### HTB SERIES

**Hydraulic Test Bench**

**FILTER SYSTEMS**

**Volume 1**

The versatile hydraulic circuitry in every Schroeder HTB allows users to perform comprehensive testing of pumps, motors, double or single-acting cylinders, and valves (relief and manually operated).

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**HTB PRODUCT SPECIFICATIONS BY MODEL**

<table>
<thead>
<tr>
<th>Model</th>
<th>HTB-50-E</th>
<th>HTB-100-E</th>
<th>HTB-150-E</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPEED RANGE (bidirectional)</td>
<td>100 to 2,400 rpm</td>
<td>100 to 2,400 rpm</td>
<td>100 to 2,400 rpm</td>
</tr>
<tr>
<td>POWER AVAILABLE for testing pumps at 1,200 rpm</td>
<td>275 ft-lbs.</td>
<td>458 ft-lbs.</td>
<td>670 ft-lbs.</td>
</tr>
<tr>
<td>Expressed in torque</td>
<td>60 hp</td>
<td>115 hp</td>
<td>150 hp</td>
</tr>
<tr>
<td>TEST PRESSURE (bidirectional) for testing motors from 0 to 5,000 psi</td>
<td>275 ft-lbs.</td>
<td>458 ft-lbs.</td>
<td>670 ft-lbs.</td>
</tr>
<tr>
<td>ELECTRICAL DRIVE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor voltage</td>
<td>230/460V AC / 1,800 rpm / 60 Hz / 3 Ph</td>
<td>230/460V AC / 1,800 rpm / 60 Hz / 3 Ph</td>
<td>230/460V AC / 1,800 rpm / 60 Hz / 3 Ph</td>
</tr>
<tr>
<td>Nominal power</td>
<td>50 hp</td>
<td>100 hp</td>
<td>150 hp</td>
</tr>
<tr>
<td>Operation</td>
<td>Start/stop push button(s) included</td>
<td>Start/stop push button(s) included</td>
<td>Start/stop push button(s) included</td>
</tr>
<tr>
<td>Motor starter</td>
<td>Motor starter(s) is (are) not included; customer must advise type of starter(s) and service voltage</td>
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</tr>
<tr>
<td>HYDRAULIC S</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main variable piston pump(s) flow at 5,000 psi</td>
<td>23 gpm</td>
<td>38 gpm</td>
<td>41 gpm (38 gpm [main] + 23 gpm [aux.])</td>
</tr>
<tr>
<td>Supplemental vane pump at 2,000 psi</td>
<td>20 gpm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pressure and return ports</td>
<td>1&quot; quick disconnects</td>
<td>1&quot; quick disconnects and 2&quot; cam-groove</td>
<td>1&quot; quick disconnects and 2&quot; cam-groove</td>
</tr>
<tr>
<td>Suction ports for testing pumps</td>
<td>1&quot; quick disconnects and 2&quot; cam-groove</td>
<td>1&quot; quick disconnects and 2&quot; cam-groove</td>
<td>1&quot; quick disconnects and 2&quot; cam-groove</td>
</tr>
<tr>
<td>Flow gauge scales</td>
<td>Three scales: 2 to 14 gpm; 8 to 36 gpm; 24 to 100 gpm</td>
<td>Three scales: 2 to 14 gpm; 8 to 36 gpm; 24 to 100 gpm</td>
<td>Three scales: 2 to 14 gpm; 8 to 36 gpm; 24 to 100 gpm</td>
</tr>
<tr>
<td>Reservoir capacity</td>
<td>100 gal.</td>
<td>200 gal.</td>
<td>400 gal.</td>
</tr>
<tr>
<td>Filtration</td>
<td>3µm (absolute)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suction strainer</td>
<td>Magnetic - 20 mesh</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GENERAL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall work pan; all level gauge; fill cap with 70 mesh strainer; digital tachometer</td>
<td>30&quot; x 30&quot; x 62&quot;</td>
<td>30&quot; x 30&quot; x 62&quot;</td>
<td>30&quot; x 30&quot; x 62&quot;</td>
</tr>
<tr>
<td>OVERALL DIMENSIONS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WEIGHT</td>
<td>4,100 lbs.</td>
<td>4,100 lbs.</td>
<td>4,100 lbs. (main) + 900 lbs. (aux. power unit)</td>
</tr>
</tbody>
</table>

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**Markets Served**

Visit us online @ www.schroederindustries.com for our complete product offering!
Training available for scheduling after the HTB is completely installed and commissioned.

