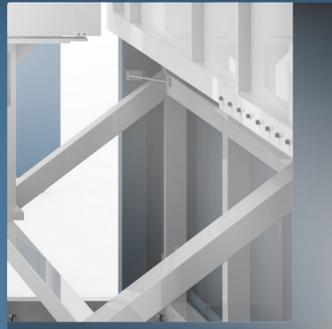
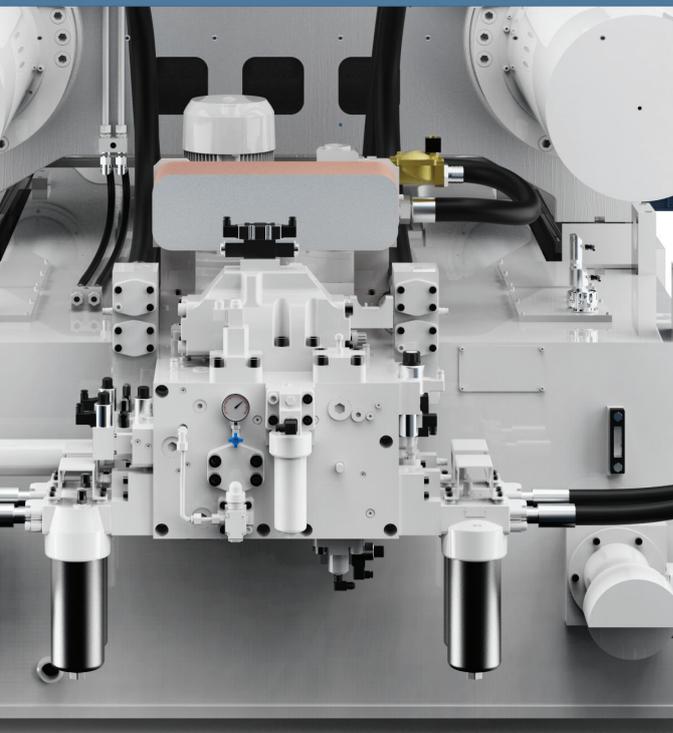




NEO
FORECO FOREVER

The Superior Choice



The Premium Die Casting Machine from



IDRA

Over-the-Edge
EFFICIENCY and
 Eco Sustainability

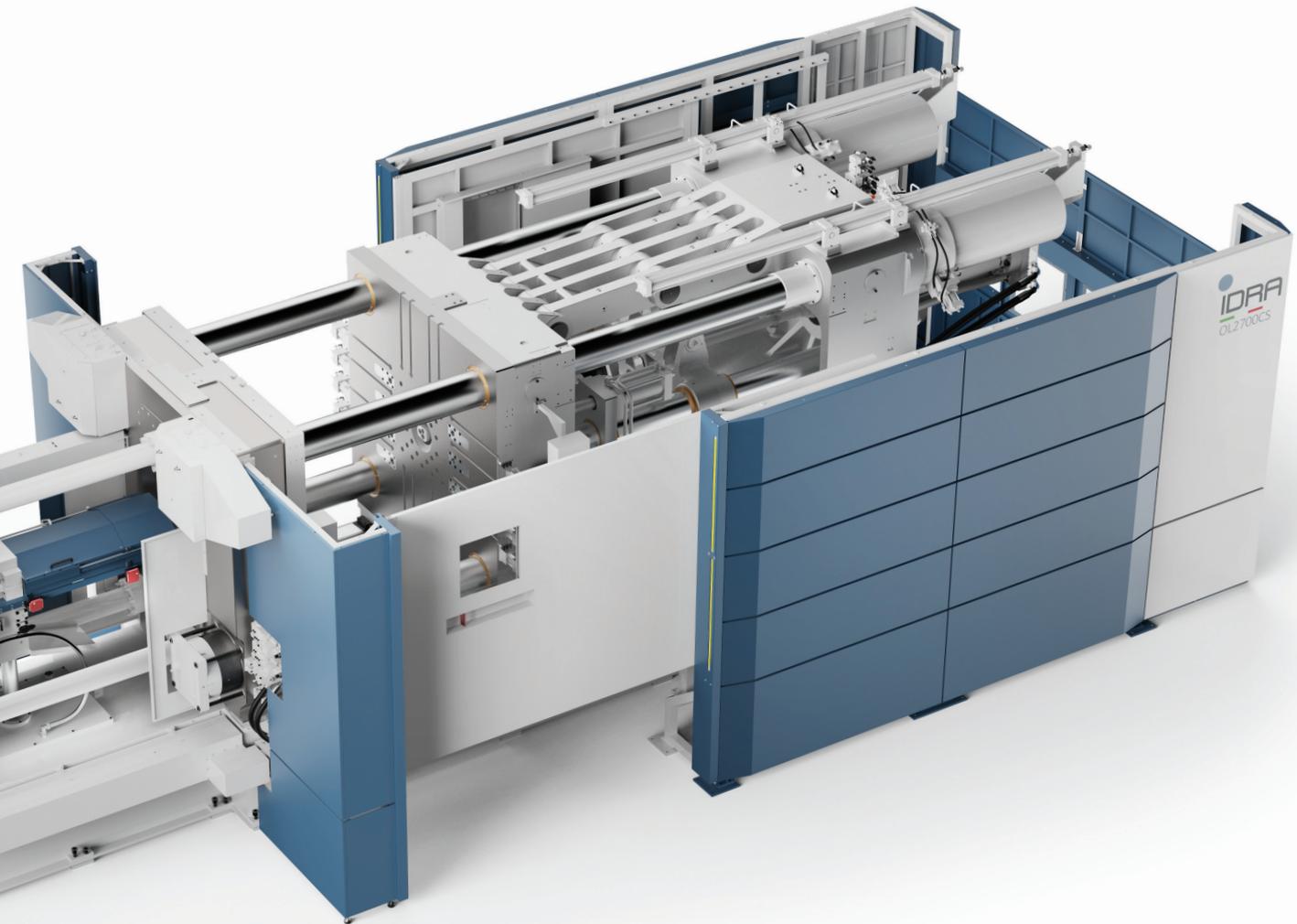
NEO introduces a new chapter in high end die casting technology.

