

iTherm® Piston

PRODUCT DESCRIPTION

1 DESCRIPTION

iTherm® Piston is an ultimate solution in thermal effectiveness and durability.

It is highly innovative conformal-cooling single-body solution and proven-performer applied where optimum process solutions are required.



2 MAIN ADVANTAGES

- Durability min 50.000 shots (see warranty)
- The piston has highest cooling effectiveness of all the products known; cooling of the biscuit exceeds that of copper pistons, and it is designed as such for further reduction of cycle time.
- Easy to maintain and replace.

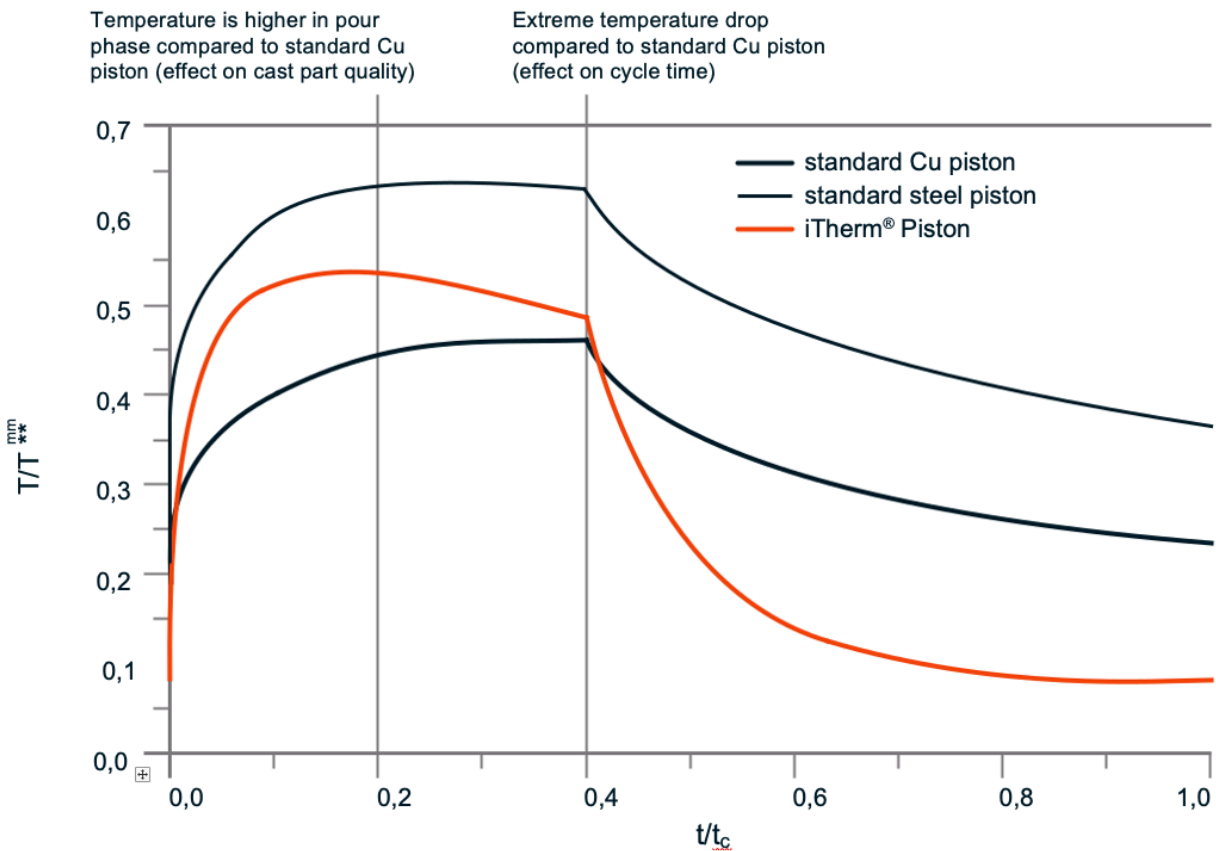
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PRODUCT DESCRIPTION

3 GRAPH

iTherm® Piston presents an optimum solution for stable process operation, in-service life, and reduction of cycle time in HPDC. There are three different types of iTherm® Pistons (V2.1, V3.1 and V4.1), each suitable to satisfy requirements of certain application.

iTherm®+ Piston comes with additional surface protection and improvement in thermal characteristics.

