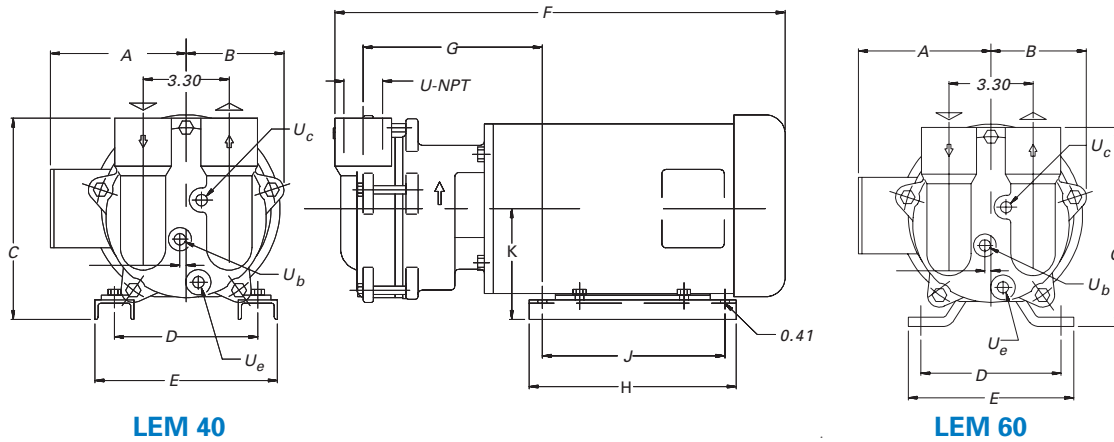


Dimensions (inches)

| PUMP MODEL | A    | B    | C    | D    | E    | F     | G    | H    | J    | K    | U    |
|------------|------|------|------|------|------|-------|------|------|------|------|------|
| LEM 40     | 5.73 | 3.75 | 7.72 | 5.50 | 7.00 | 18.20 | 6.86 | 8.00 | 7.00 | 4.25 | 1.25 |
| LEM 60     | 5.97 | 4.43 | 7.96 | 7.50 | 8.63 | 21.04 | 9.58 | 6.50 | 4.50 | 4.50 | 1.25 |

Dimensions are for AT/BT motors only. Please consult the factory for alternate enclosures. For connection sizes/ratings and motor sizes refer to engineering data table on reverse.



Capacity Table

| Pump Model - LEM 40 |                    |     |                     |     |                     |     |                     |     |                     |     |                     |     |                     |     |                    |     |                       |     |  |
|---------------------|--------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|--------------------|-----|-----------------------|-----|--|
| Speed (RPM)         | 6" Hg. V. 608 Torr |     | 12" Hg. V. 455 Torr |     | 18" Hg. V. 303 Torr |     | 20" Hg. V. 252 Torr |     | 22" Hg. V. 201 Torr |     | 24" Hg. V. 150 Torr |     | 26" Hg. V. 100 Torr |     | 28" Hg. V. 49 Torr |     | 28.92" Hg. V. 25 Torr |     |  |
|                     | cfm                | HP  | cfm                 | HP  | cfm                 | HP  | cfm                 | HP  | cfm                 | HP  | cfm                 | HP  | cfm                 | HP  | cfm                | HP  | cfm                   | HP  |  |
| 3500                | 24.0               | 1.3 | 24.0                | 1.4 | 23.5                | 1.6 | 23.0                | 1.6 | 22.0                | 1.6 | 20.5                | 1.5 | 16.5                | 1.4 | 8.0                | 1.1 | -                     | -   |  |
| Pump Model - LEM 60 |                    |     |                     |     |                     |     |                     |     |                     |     |                     |     |                     |     |                    |     |                       |     |  |
| 3500                | 36.5               | 2.6 | 37.0                | 2.8 | 37.0                | 3.0 | 37.0                | 3.0 | 37.0                | 2.9 | 35.0                | 2.8 | 30.5                | 2.7 | 23.0               | 2.3 | 8.0                   | 2.1 |  |
| 2900                | 28.0               | 1.7 | 28.4                | 2.0 | 27.3                | 2.2 | 27.3                | 2.2 | 26.2                | 2.2 | 26.0                | 2.1 | 24.6                | 2.1 | 13.5               | 1.7 | 5.0                   | 1.5 |  |

This data represents average values for pumps in standard materials. Capacity in cubic feet per minute at 68°F (20°C) using 60°F (15°C) water as a service liquid. Vacuum in inches Hg. Barometric pressure at sea level 29.92" Hg. abs. (760 Torr).

