



Requirements

Well-known manufacturers and system suppliers such as Renault, Bosch and Websto-Edscha, will take part at the International BAIKA One-on-One Match-Making Forum, September 20/21, 2010 in Lindau with their purchasing and development teams.

They have announced specific requirements they intend to work on in Lindau:

Please find below a list of their specific requirements which they intend to work on.

Bosch

- complex cold forged parts made out of wires (8 mm to 12 mm diameter)
 - region: NAFTA
 - material steel
 - additional requirements: chemical deburring / cleaning

- complex cold forged parts made out of aluminium slugs
 - region: world
 - 100%-examination is necessary if process is not safe

- fine blanking parts in NAFTA and Asia

- market estimation for automotive-PCB's
 - region: World, focus Asia

- mikro polymer parts in Asia and NAFTA

- needle bearing, Region: NAFTA

- turned parts: precision gasket parts, Region of focus: Europe

- rubber parts: complex conical nipples
 - region NAFTA
 - material: EPDM
 - dimension: 5 mm inner diameter, Tolerance < 0,1mm
 - poss. competence for surface engineering

Renault

(Dept. for Electric Vehicles)

Security Components for Electric Vehicles:

- Main contactors (Germany, Europe)
- Fuses for Electric Vehicles (World)
- RCD – Residual Current Detection for Electric Vehicles (World)
- Current Sensors (World)
- Thermal Sensors (World)
- Other components regarding security for Electric Vehicles

Other Components

- Busbars (World)

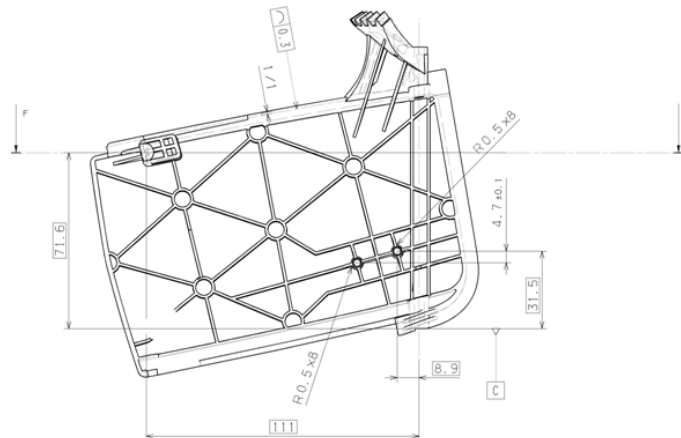
Webasto Edscha

More details on components and **correspondent engineering drawings are available**; please contact Bayern Innovativ (wrobel@bayern-innovativ.de)

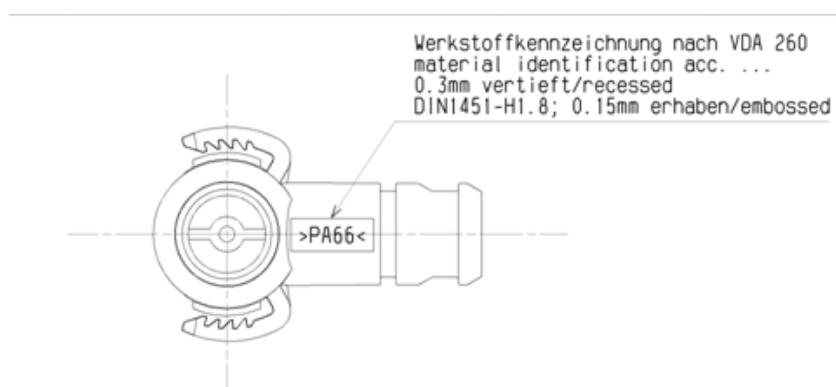
All parts with max. 50.000 units per year.

