



LANDIS LT1E

Crankshaft grinding machine

Date: 10/16/20

Prepared by: Caitlin Barnhart

- Ideal for camshafts, small crankshafts and transmission components
- Landis system CNC control
- Hydrostatic wheelhead ways
- Hydrostatic wheel spindle
- Hydrostatic wheelhead cross-slide
- CNC grinding wheelfeed
- CNC wheel dressing
- CNC variable speed workdrive
- Linear motor technology
- Easy access for simple, one-man wheel change
- Fixed table tooling
- Totally enclosed grinding area
- CBN grinding wheels
- Smaller footprint
- Specific design for machine stability
- Reduced number of parts
- Low center height & short load reach for easy machine load
- Suitable for cam, crank and transmission components



User list

ALBION AUTOMOTIVE
LEYLAND (UK) - 1

ASHOK LEYLAND
CHENNAI (INDIA) - 4
ENNORE (INDIA) - 1
UTTARAKHAND (INDIA) - 2

ASIMCO
LANGFANG (CHINA) - 2

AVADI
CHENNAI (INDIA) - 1

ASIMCO
LANGFANG (CHINA) - 2

BAJAJ AUTO
PUNE (INDIA) - 12

DAIMLER AG
BERLIN (GERMANY) - 42
STUTTGART (GERMANY) - 5

DALIAN DIESEL ENGINE COMPANY
DALIAN (CHINA) - 3

DAN JIANGKOU HUANYU
WUHAN (CHINA) - 1

D.C.E.C.
XIANGYANG (CHINA) - 2

DONG FENG HONDA
HUIZHOU (CHINA) - 8

DONG FENG MOTOR CORP
WUHAN (CHINA) - 3

DONG FENG NISSAN
ZHENGZHOU (CHINA) - 1

D.P.C.A.
XIANGYANG (CHINA) - 9

F.A.W.
CHANGCHUN (CHINA) - 5
CHENGDU (CHINA) - 2

FEDERAL MOGUL
ELSTEAD (UK) - 5

FIAT POWERTRAIN
BOURBON LANCY (ITALY) - 1

FIVES LANDIS CORP
WAYNESBORO (US) - 2

FIVES LANDIS LTD
CROSS HILLS (UK) - 1

FORD
CHENNAI (INDIA) - 1
CHIHUAHUA (MEXICO) - 2
CRAIOVA (ROMANIA) - 1
VALENCIA (SPAIN) - 10
BRIDGEND (UK) - 2
DAGENHAM (UK) - 4

