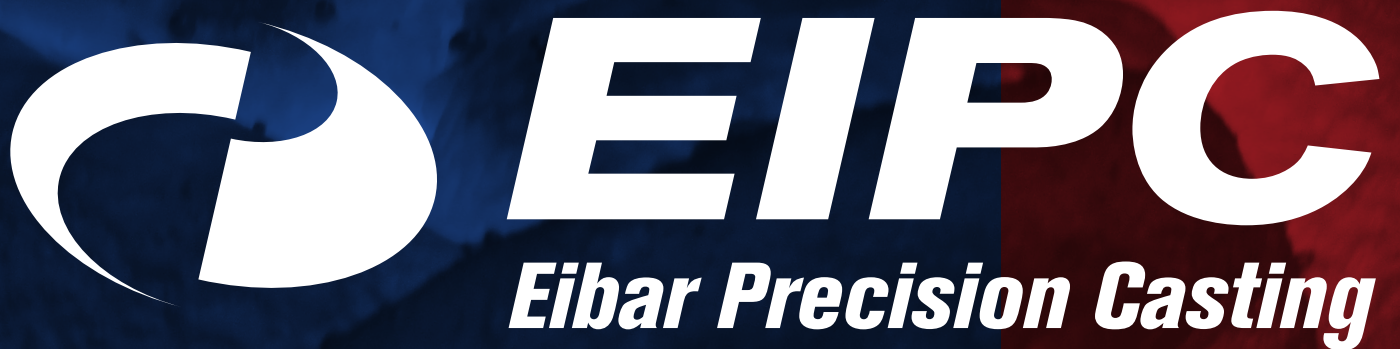




**35 YEARS
EXPERIENCE**
Casting your future

INVESTMENT CASTING ADVANTAGES

- COMPLEX GEOMETRIES
- VERY LOW THICKNESS < 0,5 MM
- EXCELLENT SURFACE FINISH – RA < 3.2
- TIGHT TOLERANCES
- IMMENSE MATERIAL POSSIBILITIES
- LOW INVESTMENT IN TOOLS
- POSSIBILITY OF SHORT, MEDIUM OR LONG SERIES
- FREEDOM OF DESIGN

MATERIALS AND TOLERANCES

ALUMINIUM				
EQUIVALENT	STANDARD	NUMERICAL DESIGNATION	SYMBOLIC DESIGNATION	CONDITION
A-356	EN 1706	EN AC42100	EN AC-AISi7Mg0.3	T6 (Solution and Precipitation)
	AIR 3380	-	A-S7G03	T6 (Solution and Precipitation)
A-357	EN 1706	EN AC42200	EN AC-AISi7Mg0.6	T6 (Solution and Precipitation)
	AIR 3380	-	A-S7G06	T6 (Solution and Precipitation)
	SAE AMS4289	-	7.0Si - 0.55Mg - 0.12Ti (F357.0)	T6 (Solution and Precipitation)
	DAN2000 Part 4	DAN2000 Part 4	7.0 Si - 0.6 Mg	T6 (Solution and Precipitation)

