300 SERIES · TECHNICAL CATALOG

300 SERIES

STAINLESS & ALLOY TUBE

SPECIFICATIONS

Austenitic Stainless Steel

4	ASTM	100%	20+
GRADES COVERED	STANDARDS	MTC CERTIFIED	YRS EXPERIENCE

BRAVA STAINLESS STEEL
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TECHNICAL DATASHEET
FOR PROFESSIONAL USE

INTRODUCTION

300 Series — Austenitic Stainless Steel

The workhorses of stainless: chromium-nickel austenitic grades offering excellent corrosion resistance, weldability, and formability across a wide temperature range. The most widely specified family for chemical, instrument, food, and general process service.

ABOUT BRAVA

BRAVA Stainless Steel is an international distributor specializing in seamless stainless and alloy tubes and pipes. Transformed from a manufacturer with 20+ years of experience in the tube and pipe industry, we bring extensive technical knowledge and industry know-how to every shipment. Our products are sourced through a rigorous three-point validation process (quality, experience, growth) and shipped from warehouses in China, Korea, Australia, and Indonesia — backed by 24/7 customer service.

GRADES IN THIS BROCHURE

#	GRADE	UNS	STANDARDS
01	**TP304 / TP304L**	S30400, S30403	A312/SA312 · A213/SA213 · A269
02	**TP316 / TP316L**	S31600, S31603	A312/SA312 · A213/SA213 · A269
03	**TP321 / TP321H**	S32100, S32109	A312/SA312 · A213/SA213 · A269
04	**TP310S / TP310H**	S31008, S31009	A312/SA312 · A213/SA213

300 SERIES

TP304 / TP304L

PRODUCT INFORMATION

304 provides useful resistance to corrosion in many environments ranging from moderately reducing to moderately oxidizing. Through the controlled addition of nitrogen, it is common for 304L to meet the mechanical properties of 304 straight grade. As a result, most products are dual certified as 304 and 304/304L.

APPLICABLE STANDARDS

- ASTM A312 / ASME SA312
- ASTM A213 / ASME SA213
- ASTM A269

SIZE RANGE

Outside Diameter (inch)	Wall Thickness (inch)	Length (m)
0.1874 – 16.0	0.0197 – 0.9059	< 18

CHEMICAL COMPOSITION (% BY WEIGHT)

Grade	UNS	Standard	C max	Mn max	P max	S max	Si max	Cr	Ni
TP304	S30400	A/SA 213	0.08	2.00	0.045	0.030	1.00	18.0–20.0	8.0–11.0
TP304	S30400	A 269	0.08	2.00	0.045	0.030	1.00	18.0–20.0	8.0–11.0
TP304	S30400	A/SA 312	0.08	2.00	0.045	0.030	1.00	18.0–20.0	8.0–11.0
TP304L	S30403	A/SA 213	0.035	2.00	0.045	0.030	1.00	18.0–20.0	8.0–12.0
TP304L	S30403	A 269	0.035	2.00	0.045	0.030	1.00	18.0–20.0	8.0–13.0
TP304L	S30403	A/SA 312	0.035	2.00	0.045	0.030	1.00	18.0–20.0	8.0–13.0

MECHANICAL PROPERTIES

Grade	UNS	Standard	Tensile Strength (MPa min)	Yield Strength (MPa min)	Elongation (% min)	Hardness (HRB max)
TP304	S30400	A/SA 213	515	205	35	90
TP304	S30400	A 269	—	—	—	90
TP304	S30400	A/SA 312	515	205	35	—
TP304L	S30403	A/SA 213	485	170	35	90
TP304L	S30403	A 269	—	—	—	90
TP304L	S30403	A/SA 312	485	170	35	—

Packing Condition: Polywooden cases. Alternative packing styles available on request to ensure product integrity throughout international transit.

