



Creating Investment Casting Solutions since 1999

**Comparative Tables Guide for
Optimizing Production Processes.**



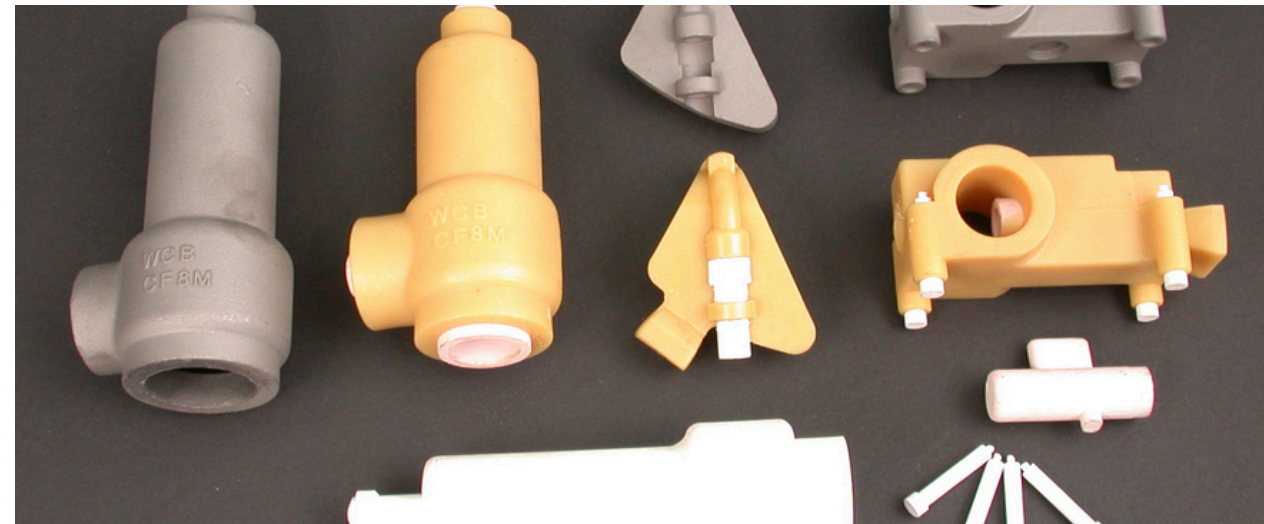
About Jandinox

Founded in 1999, Jandinox was born with the mission of becoming a reference in Microfusion in Brazil. **It is the only national company specialized in ceramic cores of any type and size.**

Capable of producing a wide variety of parts and products used in the most diverse commercial and industrial segments, Jandinox offers its customers innovative solutions that result in parts and products of the highest quality at an extremely competitive total cost.



What you will find in this guide



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Comparison Chart



PROCESS	TOLERANCE CAPABILITY	DESIGN FREEDOM	ALLOY SELECTION	SIZE RANGE	LEAD TIME	VALOME CAPABILITY	SURFACE FINISH	TOTAL COST	MACHINING COST
Investment Casting	Excellent	Excellent	Excellent	Medium	Medium	All	Good	Low	Low
Die Casting	Excellent	Fair	Poor	Good	Long	High	Good	High	Low
Powdered Metal	Excellent	Poor	Good	Fair	Long	High	Excellent	High	Low
Stamping	Excellent	Fair	Fair	Fair	Short	High	Excellent	High	Low
Forging	Fair	Fair	Fair	Fair	Long	High	Fair	High	High
Sand Casting	Fair	Good	Good	Good	Short	All	Poor	Low	High

Blind and Through Bores

The following rule is to be considered for casting with blind or through pores

They follow the following relationship:

**(D) X length
or Depth (L)**

Diameter of Blind and Through Bores (mm)		Diameter of Length or Depth (mm)	
From	To	Through hole	Blind Hole
2,0	4,0	~1xd	~0,6xd
4,0	6,0	~2xd	~1,0xd
6,0	10,0	~3xd	~1,6xd
>10		~4xd	~2,0xd

Superficial Roughness

In accordance with ISO R 468, DIN 4769 and VSM 10321

Surface Roughness of investment castings is between N7 and N9 and it depends on the material, size and weight.

