

■ REFERENCE SECTORS

In many processes, mechanical separation is responsible for product quality, production efficiency and environmental compatibility. Mechanical separation processes are found in nearly all industrial sectors.

We supply rough and fully machined components to customers operating in the construction of separators and centrifuge which find application in the following fields:

- food and beverage;
- oleo-chemical;
- environmental protection and recycling;
- chemical and pharmaceutical;
- recycling;
- industrial waste;
- milk and dairy industry;
- mining and minerals.



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Tubes for separators and decanter centrifuges

■ FONDINOX

Fondinox has been producing stainless steel and nickel-based alloy castings for 50 years. During this time we have gained vast experience and introduced many innovations that have enabled us to become a leading producer of high value added castings which are used when reliability matters.

More than 30 years ago we expanded our production with the introduction of centrifugal casting technology which, thanks to the inherent advantages given by the process, allow us to react in a very quick and efficient way to the increasing and evolving requirements of the market.

Thanks to our **internal qualified machining shop** we are able to supply our finish machined components on short lead times.

■ SEPARATORS AND DECANTERS

In many processes, mechanical separation has a decisive influence on product quality, production efficiency and environmental impacts. Centrifuges are used in technical processes for the mechanical separation of mixtures of solids and liquids.

Over the years, technological improvements along with the availability of high strength and corrosion resistant construction materials have allowed solid bowl decanters to be applied to many processes.

Fondinox S.p.A. is well introduced in this sector and puts its technical and metallurgical expertise to its customer disposal, becoming not only a supplier but a reliable partner for the production of centricast cylinders, cones, rings and shaped items. Our pieces are utilized for the production of separators and decanter centrifuges where highly demanding uses require maximum mechanical and corrosion resistance.



■ TUBES DIMENSIONS

	Tubes	Cones, rings, shaped items
External Diameter	From 230mm to 1100mm	From 230 to 1300mm
Thickness	From 10 to 150mm	From 20 to 250mm
Length	Up to 4750mm	From 200mm to 1200mm

Differently from hot rolled or cold drawn tubes, there is a total production flexibility, with no minimum quantities request. Ready to ship pieces listed in our on-line stock on www.fondinox.com

■ MATERIALS

The absence of thermo mechanical processing inside the casting process gives the opportunity to optimize the chemical analysis inside the standardized range, so optimal mechanical and corrosion resistance performances are obtained.

Centrifuges generate up to ten thousand times the force of gravity and usually handle very corrosive media at high temperatures. Consequently, high performance materials are required.

Table of materials normally used in these application, with their cross reference, is listed below.

CROSS REFERENCE – CASTINGS / FORGINGS							CASTINGS CHEMICAL ANALYSIS ACC. TO ASTM (% wt)				
Structure	ACI/Cast	Cast ASTM	Cast EN/DIN	Cast UNS	Wrought UNS	Wrought grade	C	Cr	Ni	Mo	Other
Austenitica	CPF3	A451	1.4306 X2CrNi19-11	J92500	S30403	AISI 304L	<0.03	17.0-21.0	8.0-21.0	<0.5	
Austenitica	CPF8	A451	1.4308 GX6CrNi189	J92600	S30400	AISI 304	<0.08	18.0-21.0	8.0-11.0	<0.5	
Austenitica	CPF3M	A451	1.4404/1.4409 X2CrNiMo17-12-2	J92800	S31603	AISI 316L	<0.03	17.0-21.0	9.0-13.0	2.0-3.0	
Austenitica	CPF8M	A451	1.4408 GX6CrNiMo18-10	J92900	S31600	AISI 316	<0.08	18.0-21.0	9.0-12.0	2.0-3.0	
Lean Duplex	SAF 2304®	-	1.4362	S32304	-	SAF 2304	<0.03	21.5-24.5	3.0-5.5	0.05-0.6	N
Duplex	CD3MN	A995	1.4470 GX2CrNiMoN22-5	J92205	S31803	SAF 2205, F51	<0.03	21.0-23.5	4.5-6.5	2.5-3.5	N
Superduplex	CE3MN	A995	1.4469 GX2CrNiMoN26-7	J93404	S32750	SAF 2507®, F53	<0.03	24.0-26.0	6.0-8.0	4.0-5.0	N
Superduplex	CD3MWCuN	A995	-	J93380	S39276	ZERON 100®, F55	<0.03	24.0-26.0	6.5-8.5	3.0-4.0	Cu, W, N

A complete list of our materials is available on our website www.fondinox.com

CENTRIFUGAL CASTINGS, ADVANTAGES:

- Extreme material cleanliness due to inclusions separation induced by centrifugation
- Very fine microstructure given by the rapid cooling inside metallic mould means high mechanical and corrosion resistance
 - Optimization of chemical analysis
- Total absence of gas and shrinkage cavities with subsequent density increase, which mean no UT and RT examination needed
 - Very simple and fast production cycle: short lead times
 - No limitations on minimum quantities (weight, length)

SUPPLY CONDITIONS

Our centricast items are supplied in the following conditions:

- **rough condition:** annealed, quenched and tempered, normalized, solution annealed or as requested by international standards or customers specifications;
 - **premachined cylindrical;**
 - **finish machined with internal honing.**