

More than three million cars and motorcycles on the streets of more than one hundred countries around the world wear the white / blue BMW emblem that represents a rotating propeller . Finally began the history of the Bayerischen Motoren Werke in 1916 with the production of aircraft engines in Munich . Today, however , all BMW motorcycles built in Berlin , where we visited the factory on the occasion of the introduction ABS .

In 1923 in Munich, the first BMW motorcycle built the R32 with an air-cooled boxer engine , shaft drive and double cradle . According to this principle, until the day the BMW boxers manufactured .

As in the main factory in Munich also produced the factory in Berlin initially aircraft engines .

Brandenburg Motorenfabrik ( Bramo ) was the former Siemens subsidiary thirty years developing aero look back before they merged in 1939 with the BMW originally.

In 1949 the engine construction was gradually transferred from Munich to Berlin , and since 1969 have all BMW motorcycles Berlin air in the tires . BMW 400 workers when tinkered daily 30 engines together . Twelve years later , at the height of the motorcycle sales , leaving daily more than 150 machines do factory. In the fall of 1983, the now largest motorcycle manufacturer in Europe with the K100 - line a completely new model generation . This water-cooled one liter four-cylinder with electronic injection extended the 60 year proven boxer package . Finally, autumn 1985 followed the K75 line with the 750cc three-cylinder engine

Modern manufacturing at the K series

In manufacturing lines newly established

the K-series was a modern manufacturing

first, BMW cars is common. Just for that BMW has invested more than 300 million mark at the Berlin plant.

In previous years, Berlin was

establishment has to go on a second leg

rest in the form of parts for

BMW cars . nowadays,

in Berlin before brake discs , brake drums ,

components for the drive,

exhaust pipes , camshafts and

harnesses built .

On March 1, 1984 Helmut Kohl opened

greatly expanded and modernized

BMW branch, with 1700 employees ,

of which there are about 1200 in the

motor industry working as art

bicycle factory in Europe

book.

The operation of the engine parts

in the former brick factory buildings ,

shall be just as with the

automotive powertrains with CNC

( computer-controlled numerically controlled )

machines and programmed astur applications.

The use of new technologies means

But certainly not that BMW drivers

buy motorcycles exclusively by

soulless computers are made .

For example, while in the frame construction the

dexterity of the welders are

slowly by the precision of welding robots

is replaced and the striping on

the tanks still by collaborators

with a steady hand raised

will determine computerized tools for the machining of mechanical parts. The quality of their unprecedented accuracy .

This is quite clear from the parts of the K - series in this way are manufactured . Crank three - and four-cylinder example, as raw material is delivered remains the first machining operation as far as the hardening of the bearings in the clutches of the caught machines .

In the forty stations comprising transfer street you will find almost no people anymore. In random order the sump , the intermediate flange or casing by a total of 156 instruments automatically processed . huge amounts of coolants and lubricants rinse while the tools and editing parts. Already in the aluminum processing only is 128,000 liters of emulsion in around that easily a small pool could be .

Approximately 450 kg aluminium chip be thereby filtered daily . more then goes to freezing when valve seats and valve guides to minus 170 degrees celsius in liquid nitrogen to be cooled down to them automatically in the cylinder to squeeze . of the K engines

The galvanic department previously solely for the painting BMW's was used by plating the exhausts and other parts , is the almost chromeless K models anyway not become unemployed and now serves as supply of engine parts. the cylinders of the all-aluminum cast engine of the K series have here by a thirty- story baths fully automatic operation via galvanic off a 0.1 mm thick careers consisting of nickel and silicon, either Nikasil . This is for a multi - cylinder in - line unique.

To the highest possible accuracy In order to ensure all parts are after their operation always precision measurement with tolerances to controlled by a thousandth of a millimeter . Assembling all components to a complete block is done with the hand and , where possible, with the aid of

machines . Implements with thousands  
angles bags over the block and  
drawing nuts and bolts with exactly  
set of couples , like the  
cylinder head bolts and crankcase covers .