NEO is the new paradigm in die-casting 'Giga' solutions (going from 340 to 9000 tons).

NEO is anticipating the future of OEM, offering the perfect solution for the production of aluminum parts for Hybrid - full electric vehicles (Structural, Battery box, Rotors) and Production of large aluminum parts made with full automated HPDC cells (Blocks, Auto gears, Multi-cavity structural).

NEO innovative technology offers best-in-class performance with excellent injection performance, a high dynamic force with strong intensification for final pressure and a complete setting flexibility with precise, and stable production parameters.





**FORECO
FOREVER**

Idra Group is going all-in in Forward thinking Eco Complimentary Commitment. NEO is the first IDRA system fully designed for a sustainable foundry or “Efficient Manufacturing Facility” in order to meet these amazing accomplishments:

- Low scrap waste from production
- High efficiency and optimized energy usage
- Sustainable factory environment taken into consideration at the design stage
- Helping to lower industrial production costs

NEO also offers unparalleled guaranteed long life and reliability.



NEO Features



Fast cycle times

Integrated high flow hydraulic manifold blocks
Increased pump capacity utilizing DCP technology.



Easy maintenance and minimal risk of fluid loss

All-in-one hydraulic manifolds.
Limited use of external pipe-work.
Designed-for-access mechanical groups with new guard design.



Low Energy cost

Energy efficient motors with speed control.
Minimized injection pressure loss and accumulator recharge time.



User friendly controls

Inject Computer 3.2 (best in class machine management software).
Eliminated push button Unit using Multiple touch screens.
Cell controller Single point setting for integrated peripheral automation.



Fit for complex parts manufacture

Closed loop 5S regenerative control of the injection velocity.
Programming and control of process parameters.



NEO
Innovation



New Injection Series 5S[®]

Closed loop regenerative injection with aux servo pump for efficient recharge.
 Extended velocity control valve life by balance of hydraulic forces.
 High dynamic force necessary to fill difficult castings.
 Maintaining same final pressure requirement for porosity in power train castings.



