PAULO

DATAGINEERING AT WORK.

2022

LINE CARD

SCIENTIFIC CERTAINTY & REPEATABILITY

for Mission-Critical Parts

Paulo is the largest privately-held commercial heat treater in the United States. Since 1943, we have been delivering optimal results for leading manufacturers in safety-critical, highly regulated industries such as aerospace & defense, automotive, firearms, and beyond.

THE PAULO DIFFERENCE

Datagineering leverages the strengths and minimizes the weaknesses of both people and technology.

Largest in-house metallurgy team of any commercial thermal processor verifies your results and provides advice when you need it

Fully automated furnace controls that eliminate operator error and ensure every process runs according to specifications

Proprietary software and hardware that collects data every second of your parts' processes for detailed tracking and proactive troubleshooting

168+
million lbs processed annually

82.7%
of customers have come back to work with Paulo again

79
years in business

99.999%
parts meet spec the first time

YOUR CHALLENGES, SOLVED

We have engineered our business process to anticipate, prevent, & quickly solve our customers' challenges.

Other Heat Treaters...

Fail to deliver on promised turnaround times and jeopardize your critical business relationships.

Often need to rework parts, leading to missed shipments and production shutdowns.

Struggle to keep their commitments to you when equipment breaks down or undergoes maintenance.

Have limited data to investigate the root cause of results that occur outside of spec.

VS

Paulo...

Intentionally operates at 85% capacity to allow for volume fluctuations and processing your rush orders.

Brings you peace of mind through automation that adjusts furnace controls to reduce error and deliver consistent accuracy.

Doesn't pass issues along to you—our equipment redundancies accommodate expected and unexpected maintenance without disrupting your supply chain.

Quickly identifies and corrects processing issues with the industry's most advanced data collection system.

MATERIALS

From basic carbon steels to highly specialized alloys, our metallurgy and engineering teams understand the nuances of heat treating a wide variety of metal materials.

FERROUS METALS

Tool Steels

High Speed:
M4 | M42 | M2

Cold Work:
A2 D2

High Pressure Die Casting Materials:
H13 | 2367 | H11

Powdered Metallurgy:
FN-202 | FN-205
FC-205 | FC-208

Shock Resistant:
S7

Hot Work:
H13

Martensitic:
440C | 420 | 410 | 416

Carburizing Steels

8620 | 10B21 | 1018 | 1010 | 1117 | 1025 | 4140 | 4130
1026 | CA15 | 1015 | 8630 | CRS | CA6NM | 410

Maraging Steels:
250 | 300 | 350

Low Carbon Steels:
1008 | 1010 | 1020

Medium Carbon Steels:
1030 | 1045 | 1050

Engineering Alloys

4130 | 4140 | 4150 | 4330

Spring Steel

5160 | 6150

Specialty Alloy Steels

9310

Iron

Ductile Iron:
80-55-06

Gray Iron:
Class 30 | Class 40

White Iron:
577

High Carbon Steels

1075 | 1090 | 1095

Stainless Steels

Ferritic:
409

Martensitic:
410 | 416 | 420 | 440C

Austenitic:
304 | 309 | 316

NON-FERROUS METALS

Aluminum

Wrought Alloys:
1000 | 2000 | 3000 | 4000 | 5000 | 6000 | 7000

Cast Alloys:
355 | 356 | 357

Titanium

Alpha | Beta | Alpha Beta

Nickel Based

Directionally Solidified | Equiaxed | Single Crystal

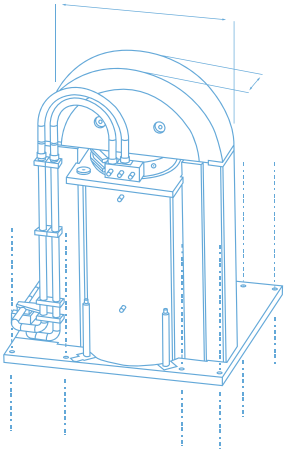
Copper, Brasses & Bronze

Copper:
C10100

Beryllium Copper:
175

ADVANCED EQUIPMENT FOR
SUPERIOR RESULTS.

Paulo is committed to investing in state-of-the-art thermal processing equipment to ensure your high-performance components receive high-quality heat treatment. Our locations have over 100 furnaces across the U.S. to support a variety of industries and part types with the capacity to tackle jobs both big and small. With the most advanced equipment combined with our expert teams and proprietary production systems monitoring every aspect of each project, Paulo is able to deliver your parts in spec and on time. Every time.