GREAT WALL MOTORS
BAODING (CHINA) - 1
XUSHUI (CHINA) - 1

HANGZHOU ENGINE CO.
HANGZHOU (CHINA) - 1

HELLER
HAFEN DALIAN (CHINA) - 1

IVECO
FOGGIA (ITALY) - 6

JAGUAR CARS
CHANGSHU (CHINA) - 2
WOLVERHAMPTON (UK) - 2

JINAN DIESEL
JINAN (CHINA) - 1

KIRLOSKAR OIL
PUNE (INDIA) - 1

LOMBARDINI
VAZIA (ITALY) - 1

MAHINDRA & MAHINDRA
IGATPURI (INDIA) - 1
MUMBAI (INDIA) - 1

MAHLE ENGINE COMPONENTS LTD.
PITHAMPUR (INDIA) - 1

MARUTI UDYOG LTD.
UDYOG (INDIA) - 2

MUBEA
ATTENDORN (GERMANY) - 2

NAVECO
NANJING (CHINA) - 1

NISSAN (UK)
AGUASCALIENTES (MEXICO) - 2
SUNDERLAND (UK) - 4

P.S.A.
CAEN (FRANCE) - 6

RENAULT
CLEON (FRANCE) - 8

QIANJIANG MOTORCYCLE CO. LTD
WENLING ZHEJIANG (CHINA) - 1

SHIYAN HONGZHAO
HUBEI (CHINA) - 4

SUZUKI POWERTRAIN INDIA LTD.
MENESAR (INDIA) - 8

TATA CUMMINS (INDIA)
JAMSHEDPUR (INDIA) - 1

TATA MOTORS (INDIA)
PUNE (INDIA) - 2
WEST BENGAL (INDIA) - 2

VOLVO CAR
ZHANGJIAKOU (CHINA) - 1

VOLVO CAR
SKOVDE (SWEDEN) - 9

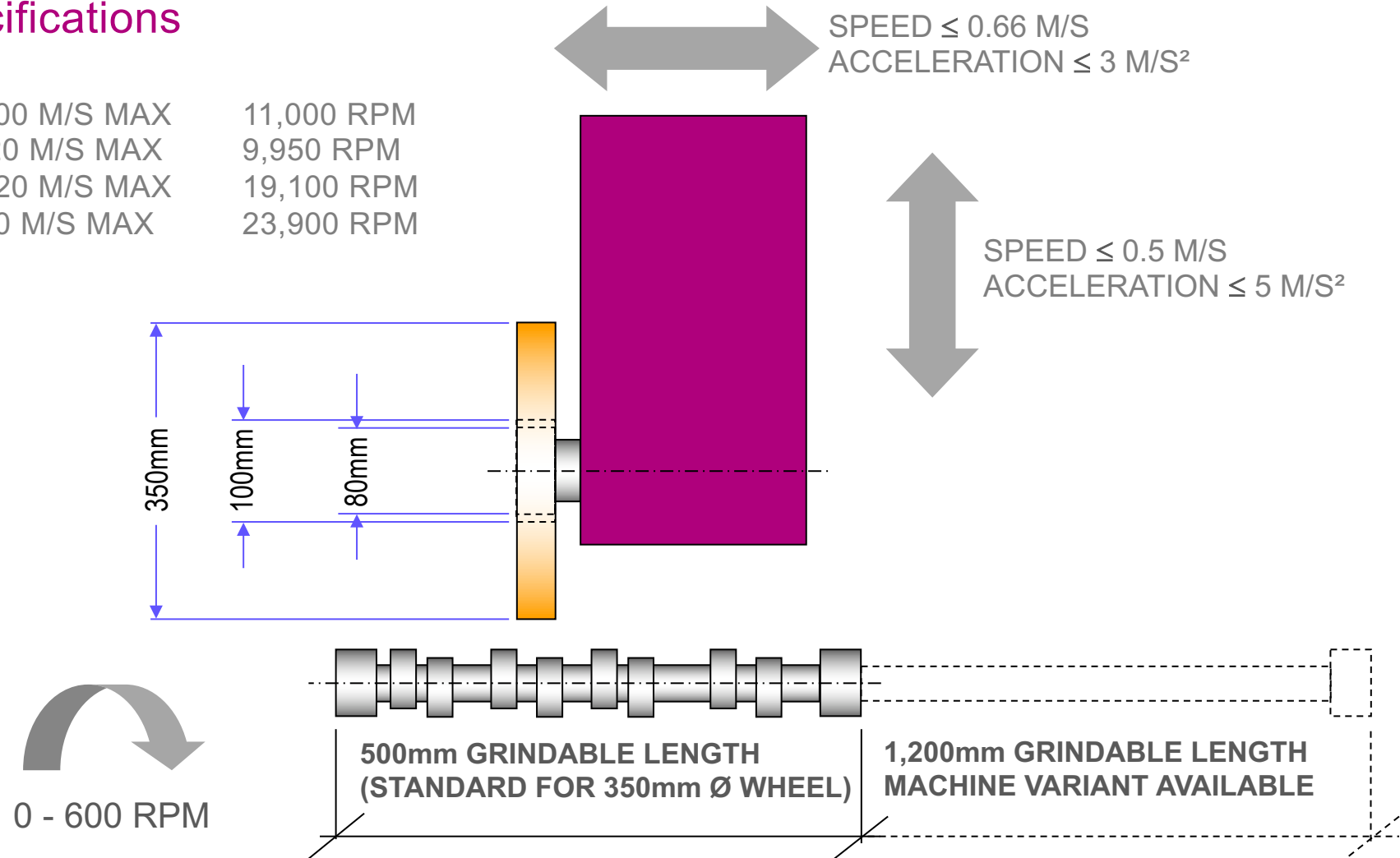
VOLVO POWERTRAIN
SKOVDE (SWEDEN) - 5

YUCHAI MACHINERY
YULIN (CHINA) - 1

TOTAL 214 MACHINES

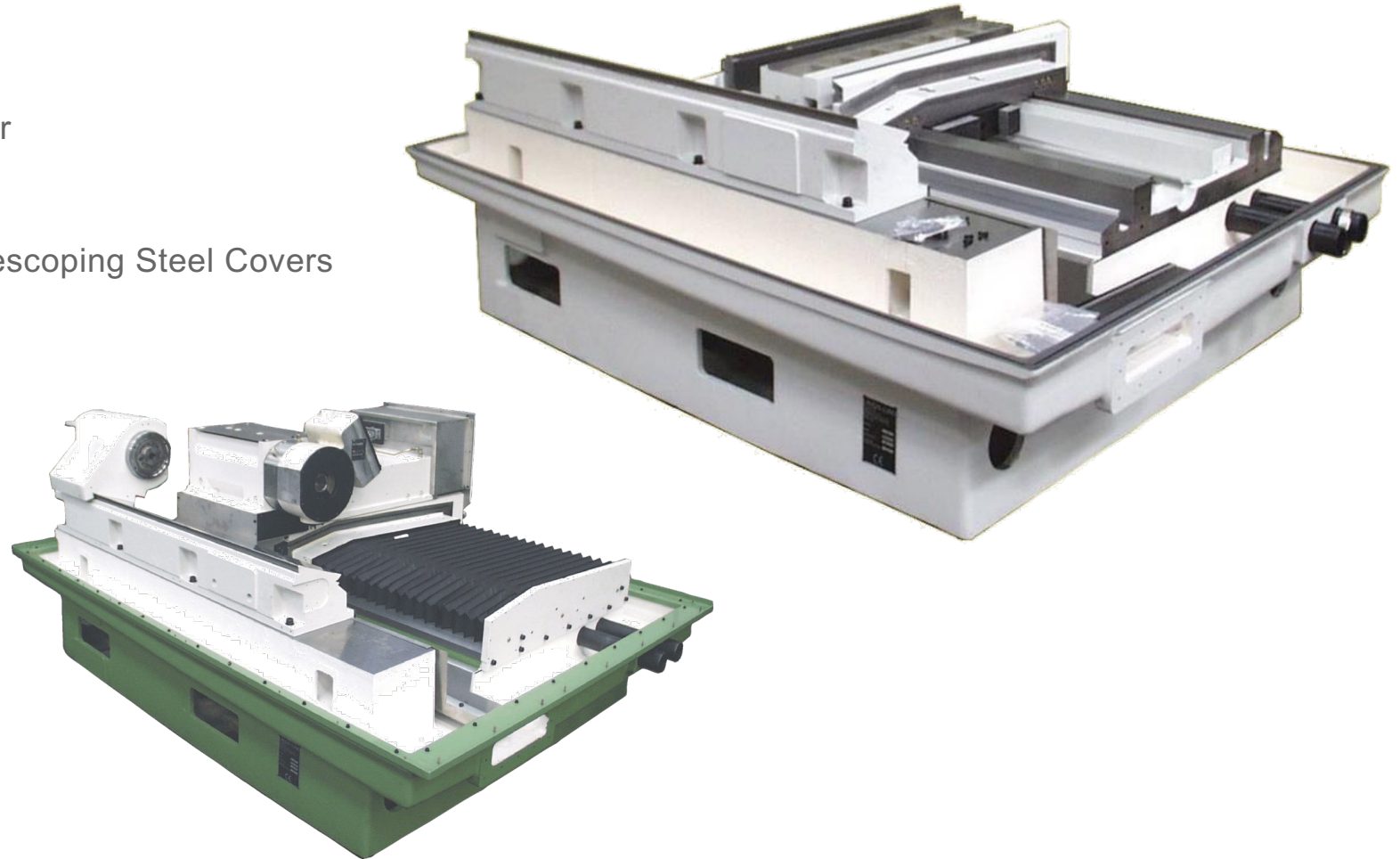
Wheel specifications

- 350mm Ø 200 M/S MAX 11,000 RPM
- 250mm Ø 120 M/S MAX 9,950 RPM
- 100mm Ø 120 M/S MAX 19,100 RPM
- 80mm Ø 100 M/S MAX 23,900 RPM



