The Penny+Giles ICT050 Contactless In-Cylinder Linear Transducer has been specifically designed for small bore mobile and static hydro-pneumatic actuators.

Designed primarily for the off-highway markets, the ICT050 linear transducer provides reliable, fit-and-forget position sensing of the cylinder rod in actuators with strokes up to 500mm.

It is a robust, non-contact transducer suitable for the harsh conditions of lifting and steering position applications and hydro-pneumatic active suspension systems. It works on an inductive coil principle, with virtually infinite resolution and is capable of withstanding temperatures up to 200°C and working pressures up to 500Bar.
**ELECTRICAL STROKE**

1. **STROKE LENGTH** specified by customer within range 25mm to 900mm.
2. These specifications apply only when the ICT is operated in conjunction with a Penny & Giles "ICT" ELECTRONIC MODULE.
3. Each Transducer is supplied with a sensor length module calibrated to match the electrical stroke length "E".

**PROGRAMMING MODULE**

Each ICT transducer is supplied with a sensor length module calibrated to match the electrical stroke length "E". The module is plug-and-play into the required "ICT" electronic module via mating connectors.

**ORDERING CODE**

**THREADED FLANGE**

ICT050/ / / / / / / /

**FLANGE OPTION**

- METRIC = INTERNAL METER FLANGE
- EU = EXTENDED UNMETER FLANGE
- RE = REVERSED THREADED METRIC FLANGE
- RU = REVERSED THREADED UNMETER FLANGE

**CORE OPTION**

- SC = SLEEVED CORE
- TR = THREADED CORE METRIC
- FF = FORCE FIT

**STROKE LENGTH** E: 4 mm

**TEMPERATURE RANGE (OPERATING)**

H: 20°C → +60°C
L: -20°C → +20°C

**FITTING PROFILES AND DIMENSIONS**

For suggested fitting profiles and dimensions refer to AI203558 (H TEMP RANGE) or AI208549 (L TEMP RANGE).

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**FOR SUGGESTED FITTING PROFILES AND DIMENSIONS REFER TO AI203558 (H TEMP RANGE) OR AI208549 (L TEMP RANGE)**

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**PENNY & GILES**

**ICT050**

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**PENNY + GILES**

**PART NUMBER:**

ICT050

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**SCALE**

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**MASS (g)**

---

**VOL. (mm³)**

---

**REF.**

---

**FINISH**

CLEAN

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**TITLE**

IN CYLINDER TRANSDUCER
MACHINING DETAILS FOR UNIFIED FLANGE

PORT CONFORMS TO SAE J1926/1, CONNECTIONS FOR FLUID POWER AND GENERAL USE - PORTS AND STUD ENDS WITH ISO 725 THREADS AND O'RING SEALING - PART 1: THREADED PORTS WITH O'RING SEAL IN TRUNCATED HOUSING

SUITABLE PORT CUTTERS ARE AVAILABLE FOR THESE DETAILS.....

* IF FACE OF PORT IS MACHINED DIMENSIONS ø19.00 x 1.6 max NEED NOT APPLY AS LONG AS R0.2/0.1 IS MAINTAINED TO AVOID DAMAGE TO O-RING DURING INSTALLATION.

MACHINING DETAILS FOR METRIC FLANGE

PORT CONFORMS TO ISO 6149-1:1993, CONNECTIONS FOR FLUID POWER AND GENERAL USE - PORTS AND STUD ENDS WITH ISO 261 THREADS AND O'RING SEALING - PART 1: PORTS WITH O'RING SEAL IN TRUNCATED HOUSING

SUITABLE PORT CUTTERS ARE AVAILABLE FOR THESE DETAILS.....

* IF FACE OF PORT IS MACHINED DIMENSIONS ø16.00 x 1.00 max NEED NOT APPLY AS LONG AS R0.2/0.1 IS MAINTAINED TO AVOID DAMAGE TO O-RING DURING INSTALLATION.