About two hours in the assembly  
K100 of a block to the tape, of which  
every five and a half minutes a  
power rolls . Thereafter, the block  
checked again . automatic  
the axial backlash and friction  
of the crankshaft, the oil filling and  
compression , oil pressure and total  
friction of the block.

assembly line

Through a newly -developed transportation  
the machines are further assembled  
in the new hall 5 . the  
machines hang in C -hooks  
of which 185 a band of 1.2 km  
forming length . This allows the machines  
not alteen 360 degree rotated ,  
but also in height .

No employee have to bend more  
to mount footpegs or out to  
racks to attach the steering wheel.  
With the K - models the creation process begins  
with the engine and gearbox.

Single-arm swingarm , shaft  
and rear wheels are mounted, the  
exhausts follow . Then the frame is  
around it. Fork , steering , tank and buddy  
can be connected. In a noise -protected  
cabin then the

idle speed , the electrical system  
and control the exhaust gas .

Leaves almost running only once  
machine assembly line : Four employees  
that engine driving all day , but  
Nevertheless, no meter move forward ,  
check the machine on a test bench  
at speeds up to 120 km / h . tested  
are brakes , clutch , gearbox ,  
fork , lighting and driveability .

Then, the machine  
again in the hook hung to  
models . Today, rollers 120  
BMW's per day of the band.

Two-thirds of the production was exported .  
The USA, England , France ,  
Italy, Spain and Japan are the main  
customers . More than 10% of all  
machines are intended for state

around the world as a police

or escort engines .

K100 four-valve

That BMW in the world wide downturn

still going relatively well , it proves

1.8% in 1981 to 3.1 % in 1987

global market share.

That in addition to the BMW tradition also

development and future counts , demonstrating

the latest R 80 GS and R 100

a power line or any extras

as may occur with government machinery

to assemble.

For every BMW finally undamaged

To get at the customer he gekonserveerd

and packed in a wooden crate that

with plastic is wrapped and with tire iron

firmly put . Of course, all automatically.

ISBMW'speruur .

The capacity of the plant is

150 engines per day , every three minutes

there may be a BMW tire run .

1985 was a record year history

in at BMW : 37,000 machines were

built in Berlin .

The deployed since 1981 global decline

in engine sales of more than

40 % went to BMW over. the

engine production was in Berlin at the

market developments adapted and scaled

be . In 1986 amounted

total production 32,000 units,

In 1987 there were only 27,500 .

Of these, 12,613 boxer engines of 650

to 1000cc , 5328 K75 and K100 9567 mo

GS boxers with the patented Paralever

system and the recently introduced

ABS system which they all

a battle for , even the Japanese!