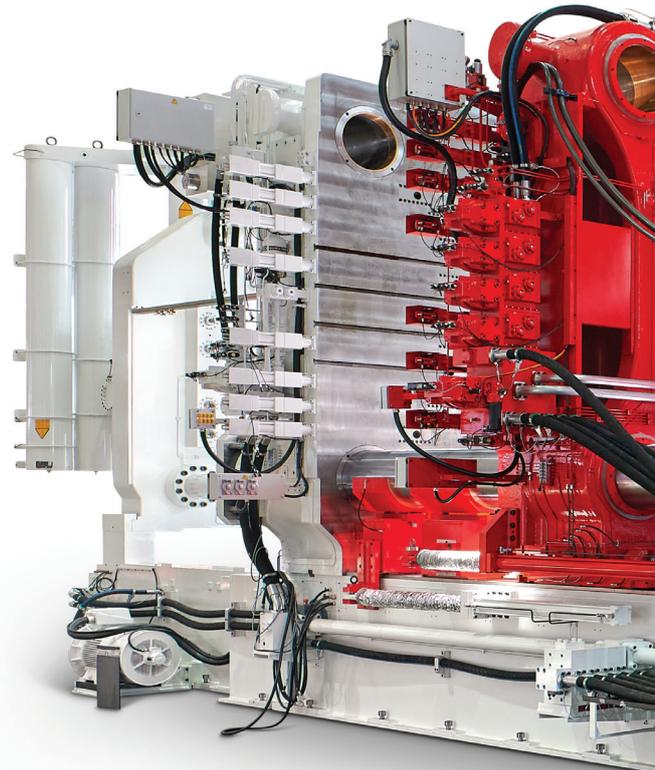
New Guarding System

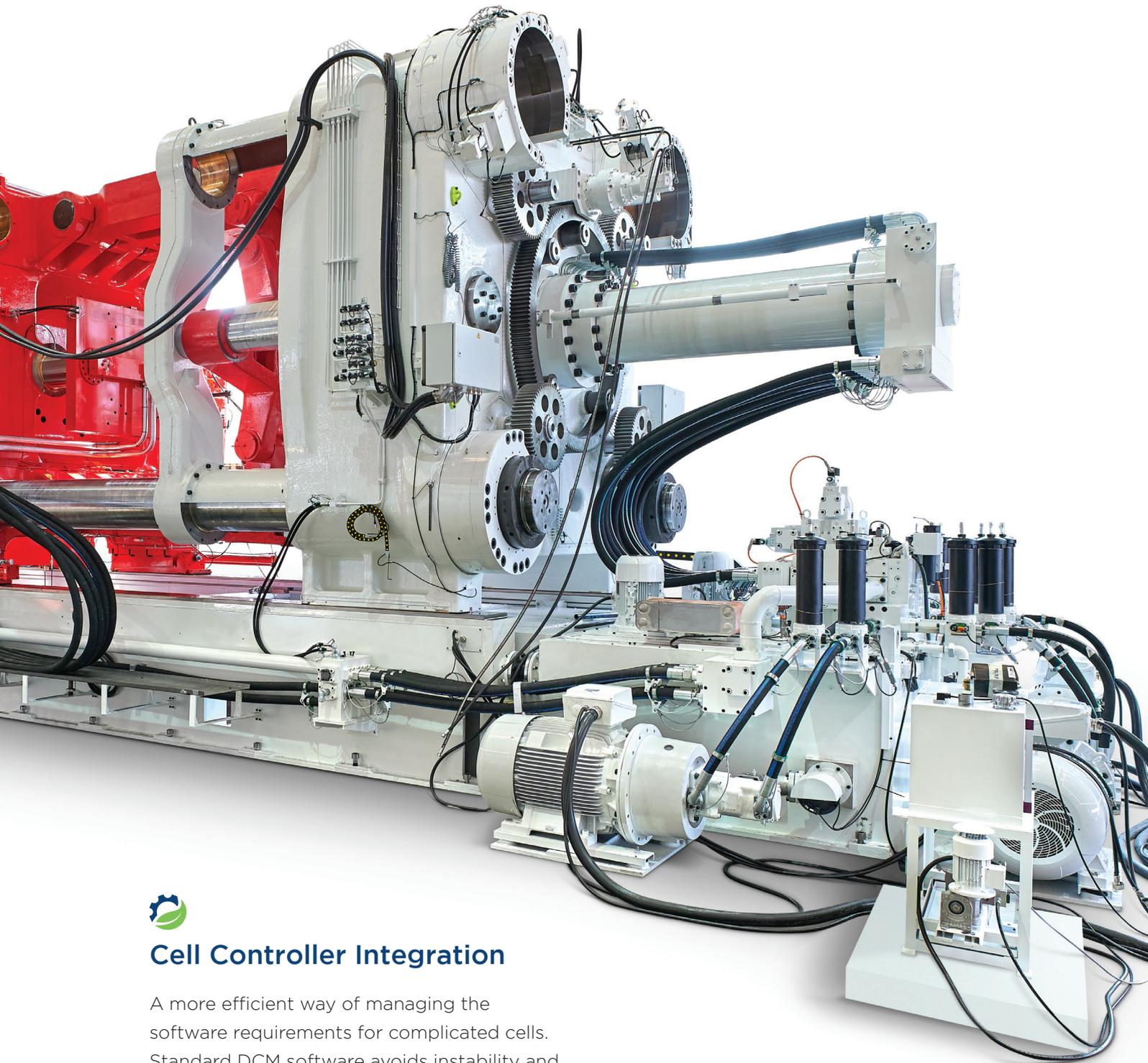
Reducing complex electrical parts and stops.
 Simplified assembly of the system with modular scalable construction.
 Increased safety requirements for access while machine is running.
 Reduced emissions from the die casting process.



DCP Hydraulic System

Reduced energy consumption per cycle of the DCM cell.
 Separated closing and injection pump systems.
 Allowing subgroup testing for the injection system.





Cell Controller Integration

A more efficient way of managing the software requirements for complicated cells. Standard DCM software avoids instability and unnecessary stops.

Flexibility and customization for many different configurations.

Easy integration with the best in market products.

5S INJECTION SYSTEM



NEO debuts the new revolutionary patented injection system, a result of an amazing R&D effort and two years of hot tests in collaboration with IDRA Group's FSA partners. 5S is a closed loop regenerative injection with aux servo pump for efficient recharge,

that gives you total control of pressure and velocity, with high dynamic force necessary to fill difficult castings, and an incredible amount of technological enhancements to give you superior results.



Strong

At all speeds (even 10 m/s) the rod side of the injection cylinder remains always pressurized, allowing a perfect control with no cavitation of the hydraulic fluid.