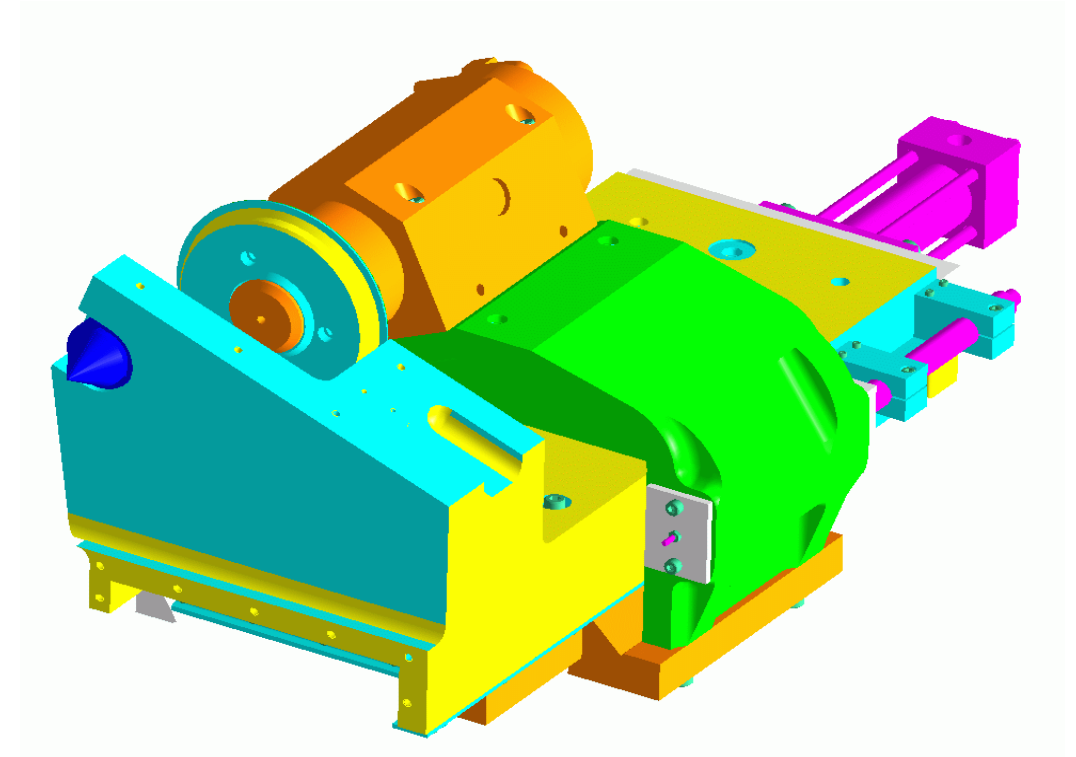
Cross Slide (“Z”) Axis

- Hydrostatic Slide
- BoschRexroth Linear Motor
- Liquid Cooled
- Absolute Linear Scale
- Bellows Guarding with Telescoping Steel Covers



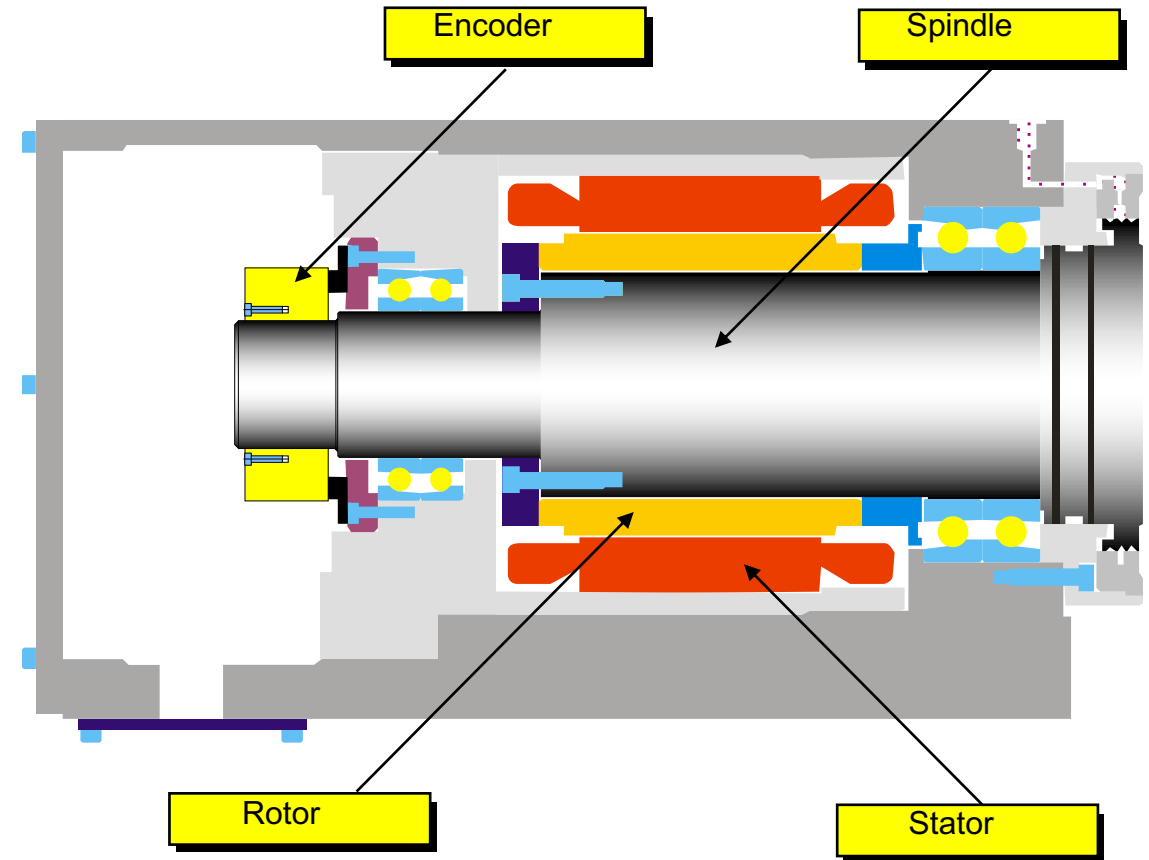
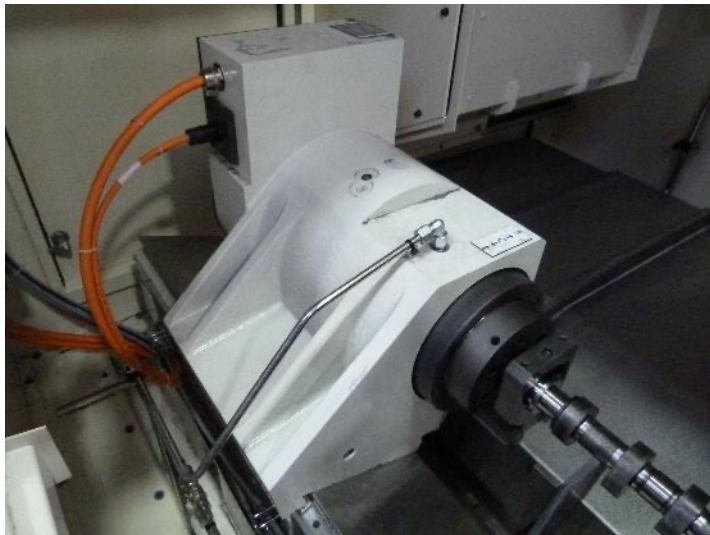
Wheel dressing unit

- Rotary Dresser Head Mounted on Footstock Base
- Acoustic Wheel/Diamond Contact Sensor in Wheel Balancer
- 18000RPM Maximum Speed
- Wheel Profiling Capability



