



UMBRA GROUP

**PRÄZISIONSKUGELN
ELTMANN GMBH**



Aerospace Steel Balls



We are a company that has been producing steel balls for Aerospace applications for over 50 years.

Operating in the Aerospace market means adhering to the main standard, requirements and specifications of this industry.

AEROSPACE APPLICATIONS

**Ball screws
Acme screw
Sector gear**

**Electromechanical
actuators
Couplings
Torque tubes**

**Gear box
Pinion gears
Tie rod**

AEROSPACE MATERIALS

We produce balls out of **Steel**

Grade	Melting	AMS
52100	Vacuum	6444
M50	VIMVAR	6491
T1	Vacuum	
BG42	VIMVAR	5749
440C	Vacuum	5618
Cronidur	PESR	5898

Product range (mm)
6,0 – 57,15
other dimensions are possible.



CERTIFICATIONS

We work to guarantee the highest quality of our products and services

NADCAP

ISO 14001:2015

EN 9100:2018

ISO 9001:2015

ISO 50001:2018



We are approved and accredited by all major Customers in the bearing industry. We also are approved for production and special processes from major engine manufacturers worldwide.

TEST APPROVALS

For non destructive testing at the Präzisionskugeln Eltmann GmbH, the people are trained and qualified in accordance to NAS410 and EN4179.

AEROSPACE METALLURGICAL LABORATORY

When you require answers to complex questions we will provide data report, evidence and understanding to find the solution to critical decisions.

- 1 Sample preparation

- 2 Hardness testing (*HRC, HV*)

- 3 Chemical Analysis (*spark spectroscopy*)

- 4 Mechanical fixture test

- 5 Rx diffractometry measurement of retained austenite


- 6 Study, analysis and interpretation of the macro and micro structures of metal


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