



Overview of Minster presses in production at Mapro's manufacturing facility.

Mapro -- a Stamping Success Story

Quality and delivery performance are the characteristics on which the Mapro organization has built its success.

Based in the Netherlands, Mapro's focus on workmanship and technical achievements have helped build a reputation as a reliable and quality partner in the field of automotive stamped parts.

Born as a small privately owned metal working shop, just after the second world war, Mapro began production with the fabrication of metal "pic pac" buttons. A few years later the company began fabrication of endless plastic coated spiral springs used for the suspension of curtains. Nearly 60 years later, these springs are still being produced on a smaller scale.

For production of the buttons Mapro purchased some small second hand presses. Approximately 20 years ago the first Minster press



Mapro world headquarters at s' Hertogenbosch, the Netherlands.

-- a 200 ton machine -- was installed in Mapro's new premises.

This first Minster press included, a solidly designed clutch, giving Mapro the possibility to make a top stop every stroke which was necessary for the product the press was bought for.

Today, 85 percent of Mapro's production is dedicated to stampings for the automotive industry. Customers are mainly Tier 1 automotive suppliers in the field of wiper production and airbag housings located in Europe and the USA.

Besides automotive parts Mapro is also active in the “industrial specialties” market segment.

Tooling is produced in-house at Mapro or at its sister company, C&J Overloon B.V.

“C&J was acquired special for the knowledge in bigger toolings,” said Geert van de Heiligenberg, General Manager of C&J Overloon. “We are producing toolings for the middle to bigger size presses.

“Our market is Europe but our strategy is also to focus on the United States market where we have a competitive advantage in price because our more compact designs allow running parts on smaller presses,” Geert van de Heiligenberg continued.

Currently, Mapro has seven Minsters in production, including the 20-year-old 200 ton press, which is still making wiper parts day after day without any significant downtime or maintenance.

“It is not a press, it is a Minster,” said Tony Kerkhof, Maintenance and Die Repair Manager. “For me the reliability of the machines is top priority and that is what I get with the Minsters. The stampings we are producing often have extreme requirements in terms of dimensions and tolerances and the Minster presses are giving me a high degree of repeatable accuracy to fulfill these needs.

“Thirty-five percent of our output is small wiper parts requiring a high tolerance,” Kerkhof contin-



Mapro's newest Minster press, an E2-400 includes the ASM drive option.

ued. “Until three years ago these parts were produced on a 25-year-old 100 ton press. We had unbelievable repair costs on our tooling for these “small toleranced” products. The press was replaced by a Minster P2H 100 and since then our repair costs have been reduced by 60 percent.”

“Tony and I did not have any discussion about ‘which machine we should buy’ when we were in need for a new 400 ton press,” said Martin Kleijer, President of Mapro Holding B.V. “The only discussion was ‘alternative slide motion (ASM), yes or no’ and the new PMC control.

“We decided for ASM because we both felt that this would give us a clear advantage in producing our deep drawn airbag housings,” Kleijer continued. “Now after a year of working with ASM there was not any moment we regret our decision. It worked out that on the deep drawn housings we achieved an average of 10 percent more output.”

The new Minster E2-400 was shipped from Minster and installed in 's Hertogenbosch, the Netherlands, in one piece.

