



**2015
STANDARD
ANGLE HEAD RANGE**



Welcome to CTL Centreline

We supply a complete range of standard and special Angle Heads. Speed Increaseers and Multi Heads for all of your machining solutions



- Standard Products
- Special Products
- Complete – Consultancy, Design and Manufacturing service on site at Coventry

CONTACT DETAILS

Phone 1-847-870-8837

Fax 1-847-590-9615

E-Mail TWIRKUS@PTSINTL.COM

Web WWW.PTSINTL.COM





CENTRELINE

TOTAL TOOLING SOLUTIONS

STANDARD ANGLE HEAD MODEL: RAD 120

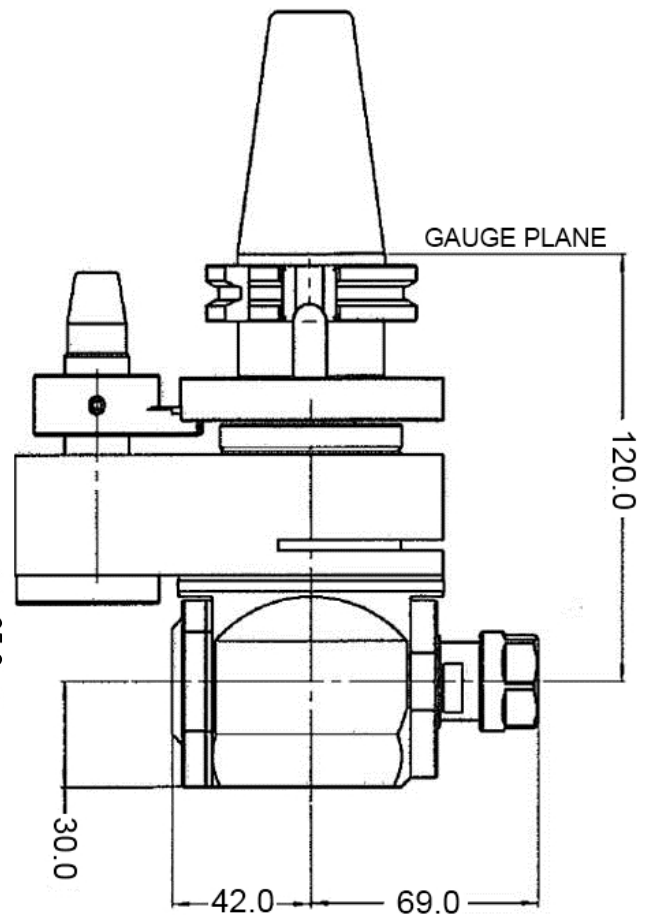
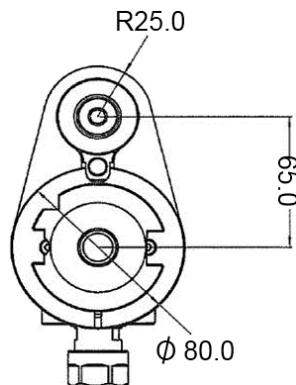
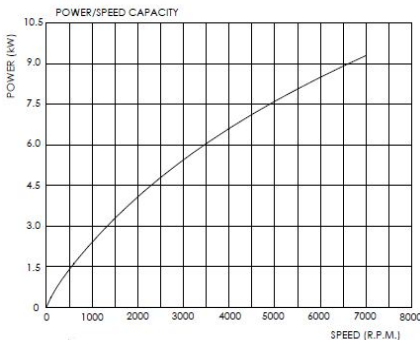


DESIGN SPECIFICATION

- Drive taper 30ISO, 40ISO, HSK50, HSK63
- Speed ratio 1:1
- Max. output speed of 7000 rpm
- Direction of rotation opposite to machine spindle
- Output spindle ER16 Collet chuck
- 10mm Max. Drilling size
- M6 / 1/4" Max. Tapping size using Tension Collet
- Weight approx. 4.0kg (5.4kg FOR RAD120D) without cutting tools
- Max. Power – 0.94Kw @ 7000rpm
- Max. Torque – 3.7Nm @ 100rpm
- Auto Tool change capability
- 360° manual positioning
- Maintenance free sealed unit

Application: A Lighter duty unit designed primarily to suit 30 & 40 taper machines with limited tool change capacity, with Drilling, Tapping and Light Milling capability.

The RAD120 is available as either a single or double output unit with ER16 Collet chuck spindles (Cap. 10mm)



**COVENTRY
ENGINEERING
GROUP**

EXCLUSIVELY REPRESENTED IN NORTH AMERICA BY:

PERFORMANCE TOOLING SOLUTIONS INT'L

1-847-870-8837

WWW.PTSINTL.COM

STANDARD ANGLE HEAD MODEL: RAD 160

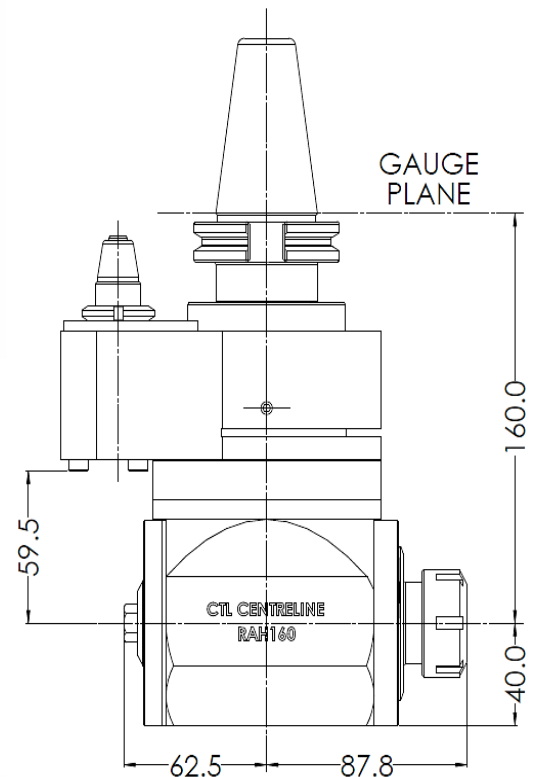
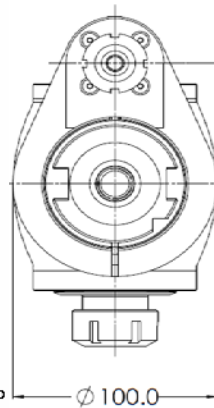
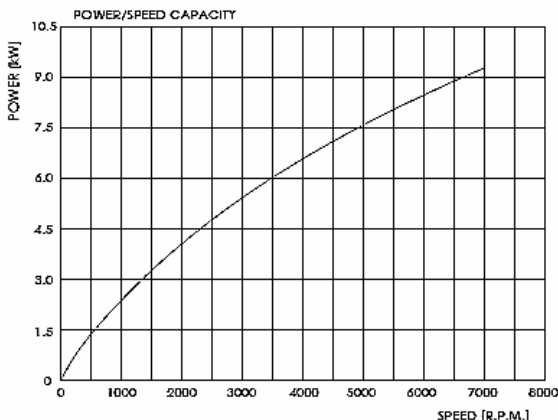


DESIGN SPECIFICATION

- Drive taper 40ISO/50ISO (BT-CT-DIN), HSK63 (Other options available on request.)
- Speed ratio 1:1
- Max. output speed of 7000rpm
- Direction of rotation opposite to machine spindle
- Output spindles 1x ER25 Collet chucks
- 16mm Drilling Capacity
- M12 / ½" Max. Tapping size using Tension Collet
- Weight approx. 7.5kg without cutting tools
- Max. Power – 9.3kW @ 7000rpm
- Max. Torque – 34Nm @ 100rpm
- Auto Tool change capability
- 360° manual positioning
- Maintenance free sealed unit

Application: A medium duty unit designed primarily for use on 40 taper machines, with Drilling, Tapping and Milling capability.

The RAD160 is available as standard with an ER25 Collet chuck spindles (Cap. 16mm). Other output options are available on request.





TOTAL TOOLING SOLUTIONS

STANDARD EXTENDED ANGLE HEAD MODEL: RAD 160-200-EX

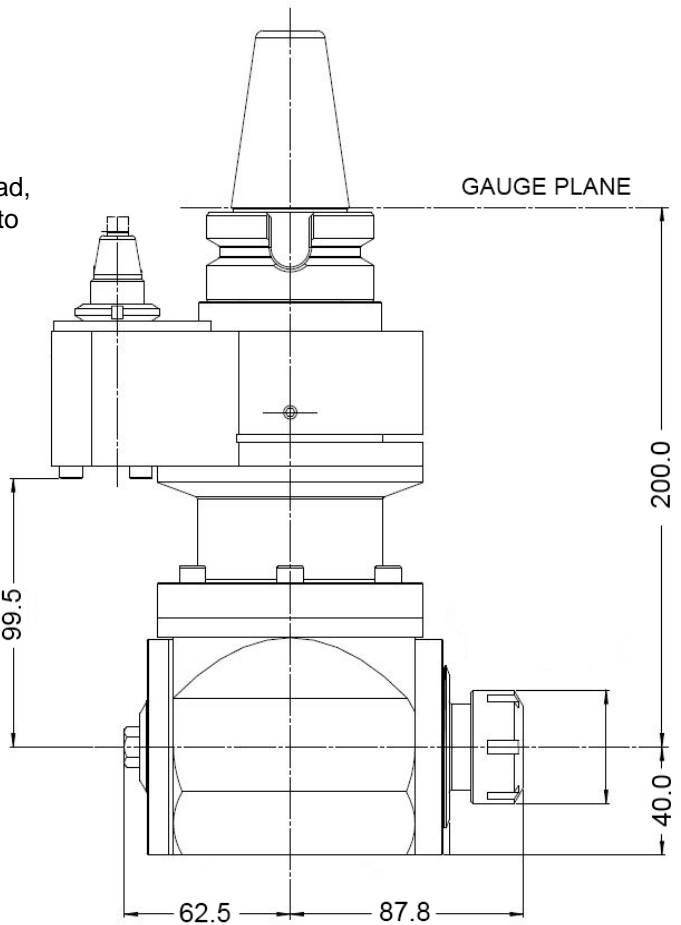
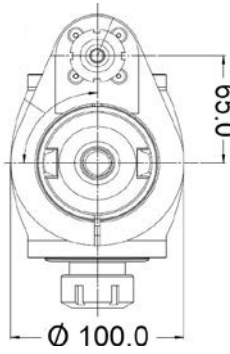
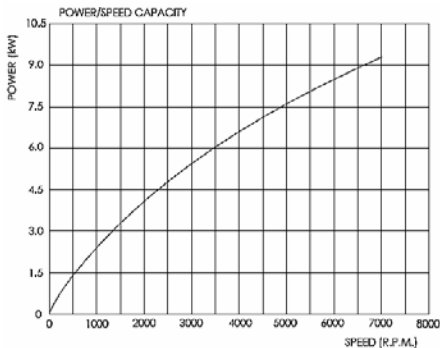
DESIGN SPECIFICATION

- Drive taper 40ISO/50ISO (BT-CT-DIN), HSK63 (Other options available on request.)
- Speed ratio 1:1
- Max. output speed of 7000rpm
- Direction of rotation opposite to machine spindle
- Output spindle ER25 Collet chuck
- 16mm Drilling Capacity
- M12 / 1/2" Max. Tapping size using Tension Collet
- Weight approx. 8.5kg without cutting tools
- Max. Power – 9.3kW @ 7000rpm
- Max. Torque – 34Nm @ 100rpm
- Auto Tool change capability (If within machine toolchange parameters)
- 360° manual positioning
- Maintenance free sealed unit



Application: The RAD160-200-EX Extended Angle Head, designed for use on 40 or 50 Taper machines and able to accommodate End Mills, Drills and Taps.

The RAD160-200-EX is available as standard with an ER25 Collet chuck spindle (Cap. 16mm). Other output options are available on request.



COVENTRY
ENGINEERING
GROUP

EXCLUSIVELY REPRESENTED IN NORTH AMERICA BY:
PERFORMANCE TOOLING SOLUTIONS INT'L
 1-847-870-8837 WWW.PTSINTL.COM



TOTAL TOOLING SOLUTIONS

STANDARD EXTENDED ANGLE HEAD MODEL: RAD 160-240-EX

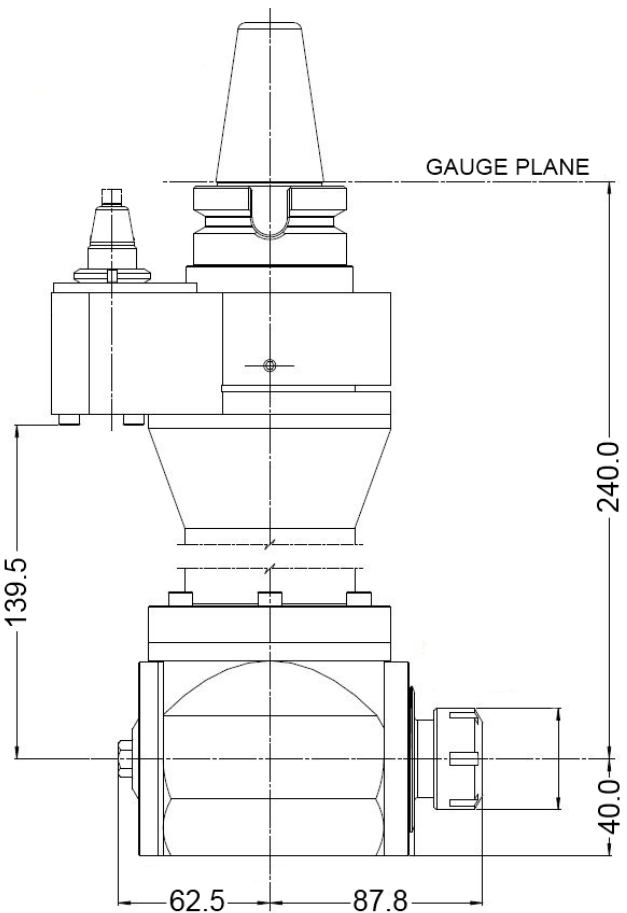
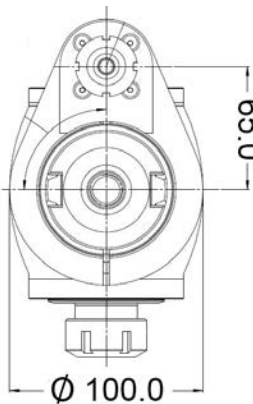
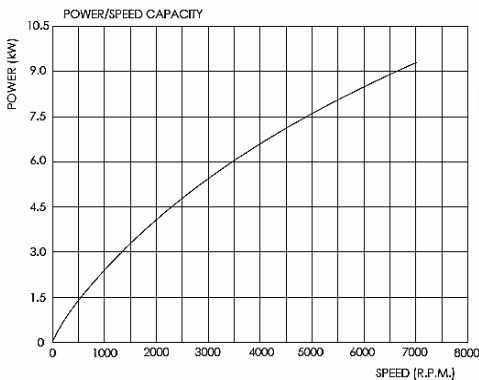
DESIGN SPECIFICATION

- Drive taper 40ISO/50ISO (BT-CT-DIN), HSK63 (Other options available on request.)
- Speed ratio 1:1
- Max. output speed of 7000rpm
- Direction of rotation opposite to machine spindle
- Output spindle ER25 Collet chuck
- 16mm Drilling Capacity
- M12 / 1/2" Max. Tapping size using Tension Collet
- Weight approx. 11.1kg without cutting tools
- Max. Power – 9.3kW @ 7000rpm
- Max. Torque – 34Nm @ 100rpm
- Auto Tool change capability (If within machine toolchange parameters)
- 360° manual positioning
- Maintenance free sealed unit



Application: The RAD160-240-EX Extended Angle Head, designed for use on 40 or 50 Taper machines and able to accommodate End Mills, Drills and Taps.

The RAD160-240-EX is available as standard with an ER25 Collet chuck spindle (Cap. 16mm). Other output options are available on request.



COVENTRY
ENGINEERING
GROUP

EXCLUSIVELY REPRESENTED IN NORTH AMERICA BY:
PERFORMANCE TOOLING SOLUTIONS INT'L
1-847-870-8837 WWW.PTSINTL.COM



TOTAL TOOLING SOLUTIONS

STANDARD EXTENDED ANGLE HEAD MODEL: RAD 160-280-EX

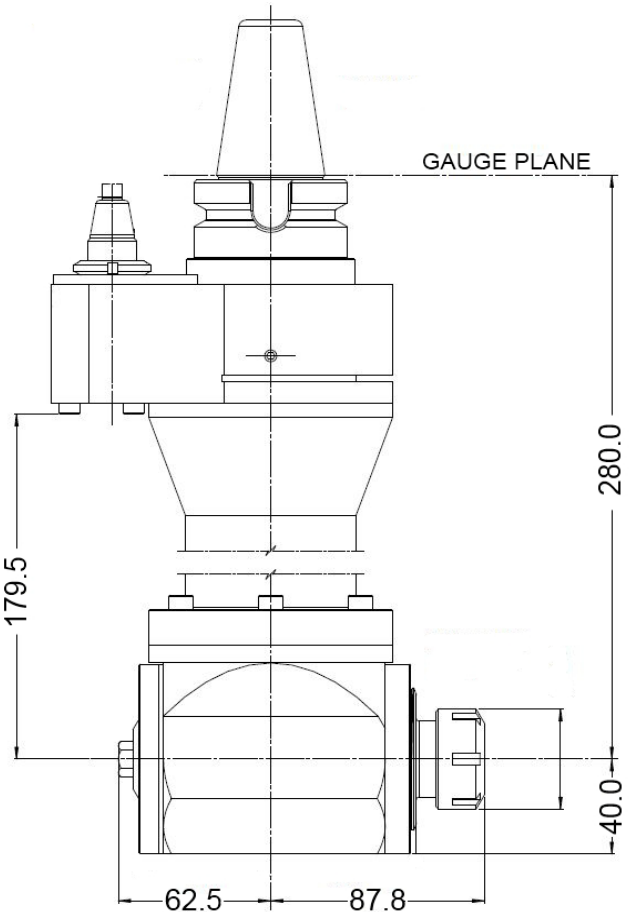
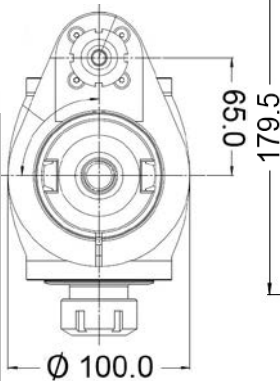
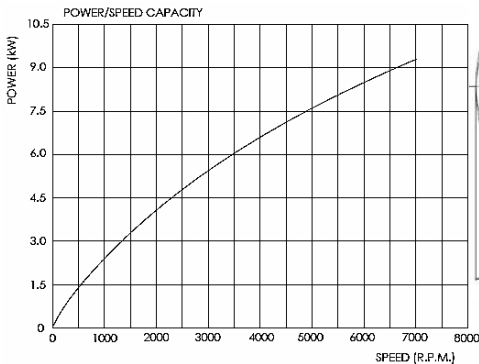
DESIGN SPECIFICATION

- Drive taper 40ISO/50ISO (BT-CT-DIN), HSK63 (Other options available on request.)
- Speed ratio 1:1
- Max. output speed of 7000rpm
- Direction of rotation opposite to machine spindle
- Output spindle ER25 Collet chuck
- 16mm Drilling Capacity
- M12 / 1/2" Max. Tapping size using Tension Collet
- Weight approx. 12.3kg without cutting tools
- Max. Power – 9.3kW @ 7000rpm
- Max. Torque – 34Nm @ 100rpm
- Auto Tool change capability (If within machine toolchange parameters)
- 360° manual positioning
- Maintenance free sealed unit



Application: The RAD160-280-EX Extended Angle Head, designed for use on 40 or 50 Taper machines and able to accommodate End Mills, Drills and Taps.

