

B/T® FIXED-SPEED PUMPS

FEATURES/BENEFITS

- ▶ Flow rates: up to 42 LPM (0.17 to 11.1 GPM) with B/T tubing
- ▶ PerfectPosition™ pump tubing ensures accurate loading and repeatable pressure and flow performance
- ▶ Tubing occlusion is optimum and automatic when door is closed and latched
- ▶ Safety interlock switch shuts off power when door is opened
- ▶ Reversible motor lets you pump in either direction
- ▶ Pumps are IP56 rated for protection from dust and water spray

SETUP

1. Open door.
2. Load PerfectPosition tubing by aligning retention marks with pump head tubing retainers.
3. Close door ensuring that latch is fully engaged.
4. Turn power on.

PUMP HEAD SPECIFICATIONS

- ▶ Corrosion-resistant Nylatron rollers
- ▶ Stainless steel/powder-coated carbon steel frame
- ▶ Powder-coated cast aluminum and polycarbonate door
- ▶ Accepts PerfectPosition tubing sizes B/T 87 and B/T 91

SPEED CONTROL/CIRCUITRY

- ▶ 115 V meets UL61010-1, CSA C22.2 No. 61010-1; 230 V for CE mark: EN61010-1 (EU low voltage), EN61326 (EU EMC), and EN809 (EU machine directive)



ORDERING INFORMATION

Catalog number	rpm	Power (50/60 Hz)
HL-77111-30	321	90 to 130 VAC
HL-77111-37	271	200 to 260 VAC



B/T fixed-speed pump 77111-30

SPECIFICATIONS

Catalog number	HL-77111-30	HL-77111-37
Performance specifications		
Flow capacity	42 LPM (11.1 GPM)	35 LPM (9.4 GPM)
rpm	321	271
Number of heads accepted	1 (supplied with drive)	
Maximum running torque	208 kg-cm (2200 oz-in)	
Reversible	Yes	
Electrical specifications		
Voltage VAC (50/60 Hz)	90 to 130	200 to 260
Current	12.6 A	6.3 A
Fuse rating	15 A	8 A
Motor type	Continuous-duty, TENV, permanent-magnet DC	
Motor size	746 W (1 hp)	
Mounting type	Direct drive	
Speed regulation	Fixed	
Physical specifications		
Housing materials	Painted steel	
Pump head materials	Powder-coated carbon steel and cast aluminum, stainless steel, polycarbonate, with Nylatron® rollers	
IP rating	IP56	
Agency listings	ETL, cETL, CE	
Operating temperature	0 to 40°C (32 to 104°F)	
Storage temperature	-10 to 65°C (14 to 149°F)	
Noise level	<75 dBA @ 1 m (39")	
Dimensions (L x W x H)	68.6 x 40.0 x 38.4 cm (27.0" x 15.8" x 15.1")	
Shipping weight	39.9 kg (88.0 lb)	

B/T PUMP TUBING FLOW RATE INFORMATION

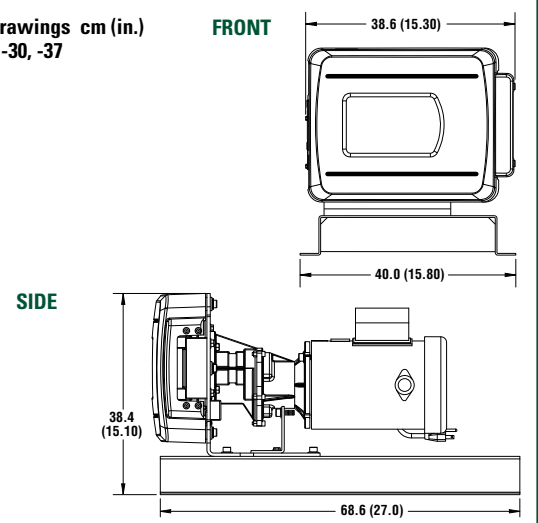
Order Masterflex B/T pump tubing separately on page 153.

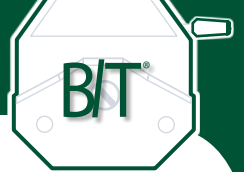
Tubing cross sections	PerfectPosition™ tubing	
	B/T 87	B/T 91
Flow rate @ 321 rpm	18.9 LPM (5.0 GPM)	42 LPM (11.1 GPM)
Flow rate @ 271 rpm	16.0 LPM (4.2 GPM)	35 LPM (9.4 GPM)

Note: Determined under the following conditions: 0 bar (0 psi) at inlet, 0.03 bar (0.5 psi) at outlet; water temperature at 22°C (72°F).

Dimensional Drawings cm (in.)

77111-30, -37





B/T[®] RAPID-LOAD PUMP HEADS for 56C Frame or IEC-72-71-14F130 Frame Motors

FEATURES/BENEFITS

- ▶ Flow rates: up to 42 LPM (0.17 to 11.1 GPM) with B/T tubing
- ▶ PerfectPosition™ pump tubing ensures accurate loading and repeatable pressure and flow performance
- ▶ Tubing occlusion is optimum and automatic when door is closed and latched
- ▶ Safety interlock switch shuts off power when door is opened
- ▶ Pump heads are IP56 rated for protection from dust and water spray

SELECTION CRITERIA

1. Determine flow rate/gear ratio required (see "Flow Rate" table at right for sample values).
2. Determine type of motor mounting required: NEMA Type 56C or IEC-72-71-14F130 with B5 mounting, 160 mm flange.

