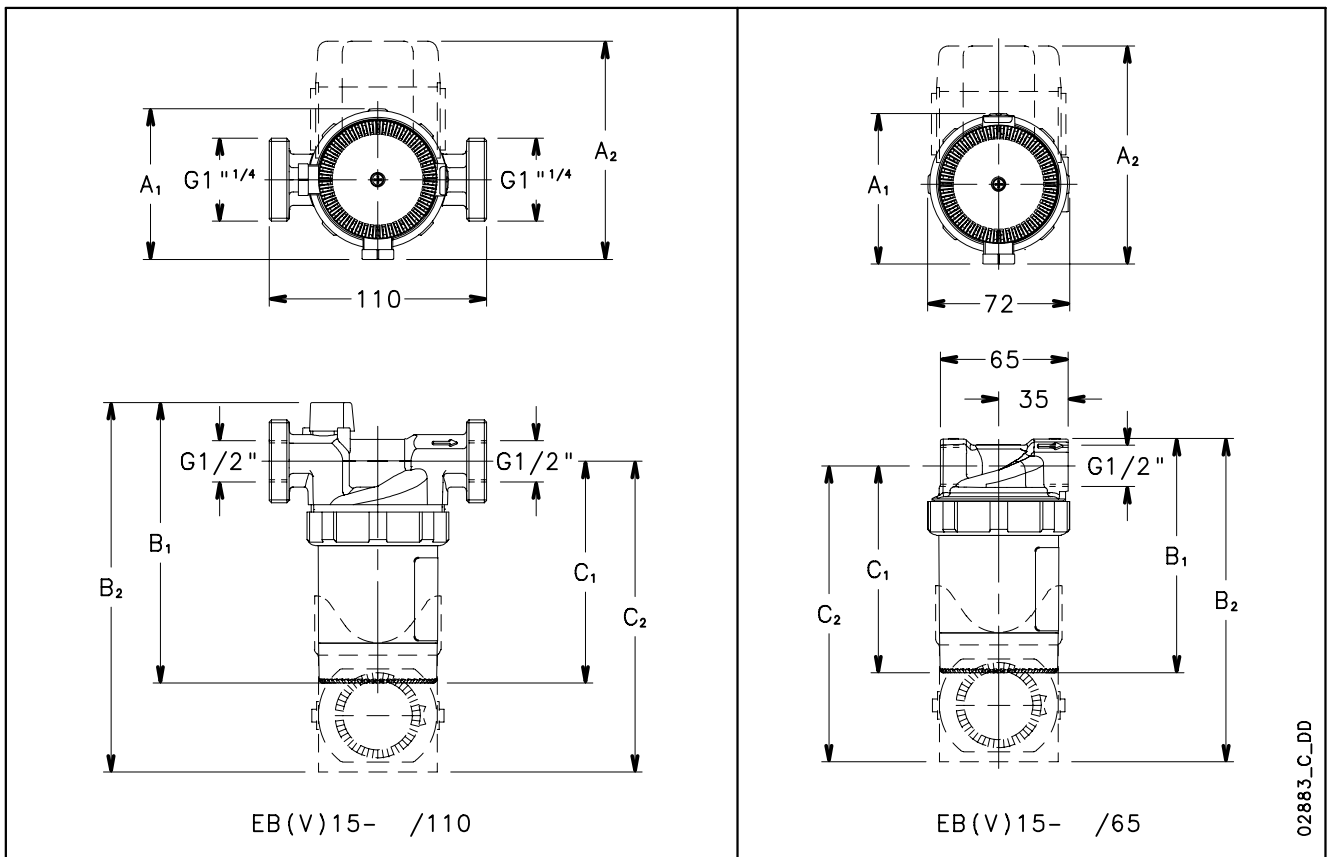
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.
* Pump operates steplessly. Lines correspond to knob settings and are for reference only.

**EB (V) SERIES
SINGLE-PHASE OPERATING CHARACTERISTICS**



These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.
Pump operates steplessly. Lines correspond to knob settings and are for reference only.