The RAD160-280-EX is available as standard with an ER25 Collet chuck spindle (Cap. 16mm). Other output options are available on request.



COVENTRY
ENGINEERING
GROUP

EXCLUSIVELY REPRESENTED IN NORTH AMERICA BY:

PERFORMANCE TOOLING SOLUTIONS INT'L

1-847-870-8837

WWW.PTSINTL.COM

STANDARD ANGLE HEAD MODEL: RAD 160-DE

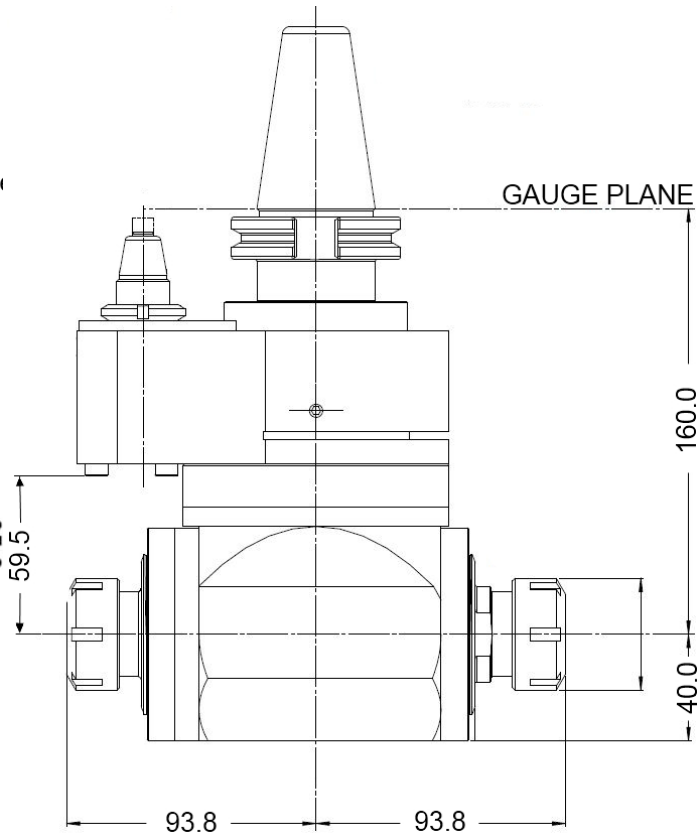
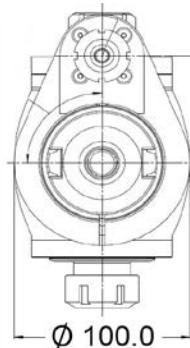
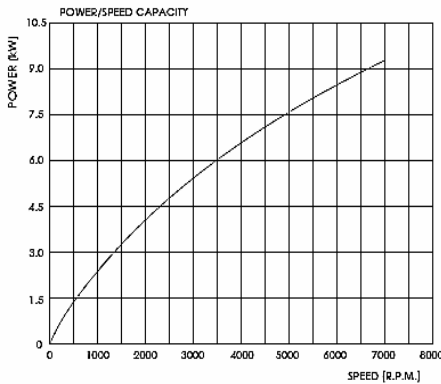
DESIGN SPECIFICATION

- Drive taper 40ISO/50ISO (BT-CT-DIN), HSK63 (Other options available on request.)
- Speed ratio 1:1
- Max. output speed of 7000rpm
- Direction of rotation opposite to machine spindle
- Output spindles 2 x ER25 Collet chucks
- 16mm Drilling Capacity
- M12 / ½" Max. Tapping size using Tension Collet
- Weight approx. 7.5kg without cutting tools
- Max. Power – 9.3kW @ 7000rpm
- Max. Torque – 34Nm @ 100rpm
- Auto Tool change capability
- 360° manual positioning
- Maintenance free sealed unit

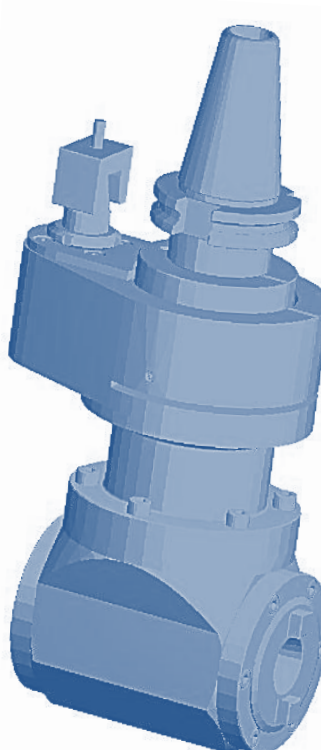





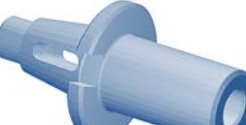
Application: A medium duty unit designed primarily for use on 40 taper machines, with Drilling, Tapping and Milling capability.

The RAD160 is available as standard with 2 x ER25 Collet chuck spindles (Cap. 16mm). Other output options are available on request.



ISO 20 TAPER TOOLING FOR USE WITH RAM160 & RAM160 - EX RIGHT ANGLE HEADS



<p>COLLET CHUCK</p> 	<table border="1"> <tr> <td>ER16 – CAP. 1MM – 10MM PART NO. RAM160-QC20-ER16-038</td> </tr> <tr> <td>ER25 – CAP. 2MM – 16MM PART NO. RAM160-QC20-ER25-038</td> </tr> </table>	ER16 – CAP. 1MM – 10MM PART NO. RAM160-QC20-ER16-038	ER25 – CAP. 2MM – 16MM PART NO. RAM160-QC20-ER25-038			
ER16 – CAP. 1MM – 10MM PART NO. RAM160-QC20-ER16-038						
ER25 – CAP. 2MM – 16MM PART NO. RAM160-QC20-ER25-038						
<p>END MILL ADAPTER</p> 	<table border="1"> <tr> <td>6MM X 40MM PART NO. RAM160-QC20-EMA06-040</td> </tr> <tr> <td>8MM X 42MM PART NO. RAM160-QC20-EMA08-042</td> </tr> <tr> <td>10MM X 44MM PART NO. RAM160-QC20-EMA10-044</td> </tr> <tr> <td>12MM X 49MM PART NO. RAM160-QC20-EMA12-049</td> </tr> <tr> <td>16MM X 52MM PART NO. RAM160-QC20-EMA16-052</td> </tr> </table>	6MM X 40MM PART NO. RAM160-QC20-EMA06-040	8MM X 42MM PART NO. RAM160-QC20-EMA08-042	10MM X 44MM PART NO. RAM160-QC20-EMA10-044	12MM X 49MM PART NO. RAM160-QC20-EMA12-049	16MM X 52MM PART NO. RAM160-QC20-EMA16-052
6MM X 40MM PART NO. RAM160-QC20-EMA06-040						
8MM X 42MM PART NO. RAM160-QC20-EMA08-042						
10MM X 44MM PART NO. RAM160-QC20-EMA10-044						
12MM X 49MM PART NO. RAM160-QC20-EMA12-049						
16MM X 52MM PART NO. RAM160-QC20-EMA16-052						
<p>SHELL MILL ADAPTER</p> 	<table border="1"> <tr> <td>Ø16MM X 18MM PART NO. RAM160-QC20-SM16-018</td> </tr> <tr> <td>Ø22MM X 20MM PART NO. RAM160-QC20-SM22-020</td> </tr> </table>	Ø16MM X 18MM PART NO. RAM160-QC20-SM16-018	Ø22MM X 20MM PART NO. RAM160-QC20-SM22-020			
Ø16MM X 18MM PART NO. RAM160-QC20-SM16-018						
Ø22MM X 20MM PART NO. RAM160-QC20-SM22-020						
<p>MORSE TAPER ADAPTER</p> 	<table border="1"> <tr> <td>NO.1 MTA X 36MM PART NO. RAM160-QC20-MT1-036</td> </tr> </table>	NO.1 MTA X 36MM PART NO. RAM160-QC20-MT1-036				
NO.1 MTA X 36MM PART NO. RAM160-QC20-MT1-036						

Special adapters available on request.

Imperial sizes also available

STANDARD ANGLE HEAD MODEL: RAD 225 – ER40

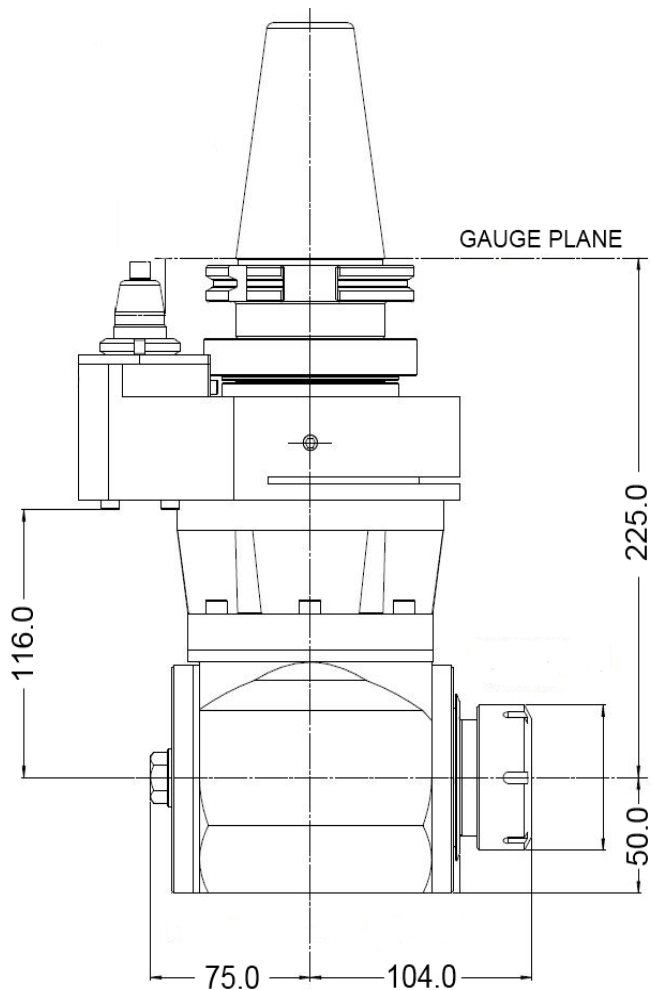
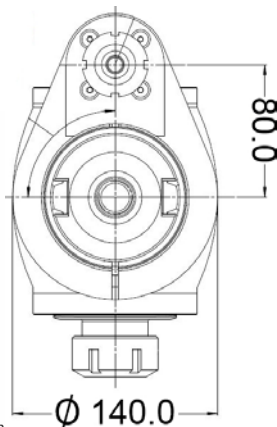
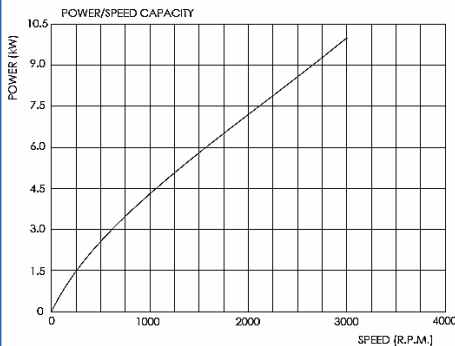
DESIGN SPECIFICATION

- Drive taper 50ISO (BT-CT-DIN), HSK80/100
- Speed ratio 1:1
- Max. output speed of 3000rpm
- Direction of rotation opposite to machine spindle
- Output spindle ER40 Collet chuck
- 30mm Max. Drilling size
- M22 / 7/8" Max. Tapping size using Tension Collet
- Weight approx. 15.6kg without cutting tools
- Max. Power @ 3000rpm – 10.0kW
- Max. Torque @ 100rpm – 63Nm
- Auto Toolchange capability
- 360° manual positioning
- Maintenance free sealed unit



Application: A Heavy duty unit designed primarily to suit 50 taper machines, with Drilling, Tapping and Milling capability.

The RAD225 is available as standard with an ER40 Collet chuck spindle (Cap. 30mm). Other output options are available on request.





TOTAL TOOLING SOLUTIONS

STANDARD EXTENDED ANGLE HEAD MODEL: RAD 225-275-EX

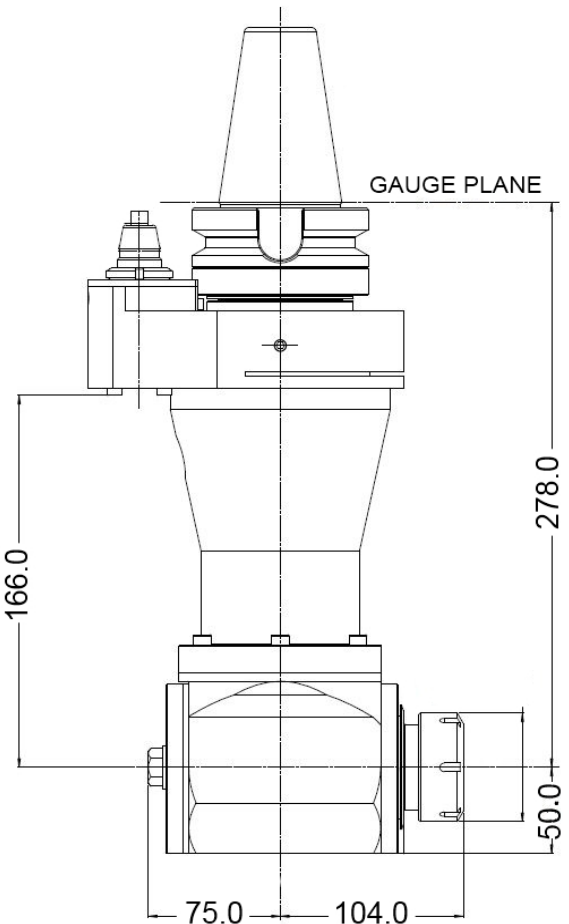
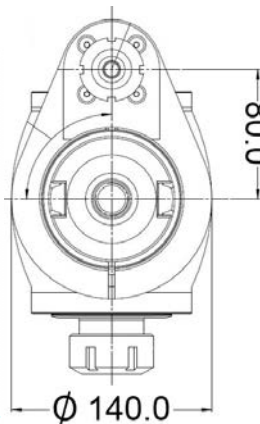
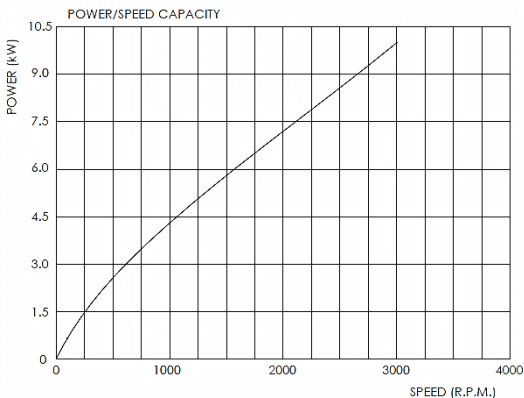


DESIGN SPECIFICATION

- Drive taper 50ISO (BT-CT-DIN), HSK80/100
- Speed ratio 1:1
- Max. output speed of 3000rpm
- Direction of rotation opposite to machine spindle
- Output spindle ER40 Collet chuck
- 30mm Max. Drilling size
- M22 / 7/8" Max. Tapping size using Tension Collet
- Max. Power 10kW @ 3000rpm
- Max. Torque 63Nm @ 100rpm
- Auto Tool change capability
- 360° manual positioning
- Maintenance free sealed unit
- Weight – 275mm configuration – 21.2kg

Application: The RAD225-275-EX Extended Angle Head, designed primarily for use on 50 Taper machines and able to accommodate end Mills, Drills and Taps.

The RAD225-275-EX is available as standard with an ER40 Collet chuck spindle (Cap. 30mm)



COVENTRY
ENGINEERING
GROUP

EXCLUSIVELY REPRESENTED IN NORTH AMERICA BY:
PERFORMANCE TOOLING SOLUTIONS INT'L

1-847-870-8837

WWW.PTSINTL.COM



TOTAL TOOLING SOLUTIONS

STANDARD EXTENDED ANGLE HEAD MODEL: RAD 225-325-EX

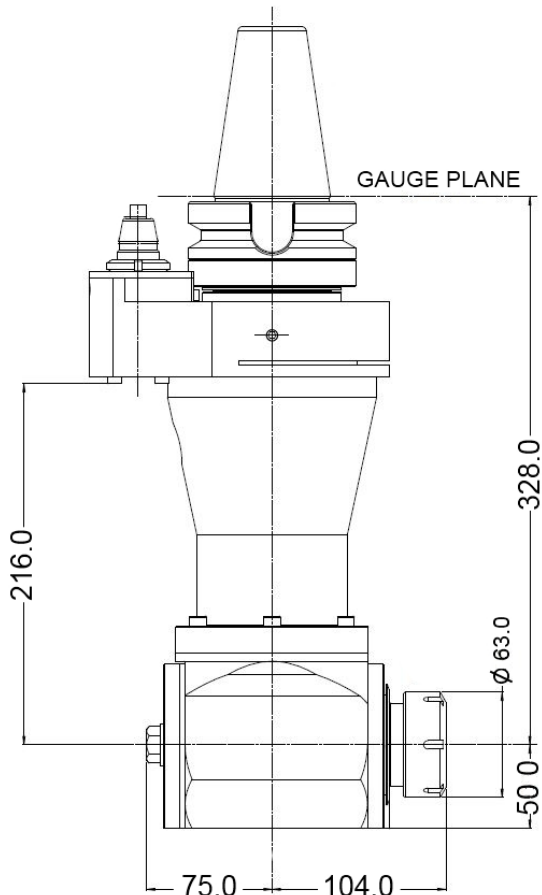
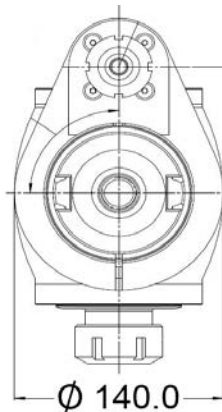
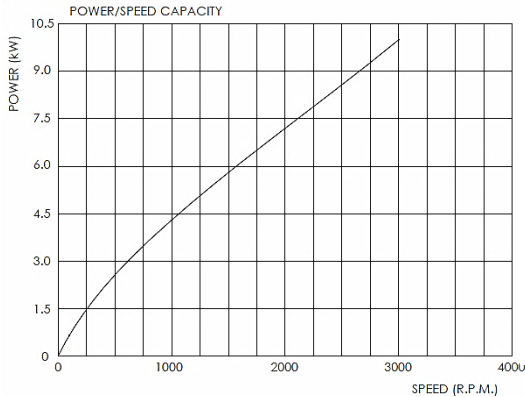


DESIGN SPECIFICATION

- Drive taper 50ISO (BT-CT-DIN), HSK80/100
- Speed ratio 1:1
- Max. output speed of 3000rpm
- Direction of rotation opposite to machine spindle
- Output spindle ER40 Collet chuck
- 30mm Max. Drilling size
- M22 / 7/8" Max. Tapping size using Tension Collet
- Max. Power 10kW @ 3000rpm
- Max. Torque 63Nm @ 100rpm
- Auto Tool change capability (Please check machine capability)
- 360° manual positioning
- Maintenance free sealed unit
- Weight – 275mm configuration – 21.2kg

Application: The RAD225-325-EX Extended Angle Head, designed primarily for use on 50 Taper machines and able to accommodate end Mills, Drills and Taps.