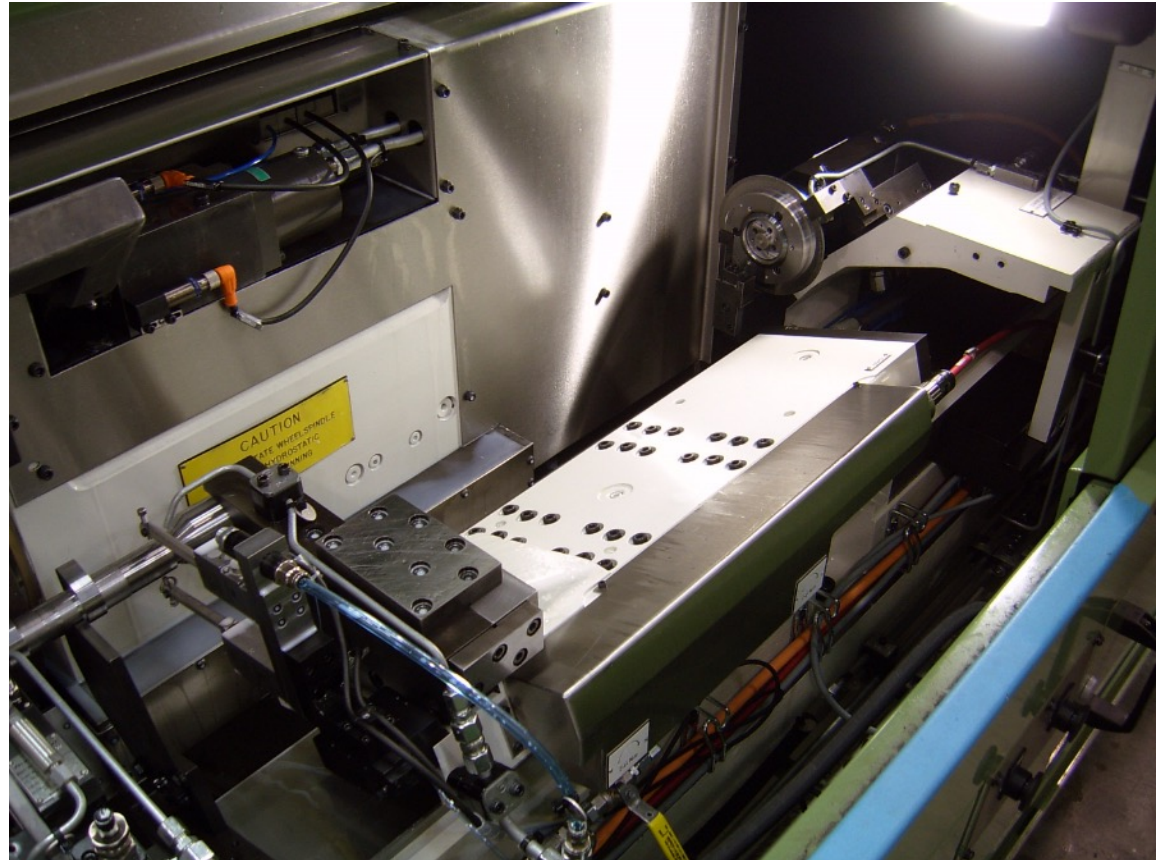
Headstock (C-Axis)

- Minimum Parts
- Less Complex
- Improved Reliability
- Simple Assembly
- BoschRexroth Motor



Footstock

- Solid Center on a Moving Carriage
- 80mm Stroke

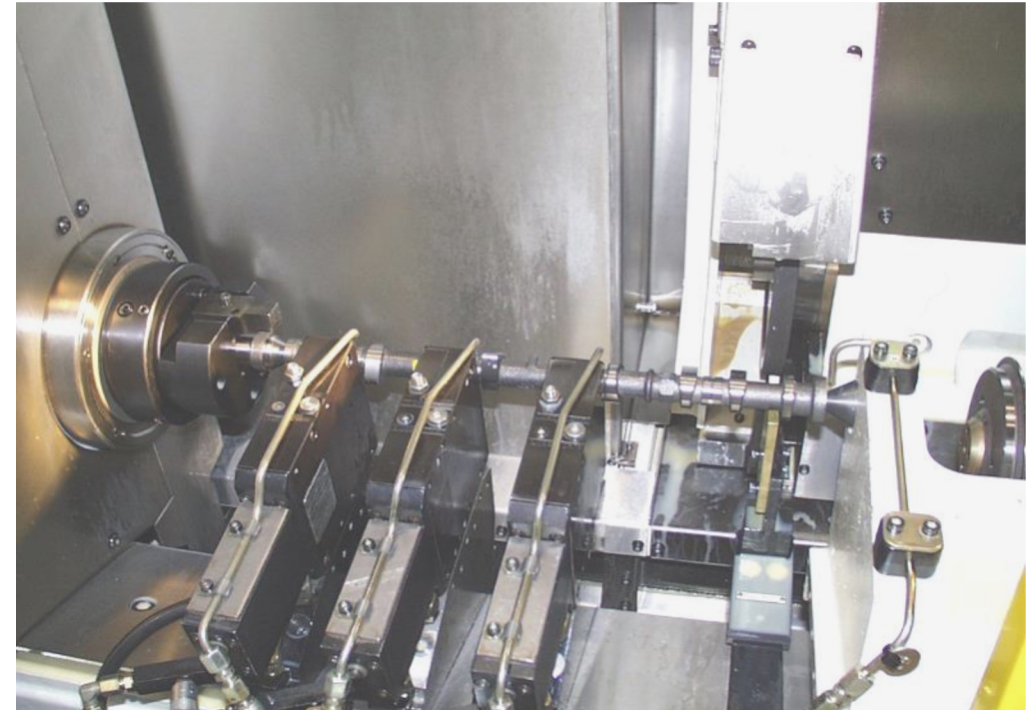


Operator Controls (HMI)

