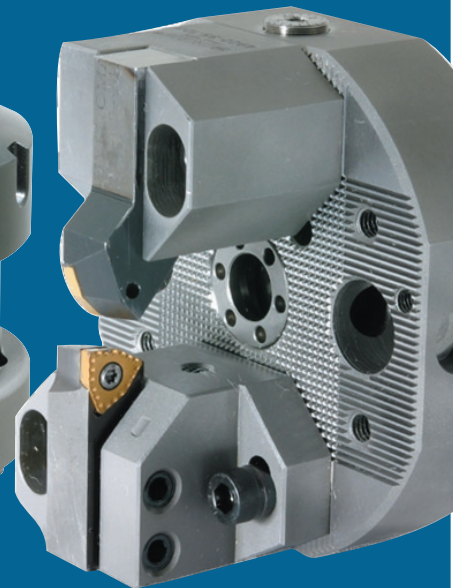
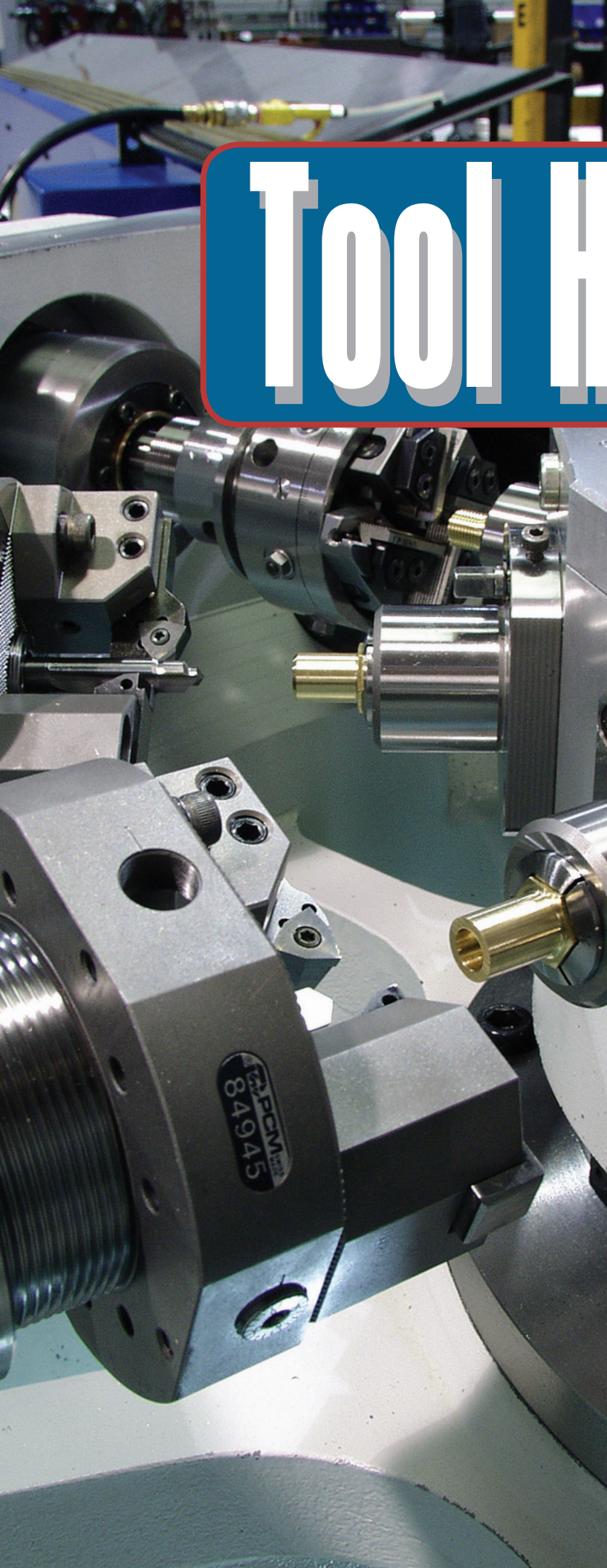
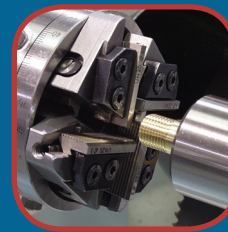
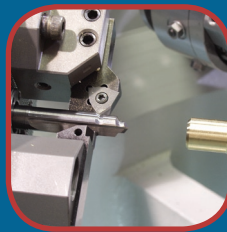


# Tool Heads

12-03

**AND UNIT  
ACCESSORIES**



 **Hydromat® Inc.**  
*precision transfer machines*

# TABLE OF CONTENTS

## TABLE OF CONTENTS

### SECTION 1: TOOLSPINDLE APPLICATION TREES

TOOLSPINDLE 26/80 QC  
 TOOLSPINDLE 26/80 HSK  
 TOOLSPINDLE 36/60-100 QC  
 TOOLSPINDLE 36/100 HSK  
 TOOLSPINDLE 46/120 QC  
 TOOLSPINDLE 46/120 HSK  
 RECESS AND RECESS TURN 26/80  
 RECESS AND RECESS TURN 36/60-100  
 RECESS 46/120  
 THREADING 20/50 QC  
 THREADING 35/60 QC-QCLS  
 THREADING 35/60 HSK - QCLS  
 THREADING 35/120 QC RA-QCLS  
 THREADING 35/120 HSK RA-QCLS  
 THREADING 45/60 QC-QCLS  
 TOOL HEAD DESIGNATION GUIDE  
 UNIT DESIGNATION GUIDE  
 CONTROL VALVE DESIGNATION GUIDE  
 FLANGE DESIGNATION GUIDE  
 FLANGE LIST

### SECTION 2: DRILL HEADS

<u>PART DESCRIPTION</u>	<u>PART #</u>	<u>PRICE</u>
DRILL HEAD QC 82/25 .....	82124.....	\$618.00
DRILL HEAD QC 83/32 .....	83125.....	\$891.00
DRILL HEAD QC 84/40 .....	84126.....	\$1,069.00
DRILL HEAD QC 84/46 ER50.....	84127-00-1 .....	\$1,069.00
DRILL HEAD QC 84/20 .....	84128.....	\$1,806.00
DRILL HEAD QC 83/16 .....	83212.....	\$1,260.00
DRILL HEAD HSK C32/25 .....	H92124.....	\$666.00
DRILL HEAD HSK C32/25 .....	HB92124.....	\$666.00
DRILL HEAD HSK C40/32 .....	H93125.....	\$713.00
DRILL HEAD HSK C40/32 .....	HB93125.....	\$713.00
DRILL HEAD HSK C40/40 .....	H93126.....	\$737.00
DRILL HEAD HSK C40/40 .....	HB93126.....	\$737.00
DRILL HEAD HSK C50/40 .....	H94126.....	\$737.00
DRILL HEAD HSK C50/40 .....	HB94126.....	\$737.00
DRILL HEAD HSK C50/50 .....	H94127.....	\$1,046.00
DRILL HEAD HSK C50/50 .....	HB94127.....	\$1,046.00

### SECTION 3: DRILL HOLDERS

<b>PART DESCRIPTION</b>	<b>PART #</b>	<b>PRICE</b>
DRILL HOLDER QC 82/20 OD34 .....	82223.....	\$844.00
DRILL HOLDER QC 83/25 OD40 .....	83224.....	\$1,081.00
DRILL HOLDER QC 84/25 OD40 .....	84224.....	\$1,707.00
DRILL HOLDER QC 84/32 OD50 .....	84225.....	\$1,165.00
DRILL HOLDER HSK C32/20 OD34.....	H92223.....	\$832.00
DRILL HOLDER HSK C32/20 OD34.....	HB92223.....	\$832.00
DRILL HOLDER HSK C32/20 OD40.....	HB92224.....	UPON REQ.
DRILL HOLDER HSK C40/25 OD40.....	H93224.....	\$975.00
DRILL HOLDER HSK C40/25 OD40.....	HB93224.....	\$975.00
DRILL HOLDER HSK C50/32 OD50.....	H94225.....	\$1,177.00
DRILL HOLDER HSK C50/32 OD50.....	HB94225.....	\$1,177.00

### SECTION 4: CHAMFER HEADS

<b>PART DESCRIPTION</b>	<b>PART #</b>	<b>PRICE</b>
CHAMFER HEAD 182/ ¼ ID34.....	5.37.005.....	\$499.00
CHAMFER HEAD 325/ 3/8 ID40.....	5.37.004.....	\$666.00
CHAMFER HEAD 335/ ½ ID40.....	5.37.003.....	\$809.00
CHAMFER HEAD 600/ ½ ID50.....	6.37.002.....	\$915.00

### SECTION 5: CHAMFER HEADS, ADJUSTABLE

<b>PART DESCRIPTION</b>	<b>PART #</b>	<b>PRICE</b>
CHAMFER HEAD ADJ. 350/ ½ ID40 35 .....	O.060.0483-35 .....	\$2,521.00
CHAMFER HEAD ADJ. 375/ ½ ID40 50 .....	O.060.0483-50 .....	\$2,641.00
CHAMFER HEAD ADJ. 650/ ½ ID50 35 .....	O.060.0486-35 .....	\$2,588.00
CHAMFER HEAD ADJ. 675/ ½ ID50 50 .....	O.060.0486-50 .....	\$2,676.00

## SECTION 6: TURNING HEADS

<b>PART DESCRIPTION</b>	<b>PART #</b>	<b>PRICE</b>
TURNING HEAD QC 82-63/8 .....	82933-952 .....	\$2,507.00
TURNING HEAD QC 83-78/16 .....	83944-952 .....	\$3,185.00
TURNING HEAD QC 83-103/16 .....	83945-127 .....	\$3,185.00
TURNING HEAD QC 84-103/16 .....	84945-127 .....	\$3,326.00
TURNING HEAD QC 84-128/20 .....	84946-127 .....	\$3,326.00
TURNING HEAD HSK C32-78 .....	H92924-952 .....	\$4,514.00
TURNING HEAD HSK C32-78 .....	HB92924-952 .....	\$4,514.00
TURNING HEAD HSK C40-103/16 .....	H93925-127 .....	\$3,683.00
TURNING HEAD HSK C40-103/16 .....	HB93925-127 .....	\$3,683.00
TURNING HEAD HSK C40-128/20 .....	HB93926-127 .....	\$4,304.00
TURNING HEAD HSK C40-103/16 .....	H93945-127 .....	\$4,325.00
TURNING HEAD HSK C40-103/16 .....	HB93945-127 .....	\$5,181.00
TURNING HEAD HSK C40-128/20 .....	HB93946-127 .....	\$5,502.00
TURNING HEAD HSK C40-128/32 .....	HB93948-127 .....	UPON REQ.
TURNING HEAD HSK C50-128/20 .....	H94926-127 .....	\$4,039.00
TURNING HEAD HSK C50-128/20 .....	HB94926-127 .....	\$4,039.00
TURNING HEAD HSK C50-128/20 .....	H94946-127 .....	\$4,420.00
TURNING HEAD HSK C50-128/20 .....	HB94946-127 .....	\$4,420.00

## SECTION 7: MILLING HEADS

<b>PART DESCRIPTION</b>	<b>PART #</b>	<b>PRICE</b>
MILLING HEAD 26-2/4 FQ .....	5.19.035-2 .....	\$7,640.00
MILLING HEAD 26-2/4 FQ .....	5.19.035-4 .....	\$7,640.00
MILLING HEAD 26-1/20 FQ .....	5.19.036-1 .....	\$8,632.00
MILLING HEAD 26-1/4 FQ .....	5.19.036-2 .....	\$8,632.00
MILLING HEAD 26-1.4/5 FQ .....	5.19.038-2 .....	\$7,640.00
MILLING HEAD 26-1.2/4 FQ .....	5.19.078-2 .....	\$5,088.00
MILLING HEAD 26-2/6 FQ .....	5.19.047-2 .....	\$11,251.00
MILLING HEAD 36-1.5/5 FQ-T .....	6.19.004-2 .....	\$5,276.00
MILLING HEAD 36-1.5/25 FQ-T .....	6.19.004-4 .....	\$8,140.00
MILLING HEAD 36-1.3/6 FQ .....	6.19.010-2 .....	\$6,445.00
MILLING HEAD 36-1/5.5 FQ .....	6.19.011-2 .....	\$6,425.00

## SECTION 8: CROSS DRILL HEAD ASSY.

<b>PART DESCRIPTION</b>	<b>PART #</b>	<b>PRICE</b>
CROSS DRILLING HEAD 261/11 .....		UPON REQ.
CROSS DRILLING HEAD 262/11 .....		UPON REQ.
CROSS DRILLING HEAD 263/11 .....		UPON REQ.
CROSS DRILLING HEAD 264/11 .....		UPON REQ.
CROSS DRILLING HEAD 261-20/QC 83/16 .....	5.20.0102-1 .....	\$12,203.00
CROSS DRILLING HEAD 262-20/QC 83/16 .....	5.20.0102-2 .....	\$18,874.00
CROSS DRILLING HEAD 361-20/QC 83/16 .....	5.20.058-1 .....	\$13,299.00
CROSS DRILLING HEAD 362-20/QC 83/16 .....	5.20.057-2 .....	\$17,013.00

## SECTION 9: CROSS DRILLING HEADS

<u>PART DESCRIPTION</u>	<u>PART #</u>	<u>PRICE</u>
CROSS DRILLING HEAD 20-10/11 .....	5.20.072-7 .....	\$5,006.00
CROSS DRILLING HEAD 20-20/11 .....	5.20.069-3 .....	\$8,225.00
CROSS DRILLING HEAD 20-10/11 EH .....	5.20.068-2 .....	\$6,723.00
CROSS DRILLING HEAD 20-20/11 EH .....	5.20.073-7 .....	\$8,586.00
CROSS DRILLING HEAD 30-20/16 .....	5.20.070.....	\$7,060.00
CROSS DRILLING HEAD 30-20/16 EH .....	5.20.075.....	\$9,863.00

## SECTION 10: BLANK HEADS

<u>PART DESCRIPTION</u>	<u>PART #</u>	<u>PRICE</u>
BLANK HEAD QC 82-70.....	82701.....	\$618.00
BLANK HEAD QC 82/40.....	82702.....	\$360.00
BLANK HEAD QC 83-100.....	83701.....	\$690.00
BLANK HEAD QC 83-50.....	83702.....	\$542.00
BLANK HEAD QC 84-120.....	84701.....	\$772.00
BLANK HEAD QC 84-64.....	84702.....	\$644.00
BLANK HEAD HSK C-32.....	HC032HF071080.....	\$1,093.00
BLANK HEAD HSK C-32.....	HBC032HF071080 .....	UPON REQ.
BLANK HEAD HSK C-40.....	HC040HF081100.....	\$1,129.00
BLANK HEAD HSK C-40.....	HBC040HF081100 .....	\$1,129.00
BLANK HEAD HSK C-40.....	HC040HF121100.....	\$1,153.00
BLANK HEAD HSK C-40.....	HBC040HF121100 .....	\$1,153.00
BLANK HEAD HSK C-50.....	HC050HF101100.....	\$1,104.00
BLANK HEAD HSK C-50.....	HBC050HF101100 .....	\$1,104.00
BLANK HEAD HSK C-50.....	HC050HF141100.....	\$1,147.00
BLANK HEAD HSK C-50.....	HBC050HF141100 .....	\$1,147.00

## SECTION 11: MISC. ITEMS

<u>PART DESCRIPTION</u>	<u>PART #</u>	<u>PRICE</u>
THREADING UNIT 20/50 LEAD SCREW .....	5.21.017mm 5.21.018in. ..	\$428.00
THREADING UNIT 30/60, 45/60 & 80 LEAD SCREW .....	5.21.015mm 5.21.016in. ..	\$809.00
THREADING UNIT 35/120 & 45/120 LEAD SCREW .....	5.21.019mm 5.21.020in. ..	\$809.00
PCM ADAPTER – VE30/60 QC to EIE 36/100 .....	O.060.1106.....	\$1,213.00

## SECTION 12: BALANCING RINGS

### BALANCING RINGS (2 PER SET) – DRILL HEAD

DRILL HEAD		RING			BALANCING	
PART #	RING TYPE	PART #	ID	OD	CAPAC. - (gmm)	PRICE
HB92124	FWR 325	7490.32500	32.5	40.5	56	\$UPON REQ.
HB93125	FWR 405	7490.40500	40.5	48.5	80	\$117.00
HB93126	FWR 505	7490.50500	50.5	60.5	170	\$121.00
HB94126	FWR 505	7490.50500	50.5	60.5	170	\$121.00
HB94127	FWR 700	8020.12200	70	80	474	\$233.00

### BALANCING RINGS (2 PER SET) – DRILL HOLDER

DRILL HOLDER		RING			BALANCING	
PART #	RING TYPE	PART #	ID	OD	CAPAC. - (gmm)	PRICE
HB92223	FWR 505	7490.50500	50.5	60.5	170	\$121.00
HB92224	FWR 505	7490.50500	50.5	60.5	170	\$121.00
HB93224	FWR 700	8020.12200	70	80	474	\$233.00
HB94225	FWR 700	8020.12200	70	80	474	\$233.00

### BALANCING RINGS (2 PER SET) – TURNING HEAD

TURNING HEAD		RING			BALANCING	
PART #	RING TYPE	PART #	ID	OD	CAPAC. - (gmm)	PRICE
HB92924-952	FWR 700	8020.12200	70	80	474	\$233.00
HB93925-127	FWR 950	8020.12300	95	105	816	\$263.00
HB93945-127	FWR 950	8020.12300	95	105	816	\$263.00
HB93926-127	FWR 1220	8020.12400	122	130	1,250	\$279.00
HB93946-127	FWR 1220	8020.12400	122	130	1,250	\$279.00
HB94926-127	FWR 1220	8020.12400	122	130	1,250	\$279.00
HB94946-127	FWR 1220	8020.12400	122	130	1,250	\$279.00

### BALANCING RINGS (2 PER SET) – BLANK HEAD

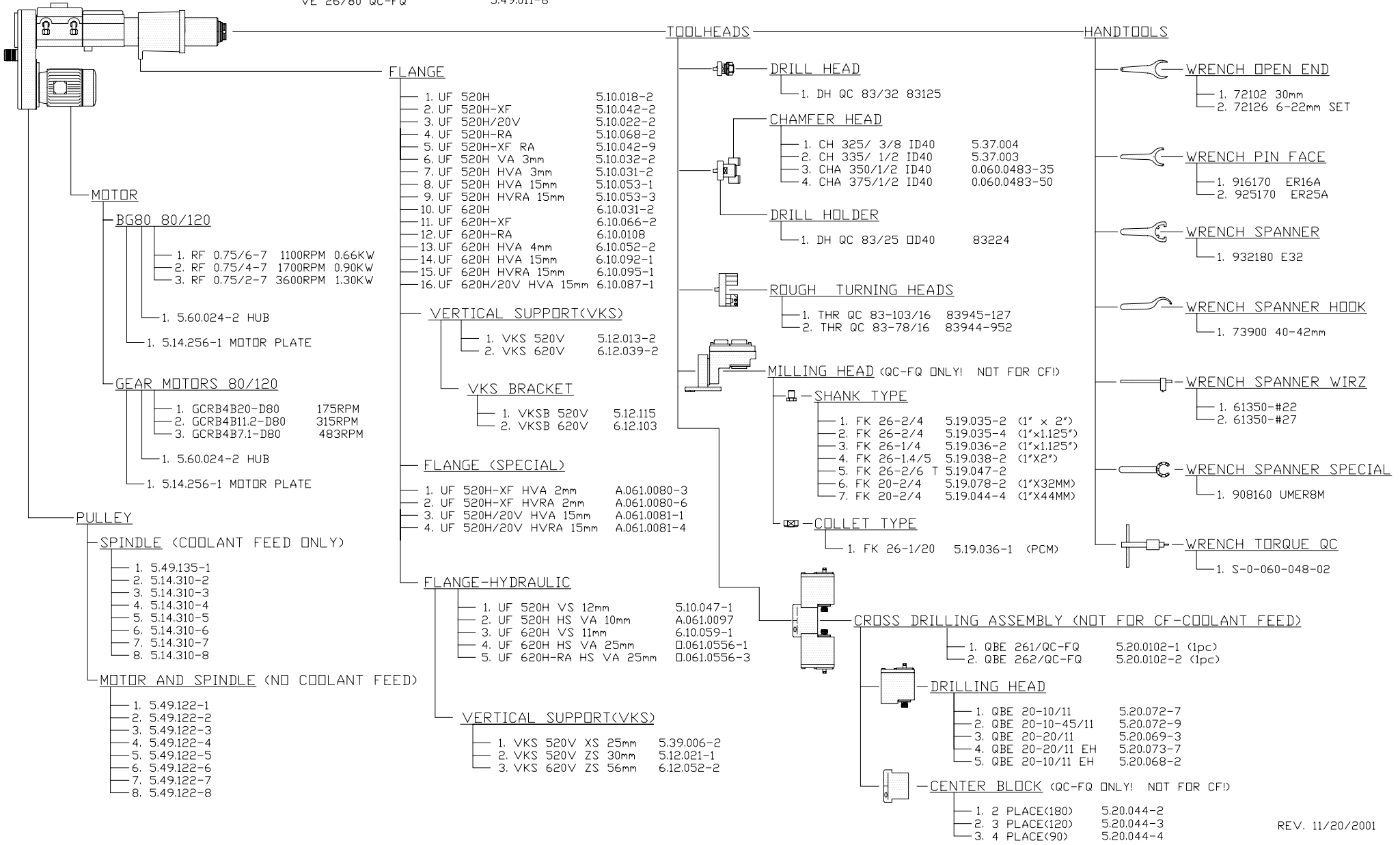
BLANK HEAD		RING			BALANCING	
PART #	RING TYPE	PART #	ID	OD	CAPAC. - (gmm)	PRICE
HBC32HF071080	FWR 505	7490.50500	50.5	60.5	170	\$121.00
HBC40HF081100	FWR 700	8020.12200	70	80	474	\$233.00
HBC50HF101100	FWR 950	8020.12300	95	105	816	\$263.00
HBC40HF121100	FWR 950	8020.12300	95	105	816	\$263.00
HBC50HF141100	FWR 1220	8020.12400	122	130	1,250	\$279.00

# **SECTION 1**

## **TOOLSPINDLE APPLICATION TREES**

# TOOLSPINDLE UNIT VE 26/80 QC APPLICATION TREE

VE 26/80 QC	5.49.001-2	VE 26/80 QC-SERVO	5.49.007-2	VE 26/80 QC	5.60.007-4	VE 26/80 QC-SERVO	5.60.010-4
VE 26/80 QC-CF	5.49.001-4	VE 26/80 QC	5.49.008-2	VE 26/80 QC-CF	5.60.008-4	VE 26/80 QC-CF-SERVO	5.60.011-4
VE 26/80 QC-FQ	5.49.003-2	VE 26/80 QC-CF	5.49.008-4	VE 26/80 QC-FQ	5.60.009-4	VE 26/80 QC-FQ-SERVO	5.60.005-6
VE 26/80 QC-SERVO	5.49.004-2	VE 26/80 QC-FQ-SERVO	5.49.009-8	VE 26/80 QC-FQ-CF	5.60.018-2	VE 26/80 QC-CF-FQ-SERVO	5.60.019-2
VE 26/80 QC-CF-SERVO	5.49.004-4	VE 26/80 QC-FQ-CF-SERVO	5.49.009-10				
VE 26/80 QC	5.49.005-2	VE 26/80 QC-SERVO	5.49.010-2				
VE 26/80 QC-FQ	5.49.006-2	VE 26/80 QC-CF-SERVO	5.49.010-4				
		VE 26/80 QC-FQ	5.49.011-6				

