



CAST ABOVE THE REST

QUALITY FROM THE LADLE...

Astech specializes in the production of small and medium size special alloy castings. Our facility has the capacity to manufacture prototype, short or long production runs tailored to meet customer requirements.

Astech draws upon a long history of experience in casting alloy grade steels and cast irons. Casting special alloys requires a unique alliance of technology and expertise. Our customers require components that perform well under extreme conditions and our metallurgical staff is capable of formulating alloys to meet these individual needs.

Modern production and engineering equipment gives Astech the flexibility for quick response and turnarounds from one specialty alloy to the next. Our 75,000 sq. ft. facility and advanced data management capability can accommodate inventory programs and "Just in time" delivery.



...TO FINISHED, CAST PRODUCT

Abrasion Resistant Alloys



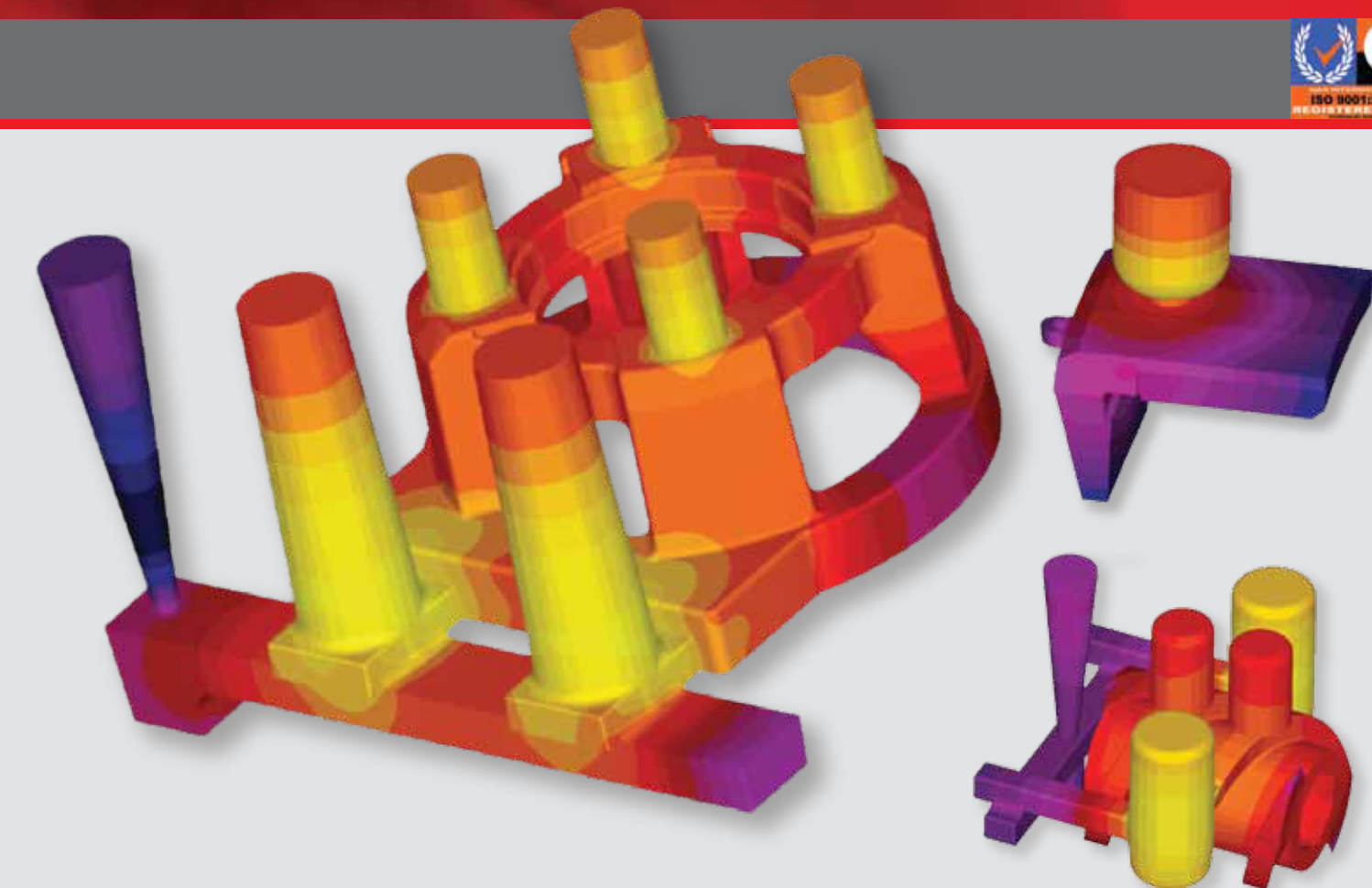
Carbon / Low Alloy Steels



Heat-Resistant Stainless Steel Alloys



Corrosion-Resistant Stainless Steel Alloys



Solidification Modeling — Product Development and Design — Part Drawings

Tooling Design — **ENGINEERING SOLUTIONS** — 3D Modeling

Large Scale 3D Printing — Rapid Prototyping Services — 3D Scanning

Alloys Cast by **ASTECH**
ALLOY STEEL TECHNOLOGIES

Abrasion Resistant Alloys

Chromium and chromium-molybdenum white irons are unequalled in their resistance to abrasive wear. The alloy white irons are cast for use in shot blast machines, crusher blocks, chute liners, cement production wear parts, earth-moving parts, vibratory mills, food processing wear parts and related equipment.