Plastic Parts:

- Plastic flap according to engineering drawings, material: PEI easy flow, BMW GS 97038



- Valve Housing according to engineering drawings, material: PA66, BMW GS 93016



All Raw materials according to input requirements (see drawings): Polyamid, reinforced plastic, only suppliers with tooling know-how.

Hydraulics:

Requirements due to correspondent engineering drawings

- Hydraulic AG according to engineering drawings
- Hydraulic Unit AG according to engineering drawings

Stampings:

Material thickness up to 6mm.

Press up to 1000t.

Very narrow tolerances

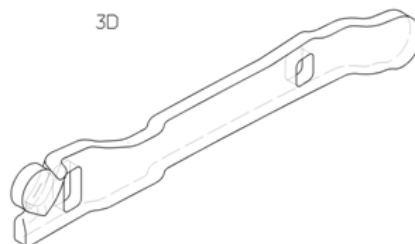
Region LCC

- Carrier plate due to correspondent engineering drawings

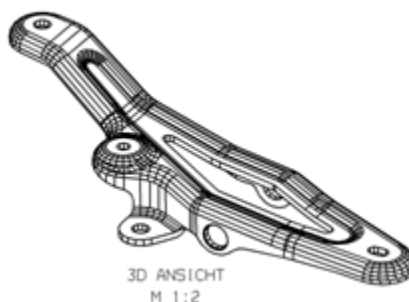


Isometric view
Scale: 1:2

- Contour Bow 1 due to correspondent engineering drawings, material: steel EN 10149-2-S355MC



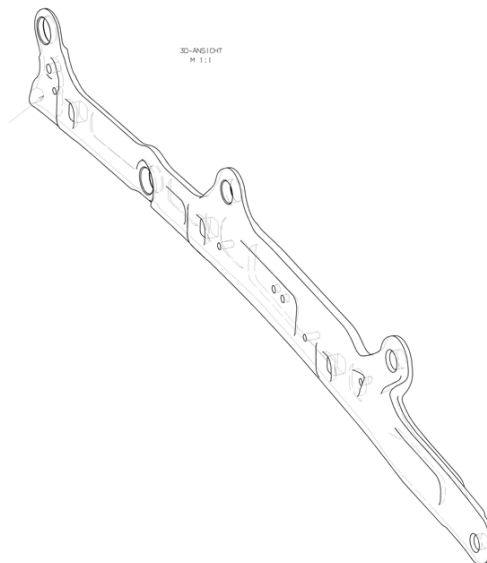
- Carrier plate latching due to correspondent engineering drawings, material: steel EN 10149-2-S355MC



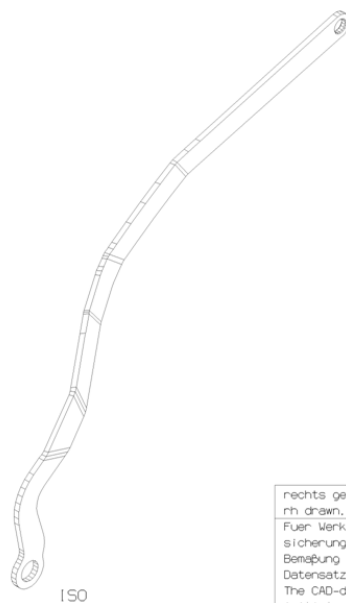
- Control link due to correspondent engineering drawings,
Material: steel EN 10149-2-S355MC



- Contour Bow 2 due to correspondent engineering drawings



- Main Linkage due to correspondent engineering drawings, material: steel EN 10149-2-S420MC