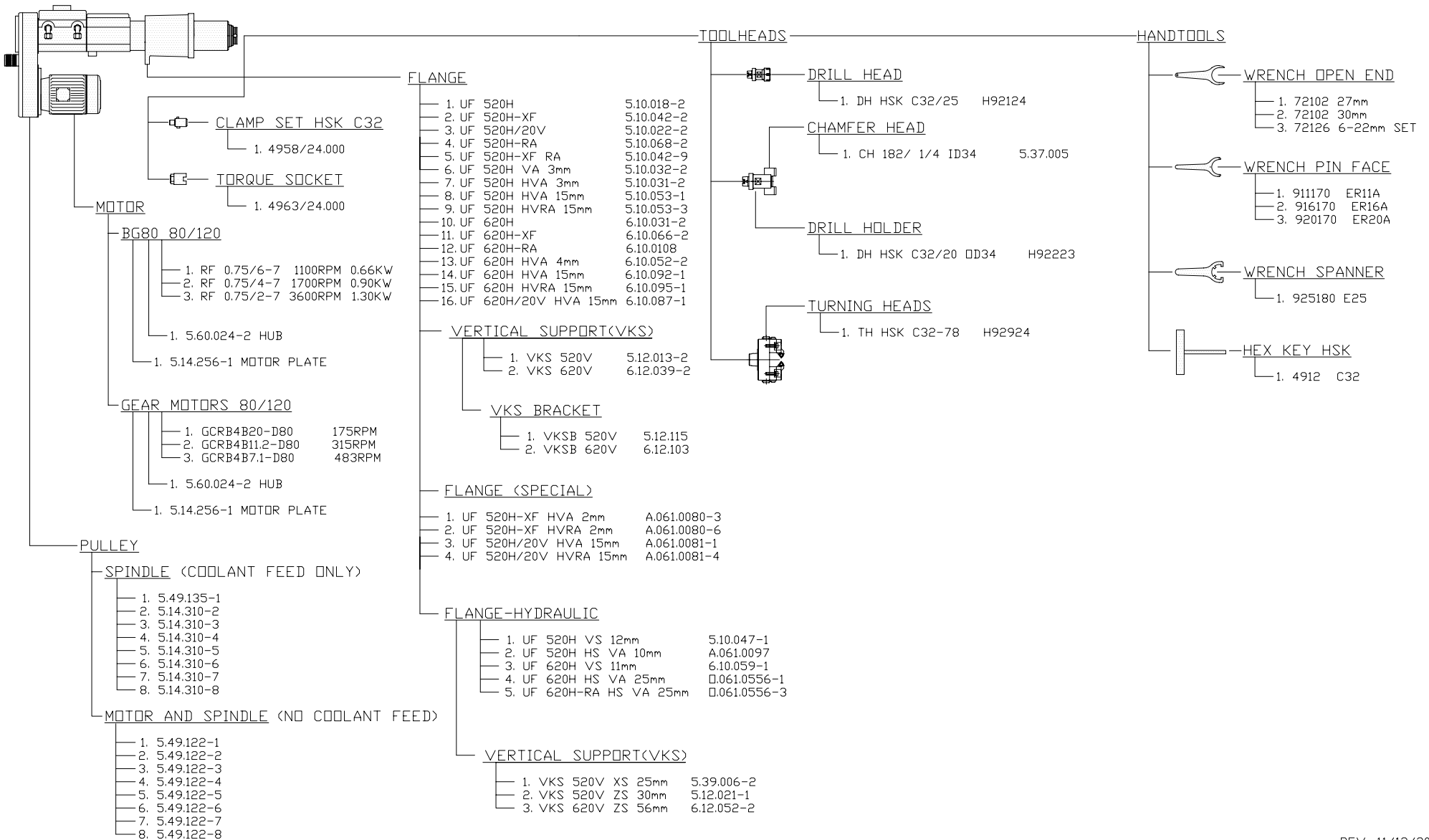




# TOOLSPINDLE UNIT VE 26/80 HSK APPLICATION TREE

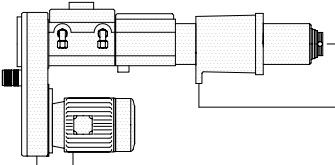
VE 26/80 HSK32 5.60.007-2  
 VE 26/80 HSK32 CF 5.60.008-2  
 VE 26/80 HSK32 FQ 5.60.009-2  
 VE 26/80 HSK32 CF-FQ-SERVO 5.60.008-2

VE 26/80 HSK32 5.60.050-2  
 VE 26/80 HSK32 CF 5.60.060-2  
 VE 26/80 HSK32 FQ 5.60.052-2  
 CNC 26/80 HSK32 5.60.051-2  
 CNC 26/80 HSK32 CF 5.60.061-2  
 CNC 26/80 HSK32 FQ 5.60.054-2



# TOOLSPINDLE UNIT VE 36/60-100 QC APPLICATION TREE

VE 36/60 QC	5.44.009-2	VE 36/60 QC-CF-GB-FQ	5.44.015-4	VE 36/100 QC-T	5.44.029-2	VE 36/100 QC-GB	5.44.041-6	VE 36/100 QC	5.62.005-2
VE 36/60 QC-CF	5.44.009-4	VE 36/60 QC-FQ-SERVO	5.44.017-2	VE 36/100 QC-CF-T	5.44.029-4	VE 36/100 QC	5.44.043-8	VE 36/100 QC-CF	5.62.011-2
VE 36/60 QC-FQ	5.44.010-2	VE 36/60 QC-FQ	5.44.022-2	VE 36/100 QC-T-SERVO	5.44.030-2	VE 36/100 QC-CF	5.44.043-10	VE 36/100 QC-FQ	5.62.008-4
VE 36/60 QC-CF-FQ	5.44.010-4	VE 36/60 QC-CF-FQ	5.44.022-4	VE 36/100 QC-CF-T-SERVO	5.44.030-4	VE 36/100 QC-SERVO	5.44.044-2	VE 36/100 QC-CF-FQ	5.62.005-10
VE 36/60 QC-GB	5.44.013-2	VE 36/60 QC-CF-SERVO	5.44.026-8	VE 36/100 QC-SERVO	5.44.031-2	VE 36/100 QC-SERVO	5.44.044-12	VE 36/100 QC-GB-FQ	5.62.015-4
VE 36/60 QC-CF-GB	5.44.013-4	VE 36/60 QC	5.44.028-2	VE 36/100 QC-CF-SERVO	5.44.031-4	VE 36/100 QC-CF-SERVO	5.44.044-4	VE 36/100 QC-SERVO	5.62.005-6
VE 36/60 QC-GB-FQ	5.44.015-2	VE 36/60 QC-CF	5.44.028-4	VE 36/100 QC	5.44.034-2	VE 36/100 QC-CF-SERVO	5.44.044-14	VE 36/100 QC-CF-SERVO	5.62.012-2
				VE 36/100 QC-SERVO	5.44.035-2	VE 36/100 QC-FQ	5.44.045-6	VE 36/100 QC-FQ-SERVO	5.62.013-2
						VE 36/100 QC-CF-FQ	5.44.045-12		



- MOTORS**
  - BG80 80/120
    - 1. NF 80/6C-11 1100RPM 0.66KW
    - 2. NF 80/4C-11 1700RPM 0.90KW
    - 3. NF 80/2C-11 3600RPM 1.30KW
  - 1. 5.60.024-5 HUB (USE PULLEYS #2-#8)
  - 1. 5.14.202 MOTOR PLATE
  - BG90 80/120
    - 1. AF 90L/2B-12 3600RPM 2.65KW
    - 2. AF 90L/4B-11 1700RPM 1.80KW
    - 3. AF 90L/6C-12 1100RPM 1.30KW
    - 4. AF 90L/8C-11 860RPM 0.66KW
  - 1. 5.60.024-3 HUB
  - 1. 5.14.202 MOTOR PLATE
  - GEAR MOTORS 80/120
    - 1. GCRB4B20-D80 175RPM
    - 2. GCRB4B11.2-D80 315RPM
    - 3. GCRB4B7.1-D80 483RPM
    - 4. GCRB4B20-D90 175RPM
    - 5. GCRB4B11.2-D90 315RPM
    - 6. GCRB4B7.1-D90 483RPM
  - 1. 5.60.024-5 HUB
  - 1. 5.14.202 MOTOR PLATE
  - PULLEYS
  - SPINDLE (COOLANT FEED ONLY)
    - 1. NOT USED
    - 2. 5.16.162-2
    - 3. 5.16.162-3
    - 4. 5.16.162-4
    - 5. 5.16.162-5
    - 6. 5.16.162-6
    - 7. 5.16.162-7
    - 8. 5.16.162-8
  - MOTOR AND SPINDLE (NO COOLANT FEED)
    - 1. 5.14.190-1
    - 2. 5.14.190-2
    - 3. 5.14.190-3
    - 4. 5.14.190-4
    - 5. 5.14.190-5
    - 6. 5.14.190-6
    - 7. 5.14.190-7
    - 8. 5.14.190-8

- FLANGES**
  - 1. UF 530H 5.10.017-2
  - 2. UF 530H-RA 5.10.056-2
  - 3. UF 530H/20V 5.10.021-2
  - 4. UF 530H HVA 2mm 5.10.028-2
  - 5. UF 530H HVA 7mm 5.10.053-2
  - 6. UF 530H HVRA 7mm 5.10.053-4
  - 7. UF 530H/30V HVA 7mm 5.10.076
  - 8. UF 630H 6.10.032-2
  - 9. UF 630H-XF 6.10.067-2
  - 10. UF 630H/30V 6.10.038-2
  - 11. UF 630H/20V 6.10.039-4
  - 12. UF 630H VA 4mm 6.10.069-2
  - 13. UF 630H HVA 4mm 6.10.046-4
  - 14. UF 630H HVA 7mm 6.10.063-2
  - 15. UF 630H HVA 15mm 6.10.088-1
  - 16. UF 630H-XF HVA 10mm 6.10.089-1
  - 17. UF 630H HVRA 15mm 6.10.0103-2
  - 18. UF 630H-XF HVRA 10mm 6.10.0104-4
- VERTICAL SUPPORT(VKS)**
  - 1. VKS 530V 5.12.014-2
  - 2. VKS 630V 6.12.038-2
- VKS BRACKET**
  - 1. VKSB 530V 5.12.115
  - 2. VKSB 630V 6.12.103
  - 3. VKSB 630V 6.12.017
- FLANGE (SPECIAL)**
  - 1. UF 530H HVRA 3mm A.061.0110-9
  - 2. UF 530H/30V HVRA 15mm A.061.0081-5
  - 3. UF 630H-XF RA A.061.0382-7
  - 4. UF 630H/20V HVA 15mm B.061.023-2
  - 5. UF 630H/20V HVRA 15mm D.061.0367-7
- FLANGE-HYDRAULIC**
  - 1. UF 630H HS VA 25mm D.061.0556-2
  - 2. UF 630H-RA HS VA 25mm D.061.0556-4
- VERTICAL SUPPORT(VKS)**
  - 1. VKS 630V XS 18mm 6.12.030-6
  - 2. VKS 630V ZS 56mm 6.12.053-2

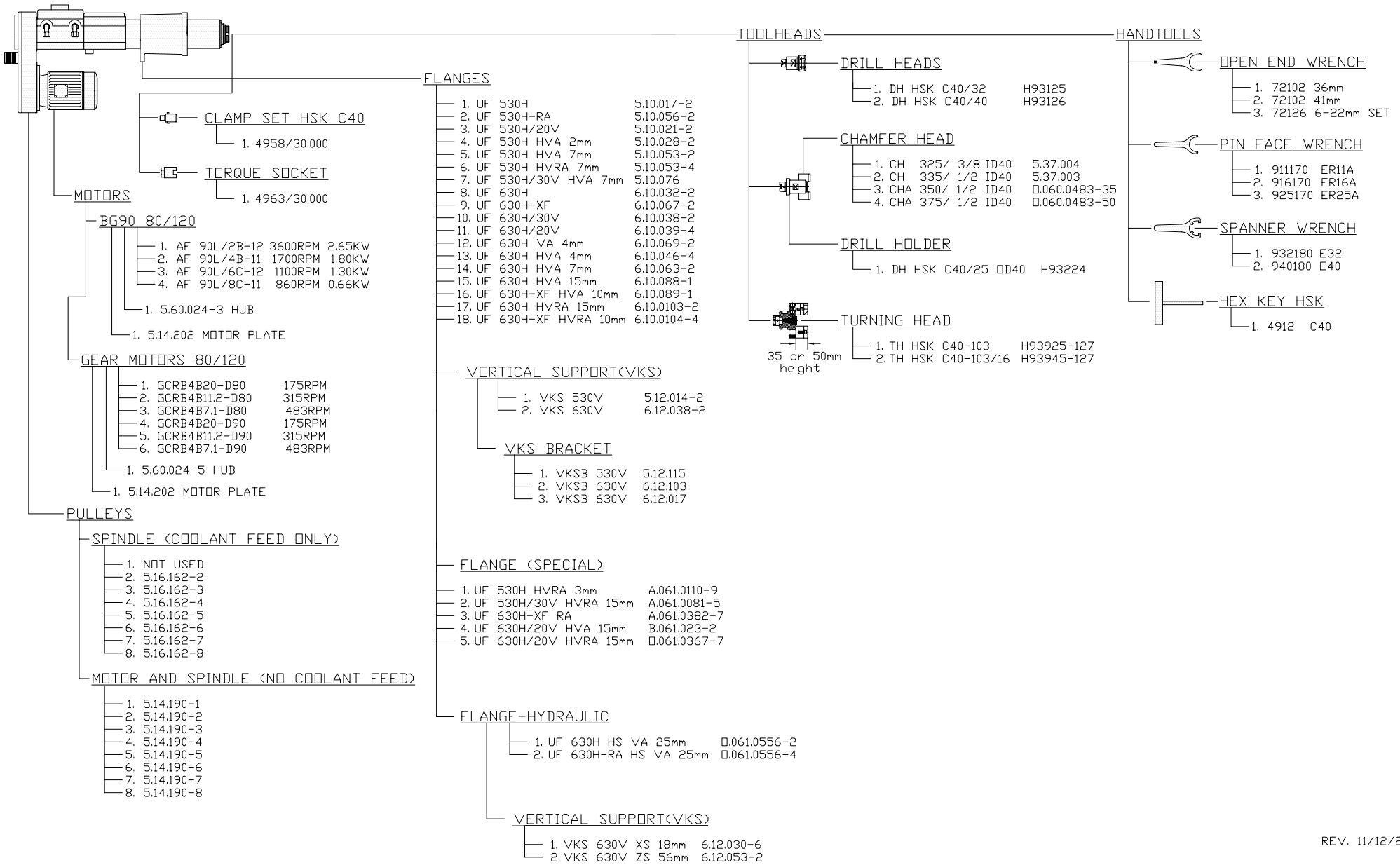
- TOOLHEADS**
  - DRILL HEADS**
    - 1. DH QC 84/40 84126
    - 2. DH QC 84/46 ER50 84127-00-1
  - CHAMFER HEAD**
    - 1. CH 325/ 3/8 ID40 5.37.004
    - 2. CH 335/ 1/2 ID40 5.37.003
    - 3. CHA 350/ 1/2 ID40 0.060.0483-35
    - 4. CHA 375/ 1/2 ID40 0.060.0483-50
    - 5. CH 600/ 1/2 ID50 6.37.002
    - 6. CHA 650/ 1/2 ID50 0.060.0486-35
    - 7. CHA 675/ 1/2 ID50 0.060.0486-50
  - DRILL HOLDER**
    - 1. DH QC 84/25 OD40 84224
    - 2. DH QC 84/32 OD50 84225
  - ROUGH TURNING HEADS**
    - 1. THR QC 84-103/16 84945-127
    - 2. THR QC 84-128/20 84946-127
  - FINISH TURNING HEADS**
    - 1. THF QC 84-132/16/25 84984
  - MILLING HEADS** (QC-FQ ONLY! NOT FOR CF!)
    - SHANK TYPE**
      - 1. FK 36-1.3/5 FQ-T 6.19.004-2 (1" x 2")
      - 2. FK 36-1.3/6 FQ-T 6.19.010-2 (1.25" x 2.25")
      - 3. FK 36-1/5 FQ-T 6.19.011-2
    - COLLET TYPE**
      - 1. FK 36-1.5/25 FQ-T 6.19.004-4
  - CROSS DRILLING ASSEMBLY (NOT FOR CF-COOLANT FEED)**
    - 1. QBE 361/QC-FQ 5.20.058-1 (1pc)
    - 2. QBE 362/QC-FQ 5.20.057-2 (1pc)
    - DRILLING HEAD**
      - 1. QBE 30-20/16 5.20.070
      - 2. QBE 30-20/16 EH 5.20.075
    - CENTER BLOCK (NOT FOR CF!)**
      - 1. 2 PLACE(180) 5.20.040-2
      - 2. 3 PLACE(120) 5.20.040-3
      - 3. 4 PLACE(90) 5.20.040-4
- HANDTOOLS**
  - OPEN END WRENCH**
    - 1. 72102 30mm
    - 2. 72102 41mm
    - 3. 72126 6-22mm SET
  - PIN FACE WRENCH**
    - 1. 916170 ER16A
    - 2. 920170 ER20A
    - 3. 925170 ER25A
    - 4. 932170 ER32A
  - SPANNER WRENCH**
    - 1. 940180 E40
    - 2. 950180 E50
  - HOOK SPANNER WRENCH**
    - 1. 73900 40-42mm
  - WIRZ SPANNER WRENCH**
    - 1. 61350-#22
    - 2. 61350-#27
  - WRENCH TORQUE QC**
    - 1. S-0-060-048-03

# TOOLSPINDLE UNIT VE 36/100 HSK APPLICATION TREE

VE 36/100 HSK40 5.62.005-4  
 VE 36/100 HSK40 CF 5.62.005-8  
 CNC 36/100 HSK40 5.62.028-2  
 CNC 36/100 HSK40 CF 5.62.036-2

VE 36/100 HSK40 5.62.050-2  
 VE 36/100 HSK40 CF 5.62.055-2  
 VE 36/100 HSK40 FQ 5.62.052-2  
 VE 36/100 HSK40 GB 5.62.041-4  
 VE 36/100 HSK40 FQ GB 5.62.015-2

CNC 36/100 HSK40 5.62.051-4  
 CNC 36/100 HSK40 CF FQ 5.62.055-2  
 CNC 36/100 HSK40 FQ 5.62.053-2  
 CNC 36/100 HSK40 GB 5.62.041-2  
 CNC 36/100 HSK40 FQ GB 5.62.015-8



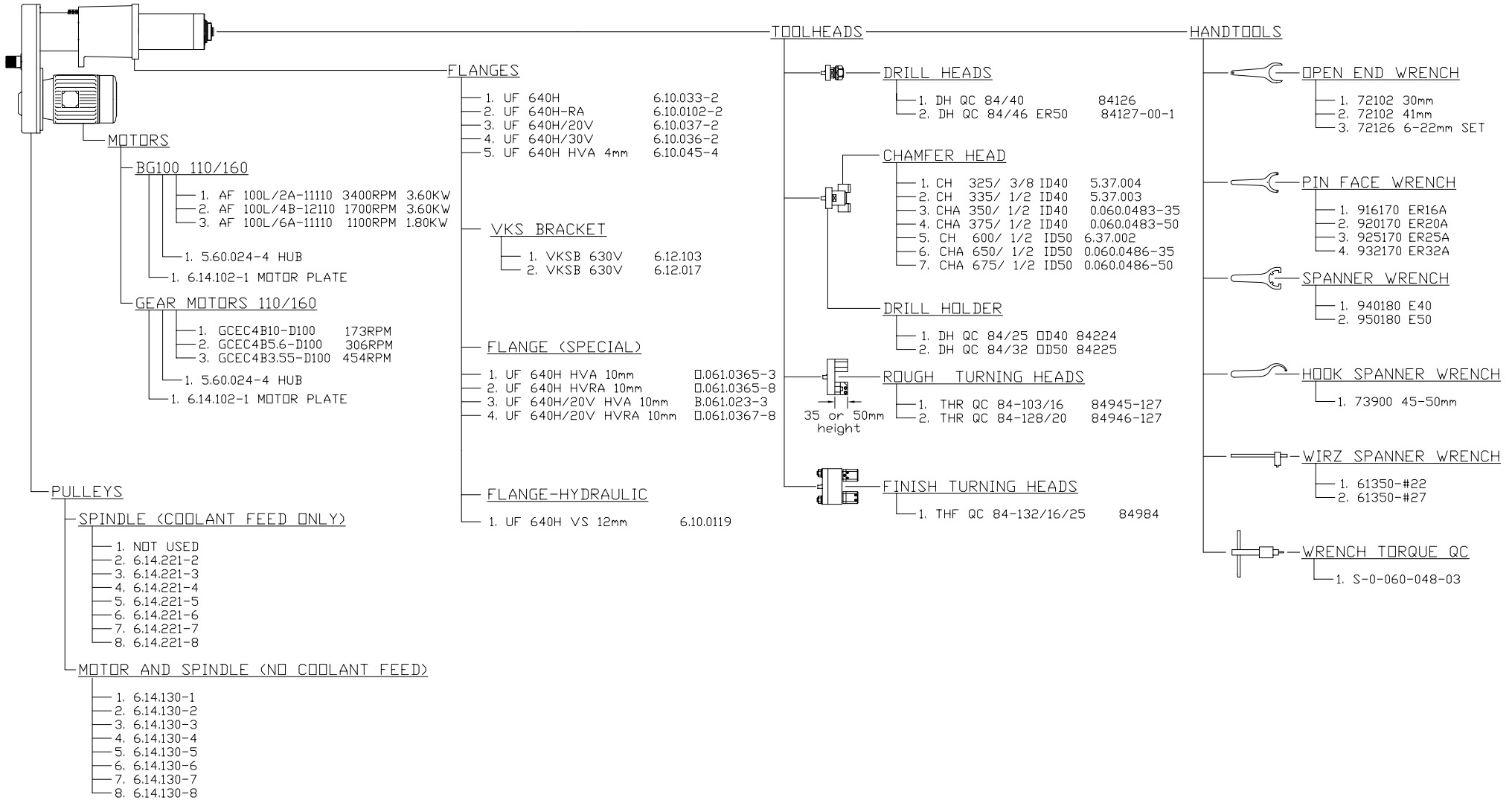
# TOOLSPINDLE UNIT VE 46/120 QC APPLICATION TREE