STEEL

CLASS		STANDARD EN (2001)	DIN		AISI /SAE	HEAT TREATMENT	TYPICAL APPLICATIONS
			Nº	DIN	SYMBOL		
Structural steels	Carbon steels	EN-10083-2	1.0401	C15	SAE 1015	Normalized	General machinery, connecting rods, axles, screws, etc
			1.0619	C25	SAE 1026	Normalized	
			1.0503	C45	SAE 1045	Normalized	
			1.0601	C60	SAE 1060	Normalized	
	Full hardening	EN-10083-1	1.7218	G25CrMo4	-	Quenched & Tempered	Engine parts, crankshaft, transmission parts, gears...
			1.7225	G42CrMo4	SAE 4140	Quenched & Tempered	
			1.6582	G34CrNiMo6	-	Quenched & Tempered	
			1.7273	G25CrMo10	-	Quenched & Tempered	
	Case hardening	EN-10084	1.5919	G15CrNi6	-	Case Hardened	Transmission levers, cams, pressure valves, hinges, etc
			1.7131	G16MnCr5	SAE 5115	Case Hardened	
			1.7242	G16CrMo4	-	Case Hardened	
	Nitrided Steels	EN-10085	1.2343	GX38CrMoV5-1	AISI H11	Nitrided	Cam followers, etc
Tool steels	Tool steels	-	1.2602	GX165CrMoV12	-	Tempered	Cutting & Stamping Tools, etc
			1.2067	GS100Cr6	-	Tempered	
			1.2419	GS105WCr6	-	Tempered	
			1.2436	GX210CrW12	-	Tempered	
Stainless steels	Martensitics	EN-10088-1	1.4006	GX10Cr13	AISI 410	Tempered	Pumps, blades, etc
			1.4122	GX35CrMo17	-	Tempered	
			1.4059	GX22CrNi17	AISI 431	Tempered	
	Austenitics	EN-10213-4 EN-10283	1.4308	GX8CrNi19-10	AISI 304	As Cast	Pumps, valves, turbines, etc
			1.4408	GX8CrNiMo18-12	AISI 316	As Cast	
			1.4404	GX3CrNiMo18-12	AISI 316L	As Cast	
			1.4581	GX5CrNiMoNb18-10	AISI 347	As Cast	
	Ferritic austenitics duplex	EN-10088-2	1.4309	GX2CrNi19-11	AISI 304L	As Cast	Ball valves, etc
			1.4460	GX8CrNiMo27-5	AISI 329	Quenched	
			1.4462	GX2CrNiMoN22-5-3	-	Normalized	
Special alloys	-	-	1.4841	GX15CrNiSi25-20	AISI 314	As Cast	Turbines, bearings etc
			1.4540	GX4CrNiCuNb16-4	15-5 PH	Solution annealed and precipitation hardened	
			1.4542	GX5CrNiCuNb16-4	17-4 PH	Solution annealed and precipitation hardened	

SUPERALLOYS

MATERIAL	STANDARD	DENS G/CM3	ROOM TEMPERATURE				HIGH TEMPERATURE				
			C.R. (MPa)	L.E. (MPa)	A %	Z %	C.R. (MPa)	L.E. (MPa)	A %	Z %	TEST TEMPERATURE
INCO 625	AMS5401B	8,44	585	310	25	-	-	-	-	-	-
INCO 718	MSRR7132	8,22	860	755	5	10	695	650	5	10	600°
C1023	RRMS 33017	8	-	-	-	-	-	-	-	-	-

LINEAL TOLERANCES

NOMINAL DIMENSIÓN RANGE (MM)	BASE ALLOYS: IRON, NICKEL, COBALT OR COOPER			BASE ALLOYS: ALUMINIUM O MAGNESIUM		
	D1	D2	D3	A1	A2	A3
	FIELD	FIELD	FIELD	FIELD	FIELD	FIELD
Up to 6	0,30	0,24	0,20	0,30	0,24	0,20
More than 6 to 10	0,36	0,28	0,22	0,36	0,28	0,22
More than 10 to 18	0,44	0,34	0,28	0,44	0,34	0,28
More than 18 to 30	0,52	0,40	0,34	0,52	0,40	0,34
More than 30 to 50	0,80	0,62	0,50	0,80	0,62	0,50
More than 50 to 80	0,90	0,74	0,60	0,90	0,74	0,60
More than 80 to 120	1,10	0,88	0,70	1,10	1,30	0,70
More than 120 to 180	1,60	1,30	1,00	1,60	1,50	1,00
More than 180 to 250	2,40	1,90	1,50	1,90	2,20	1,20
More than 250 to 315	2,60	2,20	1,60	2,60	2,40	1,60
More than 315 to 400	3,60	2,80	2,80	2,80	2,60	1,70
More than 400 to 500	4,00	3,20	3,20	3,20	3,40	1,90
More than 500 to 630	5,40	4,40	4,40	4,40	4,00	4,00
More than 630 to 800	6,20	5,00	5,00	5,00	4,60	4,60
More than 800 to 1000	7,20	7,20	7,20	5,60	5,60	5,60

1**PRODUCTION PLANT**

Eibar Precision Casting

- » Design and manufacturing of tools: CAD-CAM
- » Coengineering
- » Casting Simulation (ProCast)
- » Wax injection
- » Automated coating installation
- » Three Investment Castings (Aluminium, Steel, Ni base alloys)
- » Heat (Nadcap) and finish treatments
- » Welding (Nadcap)
- » Dimensional Control

2**PRODUCTION PLANT**

Jiangyin Eibar Precision Casting

- » Design and manufacturing of tools
- » Wax injection
- » Coating installation
- » Steel investment Casting
- » Heat and finish treatments
- » Quality controls (dimensional, spectrometry...)