The RAD225-325-EX is available as standard with an ER40 Collet chuck spindle (Cap. 30mm)



COVENTRY
ENGINEERING
GROUP

EXCLUSIVELY REPRESENTED IN NORTH AMERICA BY:
PERFORMANCE TOOLING SOLUTIONS INT'L

1-847-870-8837

WWW.PTSINTL.COM



TOTAL TOOLING SOLUTIONS

STANDARD EXTENDED ANGLE HEAD MODEL: RAD 225-375-EX

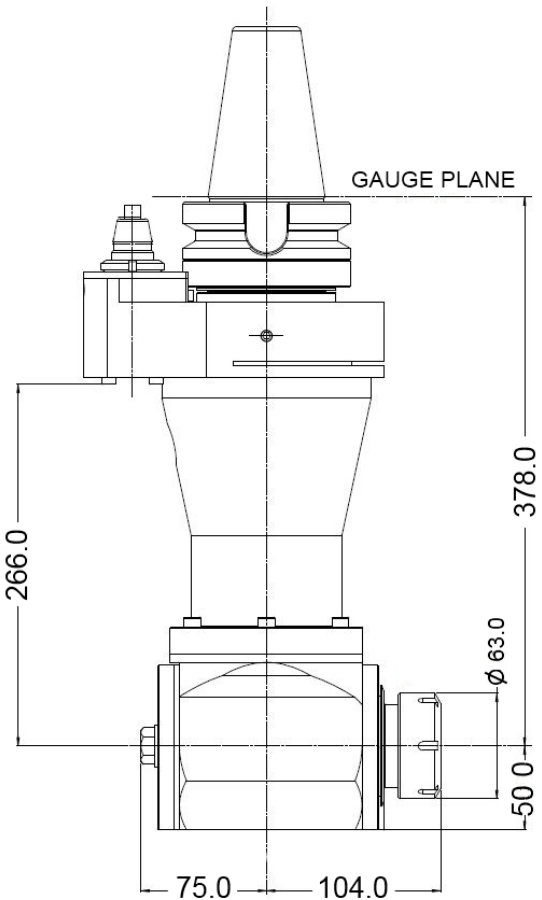
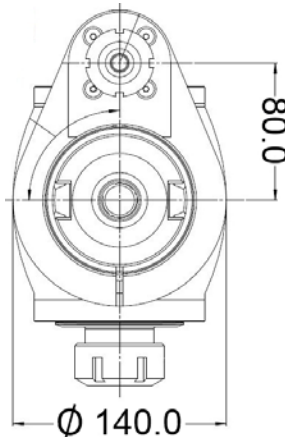
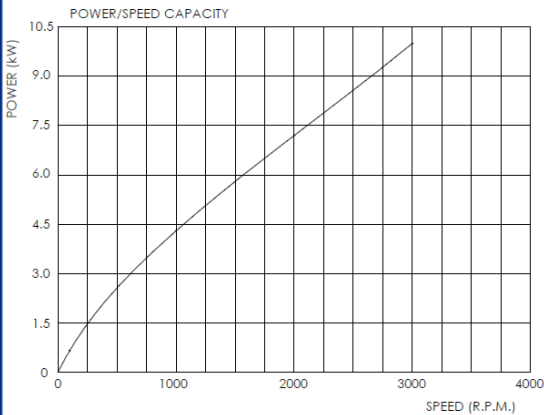


DESIGN SPECIFICATION

- Drive taper 50ISO (BT-CT-DIN), HSK80/100
- Speed ratio 1:1
- Max. output speed of 3000rpm
- Direction of rotation opposite to machine spindle
- Output spindle ER40 Collet chuck
- 30mm Max. Drilling size
- M22 / 7/8" Max. Tapping size using Tension Collet
- Max. Power 10kW @ 3000rpm
- Max. Torque 63Nm @ 100rpm
- Auto Tool change capability (Please check machine capability)
- 360° manual positioning
- Maintenance free sealed unit
- Weight – 275mm configuration – 26.2kg

Application: The RAD225-375-EX Extended Angle Head, designed primarily for use on 50 Taper machines and able to accommodate end Mills, Drills and Taps.

The RAD225-375-EX is available as standard with an ER40 Collet chuck spindle (Cap. 30mm)



COVENTRY
ENGINEERING
GROUP

EXCLUSIVELY REPRESENTED IN NORTH AMERICA BY:
PERFORMANCE TOOLING SOLUTIONS INT'L

1-847-870-8837

WWW.PTSINTL.COM

STANDARD ANGLE HEAD MODEL: RAD 225-DE-ER40

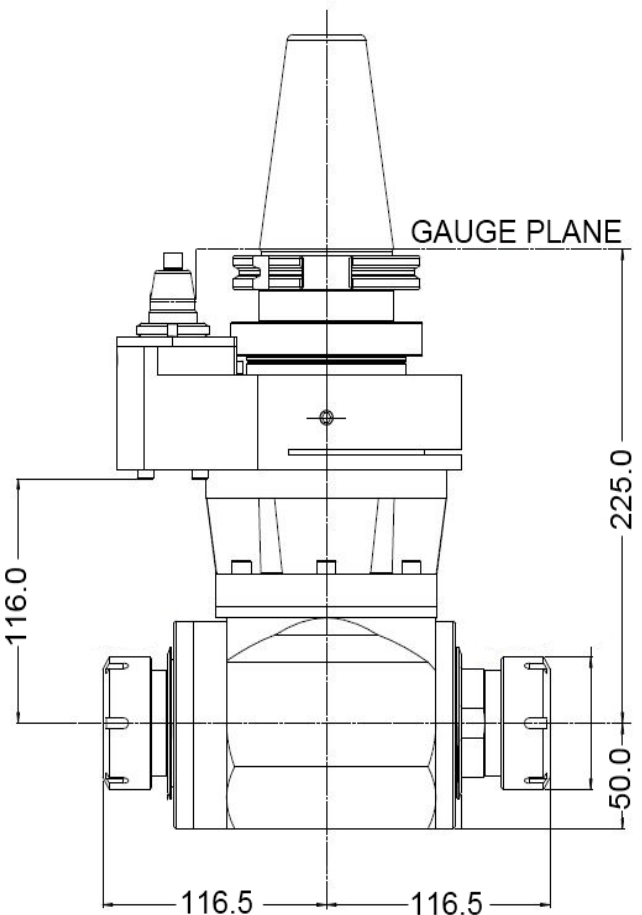
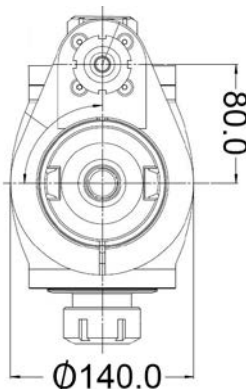
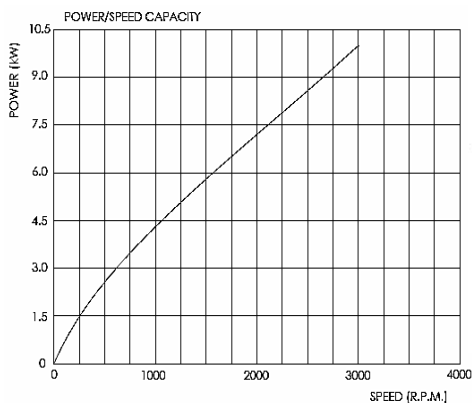
DESIGN SPECIFICATION

- Drive taper 50ISO (BT-CT-DIN), HSK80/100
- Speed ratio 1:1
- Max. output speed of 3000rpm
- Direction of rotation opposite to machine spindle
- Output spindles – 2 x ER40 Collet chucks
- 30mm Max. Drilling size
- M22 / 7/8" Max. Tapping size using Tension Collet
- Weight approx. 17.3kg without cutting tools
- Max. Power @ 3000rpm – 10.0kW
- Max. Torque @ 100rpm – 63Nm
- Auto Toolchange capability
- 360° manual positioning
- Maintenance free sealed unit



Application: A Heavy duty unit designed primarily to suit 50 taper machines, with Drilling, Tapping and Milling capability.

The RAD225 is available as standard with 2 x ER40 Collet chuck spindles (Cap. 30mm). Other output options are available on request.



STANDARD ANGLE HEAD MODEL: RAM 160

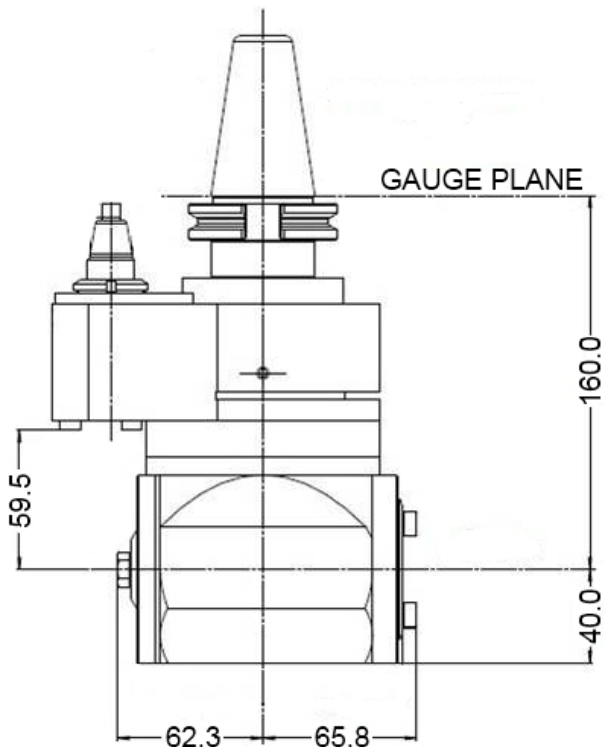
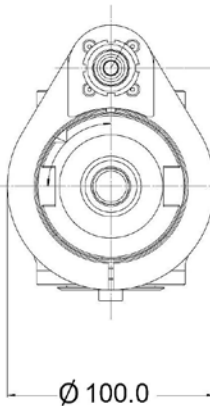
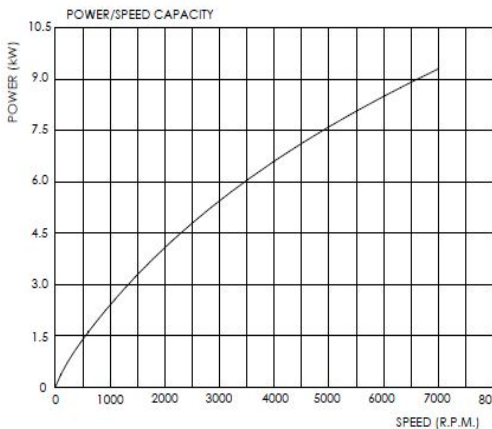
DESIGN SPECIFICATION

- Drive taper 40ISO/50ISO (BT-CT-DIN), HSK63 (Other options available on request.)
- Speed ratio 1:1
- Max. output speed of 7000rpm
- Direction of rotation opposite to machine spindle
- ISO20 Taper output spindle
- 16mm Milling Capacity
- M12 / ½" Max. Tapping size using Tension Collet
- Weight approx. 6.6kg without cutting tools
- Max. Power – 9.3kW @ 7000rpm
- Max. Torque – 34Nm @ 100rpm
- Auto Tool change capability
- 360° manual positioning
- Maintenance free sealed unit



Application: A medium duty unit designed primarily for use on 40 taper machines, with Drilling, Tapping and Milling capability.

The RAM160 is available as standard with an ISO20 Taper output spindle and has fully automatic tool change capability.



STANDARD EXTENDED ANGLE HEAD MODEL: RAM 160-200-EX

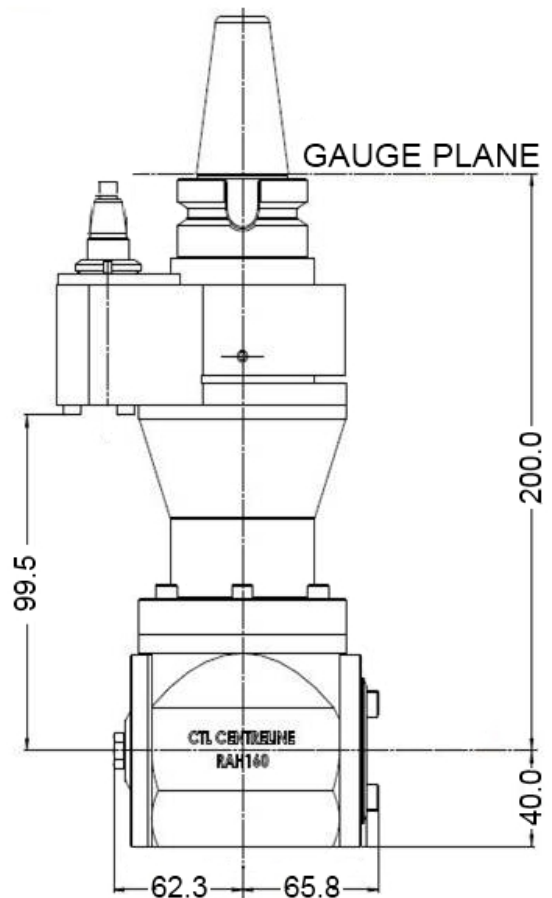
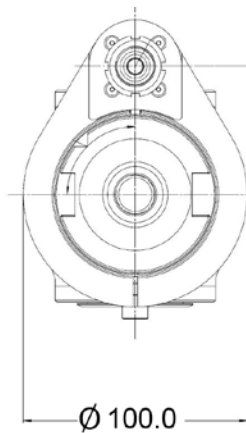
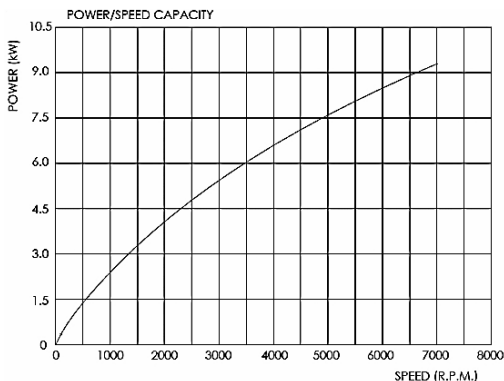


DESIGN SPECIFICATION

- Drive taper 40ISO/50ISO (BT-CT-DIN), HSK63 (Other options available on request.)
- Speed ratio 1:1
- Max. output speed of 7000rpm
- Direction of rotation opposite to machine spindle
- Output spindle ISO 20 Steep Taper adaptor
- 16mm Drilling Capacity
- M12 / ½" Max. Tapping size using Tension Collet
- Weight approx. 8.5kg without cutting tools
- Max. Power – 9.3kW @ 7000rpm
- Max. Torque – 34Nm @ 100rpm
- Auto Tool change capability (If within machine tool change parameters)
- 360° manual positioning
- Maintenance free sealed unit

Application: A robust unit with milling capability but with the flexibility of interchangeable tooling adaptors to facilitate the holding of drills, taps, end mills, shell mills etc. The tooling is held in position with a manual drawbar and accurately located on an ISO20 variant taper.

For full details of ISO20 Taper Tooling see separate datasheet



STANDARD EXTENDED ANGLE HEAD MODEL: RAM 160-240-EX

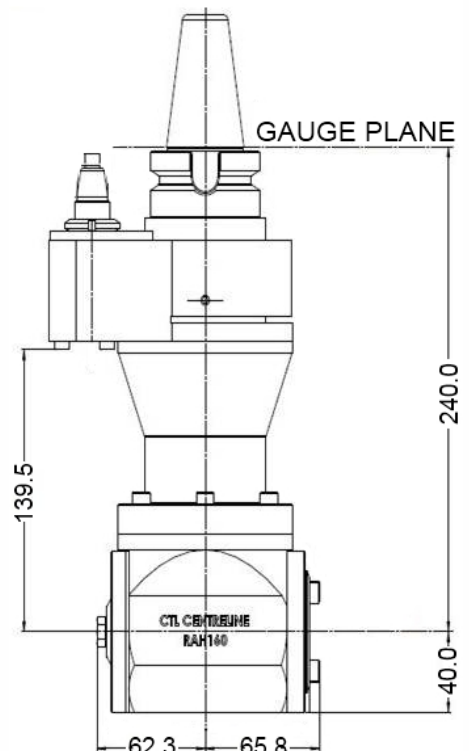
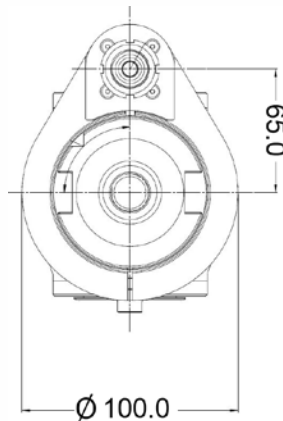
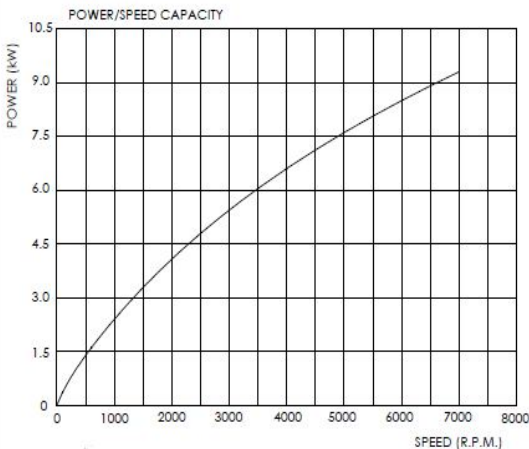


DESIGN SPECIFICATION

- Drive taper 40ISO/50ISO (BT-CT-DIN), HSK63 (Other options available on request.)
- Speed ratio 1:1
- Max. output speed of 7000rpm
- Direction of rotation opposite to machine spindle
- Output spindle ISO 20 Steep Taper adaptor
- 16mm Milling Capacity
- M12 / ½" Max. Tapping size using Tension Collet
- Weight approx. 8.5kg without cutting tools
- Max. Power – 9.3kW @ 7000rpm
- Max. Torque – 34Nm @ 100rpm
- Auto Tool change capability (If within machine tool change parameters)
- 360° manual positioning
- Maintenance free sealed unit

Application: A medium duty unit designed primarily for use on 40 taper machines, with Drilling, Tapping and Milling capability.