VE 46/120 CF 6.44.001-4

VE 46/120 NC 6.44.002-4  
VE 46/120 NC-CF 6.44.011-4

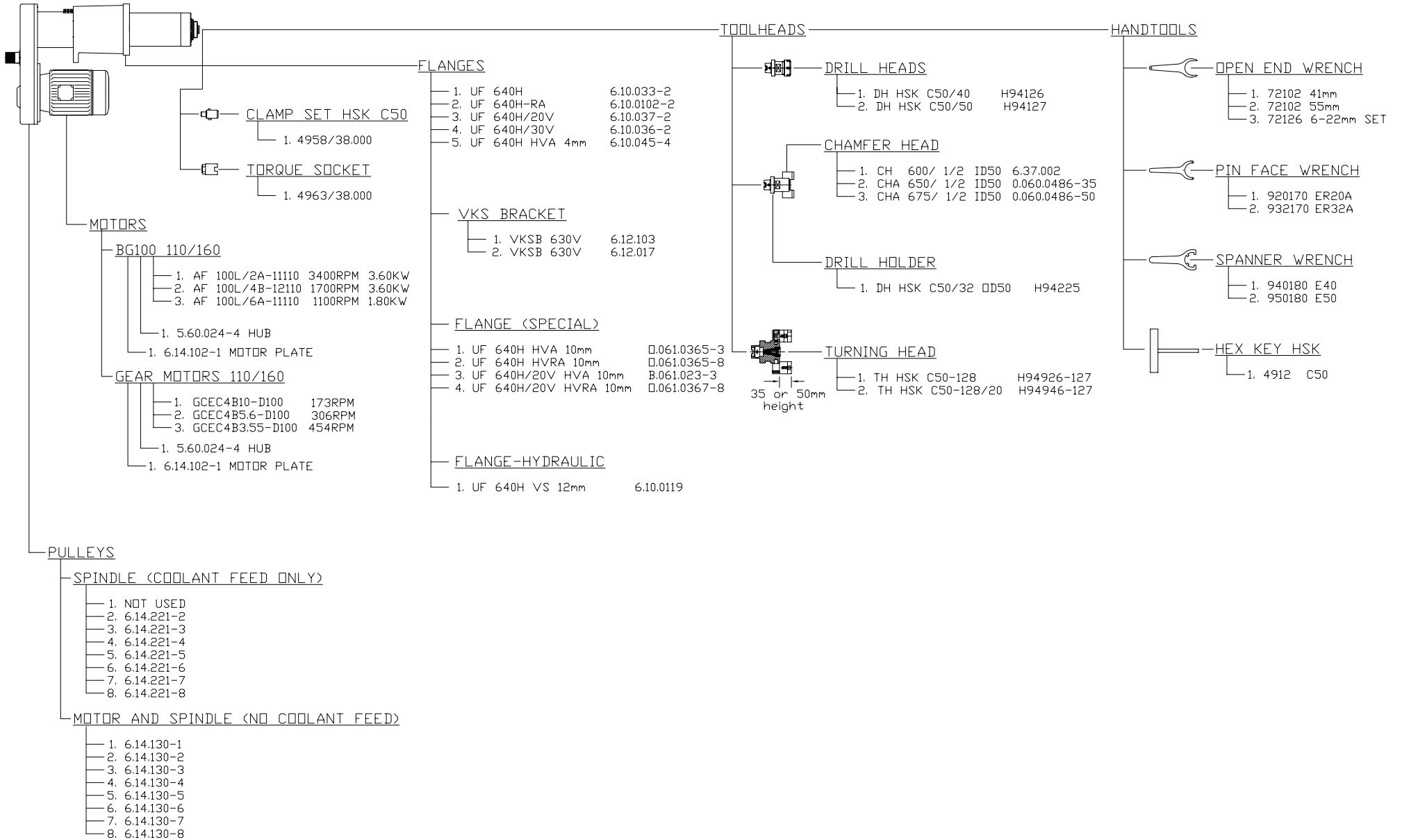
VE 46/120 T 6.44.004-2

VE 46/120 T-CF 6.44.004-4



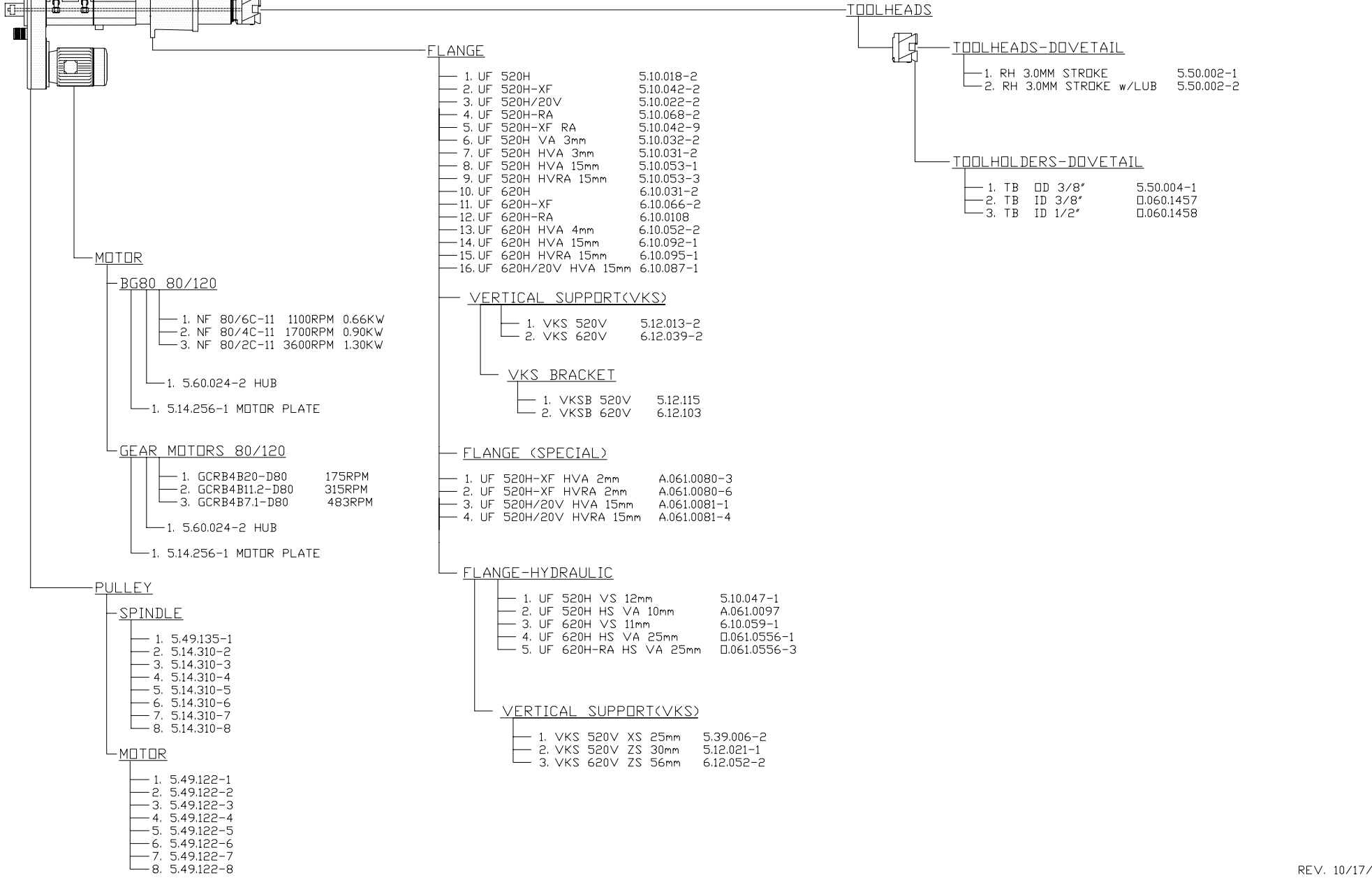
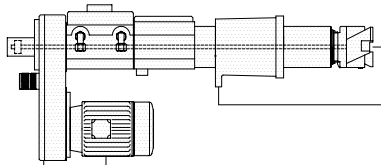
# TOOLSPINDLE UNIT VE 46/120 HSK APPLICATION TREE

VE 46/120 HSK50 6.44.013-8  
 CNC 46/120 HSK50 CF 6.44.011-6



# RECESS AND RECESS TURN UNIT 26/80 APPLICATION TREE

EIE 26/80	5.50.001-2	EIE 26/80	5.50.012-2	EIE 26/80 w/LUB	5.60.021-2	HDE 26/80	5.50.008-2
EIE 26/80	5.50.006-2	EIE 26/80	5.50.014-2			HDE 26/80	5.50.015-2
EIE 26/80	5.50.006-4	EIE 26/80 w/LUB	5.50.019-2				



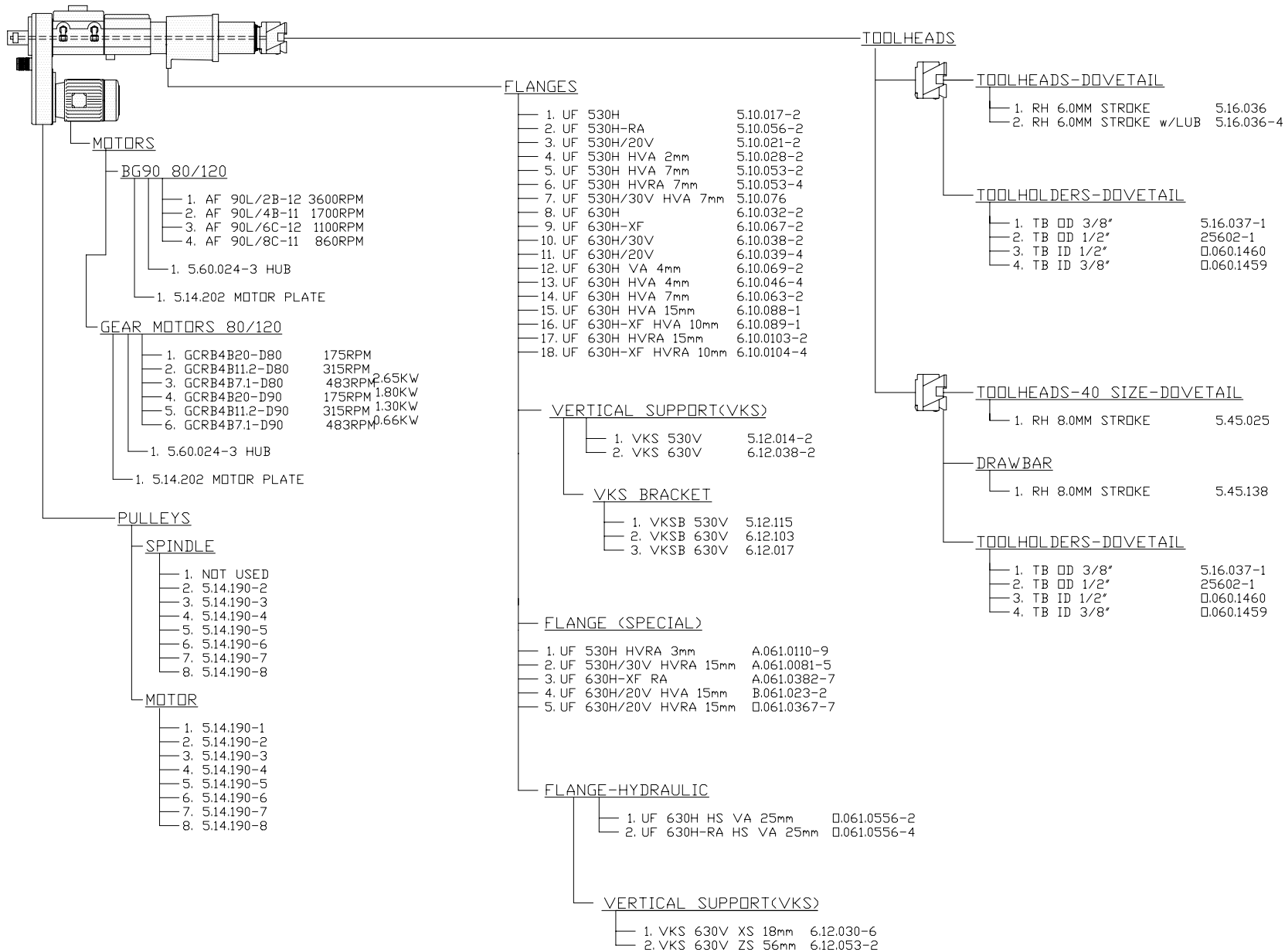
# RECESS AND RECESS TURN UNIT VE 36/60-100 APPLICATION TREE

EIE 36/60 FQ-T 5.45.004-2  
 EIE 36/60 FQ 5.45.005-2  
 EIE 36/100 T 5.45.006-2  
 EIE 36/100 5.45.008-2

EIE 36/100 5.45.009-2  
 EIE 36/100 5.45.010-2  
 EIE 36/100 5.45.010-4  
 EIE 36/100 T 5.45.011-2  
 EIE 36/100 T 5.45.012-2

EIE 36/100 5.45.012-6  
 EIE 36/100 SERVO 5.45.014-2  
 EIE 36/100 NC/LUB 5.45.014-6  
 EIE 36/100 w/LUB 5.45.018-2  
 EIE 36/100 w/LUB 5.62.014-2  
 EIE 36/100 w/LUB 5.62.063-2  
 EIE 36/100 NC/LUB 5.62.019-2

HDE 36/60 FQ-T 5.48.001-2  
 HDE 36/100 FQ-T 5.48.002-2  
 HDE 36/100 T 5.48.004-2  
 HDE 36/100 FQ-T 5.48.005-2  
 HDE 36/100 T-40 HEAD 5.48.006-4  
 HDE 36/100 T 5.48.006-6  
 HDE 36/100 T-w/LUB 5.48.009-2  
 HDE 36/100 T-w/LUB 5.62.025-2