EB (V) SERIES DIMENSIONS AND WEIGHTS



DIMENSIONS AND WEIGHTS TABLE

| PUMP TYPE | DIMENSIONS (mm) | | | | | | DN | WEIGHT kg |
|-------------------------------|-----------------|----------------|----------------|----------------|----------------|----------------|----|--------------|
| | A ₁ | A ₂ | B ₁ | B ₂ | C ₁ | C ₂ | | |
| EBV 15-1/65 - EB 15-1/65R | 76 | - | 118 | - | 105 | - | 15 | 0,9 |
| EBV 15-1/65U - EB 15-1/65RU | - | 110 | - | 163 | - | 150 | 15 | 1 |
| EBV 15-1/110 - EB 15-1/110R | 76 | - | 142 | - | 112 | - | 15 | 1,3 |
| EBV 15-1/110U - EB 15-1/110RU | - | 110 | - | 187 | - | 157 | 15 | 1,4 |
| EBV 15-3/65 | 76 | - | 118 | - | 105 | - | 15 | 0,9 |
| EBV 15-3/110 | 76 | - | 142 | - | 112 | - | 15 | 1,3 |

HYDRAULIC PERFORMANCE TABLE

eb-2p50-en_c_td

| PUMP TYPE | POWER ABSORBED | | SPEED | Q = DELIVERY | | | | | | | | | | | |
|---------------------------------------|-------------------|----------|-------|---------------------|------|------|------|------|------|------|------|------|------|------|--|
| | MIN W | MAX W | | l/s 0 | 0,03 | 0,06 | 0,08 | 0,11 | 0,14 | 0,19 | 0,22 | 0,28 | 0,36 | 0,39 | |
| | | | | m ³ /h 0 | 0,1 | 0,2 | 0,3 | 0,4 | 0,5 | 0,7 | 0,8 | 1 | 1,3 | 1,4 | |
| H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | | | | | | | | |
| EBV 15-1/65 | 2,6 | 2,7 | min | 0,20 | 0,18 | 0,15 | 0,10 | 0 | | | | | | | |
| | 5,9 | 7,5 | max | 1,05 | 1,04 | 1,00 | 0,94 | 0,86 | 0,76 | 0,46 | 0,25 | | | | |
| EB 15-1/65 R | 5,9 | 7,5 | max | 1,05 | 1,04 | 1,00 | 0,94 | 0,86 | 0,76 | 0,46 | 0,25 | | | | |
| EBV 15-1/65 U | 4,1 | 4,2 | min | 0,20 | 0,18 | 0,15 | 0,10 | 0 | | | | | | | |
| | 7,4 | 9,0 | max | 1,05 | 1,04 | 1,00 | 0,94 | 0,86 | 0,76 | 0,46 | 0,25 | | | | |
| EB 15-1/65 RU | 7,4 | 9,0 | max | 1,05 | 1,04 | 1,00 | 0,94 | 0,86 | 0,76 | 0,46 | 0,25 | | | | |
| EBV 15-1/110 | 2,2 | 2,3 | min | 0,10 | | | | | | | | | | | |
| | 5,8 | 7,3 | max | 1,05 | 0,95 | 0,83 | 0,69 | 0,51 | 0,29 | | | | | | |
| EB 15-1/110 R | 5,8 | 7,3 | max | 1,05 | 0,95 | 0,83 | 0,69 | 0,51 | 0,29 | | | | | | |
| EBV 15-1/110 U | 3,7 | 3,8 | min | 0,10 | | | | | | | | | | | |
| | 7,3 | 8,8 | max | 1,05 | 0,95 | 0,83 | 0,69 | 0,51 | 0,29 | | | | | | |
| EB 15-1/110 RU | 7,3 | 8,8 | max | 1,05 | 0,95 | 0,83 | 0,69 | 0,51 | 0,29 | | | | | | |
| EBV 15-3/65 | 2,6 | 2,6 | min | 0,25 | 0,24 | 0,20 | 0,12 | 0 | | | | | | | |
| | 17,1 | 23,7 | max | 3,10 | 3,09 | 3,08 | 3,07 | 3,06 | 3,04 | 3,02 | 3,00 | 2,97 | 2,91 | 2,89 | |
| EBV 15-3/110 | 4,0 | 4,0 | min | 0,20 | 0,11 | | | | | | | | | | |
| | 17,1 | 26,6 | max | 3,31 | 3,20 | 3,08 | 2,96 | 2,84 | 2,71 | 2,43 | 2,28 | 1,96 | | | |