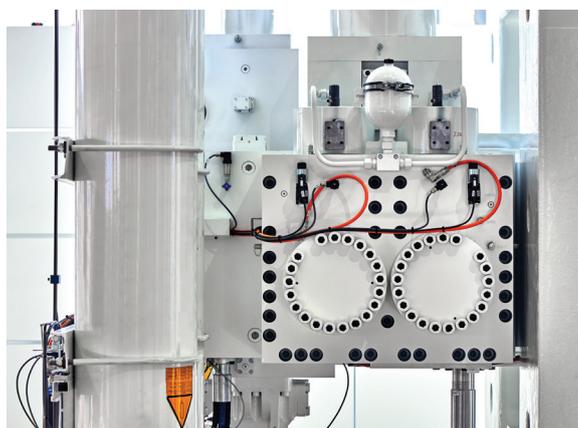
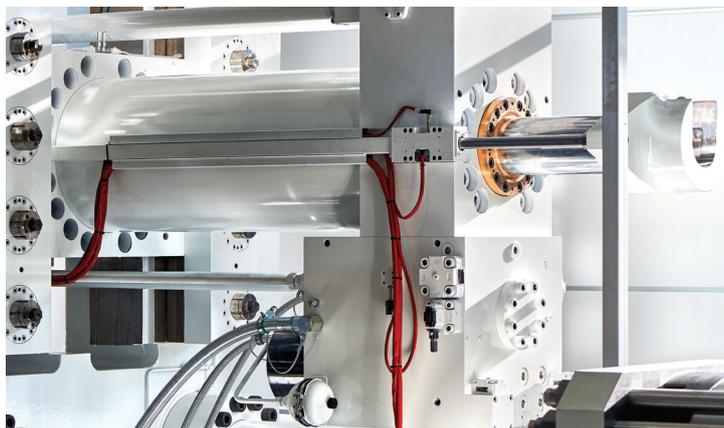
Maximum dynamic force of the injection cylinder always available (2nd phase)
 | Improved dynamic force | Better quality of the cast part



Simple

Only one valve for injection speed control, which is inserted in the inlet side of the injection cylinder.

Better control | Less stress and heating effect
 Less stressed manifolds, tubes and seals



Sustainable

5S is designed to maximize energy saving and to achieve a long lasting life, in order to improve the eco sustainability of the machine.

Hydraulic fluid consumption reduction up to 54%
 | Low energy consumption | Efficient recharge
 and programmable pressure | Long lasting
 components



Smooth

An hydraulic cushion is mounted with special design that manages the flow of the hydraulic fluid coming out of the rod side with constant counter pressure.

Fluid never discharged to the tank | Hydraulic
 fluid not emulsified | Completely smooth first
 step | Reduced mechanical noise during
 injection



Stable

5S innovative High Dynamic Force system brings revolutionary stability for injection parameters. This patented regenerative injection is giving first-class repeatability for first and second stage of velocity, while the intensification piston controlled by closed loop gives amazing final pressure.

