

Past meets Future

» A die casting machine that ejects twice the amount of castings in the same time, at a higher quality and that produces significantly cheaper per casting, is a competitive advantage for every foundry. «

Heribert Höhr, 2002



DuoCast

Technical Data DuoCast Series

	Unit	DC-35	DC-55	DC-70	DC-90	DC-110	DC-140	DC-180	DC-220	DC-280	DC-350	DC-440	DC-550
Closing force nominally	[kN]	3500	5500	7000	9000	11000	14000	18000	22000	28000	35000	44000	55000
Closing force maximal	[kN]	3675	5775	7350	9450	11550	14700	18900	23100	29400	36750	46200	57750
Casting force dynamic	[kN]	190	290	410	410	590	590	810	810	1170	1170	1560	1560
Casting force statistical	[kN]	540	770	1100	1100	1550	1550	2200	2200	3000	3000	4200	4200
Cylinder stroke	[mm]	500	600	675	750	825	900	975	1050	1125	1200	1275	1350
Stroke maximal	[mm]	290	345	390	435	475	520	560	600	650	690	730	780
Smallest shot chamber	[mm]	70	85	100	100	120	120	145	145	170	170	200	200
Biggest shot chamber	[mm]	105	125	150	150	175	175	210	210	245	245	290	290
Max. cast weight (Al alloy)	[kg]	6,3	10,6	17,2	19,2	28,6	31,3	48,5	52	76,6	81,3	120,5	128,8
Machine dimensions (length)	[mm]	5680	7150	8020	9010	9900	10890	11980	13175	14495	15945	17540	19200
Machine dimensions (width)	[mm]	1622	2042	2291	2574	2828	3111	3422	3764	4141	4555	5011	5485
Machine dimensions (height)	[mm]	2420	2905	4595	5050	5530	5970	6415	6860	7325	7714	8120	8520
Construction height max.	[mm]	470	595	670	750	840	940	1055	1185	1330	1490	1670	1770
Die opening stroke max.	[mm]	565	715	805	900	1010	1130	1265	1420	1595	1790	2005	2125
Tie-bar spacing	[mm]	590	750	845	925	1055	1185	1330	1490	1675	1875	2100	2230
Tie-bar diameter	[mm]	110	135	155	175	200	220	250	280	310	350	390	440
Dimensions of platens	[mm]	970	1205	1360	1500	1705	1895	2130	2380	2655	2975	3320	3600
Min. mould dimension	[mm]	440	555	625	690	785	880	990	1105	1240	1390	1555	1670

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►► **State of the art automation technology!**
The **DuoCast** machine is equipped with a user-oriented interface, which makes it much easier for the foundry to use. The training on this control is associated with very little effort. The user management via chip recognition makes it possible to track activities on the machine. In addition, the integrated production data acquisition offers individual evaluation options.

- 1 **O.R.C.A. control technology**
- 2 **Extremely short machine tie bars**
About 30% more stiffness
- 3 **Real-time-controlled shot unit**
Highly efficient with new process control
- 4 **Servo-Variable Drives (Energy Efficient)**
- 5 **Compact design**
Up to 50% less space to comparable machines

QUALITY BENEFITS:

- 100% filling rate
- optimal vacuum
- Shorter sprues

TIME BENEFITS:

- Reduction of the cycle time
- Dosing at open mould
- Shifting of solidification period of press residue into the non-productive time period

INVESTMENT BENEFITS:

- Casting of two moulds with one chamber filling (double ejection during one cycle)
- Smaller area required in comparison with horizontal machines
- Doubling of the closing force by series connection

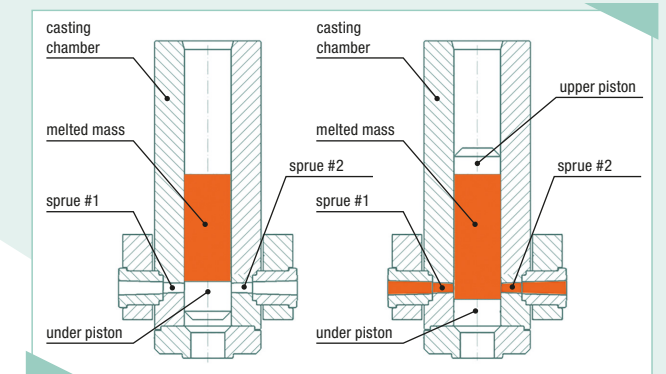
EFFICIENCIES BENEFITS:

- Material
- Energy
- Emission

►► Electromobility will play an increasingly important role in the German as well as in the international economy in the future. Particularly the die casting industry is affected by this change and faces the challenge of a completely new portfolio of die casting parts. Druckguss Service Deutschland meets this challenge and answers the question of the process of the future with the product group-specific **DuoCast** die casting machine. The revolutionary „series connection“ of two die casting moulds in one clamping unit in combination with a vertical casting unit is the ideal condition for high-quality casting of centrally injected high-volume parts, making intensive processes such as 3-platen tools and multiple forming redundant.

The patented tie bar arrangement has made it possible to maximize the overall stiffness of the closing unit and to reduce plant dimensions significantly.

Looking at the vertically arranged casting unit, the economic and casting advantages are further underlined. The enormous economic benefits are largely driven by the greatly reduced cycle time compared to a horizontal die casting machine with multiple moulds. The cycle time reduction of the **DuoCast** method results from the counter-piston principle of the vertical casting unit, this allows a dosing of melt at an open die casting mold. For removal of the finished castings the mould can even be opened in a stage when the press residue is not yet completely solidified. In addition, due to the smaller single casting weights, significantly reduced solidification times for the die castings can be achieved, as well as reduced spraying times for die casting molds.



The vertical arrangement provides a 100% filling rate of the casting chamber and eliminates the known problems of air pockets during the 1st phase of the mould filling process. Next to this, the closing of the gates during the dosing process provides an optimal chance to evacuate the two moulds.

The short casting runs following the mold filling process lead to a reduced volume of circulation material and therefore cause a positive effect on the energy balance sheet of the **DuoCast** process in addition to the advantages of casting technology.

The revolutionary **DuoCast** process offers the foundry the opportunity to react to the electrification of the powertrain with quality, cost and energy efficiency, this prevailing over the worldwide competition.