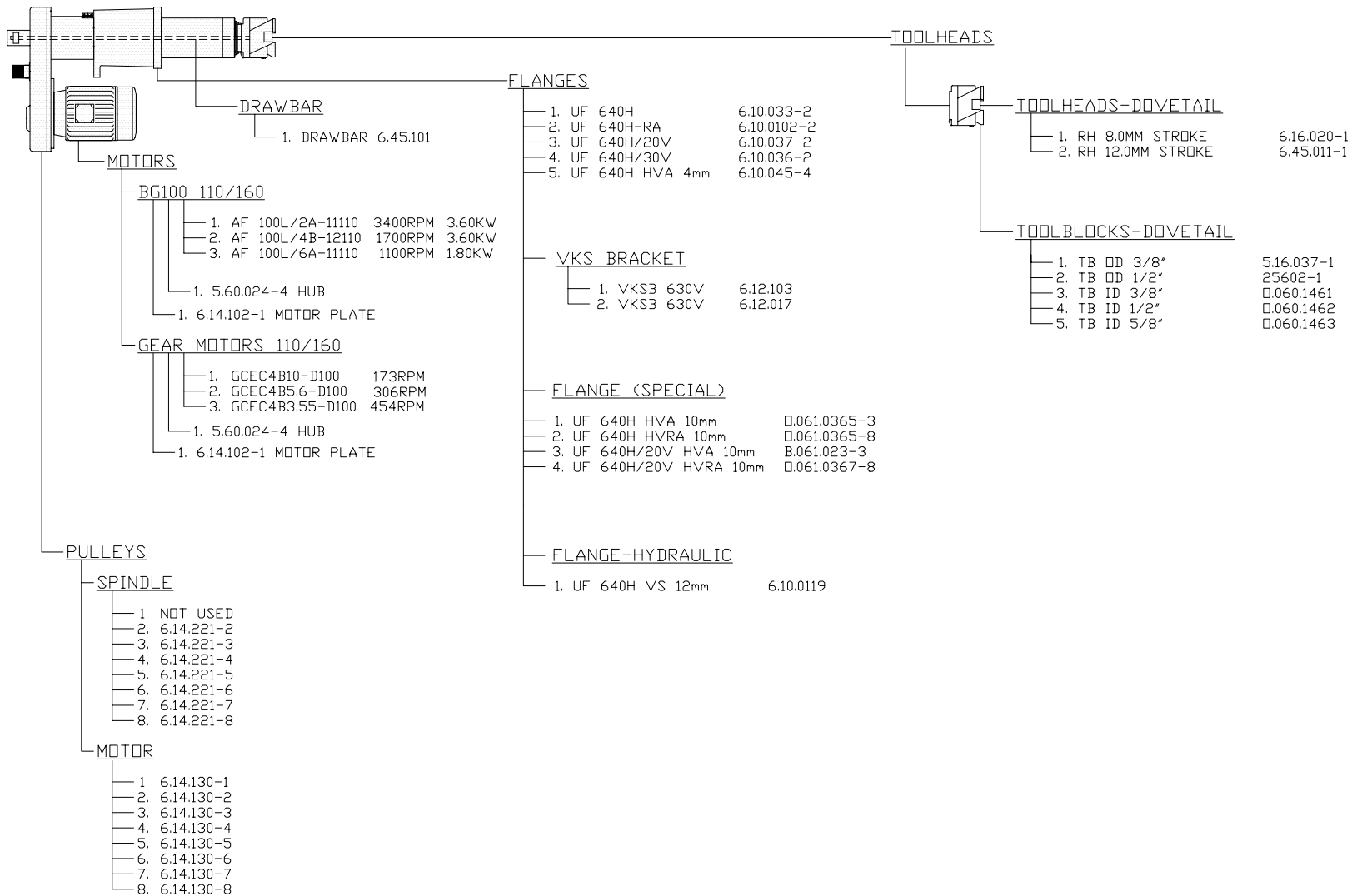
# RECESS UNIT 46/120 APPLICATION TREE

EIE 46/120 DOVETAIL 6.45.003-2

6.45.003-2

EIE 46/120 DOVETAIL w/LUB 6.45.008-2

6.45.008-2





# THREADING UNIT GWE 20/50 QC APPLICATION TREE

GWE 20/50 QC

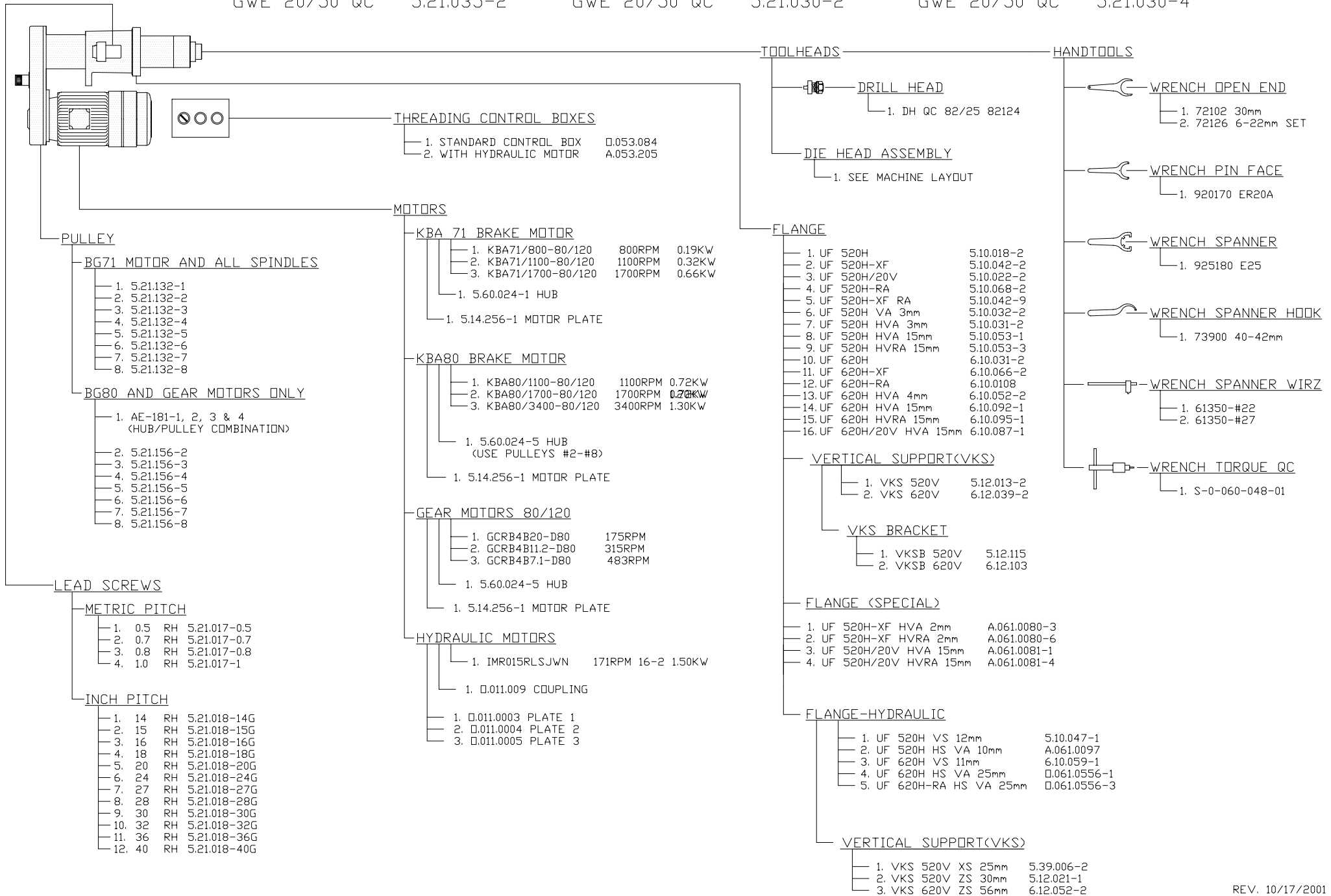
5.21.035-2

GWE 20/50 QC

5.21.030-2

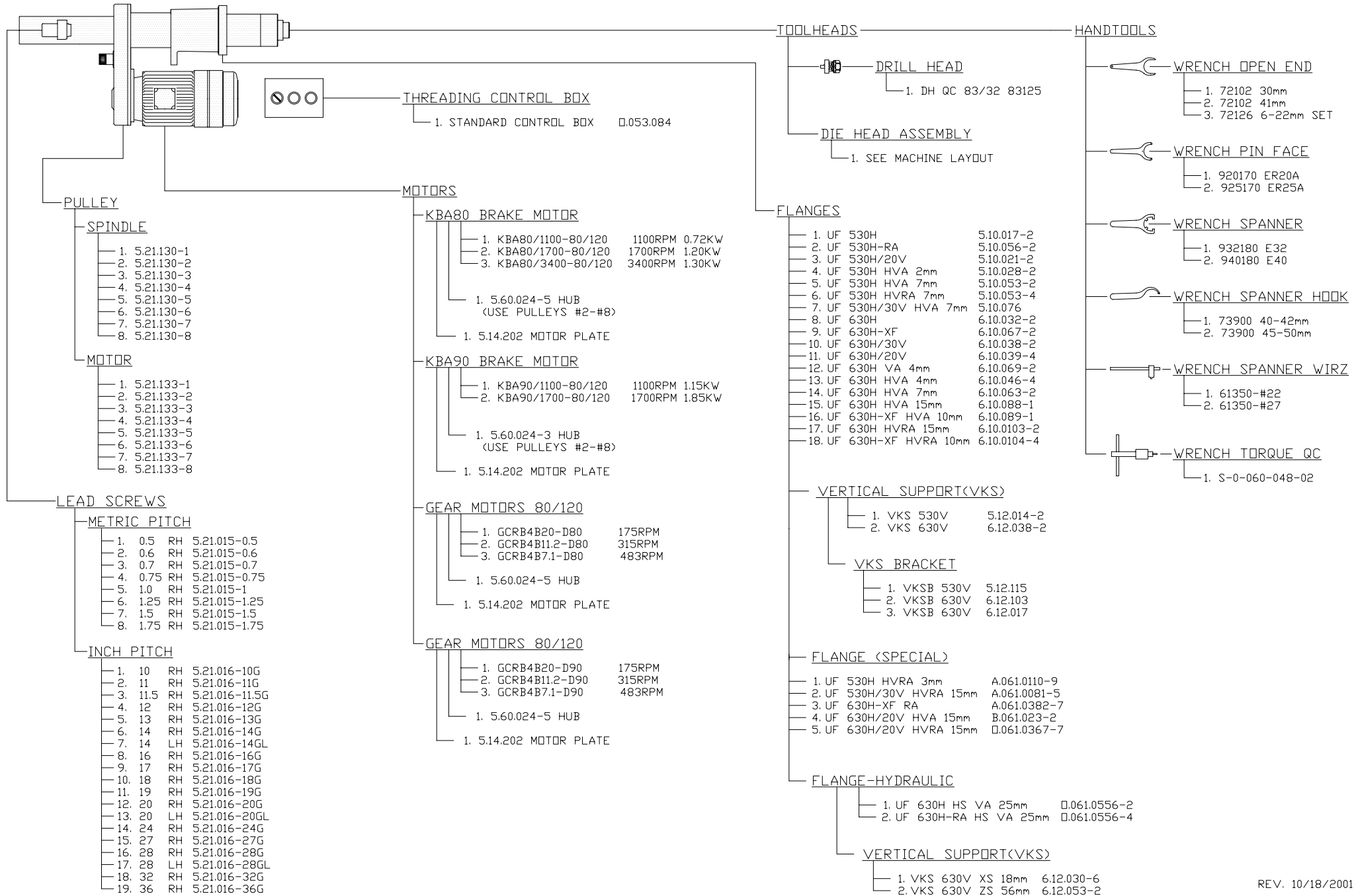
GWE 20/50 QC

5.21.030-4



# THREADING UNIT GWE 35/60 QC QCLS APPLICATION TREE

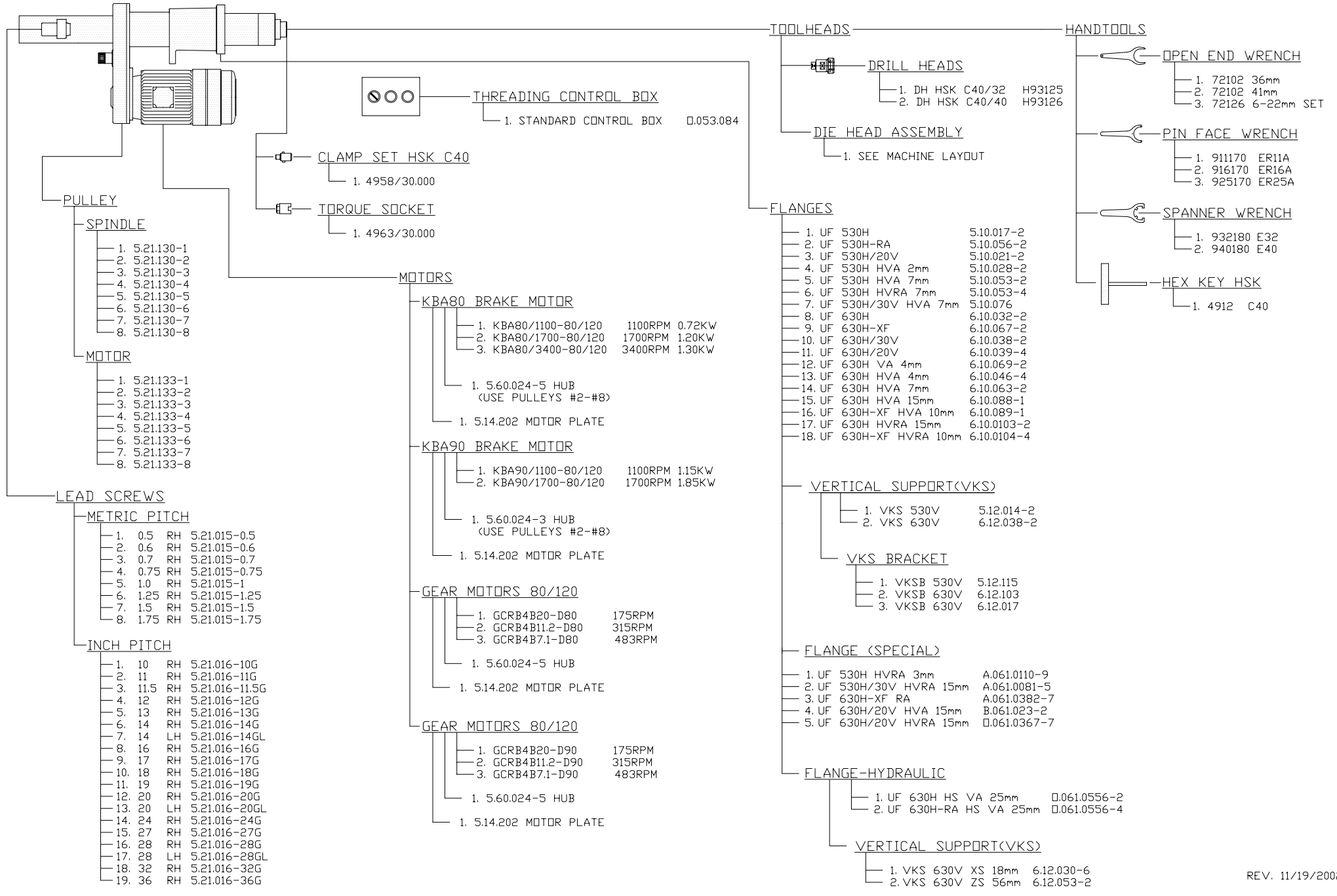
GWE 35/60 QC-QCLS 5.21.033-2



# THREADING UNIT GWE 35/60 HSK QCLS APPLICATION TREE

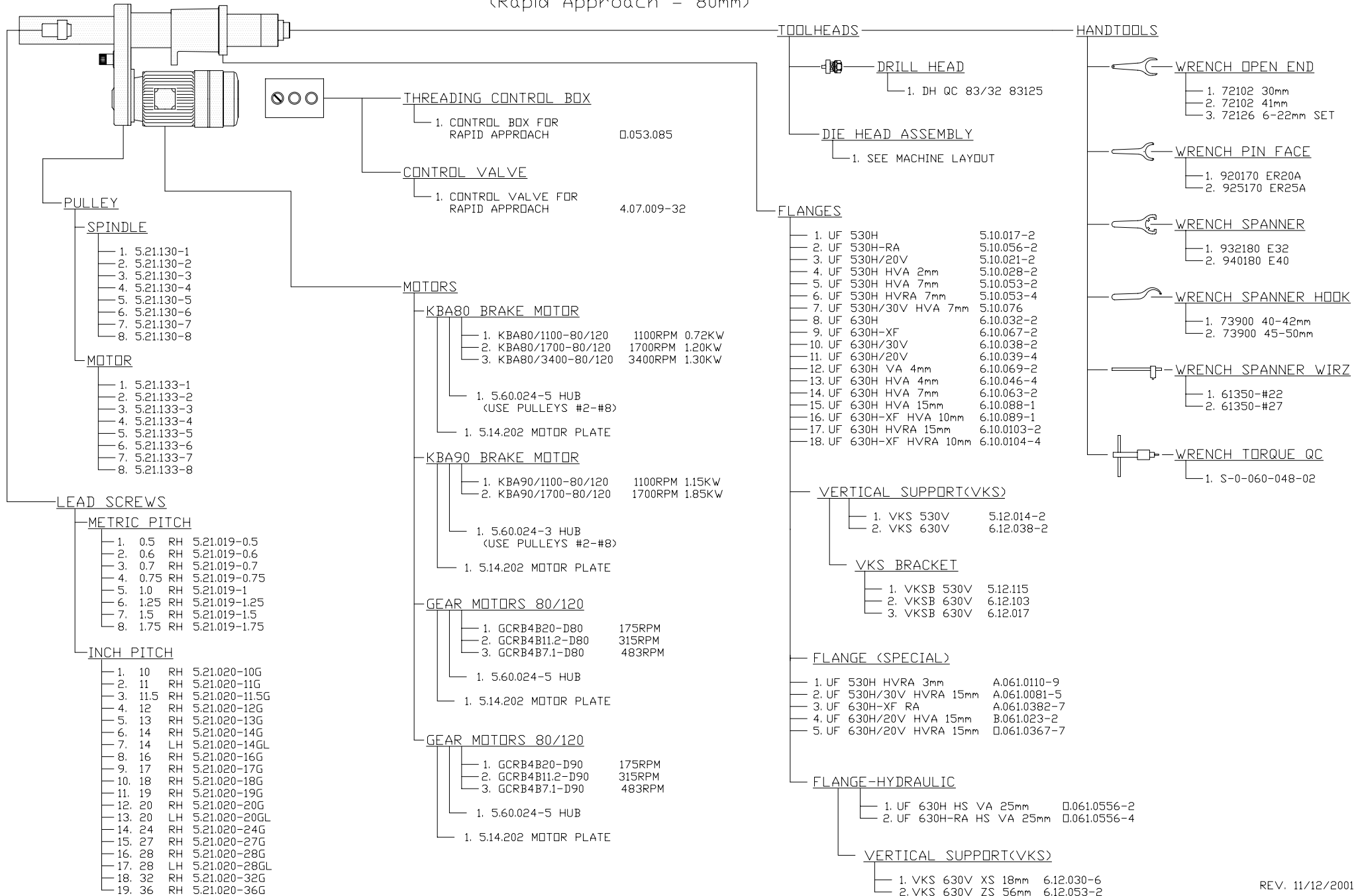
GWE 35/60 HSK C40-QCLS 5.21.033-4

GWE 35/60 HSK C40-QCLS 5.21.033-8



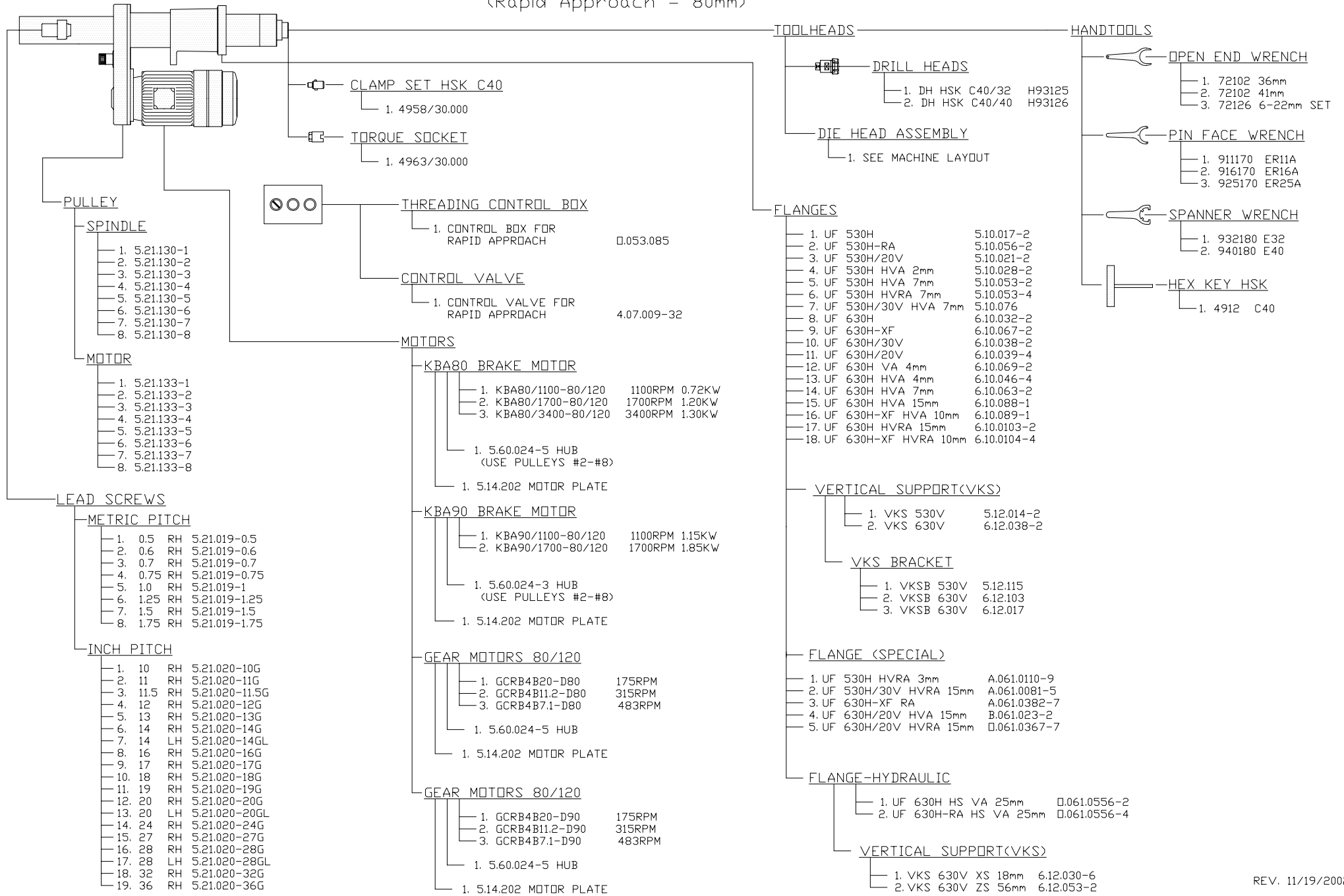
# THREADING UNIT GWE 35/120 QC RA QCLS APPLICATION TREE

GWE 35/120 QC-QCLS-RA 5.21.032-2  
(Rapid Approach = 80mm)



# THREADING UNIT GWE 35/120 HSK RA QCLS APPLICATION TREE

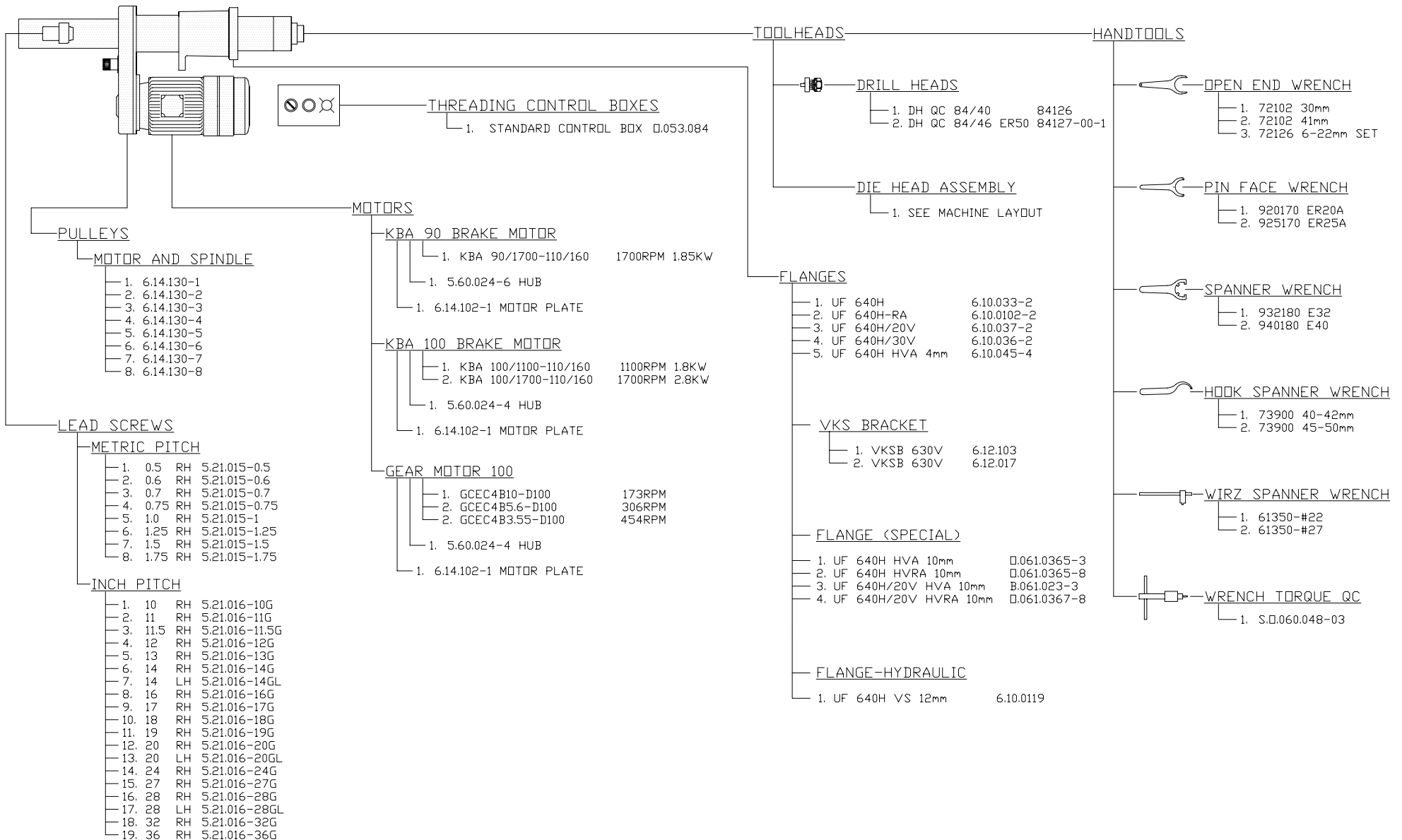
GWE 35/120 HSK40-QCLS-RA 5.21.032-6  
 (Rapid Approach = 80mm)



# THREADING UNIT GWE 45/60 QC-QCLS APPLICATION TREE

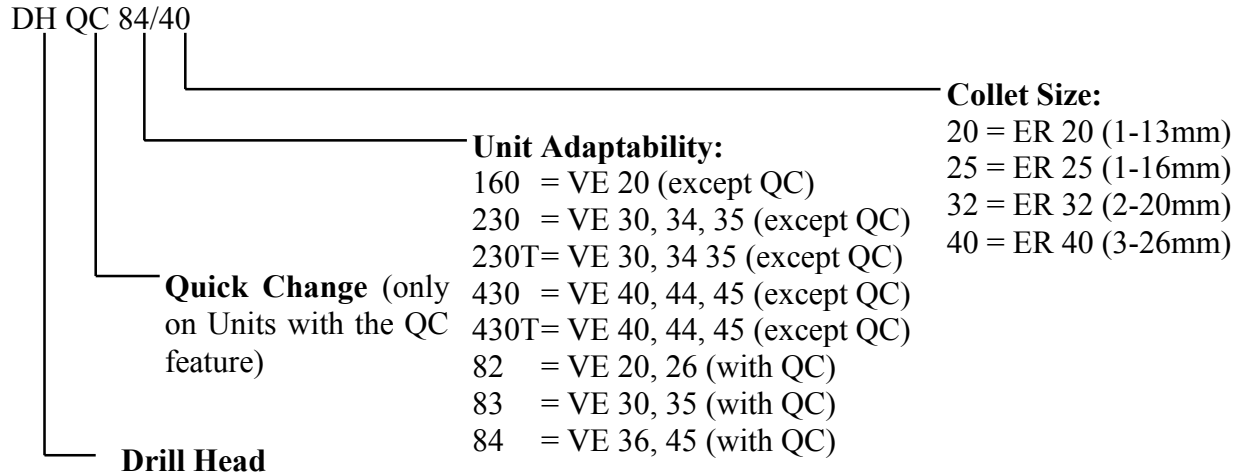
GWE 45/60 QC-QCLS 6.21.009-2

GWE 45/60 QC-GB-QCLS 6.21.010-2

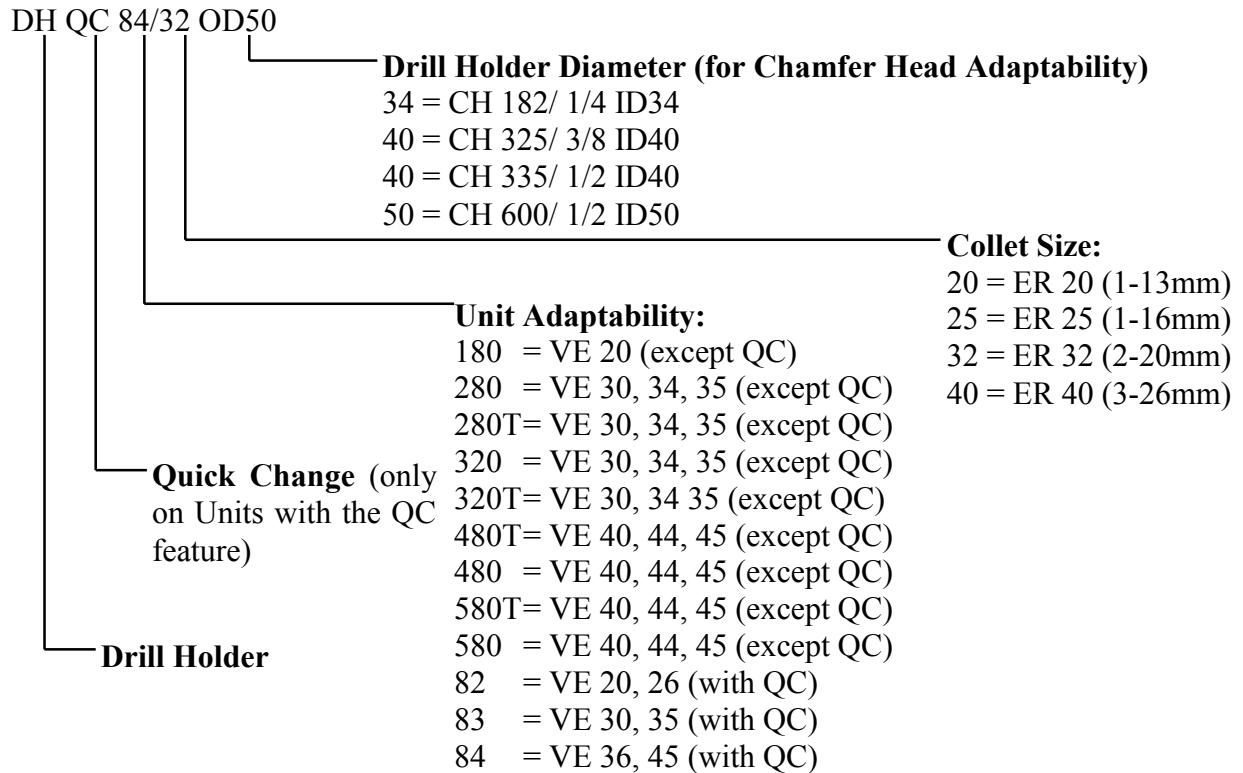


# TOOL HEAD DESIGNATION GUIDE

## 1. DRILL HEADS



## 2. DRILL HOLDERS



### 3. CHAMFER HEADS

CH 600/ 1/2 ID50

**Chamfer Head Inside Dia. (for Drill Holder Adaptability)**

34 = DH 180/20 OD34  
 34 = DH 280T/20 OD34  
 34 = DH 280/20 OD34  
 34 = DH QC 82/20 OD34  
 40 = DH 320T/25 OD40  
 40 = DH 480T/20 OD40  
 40 = DH 480/20 OD40  
 40 = DH QC 83/25 OD40  
 50 = DH 580T/32 OD50  
 50 = DH 580/32 OD50  
 50 = DH QC 84/32 OD50