MOTOR SPECIFICATIONS

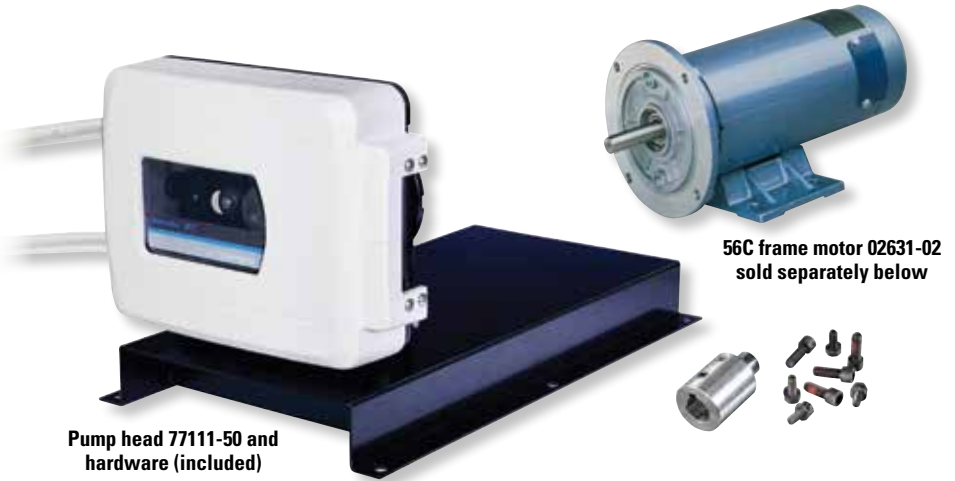
- ▶ Use a 1-hp (0.75 kW) motor; 1800 rpm maximum speed
- ▶ See motor options below
- ▶ Go to www.coleparmer.com/Motors for additional motor options and for VFD controllers to vary the speed of the motors listed below

SETUP

1. Mount motor face to pump head gear reducer using the supplied hardware.
2. Follow manual instructions for wiring connections.
3. Open door and load PerfectPosition tubing by aligning retention marks with pump head tubing retainers.
4. Close door ensuring that latch is fully engaged.
5. Turn power on.

PUMP HEAD SPECIFICATIONS

- ▶ Corrosion-resistant Nylatron rollers
- ▶ Stainless steel/powder-coated carbon steel frame
- ▶ Powder-coated cast aluminum and polycarbonate door
- ▶ Accepts PerfectPosition tubing sizes B/T 87 and B/T 91
- ▶ For CE mark: EN809 (EU machine directive)



Pump head 77111-50 and hardware (included)

56C frame motor 02631-02 sold separately below



ORDERING INFORMATION

Catalog number	For motor type
HL-77111-50	NEMA Type 56C
HL-77111-55	IEC-72-71-14F130

B/T FLOW RATE INFORMATION

Motor rpm	Pump head gear ratio	Pump head rpm	PerfectPosition pump tubing	
			B/T 87	B/T 91
Flow/rev in L (gal.)			0.059 (0.0156)	0.131 (0.035)
1725	5.6:1	308	18.2 LPM	40.3 LPM
1750	5.6:1	313	18.5 LPM	41.0 LPM
1800	5.6:1	321	18.9 LPM	42.0 LPM

Note: Flow ranges are approximate—calculated under the following conditions: 0 psig at inlet and outlet; water temperature at 22°C (72°F).

SPECIFICATIONS for B/T Pump Heads

Catalog number	HL-77111-50	HL-77111-55
Performance specifications		
Flow capacity	42 LPM (11.1 GPM)	
Maximum rpm	Pump head	321
	Motor	1800
Gear ratio	5.6:1	
Maximum running torque	208 kg-cm (2200 oz-in)	
Physical specifications		
Pump head materials	Powder-coated carbon steel and cast aluminum, stainless steel, polycarbonate, with Nylatron® rollers	
IP rating	IP56	
Agency listings	CE	
Operating temperature	0 to 40°C (32 to 104°F)	
Storage temperature	-10 to 65°C (14 to 149°F)	
Dimensions (L x W x H)	68.6 x 40.0 x 38.4 cm (27.0" x 15.8" x 15.1")	
Shipping weight	28.5 kg (63.0 lb)	

MOTORS WITH 56C FRAME

Catalog number	hp	rpm	Type	Voltage	Frequency	Phase	Wattage	IP rating ¹	Overall dimensions (L x W x H)	Shpg wt kg (lb)
DC Motors										
HL-70071-40	1	1750	TEFC	90 VDC	—	—	751	IP44	37.6 x 20.2 x 17 cm (14 ³ / ₁₆ " x 7 ¹⁵ / ₁₆ " x 6 ¹ / ₁₆ "	12.3 (27.0)
HL-70071-50	1	1750	TEFC	180 VDC	—	—	716	IP44	37.6 x 20.2 x 17 cm (14 ³ / ₁₆ " x 7 ¹⁵ / ₁₆ " x 6 ¹ / ₁₆ "	11.8 (26.0)
AC Motors										
HL-71004-45	1	1750	TEFC	115/208-230 VAC	50/60 Hz	1	750	IP44	31.3 x 22.8 x 21.2 cm (12 ³ / ₁₆ " x 8 ¹⁵ / ₁₆ " x 8 ³ / ₁₆ "	11.1 (24.5)
HL-71015-45	1	1750	WDN	208-230/460 VAC	50/60 Hz	3	750	IP53	35 x 22.2 x 17.2 cm (13 ³ / ₄ " x 8 ³ / ₄ " x 6 ³ / ₄ "	11.3 (25.0)

¹See page 194 for an explanation of IP ratings
 TENV—Totally enclosed, nonventilating TEFC—Totally enclosed, fan-cooled WDN—Washdown