

FROM TYPE 5000 TO PG7000

From 1980 to 1997, **DHI** distributed Type 5000 piston gauges manufactured by Desgranges et Huot (“DH France”). In the early 1990s, **DHI** introduced its own line of piston gauges, designed and manufactured in Phoenix, Arizona and designated PG7000. PG7000 piston gauges, the first truly new high end piston gauges introduced since the late 1970s, offer a number of enhancements in fundamental metrological performance as well as modern functions and features that conventional piston gauges lack (see the PG7000 Piston Gauges commercial brochure).

To allow users of Type 5000 piston gauges to enjoy the benefits of PG7000’s features without losing their investment in Type 5000 metrology and the continuity of their metrological elements, Type 5000 masses and piston-cylinders can be used with PG7000 piston gauge platforms.

Type 5000 masses can be used “as is” on any PG7000 piston gauge platform. Type 5000 oil (5300 Series) or gas operated (5200 Series) piston-cylinders, can be converted into PG7302 (oil) or PG7202 (gas) piston-cylinder modules.

To encourage and facilitate the conversion process, a special PG7000 upgrade program is available to Type 5000 users. Under the program, any Type 5000 base can be traded-in for credit on any Type 7000 platform. Type 5000 piston-cylinders can be upgraded to PG7000 piston-cylinder modules at nominal cost. Type 5000 masses can be used “as-is” with a manual PG7000 system or can be traded-in for credit on a PG7000 AMH mass set for fully automated mass handling when used with the PG7000-AMH Automated Mass Handling option.

TRADING IN A TYPE 5300 OR 5200 SERIES BASE

Desgranges et Huot (“DH France” or “DH-Budenberg”) Type 5000 piston gauges bases can be traded in for credit towards the purchase of a PG7000 platform.

Procedure

- When obtaining a PG7000 quotation, inform your **DHI** representative that you have a Type 5000 trade-in so the trade in credit can be reflected in the quotation.
- When ordering the PG7000 platform, include the trade-in as a credit line item on the purchase order.
- The trade-in Type 5000 base must be received by **DHI** before the PG7000 Platform can be shipped with a credit applied.

Trade In Values

- Any Type 5000 piston gauge base can be traded-in for credit on a PG7000 platform purchase. The trade-in credit is 20% of the current PG7000 platform price.
- Any Type 5000 mass set can be traded-in for credit on a MS-AMH mass set. The trade-in credit is 10% of the current AMH mass set price.

UPGRADING TYPE 5000 PISTON-CYLINDERS TO PG7000 PISTON-CYLINDER MODULES

Type 5000 piston-cylinders can be converted to PG7000 piston-cylinder modules at any time. Certain oil or gas operated, liquid lubricated, piston-cylinders (from models 5301, 5302, 5303, 5304, 5305, 5306, 5201, 5202, 5203, 5501, 5502) can be converted.

When ordered with a Type 7000 Platform, up to three (3) Type 5000 piston-cylinders can be converted for the cost of calibration alone.

Almost all 5200 and 5300 Series piston-cylinders, including both those nominally in English and SI units, can be converted into PG7202 or PG7302 piston-cylinder modules. See the tables to the right for a complete listing of convertible piston-cylinders.

Specifications

Type 5000 piston-cylinders converted to PG7000 modules are calibrated using standard PG7000 module calibration procedures and delivered with an A2LA accredited calibration report.

The uncertainty in effective area and the predicted uncertainty in pressure for each piston-cylinder are determined following the uncertainty analysis in **DHI** Technical Note 7920TN01. The uncertainty reported for converted piston-cylinders is equal to, and frequently better than, that obtained prior to conversion.

Procedure

The existing Type 5000 piston-cylinder(s) is (are) returned to **DHI** approximately three (3) weeks ahead of the scheduled PG7000 platform delivery date. Each converted piston-cylinder is delivered as an assembled PG7000 module in a bullet case with a new calibration report.

Purchase Description

Order by the "Kn" of the existing Type 5000 piston-cylinder as listed in the tables to the right.

Price

First three (3) piston-cylinders when ordered with a PG7000 platform: 30% of current PG7000 module price. Add +27% to upgrade price for "as received" data if required.

Conversion from Type 5000 piston-cylinder to Type 7000 piston-cylinder module when not ordered with a PG7000 Platform: Refer to current price list "-ADP" module prices.

5200 Series Piston-Cylinders

5200 Series "Kn"	Type 7000 Designator	Type 7000 Part Number
0.5 MPa/kg	PC-7200-500-ADP	401784
1 MPa/kg	PC-7200-1-ADP	401786
2 MPa/kg	PC-7200-2-ADP	401788
100 psi/kg	PC-7200-100P-ADP	401785
200 psi/kg	PC-7200-200P-ADP	401787

5300 Series Piston-Cylinders

5300 Series "Kn"	Type 7000 Designator	Type 7000 Part Number
0.5 MPa/kg	PC-7300-500-ADP	401473
1 MPa/kg	PC-7300-1-ADP	401475
2 MPa/kg	PC-7300-2-ADP	401478
100 psi/kg	PC-7300-100P-ADP	401474
200 psi/kg	PC-7300-200P-ADP	401476
250 psi/kg	PC-7300-250P-ADP	401477
300 psi/kg	PC-7300-300P-ADP	401479

Delivery

Four (4) to six (6) weeks after receipt of order or with delivery of PG7000 Platform when ordered together.

Existing Type 5000 piston-cylinder(s) to be returned to **DHI** three (3) weeks prior to final delivery.

USING TYPE 5000 MASSES WITH A PG7000

Type 5000 masses can be used "as is" on a PG7000 platform. The following points should be noted:

- The maximum mass load is 100 kg on PG7202, PG7302, PG7102 and 35 kg on PG7601. Type 5000 5 kg masses will not fit under PG7601's bell jar.
- Type 5000 masses will not work with PG7000-AMH Automated Mass Handling accessory (see trade in notes on page 1).
- Type 5000 masses, regardless of their accuracy class, can be adjusted and calibrated with uncertainty of ± 10 ppm.
- Type 5000 masses include adjustment pockets that may trap gas and increase vacuum reference pump down times when used with PG7601.

DH Instruments, a Fluke Company
4765 East Beautiful Lane
Phoenix AZ 85044-5318
USA



Tel 602.431.9100
Fax 602.431.9559
dhi@dhinstruments.com
www.dhinstruments.com