**Tool Holder :**

1/4 = 1/4" Maximum  
 3/8 = 3/8" Maximum  
 1/2 = 1/2" Maximum)

**Drill Holder Model No. :**

182 = WZ 182  
 325 = WZ 325  
 335 = WZ 335  
 600 = WZ 600

**Chamfer Head**

### 4. DRILL CHAMFER HEADS

DCA 180/ 1/4 / 20

**Collet Type:**

20 = ER 20 (1-13mm)  
 25 = ER25 (1-16mm)  
 32 = ER32 (2-20mm)  
 40 = ER40 (3-26mm)

**Tool Holder :**

1/4 = 1/4" Maximum  
 3/8 = 3/8" Maximum  
 1/2 = 1/2" Maximum)

**Unit Adaptability:**

180 = VE 20 (except QC)  
 280 = VE 30, 34, 35 (except QC)  
 280T= VE 30, 34, 35 (except QC)  
 320 = VE 30, 34, 35 (except QC)  
 320T= VE 30, 34 35 (except QC)  
 480T= VE 40, 44, 45 (except QC)  
 480 = VE 40, 44, 45 (except QC)  
 580T= VE 40, 44, 45 (except QC)  
 580 = VE 40, 44, 45 (except QC)  
 82 = VE 20, 26 (with QC)  
 83 = VE 30, 35 (with QC)  
 84 = VE 36, 45 (with QC)

**Drill Chamfer Head**



## 5. ROUGH TURNING HEADS

THR QC 83-103/16

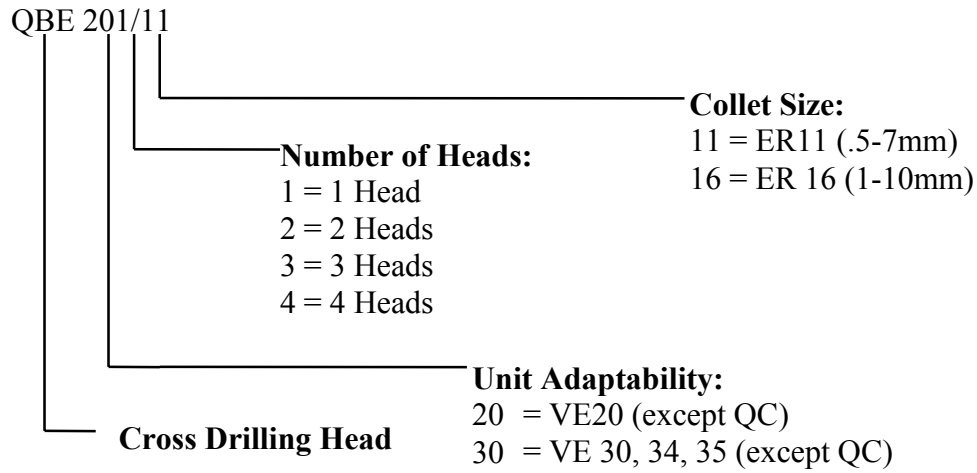
<p>Quick Change (only on Units with the QC feature)</p>	<p>Turning Head Rough</p>	<p><b>Outside Dia. of Head:</b></p> <p>63 = 63mm</p> <p>103 = 103mm</p> <p>128 = 128mm</p>	<p><b>Collet Size:</b></p> <p>8 = ER8 (.5-5mm)</p> <p>11 = ER11 (.5-7mm)</p> <p>20 = ER20 (1-13mm)</p> <p>25 = ER25 (1-16mm)</p> <p>32 = ER32 (2-20mm)</p> <p>40 = ER40 (3-26mm)</p>
		<p><b>Unit Adaptability:</b></p> <p>160 = VE 20 (except QC)</p> <p>230 = VE 30, 34, 35 (except QC)</p> <p>230T= VE 30, 34 35 (except QC)</p> <p>430 = VE 40, 44, 45 (except QC)</p> <p>430T= VE 40, 44, 45 (except QC)</p> <p>82 = VE 20, 26 (with QC)</p> <p>83 = VE 30, 35 (with QC)</p> <p>84 = VE 36, 45 (with QC)</p>	

## 6. FINISH TURNING HEADS

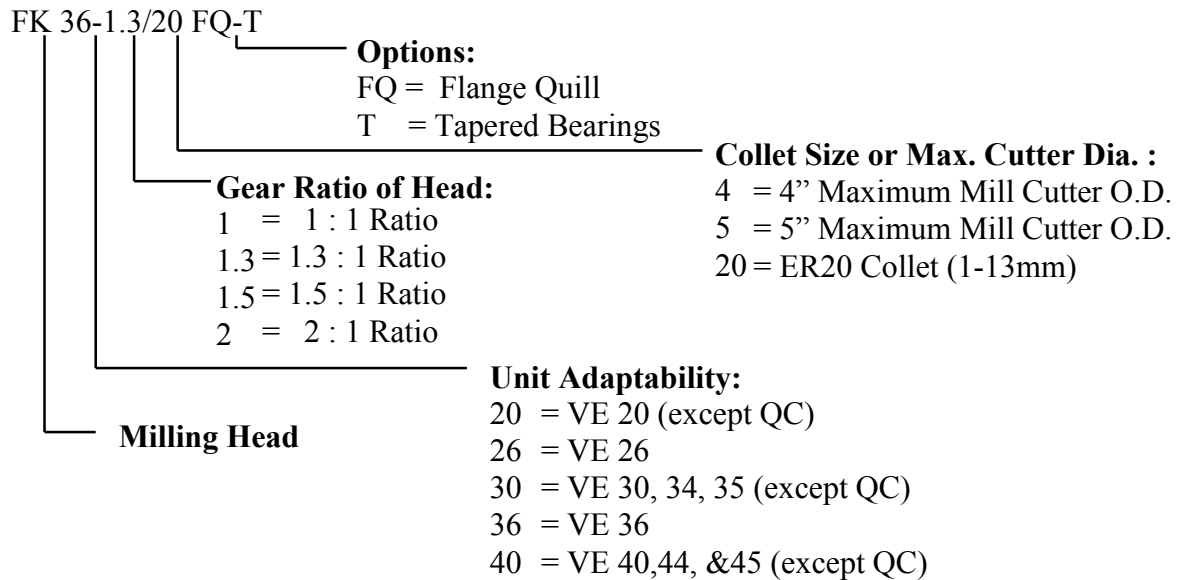
THF QC 84-103/11

<p>Quick Change (only on Units with the QC feature)</p>	<p>Turning Head Finish</p>	<p><b>Outside Dia. of Head:</b></p> <p>96 = 96mm</p> <p>103 = 103mm</p> <p>128 = 128mm</p> <p>132 = 132mm</p>	<p><b>Collet Size:</b></p> <p>11 = ER11 (.5-7mm)</p> <p>16 = ER 16 (1-10mm)</p> <p>25 = ER25 (1-16mm)</p>
		<p><b>Unit Adaptability:</b></p> <p>30 = VE 30, 34, 35 (except QC)</p> <p>40 = VE 40, 44, 45 (except QC)</p> <p>83 = VE 30, 35 (with QC)</p> <p>84 = VE 36, 45 (with QC)</p>	

