

CASTOOLTM
TOOLING SYSTEMS

DIE HEATERS

TWIN CELL

SA CE
APPROVED



4-Side Heating

MASTER
CONTROLLER



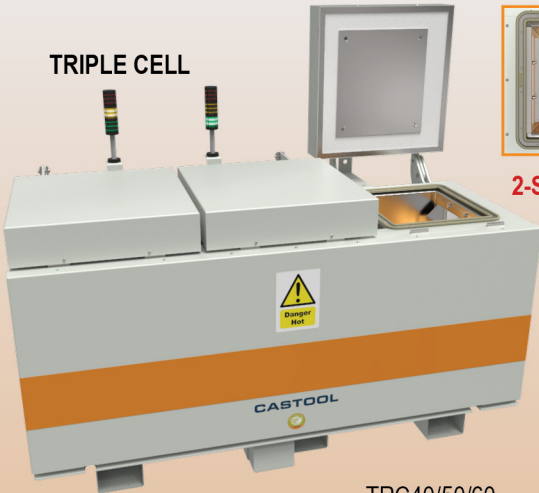
TCX100/200/Custom



TRIPLE CELL



2-Side Heating

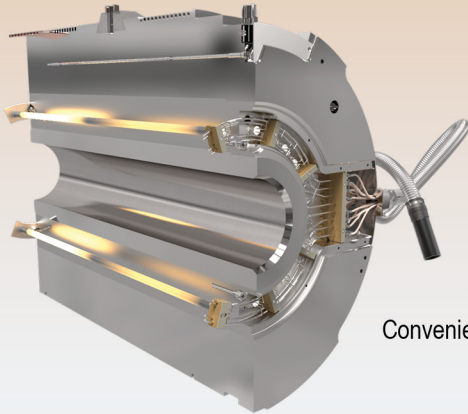


TRC40/50/60

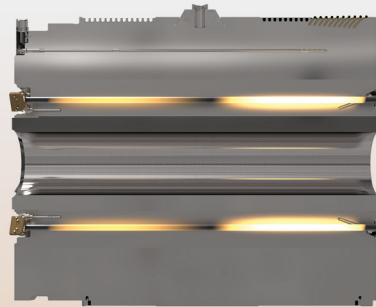
Die Jacks and Splitters Available



CONTAINERS, RELINES AND CONTROL PANELS



Hard-Wired or
Convenient Quick-Connect Plug



Quick Response
(QR) Container

Maintain stable liner temperature by dissipating heat as generated by the process