TECHNICAL APPENDIX

TECHNICAL APPENDIX VAPOUR PRESSURE PS VAPOUR PRESSURE AND ρ DENSITY OF WATER TABLE

| t °C | T K | ps bar | ρ kg/dm ³ | t °C | T K | ps bar | ρ kg/dm ³ | t °C | T K | ps bar | ρ kg/dm ³ |
|---------|--------|-----------|------------------------------|---------|--------|-----------|------------------------------|---------|--------|-----------|------------------------------|
| 0 | 273,15 | 0,00611 | 0,9998 | 55 | 328,15 | 0,15741 | 0,9857 | 120 | 393,15 | 1,9854 | 0,9429 |
| 1 | 274,15 | 0,00657 | 0,9999 | 56 | 329,15 | 0,16511 | 0,9852 | 122 | 395,15 | 2,1145 | 0,9412 |
| 2 | 275,15 | 0,00706 | 0,9999 | 57 | 330,15 | 0,17313 | 0,9846 | 124 | 397,15 | 2,2504 | 0,9396 |
| 3 | 276,15 | 0,00758 | 0,9999 | 58 | 331,15 | 0,18147 | 0,9842 | 126 | 399,15 | 2,3933 | 0,9379 |
| 4 | 277,15 | 0,00813 | 1,0000 | 59 | 332,15 | 0,19016 | 0,9837 | 128 | 401,15 | 2,5435 | 0,9362 |
| 5 | 278,15 | 0,00872 | 1,0000 | 60 | 333,15 | 0,1992 | 0,9832 | 130 | 403,15 | 2,7013 | 0,9346 |
| 6 | 279,15 | 0,00935 | 1,0000 | 61 | 334,15 | 0,2086 | 0,9826 | 132 | 405,15 | 2,867 | 0,9328 |
| 7 | 280,15 | 0,01001 | 0,9999 | 62 | 335,15 | 0,2184 | 0,9821 | 134 | 407,15 | 3,041 | 0,9311 |
| 8 | 281,15 | 0,01072 | 0,9999 | 63 | 336,15 | 0,2286 | 0,9816 | 136 | 409,15 | 3,223 | 0,9294 |
| 9 | 282,15 | 0,01147 | 0,9998 | 64 | 337,15 | 0,2391 | 0,9811 | 138 | 411,15 | 3,414 | 0,9276 |
| 10 | 283,15 | 0,01227 | 0,9997 | 65 | 338,15 | 0,2501 | 0,9805 | 140 | 413,15 | 3,614 | 0,9258 |
| 11 | 284,15 | 0,01312 | 0,9997 | 66 | 339,15 | 0,2615 | 0,9799 | 145 | 418,15 | 4,155 | 0,9214 |
| 12 | 285,15 | 0,01401 | 0,9996 | 67 | 340,15 | 0,2733 | 0,9793 | 155 | 428,15 | 5,433 | 0,9121 |
| 13 | 286,15 | 0,01497 | 0,9994 | 68 | 341,15 | 0,2856 | 0,9788 | 160 | 433,15 | 6,181 | 0,9073 |
| 14 | 287,15 | 0,01597 | 0,9993 | 69 | 342,15 | 0,2984 | 0,9782 | 165 | 438,15 | 7,008 | 0,9024 |
| 15 | 288,15 | 0,01704 | 0,9992 | 70 | 343,15 | 0,3116 | 0,9777 | 170 | 443,15 | 7,920 | 0,8973 |
| 16 | 289,15 | 0,01817 | 0,9990 | 71 | 344,15 | 0,3253 | 0,9770 | 175 | 448,15 | 8,924 | 0,8921 |
| 17 | 290,15 | 0,01936 | 0,9988 | 72 | 345,15 | 0,3396 | 0,9765 | 180 | 453,15 | 10,027 | 0,8869 |
| 18 | 291,15 | 0,02062 | 0,9987 | 73 | 346,15 | 0,3543 | 0,9760 | 185 | 458,15 | 11,233 | 0,8815 |
| 19 | 292,15 | 0,02196 | 0,9985 | 74 | 347,15 | 0,3696 | 0,9753 | 190 | 463,15 | 12,551 | 0,8760 |
| 20 | 293,15 | 0,02337 | 0,9983 | 75 | 348,15 | 0,3855 | 0,9748 | 195 | 468,15 | 13,987 | 0,8704 |
| 21 | 294,15 | 0,24850 | 0,9981 | 76 | 349,15 | 0,4019 | 0,9741 | 200 | 473,15 | 15,550 | 0,8647 |
| 22 | 295,15 | 0,02642 | 0,9978 | 77 | 350,15 | 0,4189 | 0,9735 | 205 | 478,15 | 17,243 | 0,8588 |
| 23 | 296,15 | 0,02808 | 0,9976 | 78 | 351,15 | 0,4365 | 0,9729 | 210 | 483,15 | 19,077 | 0,8528 |
| 24 | 297,15 | 0,02982 | 0,9974 | 79 | 352,15 | 0,4547 | 0,9723 | 215 | 488,15 | 21,060 | 0,8467 |