## 7. CROSS DRILLING HEAD ASSEMBLIES



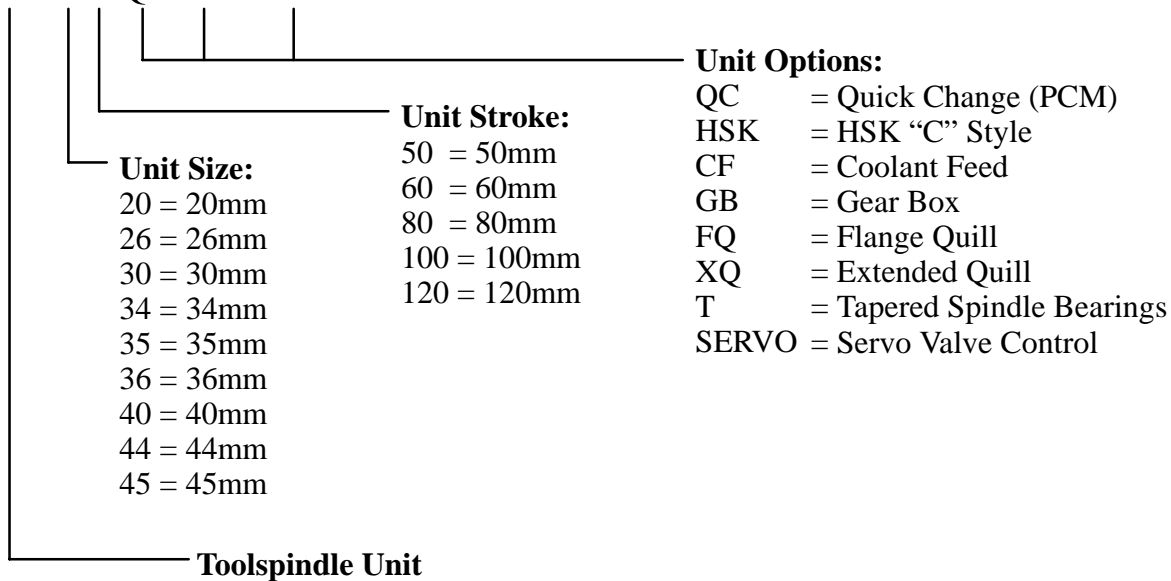
## 8. MILLING HEADS



# UNIT DESIGNATION GUIDE

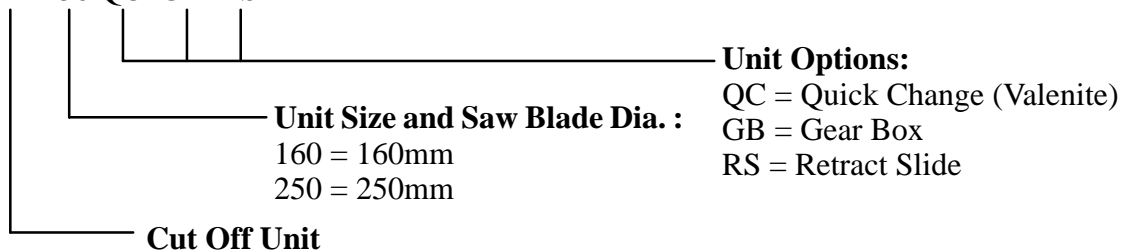
## 1. TOOLSPINDLE UNITS

VE 26/80 QC-CF-SERVO



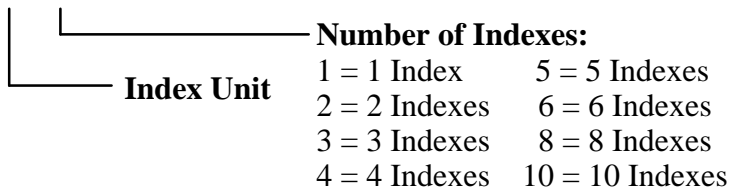
## 2. CUT OFF UNITS

AE 250 QC-GB-RS

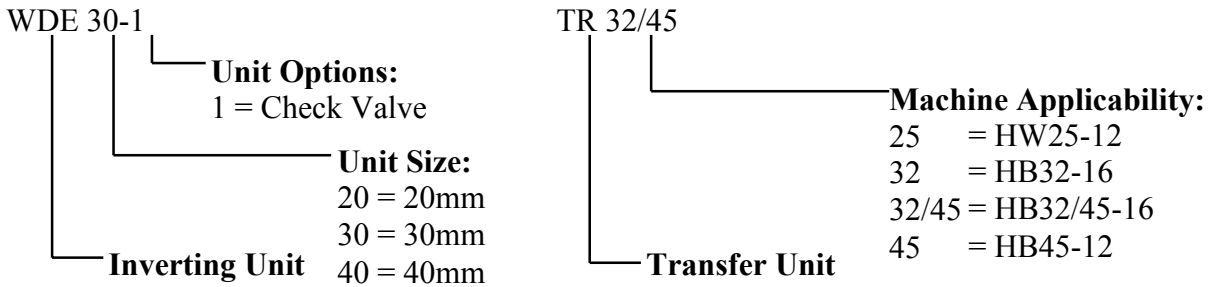


## 3. INDEX UNITS

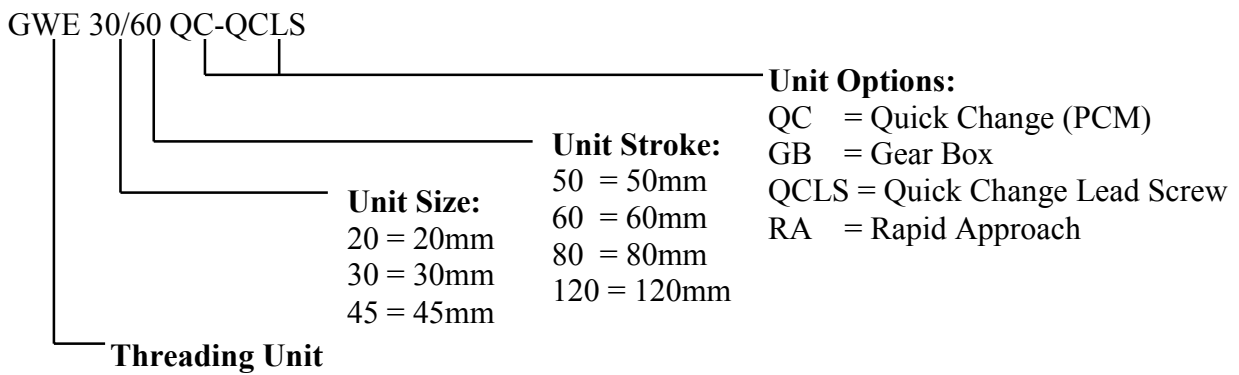
TE X5



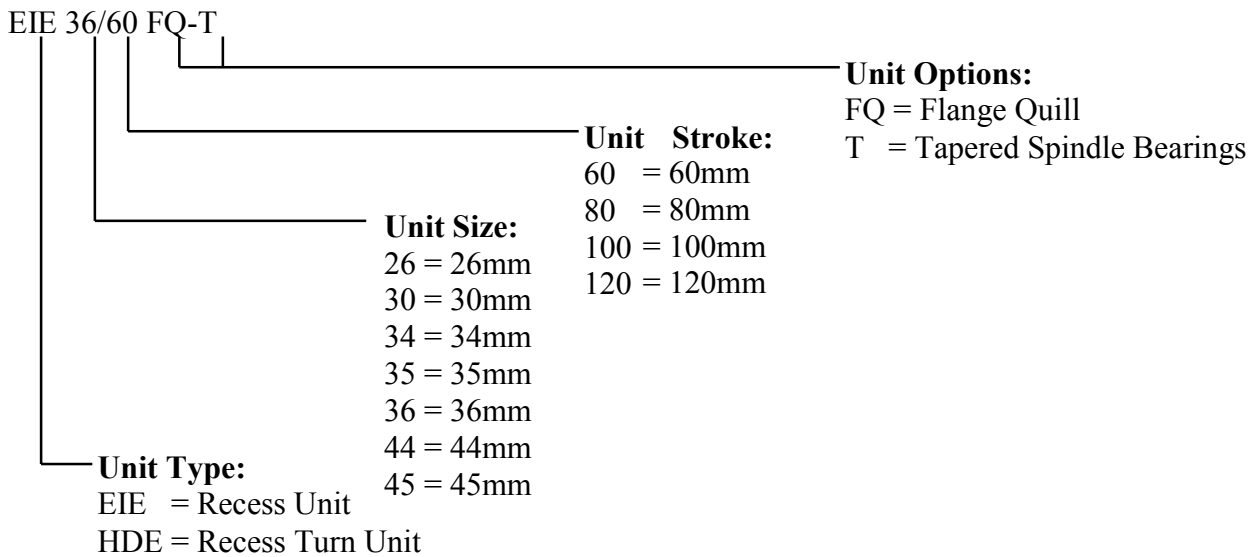
#### 4. INVERTING AND TRANSFER UNITS



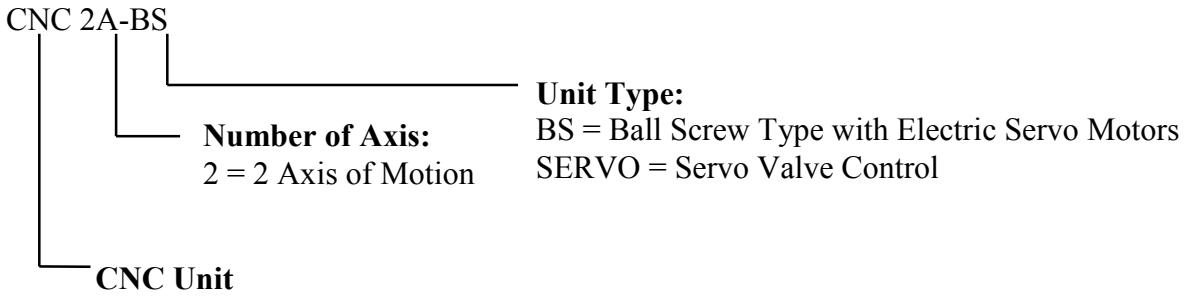
#### 5. THREADING UNITS



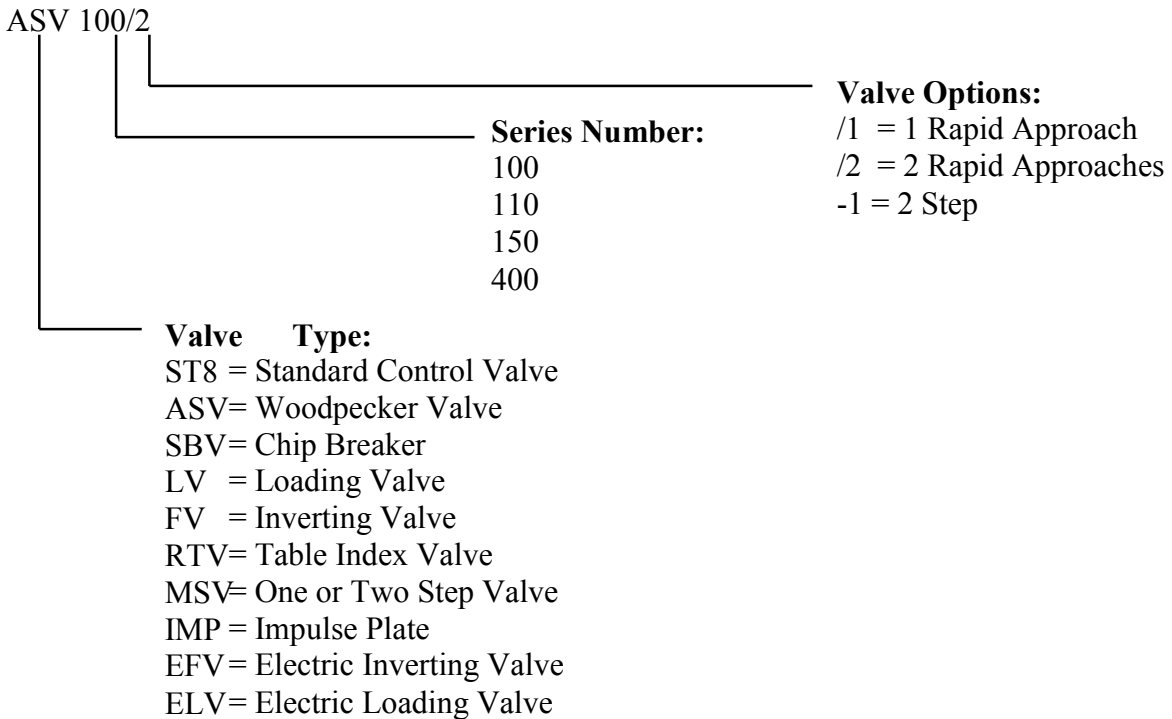
#### 6. RECESS AND RECESS TURN UNITS



## 7. CNC UNITS

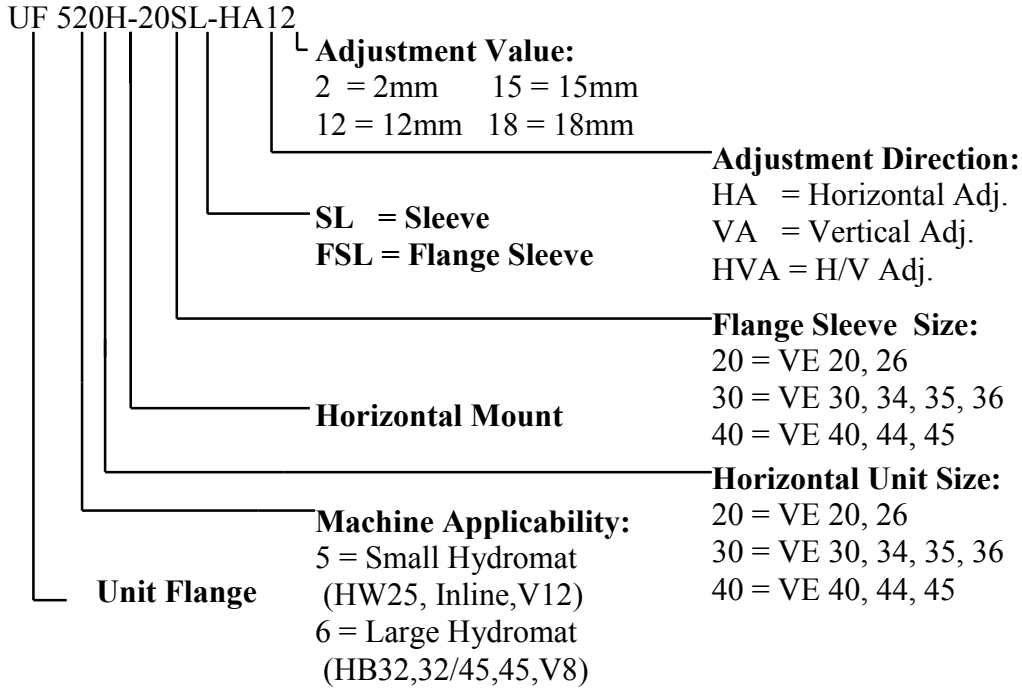


## CONTROL VALVE DESIGNATION GUIDE

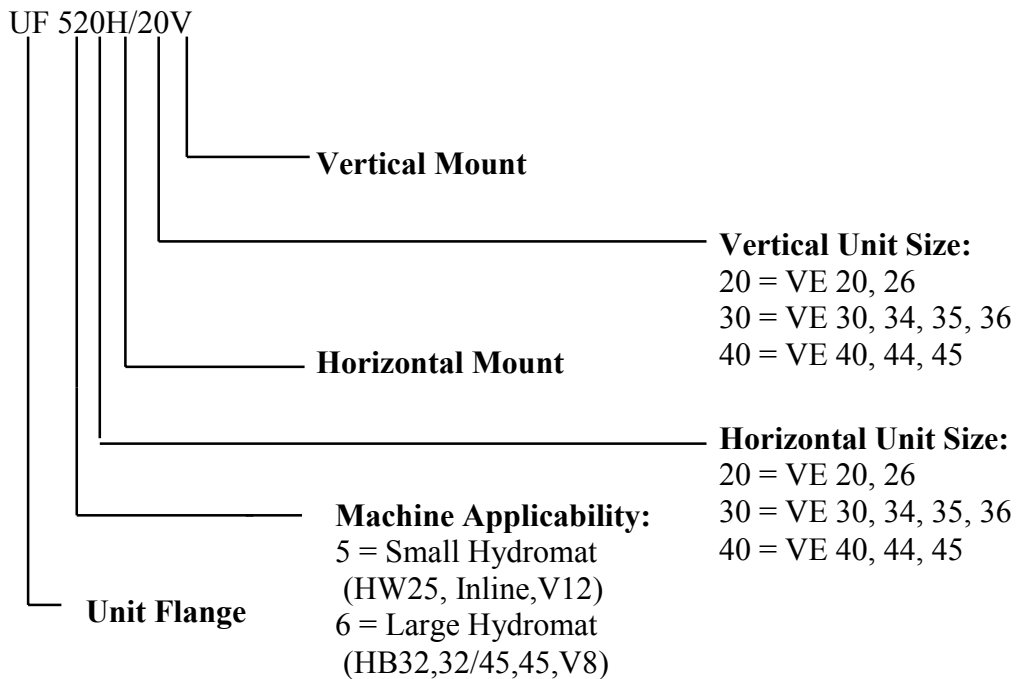


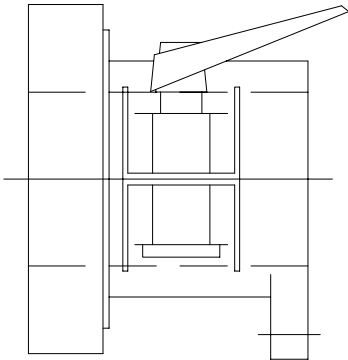
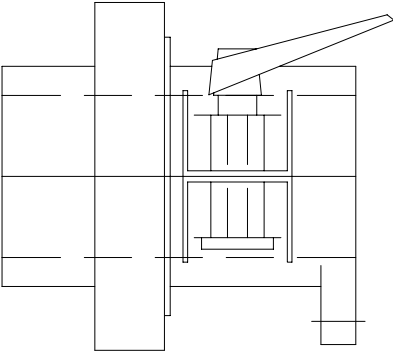
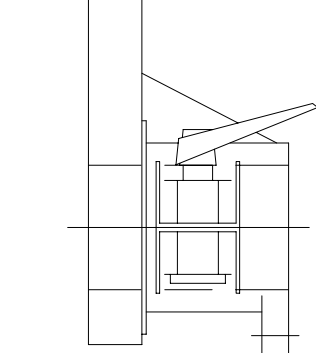
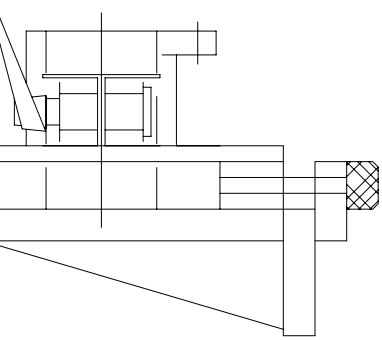
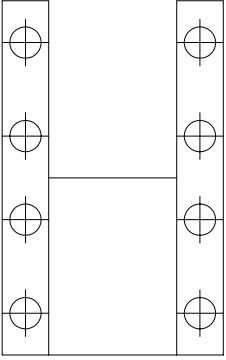
# FLANGE DESIGNATION GUIDE

## Horizontal:



## Vertical:

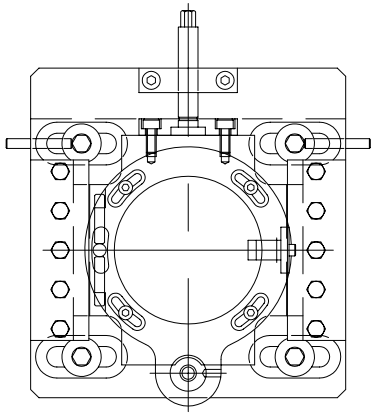


UNIT FLANGES	HW-25	HB-32,HB-45	
	HORIZONTAL		
	20/50	5.10.018-2	6.10.031-2
	30/60	5.10.017-2	6.10.032-2
	40/80	N/A	6.10.033-2
	EXTENDED FLANGE		
	20/50	5.10.042-2	6.10.066-2
	30/60	N/A	6.10.067-2
	40/80	N/A	N/A
	HORIZONTAL/VERTICAL		
	20/50	5.10.022-2 520H/20V	N/A
	30/60	5.10.021-2 530H/20V	6.10.038-2 630H/30V
			6.10.039-4 630H/20V
	40/80	N/A	6.10.036-2 640H/30V
6.10.037-2 640H/20V			
	VERTICAL SUPPORT		
	20/50	5.12.013-2	6.12.039-2
	30/60	5.12.014-2	6.12.038-2
	40/80	N/A	N/A
	VERTICAL BRACKET		
	20/50	5.12.115	6.12.103
			6.12.017
	30/60	5.12.115	6.12.103
			6.12.017
40/80	N/A	N/A	

UNIT FLANGES

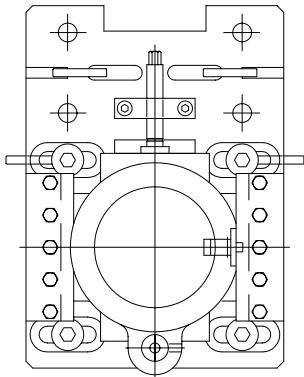
HW-25

HB-32,HB-45



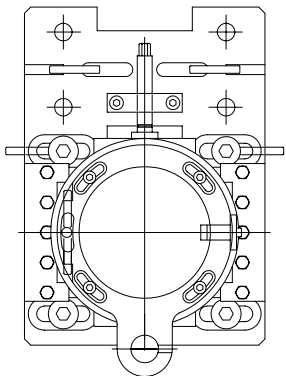
HORIZONTAL, VERTICAL, RADIAL  
ADJUSTMENT

20/50	5.10.069-3 HVA 2MM	6.10.095-1 HVA 15MM
	5.10.053-3 HVA 15MM	0.061.0365-9 XF HVA 15MM
	A.061.0080-6 XF HVA 2MM	
30/60	A.061.0110-9 HVA 3MM	6.10.0103-2 HVA 15MM
	5.10.053-4 HVA 7MM	6.10.0104-4 XF HVA 10MM
40/80	N/A	0.061.0365-8 HVA 10MM



HORIZONTAL/ VERTICAL,  
HORIZONTAL, VERTICAL ADJUSTMENT

20/50	A.061.0081-1 520H/20V-HVA15MM	6.10.087-1 620H/20V-HVA 15MM
	A.061.0081-3 520H/20V-XF HVA 2MM	B.061.023-1 620H/20V-HVA 15MM
		0.061.0367-4 620H/20V-XF HVA 15MM
30/60	5.10.076 530H/30V-HVA 7MM	0.061.0367-2 630H/20V HVA 5MM
		B.061.023-2 630H/20V-HVA15MM
		0.061.0367-5 630H/20V-XF HVA 5MM
40/80	N/A	0.061.0367-3 640H/20V-HVA 10MM
		B.061.023-3 640H/20V-HVA 10MM



HORIZONTAL/VERTICAL  
HORIZONTAL, VERTICAL, RADIAL ADJUSTMENT

20/50	A.061.0081-4 520H/20V-HVA 15MM	0.061.0367-6 620H/20V-HVA 15MM
	A.061.0081-6 520H/20V-XF HVA 2MM	0.061.0367-9 620H/20V-XF HVA 15MM
30/60	A.061.0081-5 530H/30V-HVA 15MM	0.061.0367-7 630H/20V-HVA 15MM
40/80	N/A	0.061.0367-8 640H/20V-HVA 10MM

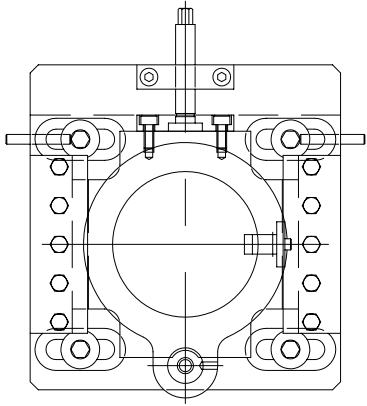


UNIT FLANGES

HW-25

HB-32,HB-45

HORIZONTAL/VERTICAL  
ADJUSTMENT



20/50

5.10.033-2 HVA 3MM

6.10.052-2 HVA 4MM

5.10.031-2 Micro HVA 3MM

0.061.0365-4 XF HVA 15MM

5.10.053-1 HVA 15MM

6.10.072-1 HVA 15MM

A.061.0080-3 XF HVA 2MM

6.10.092-1 HVA 15MM

B.061.024-1 HVA 15MM

30/60

5.10.028-2  
Micro HVA 2MM

6.10.046-4 Micro HVA 4MM

6.10.063-2 HVA 7MM

5.10.053-2  
HVA 7MM

6.10.034-2 HVA 9MM

6.10.072-2 HVA 15MM

6.10.072-4 XF HVA 10MM

6.10.088-1 HVA 15MM

B.061.024-2 HVA 15MM

6.10.089-1 XF HVA 15MM

B.061.024-4 XF HVA15MM

40/80

N/A

6.10.045-4 Micro HVA4MM

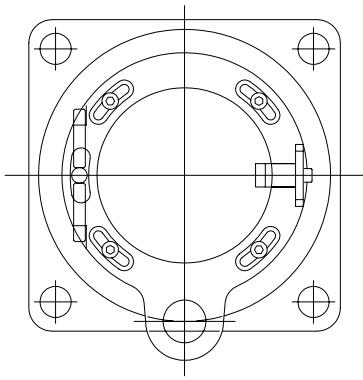
B.061.024-3 HVA 10MM

0.061.0365-3 HVA 10MM

UNIT FLANGES

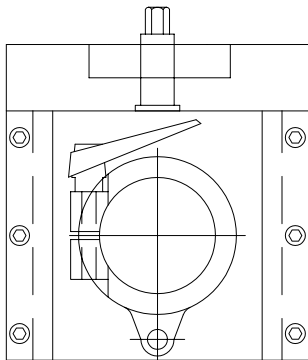
HW-25

HB-32,HB-45



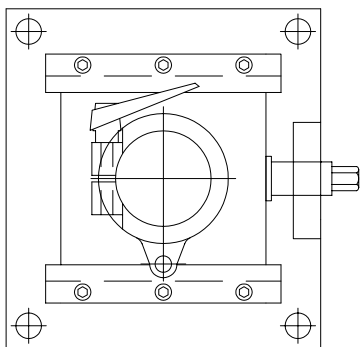
RADIAL ADJUSTMENT

20/50	5.10.068-2	6.10.0108
	5.10.042-9 XF	0.061.0382-6 XF
30/60	5.10.056-2	6.10.0101-2 0.061.0382-7 XF
40/80	N/A	6.10.0102-2



VERTICAL ADJUSTMENT

20/50	5.10.032-2 VA 15MM	N/A
30/60	N/A	6.10.064-2 MICRO VA 15MM
		6.10.069-2 MICRO VA 15MM
40/80	N/A	6.10.050 VA 15MM (HB45 ONLY)
		6.10.065 MICRO VA 15MM



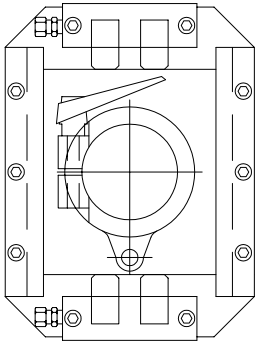
HORIZONTAL ADJUSTMENT

20/50	N/A	6.10.023-2 HA 18MM
30/60	N/A	6.10.024-2 HA 15MM
40/80	N/A	N/A

UNIT FLANGES

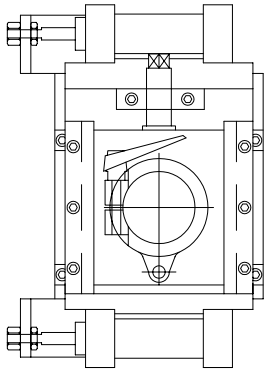
HW-25

HB-32,HB-45



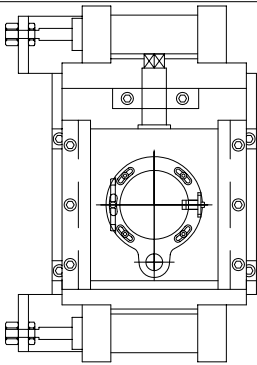
VERTICAL HYDRAULIC SLIDE

20/50	5.10.047-1 V-SLIDE 12MM	6.10.059-1 V-SLIDE 11MM
	5.10.049-1 XF V-SLIDE 12MM	
30/60	N/A	N/A
40/80	N/A	6.10.0119 V-SLIDE 12MM



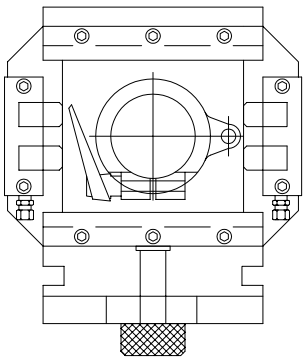
HORIZONTAL HYDRAULIC SLIDE  
VERTICAL ADJUSTMENT

20/50	5.10.048-2 HS 10MM	0.061.0556-1 VA 25MM
	A.061.0097 VA 10MM	0.061.0556-5 XF VA 25MM
30/60	N/A	0.061.0556-2 VA 25MM
40/80	N/A	N/A



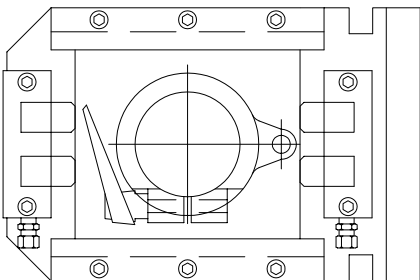
HORIZONTAL HYDRAULIC SLIDE  
VERTICAL, RADIAL ADJUSTMENT

20/50	N/A	0.061.0556-3 VA 25MM
30/60	N/A	0.061.0556-4 VA 25MM
40/80	N/A	N/A



VERTICAL SUPPORT  
HYDRAULIC X-SLIDE

20/50		5.39.006-2 X SLIDE 25MM
30/60		5.39.016-4 X SLIDE 18MM



VERTICAL SUPPORT  
HYDRAULIC Z-SLIDE

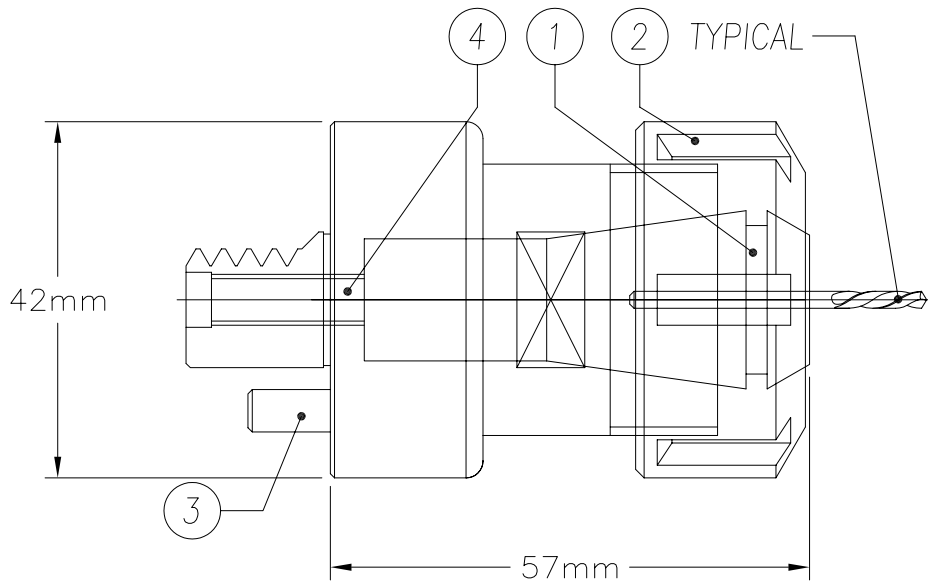
20/50	5.12.021-1 Z SLIDE 30MM	6.12.052-2 Z SLIDE 56MM
30/60	N/A	6.12.053-2 Z SLIDE 56MM

**SECTION 2**

**DRILL HEADS**

# SECTION 2: DRILL HEADS

DH QC 82/25.....82124



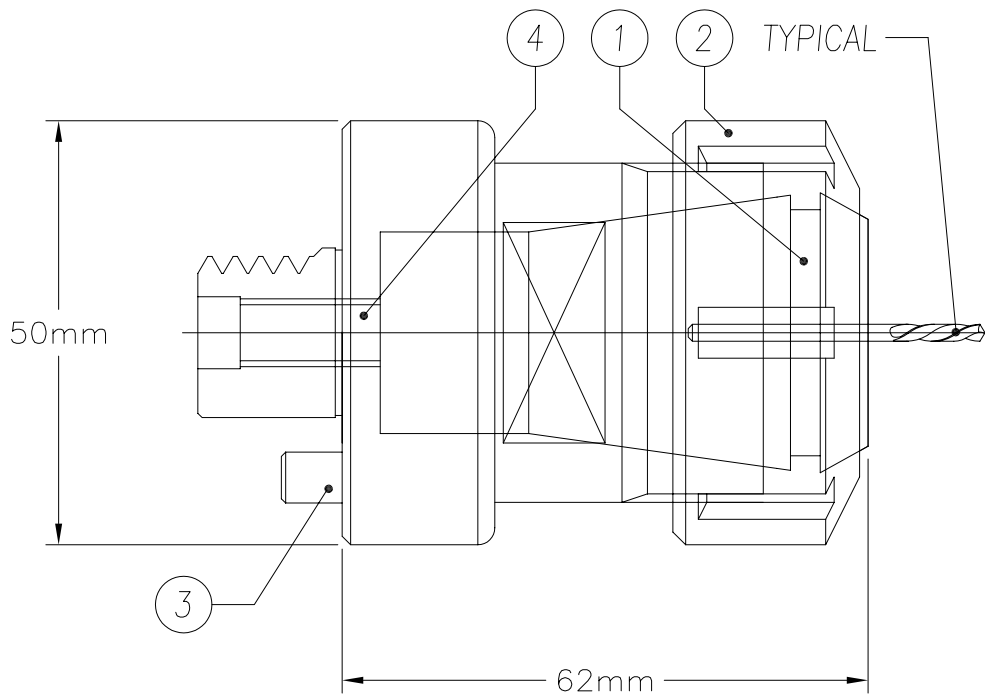
USE TORQUE WRENCH #S-0-060-048-01

ITEM	QTY.	DESCRIPTION	PART NUMBER
1*	1	COLLET (RANGE 1-16mm)	ER25
2	1	CLAMP NUT	925120
3	1	DOWEL PIN	5x20mm
4	1	STOP SCREW With Nylon	M6x16
5*	1	WRENCH OPEN END (30mm)	72102-30mm
6*	1	WRENCH SPANNER E25	925180

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 2: DRILL HEADS

DH QC 83/32.....83125



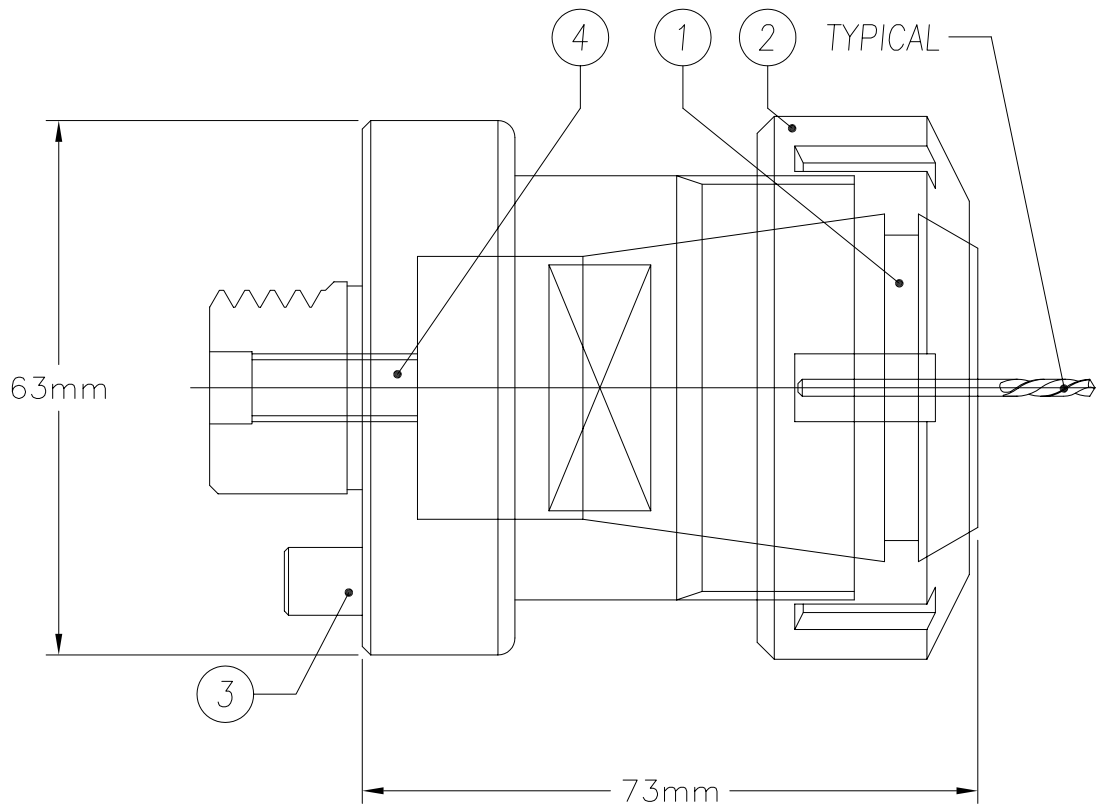
USE TORQUE WRENCH #S-0-060-048-02

ITEM	QTY.	DESCRIPTION	PART NUMBER
1*	1	COLLET (RANGE 2-20mm)	ER32
2	1	CLAMP NUT	932120
3	1	DOWEL PIN	6 x 20mm
4	1	STOP SCREW M8 x 1 With Nylon	1100-088-P03
5*	1	WRENCH OPEN END (30mm)	72102-30mm
6*	1	WRENCH SPANNER E32	932180