QR, QRC, QRX
Optional air and water control
for increased productivity

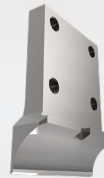
3-PIECE FOR ADDED STRENGTH

SHEAR BLADES

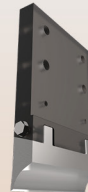
ALLOY AND
PROFILE SPECIFIC



DELTA



SCOOP

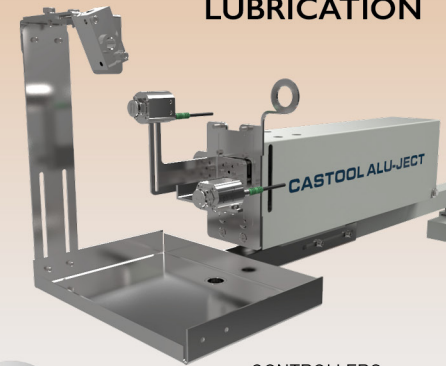


2-Piece SCOOP



KNIFE

LUBRICATION



CONTROLLERS,
APPLICATORS AND LUBRICANTS



TOOL RELEASE
Boron Nitride
Protection

ALU-JECT

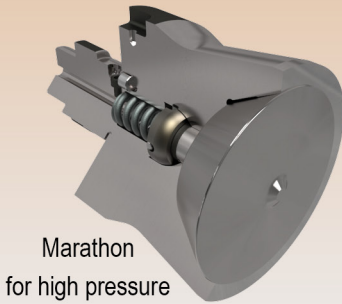


STICK (BAR), TABLET, LIQUID

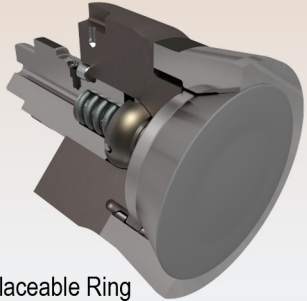
**NO SMOKE, WATER BASED
BIODEGRADABLE**

DUMMY BLOCKS

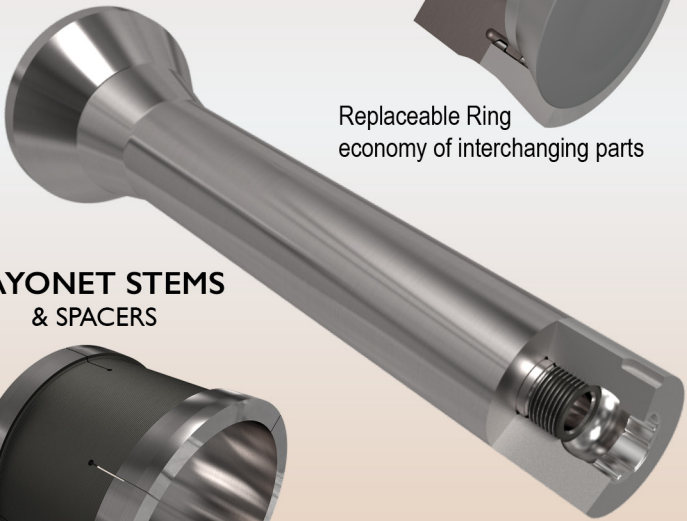
H-13 (1.2344) and Tuff
Temper



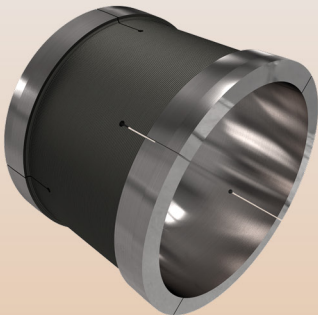
Marathon
for high pressure



Replaceable Ring
economy of interchanging parts



BAYONET STEMS & SPACERS



COLD CLEAN
OUT BLOCKS

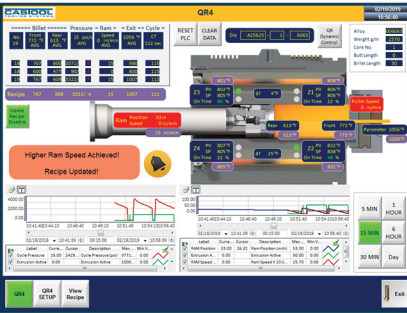
SCHMOLZ + BICKENBACH
International

HOT WORK TOOL STEELS



CASTOOL MAKES EXTRUSION BETTER

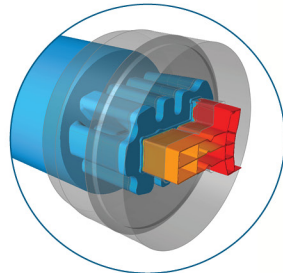
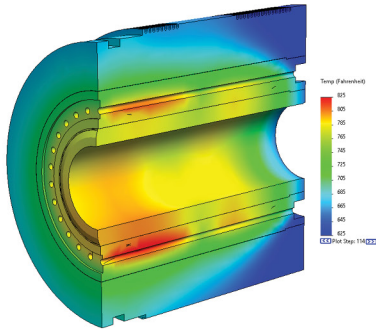
BETTER PROFILES FASTER



PROGRAMMING



OPTIMIZATION



SIMULATION using HyperXtrude and Solid Works

The **PERFECT DIE** requires the die and liner temperature to be stable from the first to the last billet.

intertek

CERTIFICATE OF REGISTRATION

This is to certify that the management system of:
Castool Tooling Systems
has been registered by Intertek in conformity to the requirements of:
ISO 45001:2018
The management system is applicable to:
Design, manufacturing and supply of tooling systems for the extrusion and casting industries.

Castool Tooling Systems
10000 Highway 100
Suite 200
Carmichael, CA 95628
USA
Tel: +1 916 481 2200
Fax: +1 916 481 2201
www.castool.com

Intertek
14000 Midway Avenue, Suite 100
Fremont, CA 94555
USA
Tel: +1 510 709 7000
Fax: +1 510 709 7001
www.intertek.com

intertek

CERTIFICATE OF REGISTRATION

This is to certify that the management system of:
Castool Tooling Systems
has been registered by Intertek in conformity to the requirements of:
ISO 9001:2015
The management system is applicable to:
Design, manufacturing and supply of tooling systems for the extrusion and casting industries.

Castool Tooling Systems
10000 Highway 100
Suite 200
Carmichael, CA 95628
USA
Tel: +1 916 481 2200
Fax: +1 916 481 2201
www.castool.com

Intertek
14000 Midway Avenue, Suite 100
Fremont, CA 94555
USA
Tel: +1 510 709 7000
Fax: +1 510 709 7001
www.intertek.com

intertek

CERTIFICATE OF REGISTRATION

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Design, manufacturing and supply of tooling systems for the extrusion and casting industries.