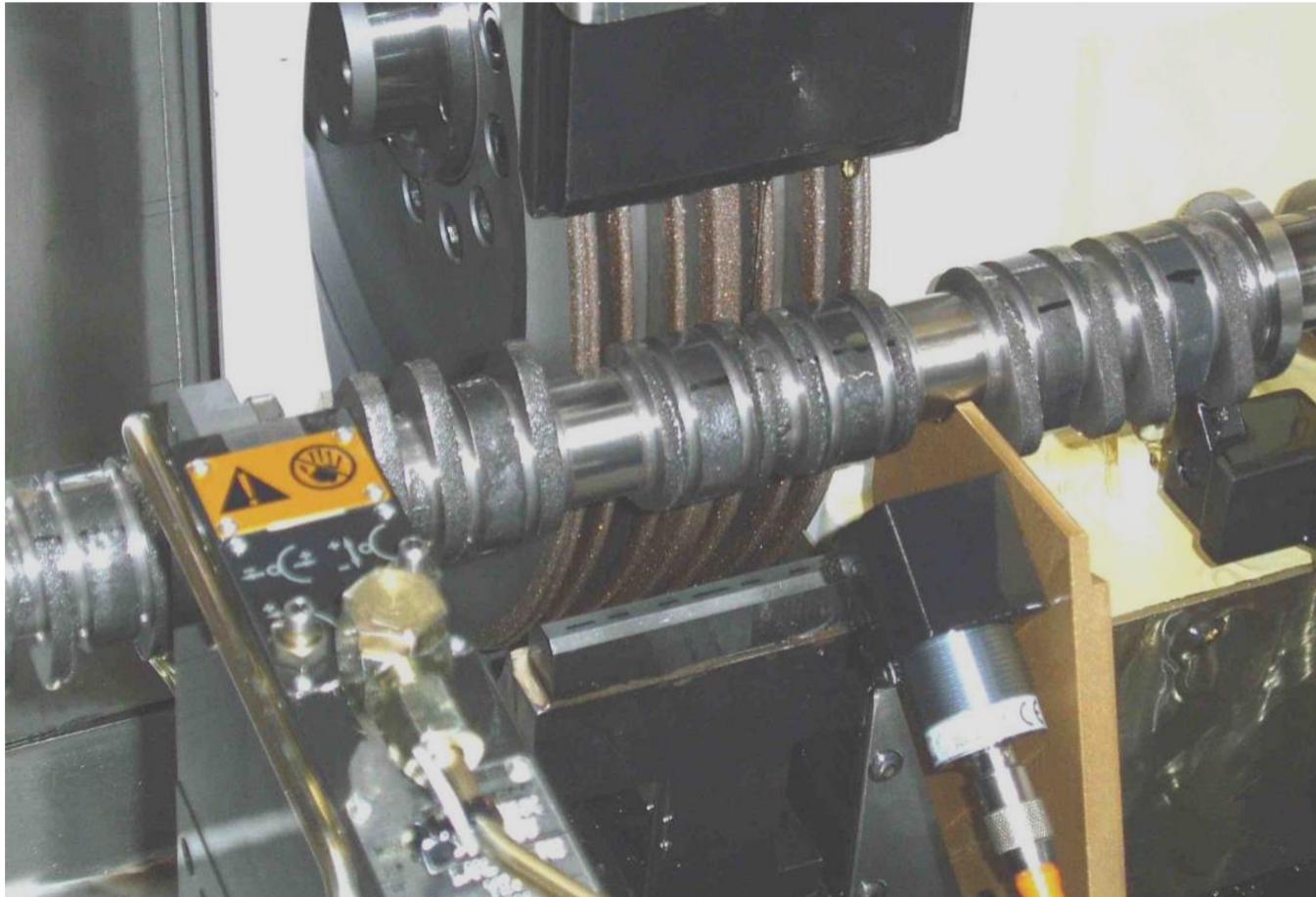


Tooling

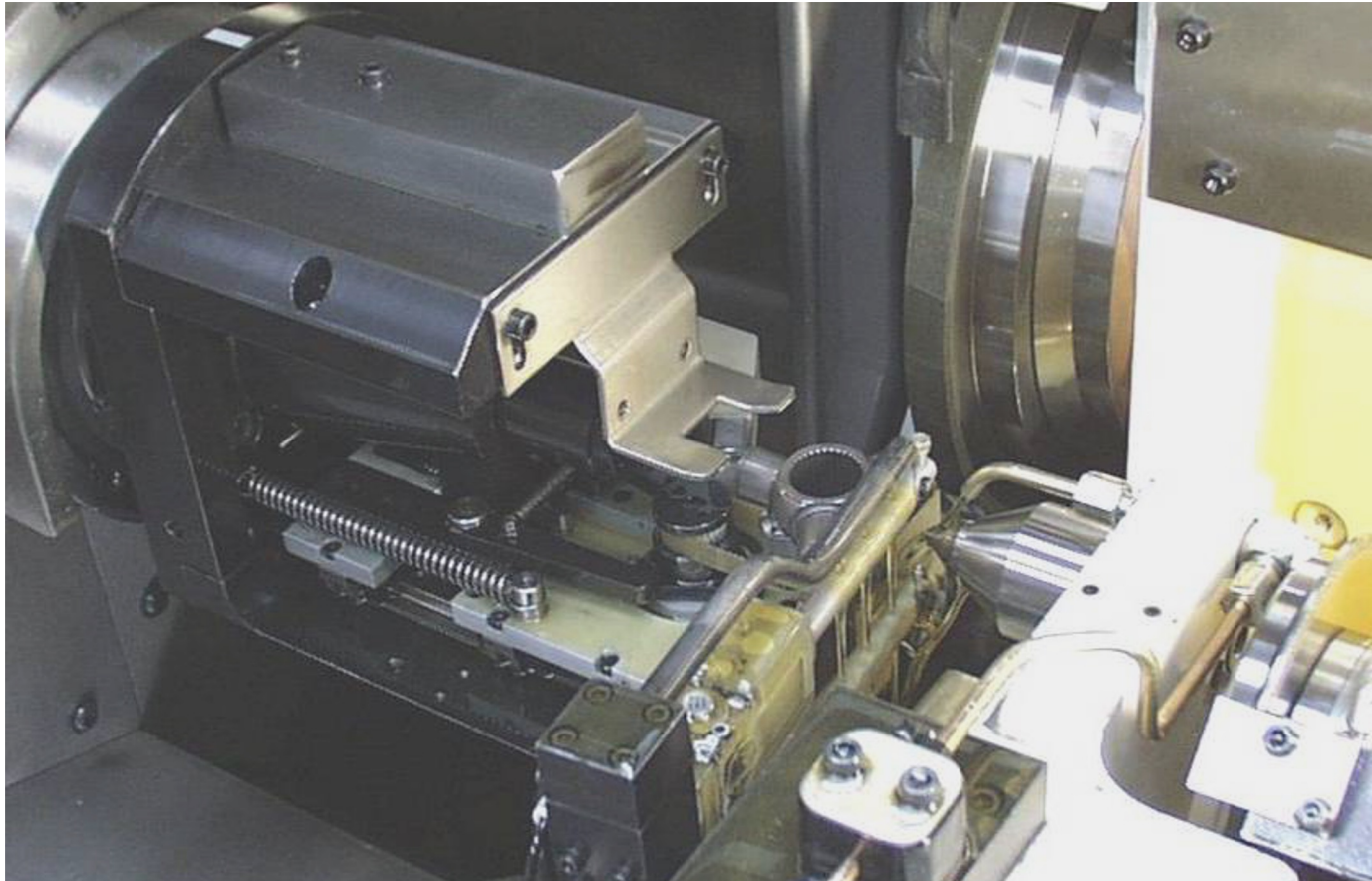
- Live spindle headstock with 0 to 600RPM variable speed range
- Ø250mm workdriver swing
- Optional workrest(s) where required
- CBN grinding wheel - plated or vitrified
- Ø350mm maximum wheel diameter
- Optional 250 mm wheel
- Small wheel variant using Ø100mm / Ø80mm wheel available
- Up to 65mm wheel span (50mm max. wheel width)
- 10000rpm (200m/s @ Ø350mm) maximum wheel speed
23000rpm (120m/s @ Ø100mm) for small wheel variant