The RAM160 is available as standard with 1 x ER25 Collet chuck spindles (Cap. 16mm). Other output options are available on request.



STANDARD EXTENDED ANGLE HEAD MODEL: RAM 160-280-EX

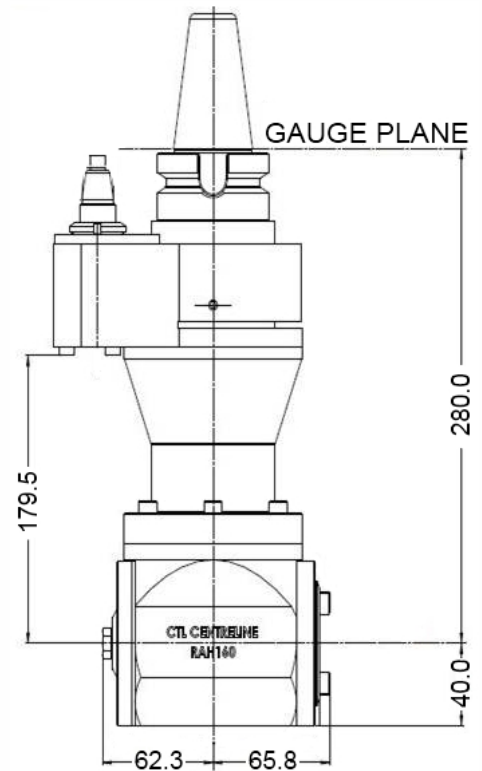
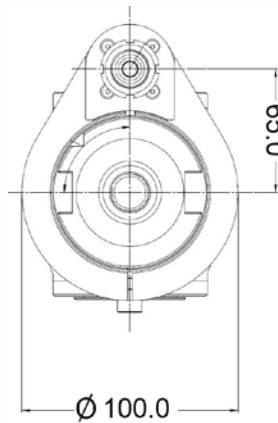
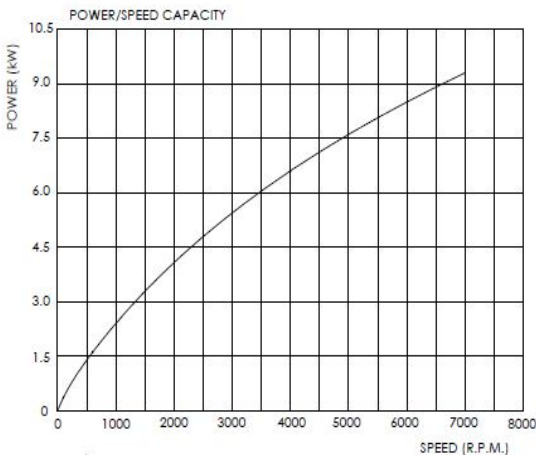


DESIGN SPECIFICATION

- Drive taper 40ISO/50ISO (BT-CT-DIN), HSK63 (Other options available on request.)
- Speed ratio 1:1
- Max. output speed of 7000rpm
- Direction of rotation opposite to machine spindle
- Output spindle ISO 20 Steep Taper adaptor
- 16mm Milling Capacity
- M12 / ½" Max. Tapping size using Tension Collet
- Weight approx. 12.3kg without cutting tools
- Max. Power – 9.3kW @ 7000rpm
- Max. Torque – 34Nm @ 100rpm
- Auto Tool change capability (If within machine tool change parameters)
- 360° manual positioning
- Maintenance free sealed unit

Application: The RAD160-280-EX Extended Angle Head, designed for use on 40 or 50 Taper machines and able to accommodate End Mills, Drills and Taps.

The RAD160-280-EX is available as standard with an ER25 Collet chuck spindle (Cap. 16mm). Other output options are available on request.





CENTRELINE

TOTAL TOOLING SOLUTIONS

STANDARD ANGLE HEAD MODEL: RAM 225 – ISO30

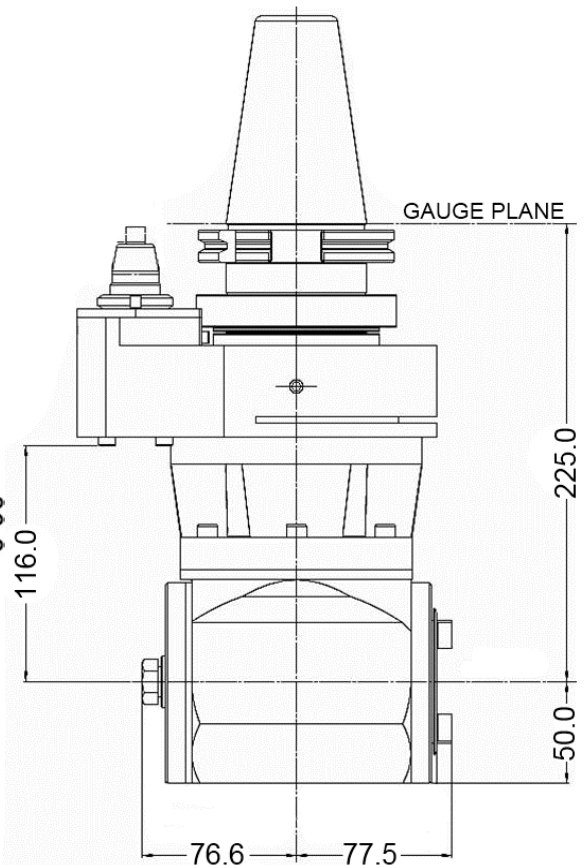
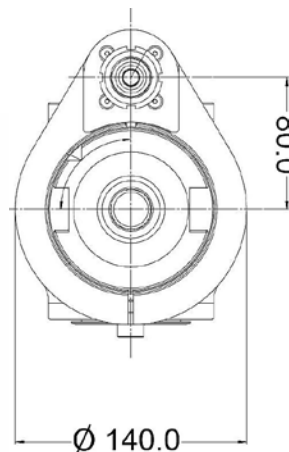
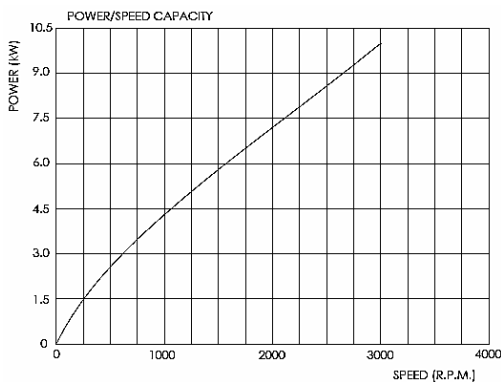


DESIGN SPECIFICATION

- Drive taper 50ISO (BT-CT-DIN), HSK80/100
- Speed ratio 1:1
- Max. output speed of 3000rpm
- Direction of rotation opposite to machine spindle
- Output spindle ISO30 Steep Taper Adaptor
- 30mm Max. Drilling size
- M22 / 7/8" Max. Tapping size using Tension Collet
- Weight approx. 15kg without cutting tools
- Max. Power @ 3000rpm – 10.0kW
- Max. Torque @ 100rpm – 63Nm
- Auto Tool change capability
- 360° manual positioning
- Maintenance free sealed unit

Application: A Heavy duty unit designed primarily to suit 50 taper machines, with the flexibility of interchangeable tooling adaptors to facilitate the holding of drills, taps, end mills, shell mills etc. The tooling is held in position with a manual drawbar and accurately located on an ISO30 taper.

For full details of ISO20 Taper Tooling see separate datasheet



COVENTRY
ENGINEERING
GROUP

EXCLUSIVELY REPRESENTED IN NORTH AMERICA BY:

PERFORMANCE TOOLING SOLUTIONS INT'L

1-847-870-8837

WWW.PTSINTL.COM

STANDARD EXTENDED ANGLE HEAD

MODEL: RAM 225-275 -EX

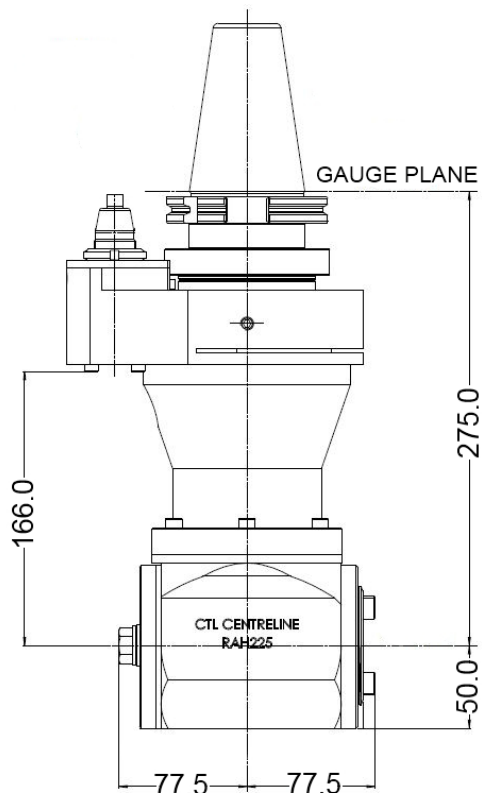
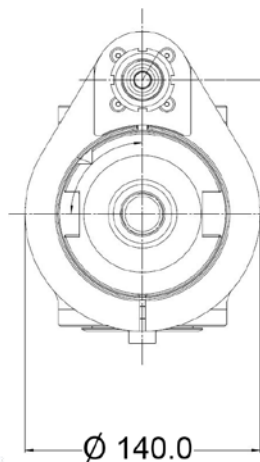
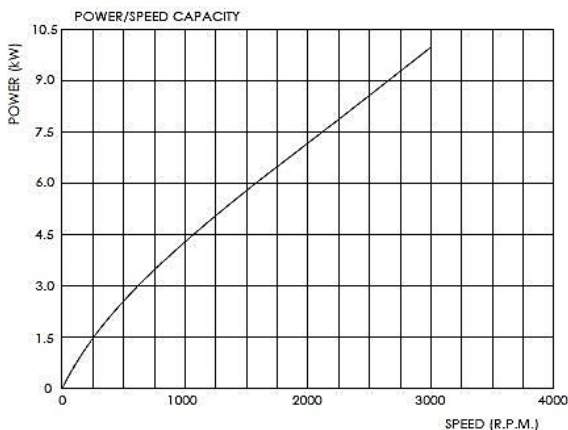
DESIGN SPECIFICATION

- Drive taper 50ISO (BT-CT-DIN), HSK63 (Other options available on request.)
- Speed ratio 1:1
- Max. output speed of 3000rpm
- Direction of rotation opposite to machine spindle
- Output spindles 1 x ISO30 Steep Tapper Adaptor
- 30mm Milling Capacity
- M22/ / 7/8" Max. Tapping size using Tension Collet
- Weight approx. 20.4kg without cutting tools
- Max. Power – 10.0 kW @ 3000rpm
- Max. Torque – 64Nm @ 100rpm
- Auto Tool change capability
- 360° manual positioning
- Maintenance free sealed unit



Application: The RAM225-275-EX Extended Heavy Duty Milling Head, with a 275mm gauge length, with milling capability but with the flexibility of interchangeable 30 ISO tooling adaptors to facilitate the holding of drills, taps, end mills and shell mills etc.

The RAM225-275-EX is available as standard with a standard ISO 30 output spindle with manual tool clamping facility.





TOTAL TOOLING SOLUTIONS

STANDARD EXTENDED ANGLE HEAD MODEL: RAM 225-325-EX

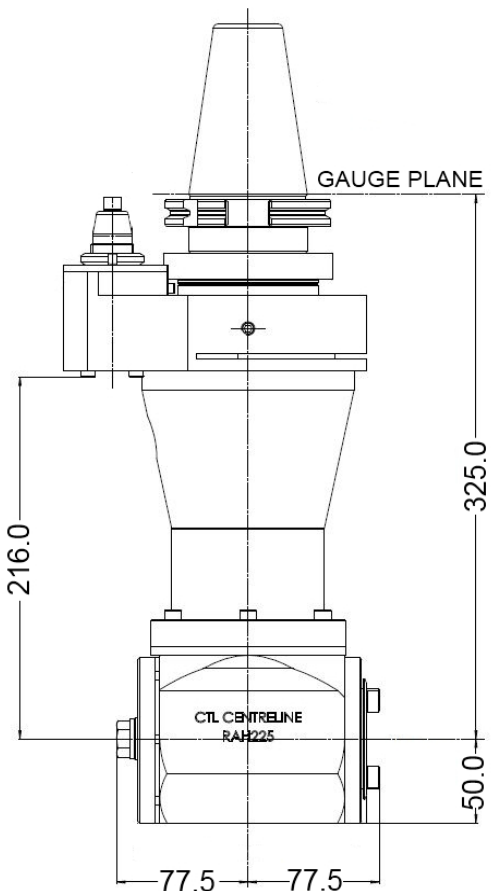
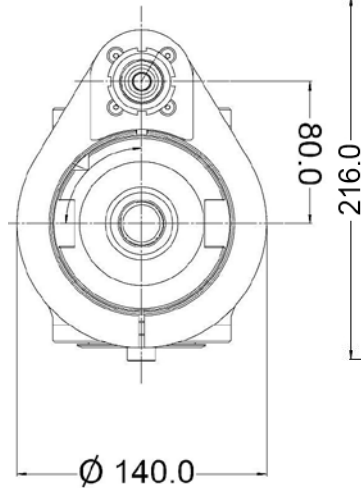
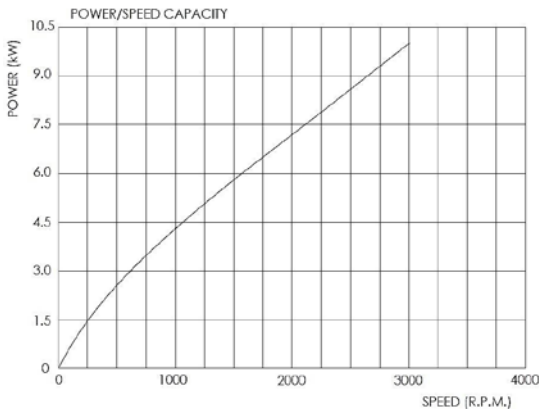


DESIGN SPECIFICATION

- Drive taper 50ISO (BT-CT-DIN), HSK80/100
- Speed ratio 1:1
- Max. output speed of 3000rpm
- Direction of rotation opposite to machine spindle
- Output spindle ISO30 Steep Taper Adaptor
- 30mm Max. Drilling size
- M22 / 7/8" Max. Tapping size using Tension Collet
- Max. Power 10kW @ 3000rpm
- Max. Torque 63Nm @ 100rpm
- Auto Tool change capability (Please check machine capability)
- 360° manual positioning
- Maintenance free sealed unit
- Weight – 325mm configuration – 21.2kg

Application: The RAM225-325-EX Extended Angle Head, designed primarily for use on 50 Taper machines and able to accommodate end Mills, Drills, Shell Mills and Taps.

The tooling is held in position with a manual drawbar and accurately located on a ISO30 taper.



COVENTRY
ENGINEERING
GROUP

EXCLUSIVELY REPRESENTED IN NORTH AMERICA BY:
PERFORMANCE TOOLING SOLUTIONS INT'L

1-847-870-8837

WWW.PTSINTL.COM

STANDARD EXTENDED ANGLE HEAD

MODEL: RAM 225-375 -EX

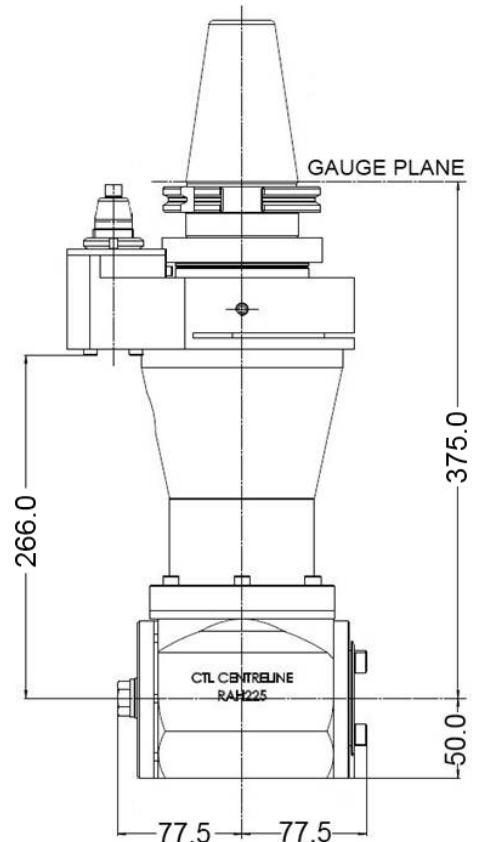
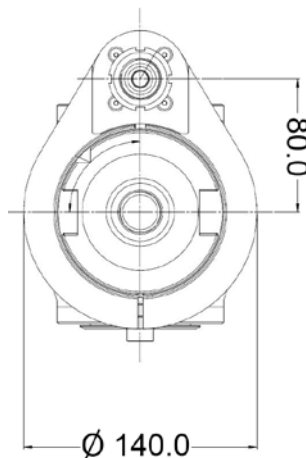
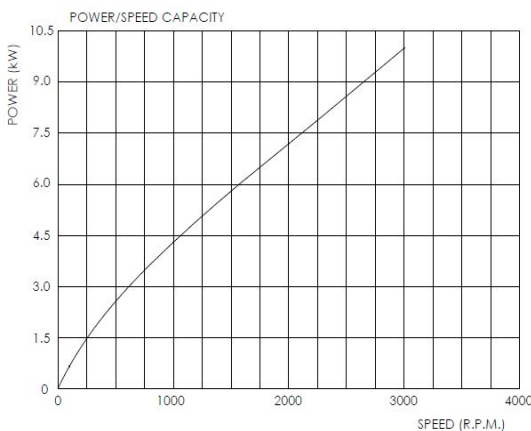
DESIGN SPECIFICATION

- Drive taper 50ISO (BT-CT-DIN), HSK63 (Other options available on request.)
- Speed ratio 1:1
- Max. output speed of 3000rpm
- Direction of rotation opposite to machine spindle
- Output spindles 1 x ISO30 Steep Tapper Adaptor
- 30mm Milling Capacity
- M22/ / 7/8" Max. Tapping size using Tension Collet
- Weight approx. 25.3kg without cutting tools
- Max. Power – 10.0 kW @ 3000rpm
- Max. Torque – 64Nm @ 100rpm
- Auto Tool change capability
- 360° manual positioning
- Maintenance free sealed unit



Application: The RAM225-375-EX is the longest standard Extended Milling Head variant. With a 375mm gauge length, with milling capability but with the flexibility of interchangeable 30 ISO tooling adapters to facilitate the holding of drills, taps, end mills and shell mills etc.

