

Standard Parts Size Chart

Pre-engineered nickel alloy casting reference for standard flow-control parts, pump components, flanges and corrosion-resistant replacement castings.

Product Type	Standard nickel alloy cast parts
Available Grades	CW-12MW (C-276), M-35-1 (Monel), CW-6MC (Inconel 625), CZ-100 (Nickel 200), CY-40 (Inconel 600)
Components	Valve bodies, pump casings, impellers, flanges, elbows, tees and replacement castings
Inspection	Radiographic testing (RT), dye penetrant testing (PT), heat treatment and machining available
Pressure Class	Compatible with ASME B16.34 style pressure-retaining casting requirements when specified

1. Product Overview

Standard Parts are pre-engineered nickel alloy cast components produced for rapid replacement and project supply in chemical processing, marine, power generation and industrial flow-control systems. Existing patterns and tooling can reduce lead time compared with one-off custom fabrication.

Part Family	Typical Cast Components	Primary Benefit
Valves	Gate, globe, check and ball valve bodies; bonnets, discs and wedges	Corrosion-resistant pressure parts with alloy trim options
Pumps	ANSI-style casings, volutes, open/closed impellers and stuffing box covers	Replacement parts for corrosive liquid handling systems
Fittings & Flanges	Heavy-wall tees, elbows, reducing flanges and special cast fittings	Near-net-shape parts where forging or machining is inefficient

2. Key Features

- Existing standard patterns help shorten lead time for common valve, pump and piping components.
- Nickel alloy grades are selected for chloride, acid, seawater, caustic and high-temperature service.
- Pressure-retaining castings can be supplied with RT/PT inspection and material documentation.
- Parts may be supplied as-cast, heat treated, rough machined or finish machined for assembly.

Further information under:	https://www.nickelcasting.com/nickel-alloys/nickel-casting/standard-parts/
Home page:	www.nickelcasting.com
Email:	ni@Nickelcasting.com

Size Chart and Technical Data

The following ranges are practical inquiry guidelines for standard nickel alloy castings. Final dimensions, pressure rating and tolerances should be confirmed against the drawing, pattern availability and applicable ASTM / ASME requirements.

3. Standard Parts Size Chart

Component	Common Inquiry Size	Typical Information Needed
Valve Bodies	NPS 1/2-24 or drawing-based replacement sizes	Valve type, pressure class, end connection, alloy grade and machining requirement
Pump Casings / Volutes	Small process pumps to large heavy-wall casings	Pump model, drawing, impeller diameter, corrosion service and inspection level
Impellers	Open, semi-open and closed impeller designs	Outside diameter, hub/bore detail, vane geometry, balance requirement and alloy
Flanges & Fittings	ANSI-style and special cast configurations	Nominal pipe size, pressure class, face type, wall thickness and drawing
Replacement Castings	Legacy parts reproduced from drawing, sample or scan	Part number, photos, dimensions, operating media and failure history

4. Standard Casting Grades

Cast Grade	Wrought Equivalent	Key Characteristics
CW-12MW	Hastelloy C-276	Premium corrosion resistance in mixed acids and chlorides
M-35-1	Monel 400	Excellent for seawater, hydrofluoric acid and salts; weldable
CW-6MC	Inconel 625	High strength and oxidation resistance for demanding service
CZ-100	Nickel 200	Commercially pure nickel for caustic soda production
CY-40	Inconel 600	High-temperature oxidation resistance for furnace parts

5. Inspection and Supply Conditions

Item	Available Options
Inspection	Radiography (RT), dye penetrant testing (PT), dimensional inspection and visual inspection
Heat Treatment	Solution annealing or grade-specific heat treatment to improve corrosion resistance and structure
Machining	As-cast, rough machined, finish machined, drilled, faced or prepared for assembly
Documentation	Material certificate, test report, inspection report and dimensional record when requested

Applications and Ordering Information

Use this section to define replacement-part requirements and accelerate technical confirmation for standard nickel alloy castings.

6. Typical Applications

Industry / Area	Typical Components
Chemical Processing	Valve bodies, pump casings, impellers and fittings exposed to acids and chlorides
Marine & Offshore	Seawater pump components, Monel castings, flanges and corrosion-resistant fittings
Power & Heat Systems	High-temperature cast parts, furnace components and oxidation-resistant CY-40 castings
Maintenance / MRO	Replacement castings for obsolete equipment where downtime must be minimized

7. Information to Include When Requesting a Quote

- Part type: valve body, pump casing, impeller, fitting, flange or replacement casting.
- Alloy grade or service media: CW-12MW, M-35-1, CW-6MC, CZ-100, CY-40 or equivalent wrought alloy.
- Size details: NPS / DN, pressure class, wall thickness, critical dimensions, drawing or sample part.
- Supply condition: as-cast, heat treated, rough machined, finish machined or ready for assembly.
- Inspection and documents: RT, PT, PMI, dimensional report, MTC or project-specific certificates.

Company Information	
Address	Shanghai, China
Email	ni@Nickelcasting.com
Home Page	www.nickelcasting.com
Product Page	https://www.nickelcasting.com/nickel-alloys/nickel-casting/standard-parts/

Disclaimer

This document is provided for general reference only. Actual casting dimensions, tolerances, alloy availability and inspection requirements may vary by pattern, drawing, product form, heat treatment and applicable specification. Please contact us for confirmed specifications, test reports and material certificates before ordering.