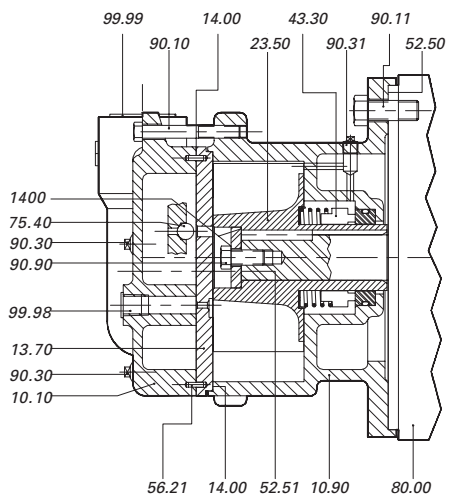
All performance data per HEI standards; subject to SIHI standard tolerances.

ENGINEERING DATA

| PUMP MODEL  | LEM 40      | LEM 60      |
|---|-------------|-------------|
| Gas Conn. Size -'U'                                   | 1 1/4" NPT  | 1 1/4" NPT  |
| Ser. Liq. Line Qty/Size -"U <sub>B</sub> "            | 1/4" NPT    | 1/4" NPT    |
| Drain (U <sub>A</sub> ) & Cav. (U <sub>C</sub> ) Size | 1/4" NPT    | 1/4" NPT    |
| Pump & Motor Wt. (lb.)                                | 64          | 85          |
| Separator Size-Recirc (G)                             | 3           | 3           |
| 1/2 Norm Max. Gas Temp. (°F)                          | 200         | 200         |
| Norm Max. Liq. Temp. (°F)                             | 180         | 180         |
| 3 Sound Level @24" Hg. (dBA)                          | 74          | 75          |
| Casing Max. Working Pressure (psi)                    | 30          | 30          |
| Pneumatic Test Pressure (psig)                        | 15          | 15          |
| Motor Data  |             |             |
| Motor Speed @ 60 HZ.                                  | 3500        | 3500        |
| Motor Speed @ 50 HZ.                                  | 2900        | 2900        |
| Std. HP/Frame @ 60 HZ.                                | 2/145 TCZ   | 3/182 TCZ   |
| Std. HP/Frame @ 50 HZ.                                | 1.5/145 TCZ | 2.5/182 TCZ |
| Std. Motor Enclosure                                  | TEFC        | TEFC        |
| Motor Code Approvals                                  | UL,CSA      | UL,CSA      |
| Std. Service Factor                                   | 1.15        | 1.15        |
| Stock Voltages  | 208/230/460 | 208/230/460 |
|   | 575         | 575         |
| Alt Enclosures Available                              | XPFC1GRD    | XPFC1GRD    |

1. Max. temp. with saturated gases.
2. Higher temp. possible on request
3. At 3 ft., 3500 RPM with motor (not certified)

SECTIONAL



MATERIALS

| ITEM             | OE               | 4B               |
|------------------|------------------|------------------|
| Casing-Wetted    | Cast Iron        | 316 SS           |
| Intermediate     | Cast Iron        | 316 SS           |
| Impeller         | 316 SS           | 316 SS           |
| 4 Motor Shaft    | Steel            | Steel            |
| Mechanical Shaft | AAB <sup>5</sup> | AAB <sup>5</sup> |

<sup>4</sup> Motor shaft is a non-wetted part <sup>5</sup> AAB =single bellows with virton elastomers, carbon vs SiC faces

