



**„Where the cold processing reached their limits
begin our strengths!“**

Short summary

products:

drawing parts for example: - studs and expansion stud - cap/head screw - with hexagon - with hexagon socket - with other head forms	DIN-screws for example: - hexagon screw - hexagon socket screw - countersunk and cylinder screw - square-head bolt - studs and expansion stud	turned parts / nuts for example: - nuts to customers drawings - nut capsule - sleeves - washers
ways of processing - warm forging (gas- or inductive heating) - CNC-processing - Ø 8 mm 10xd - Ø 70 mm 10xd - Ø 20 mm - Ø 100 mm max. turning length 1,200 mm - polygonal processing - polishing (also centerless) - milling - drilling - calibrating - outside processing thread		moreover: for example: - serration for the transmission of high torques - final thread rolling up to 1,450 N/mm ² - thread rolling of - metric threads - inch threads UN, UNC, UNF or Whitworth or R - trapezoidal threads (Tr) - conical threads - special threads

quality:

attestations and registrations - TÜV DIN EN ISO 9001:2000 - TÜV TÜV Pressure Equipment Directive 97/23/EG - WO / TRD 100 / TRD 106 - e-on Kernkraft (KTA) - Germanischer Lloyd - Bureau Veritas	material testing - destructive testing - laboratory with tensile test - hardness test (HV, HBW, HRC) - beam impact test - non-destructive testing - magnetic crack testing (up to 2,5 m) - ultrasonic testing - penetration testing - spectral analysis - Spectroscopic confounding examination	Approval tests The approval tests carried out as single-and multiple inspections in cooperation with our own experts and the relevant acceptance inspections: - TÜV, ABS, GL, NV, BV, LR, PRS, DB, NKK, RINA, CCS the tests done by: - DIN EN ISO 10204 : 2005 - 2.1 / 2.2 - 3.1 - 3.2
inspection and testing according to guidelines of our quality management, certified in accordance with DIN EN ISO 9001:2000 and Pressure Equipment Directive.		testing of complex forms: - Konturograph, 3D-meter, Height Measuring Instrument - first sampling (VDA und PPAP)

material:

grades category DIN EN ISO 898-1 for example: - 5.6 (C35E; St 50-2) - 8.8 (37Cr4, 41Cr4, 42CrMo4) - 10.9 (42CrMo4; 34CrNiMo6) - 12.9 (42CrMo4; 34CrNiMo6; 30CrNiMo8) moreover: - heat-resistant steel - steel, which is resistant to subzero temperatures - tool steel - special material - steel according to DIN EN 10083-2/-3	steel and nickel alloys for fasteners for use at elevated and / or low temperatures according to DIN EN 10269 (DIN 17240), (DIN 17280) for example: - CK35 (1.1181) - 24CrMo5 (1.7258) - 21CrMoV5-7 (1.7709) - 40CrMoV4-7 (1.7711) - X22CrMoV12-1 (1.4923) - X19CrMoVNbN11-1 (1.4913) - NiCr20TiAl (2.4952)	stainless materials according to DIN EN 10088 / DIN 17440 for example: - X20Cr13 (1.4021) - X17CrNi16-2 (1.4057) - X5CrNi18-10 (1.4301) - X3CrNiMo17-13-3 (1.4436) - X6CrNiTi18-10 (1.4541) - X6CrNiMoTi17-12-2 (1.4571)
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surface:

example: - black oxide - Geomet (Dakromet) coating (320 bzw. 500) - zinc-iron coating	- galvanized (example: Chromium-, nickel-, zinc-, tin-, copper-plated) - phosphating (Mn and/or Zn)	- chemical nickel plated - inductive hardening - carbonization - nitride hardening
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