But that is not on the cake. during

This factory was visiting us in the cylinder

street also pointed out the place

where next year the heads of the

K100 four-valve manufactured go

are ! On the left introductiedatum

they further nothing tos, except that in the '89

will be. For now it is a 100

hp RS with custom styling . the

new Paralever rear suspension will this

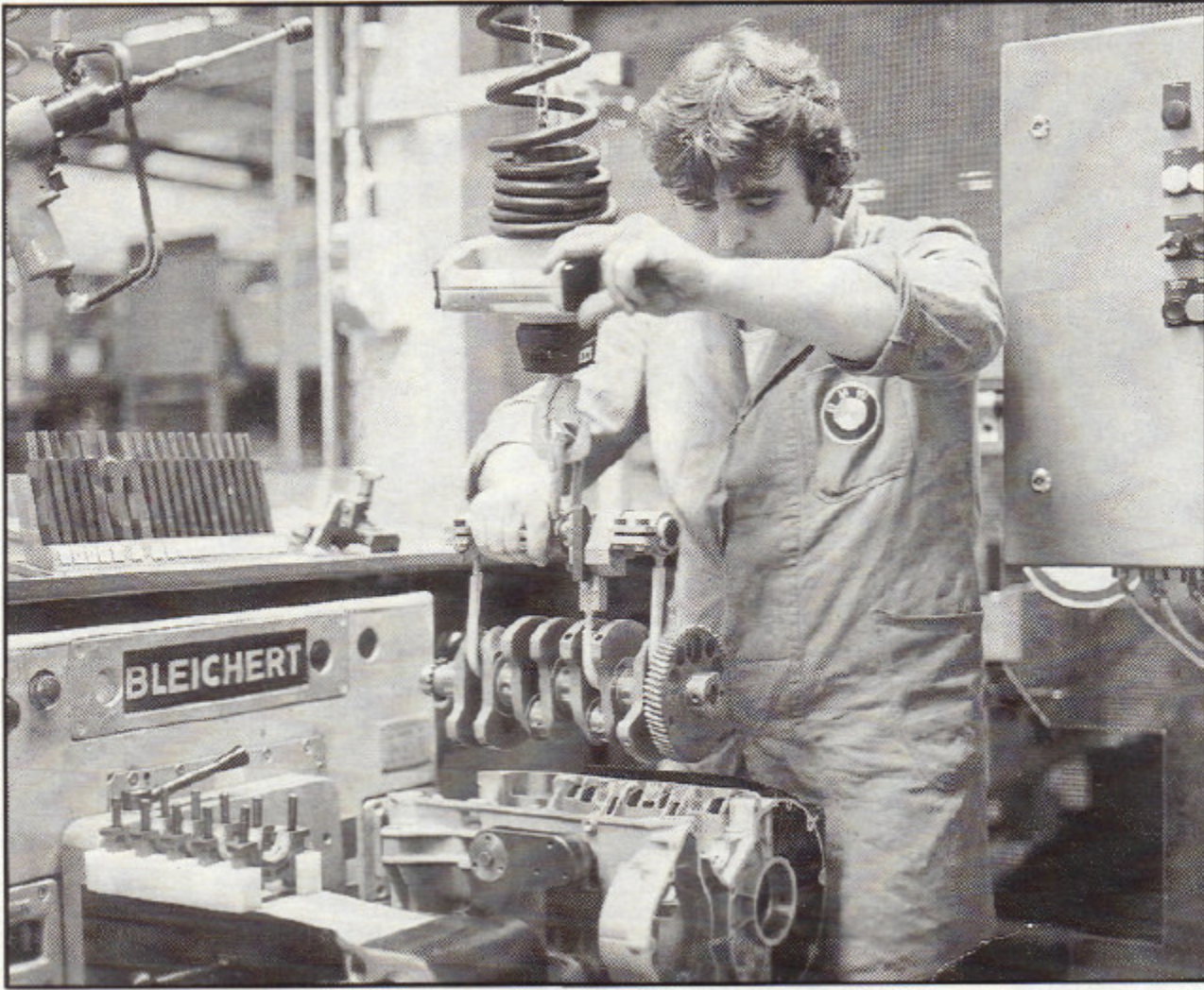
are present , the ABS probably

not standard . Over an eight -valve

However boxer wanted to get rid of them , nothing

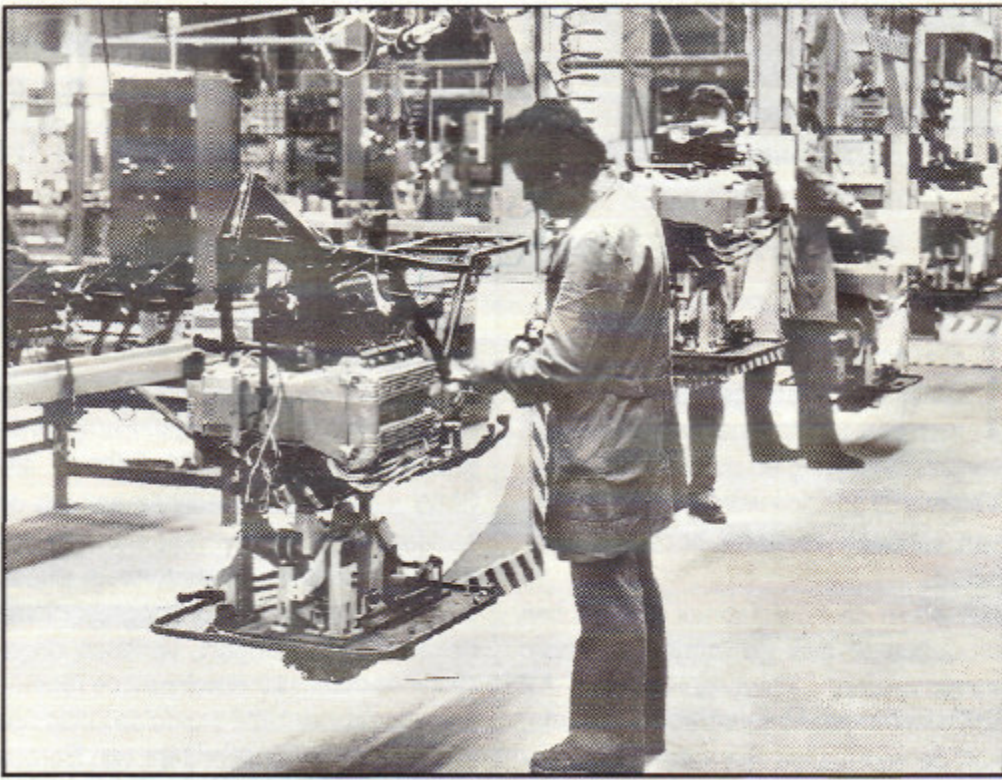
smiles outside a Japanese

Picture Captions



At the engine assembly line  
the crankshaft  
crankcase  
built-in.

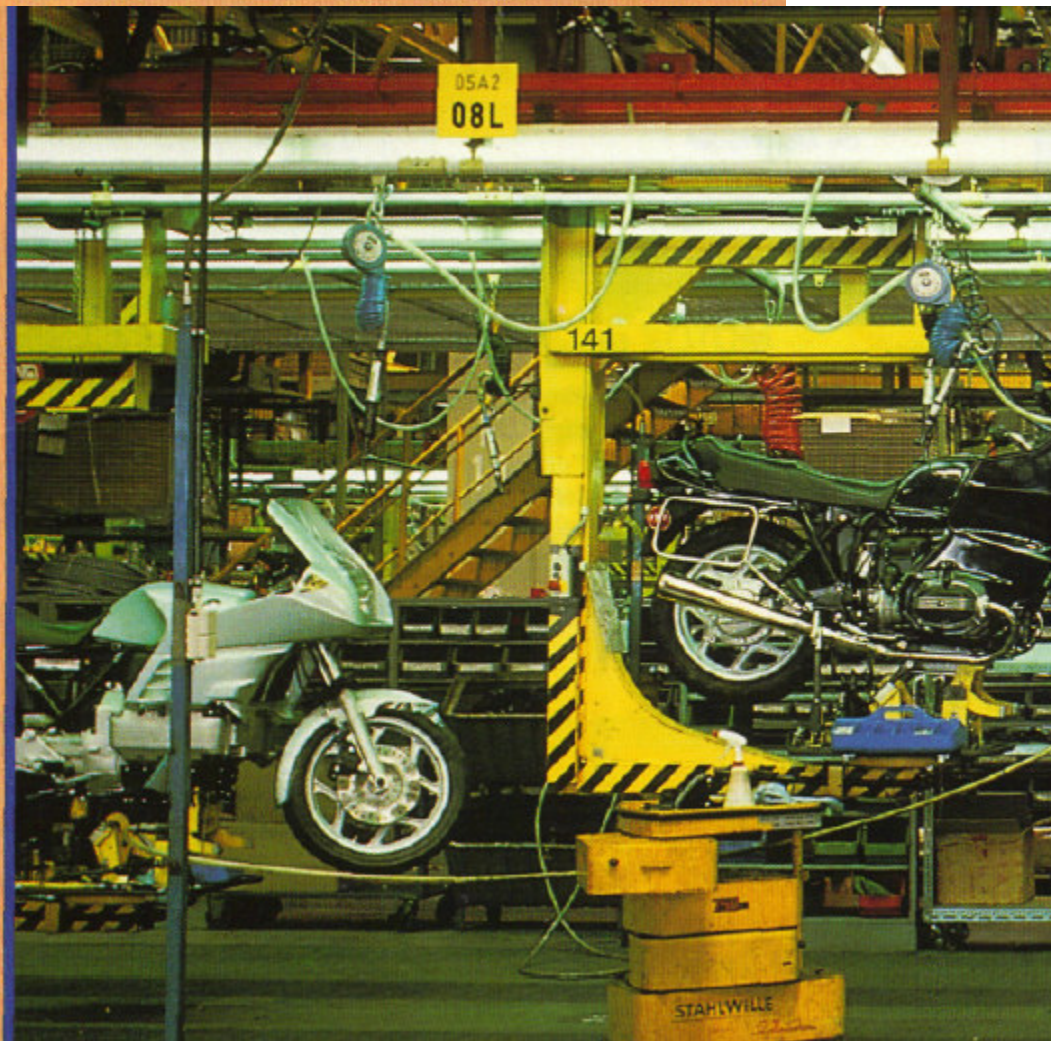
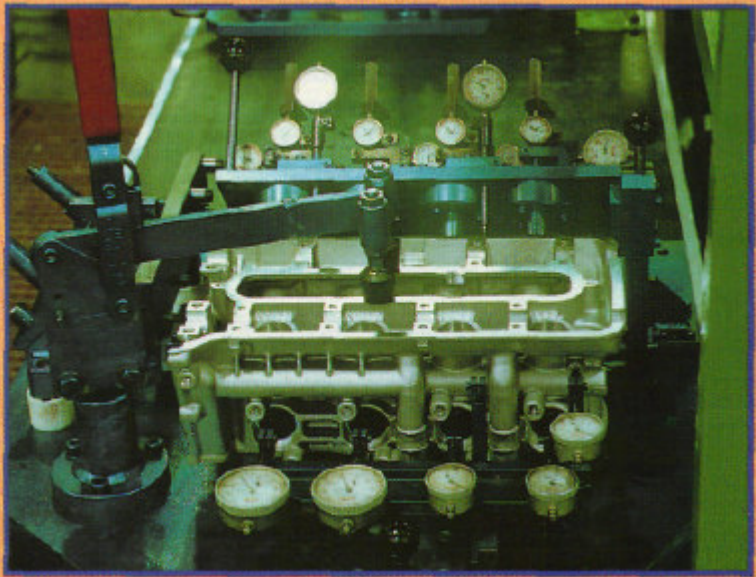