| 25 | 298,15 | 0,03166 | 0,9971 | 80 | 353,15 | 0,4736 | 0,9716 | 220 | 493,15 | 23,198 | 0,8403 |
| 26 | 299,15 | 0,03360 | 0,9968 | 81 | 354,15 | 0,4931 | 0,9710 | 225 | 498,15 | 25,501 | 0,8339 |
| 27 | 300,15 | 0,03564 | 0,9966 | 82 | 355,15 | 0,5133 | 0,9704 | 230 | 503,15 | 27,976 | 0,8273 |
| 28 | 301,15 | 0,03778 | 0,9963 | 83 | 356,15 | 0,5342 | 0,9697 | 235 | 508,15 | 30,632 | 0,8205 |
| 29 | 302,15 | 0,04004 | 0,9960 | 84 | 357,15 | 0,5557 | 0,9691 | 240 | 513,15 | 33,478 | 0,8136 |
| 30 | 303,15 | 0,04241 | 0,9957 | 85 | 358,15 | 0,5780 | 0,9684 | 245 | 518,15 | 36,523 | 0,8065 |
| 31 | 304,15 | 0,04491 | 0,9954 | 86 | 359,15 | 0,6011 | 0,9678 | 250 | 523,15 | 39,776 | 0,7992 |
| 32 | 305,15 | 0,04753 | 0,9951 | 87 | 360,15 | 0,6249 | 0,9671 | 255 | 528,15 | 43,246 | 0,7916 |
| 33 | 306,15 | 0,05029 | 0,9947 | 88 | 361,15 | 0,6495 | 0,9665 | 260 | 533,15 | 46,943 | 0,7839 |
| 34 | 307,15 | 0,05318 | 0,9944 | 89 | 362,15 | 0,6749 | 0,9658 | 265 | 538,15 | 50,877 | 0,7759 |
| 35 | 308,15 | 0,05622 | 0,9940 | 90 | 363,15 | 0,7011 | 0,9652 | 270 | 543,15 | 55,058 | 0,7678 |
| 36 | 309,15 | 0,05940 | 0,9937 | 91 | 364,15 | 0,7281 | 0,9644 | 275 | 548,15 | 59,496 | 0,7593 |
| 37 | 310,15 | 0,06274 | 0,9933 | 92 | 365,15 | 0,7561 | 0,9638 | 280 | 553,15 | 64,202 | 0,7505 |
| 38 | 311,15 | 0,06624 | 0,9930 | 93 | 366,15 | 0,7849 | 0,9630 | 285 | 558,15 | 69,186 | 0,7415 |
| 39 | 312,15 | 0,06991 | 0,9927 | 94 | 367,15 | 0,8146 | 0,9624 | 290 | 563,15 | 74,461 | 0,7321 |
| 40 | 313,15 | 0,07375 | 0,9923 | 95 | 368,15 | 0,8453 | 0,9616 | 295 | 568,15 | 80,037 | 0,7223 |
| 41 | 314,15 | 0,07777 | 0,9919 | 96 | 369,15 | 0,8769 | 0,9610 | 300 | 573,15 | 85,927 | 0,7122 |
| 42 | 315,15 | 0,08198 | 0,9915 | 97 | 370,15 | 0,9094 | 0,9602 | 305 | 578,15 | 92,144 | 0,7017 |
| 43 | 316,15 | 0,09639 | 0,9911 | 98 | 371,15 | 0,9430 | 0,9596 | 310 | 583,15 | 98,70 | 0,6906 |
| 44 | 317,15 | 0,09100 | 0,9907 | 99 | 372,15 | 0,9776 | 0,9586 | 315 | 588,15 | 105,61 | 0,6791 |
| 45 | 318,15 | 0,09582 | 0,9902 | 100 | 373,15 | 1,0133 | 0,9581 | 320 | 593,15 | 112,89 | 0,6669 |
| 46 | 319,15 | 0,10086 | 0,9898 | 102 | 375,15 | 1,0878 | 0,9567 | 325 | 598,15 | 120,56 | 0,6541 |
| 47 | 320,15 | 0,10612 | 0,9894 | 104 | 377,15 | 1,1668 | 0,9552 | 330 | 603,15 | 128,63 | 0,6404 |
| 48 | 321,15 | 0,11162 | 0,9889 | 106 | 379,15 | 1,2504 | 0,9537 | 340 | 613,15 | 146,05 | 0,6102 |
| 49 | 322,15 | 0,11736 | 0,9884 | 108 | 381,15 | 1,3390 | 0,9522 | 350 | 623,15 | 165,35 | 0,5743 |
| 50 | 323,15 | 0,12335 | 0,9880 | 110 | 383,15 | 1,4327 | 0,9507 | 360 | 633,15 | 186,75 | 0,5275 |
| 51 | 324,15 | 0,12961 | 0,9876 | 112 | 385,15 | 1,5316 | 0,9491 | 370 | 643,15 | 210,54 | 0,4518 |
| 52 | 325,15 | 0,13613 | 0,9871 | 114 | 387,15 | 1,6362 | 0,9476 | 374,15 | 647,30 | 221,20 | 0,3154 |
| 53 | 326,15 | 0,14293 | 0,9862 | 116 | 389,15 | 1,7465 | 0,9460 | | | | |
| 54 | 327,15 | 0,15002 | 0,9862 | 118 | 391,15 | 1,8628 | 0,9445 | | | | |