Work Hardening Steel

Astech specializes in the production of 11% to 14% austenitic manganese steel castings for various wear resistant applications and has developed a proprietary version that enhances the alloys work hardening characteristics.

Carbon / Low Alloy Steels

Steel castings have the same advantages as wrought steels (respond well to heat treatment, good weldability, good mechanical properties) plus the added benefits of non-directionality of mechanical properties and the facility of the production of complex shapes at low cost.

Heat-Resistant Stainless Steel Alloys

Nickel-chromium steel alloys, Grades HA thru HX - These nickel-chrome steel alloys are ideal for heat-treating furnace applications where temperatures are extreme and hot strength is essential. Typical uses for this family of alloys include burner nozzles, connection tube supports, grate supports, kiln nose ring segments, hearth rollers and roller supports, billet skids, furnace door arches and lentils, furnace chain, annealing/ hardening/ quenching and heat treating trays and boiler parts.

Tool Steels / Modified Tool Steel

VE-7 Alloy - This alloy has been developed specifically for use wherever high, hot hardness is necessary. It has been used extensively in valve seat inserts.

Alloy Cast Iron

Plain gray iron and alloyed cast iron compositions are so varied, Astech recommends inquiry based on specific needs.

Corrosion-Resistant Stainless Steel Alloys

The Austenitic, Ferritic, and Martensitic Grades of Cast Stainless Steels - The austenitic, ferritic, and martensitic stainless steels exhibit high-temperature strength and good scaling resistance. They can be used successfully in applications where carbon and low-alloy steels would be destroyed by corrosive environmental effects. Typical applications include chemical and food processing equipment, aircraft heaters, heat-treating equipment and furnace parts.

ASTECH - ALLOY STEEL TECHNOLOGY

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POWERING OUR FUTURE THROUGH ENTREPRENURIAL SPIRIT

- At Astech our people question and challenge the norm.
- We nurture develop and implement innovative ideas and solutions.
- We corporately embrace each new customer with a common tenacity- determination and focus to consistently exceed expectations.
- We embrace a corporate culture that all things are possible! Nothing is Impossible!

We are Astech.... Let us work for you



ALLOYS CAST BY ASTECH, INC.

This is a list of alloys most commonly poured. Please contact ASTECH representatives for the casting potential of other alloys, either iron or steel. Composition limits can be modified by mutual agreement between customer and ASTECH.

Material	Carbon	Chrome	Silicon	Manganese	Moly	Nickel	Other
ABRASION-RESISTANT SPECIALTY ALLOYS							
15-3 Types*	2.40-3.60	14.0-18.0	1.00 Max	0.50-1.20	1.50-3.20	0.30 Max	--
27 Cr.Types*	1.90-2.90	26.0-30.0	1.00 Max	0.50-1.20	1.20 Max	0.50 Max	--
VE-7*	0.90-1.65	3.40-4.00	1.00 Max	0.40-0.80	6.20-6.80	--	W-5.30-5.80 S-0.04 Max P-0.07Max
550 MN	1.00-1.25	0.50 Max	0.15-0.30	11.50-13.50	--	--	
CARBON / LOW ALLOY STEELS							
1000 Series	0.17-0.50	0.40 Max	0.80 Max	0.70 Max	0.20 Max	0.50 Max	--
4100 Series	0.27-0.43	0.80-1.20	0.80 Max	0.40-1.00	0.15-0.25	--	--
8600 Series	0.17-0.43	0.40-0.60	0.80 Max	0.60-1.00	0.15-0.25	0.35-0.75	--
HEAT-RESISTANT ALLOYS							
CY40	0.30-0.35	15.0-17.0	2.25-2.50	1.50 Max	0.50 Max	Balance	--
HH (25-12)	0.20-0.50	24.0-28.0	2.00 Max	2.00 Max	0.50 Max	11.0-14.0	--
HP Mod	0.40-0.50	24.0-26.0	1.75-2.00	0.50 Max	0.50 Max	4.5-35.25	--
HK (25-20)	0.20-0.60	24.0-28.0	2.00 Max	2.00 Max	0.50 Max	18.0-22.0	--
HT (35-15)	0.35-0.75	15.0-19.0	2.50 Max	2.00 Max	0.50 Max	33.0-37.0	--
HN (20-25)	0.35-0.50	19.0-23.0	1.75 Max	2.00 Max	--	24.0-27.0	--
CORROSION-RESISTANT ALLOYS							
CF-20 (302)	0.20 Max	18.0-21.0	2.00 Max	1.50 Max	--	8.0-11.0	--
CF-16FA (303)	0.16 Max	18.0-21.0	2.00 Max	1.50 Max	0.40-0.80	9.0-12.0	S-0.20-0.40
CF-8	0.08 Max	18.0-21.0	2.00 Max	1.50 Max	--	8.0-11.0	--
CF-8M (316)	0.08 Max	18.0-21.0	2.00 Max	1.50 Max	2.0-3.0	9.0-12.0	--
CF-8C	0.08 Max	18.0-21.0	2.00 Max	1.50 Max	--	9.0-12.0	Cb-0.40-1.00

*Composition limits will vary with section size or application



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