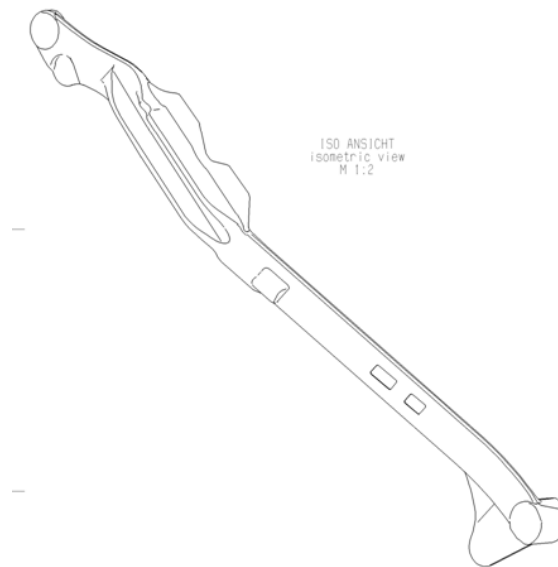


Forgings:

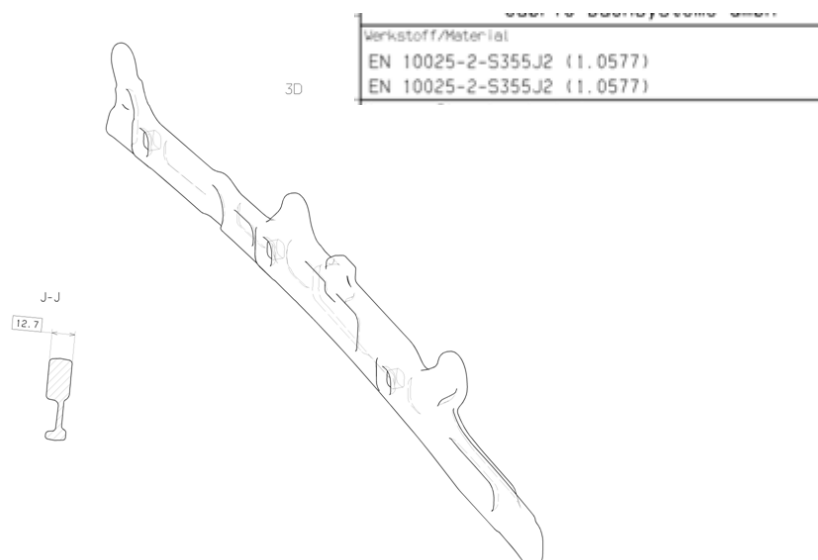
Components should be offered completely manufactured.
Component weight: 50g to 4000g should be possible.

- Main linkage due to correspondent engineering drawings, material:

EN 10250-2-S355 J2G3 (1.0570)



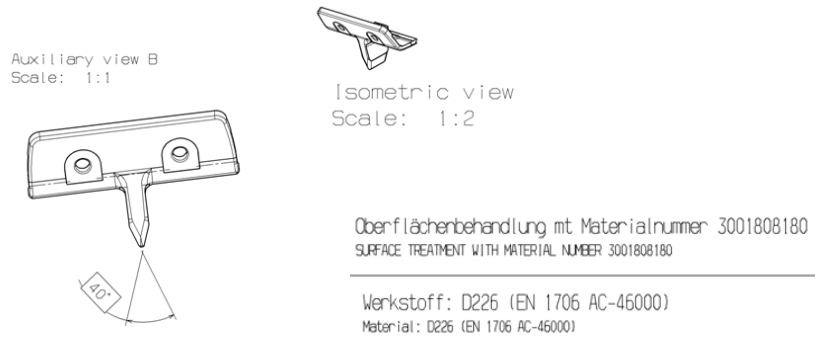
- Contour Bow 2 Forging part due to correspondent engineering drawings



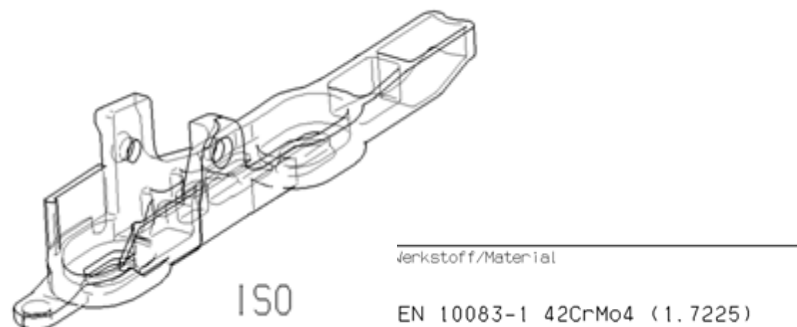
Die Casting:

Different Alloys should be possible for alternative solutions. Currently used alloys are: D230/231.....; Magsimal 59; Castasil, Silafont (Rheinfelden). Additional Processing is required.

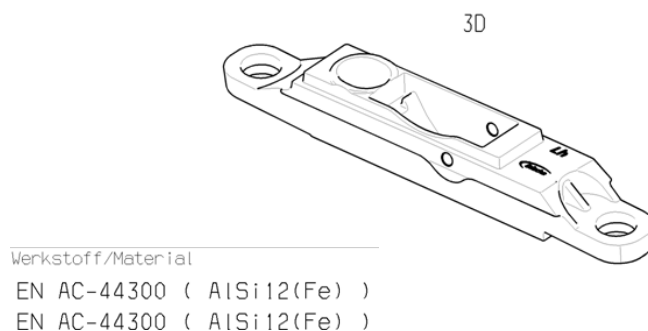
- Location part due to correspondent engineering drawings



- Hood shell bracket due to correspondent engineering drawings



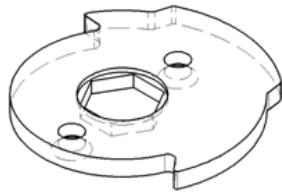
- Closing part due to correspondent engineering drawings



Fine blanking:

Requirements comparable to stamping

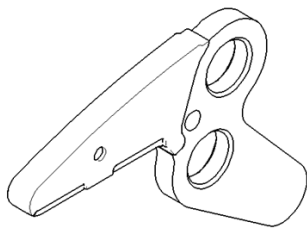
- Turnstile due to correspondent engineering drawings



Isometric view

Werkstoff/Material
EN 10149-2-S355MC (1.0976)
EN 10149-2-S355MC (1.0976)

- Hoodcatch E93 due to correspondent engineering drawings



ISO

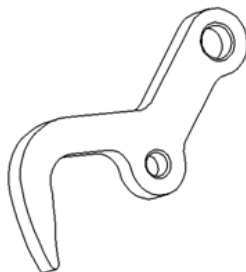
Werkstoff Stahl:
EN10083 42CrMo4 (1.7225) H
Gefuege gegluet auf kugeligem Zementit mind.80%
Material steel: ... H, spheroidizing min.80%

Oberflaechenbehandlung: BMW GS90010-ZNFE SW (vor Kunstst
Wasserstoffaustr. n.d. verzinken 200°C / 4h
Surface treatment: ... (before plastic coating)
hydrogen expulsion after zinc plating 200°C / 4h

Waermebehandlung: Verguetet 1000+200 N/mm2
Heat treatment: quenched and tempered to 1000+200 N/mm2

Kunststoffueberzug:
PA66-GF35 (Frianyl A 63 GV 35) schwarz nach BMW GS93016
Plastic coating: ... black according to ...
Oberflaeche:
Erodierstruktur nach VD13400 Ref.33
surface: spark eroded texture acc.to ...

