

Specifications

HXL-Series Clamp-on Flowsensors

APPLICATIONS

- Artificial Heart & VAD Performance
- Medical Device & Pump Engineering
- Manufacturing & Compliance Flow Testing



Transit-time ultrasound technology measures volume flow in tubing with Sensors specifically designed Tubing Flowsensors. Most non-aerated liquids can be measured, including saline and buffer solutions, blood and water. No physical contact is made with the fluid media. H-XL Series Flowsensors can be calibrated and programmed for up to four different fluid/temperature/tubing combinations and will work with most flexible tubing types (see next page). Sensor size is determined by outer tubing diameter.

SENSOR SIZE	TUBING			BIDIRECTIONAL FLOW OUTPUTS		SYSTEM ACCURACY SPECIFICATIONS		ULTRASOUND FREQUENCY	
	ID	WALL THICKNESS	OD	RESOLUTION ¹	MAX FLOW	MAX ZERO OFFSET	ABSOLUTE ACCURACY		
	INCHES	INCHES	INCHES	ML/MIN	5V OUTPUT IN L/MIN	ML/MIN	% OF READING		
H2XL	IN SIZES 2XL-5XL RATIO OF TUBING WALL THICKNESS TO OD MUST NOT EXCEED 1.5 FOR PVC; 1:3 FOR SILICONE			1/8	0.5	1	± 5.0	± 10	3.6
H3XL				3/16	1.0	2	± 10.0	± 10	3.6
H4XL				1/4	1.0	2	± 10.0	± 10	2.4
H5XL				5/16	1.0	2	± 10.0	± 10	2.4
H6XL	1/4	1/16	3/8	2.5	5	± 30	± 10	2.4	
H7XL	1/4	3/32	7/16	5	10	± 60	± 10	1.8	
H8XL	3/8	1/16	1/2	5	10	± 60	± 10	1.8	
H9XL	3/8	3/32	9/16	5	10	± 60	± 10	1.8	
H10XL	1/2	1/16	5/8	10	20	± 120	± 10	1.2	
H11XL	1/2	3/32	11/16	10	20	± 120	± 10	1.2	
H12XL	1/2	1/8	3/4	10	20	± 120	± 10	1.2	
H14XL	5/8	1/8	7/8	25	50	± 300	± 10	1.2	
H16XL	3/4	1/8	1	25	50	± 300	± 10	1.2	
H20XL	1	1/8	1 1/4	50	100	± 600	± 10	1.2	

Calibration is dependent on tubing material, wall thickness, ultrasound velocity of liquid flowing through the tube & temperature.

1. Resolution represents the smallest detectable flow change at 0.1 Hz filter (average flow output).

2. Absolute accuracy is comprised of zero stability, resolution and zero-offset effects. Stated values apply when flow rate is greater than 5% of maximum range and zero offset is nulled.

HXL-Series Clamp-on Flowsensor cont.

STOCK TUBING				
Procedure	Cat #	TUBING (inches)		Tygon Stock Tubing If using tubing of different diameter or type, please discuss tubing with a customer service representative.
		Inner Diameter	Wall Thickness	
CAROTID SHUNTS	HQ_ 2XL	3/32 x 1/32		Tygon ND 100-65; Tygon E-3603
	HQ_ 3XL	1/8 x 3/32		Tygon E-3603
	HQ_ 4XL	1/8 x 1/16		Tygon ND 100-65; Tygon E-3603
	HQ_ 5XL	3/8 x 1/16		Tygon ND 100-65; Tygon E-3603
PED CPB, ECMO	HQ_ 6XL	1/4 x 1/16		Tygon ND 100-65; Tygon E-3603
	HQ_ 7XL	1/4 x 3/32		Tygon ND 100-65; Tygon E-3603
	HQ_ 8XL	3/8 x 1/16		Tygon ND 100-65; Tygon E-3603
ADULT CPB	HQ_ 9XL	3/8 x 3/32		Tygon ND 100-65; Tygon E-3603
	HQ_ 10XL	1/2 x 1/16		Tygon ND 100-65; Tygon E-3603
	HQ_ 11XL	1/2 x 3/32		Tygon ND 100-65; Tygon E-3603



Transonic Systems Inc. is a global manufacturer of innovative biomedical measurement equipment. Founded in 1983, Transonic sells "gold standard" transit-time ultrasound flowmeters and monitors for surgical, hemodialysis, pediatric critical care, perfusion, interventional radiology and research applications. In addition, Transonic provides pressure and pressure volume systems, laser Doppler flowmeters and telemetry systems.

AMERICAS

Transonic Systems Inc.
34 Dutch Mill Rd
Ithaca, NY 14850
U.S.A.
Tel: +1 607-257-5300
Fax: +1 607-257-7256
support@transonic.com

EUROPE

Transonic Europe B.V.
Business Park Stein 205
6181 NB Elstloo
The Netherlands
Tel: +31 43-407-7200
Fax: +31 43-407-7201
europe@transonic.com

ASIA/PACIFIC

Transonic Asia Inc.
6F-3 No 5 Hangsiang Rd
Dayuan, Taoyuan County
33747 Taiwan, R.O.C.
Tel: +886 3399-5806
Fax: +886 3399-5805
support@transonicasia.com

JAPAN

Transonic Japan Inc.
KS Bldg 201, 735-4 Kita-Akitsu
Tokorozawa Saitama
359-0038 Japan
Tel: +81 4-2946-8541
Fax: +81 04-2946-8542
japan@transonic.com