G-at_nps_h_a_sc

FLOW RESISTANCE

TABLE OF FLOW RESISTANCE IN BENDS, VALVES AND GATES

The flow resistance is calculated using the equivalent pipeline length method according to the table below:

| ACCESSORY TYPE | DN | | | | | | | | | | | |
|--------------------|--------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|
| | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
| | Equivalent pipeline length (m) | | | | | | | | | | | |
| 45° bend | 0,2 | 0,2 | 0,4 | 0,4 | 0,6 | 0,6 | 0,9 | 1,1 | 1,5 | 1,9 | 2,4 | 2,8 |
| 90° bend | 0,4 | 0,6 | 0,9 | 1,1 | 1,3 | 1,5 | 2,1 | 2,6 | 3,0 | 3,9 | 4,7 | 5,8 |
| 90° smooth bend | 0,4 | 0,4 | 0,4 | 0,6 | 0,9 | 1,1 | 1,3 | 1,7 | 1,9 | 2,8 | 3,4 | 3,9 |
| Union tee or cross | 1,1 | 1,3 | 1,7 | 2,1 | 2,6 | 3,2 | 4,3 | 5,3 | 6,4 | 7,5 | 10,7 | 12,8 |
| Gate | - | - | - | 0,2 | 0,2 | 0,2 | 0,4 | 0,4 | 0,6 | 0,9 | 1,1 | 1,3 |
| Non return valve | 1,1 | 1,5 | 1,9 | 2,4 | 3,0 | 3,4 | 4,7 | 5,9 | 7,4 | 9,6 | 11,8 | 13,9 |