Unrivaled stability | Top-notch repeatability | Excellent final pressure

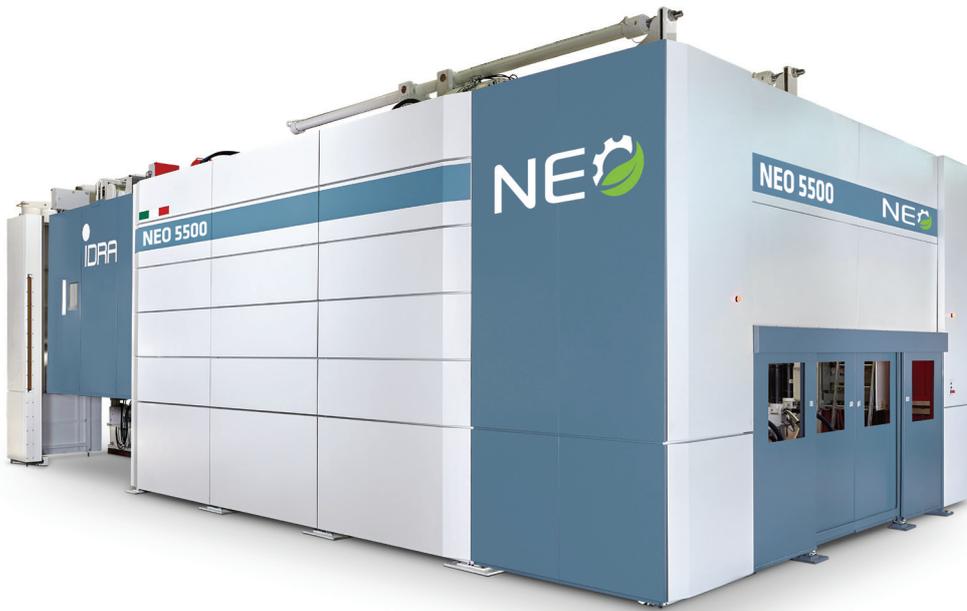
INJECTION UNIT DATA

MODEL		NEO 340	NEO 450	NEO 600	NEO 800	NEO 1000	NEO 1200	NEO 1500
Injection dynamic force (2nd phase)	kN	246	246	246	327	327	440	440
Injection force with 20 bar counterpressure	kN	591	591	591	917	917	1.222	1.222
Injection stroke	mm	650	650	650	750	750	900	900
Max. injection velocity (without alloy)	m/s	9	9	9	9	9	9	9
Min. sleeve diameter	mm	60	60	60	80	80	90	90
Max. sleeve diameter	mm	80	90	100	120	130	140	140
Max. shot weight (Al alloy) with 65% min. sleeve filling up and 95% of injection stroke	kg	2,95	2,95	2,95	6,05	6,05	9,19	9,19
Max. shot weight (Al alloy) with 65% max. sleeve filling up and 95% of injection stroke	kg	5,25	6,64	8,20	13,62	15,98	22,24	22,24
Max. projected area with min. sleeve diameter	cm ²	185	253	337	479	612	672	880
Max. projected area with max. sleeve diameter	cm ²	330	569	937	1.078	1.617	1.625	2.130
Max. projected area with nominal clamping force and p = 400 bar on alloy	cm ²	988	1.348	1.797	2.227	2.846	3.287	4.309
Pressure on the alloy in the min. sleeve	bar	2.131	2.131	2.131	1.860	1.860	1.958	1.958
Pressure on the alloy in the max. sleeve	bar	1.199	947	767	827	704	809	809
Injection positions	mm	0; -200	0; -270	0; -300	0; -350	0; -400	0; -450	0; -450
Max. plunger penetration	mm	240	240	240	285	285	350	350
Sleeve centering diameter	mm	130	150	180	180	195	195	195

INJECTION UNIT DATA

MODEL		NEO 1800	NEO 2200	NEO 2700	NEO 3000	NEO 3400	NEO 3800	NEO 4400
Injection dynamic force (2nd phase)	kN	592	592	873	873	873	873	1.000
Injection force with 20 bar counterpressure	kN	1.784	1.784	2.629	2.629	2.629	2.629	3.072
Injection stroke	mm	1.000	1.000	1.450	1.450	1.450	1.450	1.800
Max. injection velocity (without alloy)	m/s	9	9	10	10	10	10	10
Min. sleeve diameter	mm	110	110	130	130	130	130	140
Max. sleeve diameter	mm	160	165	190	190	200	210	220
Max. shot weight (Al alloy) with 65% min. sleeve filling up and 95% of injection stroke	kg	15,26	15,26	30,90	30,90	30,90	30,90	44,49
Max. shot weight (Al alloy) with 65% max. sleeve filling up and 95% of injection stroke	kg	32,28	34,33	66	66	73,14	80,63	109,85
Max. projected area with min. sleeve diameter	cm ²	1.001	1.238	1.390	1.535	1.732	1.903	2.192
Max. projected area with max. sleeve diameter	cm ²	2.117	2.785	2.970	3.278	4.100	4.967	5.413
Max. projected area with nominal clamping force and p = 400 bar on alloy	cm ²	4.788	5.921	7.018	7.746	8.744	9.608	11.148
Pressure on the alloy in the min. sleeve	bar	1.914	1.914	2.019	2.019	2.019	2.019	2.034
Pressure on the alloy in the max. sleeve	bar	904	850	945	945	853	774	824
Injection positions	mm	0; -500	0; -500	0; -500	0; -500	0; -550	0; -600	0; -650
Max. plunger penetration	mm	420	420	550	550	550	550	700
Sleeve centering diameter	mm	225	265	290	290	310	330	330

NEO DCM Guarding System



NEO debuts the new Guarding system developed by Idra Group following the 'Foreco. Forever' philosophy: eco-sustainability and efficiency. The innovative system comes with reduced manufacturing costs and impact: the toggle guarding can now be eliminated using a closed system with light barrier protection, and difficult to manufacture sheet metal gear guards are no longer needed. The NGS goes the 'less is more'