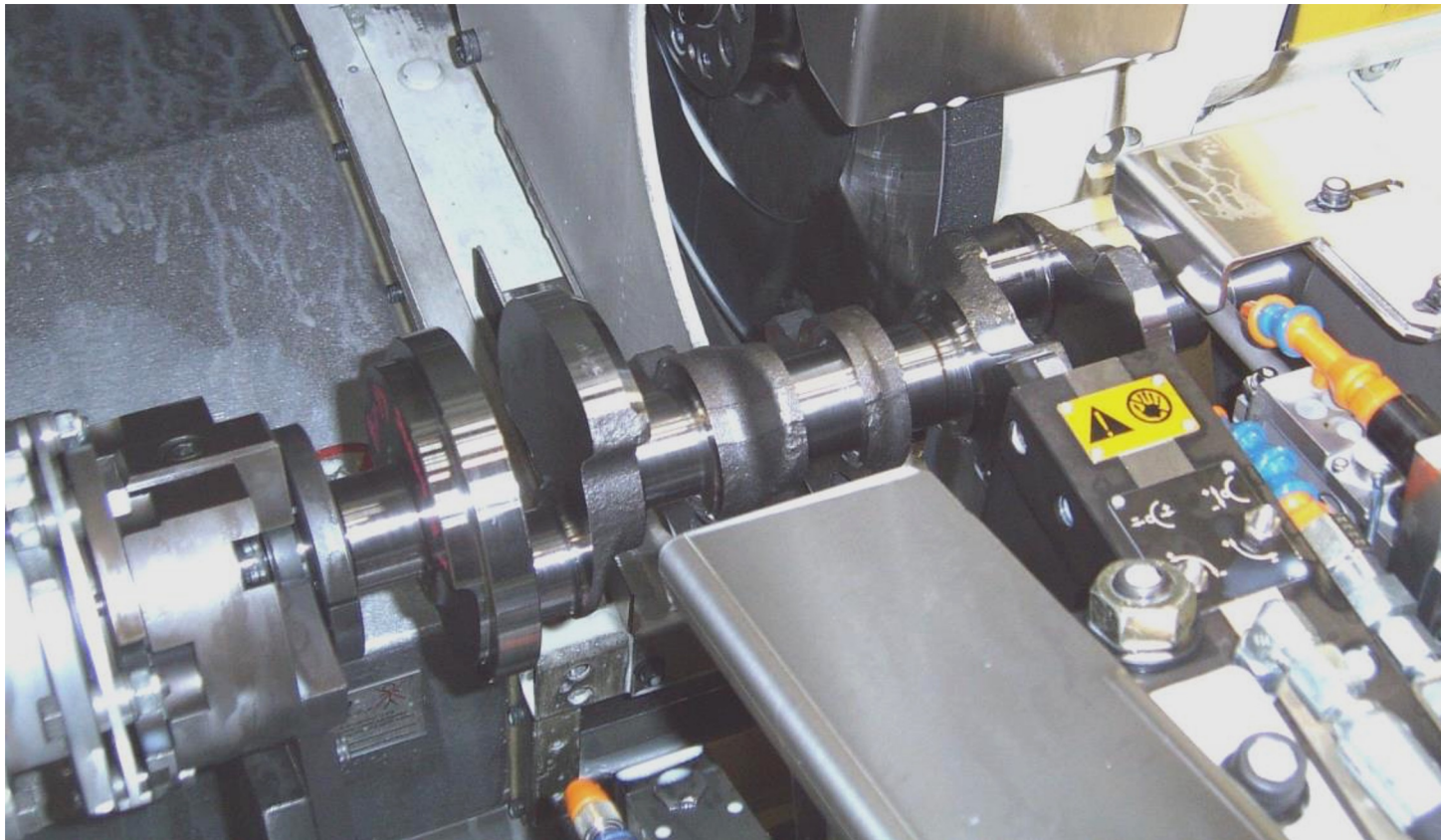
Rough grind grooves between cam lobes



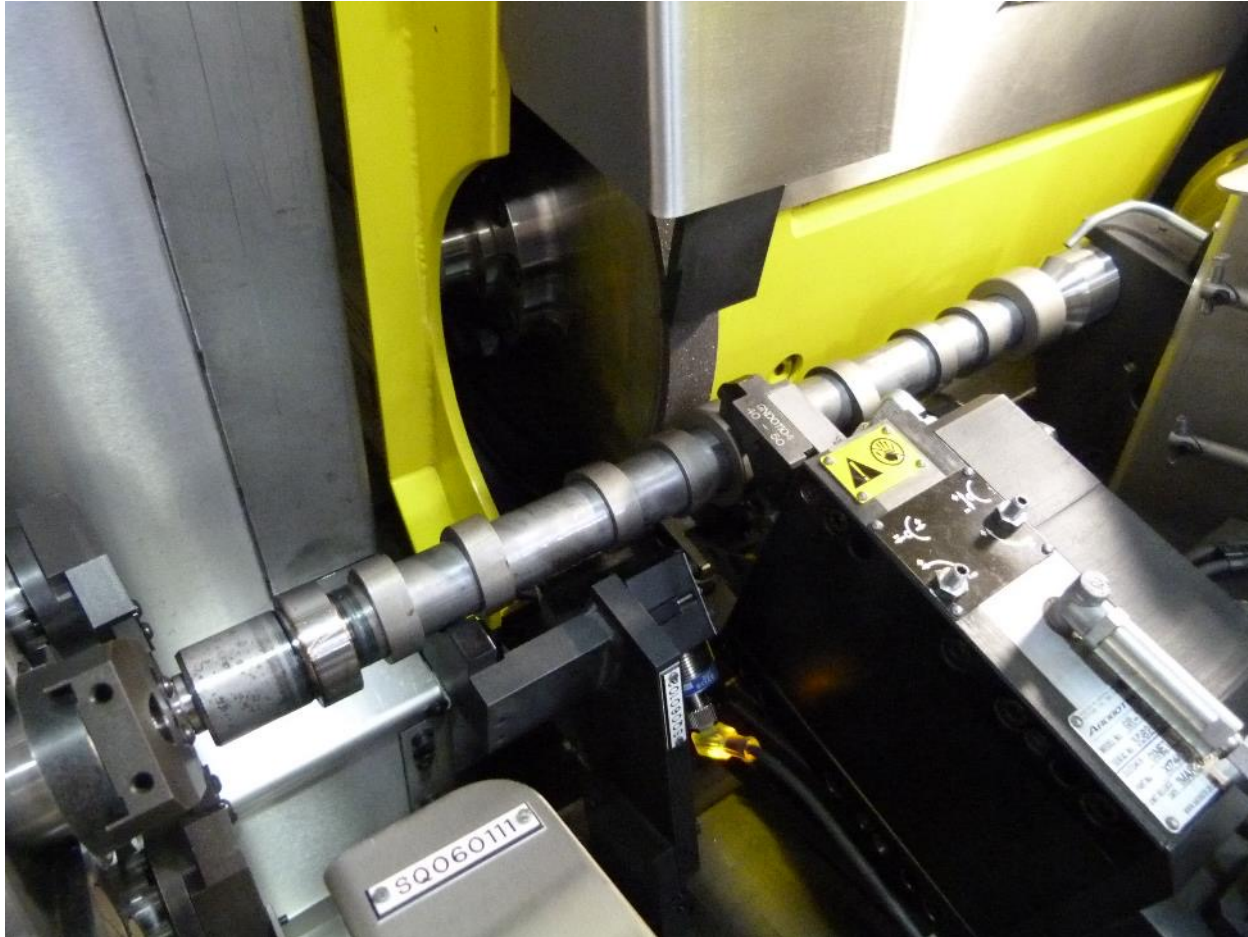
Finish grind 3 profiled Ø's



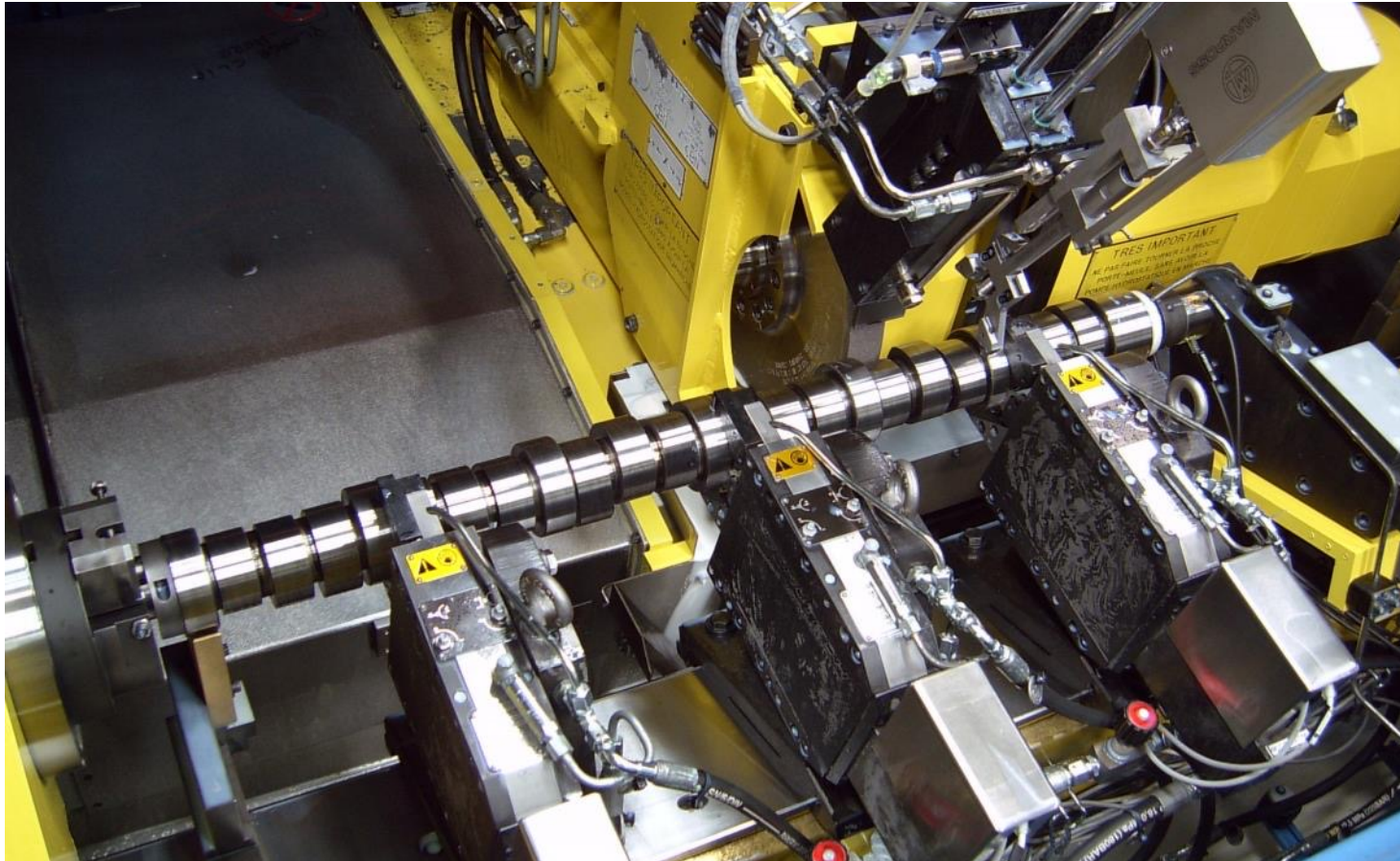