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 2: DRILL HEADS

DH QC 84/40.....84126



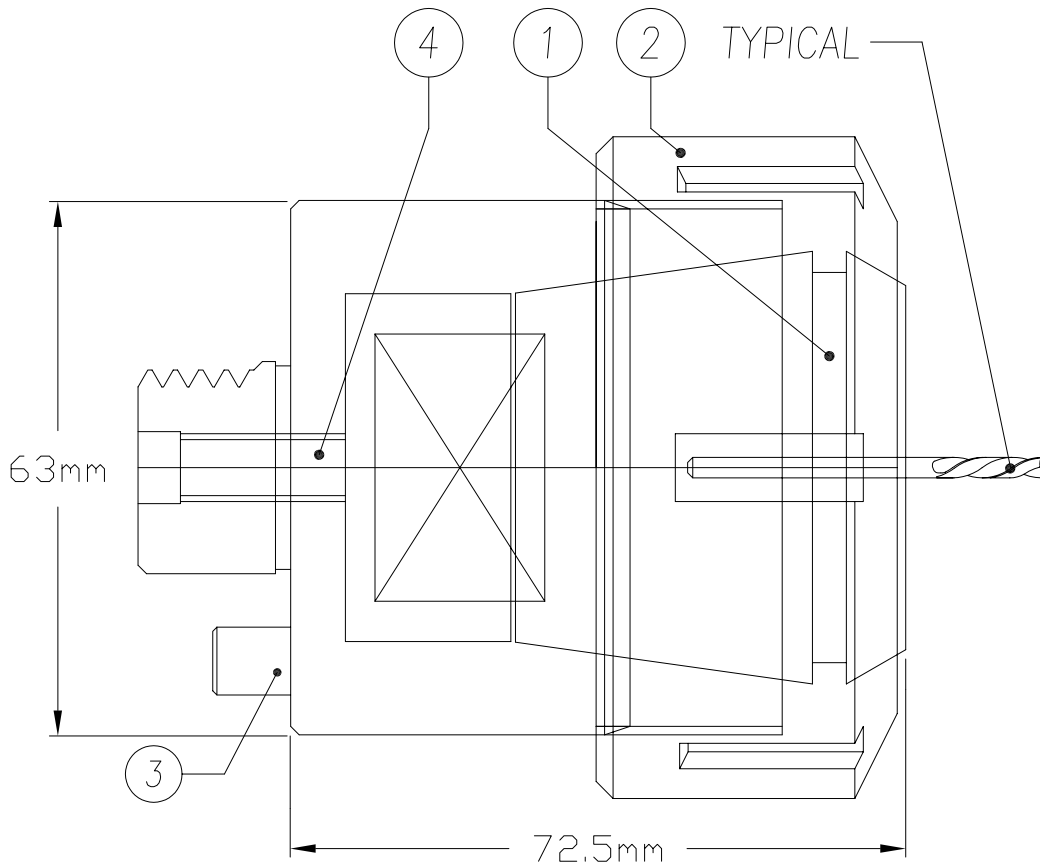
USE TORQUE WRENCH #S-0-060-048-03

ITEM	QTY.	DESCRIPTION	PART NUMBER
1*	1	COLLET (RANGE 3-26mm)	ER40
2	1	CLAMP NUT	940120
3	1	DOWEL PIN	8 x 20mm
4	1	STOP SCREW M8 x 1 With Nylon	1100-088-P03
5*	1	WRENCH OPEN END (41mm)	72102-41mm
6*	1	WRENCH SPANNER E40	940180

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 2: DRILL HEADS

DH QC 84/46 ER50.....84127-00-1



USE TORQUE WRENCH #S-0-060-048-03

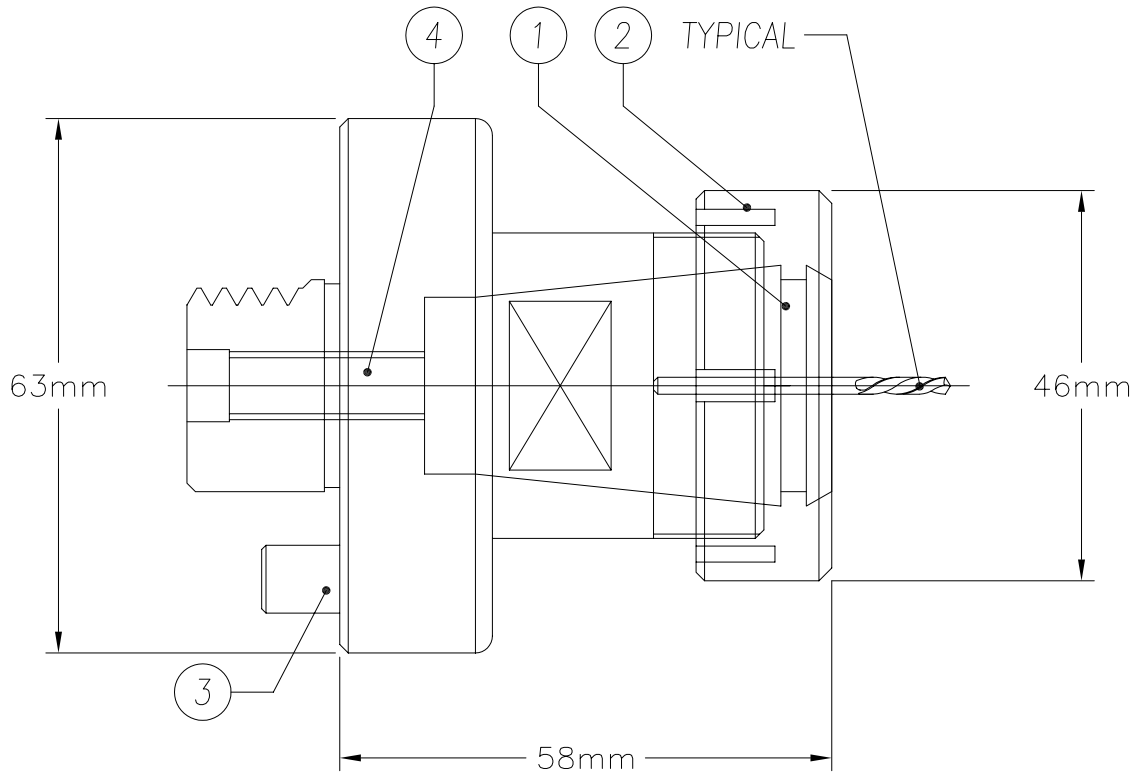
ITEM	QTY.	DESCRIPTION	PART NUMBER
1*	1	COLLET (RANGE 4-34mm)	ER50
2	1	CLAMP NUT	950120
3	1	DOWEL PIN	8 x 20mm
4	1	STOP SCREW M8 x 1 With Nylon	1100-088-P03
5*	1	WRENCH OPEN END (55mm)	72102-55mm
6*	1	WRENCH SPANNER E50	950180

\* NOT INCLUDED WITH TOOLHEAD



# SECTION 2: DRILL HEADS

DH QC 84/20.....84128



USE TORQUE WRENCH #S-0-060-048-03

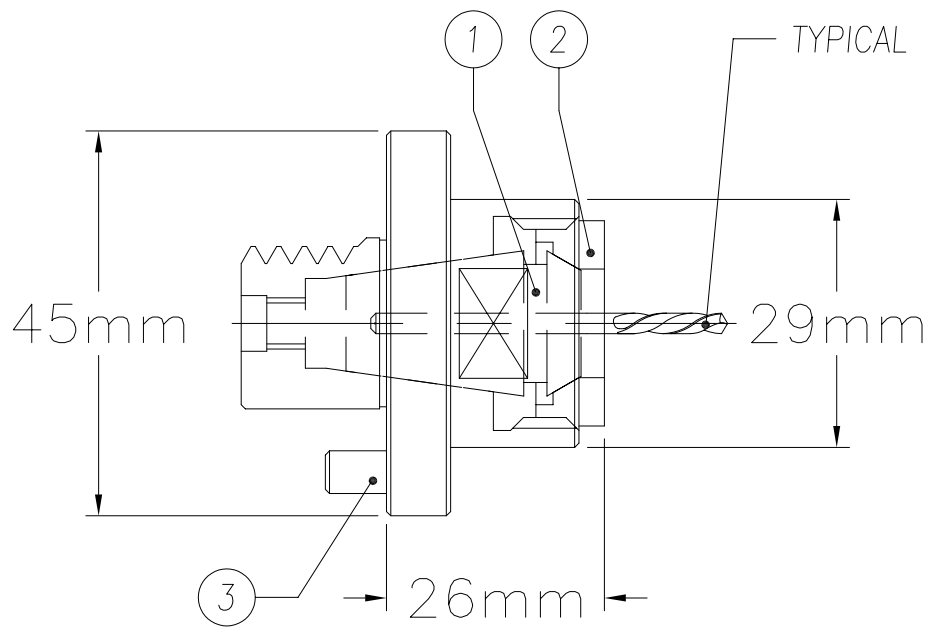
ITEM	QTY.	DESCRIPTION	PART NUMBER
1*	1	COLLET (RANGE 3-20mm)	NBC20
2	1	CLAMP NUT	NBN20
3	1	DOWEL PIN	8 x 20mm
4	1	STOP SCREW M8 x 1 With Nylon	1100-088-P03
5*	1	WRENCH OPEN END (30mm)	72102-30mm
6*	1	WRENCH SPANNER	NBK20

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 2: DRILL HEADS

DH QC 83/16.....83212

\* SPECIAL FOR CROSS DRILLING HEAD ONLY!



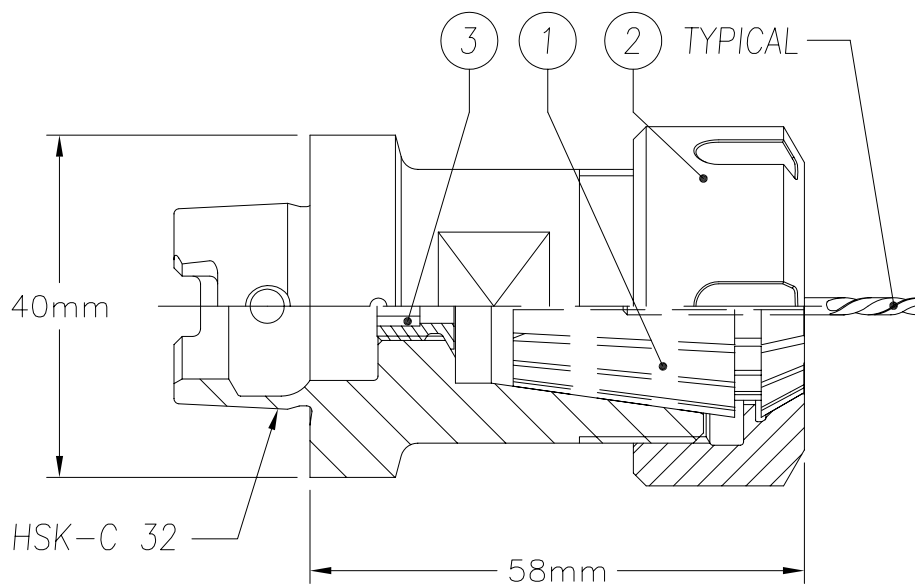
USE TORQUE WRENCH #S-0-060-048-02

ITEM	QTY.	DESCRIPTION	PART NUMBER
1*	1	COLLET (RANGE .5-10mm)	ER16
2	1	PIN FACE NUT ER16A	916110
3	1	DOWEL PIN	5 x 16mm
4*	1	WRENCH OPEN END (27mm)	72102-27mm
5	1	WRENCH PIN FACE	916170

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 2: DRILL HEADS

DH HSK C32/25.....H92124

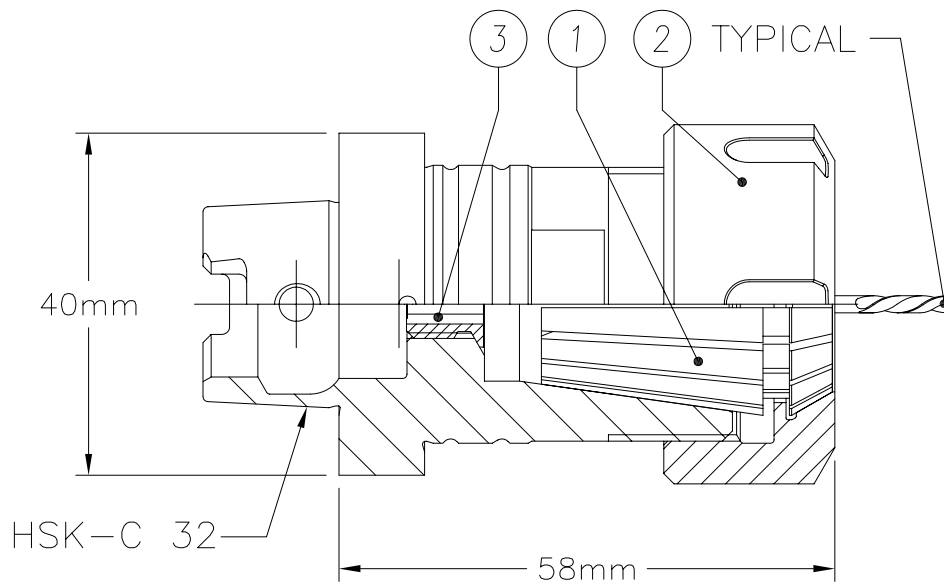


ITEM	QTY	DESCRIPTION	PART NUMBER
1*	1	COLLET (RANGE 1-16mm)	ER25
2	1	CLAMP NUT	925120
3	1	STOP SCREW	
4*	1	WRENCH OPEN END (27mm)	72102-27mm
5*	1	WRENCH SPANNER ER25	925180
6*	1	HEX KEY	4912 C32

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 2: DRILL HEADS

DH HSK C32/25.....HB92124

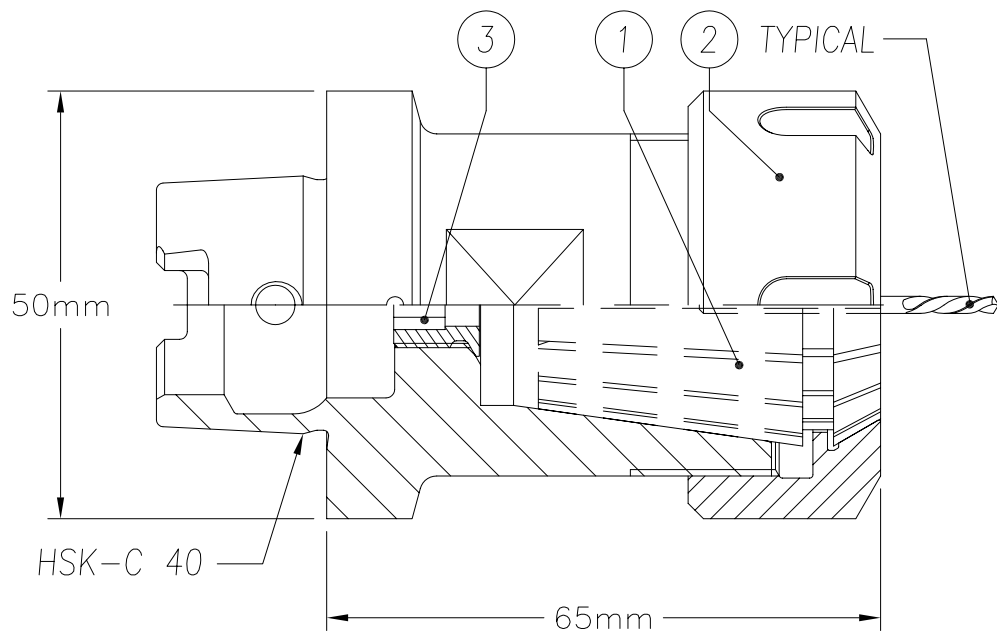


ITEM	QTY	DESCRIPTION	PART NUMBER
1*	1	COLLET (RANGE 1-16mm)	ER25
2	1	CLAMP NUT	3425.20000
3	1	STOP SCREW	
4*	1	BALANCE RINGS (FWR 325)	7490.32500
5*	1	WRENCH OPEN END (27mm)	72102-27mm
6*	1	WRENCH SPANNER ER25	925180
7*	1	HEX KEY	4912 C32

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 2: DRILL HEADS

DH HSK C40/32.....H93125

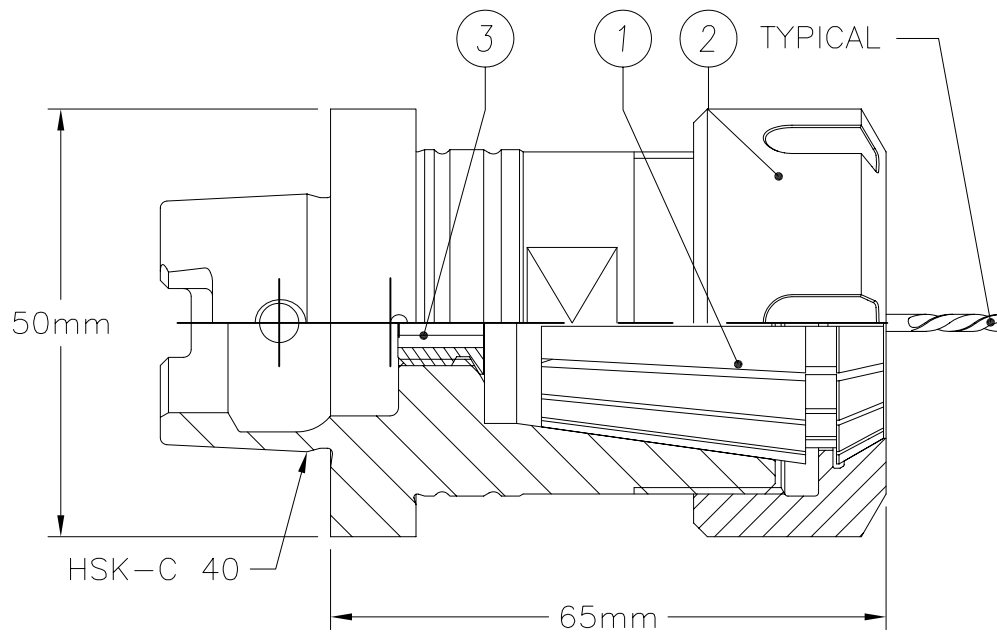


ITEM	QTY	DESCRIPTION	PART NUMBER
1*	1	COLLET (RANGE 2-20mm)	ER32
2	1	CLAMP NUT	932120
3	1	STOP SCREW	
4*	1	WRENCH OPEN END (36mm)	72102-36mm
5*	1	WRENCH SPANNER E32	932180
6*	1	HEX KEY	4912 C40

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 2: DRILL HEADS

DH HSK C40/32.....HB93125

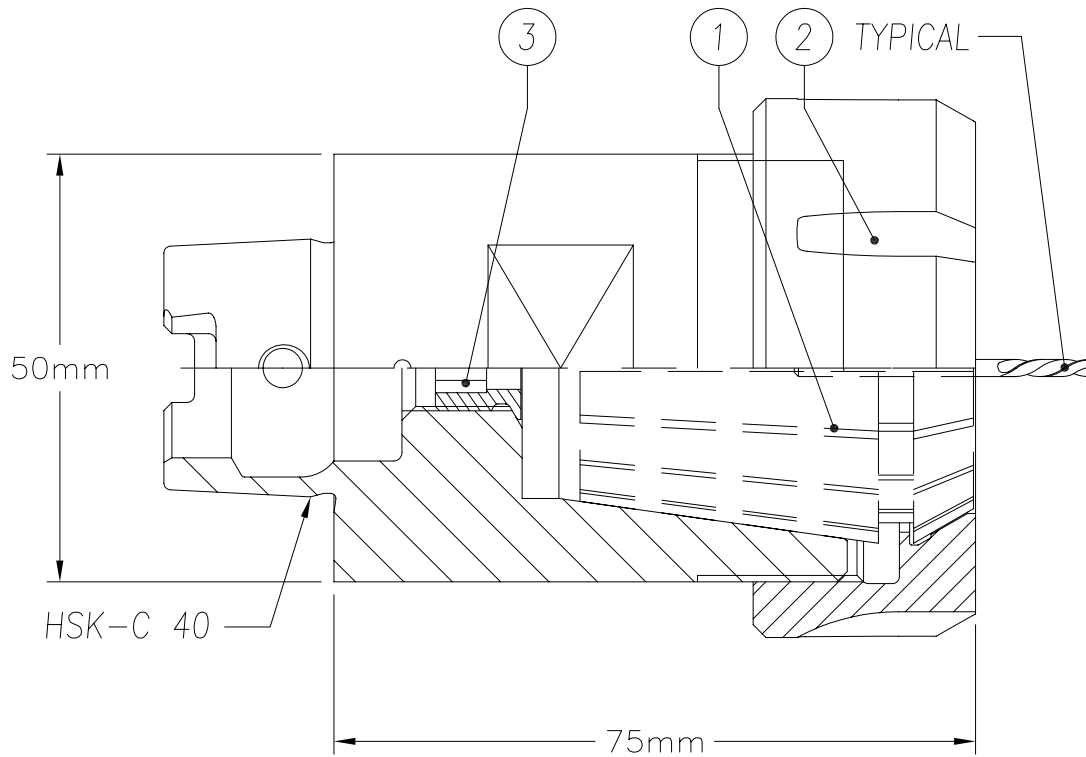


ITEM	QTY	DESCRIPTION	PART NUMBER
1*	1	COLLET (RANGE 2-20mm)	ER32
2	1	CLAMP NUT	3432.20000
3	1	STOP SCREW	
4*	1	WRENCH OPEN END (36mm)	72102-36
5*	1	WRENCH SPANNER E32	932180
6*	1	HEX KEY	4912 C40
7*	1	BALANCE RINGS (FRW 405)	7490.40500