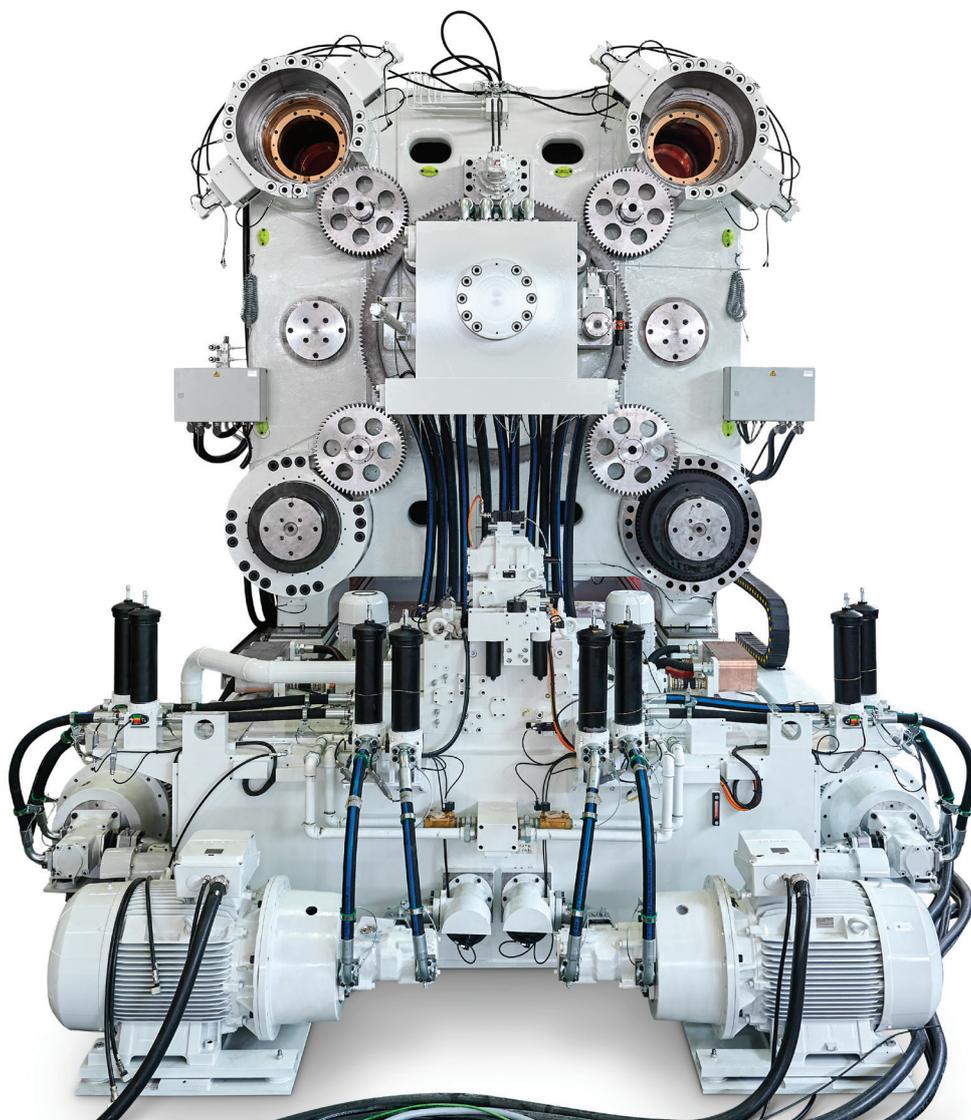
route with a simplified electrical installation, a minimalistic design that reduces components and removes cable and switches. These improvements - together with a DC motor with direct belt drive - allows for a faster movement of the guards and a quicker cycle. The new design is also easily customizable: customer name and logo can be added to rear panels and colour scheme can easily be modified on request.

-  Servo Drive
-  Reduced Wear
-  Simplified Design

-  Faster Guard movement
-  Total machine protection
-  Easy customization

DCP Drive Control Pump System

NEO comes equipped with the new over-the-edge Drive Control Pump System developed by Idra Group. The DCP has a new architecture, that can accomplish the same efficiency with smaller kW motors, thanks to a new Master-Slave, closing unit, an improved PLC control and a new Injection Accumulator charging unit, that charges independently from the closing and core puller system.