Finish grind mains & pins including sidewalls & radii



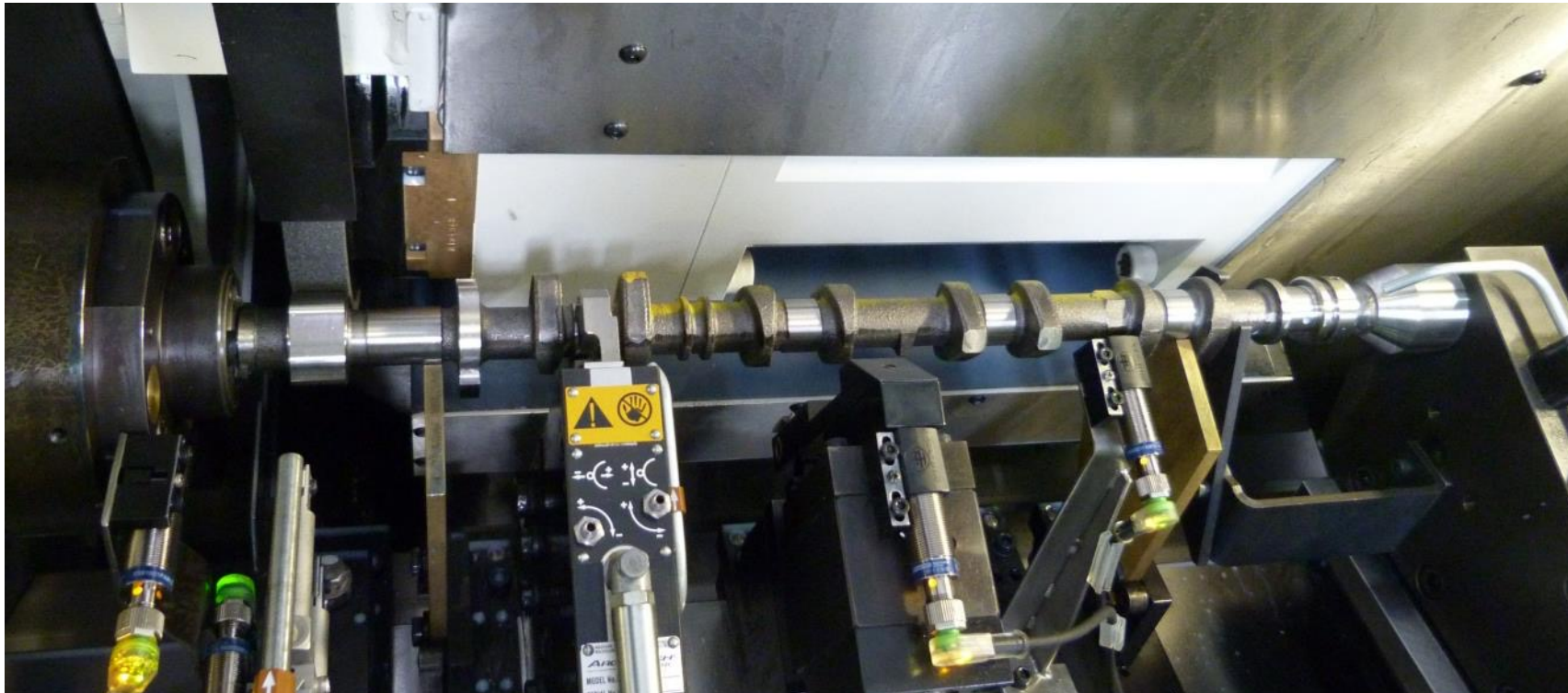
Finish grind 3 journal diameters and 8 cam lobes on intake & exhaust camshafts