SERVICE LIQUID RATES

| PUMP MODEL- LEM 40 |                     |     |     |                     |     |     |                     |     |     |                     |     |     |                    |     |     |
|--------------------|---------------------|-----|-----|---------------------|-----|-----|---------------------|-----|-----|---------------------|-----|-----|--------------------|-----|-----|
| Pump Speed         | 12" Hg. V. 455 Torr |     |     | 16" Hg. V. 354 Torr |     |     | 20" Hg. V. 252 Torr |     |     | 24" Hg. V. 150 Torr |     |     | 28" Hg. V. 49 Torr |     |     |
|                    | A                   | B   | C   | A                   | B   | C   | A                   | B   | C   | A                   | B   | C   | A                  | B   | C   |
| 3500               | 1.5                 | 0.5 | 0.3 | 1.5                 | 0.5 | 0.3 | 1.5                 | 0.5 | 0.3 | 1.5                 | 0.5 | 0.3 | 1.5                | 0.4 | 0.2 |
| 2900               | --                  | --  | --  | --                  | --  | --  | --                  | --  | --  | --                  | --  | --  | --                 | --  | --  |
| PUMP MODEL- LEM 60 |                     |     |     |                     |     |     |                     |     |     |                     |     |     |                    |     |     |
| 3500               | 1.5                 | 0.7 | 0.5 | 1.5                 | 0.8 | 0.5 | 1.5                 | 0.8 | 0.5 | 1.5                 | 0.7 | 0.5 | 1.5                | 0.7 | 0.4 |
| 2900               | --                  | 0.6 | 0.4 | --                  | 0.6 | 0.4 | --                  | 0.6 | 0.4 | --                  | 0.6 | 0.4 | --                 | 0.6 | 0.3 |

Column 'A' is the flow in USGPM required - once through.

Column 'B' is the make-up flow required when make-up water is 5°C (9°F) cooler than service water.

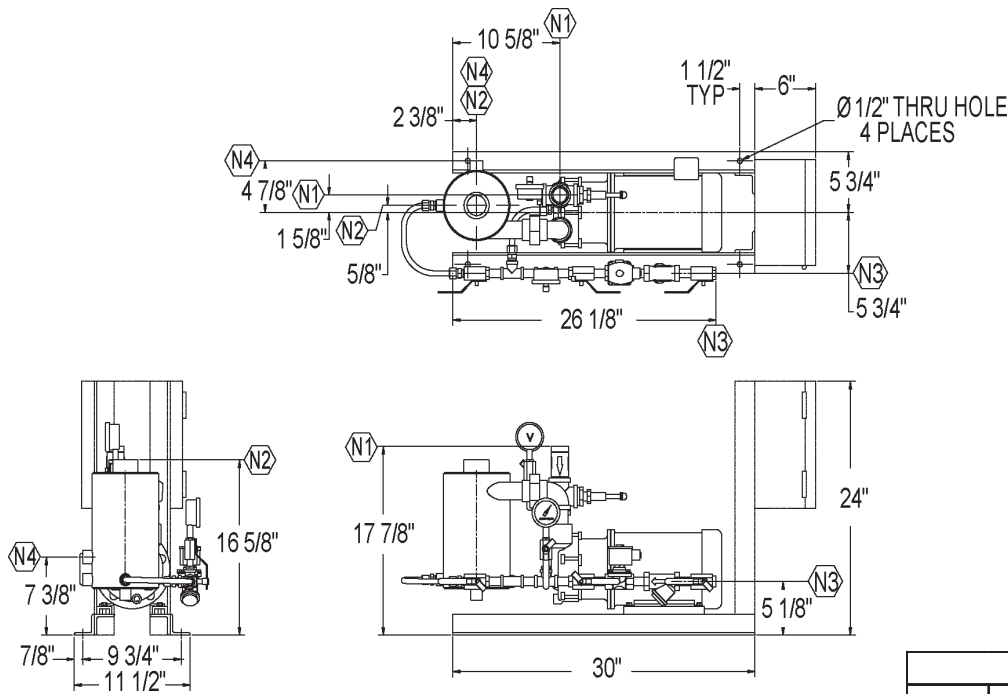
Column 'C' is the make-up flow when make-up water is 10°C (18°F) cooler than service water.

**Note:** The service liquid supply pressure may vary with pump speed and vacuum level. Please consult factory engineering department for additional information.