300 SERIES

TP316 / TP316L

PRODUCT INFORMATION

With the addition of molybdenum, grades 316 and 316L stainless steel were developed to offer improved corrosion resistance compared to alloy 304/L. The increased performance of this austenitic chromium-nickel stainless makes it better suited for environments rich in salt air and chloride. Additionally, the low carbon content makes the alloy 316/L easy to weld.

APPLICABLE STANDARDS

- ASTM A312 / ASME SA312
- ASTM A213 / ASME SA213
- ASTM A269

SIZE RANGE

Outside Diameter (inch)	Wall Thickness (inch)	Length (m)
0.1874 – 16.0	0.0197 – 0.9059	< 18

CHEMICAL COMPOSITION (% BY WEIGHT)

Grade	UNS	Standard	C max	Mn max	P max	S max	Si max	Cr	Ni	Mo
TP316	S31600	A/SA 213	0.08	2.00	0.045	0.030	1.00	16.0–18.0	10.0–14.0	2.0–3.0
TP316	S31600	A 269	0.08	2.00	0.045	0.030	1.00	16.0–18.0	10.0–14.0	2.0–3.0
TP316	S31600	A/SA 312	0.08	2.00	0.045	0.030	1.00	16.0–18.0	10.0–14.0	2.0–3.0
TP316L	S31603	A/SA 213	0.035	2.00	0.045	0.030	1.00	16.0–18.0	10.0–14.0	2.0–3.0
TP316L	S31603	A 269	0.035	2.00	0.045	0.030	1.00	16.0–18.0	10.0–15.0	2.0–3.0
TP316L	S31603	A/SA 312	0.035	2.00	0.045	0.030	1.00	16.0–18.0	10.0–14.0	2.0–3.0

MECHANICAL PROPERTIES

Grade	UNS	Standard	Tensile Strength (MPa min)	Yield Strength (MPa min)	Elongation (% min)	Hardness (HRB max)
TP316	S31600	A/SA 213	515	205	35	90
TP316	S31600	A 269	—	—	—	90
TP316	S31600	A/SA 312	515	205	35	—
TP316L	S31603	A/SA 213	485	170	35	90
TP316L	S31603	A 269	—	—	—	90
TP316L	S31603	A/SA 312	485	170	35	—

Packing Condition: Polywooden cases. Alternative packing styles available on request to ensure product integrity throughout international transit.

300 SERIES

TP321 / TP321H

PRODUCT INFORMATION

TP321/H is a standard austenitic 18/8 chromium-nickel alloy with the addition of titanium, making it an excellent choice in elevated-temperature environments. The titanium stabilizes the material — removing its susceptibility to intergranular corrosion. 321 is therefore the stainless steel of choice for working environments up to 900°C.

APPLICABLE STANDARDS

- ASTM A312 / ASME SA312
- ASTM A213 / ASME SA213
- ASTM A269

SIZE RANGE

Outside Diameter (inch)	Wall Thickness (inch)	Length (m)
0.1874 – 16.0	0.0197 – 0.9059	< 18

CHEMICAL COMPOSITION (% BY WEIGHT)

Grade	UNS	Standard	C	Mn max	P max	S max	Si max	Cr	Ni	N max	Ti
TP321	S32100	A/SA 213	0.08 max	2.00	0.045	0.030	1.00	17.0–19.0	9.0–12.0	—	5×(C+N) – 0.70
TP321	S32100	A 269	0.08 max	2.00	0.045	0.030	1.00	17.0–19.0	9.0–12.0	—	5×(C+N) – 0.70
TP321	S32100	A/SA 312	0.08 max	2.00	0.045	0.030	1.00	17.0–19.0	9.0–12.0	0.10	5×(C+N) – 0.70
TP321H	S32109	A/SA 213	0.04–0.10	2.00	0.045	0.030	1.00	17.0–19.0	9.0–12.0	—	4×(C+N) – 0.70
TP321H	S32109	A/SA 312	0.04–0.10	2.00	0.045	0.030	1.00	17.0–19.0	9.0–12.0	0.10	4×(C+N) – 0.70