		CLA	Ra''	Rz''	Rt''
Machined	N1	1	0,025	0,22-0,30	0,24-0,40
	N2	2	0,050	0,45-0,60	0,49-0,90
	N3	4	0,1	0,8-1,1	0,85-1,45
	N4	8	0,2	1,0-1,8	1,10-2,40
	N5	16	0,4	1,6-2,8	1,75-3,60
	N6	32	0,8	3,0-4,8	3,2-6,0
Investment Casting	N7	63	1,6	5,9-8,0	6,3-10,0
	N8	125	3,2	12-16	13,0-19,5
	N9	250	6,3	23-32	25-38
Sand Casting	N10	500	12,5	46-57	48-68
	N11	1000	25	90-110	95-130
	N12	2000	50	180-220	190-250
	N13	4000	100	360-430	380-500

Linear Tolerances

Degrees of Precision:

D1

Applicable to dimensions with no tolerance determination.

D2

Applicable to dimensions with tolerance determination.

D3

Applicable to dimensions with very high tolerance determination.

Range (mm)		D1		D2		D3		Distance between Center Lines	
From	To	Tol.	Total	Tol.	Total	Tol.	Total	D1 (Tol.)	D3 (Tol.)
	6	+/-0,10	0,20	+/-0,08	0,16	+/-0,06	0,12	+/-0,25	+/-0,16
6	10	+/-0,12	0,24	+/-0,10	0,20	+/-0,06	0,12		
10	14	+/-0,15	0,30	+/-0,12	0,24	+/-0,09	0,18		
14	18	+/-0,20	0,40	+/-0,14	0,28	+/-0,09	0,18		
18	24	+/-0,25	0,50	+/-0,17	0,34	+/-0,12	0,24	+/-0,32	+/-0,20
24	30	+/-0,30	0,60	+/-0,20	0,40	+/-0,14	0,28		
30	40	+/-0,37	0,74	+/-0,25	0,50	+/-0,17	0,34	+/-0,50	+/-0,30
40	50	+/-0,44	0,88	+/-0,30	0,60	+/-0,20	0,40		
50	65	+/-0,52	1,04	+/-0,38	0,76	+/-0,23	0,46	+/-0,71	+/-0,45
65	80	+/-0,60	1,20	+/-0,46	0,92	+/-0,27	0,54		
80	100	+/-0,68	1,36	+/-0,53	1,06	+/-0,30	0,60	+/-0,90	+/-0,60
100	120	+/-0,76	1,52	+/-0,60	1,20	+/-0,33	0,66		
120	140	+/-0,84	1,68	+/-0,65	1,30	+/-0,36	0,72	+/-1,15	+/-0,85
140	160	+/-0,92	1,84	+/-0,72	1,44	+/-0,38	0,76		
160	180	+/-1,02	2,04	+/-0,80	1,60	+/-0,42	0,84		
180	200	+/-1,12	2,24	+/-0,88	1,76	+/-0,43	0,86	+/-1,80	+/-1,00
200	225	+/-1,28	2,56	+/-0,95	1,90	+/-0,47	0,94		
225	250	+/-1,44	2,88	+/-1,05	2,10	+/-0,51	1,02		
250	280	+/-1,64	3,28	+/-1,15	2,30	+/-0,56	1,12	+/-2,20	+/-1,25
280	315	+/-1,84	3,68	+/-1,25	2,50	+/-0,63	1,26		
315	355	+/-2,10	4,20	+/-1,40	2,80	+/-0,71	1,42	+/-2,60	+/-1,60
355	400	+/-2,40	4,80	+/-1,60	3,20	+/-0,80	1,60		
400	450	+/-2,70	5,40	+/-1,80	3,60	+/-0,90	1,80	+/-3,10	+/-2,00
450	500	+/-3,00	6,00	+/-2,00	4,00	+/-1,00	2,00		

Parallelism

Length (mm)		Degree of Precision	
From	To	D1	D2
0	25	0,15	0,10
25	50	0,25	0,20
50	75	0,40	0,25
75	100	0,55	0,35
100	150	0,75	0,50
150	200	1,00	0,75
200	250	1,30	0,90
250	300	1,70	1,10



**The only national
company specialized in
Ceramic Cores of any
type and size**

For more information or to clarify any doubts about our services, please contact us.

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