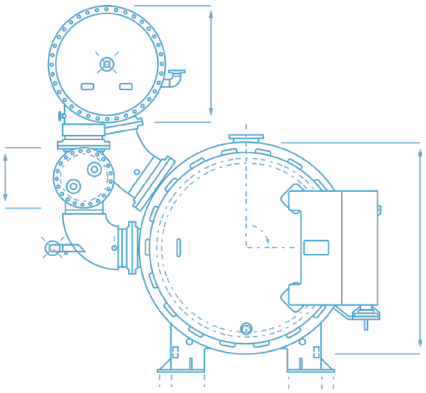
Hot Isostatic Press

Max Working Area Size:
- 24.5”W x 68”H

Max Capacity:
- 4,409 lbs

Temperature:
- 2,552 °F

Atmosphere:
- Argon



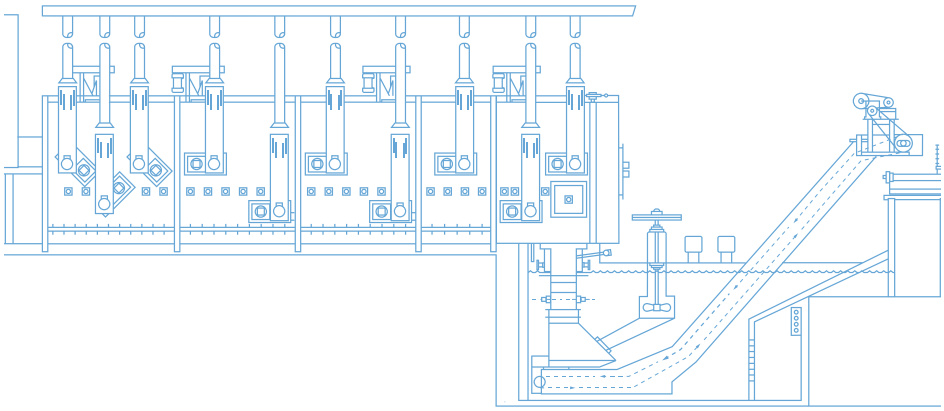
Vacuum Furnace

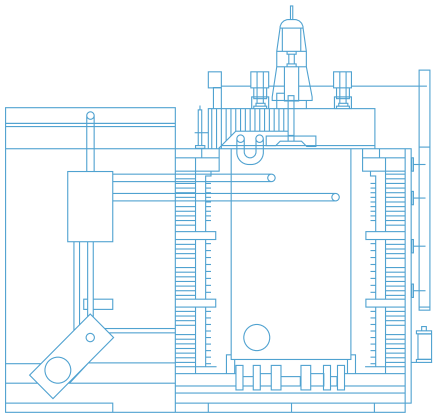
Max Working Area Size:
- 72”L x 30”W x 36”H

Max Capacity:
- 8,000 lbs

Temperature:
- 300 - 2,500 °F

Atmosphere:
- Nitrogen/Argon





Continuous Belt Furnace

Max Working Area Size:
- 60”W x 6”H

Max Capacity:
- 4,250 lbs/hr

Temperature:
- 1,450 - 1,750 °F

Atmosphere:
- Endothermic Gas

Continuous Austemper Furnace (Salt Quench)