Troubleshooting and testing made easy with Schroeder Hydraulic Test Benches

Schroeder HTB series hydraulic test benches can shorten your troubleshooting diagnosis, take the guesswork out of your diagnosis, and let you thoroughly test new or rebuilt components and sub-assemblies before you install them into a working hydraulic system. Options for testing pilot or solenoid actuated directional control valves are also available. These benches have been refined for over 60 years by Schroeder engineers, based on the experiences and feedback of over 500 proud test bench owners. Current models are powerful, compact units that pay for themselves quickly in saved maintenance time and costs, as well as improved productivity and bottom line.

Pumps and motors can be dynamically tested

The HTB contains a hydraulic motor that is controlled via an open-loop, hydrostatic, variable-volume hydraulic circuit, providing flexible testing capabilities in terms of speed, torque and power. For example, motors can be tested for external leakage and volumetric efficiency in either direction. The HTB can also be used to break-in pumps and motors to manufacturer specifications before they are installed in a system.

Mounting pumps and motors are simple

Mounting test pumps and motors can be performed quickly and simply through flexible componentry.

- A universal mounting bracket and interchangeable mounting plates
- Drive adapter inserts for keyed shafts, an insert chuck, and a universal drive shaft
- A spline shaft insert group kit is also available as an option

Bench circuit filtration keeps oil clean

HTB circuits include efficient Schroeder Hydraulic Filters to keep its oil at optimum cleanliness, as well as filter element clogging indication directly on the main instrument panel. Therefore, you can perform testing with the peace of mind that components will not be subject to harmful levels of contamination.

You get more than just hardware

Schroeder wants you to be able to begin cutting your maintenance and test time, and become more productive right away. That’s why we furnish a factory-trained technician for a two-day, on-site training session.* We also maintain an inventory of kits and spare parts so that you can upgrade and maintain your HTB through years of operation.

Cylinder leaks are easy to find

Detecting cylinder leaks and evaluating cylinder condition (i.e. scoring, seals and packing) is a simple and safe process with the HTB:

- Single-acting cylinders are tested for leaks at maximum stroke
- Double-acting cylinders are tested at any point of piston travel

Full instrumentation is included

HTB instrumentation has been designed to make testing fast and accurate, with virtually no requirement for connecting external instruments. Every standard HTB includes a three-scale flow gauge, digital tachometer for measuring test pump or motor speed, reservoir temperature gauge, and dedicated pressure gauges (main pump, main motor, supercharge pump, test component ports).

Valve testing time is minimized

The HTB circuitry and instrumentation lets you efficiently perform a variety of valve tests and functions:

- Set relief valves
- Inspect for internal/external leakage
- Capture performance data under variably simulated operating conditions
- Determine overall efficiency
- Optional electrical and pilot pressure supplies are available on the bench for testing solenoid-actuated and pilot-operated valves.

Porting and plumbing make changing test components easy

Quick Disconnect (QD) port panel enables test components to be connected and disconnected conveniently and in minimum time. An optional hose adapter kit contains hose connections with female quick disconnects on both ends, plus a series of separate national pipe thread, straight thread, and SAE four-bolt flange adapters, ranging in size from 3/8” through 2”. The adapters are equipped with male quick disconnects for easy attachment to the hoses.

Accessories

- Suction and pressure hose and fittings group
- Solenoid and pilot-operated valve test group kit
- Air-cooled heat exchanger
- Water-cooled heat exchanger
- Spine shaft adapter kit
- Jib crane with hand-operated hoist
- Digital instrumentation package
- Filtration group
- Safety enclosure
- Bidirectional pump test circuit
- HMG data recorder
- 25 GPM case drain meter
- Particle contamination monitoring kit
- Hand-held filtration/fluid transfer system

The HMG 4000 data recorder is a portable measuring and data logging device, it enables HTB operators to easily collect, visually analyze and transfer measurement data when coupled with the digital instrumentation package.

The HFS-15 Hand Held Portable Filter is used as a portable service unit for filling and flushing hydraulic systems, as well as for cleaning in bypass flow. Solid particle contamination as well as free water can be removed by the filter elements.
Training available for scheduling after the HTB is completely installed and commissioned.

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