G-a-pcv_a_th

The table is valid for the Hazen Williams coefficient $C = 100$ (cast iron pipework). For steel pipework, multiply the values by 1.41. For stainless steel, copper and coated cast iron pipework, multiply the values by 1.85.

When the **equivalent pipeline length** has been determined, the flow resistance is obtained from the table of flow resistance.

The values given are guideline values which are bound to vary slightly according to the model, especially for gate valves and non-return valves, for which it is a good idea to check the values supplied by the manufacturers.

VOLUMETRIC CAPACITY

| Litres per minute l/min | Cubic metres per hour m ³ /h | Cubic feet per hour ft ³ /h | Cubic feet per minute ft ³ /min | Imp. gal. per minute Imp. gal./min | US gal. per minute Us gal./min |
|-------------------------------|---|--|--|--|--------------------------------------|
| 1,000 | 0,0600 | 2,1189 | 0,0353 | 0,2200 | 0,2642 |
| 16,6667 | 1,0000 | 35,3147 | 0,5886 | 3,6662 | 4,4029 |
| 0,4719 | 0,0283 | 1,0000 | 0,0167 | 0,1038 | 0,1247 |
| 28,3168 | 1,6990 | 60,0000 | 1,0000 | 6,2288 | 7,4805 |
| 4,5461 | 0,2728 | 9,6326 | 0,1605 | 1,0000 | 1,2009 |
| 3,7854 | 0,2271 | 8,0208 | 0,1337 | 0,8327 | 1,0000 |

PRESSURE AND HEAD

| Newton per square metre N/m ² | kilo Pascal kPa | bar bar | Pound force per square inch psi | metre of water m H ₂ O | millimetre of mercury mm Hg |
|--|--------------------|----------------------|---------------------------------------|---|-----------------------------------|
| 1,0000 | 0,0010 | 1 x 10 ⁻⁵ | 1.45 x 10 ⁻⁴ | 1.02 x 10 ⁻⁴ | 0,0075 |
| 1000,0000 | 1,0000 | 0,0100 | 0,1450 | 0,1020 | 7,5006 |
| 1 x 10 ⁵ | 100,0000 | 1,0000 | 14,5038 | 10,1972 | 750,0638 |
| 6894,7570 | 6,8948 | 0,0689 | 1,0000 | 0,7031 | 51,7151 |
| 9806,6500 | 9,8067 | 0,0981 | 1,4223 | 1,0000 | 73,5561 |
| 133,3220 | 0,1333 | 0,0013 | 0,0193 | 0,0136 | 1,0000 |

LENGHT

| millimetre mm | centimetre cm | metre m | inch in | foot ft | yard yd |
|------------------|------------------|---------------|---------------|---------------|---------------|
| 1,0000 | 0,1000 | 0,0010 | 0,0394 | 0,0033 | 0,0011 |
| 10,0000 | 1,0000 | 0,0100 | 0,3937 | 0,0328 | 0,0109 |
| 1000,0000 | 100,0000 | 1,0000 | 39,3701 | 3,2808 | 1,0936 |
| 25,4000 | 2,5400 | 0,0254 | 1,0000 | 0,0833 | 0,0278 |
| 304,8000 | 30,4800 | 0,3048 | 12,0000 | 1,0000 | 0,3333 |
| 914,4000 | 91,4400 | 0,9144 | 36,0000 | 3,0000 | 1,0000 |