PARTS LIST

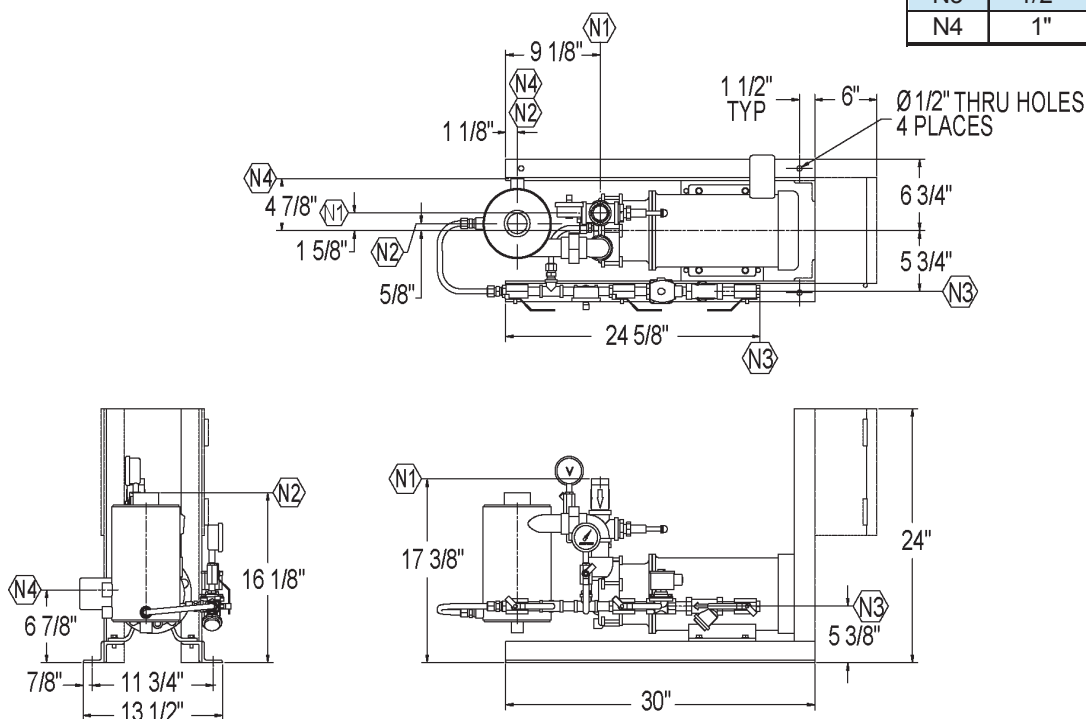
- 10.10 Cover
- 10.90 Centerbody
- 13.70 Intermediate
- 14.00 Gasket-Compound
- 23.50 Impeller
- 43.30 Mechanical Seal
- 52.50 Shim Set
- 52.51 Shim Set
- 56.21 Locating Pin
- 63.00 Impeller Plate
- 75.40 Orifice Ball
- 80.00 Motor/TEFC
- 90.10 Bolt
- 90.11 Bolt
- 90.30 Plug
- 90.90 Bolt
- 99.98 Plug - Plastic
- 99.99 Plug - Plastic

**XBAR STANDARD PACKAGE XBA 40**



| Nozzle Schedule |        |      |             |                |
|-----------------|--------|------|-------------|----------------|
| Nozzle          | Size   | Qty. | Description | Service        |
| N1              | 1-1/4" | 1    | MNPT        | Suction        |
| N2              | 1-1/2" | 1    | FNPT        | Vent           |
| N3              | 1/2"   | 1    | FNPT        | Service Liquid |
| N4              | 1"     | 1    | FNPT        | Overflow       |