Castool Tooling Systems
10000 Highway 100
Suite 200
Carmichael, CA 95628
USA
Tel: +1 916 481 2200
Fax: +1 916 481 2201
www.castool.com

Intertek
14000 Midway Avenue, Suite 100
Fremont, CA 94555
USA
Tel: +1 510 709 7000
Fax: +1 510 709 7001
www.intertek.com

MATERIALS

ALLOY	Working hardness (HRC)	Hot strength	Toughness	Hot wear resistance	Thermal Conductivity (W/mk)	Cost
Con-Duct	34-38	●	●●●●●●●●	●	●●●●	○
L6 (1.2714)	38-42	●●	●●●	●●	●●●●	○
H11 (1.2343)	38-52	●●	●●●	●●	●●●●	●
H13 (1.2344)	38-52	●●●	●●●	●●●	●●●●	●
E40K	42-52	●●●	●●●●	●●●	●●●●	●●
Tuff Temper	42-52	●●●●	●●●●	●●●●	●●●●	●●
Q10	42-52	●●●	●●●	●●●	●●●●	●●
DAC3	42-52	●●●	●●●	●●●	●●●●	●●

Extrusion processes can vary widely. Alloy types, pressures, cycle times, size and lubrication can all play a role. Choosing the best material for each component of the tooling system can be challenging, at the same time as being cost competitive. The chart lists the thermal conductivity, wear properties, temperature range and cost factor for several of the materials Castool uses.

MANY OF CASTOOL PRODUCTS AND PROCESSES ARE PATENTED.

The Director of the United States Patent and Trademark Office

The United States of America

Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America, or importing the invention into the United States of America, and if the invention is a process, of the right to exclude others from using, offering for sale, or selling throughout the United States of America, or importing into the United States of America, products made by that process for the term set forth in 35 U.S.C. 154(a)(2) or 151, subject to the payment of maintenance fees as provided by 35 U.S.C. 410b, and the Maintenance Fee Notice on the inside of the cover.

Wissell K. Lee
Director of the United States Patent and Trademark Office

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(12) Pub. Date: May 11, 2017

INVENTOR: ERIC BYRONGER LEMKE, Inventor
(71) Applicant: ERIC BYRONGER LEMKE, Inventor
(72) Inventor: Paul Barry Robbins, Paul Barry (U.S.); ERIC BYRONGER LEMKE, Inventor
(73) Assignee: ERIC BYRONGER LEMKE, Inventor
(21) Appl. No.: 15/196,242
(22) Filed: Nov. 1, 2016
(54) Title: Extrusion Die, Apparatus and Method

United States Patent (11) Patent No. US 8,811,562 B2
(12) Date of Patent: Nov. 14, 2017

INVENTOR: ERIC BYRONGER LEMKE, Inventor
(71) Applicant: ERIC BYRONGER LEMKE, Inventor
(72) Inventor: Paul Barry Robbins, Paul Barry (U.S.); ERIC BYRONGER LEMKE, Inventor
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(73) Assignee: ERIC BYRONGER LEMKE, Inventor
(21) Appl. No.: 15/196,242
(22) Filed: Nov. 1, 2016
(54) Title: Extrusion Die, Apparatus and Method

United States Patent (11) Patent No. US 8,975,275 B2
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INVENTOR: ERIC BYRONGER LEMKE, Inventor
(71) Applicant: ERIC BYRONGER LEMKE, Inventor
(72) Inventor: Paul Barry Robbins, Paul Barry (U.S.); ERIC BYRONGER LEMKE, Inventor
(73) Assignee: ERIC BYRONGER LEMKE, Inventor
(21) Appl. No.: 15/196,242
(22) Filed: Nov. 1, 2016
(54) Title: Extrusion Die, Apparatus and Method

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INVENTOR: ERIC BYRONGER LEMKE, Inventor
(71) Applicant: ERIC BYRONGER LEMKE, Inventor
(72) Inventor: Paul Barry Robbins, Paul Barry (U.S.); ERIC BYRONGER LEMKE, Inventor
(73) Assignee: ERIC BYRONGER LEMKE, Inventor
(21) Appl. No.: 15/196,242
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No single component of the extrusion production process should be examined or evaluated individually.

Each interacts with at least one other complementary element of the process. If the interacting elements are equally efficient, they will reinforce and enhance the function of each other.

Only if the entire production process is considered as an integrated system, with all parts operating together in common cause, can maximum efficiency be approached.

All Castool products promote energy conservation and are environmentally friendly.



CASTOOLTM
TOOLING SYSTEMS

CANADA +1.905.852.0121



THAILAND +66.38.345.188

WWW.CASTOOL.COM

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