VOLUME

| cubic metre m ³ | litre litro | millilitre ml | imp. Gallon imp. gal. | US gallon US gal. | cubic foot ft ³ |
|-------------------------------|----------------|---------------------|--------------------------|--------------------------|-------------------------------|
| 1,0000 | 1000,0000 | 1 x 10 ⁶ | 219,9694 | 264,1720 | 35,3147 |
| 0,0010 | 1,0000 | 1000,0000 | 0,2200 | 0,2642 | 0,0353 |
| 1 x 10 ⁻⁶ | 0,0010 | 1,0000 | 2.2 x 10 ⁻⁴ | 2.642 x 10 ⁻⁴ | 3.53 x 10 ⁻⁵ |
| 0,0045 | 4,5461 | 4546,0870 | 1,0000 | 1,2009 | 0,1605 |
| 0,0038 | 3,7854 | 3785,4120 | 0,8327 | 1,0000 | 0,1337 |
| 0,0283 | 28,3168 | 28316,8466 | 6,2288 | 7,4805 | 1,0000 |

G-at_pp-en_a_sc

FURTHER PRODUCT SELECTION AND DOCUMENTATION

Xylect



Xylect is pump solution selection software with an extensive online database of product information across the entire Lowara, and Vogel range of pumps and related products, with multiple search options and helpful project management facilities. The system holds up-to-date product information on thousands of products and accessories.

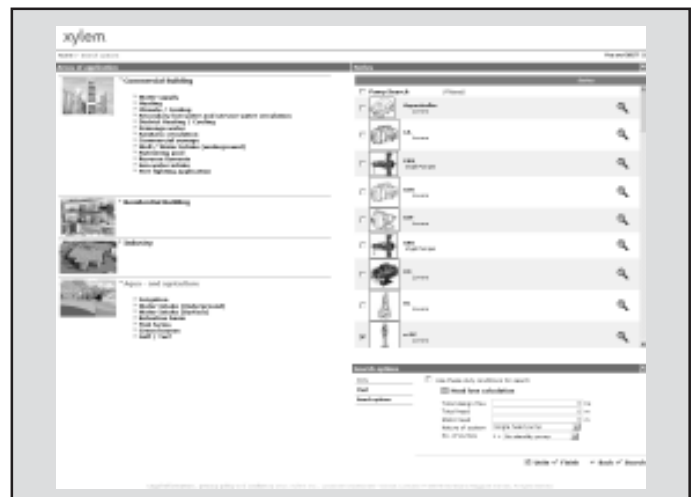
The possibility to search by applications and the detailed information output given makes it easy to make the optimal selection without having detailed knowledge about the Lowara and Vogel products.

The search can be made by:

- Application
- Product type
- Duty point

Xylect gives a detailed output:

