

BENEŠ A LÁT

We're traditional mechanical engineering manufacturing company dated since 1934. Since the very beginning our focus are high quality nonferrous metals castings made of Aluminum and Zinc alloys; since 50's last century we've deployed technology of plastic materials injection. Due to long term development in the casting technology we extended our capability to building casting machines of our own design – Low-Pressure Die-Casting machine for Aluminum alloys.

Through the more than 80 years of continuous development of technology portfolio we're today capable to assist our customer from

technology/design development, through mathematical simulations and analyses to the casting tools and casting equipment manufacturing. We provide a complex solution from prototype-samples, serial castings up to finished, CNC machined, surface treated and sub-assembled units.

Through the wide technology spectrum in one house and due to the through generations developed know-how in the technical field we simplify and speed up for our customers way from the idea to the serial solution.

PATENTED SINCE 1930

1) In 1927, Mr. Josef Polak patented the first high-pressure die-casting, cold chamber machine. Ten years later the upgraded solution was patented. All of his machines have been patented in the United States. These machines are roots of today cold chamber die-casting machines.

2) our grandfather, Mr. Josef Lat designed and build his first low-pressure die-casting machine in 1952. The principles of the machine are identical to today machines concept, with the exception that the manual control system of that era is automated to the 21st century level.

3) In addition to the first low-pressure die-cast machine Josef Lat also designed and build the hot chamber die-casting machine for ZAMAK alloys. Build in 1950's in our foundry. Shortly after Wottan and Frech machines were available and have been used for serial production since.

4) in 1980's local Czechoslovak high-pressure die-casting manufacturer – VIHORLAT Snina based their R&D department at our foundry. That company was a manufacturer of the CLT, CLH, CLOO, CS die-casting and injection machines which originate from the roots of Mr. Polak's company. The R&D engineers conducted their research and testing while working alongside Wottan and Frech machines our foundry was operating.

LOW-PRESSURE DIE-CASTING MACHINE

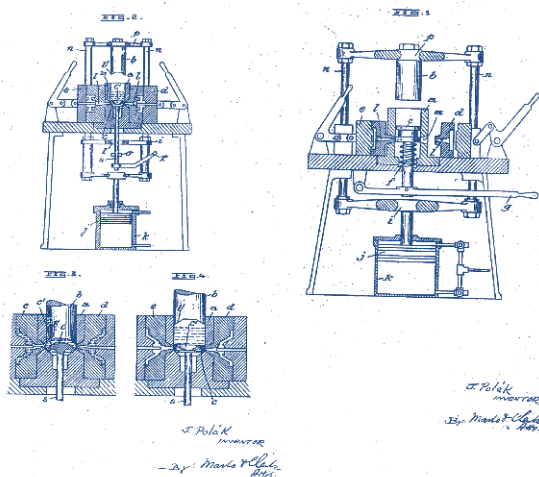
BAL NTL 3.2



**CASTER
TO CASTERS**

TECHNOLOGY IS OUR LIVING

Patented June 11, 1929. 1,717,254
UNITED STATES PATENT OFFICE.
JOSEF POLAK, OF PRAGUE, CZECHOSLOVAKIA.
CASTING MACHINES. REISSUED
Application filed August 8, 1908, Serial No. 895,970, and in Czechoslovakia September 1, 1927.



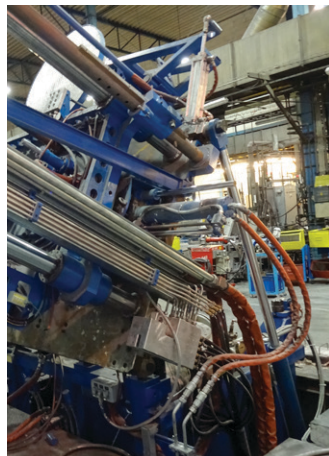
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LOW-PRESSURE DIE-CASTING MACHINE

BAL NTL 3.2



WE MANUFACTURE MACHINES TAILORED TO YOUR NEEDS

We provide all necessary support
– engineering, SW



STANDARD PARAMETERS OF THE MACHINE

- Crucible, electric heated furnace, up to **800kg of molten alloy**
- The entire LPDC machine tilts to enable the **furnace access**
- To refill the furnace there is no need to tilt the entire LPDC machine and to interrupt the cycle
- There are feasible castings up to **50kg/shot**. Standard are **15kg/shot**
- The casting size up to **900 x 800 x 800mm** (w x d x h)
- Over all dimensions of the machine are **2,400 x 2,000 x 6,000mm** (w x d x h)
- There are up to **3 pipes** running parallel
- Standard are four side radial hydraulic tractors, there is an option to add two more.
- Casting tools are cooled down via **20 water and 10 air cooling loops**. Next extension possible.
- Hi-Tech control system build for the machine on the platform of **SIEMENS S7**
- User friendly control SW using 22" touch screen SIEMENS TPU 1500
- User friendly database organizing all products and process parameters data
- Remote access via web interface

WHO
UNDERSTANDS
THE
**CASTING
MACHINE**
BETTER
THAN
THE
FOUNDRY?