Max Working Area Size:
- 60”W x 6”H

Max Capacity:
- 3,000 lbs/hr

Temperature:
- 585 - 1,650 °F

Atmosphere:
- Endothermic Gas
- Full hour dwell in the salt

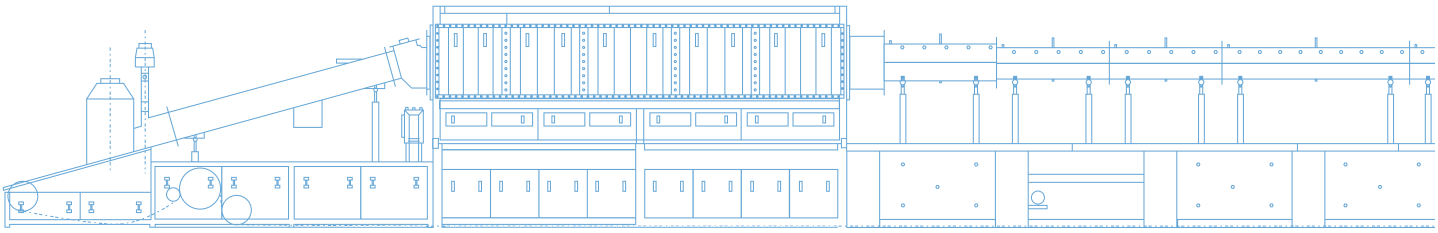
Pit Gas Nitrider Furnace

Max Working Area Size:
- 28.5” Dia x 55”L

Max Capacity:
- 3,000 lbs

Temperature:
- 1,250 °F

Atmosphere:
- Ammonia



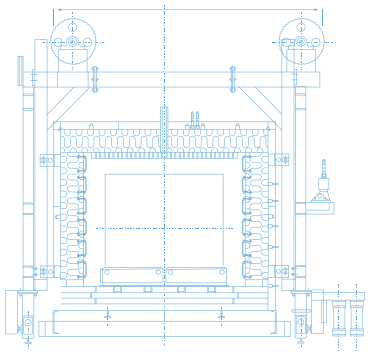
Continuous Hydrogen Belt Furnace

Max Working Area Size:
- 30”L x 240”W x 12”H

Max Capacity:
- N/A

Temperature:
- 1550 - 2075 °F

Atmosphere:
- Hydrogen



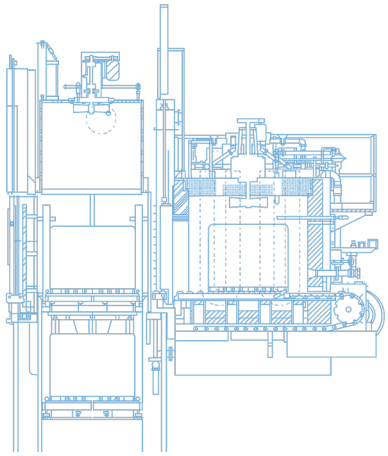
Air Furnace

Max Working Area Size:
- 62”L x 48”W x 48”H

Max Capacity:
- 4,000 lbs

Temperature:
- 1,250 - 2,250 °F

Atmosphere:
- Air



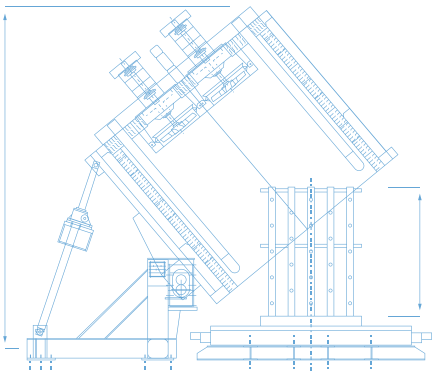
Integral Quench Furnace

Max Working Area Size:
- 48”L x 43.5”W x 38”H

Max Capacity:
- 3,500 lbs

Temperature:
- 900 - 1,750 °F

Atmosphere:
- Endothermic Gas



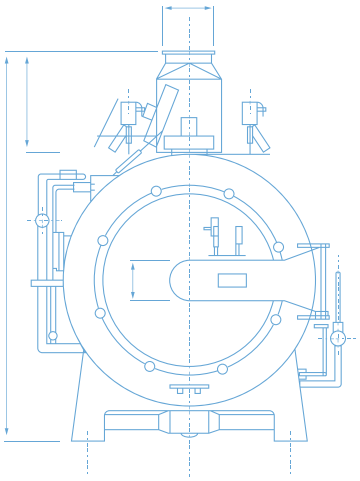
Tip-Up Furnace

Max Working Area Size:
- 64”L x 376”W x 85”H

Max Capacity:
- 100,000 lbs

Temperature:
- 392 - 1250 °F

Atmosphere:
- Nitrogen



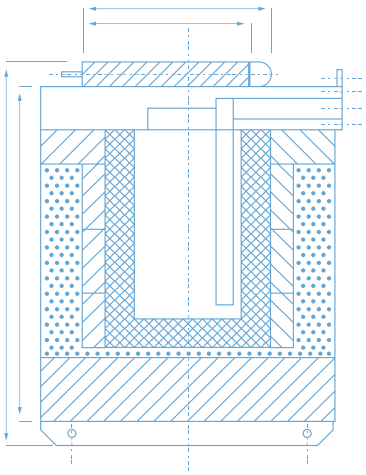
Vacuum Purge Nitriding Furnace

Max Working Area Size:
- 48”L x 30”W x 36”H

Max Capacity:
- 6,600 lbs

Temperature:
- 650 - 1,382 °F

Atmosphere:
- Nitrogen



Salt Pot Furnace

Max Working Area Size:
- 16”L x 32”W x 58”H

Max Capacity:
- N/A

Temperature:
- 1,350 - 1,650 °F

Atmosphere:
- Salt

Our Capabilities

	Cleveland, OH	Kansas City, MO	Murfreesboro, TN	Nashville, TN	St. Louis, MO	Monterrey, MX
THERMAL PROCESSING						
Annealing / Stress Relieving	●	●	●	●	●	●
Austempering		●	●			
Case Hardening		●	●	●	●	
Cryogenic & Deep Freezing	●	●		●	●	
Ferritic Nitrocarburizing		●	●	●	●	●
Flattening & Staightening	●	●		●	●	
Gas Nitriding				●	●	
Hot Isostatic Pressing	●					
Induction Heat Treating		●				
Low Pressure Carburizing				●		
Martempering		●				
Precipitation Hardening	●	●		●	●	
Precision Nitriding				●		
Through Hardening	●	●	●	●	●	
Vacum Heat Treating	●	●		●	●	
BRAZING						
Hydrogen Brazing	●					
Vacuum Brazing	●					
METAL FINISHING						
Black Oxide Coating		●	●		●	
Blasting	●	●	●	●	●	
Zinc Phosphating			●			
Zinc Plating			●			
CERTIFICATIONS						
AS9100	●	●				
CQI-9	●	●	●	●	●	●
CQI-11			●			
CQI-12			●			
FFL	●			●	●	
IATF 16949			●	●	●	●
ISO9001	●	●				
ITAR	●	●	●	●	●	
Nadcap	●	●				

LET'S KEEP YOUR BUSINESS MOVING FORWARD

Contact a Paulo expert today: sales@paulo.com

PAULO

DATAGINEERING AT WORK.