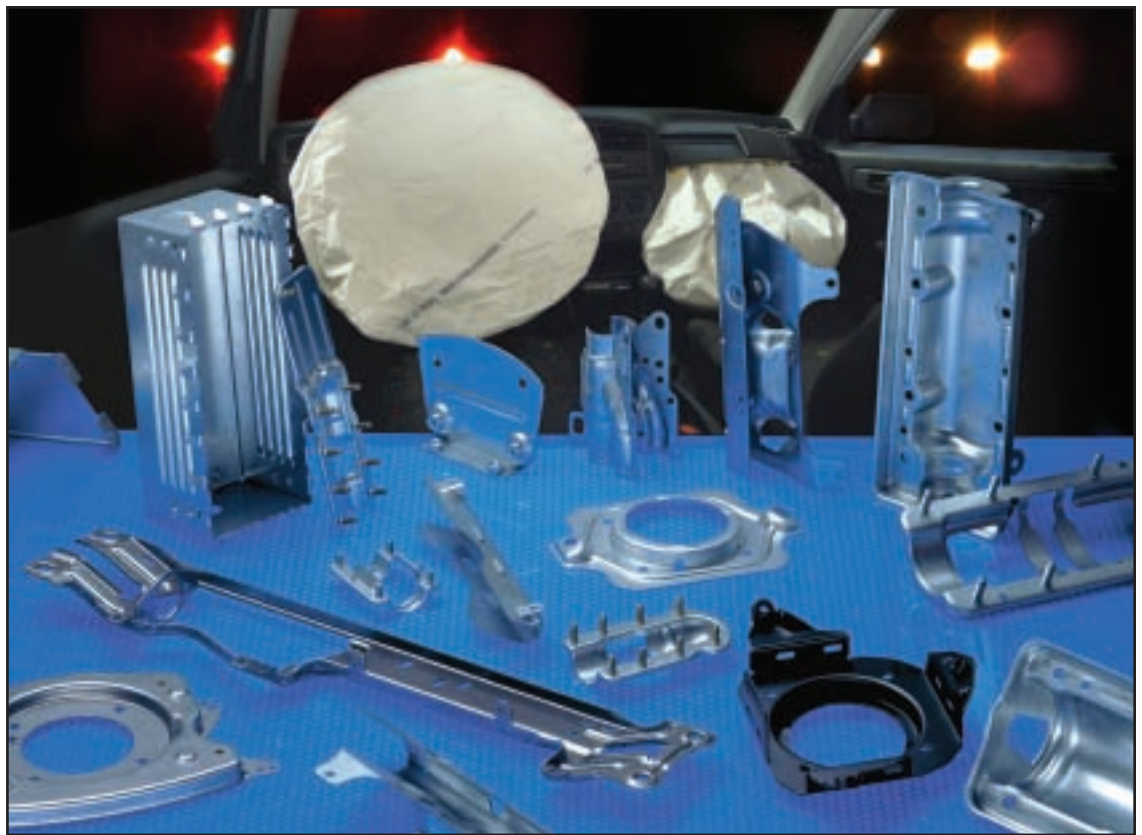
For the installation Mapro personnel needed to open the side wall of the manufacturing building.

Kerkhof said one of his most exciting days at the company was the day the press arrived because he was the one who had measured and calculated that the distance between floor and roof was just a three inches more than the press dimensions.

Installation time from day of arrival to running first parts was reduced to 10 working days.

The Minster E2-400 with ASM is mainly used for the production of airbag housings and automotive structure parts. More than half of the parts are running on basis of a transfer with or without a system for adding and clinching bolts during the press stroke.

“In-house developed technology,



A small sampling of the many high quality parts produced by Mapro.

has given us a competitive strength in airbag parts fabrication,” Kleijer said. “It is an absolute product requirement of not having any burr or sharpness on the part, which most of the time only can be achieved by using transfer type tooling.

“We developed a low cost transfer system which is built, and stays with the tooling, giving us an advantage in setup time by changing tooling from transfer to non-transfer and vice versa.”

“The system of adding and clinching bolts, up to 10 bolts per stroke, is developed as an enlargement on the transfer system but can also

be used as a stand alone system,” Kleijer said.

Mapro’s unique manufacturing system has been on the market for about one year.

“This technology, in combination with the Minster presses, is our key for success,” Kleijer concluded. “For us a Minster press is like a Hummer in automotive land -- strong, rigid and it doesn’t matter which road you want to follow.”

MAPRO

For additional information about the capabilities of Mapro visit the company online at www.mapro.nl

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