MECHANICAL PROPERTIES

Grade	UNS	Standard	Tensile Strength (MPa min)	Yield Strength (MPa min)	Elongation (% min)	Hardness (HRB max)
TP321	S32100	A/SA 213	515	205	35	90
TP321	S32100	A 269	—	—	—	90
TP321	S32100	A/SA 312 (≤3/8")	515	205	35	—
TP321	S32100	A/SA 312 (>3/8")	485	170	35	—
TP321H	S32109	A/SA 213	515	205	35	90

Grade	UNS	Standard	Tensile Strength (MPa min)	Yield Strength (MPa min)	Elongation (% min)	Hardness (HRB max)
TP321H	S32109	A/SA 312 (≤3/16")	515	205	35	—
TP321H	S32109	A/SA 312 (>3/16")	480	170	35	—

Packing Condition: Polywooden cases. Alternative packing styles available on request to ensure product integrity throughout international transit.

300 SERIES

TP310S / TP310H

PRODUCT INFORMATION

310S (UNS S31008) is the low-carbon version of the alloy, utilized for ease of fabrication. 310H (UNS S31009) is a high-carbon modification developed for enhanced creep resistance. In most instances the grain size and carbon content of the plate can meet both 310S and 310H requirements — making it ideal for high-temperature furnace and heat treatment service.

APPLICABLE STANDARDS

- ASTM A312 / ASME SA312
- ASTM A213 / ASME SA213

SIZE RANGE

Outside Diameter (inch)	Wall Thickness (inch)	Length (m)
0.1874 – 16.0	0.0197 – 0.9059	< 18

CHEMICAL COMPOSITION (% BY WEIGHT)

Grade	UNS	Standard	C	Mn max	P max	S max	Si max	Cr	Ni	Mo max
TP310H	S31009	A/SA 213	0.04–0.10	2.00	0.045	0.030	1.00	24.0–26.0	19.0–22.0	—
TP310H	S31009	A/SA 312	0.04–0.10	2.00	0.045	0.030	1.00	24.0–26.0	19.0–22.0	—
TP310S	S31008	A/SA 213	0.08 max	2.00	0.045	0.030	1.00	24.0–26.0	19.0–22.0	—
TP310S	S31008	A/SA 312	0.08 max	2.00	0.045	0.030	1.00	24.0–26.0	19.0–22.0	0.75

MECHANICAL PROPERTIES

Grade	UNS	Standard	Tensile Strength (MPa min)	Yield Strength (MPa min)	Elongation (% min)	Hardness (HRB max)
TP310H	S31009	A/SA 213	515	205	35	90
TP310H	S31009	A/SA 312	515	205	35	—
TP310S	S31008	A/SA 213	515	205	35	90
TP310S	S31008	A/SA 312	515	205	35	—

Packing Condition: Polywooden cases. Alternative packing styles available on request to ensure product integrity throughout international transit.

HOW TO ORDER

Request a Quote in Three Steps

01 · GETTING STARTED

Submit your specifications — grade, ASTM standard, OD, wall thickness, length, quantity, surface finish, and target delivery date. We respond within one business day with our most competitive quote drawn from our global supplier network.

02 · SOURCING & QUALITY CHECK

Based on your request, we locate the best options across our global inventories and run them through our rigorous QC process. Our dedicated QC teams in sourcing geographies physically inspect every item before clearance for shipment.

03 · GET YOUR PRODUCTS

We prepare packing per your specification and handle every customs document. Mill test certificates accompany each shipment. Your only job is to receive the product on time, in spec, and ready to install.

CONTACT A BRAVA SPECIALIST

Phone	+1 (636) 591-5760
General Inquiries	info@brava-steel.com
Technical Support	tech@brava-steel.com
Warehouses	China · Korea · Australia · Indonesia
Customer Service	24/7 (US Eastern & Asia-Pacific time zones)
Standard Lead Time	35 – 40 days
Minimum Order Quantity	20 ft (straight tubing)
Documentation	Mill Test Certificate (MTC) included with every shipment