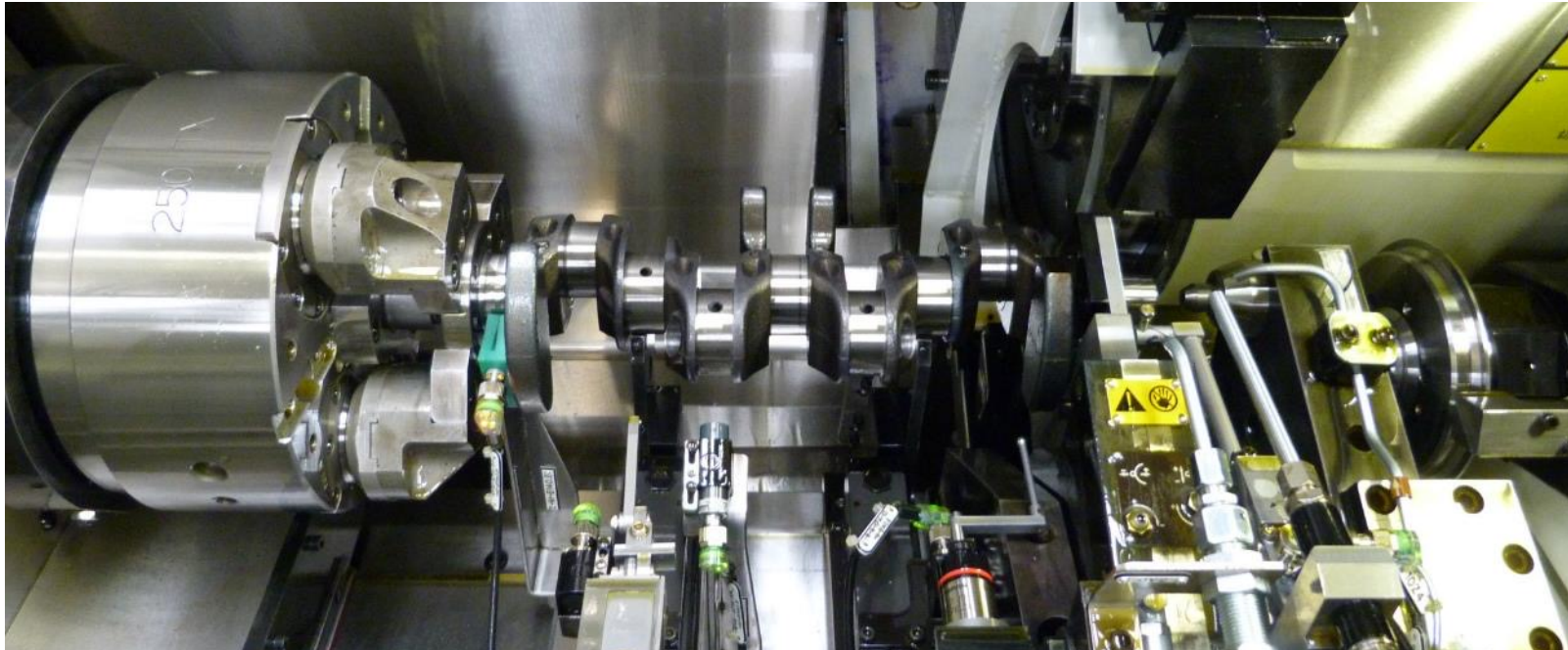
Finish grind cam lobes



Finish grind fuel pump



Finish grind the duocentric & post end flat using a twin rim vitrified wheel



Specifications

| | Landis LT1e 500 | Landis LT1e 1200 |
|--------------------------|------------------------|------------------|
| Grinding capacity | | |
| Max. component swing | 150 mm (5.9') | |
| Max. grinding length | 500 mm (19.7") | 1,200 mm (47.2") |
| Center height | 220 mm (8.7") | |
| Max. workpiece weight | 250 kg (551 lb.) | |
| Wheelhead | | |
| Wheel type | CBN | |
| Max. wheel Ø | 350 mm (13.8") | |
| Max. wheel width | 65 mm (2.6") | |
| Wheel surface speed | 200 m/sec (656 ft/sec) | |
| Spindle power | 40 kW | |

| | Landis LT1e 500 | Landis LT1e 1200 |
|---------------------------------|--|--|
| Workhead & footstock | | |
| Type | Live spindle | |
| Workhead speed range | 0 - 600 rpm | |
| Workhead drive power | 5.5 kW | |
| Max. workhead motor torque | 230 Nm | |
| Type | Hydraulic operated | |
| Footstock stroke | 50 / 80 / 160 mm (2" / 3.2" / 6.3") | |
| Axes | | |
| Linear guide ways | Hydrostatic | |
| Grinding spindle | Hydrostatic | |
| Drive | Linear motor | |
| Dimensions | | |
| Dimensions (W x D x H) | 4,330 x 5,650 x 2,385 mm (14' x 18.5' x 7.8') | 5,530 x 5,650 x 2,465 mm (18' x 18.5' x 8.2') |
| Machine weight | 9,800 kg (21,605 lb.) | 12,000 kg (26,456 lb.) |