The RAM225-375-EX is available as standard with a standard ISO 30 output spindle with manual tool clamping facility.





CENTRELINE

TOTAL TOOLING SOLUTIONS

STANDARD ANGLE HEAD MODEL: RAD 190 - 11



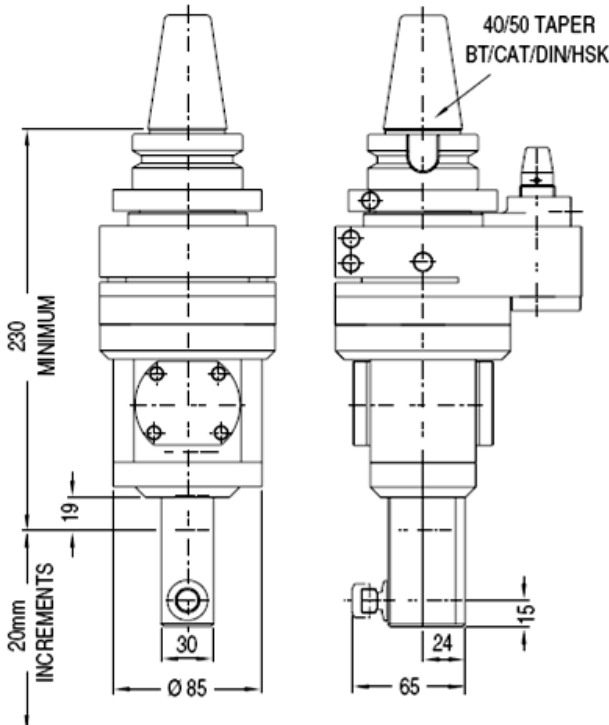
Application: An Extended, Long Reach Modular Angle head designed for accessing those difficult to reach features.

Designed with Helical Gear drive from a master Spiral Bevel Gear set for smooth running, with the ability for interchangeability between different module sizes in minutes.

The RAD190-11 module is available as either a single or double output unit with ER11 Collet chuck spindles (Cap. 7mm) with the ability to Drill, Tap or carry out light milling operations.

DESIGN SPECIFICATION

- Drive taper - BT/CAT/DIN/ISO, HSK63/80/100
- Speed ratio 1.2:1 Speed Increase
- Max. Input speed of 3500rpm (Output – 4200rpm)
- Max. Output Torque 5Nm
- Output spindle ER11 Collet chuck
- 7mm Max. Drilling size
- M5 / 6-32" Max. Tapping size using Tension Collet
- 360° manual positioning
- Available in 20mm length increments
- Interchangeable modules between -11, -16 & -20
- Maintenance free sealed unit



Increments	Gauge Length	Weight (kg)
/0	230mm	8.15
/1	250mm	8.4
/2	270mm	8.65
/3	290mm	8.9
/4	310mm	9.15
/5	330mm	9.4

COVENTRY
ENGINEERING
GROUP

EXCLUSIVELY REPRESENTED IN NORTH AMERICA BY:

PERFORMANCE TOOLING SOLUTIONS INT'L

1-847-870-8837

WWW.PTSINTL.COM



CENTRELINE

TOTAL TOOLING SOLUTIONS

STANDARD ANGLE HEAD MODEL: RAD 190 - 16



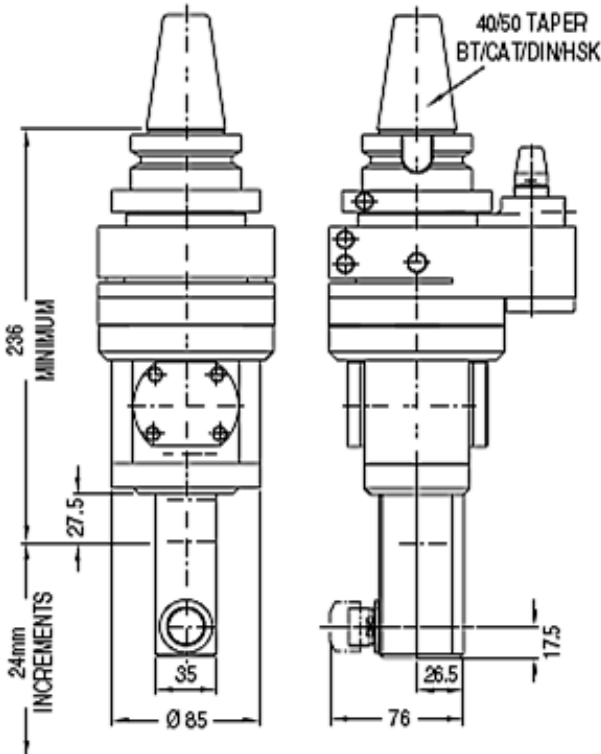
Application: An Extended, Long Reach Modular Angle head designed for accessing those difficult to reach features.

Designed with Helical Gear drive from a master Spiral Bevel Gear set for smooth running, with the ability for interchangeability between different module sizes in minutes.

The RAD190-16 is available as either a single or double output unit with ER16 Collet chuck spindles (Cap. 10mm) with the ability to Drill, Tap or carry out light milling operations.

DESIGN SPECIFICATION

- Drive taper - BT/CAT/DIN/ISO, HSK63/80/100
- Speed ratio 1:1 Speed Increase
- Max. Output speed of 3500rpm
- Max. Torque 6Nm
- Output spindle ER16 Collet chuck
- 10mm Max. Drilling size
- M6 / 1/4" Max. Tapping size using Tension Collet
- Power transmission –
- 360° manual positioning
- Available in 24mm length increments
- Interchangeable modules between -11, -16 & -20
- Maintenance free sealed unit



Increments	Gauge Length	Weight (kg)
/0	236mm	8.75
/1	260mm	9.05
/2	284mm	9.35
/3	308mm	9.65
/4	332mm	9.95
/5	356mm	10.25
/6	380mm	10.55
/7	404mm	10.85



CENTRELINE

TOTAL TOOLING SOLUTIONS

STANDARD ANGLE HEAD MODEL: RAD 190 - 20



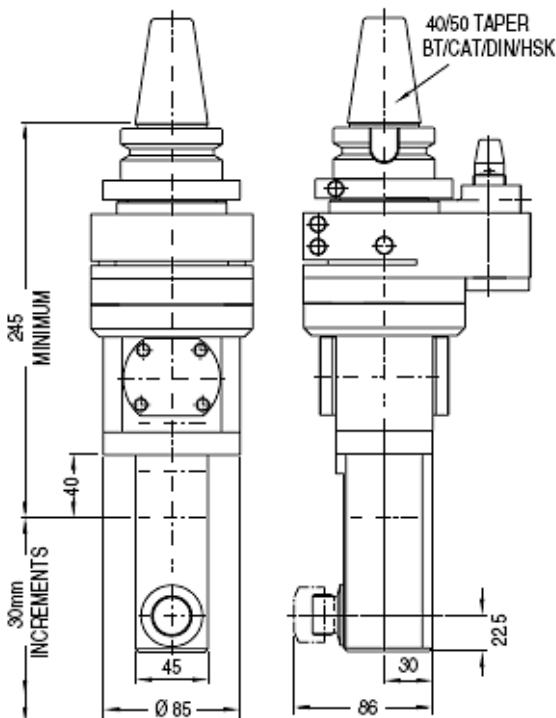
Application: An Extended, Long Reach Modular Angle head designed for accessing those difficult to reach features.

Designed with Helical Gear drive from a master Spiral Bevel Gear set for smooth running, with the ability for interchangeability between different module sizes in minutes.

The RAD190-20 is available as either a single or double output unit with ER20 Collet chuck spindles (Cap. 13mm) with the ability to Drill, Tap or carry out light milling operations.

DESIGN SPECIFICATION

- Drive taper - BT/CAT/DIN/ISO, HSK63/80/100
- Speed ratio 1.25:1 Speed Reduction
- Max. Input speed of 3500rpm (Output – 2800rpm)
- Max. Torque 7.5Nm
- Output spindle ER20 Collet chuck
- 13mm Max. Drilling size
- M10 / 3/8" Max. Tapping size using Tension Collet
- 360° manual positioning
- Available in 30mm length increments
- Interchangeable modules between -11, -16 & -20
- Maintenance free sealed unit



Increments	Gauge Length	Weight (kg)
/0	245mm	9.40
/1	275mm	9.90
/2	305mm	10.40
/3	335mm	10.90
/4	365mm	11.50
/5	395mm	12.00
/6	425mm	12.50
/7	455mm	13.10
/8	485mm	13.60
/9	515mm	14.10

COVENTRY
ENGINEERING
GROUP

EXCLUSIVELY REPRESENTED IN NORTH AMERICA BY:

PERFORMANCE TOOLING SOLUTIONS INT'L

1-847-870-8837

WWW.PTSINTL.COM



CENTRELINE

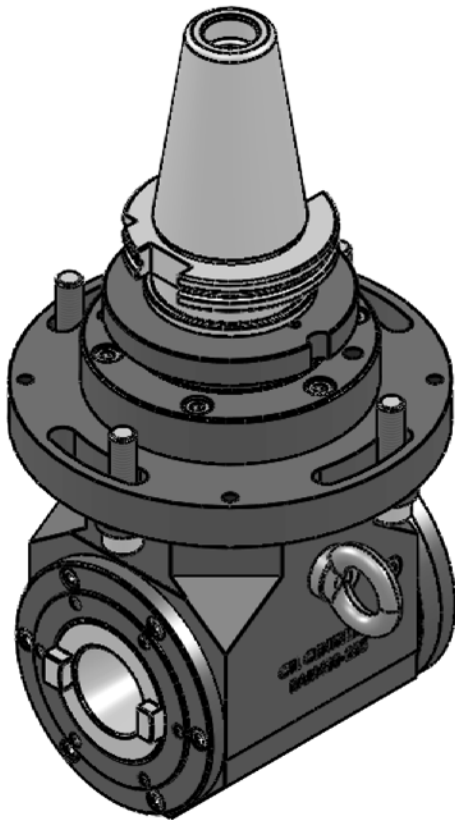
STANDARD ANGLE HEAD MODEL: RAM400-40-AL

TOTAL TOOLING SOLUTIONS

Application: A heavy duty, Aluminium bodied unit with milling capability but with the flexibility of interchangeable tooling adaptors to facilitate the location of drills, taps, end mills, shell mills etc.

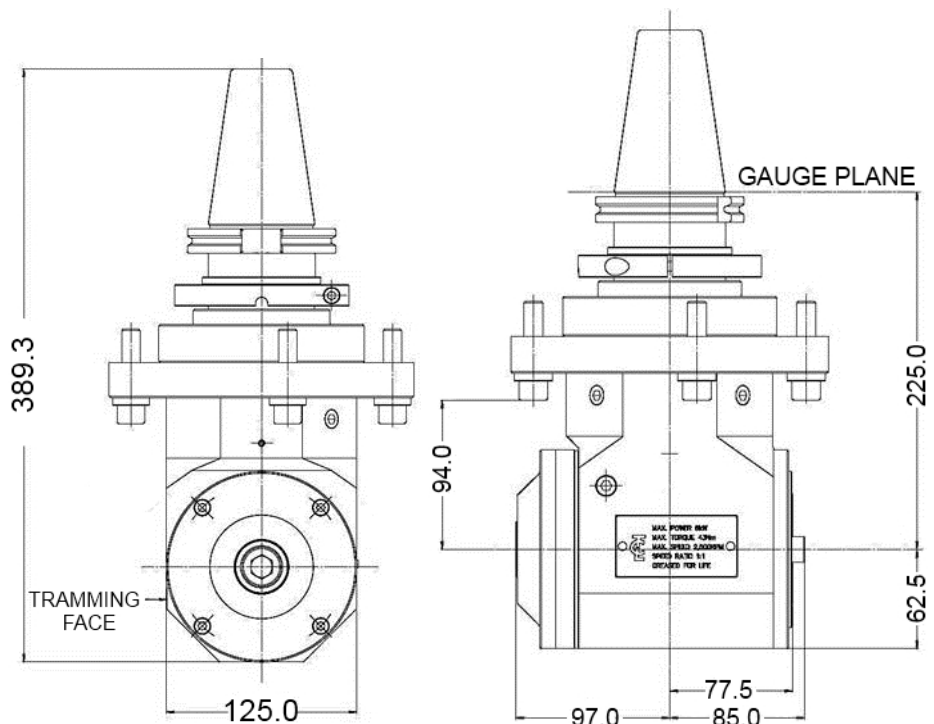
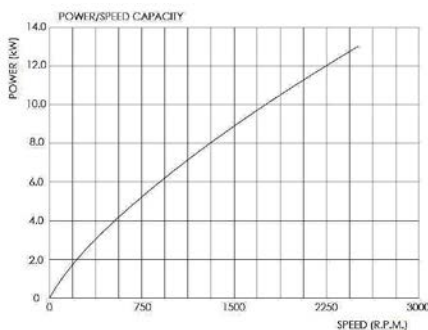
The Tooling is held in position with a manual drawbar and accurately located on an ISO 40 Taper (CAT/DIN/BT/ISO tooling can be used).

The RAM 400-40-AL is designed for direct mounting to machine spindle nose via a dedicated cowl assembly for optimum rigidity. Radial timing is achieved via a Location Pin and the head has full 360° manual rotation adjustability.



DESIGN SPECIFICATION

- Direct mounting to machine spindle or ram
- Drive taper 50 / 60 ISO / HSK100
- Speed ratio 1:1 with max. output speed of 2500 rpm
- Direction of rotation opposite to machine spindle
- Output spindle ISO 40 with manual tool clamping
- Weight approx. 23kg untooled and without cowl assembly
- Grease lubricated. (greased for life)
- Max. Power @ 2500rpm: 13kW
- Max. Torque @ 100rpm: 95Nm



**COVENTRY
ENGINEERING
GROUP**

EXCLUSIVELY REPRESENTED IN NORTH AMERICA BY:

PERFORMANCE TOOLING SOLUTIONS INT'L

1-847-870-8837

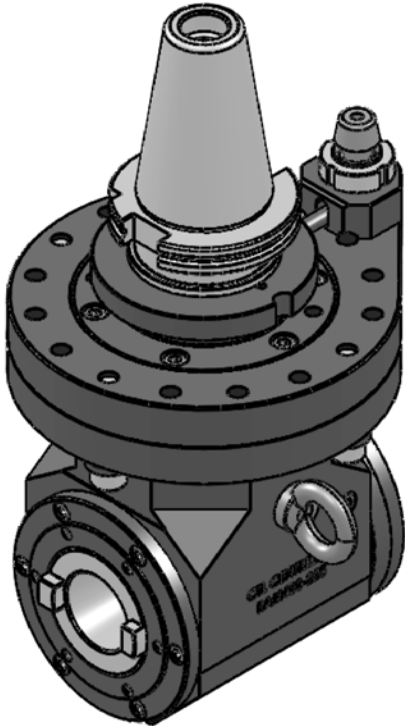
WWW.PTSINTL.COM



CENTRELINE

STANDARD ANGLE HEAD MODEL: RAM400-40-AL-TC

TOTAL TOOLING SOLUTIONS



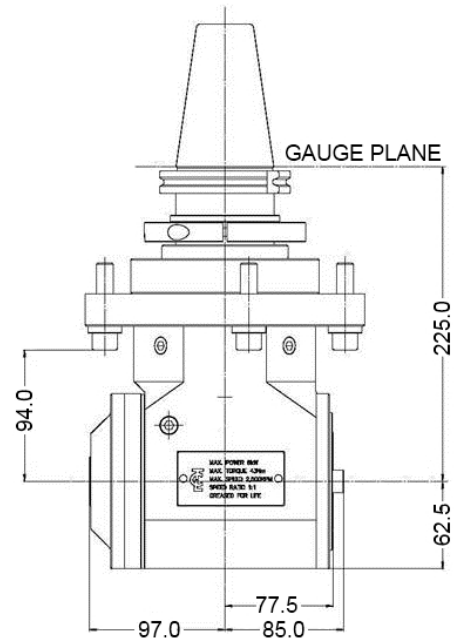
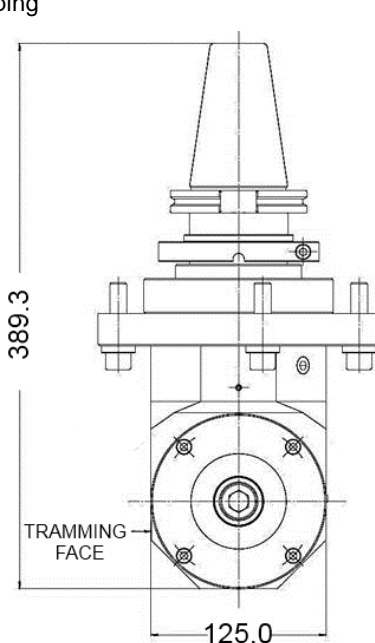
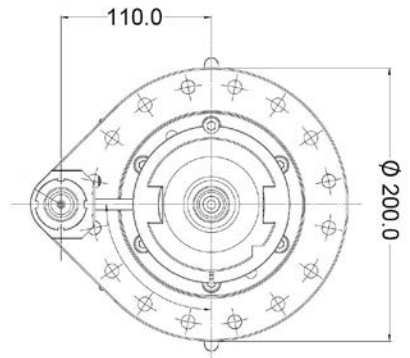
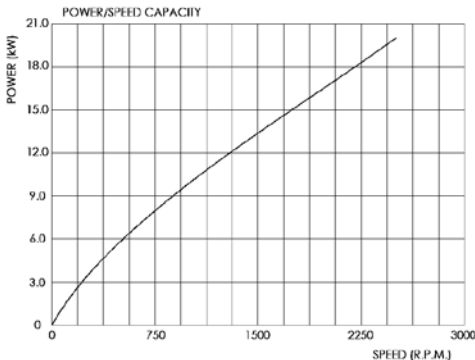
Application: A heavy duty, Aluminium bodied unit with milling capability but with the flexibility of interchangeable tooling adaptors to facilitate the location of drills, taps, end mills, shell mills etc.