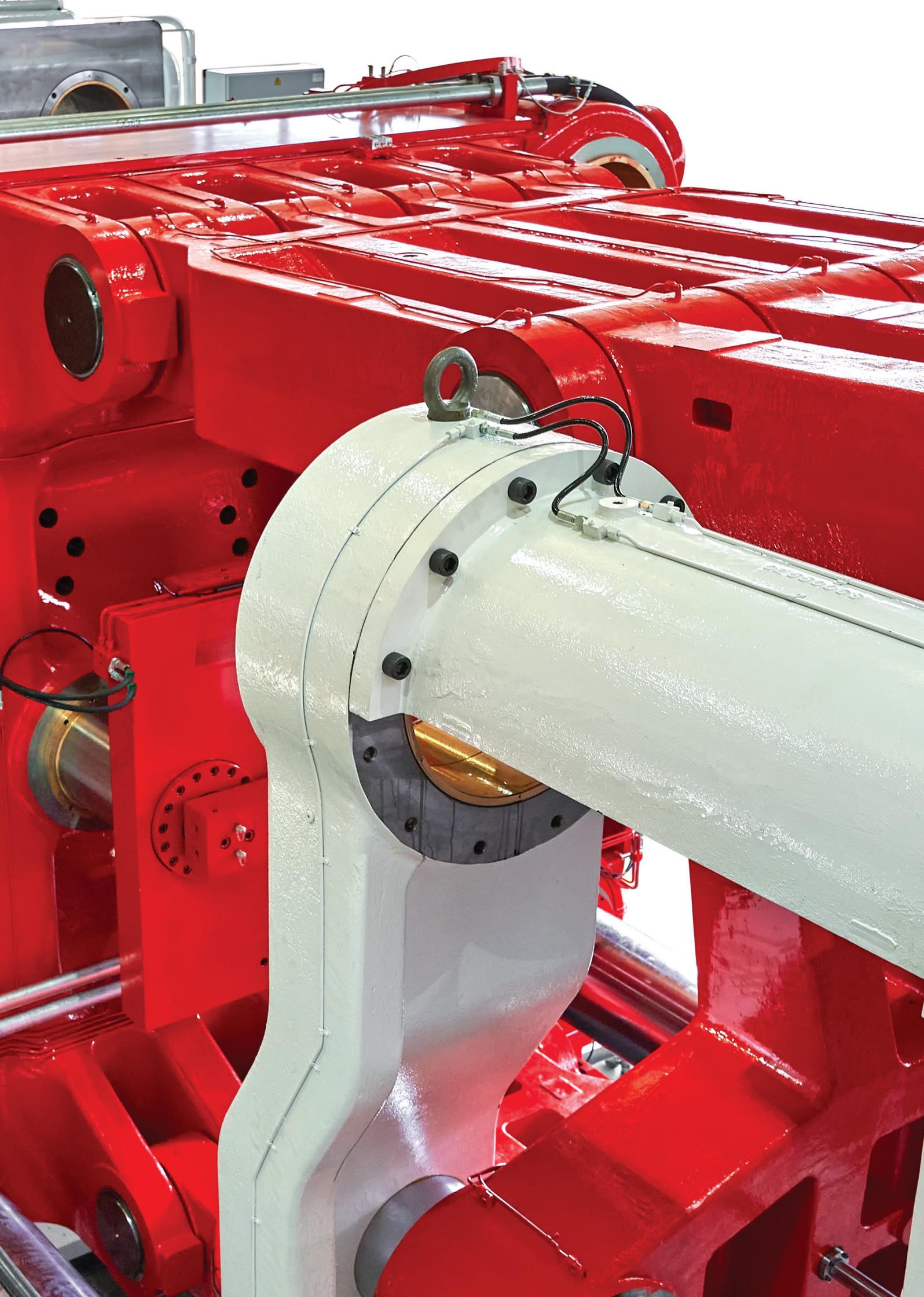


Energy saving

54%



NE 
6100



CLOSING UNIT DATA

MODEL		NEO 340	NEO 450	NEO 600	NEO 800	NEO 1000	NEO 1200	NEO 1500
Clamping force	kN	3.876	5.290	7.053	8.740	11.168	12.899	16.908
Clamping force	Ton	395	539	719	891	1.138	1.315	1.724
Ejection force	kN	277	277	433	433	433	433	433
Max. die height	mm	700	800	900	1.000	1.050	1.100	1.200
Min. die height	mm	250	300	400	450	450	450	450
Platens dimensions HxV	mm	1.029x1.029	1.160x1.160	1.350x1.350	1.400x1.400	1.620x1.620	1.730x1.730	1.850x1.850
Tie bar spacing	mm	669x669	760x760	865x865	910x910	1.000x1.000	1.100x1.100	1.160x1.160
Tie bar diameter	mm	130	140	165	180	200	215	240
Movable platen stroke	mm	600	700	780	900	960	1.070	1.200
Ejection stroke	mm	140	165	175	200	230	230	255

GENERAL DATA

MODEL		NEO 340	NEO 450	NEO 600	NEO 800	NEO 1000	NEO 1200	NEO 1500
Working pressure	bar	180	180	180	180	180	180	180
Dry Ciclyng (DIN 24480)	n/1"	3.5	3	2.9	2.7	2.5	2.5	2.2
Pump motor power	kW	30	37	37	37	45	2x37	2x37
Injection group pump motor power	KW	-	-	-	-	-	-	-
Machine weight	Ton	18	24	33	47	56	65	85
Machine dimensions (L x W x H)	m	8,4x3,76x3,5	8,8x4,1x3,64	9,24x4,2x3,7	10,4x4,3x4,1	10,8x4,5x4,3	11,85x4,5x4,3	12,2x5x4,4

CLOSING UNIT DATA

MODEL		NEO 1800	NEO 2200	NEO 2700	NEO 3000	NEO 3400	NEO 3800	NEO 4400
Clamping force	kN	18.788	23.233	27.538	30.394	34.313	37.700	43.743
Clamping force	ton	1.915	2.368	2.807	3.098	3.498	3.843	4.459
Ejection force	kN	574	574	773	773	773	1.164	1.164
Max. die height	mm	1.450	1.550	1.750	1.750	1.900	2.100	2.100
Min. die height	mm	600	700	800	800	900	1.100	1.100
Platens dimensions HxV	mm	1.960x1.960	2.120x2.120	2.380x2.380	2.530x2.530	2.640x2.640	2.840x2.840	2.900x2.900
Tie bar spacing	mm	1.250x1.250	1.345x1.345	1.500x1.500	1.640x1.640	1.720x1.720	1.770x1.770	1.850x1.850
Tie bar diameter	mm	250	280	300	310	330	350	370
Movable platen stroke	mm	1.400	1.400	1.500	1.500	1.600	1.700	1.800
Ejection stroke	mm	280	280	350	350	350	400	400