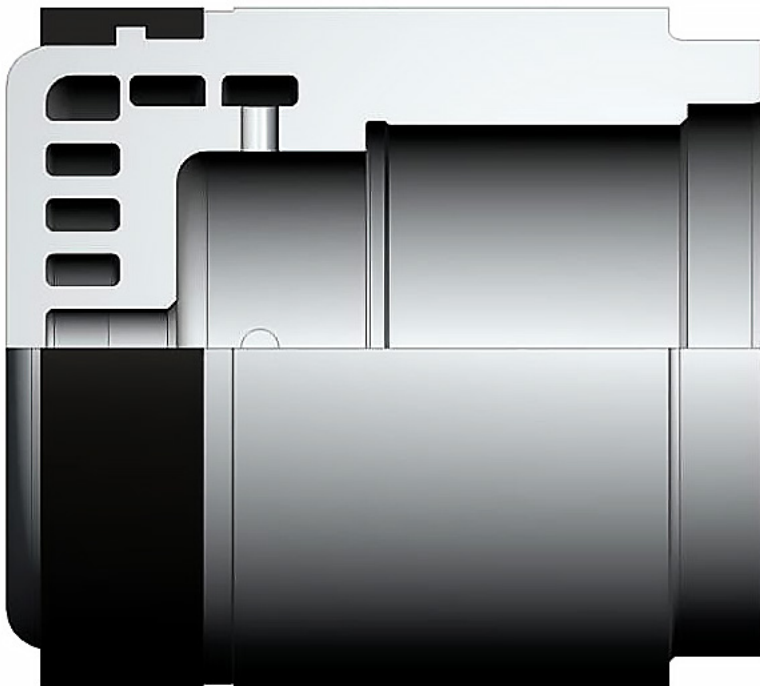


** T/T_{min} is iTherm® Piston surface temperature normalized with temperature of molten aluminium

iTherm® Piston

TECHNICAL SPECIFICATIONS

1 iTherm® Piston V2.1



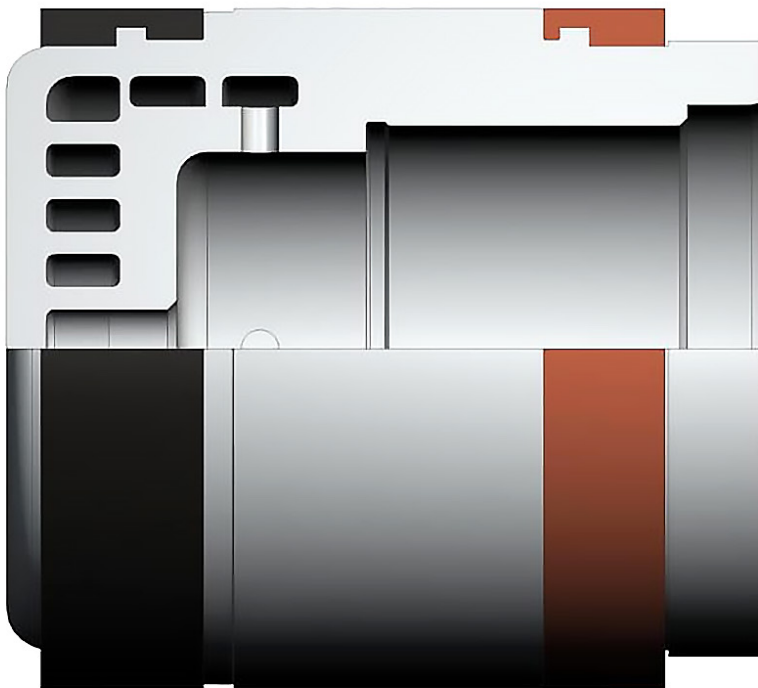
APPLICATION

- Medium to big machines, from 70 up to 160 mm
- All applications
- Structural parts

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TECHNICAL SPECIFICATIONS

2 iTherm® Piston V3.1



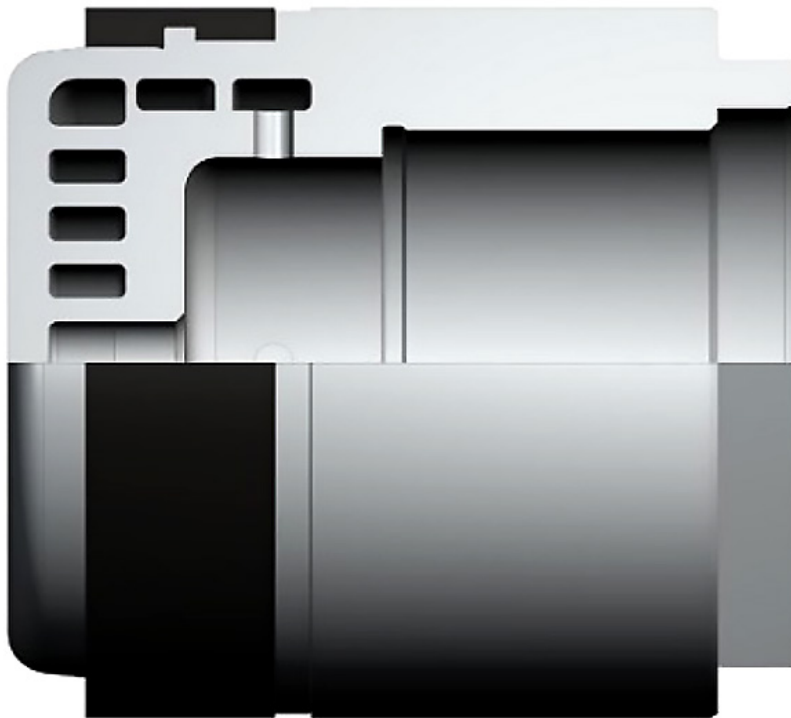
APPLICATION

- Medium to big machines, from 70 up to 160 mm, or from 3,00" up to 6,00"
- All Al and Mg casting applications
- Structural parts