The beginning of the  
1.2 km long  
assembly line. the  
C-Hooks zijn 360 °  
rotatable and  
height  
adjustable.



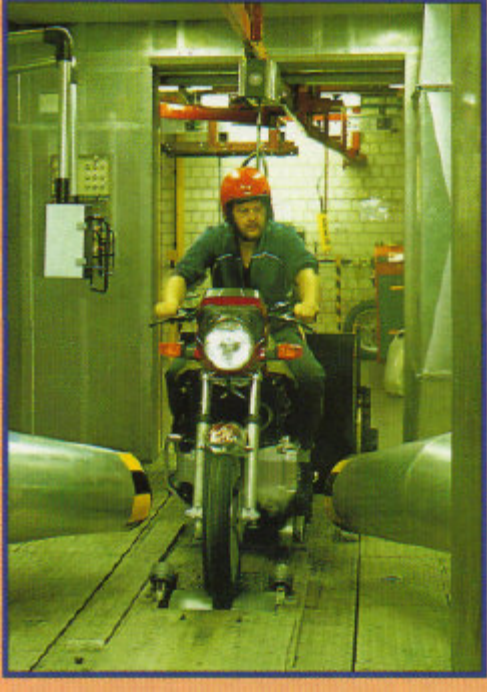




Control of a  
K100 cylinder.

Right: At the  
end of the 1.2  
km long  
montageband are  
BM W's  
almost ready.  
Are

different  
ind by  
built together.  
A custard  
injected code  
in the central  
computer  
by model  
necessary  
parts and  
machines  
on the  
right places  
charged.



Above v.l.n.r.: The  
rough casting, and  
the final  
of a crankshaft  
K100 viercilinder.  
on the  
assembly line  
is about  
Biok a frame  
fitted.  
All day motor  
driving, without a  
meters ahead  
come: all  
BMW's are on  
the rolling bench  
tested.