The Tooling is held in position with a manual drawbar and accurately located on an ISO 40 Taper (CAT/DIN/BT/ISO tooling can be used).

The RAM 400-40-AL is designed to be toolchanged on larger capacity machining centres. Radial timing is achieved via a spring loaded tapered location pin and the head has full 360° manual rotation adjustability.

DESIGN SPECIFICATION

- Drive taper 50 / 60 ISO / HSK100
- Speed ratio 1:1 with max. output speed of 2500 rpm
- Direction of rotation opposite to machine spindle
- Output spindle ISO 40 with manual tool clamping
- Weight approx. 27kg untooled
- Grease lubricated. (greased for life)
- Max. Power @ 2500rpm: 13kW
- Max. Torque @ 100rpm: 90Nm



COVENTRY ENGINEERING GROUP

EXCLUSIVELY REPRESENTED IN NORTH AMERICA BY:
PERFORMANCE TOOLING SOLUTIONS INT'L

1-847-870-8837

WWW.PTSINTL.COM



Application: A heavy duty unit with milling capability but with the flexibility of interchangeable tooling adaptors to facilitate the location of drills, taps, end mills, shell mills etc.

Available in 3 gauge length configurations: 300mm / 375mm & 450mm

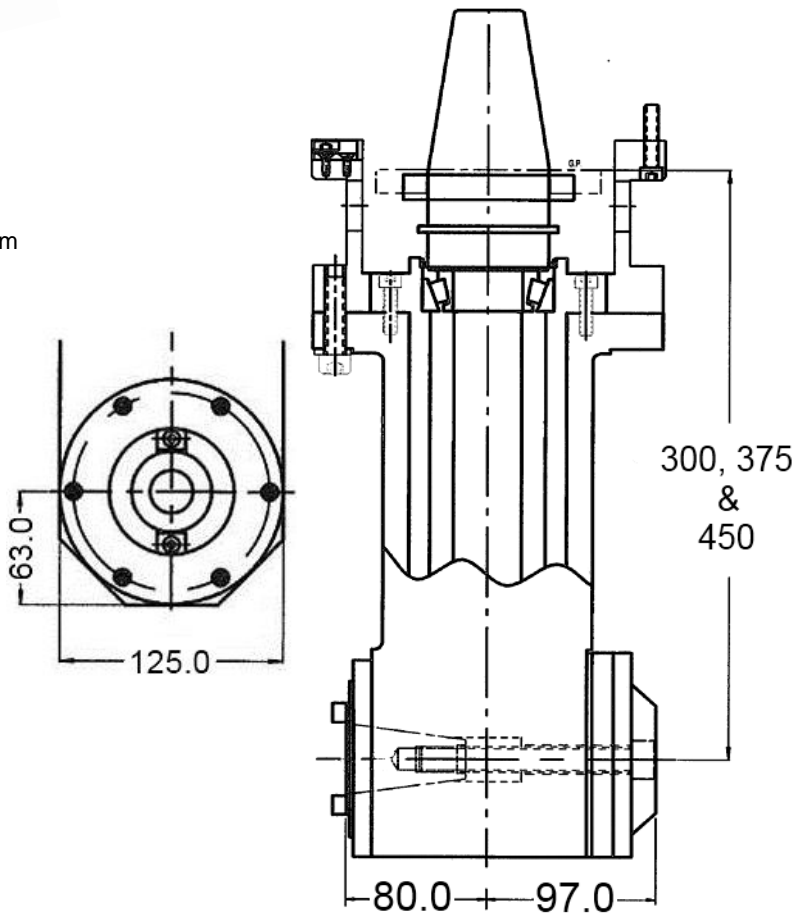
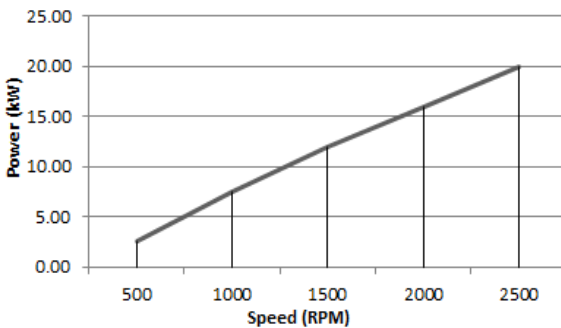
The Tooling is held in position with a manual drawbar and accurately Located on an ISO 40 Taper. (CAT/DIN/BT/ISO tooling can be used).

The RAM 400-40 is designed for direct mounting to machine spindle nose via a Cowl assembly dedicated to machine. Radial timing is achieved via a Location Pin and has full 360° rotation adjustability.

DESIGN SPECIFICATION

- Direct mounting to machine spindle or ram
- Drive taper 50 / 60 ISO / HSK100
- Speed ratio 1:1 with max. output speed of 2500 rpm
- Direction of rotation opposite to machine spindle
- Output spindle ISO 40 with manual tool clamping
- Weight approx. 40kg – 300mm configuration
45kg – 375mm configuration
50kg – 450mm configuration
- Max. Power 20Kw @ 2500rpm
- Max. Torque 129Nm

RAM400



STANDARD ANGLE HEAD MODEL: RAM500-50



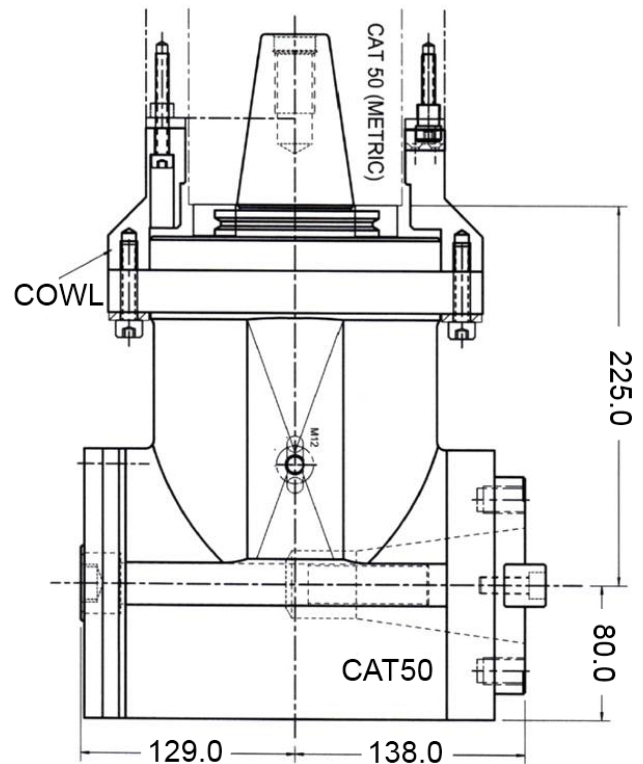
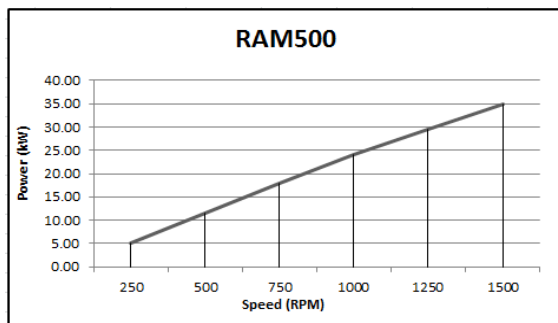
Application: A heavy duty unit with milling capability but with the flexibility of interchangeable tooling adaptors to facilitate the location of drills, taps, end mills, shell mills etc.

The Tooling is held in position with a manual drawbar and accurately located on an ISO 50 Taper (CAT/DIN/BT/ISO tooling can be used).

The RAM 500-50 is designed for direct mounting to machine spindle nose via a Cowl assembly dedicated to machine. Radial timing is achieved via a Location Pin and has full 360° rotation adjustability.

DESIGN SPECIFICATION

- Direct mounting to machine spindle or ram
- Drive taper 50 / 60 ISO / HSK100
- Speed ratio 1:1 with max. output speed of 1500 rpm
- Direction of rotation opposite to machine spindle
- Output spindle ISO 50 with manual tool clamping
- Weight approx. 45kg depending on machine interface
- Max. Power 35Kw @ 1500rpm
- Max. Torque—372Nm



STANDARD ANGLE HEAD MODEL: RAM500 – 50 - EX



Application: A heavy duty unit with milling capability but with the flexibility of interchangeable tooling adaptors to facilitate the location of drills, taps, end mills, shell mills etc. Available in 3 gauge length configurations: 300mm / 375mm & 450mm

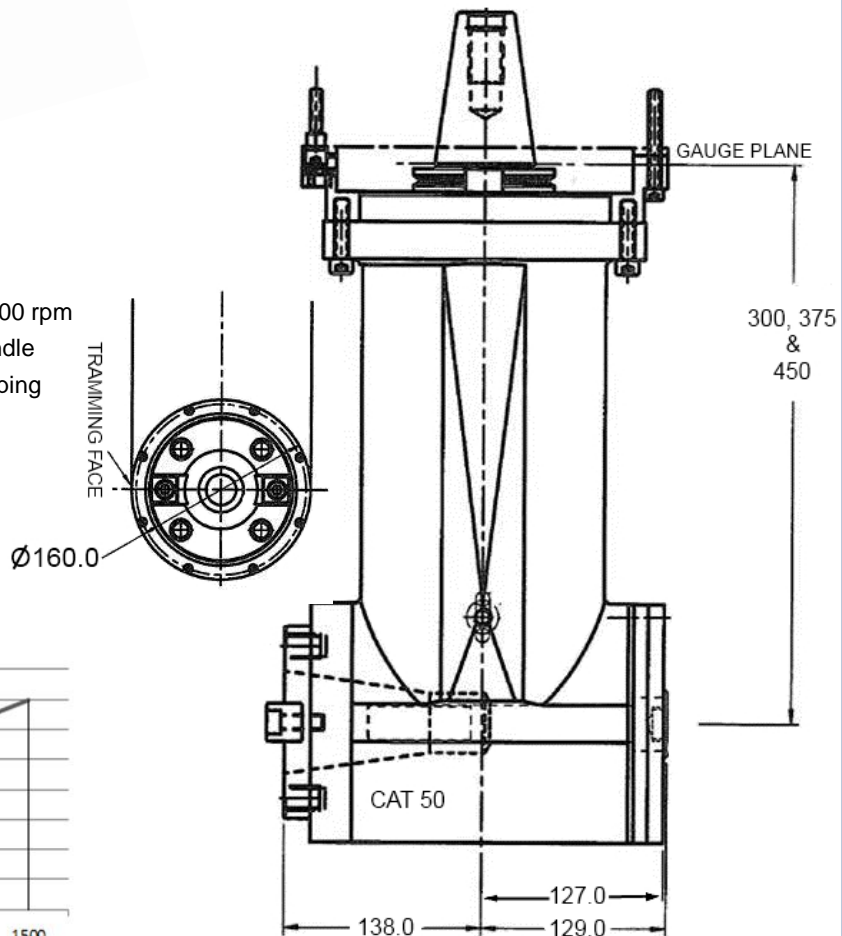
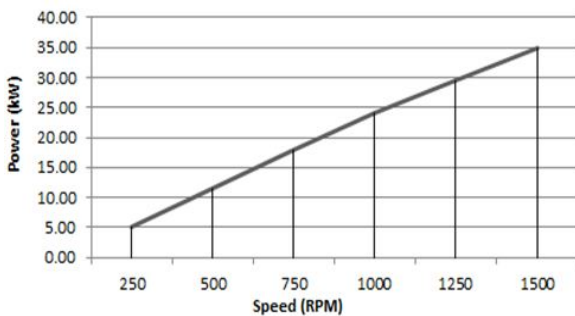
The Tooling is held in position with a manual drawbar and accurately located on an ISO 50 Taper.
(CAT/DIN/BT/ISO tooling can be used).

The RAM 500-50 is designed for direct mounting to machine spindle nose via a Cowl assembly dedicated to machine. Radial timing is achieved via a Location Pin and has full 360° rotation adjustability.

DESIGN SPECIFICATION

- Direct mounting to machine spindle or ram
- Drive taper 50 / 60 ISO / HSK100
- Speed ratio 1:1 with max. output speed of 1500 rpm
- Direction of rotation opposite to machine spindle
- Output spindle ISO 50 with manual tool clamping
- Weight approx. 50kg – 300mm configuration
55kg – 375mm configuration
60kg – 450mm configuration
- Max. Power 35Kw @ 1500rpm
- Max. Torque 372Nm

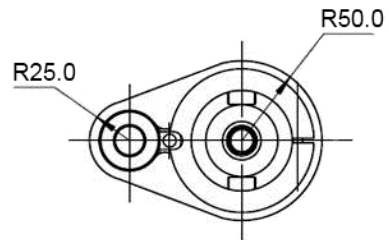
RAM500





DESIGN SPECIFICATION

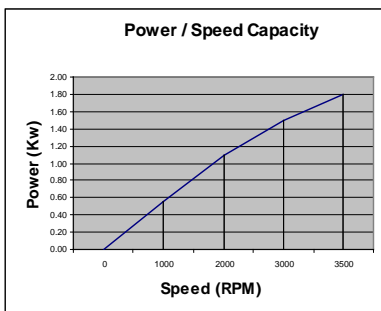
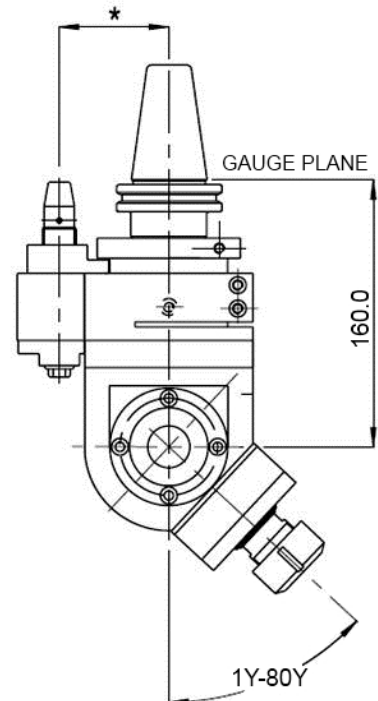
- Drive taper 40ISO (BT-CT-DIN), HSK63
(Larger sizes available on request.)
- Speed ratio 1:1
- Max. output speed of 3500rpm
- Direction of rotation opposite to machine spindle
- Output spindle ER16 / ER25 Collet chuck
- 10mm / 16mm Max. Drilling size
- M6 (1/4") / M12 (1/2") Max. Tapping size using Tension Collet
- Weight approx. 6.6kg / 7.5kg without cutting tools
- Power transmission – Std 1.55kW @ 3000rpm
- Auto Toolchange capability
- Fixed angles from 1° to 80°
- 360° manual radial positioning
- Maintenance free sealed unit



Application: A medium duty unit designed primarily for production applications where a specific angled feature has to be machined.

The FAH160 is available as standard with either ER16 or ER 25 Collet chuck spindles (Cap. 10mm or 16mm) and can be manufactured with any angle from 1° to 80°

Special Output Spindle configurations are available to suit customer requirements.





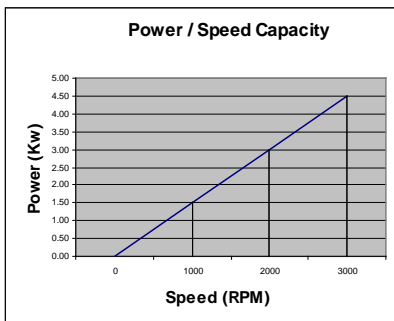
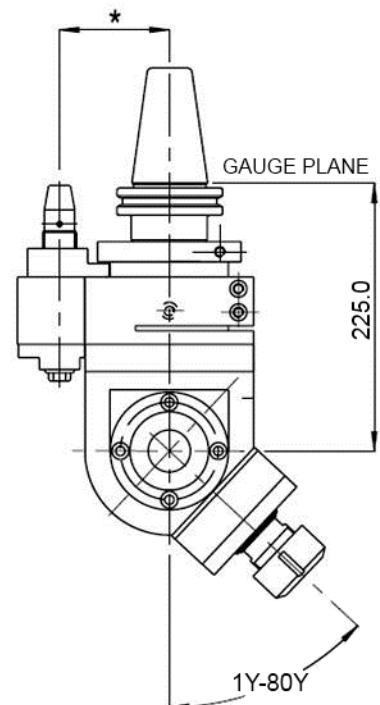
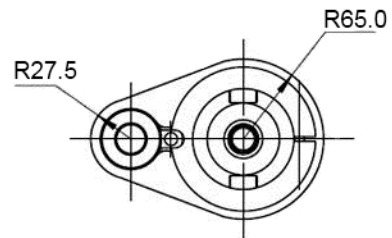
DESIGN SPECIFICATION

- Drive taper 40 / 50 ISO (BT-CT-DIN), HSK80/100
- Speed ratio 1:1
- Max. output speed of 3000rpm
- Direction of rotation opposite to machine spindle
- Output spindle ER25 Collet chuck
- 16mm Max. Drilling size
- M12 / 1/2" Max. Tapping size using Tension Collet
- Weight approx. 15.5kg without cutting tools
- Power transmission – Std kW @ 3000rpm
- Auto Toolchange capability
- Fixed angles from 1° to 80°
- 360° manual radial positioning
- Maintenance free sealed unit

Application: A Heavy duty unit designed primarily for production applications where a specific angled feature has to be machined.

The FAH225 is available as standard with an ER25 Collet chuck spindle (Cap. 16mm) and can be manufactured with any angle from 1° to 80°

Special Output Spindle configurations are available to suit customer requirements.



