

P265GH(1.0425) Flange Specification

P265GH (material number 1.0425) is a **non-alloy quality steel grade** defined in **EN 10028-2**, specifically designed for **pressure vessels, boilers, and high-temperature piping systems**. The “P” stands for **pressure**, while “265” indicates a minimum yield strength of 265 MPa. Due to its excellent weldability, toughness, and resistance to high-temperature environments, P265GH is widely used across the **oil & gas, petrochemical, power generation, and mechanical engineering industries**.

Flanges manufactured in **P265GH** are widely used in **boiler systems, heat exchangers, petrochemical plants, and power generation pipelines**. They comply with **EN 1092-1** standards and are suitable for medium to high temperature applications.

Types of Flanges Available

- Weld Neck Flange (EN 1092-1 Type 11)
- Slip On Flange (Type 01)
- Blind Flange (Type 05)
- Lap Joint Flange (Type 02)
- Threaded Flange (Type 13)
- Socket Weld Flange (Type 12)

Pressure Ratings

- **PN6, PN10, PN16, PN25, PN40** (according to EN 1092-1)

Sizes

- Nominal Diameter: **DN10 to DN2000**
- Custom sizes available on request

Dimensions

- As per **EN 1092-1**
- Facing types: **Raised Face (RF), Flat Face (FF), Ring Type Joint (RTJ)**

Chemical composition % of steel P265GH (1.0425): EN 10028-2-2003

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C	Si	Mn	Ni	P	S	Cr	Mo	V	N	Nb	Ti	Al	Cu	-
max 0.2	max 0.4	0.8 - 1.4	max 0.3	max 0.025	max 0.015	max 0.3	max 0.08	max 0.02	max 0.012	max 0.02	max 0.03	max 0.02	max 0.3	Cr+Cu+Mo+Ni < 0.7

Mechanical properties of steel P265GH (1.0425)

Nominal thickness (mm):	to 100	100 - 150	150 - 250
Rm - Tensile strength (MPa) (+N)	410-530	400-530	390-530

Nominal thickness (mm):	to 16	16 - 40	40 - 60	60 - 100	100 - 150	150 - 250
ReH - Minimum yield strength (MPa) (+N)	265	255	245	215	200	185

KV - Impact energy (J) transverse, (+N)	-20° 27	0° 27	+20° 40
KV - Impact energy (J) longitud.,	-10° 28	0° 40	+20° 47

Heat Treatment

- Normalizing: 890 - 950 ° C (air cooled)
- Stress Relieving: 580 - 620 ° C

Testing & Certification

- 1Dimensional Inspection
- UT / NDT / Impact Tests as per EN standards
- EN 10204 3.1 / 3.2 Certificates available
- Third-party inspection (TÜV, SGS, BV, Lloyd' s) on request

Applications of P265GH Flanges

- Boilers and Pressure Vessels
- Steam Pipelines & Power Plants

- Oil & Gas Refineries
- Petrochemical & Fertilizer Plants