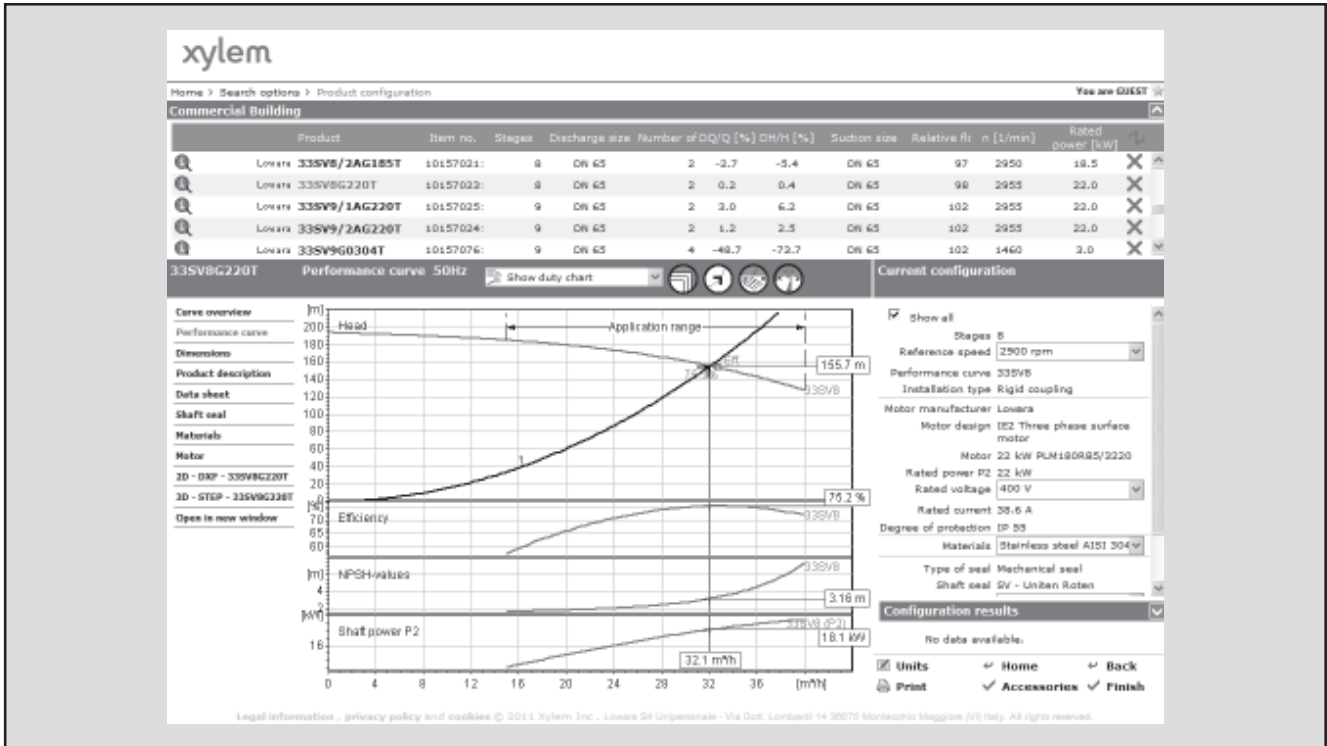
- List with search results
- Performance curves (flow, head, power, efficiency, NPSH)
- Motor data
- Dimensional drawings
- Options
- Data sheet printouts
- Document downloads incl dxf files



The search by application guides users not familiar with the product range to the right choice.

FURTHER PRODUCT SELECTION AND DOCUMENTATION

Xylect



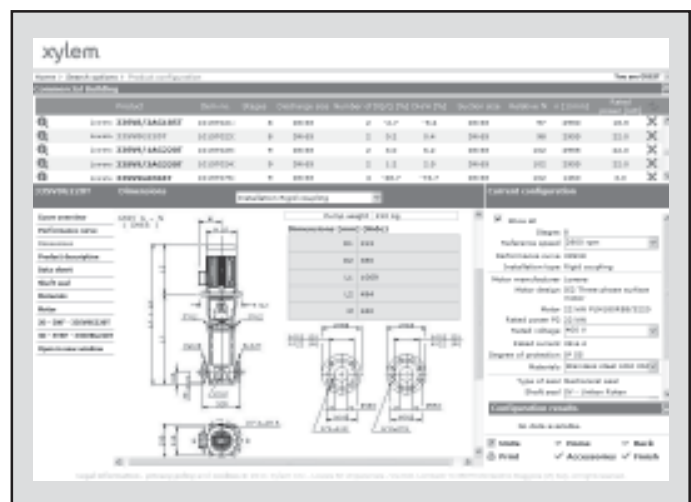
The detailed output makes it easy to select the optimal pump from the given alternatives.

The best way to work with Xylect is to create a personal account. This makes it possible to:

- Set own standard units
- Create and save projects
- Share projects with other Xylect users

Every user has a My Xylect space, where all projects are saved.

For more information about Xylect please contact our sales network or visit www.xylect.com.



Dimensional drawings appear on the screen and can be downloaded in dxf format.

Xylem |'zīləm|

- 1) The tissue in plants that brings water upward from the roots;
- 2) a leading global water technology company.

We're 12,000 people unified in a common purpose: creating innovative solutions to meet our world's water needs. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. We move, treat, analyze, and return water to the environment, and we help people use water efficiently, in their homes, buildings, factories and farms. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise, backed by a legacy of innovation.

For more information on how Xylem can help you, go to xylem.com.



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