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TECHNICAL SPECIFICATIONS

3 iTherm® Piston V4.1



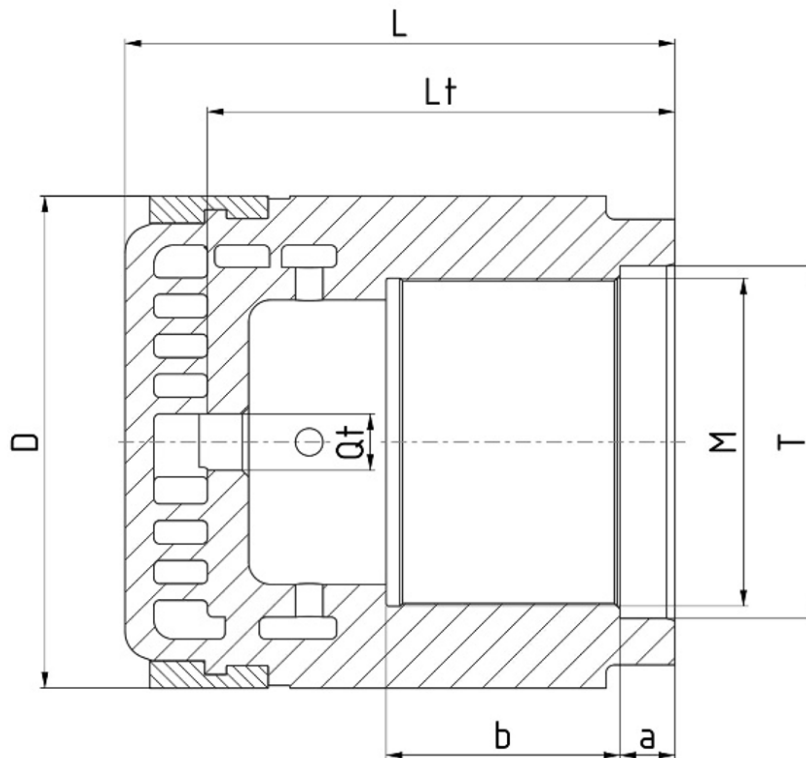
APPLICATION

- biggest machines, from 120 up to 180 mm or from 4,50" up to 7,00"
- all applications
- specially designed for engine blocks casting or other large castings

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TECHNICAL SPECIFICATIONS

3 iTherm® PISTON DIMENSIONS



D	70	75	80	85	90
L	120	120	120	120	120
T x a	49x20	49x20	57x20	57x20	67x20
M x B	M36x2 x 35	M36x2 x 35	M48x2 x 35	M48x2 x 35	M58x2 x 35
Lt	102	102	102	102	102
Qt	12,5	12,5	12,5	12,5	12,5

D	95	100	105	110	115
L	120	120	125	130	135
T x a	67x20	77x20	77x20	84x20	84x20
M x B	M58x2 x 35	M62x2 x 35	M62x2 x 40	M72x2 x 45	M72x2 x 50
Lt	102	102	102	107	112
Qt	12,5	12,5	16,5	16,5	16,5

All dimensions are in mm

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D	120	125	130	135	140
L	140	145	150	150	160
T x a	94x20	94x20	99x20	99x20	99x20
M x B	M76x2 x 55	M76x2 x 55	M85x2 x 55	M85x2 x 55	M85x2 x 65
Lt	116	116	126	126	136
Qt	16,5	16,5	16,5	16,5	16,5

D	145	150	160	170	180
L		170	180	190	200
T x a		116x20	116x22	129x22	129x22
M x B		M105x2 x 75	M105x2 x 75	M120x2 x 85	M120x2 x 85
Lt		146	155	160	170
Qt		16,5	16,5	18,5	18,5

All dimensions are in mm

4 OPERATING INSTRUCTIONS

- iTherm® pistons are designed to operate with water as the coolant with forced coolant flow.
- Coolant flow must be established before startup, before any shots are made.
- Coolant center-feed tube length (Lt), diameter (Qt) installation must be according to specification. This means center tube must seat properly in the front of the piston to form a complete cooling circuit.
- There are no restrictions on coolant temperature. Unregulated tower water at room temperature (20-30°C) is frequently used, with no adverse impact on component. This means that the shot tip is the most effective surface for cooling the biscuit.

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Do you need a slightly different
design or component?

We got you covered.

Contact our die casting professionals and we will do our best to match your requirements. You can count on us to support you through each step of performance improvement.

sales@hts-ic.com