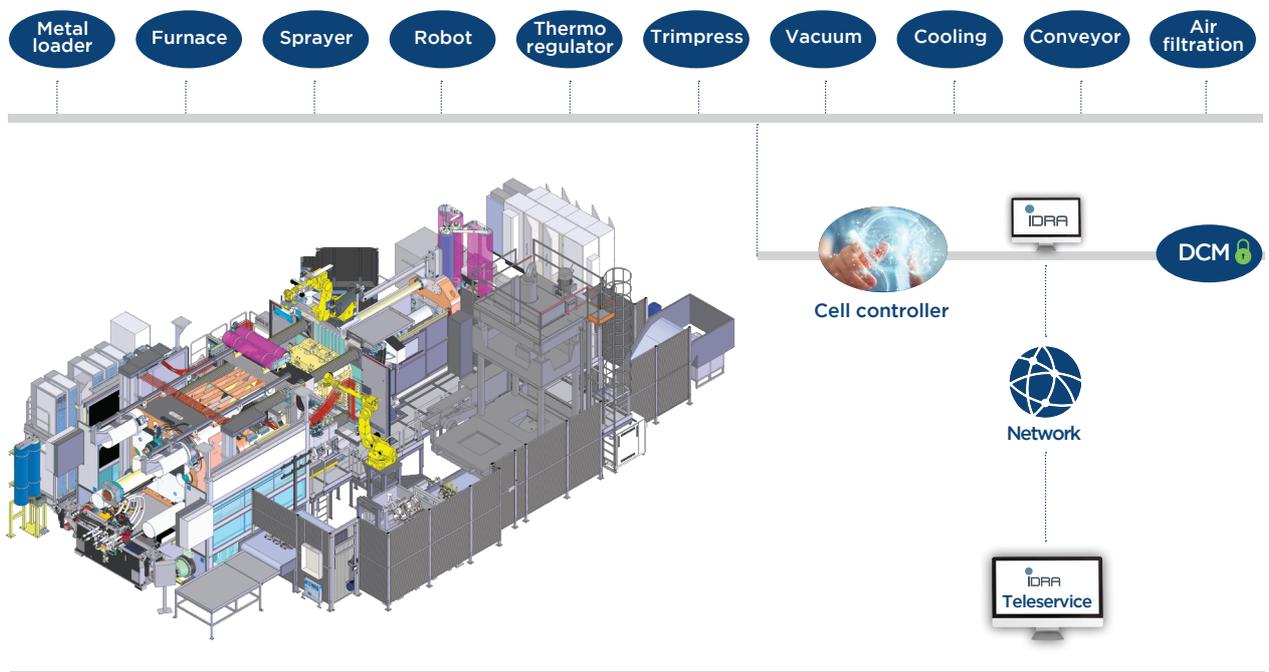
GENERAL DATA

MODEL		NEO 1800	NEO 2200	NEO 2700	NEO 3000	NEO 3400	NEO 3800	NEO 4400
Working pressure	bar	180	180	180	180	180	180	180
Dry Ciclyng (DIN 24480)	n/l"	2.1	1.9	1.7	1.6	1.7	1.5	1.5
Pump motor power	kW	2x37	2x45	2x45	2x75	2x90	2x90	2x90
Injection group pump motor power	KW	37	37	45	45	45	45	55
Machine weight	Ton	98	113	150	185	223	227	270
Machine dimensions (L x W x H)	m	13,3x5,1x5	13,4x5,3x5,1	15,6x5,46x5,38	15,9x5,7x5,4	16,6x6,7x5,6	17,1x6,7x5,7	18,3x6,7x5,8

IDRA Cell Controller

IDRA Cell Controller is a brand new 4.0 architecture developed by IDRA and available in all the new machines, to perform efficiently the software requirements for complicated cells. From a single 'Cell Controller' unit, you can now control the DCM and all the peripherals of the automation cell with an easy to read, easy to customize user interface. IDRA Cell Controller brings a new level of connectivity and integration, with a seamless flow of data

exchange between DCM and the peripherals, to give you full control over production and process traceability. In a single screen you have a complete diagnostic analysis of the cell, greatly improving set-up and maintenance times and costs. The DCM software is standard to give 100% reliability, and the Cell Controller offers complete flexibility and customization for many different configurations.



 Lower Maintenance Controller Costs for Peripherals

 High Quality Data and comprehensive integration

 Total safety control

 Easy customization and integration process

 Improved OEE efficiency

 Industry 4.0 ready



WE LIKE TO WORK TOGETHER WITH YOU

STRONGER Together

IDRA Cell Controller System is the amazing result of a combined effort of the Foundry Star Alliance (FSA), a group of leading companies in their specific field of activity who decided to cooperate with the aim of better support the very rapid growth of the global light alloy HPDC markets.

The global approach of the OEM's require a level of knowledge and skill that cannot be available in one single company. The members of the FSA are cooperating and pulling together their combined resources and specific technology; the result is the best reliable, integrated and automated high pressure die casting production cell in the market.

Choosing IDRA Cell Controller System you get a clear competitive advantage, with a solution that natively integrates with the best in market products.

FSA combines the leading European companies in the different light alloy HPDC fields of expertise.

Innovation

We are pulling together our combined resources and specific technology to move forward, faster and stronger.

Time to Market

In a quickly evolving market, we work together to anticipate the future and be the first to deliver.

Green Future

FSA partners value our environment and are working towards a brighter future for our Earth. Together, we can do more.

Turn key solutions

Different skill and expertise: we can provide the solutions to solve all the various challenges of our customers.

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