

## L/S® STANDARD PUMP HEADS

### FEATURES/BENEFITS

- ▶ Ideal for fluid transfer applications where accuracy and repeatability are important
- ▶ Tubing enters/exits on top of pump head
- ▶ Deliver flow rates from 0.06 to 2900 mL/min
- ▶ Precision molded housing and tubing cavity
- ▶ Each pump head is designed for one size of tubing—ensuring optimal occlusion and performance
- ▶ Adapts easily to OEM applications
- ▶ Interchangeable
- ▶ Stackable for multichannel pumping

### SELECTION CRITERIA

1. Flow rate/tube size desired.
2. Materials of construction.
3. Compatibility with drives.

See specifications for more information.

**Order tubing and drives separately.**

### COMPATIBILITY WITH DRIVES

- ▶ Mount on all drives accepting Masterflex L/S pump heads

### PUMP HOUSING SPECIFICATIONS

#### Clear Polycarbonate (PC)

- ▶ General-purpose applications
- ▶ Pump head operation visible through housing
- ▶ Select from CRS/Buna N or 300-series SS/PTFE shielded ball-bearing

#### Polyphenylene Sulfide (PPS)

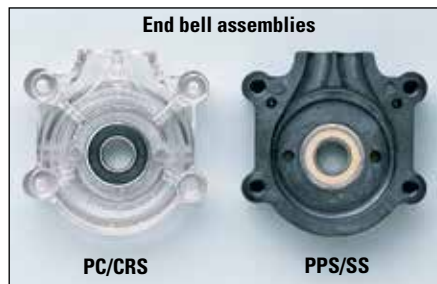
- ▶ Best protection from corrosive liquids/vapors
- ▶ 300-series stainless steel shielded ball-bearing

### Watch the VIDEO!

Watch video tutorial on how to load Masterflex® L/S® Standard Pump Heads. Go to...  
[Masterflex.com/video](http://Masterflex.com/video)



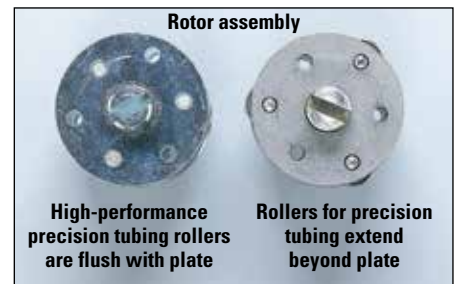
Standard pump head 07015-20



End bell assemblies

PC/CRS

PPS/SS



Rotor assembly

High-performance precision tubing rollers are flush with plate

Rollers for precision tubing extend beyond plate

### ROLLER/ROTOR SPECIFICATIONS

#### Plated Cold-Rolled Steel (CRS)

- ▶ General-purpose applications
- ▶ Ball-bearing construction
- ▶ Continuous duty up to 600 rpm

#### 300-Series Stainless Steel (SS)

- ▶ Corrosive fluids
- ▶ Shielded ball-bearing construction (highest life expectancy)
- ▶ Continuous duty up to 600 rpm

ISO9001:2008  
CERTIFIED SUPPLIER

2 year  
warranty

### ORDERING INFORMATION

Pump tubing size	PC housing		PPS housing
	CRS rotor	SS rotor	SS rotor
<b>For Precision tubing</b>			
L/S 13	HL-07013-20	HL-07013-21	HL-07013-52
L/S 14	HL-07014-20	HL-07014-21	HL-07014-52
L/S 16	HL-07016-20	HL-07016-21	HL-07016-52
L/S 17	HL-07017-20	HL-07017-21	HL-07017-52
L/S 18	HL-07018-20	HL-07018-21	HL-07018-52
<b>For High-performance Precision tubing</b>			
L/S 15	HL-07015-20	HL-07015-21	HL-07015-52
L/S 24	HL-07024-20	HL-07024-21	HL-07024-52
L/S 35	HL-07035-20	HL-07035-21	—
L/S 36	HL-07036-30	HL-07036-31	—

PC = polycarbonate PPS = polyphenylene sulfide  
CRS = cold-rolled steel SS = stainless steel

### L/S PUMP TUBING FLOW RATE INFORMATION

Order Masterflex L/S pump tubing separately on pages 68–73

Tubing cross sections	L/S Precision pump tubing					L/S High-performance Precision pump tubing			
	L/S 13	L/S 14	L/S 16	L/S 17	L/S 18	L/S 15	L/S 24	L/S 35	L/S 36
Flow rate—mL/rev	0.06	0.21	0.8	2.8	3.8	1.7	2.8	3.8	4.8
mL/min @ 600 rpm	36	130	480	1700	2300	1000	1700	2300	2900
Max pressure <sup>†</sup>	2.7 bar (40 psi)			1.4 bar (20 psi)	1.0 bar (15 psi)	2.7 bar (40 psi)		2.4 bar (35 psi)	1.4 bar (20 psi)
Max vacuum <sup>†</sup>	660 mm Hg (26" Hg)			510 mm Hg (20" Hg)			660 mm Hg (26" Hg)		
Suction lift	8.8 m H <sub>2</sub> O (29 ft H <sub>2</sub> O)			6.7 m H <sub>2</sub> O (22 ft H <sub>2</sub> O)			8.8 m H <sub>2</sub> O (29 ft H <sub>2</sub> O)		

<sup>†</sup>Actual performance varies depending upon tubing materials—see pages 20–24 and 172–192 for more information.