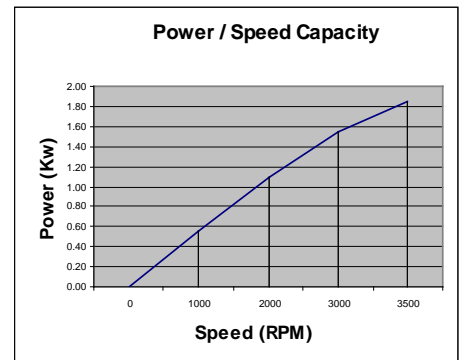
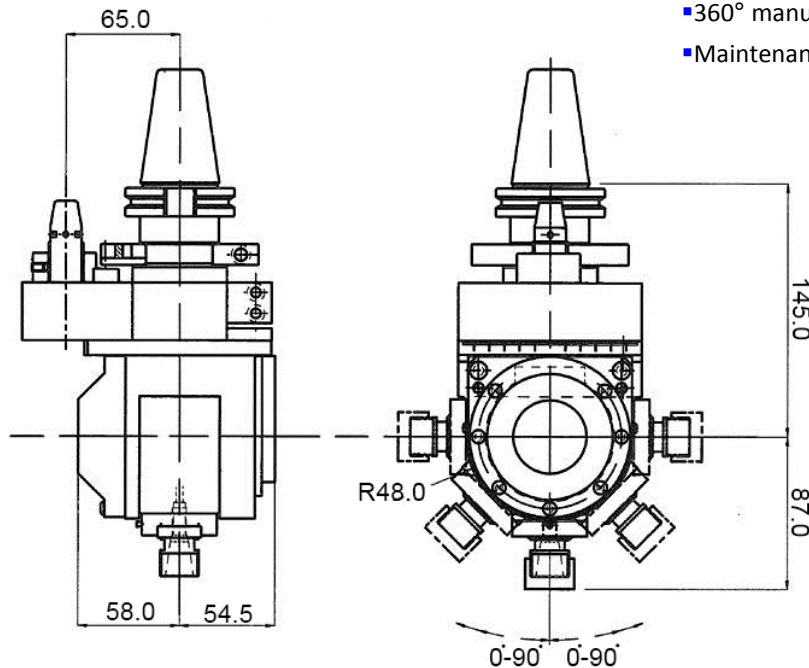


Application: A light duty unit providing the ability to machine at any angle from 0 to 90 degrees, offering the ultimate in versatility for small batch, tool making and one-off applications.

The UAH 145 is available as standard with an ER16 Collet chuck spindle (Cap. 10mm)

DESIGN SPECIFICATION

- Drive taper 40ISO (BT-CT-DIN), HSK63
(Larger sizes available on request.)
- Speed ratio 1:1
- Max. output speed of 3500rpm
- Direction of rotation same as machine spindle
- Output spindle ER16 Collet chuck
- 10mm Max. Drilling size
- Weight approx. 6kg without cutting tools
- Power transmission – Std 1.55kW @ 3000rpm
- Auto Toolchange capability
- +/- 0° to 90° continuous adjustment (Manual)
- 360° manual radial positioning
- Maintenance free sealed unit



UNIVERSAL ANGLE HEAD.

MODEL: UAH 180

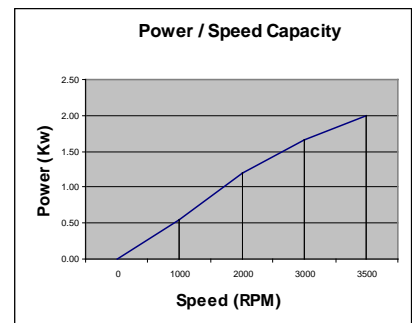
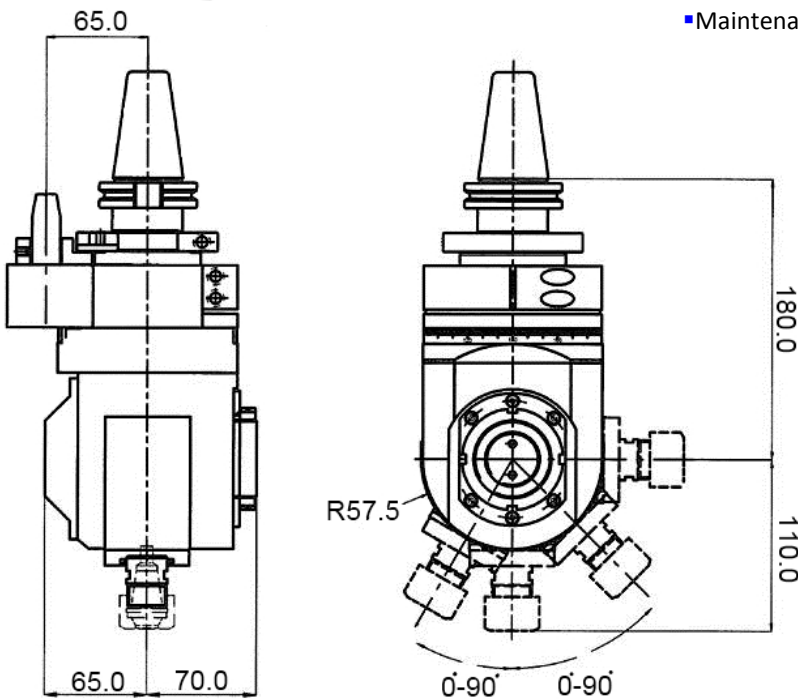


Application: A medium duty unit providing the ability to machine at any angle from 0 to 90 degrees, offering the ultimate in versatility for small batch, tool making and one-off applications.

The UAH180 is available as standard with an ER20 Collet chuck spindle (Cap. 13mm)

DESIGN SPECIFICATION

- Drive taper 40 / 50ISO (BT-CT-DIN), HSK63/80/100
- Speed ratio 1:1
- Max. output speed of 3500rpm
- Direction of rotation same as machine spindle
- Output spindle ER20 Collet chuck
- 13mm Max. Drilling size
- Weight approx. 8kg without cutting tools
- Power transmission – Std 1.7kW @ 3000rpm
- Auto Toolchange capability
- +/- 0° to 90° continuous adjustment (Manual)
- 360° manual radial positioning
- Maintenance free sealed unit





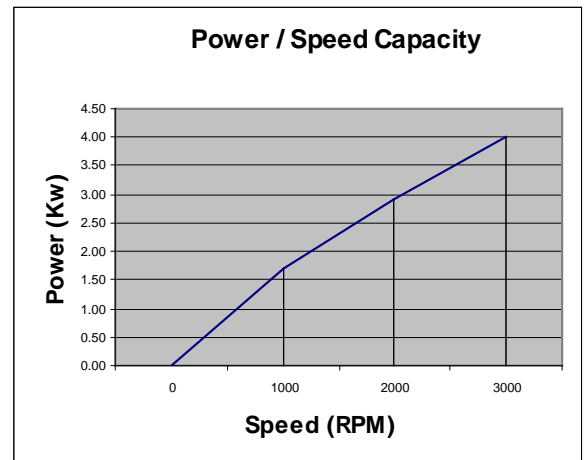
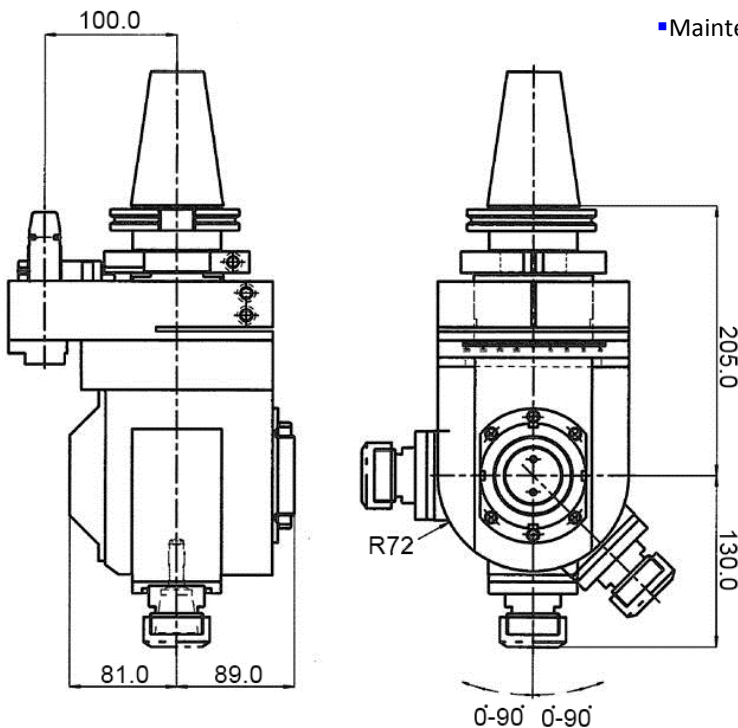
Application: A medium/heavy duty unit providing the ability to machine at any angle from 0 to 90 degrees, offering the ultimate in versatility for small batch, tool making and one-off applications.

NOTE. Designed for drilling and light milling operations only. Please keep within power capacity as graph.

The UAH205 is available as standard with an ER32 Collet chuck spindle (Cap. 20mm)

DESIGN SPECIFICATION

- Drive taper 50ISO (BT-CT-DIN), HSK 80/100
- Speed ratio 1:1
- Max. output speed of 3000rpm
- Direction of rotation same as machine spindle
- Output spindle ER32Collet chuck
- 20mm Max. Drilling size
- Weight approx. 20kg without cutting tools
- Power transmission – Std 2.85kW @ 2000rpm
- Auto Toolchange capability
- +/- 0° to 90° continuous adjustment (Manual)
- 360° manual radial positioning
- Maintenance free sealed unit





CENTRELINE

TOTAL TOOLING SOLUTIONS

UNIVERSAL ANGLE HEAD.

MODEL: UAH 250

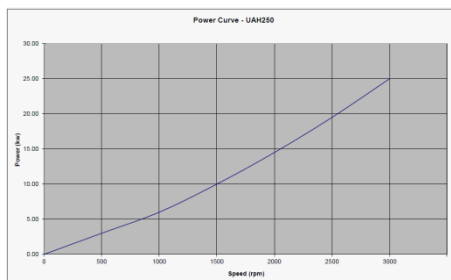
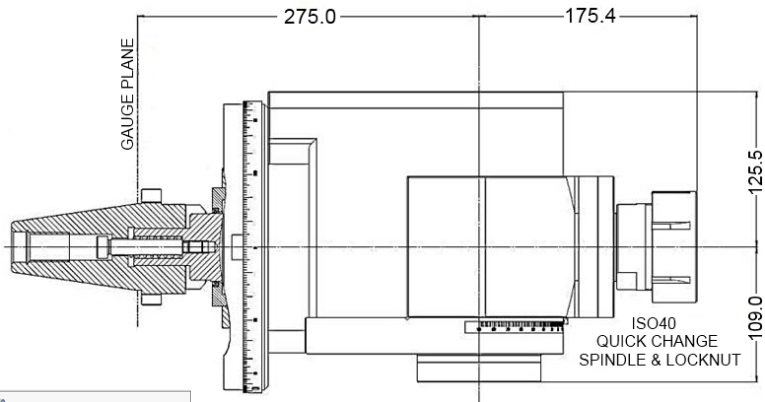
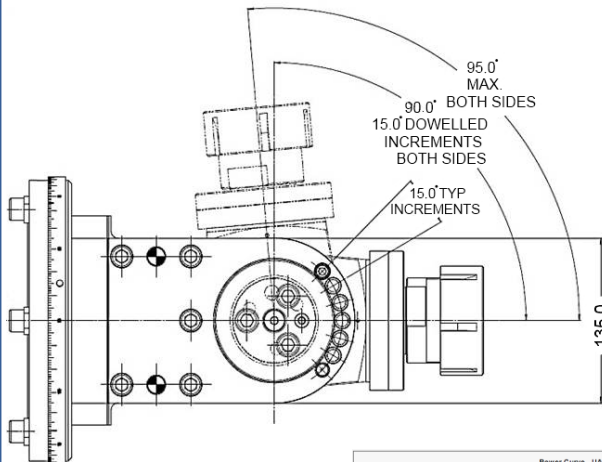


Application: A Heavy duty unit providing the ability to machine at any angle from 0 to 90 degrees, offering the ultimate in versatility for larger Bed Mills, Horizontal Borers or VTL's.

The UAH250 is available as standard with a variety of output options including 40ISO (Via QC Locknut), HSK or Capto

DESIGN SPECIFICATION

- Drive taper 50ISO (BT-CT-DIN), HSK 80/100
- Cowl Mounted for Ultimate Rigidity
- Speed ratio 1:1
- Max. output speed of 2500rpm
- Direction of rotation opposite to machine spindle
- Various Output options
- Weight approx. 65kg without cutting tools
- Manual Toolchange capability
- +/- 0° to 90° continuous adjustment (Manual)
- Mechanical Locking at 30,45 & 60 Degrees
- 360° manual radial positioning
- Maintenance free sealed unit



COVENTRY
ENGINEERING
GROUP

EXCLUSIVELY REPRESENTED IN NORTH AMERICA BY:

PERFORMANCE TOOLING SOLUTIONS INT'L

1-847-870-8837

WWW.PTSINTL.COM



CENTRELINE

TOTAL TOOLING SOLUTIONS

UNIVERSAL ANGLE HEAD.

MODEL: UAH 250-AL

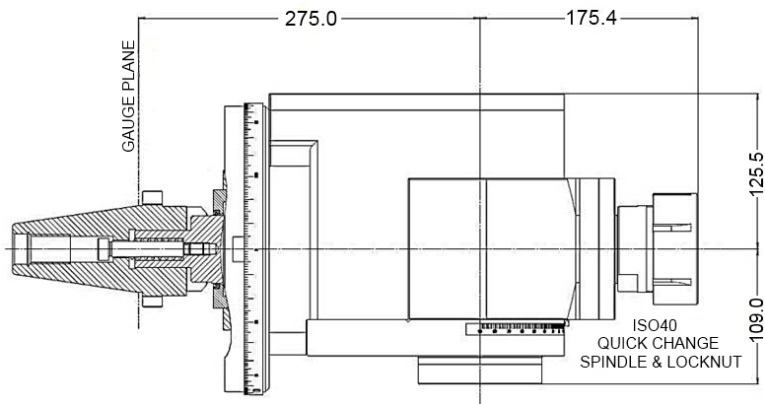
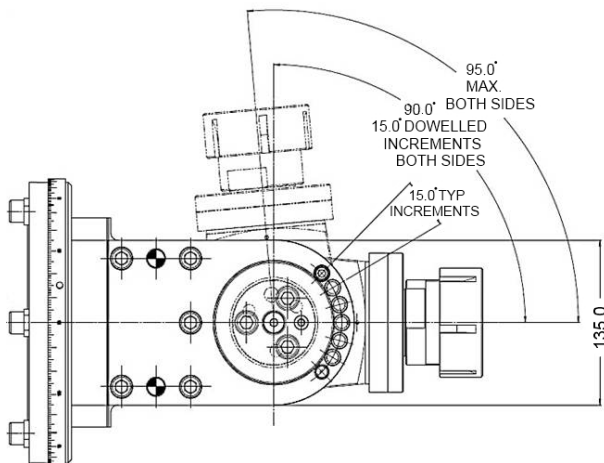


Application: A Heavy duty, Aluminium bodied unit providing the ability to machine at any angle from 0 to 90 degrees, offering the ultimate in versatility for larger Bed Mills, Horizontal Borers or VTL's.

The UAH250-AL is available as standard with a variety of output options including 40ISO (Via QC Locknut), HSK or Capto

DESIGN SPECIFICATION

- Drive taper 50ISO (BT-CT-DIN), HSK 80/100
- Cowl Mounted for Ultimate Rigidity
- Aluminium body
- Speed ratio 1:1
- Max. output speed of 2500rpm
- Max. Torque @ 2500rpm – 24Nm
- Max. Torque @ 100rpm – 42 Nm
- Direction of rotation opposite to machine spindle
- Various Output options
- Weight approx. 48kg without cutting tools
- Manual Toolchange capability
- +/- 0° to 90° continuous adjustment (Manual)
- Mechanical Locking at 30,45 & 60 Degrees
- 360° manual radial positioning
- Maintenance free sealed unit



COVENTRY
ENGINEERING
GROUP

EXCLUSIVELY REPRESENTED IN NORTH AMERICA BY:

PERFORMANCE TOOLING SOLUTIONS INT'L

1-847-870-8837

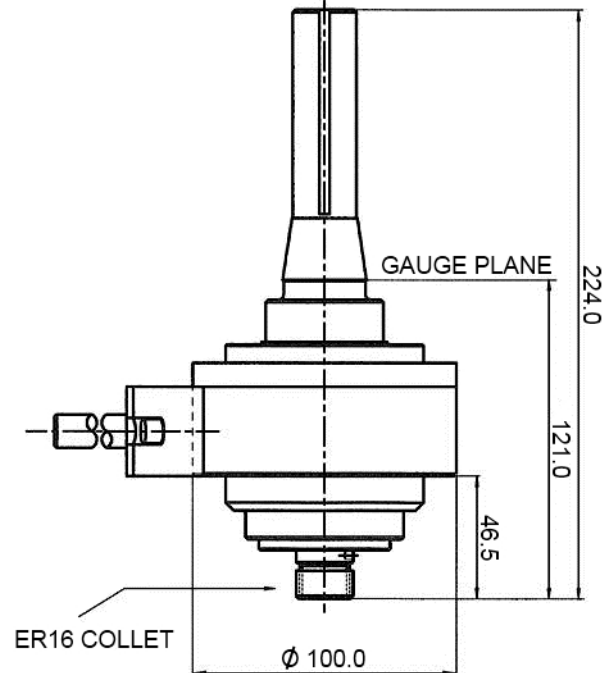
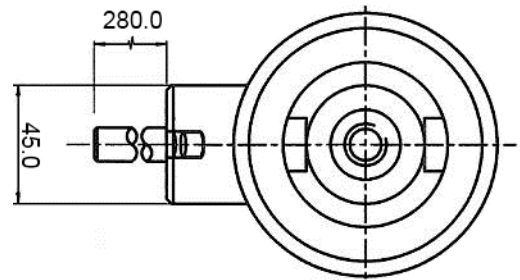
WWW.PTSINTL.COM

STANDARD SPEED INCREASER MODEL SPR 410 – R8

Application. The Model 410-R8 Speed Inserter, specifically designed for turret mills and older machine tools to increase spindle speeds to the levels required by modern tooling at an affordable price.

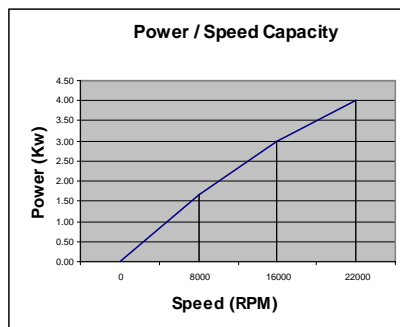
The speed inserter represents a small investment that brings big returns in higher productivity and improved surface finish, giving added capability to machines that would otherwise be unable to meet the requirements of modern machining techniques.

Supplied with an R8 taper and complete with a Torque Bar for manual tool change to prevent body rotation.