ITEM NO. DESCRIPTION P&G PART No. QTY.
1 THIN NUT M5x0.8 X63-072-050 1
2 FULL NUT 0.190-32 UNF X63-111-003 1
3 WAVEY WASHER - ELP2 X63-112-002 2
4 SHIM WASHER P55044/3 1
5 CIRCLIP D1300-0130 X69-005-109 1
6 O'RING BROWN (7.65 x 1.63) X64-194-114 1
7 O'RING (8 x 1.4) X64-194-015 1
8 O'RING [x2] X64-194-016 1
9 ANTI EXTRUSION RING X63-076-305 1
10 M3X0.5 CONICAL SET SCREW P200919 1
11 LABEL (SUPPLIED LOOSE) P204986 1
12 ALTERNATE CABLE GLAND SEAL X61-213-202 1

ITEM 12, LABEL, IS SUPPLIED FOR THE CUSTOMER TO RECORD ICT ORDERING CODE AND TO BE FITTED IN VISIBLE LOCATION ADJACENT TO SENSOR FOR RE-ORDERING REFERENCE.

ITEM 14, ALTERNATE CABLE GLAND SEAL, IS SUPPLIED FOR CONNECTING ICT050 DIRECT TO EICTM.

SUGGESTED ICT050 INSTALLATION DETAILS AND INSTALLATION KIT "H" TEMP RANGE

PART NUMBER: AI203558

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* IF IN DOUBT ASK
SLEEVED CORE ASSEMBLY
MACHINING DETAILS

FORCE FIT CORE
MACHINING DETAILS

1.00 TYP.
FREE SPACE REQUIRED
FOR RETURN OIL FLOW.

NOTE: INSTALLATION TOOL
REQUIRED SEE P&G DRAWING T56726

LOCK CORE ASSEMBLY
WITH NUT
1 OR 2
AND LOCTITE 242.

THREADED CORE ASSEMBLY
M5 x 0.8 OR 0.190-32 UNF

1.00 TYP.
FREE SPACE REQUIRED
FOR RETURN OIL FLOW.

SCALE
UNLESS STATED

D No
ICT050
FIRST USED ON
A156140

MATERIAL

FINISH

UNLESS STATED
SUGGESTED ICT050 INSTALLATION
DETAILS AND INSTALLATION KIT
'H' TEMP RANGE

PART NUMBER:
AI203558

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MACHINING DETAILS FOR UNIFIED FLANGE
PORT CONFORMS TO SAE J1926/1, CONNECTIONS FOR FLUID POWER AND GENERAL USE - PORTS AND STUD ENDS WITH ISO 725 THREADS AND O'RING SEALING - PART 1: THREADED PORTS WITH O'RING SEAL IN TRUNCATED HOUSING

SUITABLE PORT CUTTERS ARE AVAILABLE FOR THESE DETAILS....

MACHINING DETAILS FOR METRIC FLANGE
PORTS CONFORM TO ISO 6149-1:1993, CONNECTIONS FOR FLUID POWER AND GENERAL USE - PORTS AND STUD ENDS WITH ISO 261 THREADS AND O'RING SEALING - PART 1: PORTS WITH O'RING SEAL IN TRUNCATED HOUSING

SUITABLE PORT CUTTERS ARE AVAILABLE FOR THESE DETAILS....

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ITEM 14, ALTERNATE CABLE GLAND SEAL, IS SUPPLIED FOR CONNECTING ICT050 DIRECT TO EICTM.

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* IF FACE OF PORT IS MACHINED DIMENSIONS ø16.00 x 1.00 max NEED NOT APPLY AS LONG AS R0.2/0.1 IS MAINTAINED TO AVOID DAMAGE TO O-RING DURING INSTALLATION.
SLEEVED CORE ASSEMBLY
MACHINING DETAILS

FORCE FIT CORE
MACHINING DETAILS

1.00 TYP.
FREE SPACE REQUIRED
FOR RETURN OIL FLOW.

NOTE: INSTALLATION TOOL
REQUIRED SEE P&G DRAWING T56726

LOCK CORE ASSEMBLY
WITH NUT

1 OR 2
AND LOCTITE 242.

THREADED CORE ASSEMBLY
M5 x 0.8 OR 0.190-32 UNF

1.00 TYP
FREE SPACE REQUIRED
FOR RETURN OIL FLOW.

SUGGESTED ICT050 INSTALLATION
DETAILS AND INSTALLATION KIT
L' TEMP RANGE

PART NUMBER:
AI208549