3**DEVELOPMENT AND INNOVATION PLANT**

EIPC Research Center

- » Non Destructive Facilities (Nadcap):

X Ray
Penetrating Liquids
Hardness

Destructive Facilities:

Macro & Micrography
Tensile Test

- » Spectrometry
- » Laboratory
- » I + D

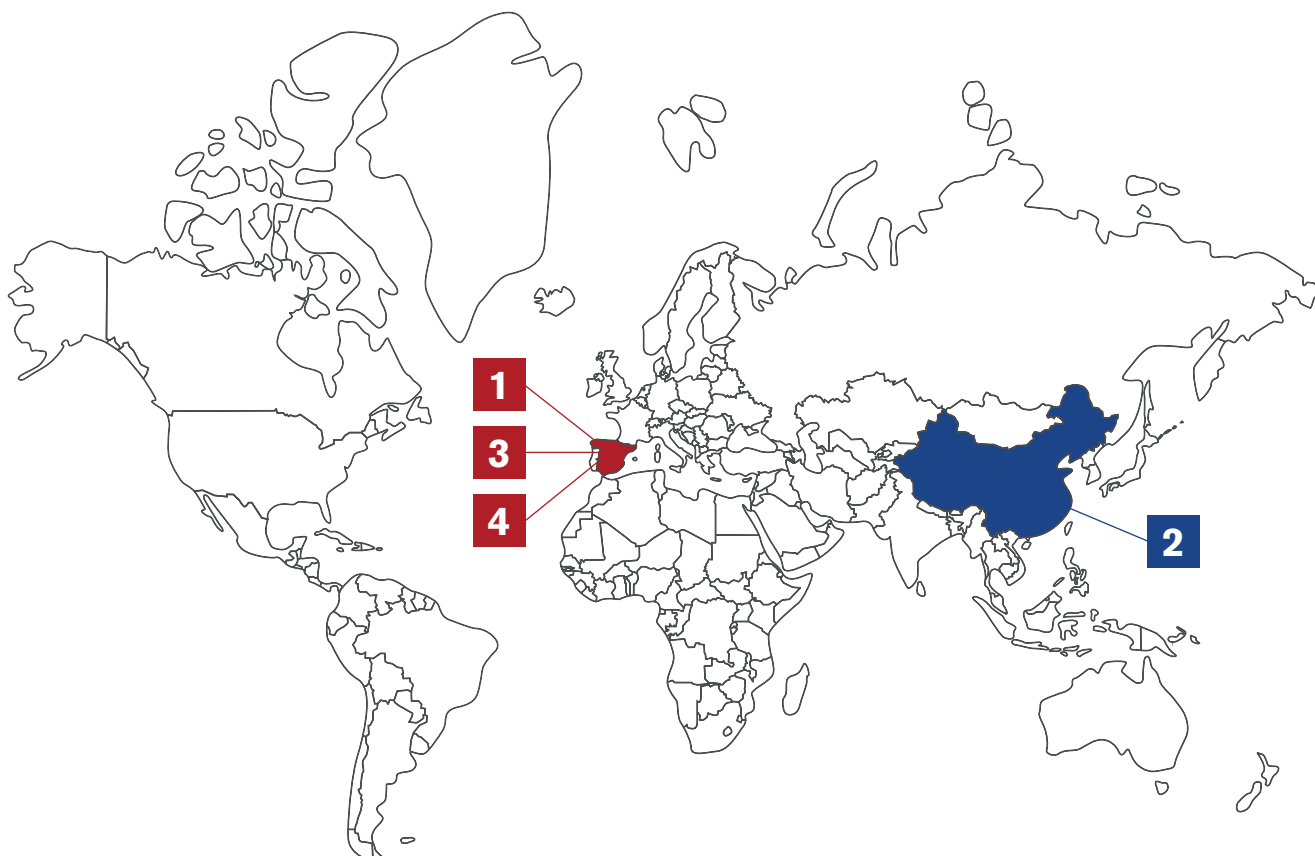
4**MACHINING PLANT**

EIPC Machining

- » Design and manufacturing of:

Injection
Control
Machining
Straighten Tools

- » Machined cast of parts
- » Leak test
- » Quality Control



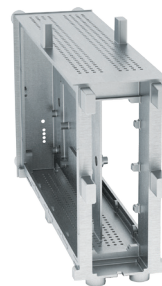


Electroptical housing

Material: EN AC-AL Si7Mg0,6 (A 357 / AS7G 06)

Weight: 4,24 kgs.

Heat Treatment: Solubilized + Artificial Maturation

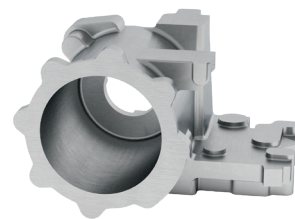


Electrical housing

Material: A 356.0 (AS7G 03)

Weight: 1,1 kgs.

Heat Treatment: T6 Solubilized + Quenching + Precipitation



Body valve

Material: 15-5PH (FMM7404) / UNS J92110 (AMS5347)

Weight: 3,1 kgs.

Heat Treatment: H1000 Solubilized + Tempered

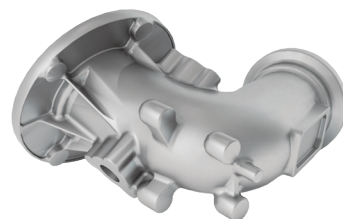


Fuel tube system

Material: A 357 (AS7G06)

Weight: 1,28 kgs.

Heat Treatment: T6 Solubilized + Quenching + Precipitation



Air tube system

Material: NC19Fe Nb (FMM7601) / INCO 718 / UNS N07718 (AMS 5383)

Weight: 1,9 kgs.

Heat Treatment: HoT3 Homogenized + Solubilization

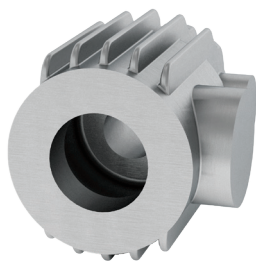


AUTOMOTIVE / INDUSTRY



Connector

Material: AISI-304 (1.4308)
Weight: 565 grs.
Heat Treatment: As Cast



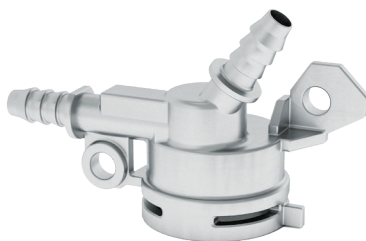
Compressor

Material: F-114 (1.0503)
Weight: 750 grs.
Heat Treatment: +N Normalized



Valve & pumps

Material: CF-8M (1.4408)
Weight: 626 grs.
Heat Treatment: +AT Solution Annealed



Sensor housing

Material: AISI-304 (1.4308)
Weight: 197 grs.
Heat Treatment: +AT Solution Annealed

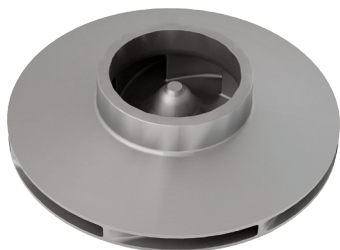


Valve & pumps

Material: GS240 (1.0455)
Weight: 4,80 kgs.
Heat Treatment: +N Normalized

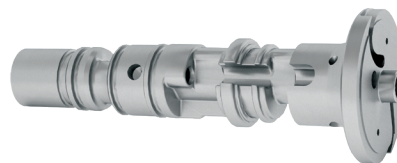


MARINE



Impeller

Material: CF3M + Mo (1.4409)
Weight: 13 kgs.
Heat Treatment: +AT Solution Annealed



Inlet & outlet pipe

Material: CF-8M (1.4408)
Weight: 1kg.
Heat Treatment: +AT Solution Annealed



 **Nadcap**
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NonDestructive Testing
Heat Treatment

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