DESIGN SPECIFICATION

- Speed Ratio - 4:1
- ER16 Collet Chuck
- 10mm cutter capacity
- Speeds up to 22,000 rpm
- **Output Spindle same direction as machine spindle**
- **Approx. Weight 5.2kg without cutter.**
- **Power Transmission: 3kW @ 16000rpm**
- Maintenance free sealed unit

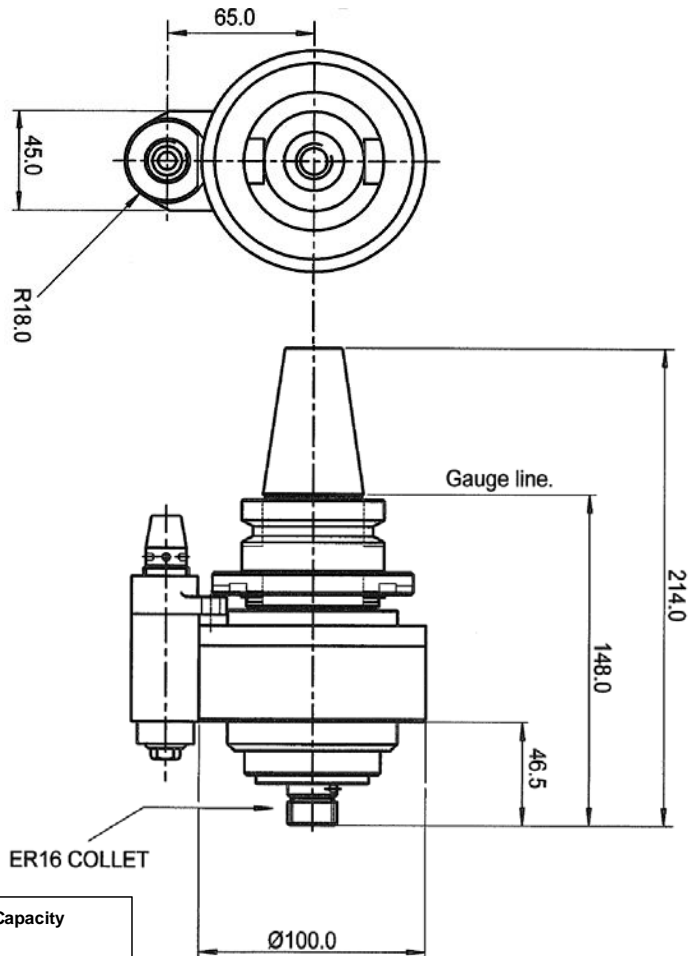


STANDARD SPEED INCREASER MODEL SPR 410

Application. The Model 410 Speed Inserter, specifically designed for Low Cost Vertical Machining Centres to increase spindle speeds to the levels usually associated with high speed machines.

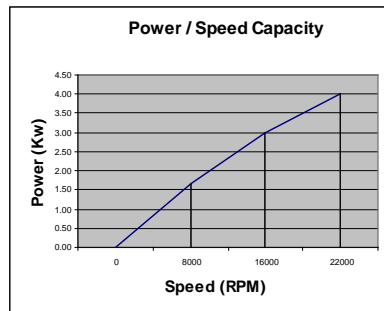
The speed inserter represents a small investment that brings big returns in higher productivity and improved surface finish.

Available with ISO30, ISO40, ISO50 tapers and other drives for both manual and automatic tool change.



DESIGN SPECIFICATION

- Speed Ratio - 4:1
- ER16 Collet Chuck
- 10mm cutter capacity
- Speeds up to 22,000 rpm
- **Output Spindle same direction as machine spindle**
- **Approx. Weight 5.2kg without cutter.**
- **Power Transmission: 3kW @ 16000rpm**
- Auto Toolchange capability
- Maintenance free sealed unit



STANDARD SPEED INCREASER MODEL SPR 610



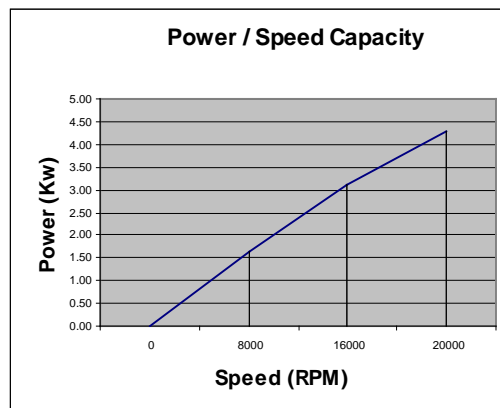
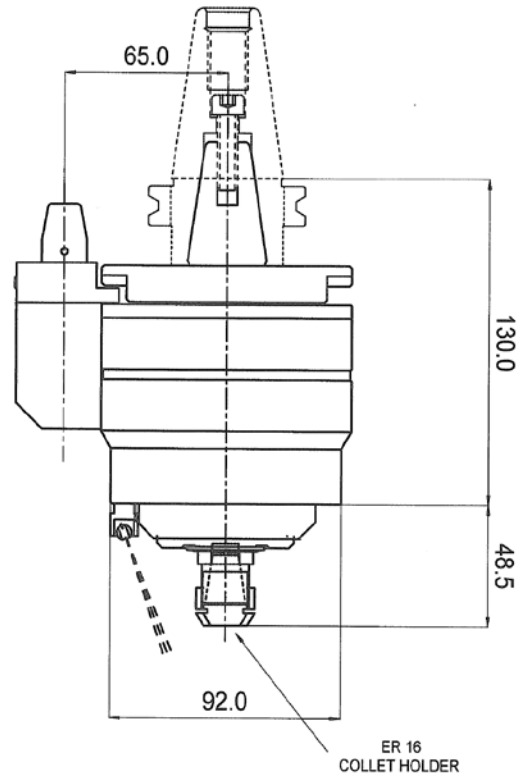
Application. The Model 610 Speed Inserter, designed to increase spindle speeds to the levels usually associated with high speed machines.

The speed inserter represents a small investment that brings big returns in higher productivity and improved surface finish.

Available with ISO30, ISO40, ISO50 tapers and other drives for both manual and automatic tool change.

DESIGN SPECIFICATION

- Speed Ratio - 6:1
- ER16 Collet Chuck
- 10mm cutter capacity
- Speeds up to 26,000 rpm
- **Output Spindle same direction as machine spindle**
- **Approx. Weight 5.2kg without cutter.**
- **Power Transmission: 3.1kW @ 16000rpm**
- Auto Toolchange capability
- Maintenance free sealed unit
- Various Drive Tapers available
– 40/50 BT-CAT-DIN & HSK



STANDARD SPEED INCREASER MODEL SPR 520



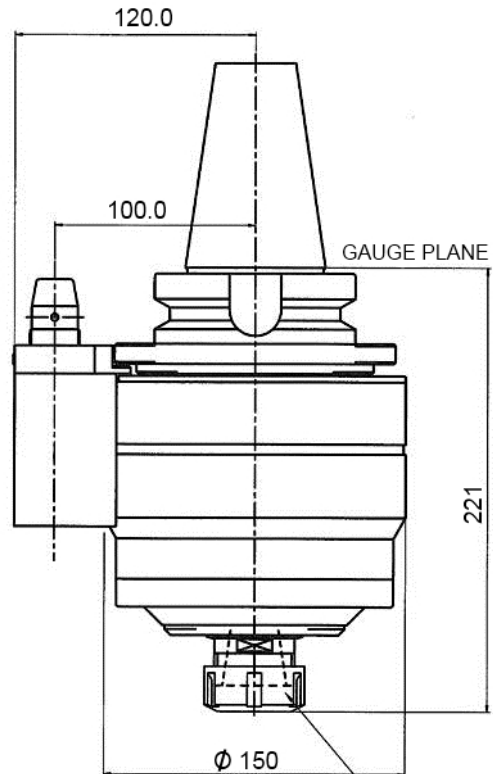
Application. The Model 520 Speed Inserter, specifically designed for larger Machines with 50ISO spindles which normally have lower spindle speeds, giving output speeds up to 15,000rpm.

The speed inserter represents a small investment that brings big returns in higher productivity and improved surface finish.

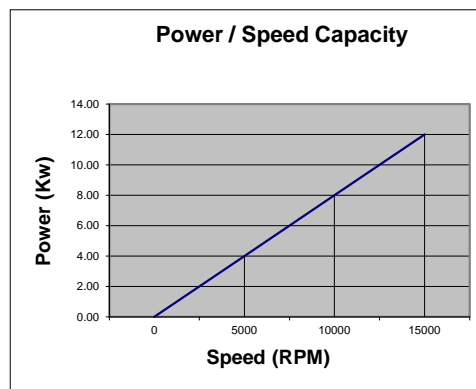
Available with ISO50 tapers (BT-DIN-CAT) or HSK 80/100 for both manual and automatic tool change.

DESIGN SPECIFICATION

- Speed Ratio - 5:1
- ER32 Collet Chuck
- 20mm cutter capacity
- Speeds up to 15,000 rpm
- **Output Spindle same direction as machine spindle**
- **Approx. Weight 16kg without cutter.**
- **Power Transmission: 8kW @ 8000rpm**
- Auto Toolchange capability
- Maintenance free sealed unit
- Various Drive Tapers available
– 50 BT-CAT-DIN & HSK



ER32
COLLET HOLDER



Torque/Stop/Anti-Rotation Blocks

Application: For CNC Automatic Tool Change Machines.

A Torque Block is required when using an Angle Head on a CNC machine, when the tool is to be Auto-Tool changed. CTL Centreline prefers a hardened location with a tapered slot for best results.



Cowl Mounting

Application: For both CNC and Manual Machines where either the Angle Head is overweight for the tool changer, but still within the machine's power capability, or where added rigidity is required.

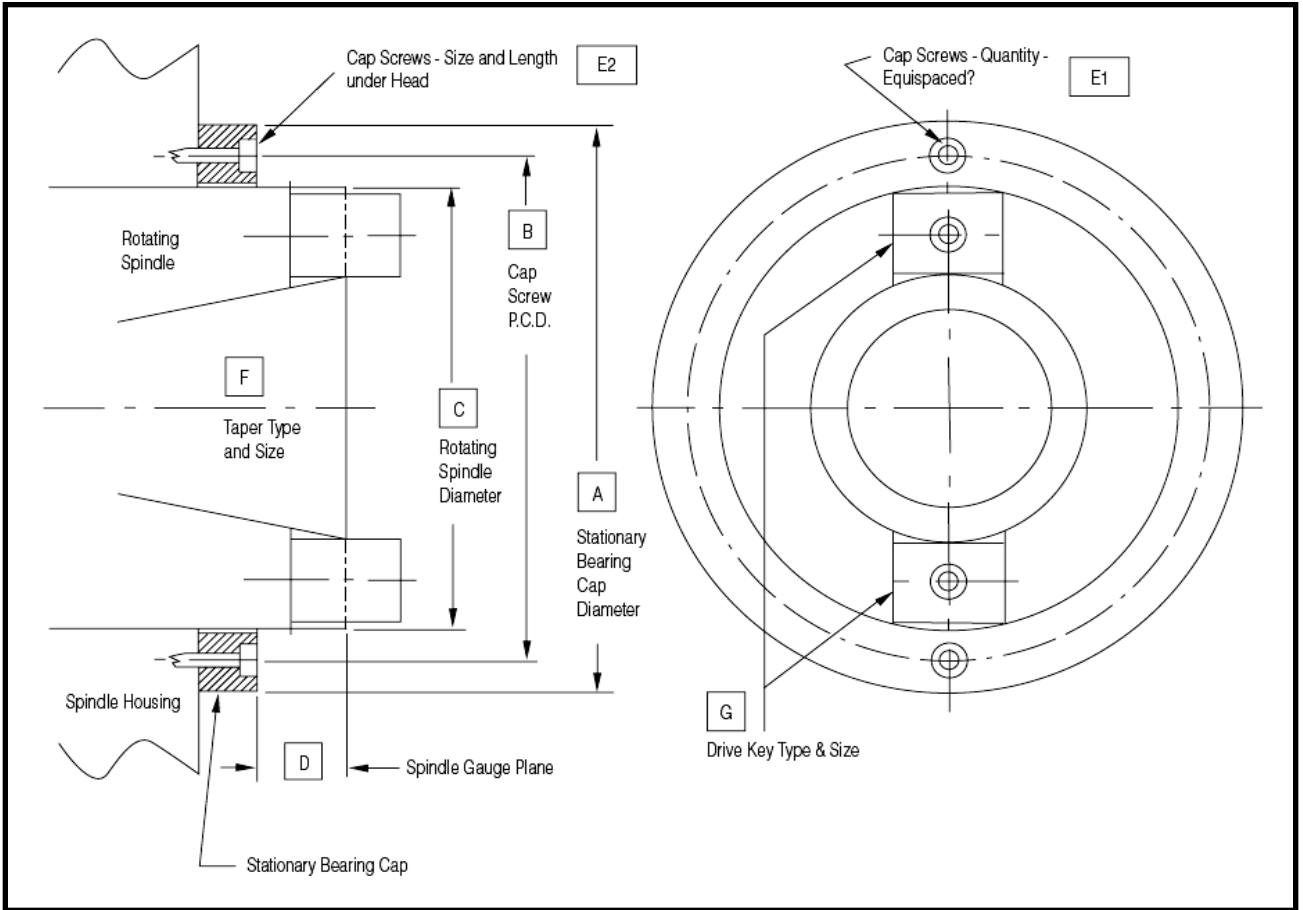
Each Cowl Assembly is custom built to exactly match the Spindle nose of the chosen machine tool.

It is also possible to design a cowl that will sit in a conveniently sited cradle for automatic pick-up by the machine



Which ever option is chosen for use with your Angle Head, full Spindle Nose details must be obtained. To help us in this, please complete the datasheet found on the reverse of this datasheet.

Machine Spindle Nose Details



Machine:	Make	
	Model	
Bearing Cap Diameter (Stationary)	A	
Cap Screw Pitch Circle Diameter	B	
Spindle Diameter (Rotating)	C	
Spindle Gauge Plane to Bearing Cap Distance	D	
Cap Screws - Quantity - Equispaced?	E1	
Cap Screws - Size & Length under head	E2	
Taper Type and Size (BT / ANSI / DIN / HSK)	F	
Drive Key Type and Size	G	
Any existing Tapped Mounting Holes Available?		If Yes, please provide sketch

COVENTRY ENGINEERING GROUP

COVENTRY TOOLHOLDERS

**COVENTRY
TOOLHOLDERS** PRECISION TOOLHOLDING SYSTEMS.
A COMPLETE PRODUCT RANGE FROM
A SINGLE SOURCE



HSK
Sizes from HSK32 to HSK100
Forms A to F
Standards and Specials



STEEP TAPER
M45403 BT, DIN49871 DV
CV - CAT ANSI - ISO
Metric and Imperial available



STRAIGHT SHANK
A complete service: Technical
Advice - Design - Manufacture
- Test. All on one site.



SPECIAL TOOLHOLDERS
A complete service: Technical
Advice - Design - Manufacture
- Test. All on one site.



STANDARD HYDRAULIC
Full range of bore sizes on a
range of tapers.
Hydraulic system uses patented
gel technology



SPECIAL HYDRAULIC
A wide variety of designed to
suit both toolholding and
workholding applications



HEAT SHRINK
Full range of Toolholders, Heat
Shrink Units and Accessories -
Special and extended length
toolholders available.



OTHER TOOLHOLDERS
Rotary Coolant Adapters
- achieve through coolant
supply. Pull Studs - full range
available. Spanners / Wipers



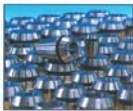
VDI STATIC TOOLING
Range of static VDI tooling
Range covers VDI 16mm to
VDI 80 shank sizes.



VDI DRIVEN TOOLING
Designed to suit a range of
turret configurations.
Standard In-Line and Angle
types along with special designs.



EASY CHANGE
Quick Change toolholding
system for Manual Machines.
Achieve tool change in 3
seconds



COLLETS
ER - Standard and High
Precision, also rigid and tension
tapping collets.
DA - Standard range and Mini
TG - Full range of collets.



TURN - MILL TOOLING
A range of standard
toolholders designed for
integrated turn / milling
machines



TURN - MILL TOOLING
A range of custom designs for
high precision and heavy duty
cutting requirements.



VERTICAL TURNING - SPECIAL
Specially designed tools for
custom applications. Tools
shown have Capto® adapters
for quick change tooling



**VERTICAL TURNING -
STANDARD**
Square block and boring bar
type holders for large capacity
vertical turning machines.

CENTRELINE

CENTRELINE DRIVEN TOOLHOLDING SYSTEMS.
A COMPLETE PRODUCT RANGE FROM
A SINGLE SOURCE

STANDARD APPLICATIONS



RIGHT ANGLE HEADS
To suit any type of machine



FIXED ANGLE HEADS
The rigid answer to
complex angles



UNIVERSAL ANGLE HEADS
Ultimate flexibility



SPEED INCREASERS
Allows the ultimate feedrate



ROTARY COOLANT ADAPTERS
For all types of machine tool



ATC MULTIHEADS
For drilling, tapping, reaming etc.



'CENTINEL' ADJUSTABLE
Multi-drilling &
tapping heads



'SET BACK' HEAD
Limited space applications

SPECIAL APPLICATIONS



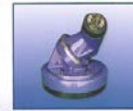
VERTICAL BORING HEADS
A hydraulically operated A.T.C.
900 unit to accept
Cormant Capto® Tooling



SPECIAL DRIVEN TOOLS
For all types of turning centres



**SPECIAL & EXTENDED
APPLICATIONS**
To suit any type of
prismatic machine



UNIVERSAL ANGLE HEADS
Universal heads can be
designed to suit all
types of machine



TITAN STEEL WHEEL
3 off 120 angle drives of 90°
to the machine axis



**EXTENDED REACH FOR
SMALL BORES**
A solution for small diameter
deep milling applications



RESPONSE APPLICATIONS
For confined
machining conditions



STANDARD UNITS
Special interfaces to
customers machine tools

COVENTRY ENGINEERING SERVICES

Equipped to offer "turnkey" manufacturing solutions with 2D & 3D design and a full range of specialised precision machining services.



**COVENTRY
ENGINEERING
GROUP**

EXCLUSIVELY REPRESENTED IN NORTH AMERICA BY:

PERFORMANCE TOOLING SOLUTIONS INT'L

1-847-870-8837

WWW.PTSINTL.COM



Phone 1-847-870-8837

Fax 1-847-590-9615

E-Mail TWIRKUS@PTSINTL.COM

Web WWW.PTSINTL.COM

COVENTRY
ENGINEERING SERVICES

COVENTRY
TOOLHOLDERS



COVENTRY
ENGINEERING
GROUP

EXCLUSIVELY REPRESENTED IN NORTH AMERICA BY:
PERFORMANCE TOOLING SOLUTIONS INT'L

1-847-870-8837

WWW.PTSINTL.COM