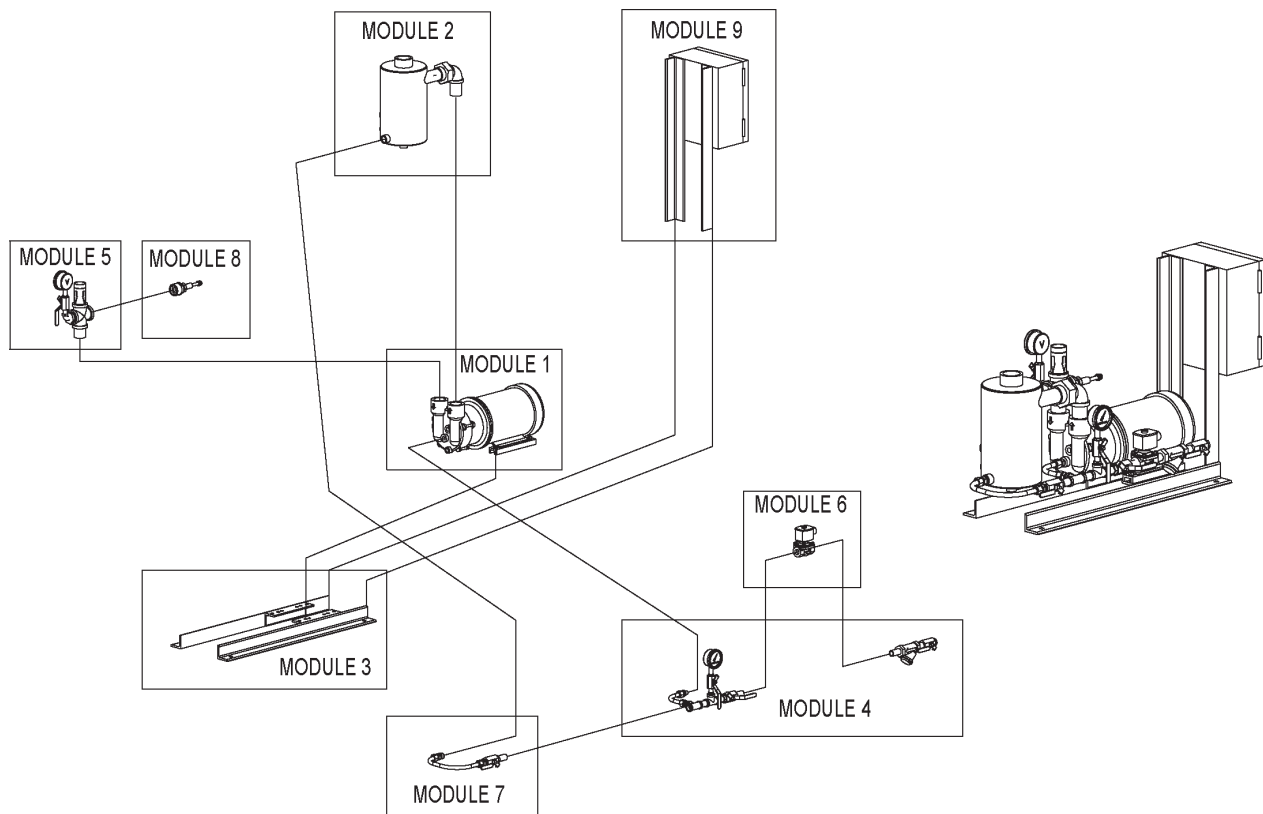
**XBAR STANDARD PACKAGE XBA 60**



| System Model No. | SIHI Pump Model No. | Motor HP/RPM | Motor Frame Size | Xba Tank Model No. | Baseplate | Approx Shipping Weight |
|------------------|---------------------|--------------|------------------|--------------------|-----------|------------------------|
| XBAR 40          | LEM 40              | 2/3500       | 145TCZ           | 1126/1567          | B2390-1   | 154                    |
| XBAR 60          | LEM 60              | 3/3500       | 184TCZ           | 1126/1567          | B2390-1   | 180                    |

Dimensions subject to change, consult factory for certified drawing if required.

**XBAR STANDARD PACKAGE MODULAR CONSTRUCTION**



| Pump Series: |   | 40/60 Series       |                                      |                |                       |
|--------------|---|--------------------|--------------------------------------|----------------|-----------------------|
| Module       | Description                               | Details            | Module Standard Construction Options |                |                       |
| Module 1     | Pump                                      | Material           | 0A                                   | 0E             | 4B                    |
|              | Motor                                     | HP                 | 2                                    |                | 3                     |
|              |   | RPM                | 3500                                 |                |                       |
|              |   | Enclosure          | TEFC                                 |                | EXPF                  |
|              |   | Voltage            | 208-230/460                          | 575            | 115/230               |
| Phase        | 3   | 3                  | 1                                    |                |                       |
| Module 2     | Discharge                                 | Separator / Piping | CS / Bronze                          | CS / Stainless | Stainless / Stainless |
| Module 3     | Baseplate                                 |                    | Rail Base                            |                |                       |
| Module 4     | Service Liquid Line (less solenoid valve) | Valve / Piping     | Bronze / CS                          | CS / CS        | Stainless / Stainless |
| Module 5     | Inlet Vacuum Line                         | Valve / Piping     | Bronze / CS                          | CS / CS        | Stainless / Stainless |
| Module 6     | Solenoid Valve                            | Enclosure          | NEMA 4                               |                | NEMA 7                |
|              |   | Voltage            | 24VDC                                | 120V/60Hz      | 110V/50Hz             |
|              |   | Material           | Bronze                               |                | Stainless Steel       |
| Module 7     | Recirculation Line                        | Valve / Tubing     | Bronze / Bronze                      | CS / CS        | Stainless / Stainless |
| Module 8     | Vacuum Relief Valve                       | Material           | Bronze                               | Iron           | Stainless Steel       |
| Module 9     | Control Panel                             | Enclosure          | NEMA 4                               |                | NEMA 7                |
|              |   | Voltage            | 230                                  | 460            | 575                   |