## SPECIFICATIONS for L/S Standard Pump Heads

Catalog number	HL-070XX-20 and -30 Series	HL-070XX-21 and -31 Series	HL-070XX-52 Series
<b>Performance Specifications</b>			
Flow capacity	0.001 to 2900 mL/min (0 to 46 GPH) <sup>†</sup>		
Max rpm	600		
Number of rollers	3		
<b>Torque Specifications<sup>‡</sup> [a single head pumping water at 0 psi, 21°C (70°F)]</b>			
Norprene®, PharMed® BPT	Starting torque	18.0 kg-cm (250 oz-in)	
	Running torque	5.8 kg-cm (80 oz-in)	
Tygon®, Viton®	Starting torque	27.7 kg-cm (385 oz-in)	
	Running torque	4.6 kg-cm (64 oz-in)	
C-FLEX®, Silicone	Starting torque	5.8 kg-cm (80 oz-in)	
	Running torque	2.2 kg-cm (30 oz-in)	
<b>Physical Specifications</b>			
Housing material	Clear polycarbonate		Polyphenylene sulfide
Rotor material	Cold-rolled steel	Stainless steel	
Operating temperature	0 to 40°C (32 to 104°F)		
Shipping weight	0.54 kg (1.18 lb)		

<sup>†</sup>Depending on pump head selected.

<sup>‡</sup>Actual torque depends on tubing size formulation. For complete torque data, please see pages 172–192.

## MULTICHANNEL CAPABILITIES

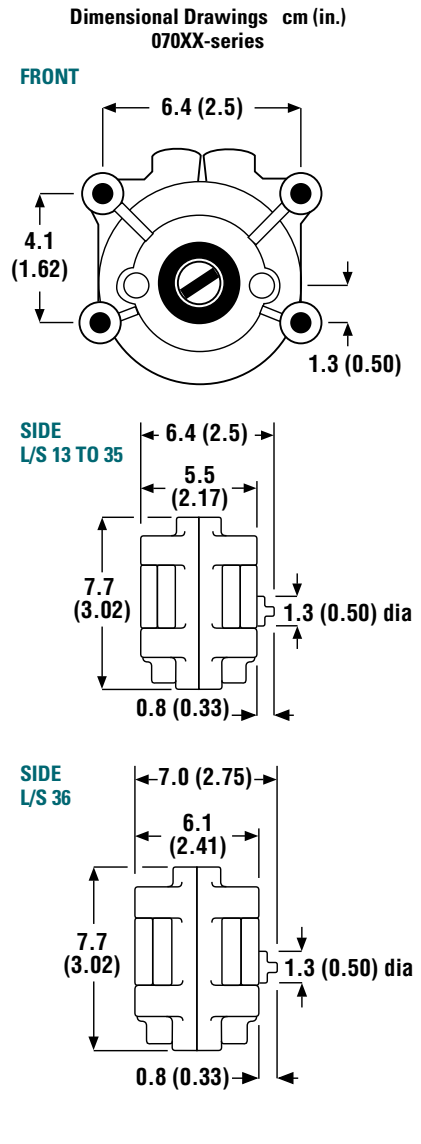
Mount up to four pump heads depending on the drive. Order hardware based on the number of pump heads to be mounted.



Mounting hardware

## MOUNTING HARDWARE

Heads to be mounted	Catalog number/set
	Stainless steel
<b>L/S 13 to 35 Standard pump heads</b>	
One	HL-07013-04
Two	HL-07013-05
Three	HL-07013-08
Four	HL-07013-09
<b>L/S 36 Standard pump head</b>	
One	HL-07036-01
Two	HL-07036-02



## NOTES

The design of the Standard pump head enables the most precise dispensing accuracy of any Masterflex pump head.

## HOW TO LOAD YOUR PUMP HEAD



1. Disassemble pump head. Load tubing.



2. Use the loading key (included) to ensure proper tubing alignment and tension.



3. Reassemble two halves and mount on drive.

L/S<sup>†</sup> TUBING ..... 68–73  
L/S<sup>†</sup> DRIVES ..... 74–107  
L/S<sup>†</sup> PUMP SYSTEMS ..... 108–117

ACCESSORIES ..... 160–171

TECHNICAL DATA ..... 172–206