- Hoodcatch A451 due to correspondent engineering drawings



Werkstoff/Material
Stahl/steel EN10083-1 - 42CrMo4
Massnorm/Dimension standard
5 ±0.1
Oberflaechenbehandlung/Surface treatment
Wasserstoffaustr. n. d. Verzink. 200C/4h BMW GS 90010-ZNFE SW
Waermebehandlung/Heat treatment
verguetet 1000 +200 N/mm2

Cold formed parts:

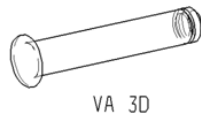
Order quantity of 20.000 pieces

- Stepped rivet due to correspondent engineering drawings



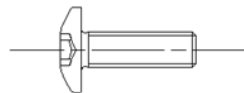
Werkstoff/Material
Stahl/steel EN10263-2 C10C (1.0214)
Massnorm/Dimension standard
Oberflächenbehandlung/Surface treatment
Fe/Zn 8 DIN50961

- Hinge pin due to correspondent engineering drawings



Werkstoff/Material
DIN EN 10263-5-X3CrNiCu 18-9-4 (1.4567)

- Oval head screw due to correspondent engineering drawings



Werkstoff/Material
Stahl/steel
Festigkeitsklasse/property class 10.9
Massnorm/Dimension standard
Oberflächenbehandlung/Surface treatment
VW 137 50-OfL-r672

- Semitubular pan head rivet due to correspondent engineering drawings



Werkstoff/Material
Stahl/steel DIN1654 - X3CrNiCu189

Aluminum extrusion

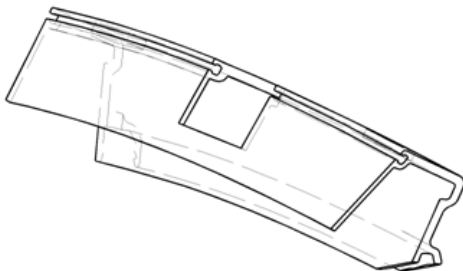
Supplier for extrusion and additional processing
Also small batches should be possible.

- Seal holder main post due to correspondent engineering drawings



Gefertigt aus/made of
350C3001752150

- Seal holder A3 due to correspondent engineering drawings

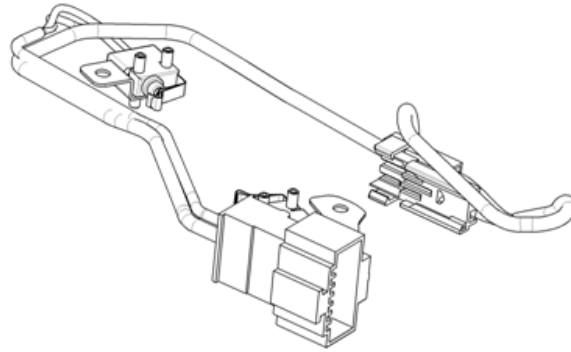


gefertigt aus/made of
350C3001752150

Oberflaeche KTL schwarz
Surface treatment e-coat black

Harnesses

- Wire Harness latching E89 due to correspondent engineering drawings



- Wire Harness CG A3 due to correspondent engineering drawings

Other System Suppliers

- Fuel rail assemblies in Asia (diesel and gasoline)
required associated technologies:
Autofrettage
Leakage testing
- High precision machining with complex, interlinked processes in Europe /Asia
Component size 100mm x Ø40mm
(including turning, milling, deep-hole drilling, ECM or TEM, grinding)
- HE rounding
- Autofrettage 4000/ 8000bar
- Coating WCC, DLC
Component size: 50mm x 15mm
- MIM: technological limits / fields&limits of application / cost structures
- Fine blanking of spacer discs (ASEA, BRIC, NAFTA)
Component size Ø20mm x 5mm

- Cold forming / Impact extruding
 - Thin walled: e.g. for sleeves, bushings, tensioning nuts
 - Component size up to 50mm x Ø20mm
 - Massive: including ultrasonic / eddy current testing
 - Component size up to 60mm x Ø20mm

- Deep drawing
 - Component size: 80mm x 60mm

- Forging and machining of forged parts (ASEA, BRIC, NAFTA)
 - Component size: 100mm x Ø40mm

- Precision casting (reduced machining effort compared to GGG casting)
 - Component size 150mm x 150mm

- Aluminium casting machining of those parts
 - Component size 150mm x150mm