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 2: DRILL HEADS

DH HSK C40/40.....H93126

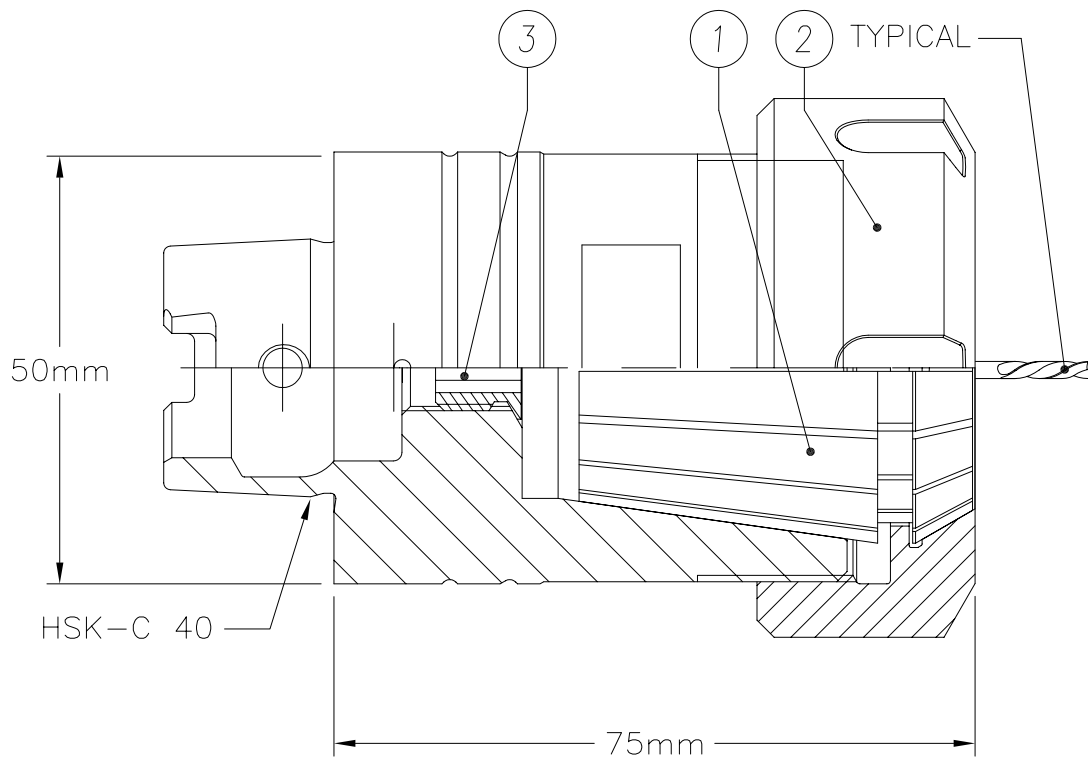


ITEM	QTY	DESCRIPTION	PART NUMBER
1*	1	COLLET (RANGE 3-26mm)	ER40
2	1	CLAMP NUT	940120
3	1	STOP SCREW	
4*	1	WRENCH OPEN END (41mm)	72102-41mm
5*	1	WRENCH SPANNER E40	940180
6*	1	HEX KEY	4912 C40

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 2: DRILL HEADS

DH HSK C40/40.....HB93126



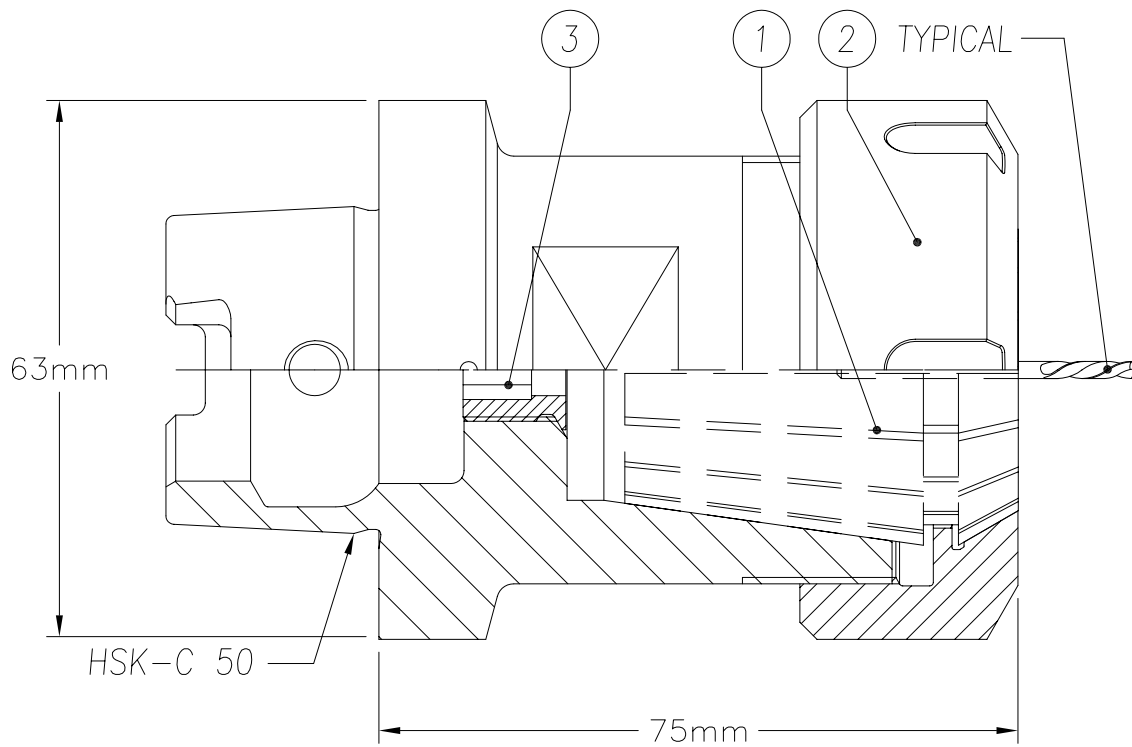
ITEM	QTY	DESCRIPTION	PART NUMBER
1*	1	COLLET (RANGE 3-26mm)	ER40
2	1	CLAMP NUT	3440.20000
3	1	STOP SCREW	
4*	1	WRENCH OPEN END (41mm)	72102-41mm
5*	1	WRENCH SPANNER E40	940180
6*	1	HEX KEY	4912 C40
7*	1	BALANCE RINGS (FRW 505)	7490.50500

\* NOT INCLUDED WITH TOOLHEAD



# SECTION 2: DRILL HEADS

DH HSK C50/40.....H94126



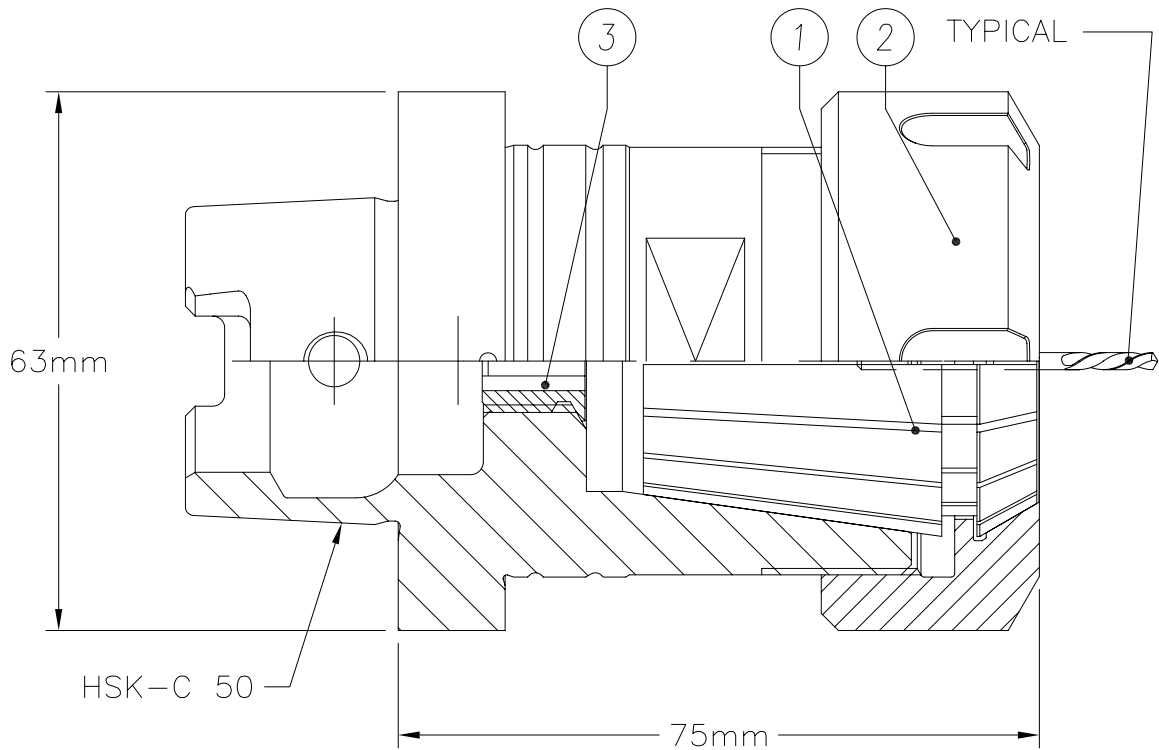
ITEM	QTY	DESCRIPTION	PART NUMBER
1*	1	COLLET (RANGE 3-26mm)	ER40
2	1	CLAMP NUT	940120
3	1	STOP SCREW	
4*	1	WRENCH OPEN END (41mm)	72102-41mm
5*	1	WRENCH SPANNER E32	940180
6*	1	HEX KEY	4912 C50

\* NOT INCLUDED WITH TOOLHEAD

REV 12/15/2003

# SECTION 2: DRILL HEADS

DH HSK C50/40.....HB94126

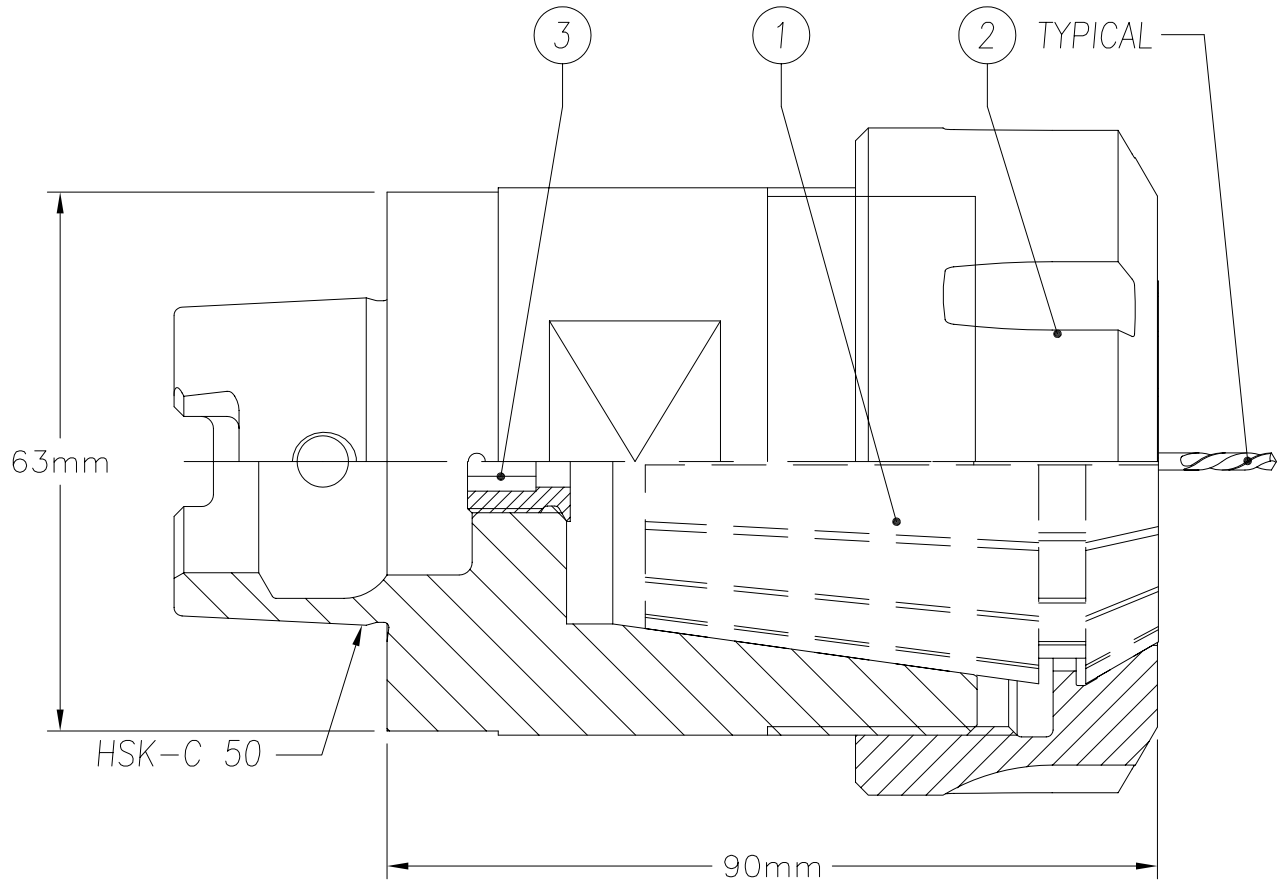


ITEM	QTY	DESCRIPTION	PART NUMBER
1*	1	COLLET (RANGE 3–26mm)	ER40
2	1	CLAMP NUT	3440.20000
3	1	STOP SCREW	
4*	1	WRENCH OPEN END (41mm)	72102–41mm
5*	1	WRENCH SPANNER E32	940180
6*	1	HEX KEY	4912 C50
7*	1	BALANCE RINGS (FRW 505)	7490.50500

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 2: DRILL HEADS

DH HSK C50/50.....H94127

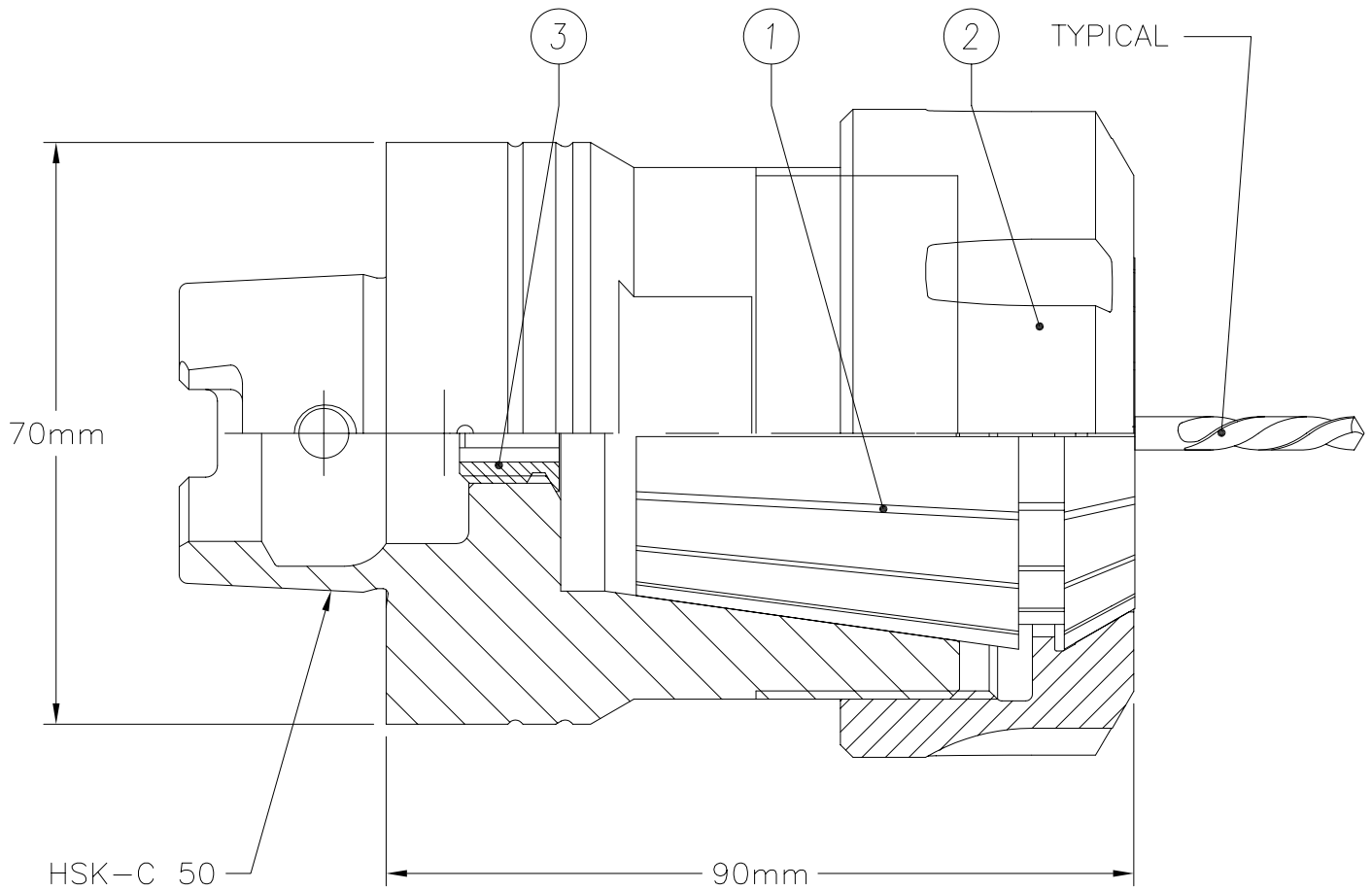


ITEM	QTY	DESCRIPTION	PART NUMBER
1*	1	COLLET (RANGE 4-34mm)	ER50
2	1	CLAMP NUT	950120
3	1	STOP SCREW	
4*	1	WRENCH OPEN END (55mm)	72102-55mm
5*	1	WRENCH SPANNER E50	950180
6*	1	HEX KEY	4912 C50

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 2: DRILL HEADS

DH HSK C50/50.....HB94127



ITEM	QTY	DESCRIPTION	PART NUMBER
1*	1	COLLET (RANGE 4-34mm)	ER50
2	1	CLAMP NUT	950120
3	1	STOP SCREW	
4*	1	WRENCH OPEN END (55mm)	72102-55mm
5*	1	WRENCH SPANNER E50	950180
6*	1	HEX KEY	4912 C50
7*	1	BALANCE RINGS (FRW 700)	8020.12200

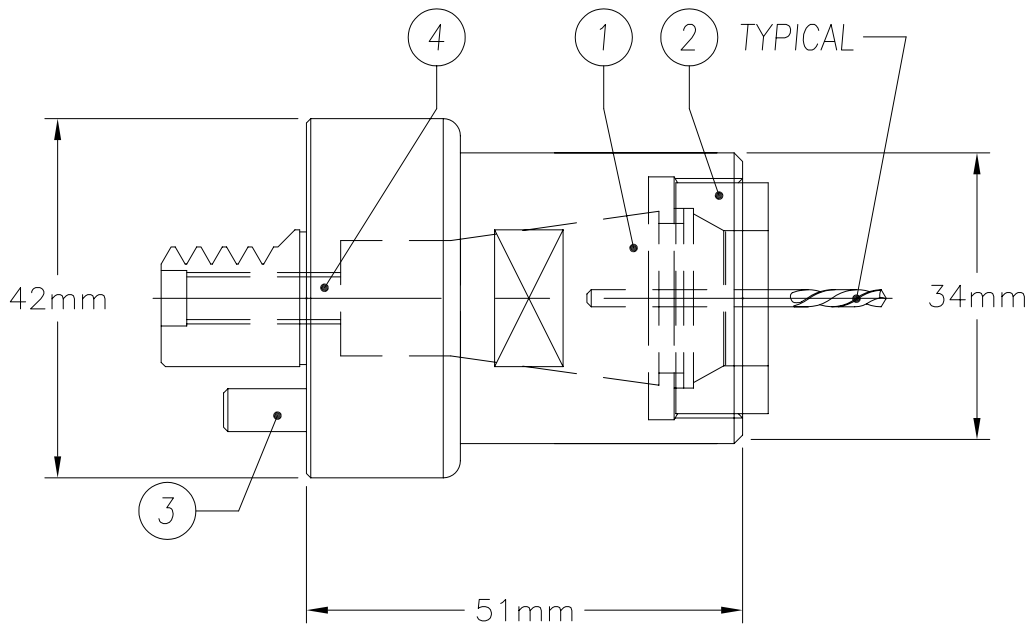
\* NOT INCLUDED WITH TOOLHEAD

**SECTION 3**

**DRILL HOLDERS**

# SECTION 3: DRILL HOLDERS

DH QC 82/20 OD34.....82223



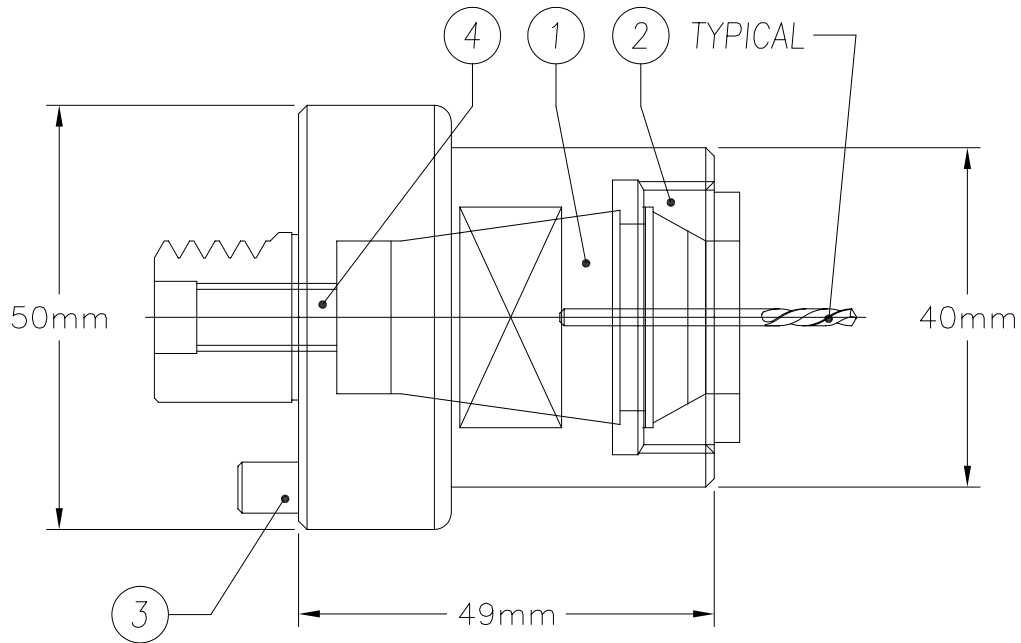
USE TORQUE WRENCH #S-0-060-048-01

ITEM	QTY.	DESCRIPTION	PART NUMBER
1*	1	COLLET (RANGE 1-13mm)	ER20
2	1	CLAMP NUT	920110
3	1	DOWEL PIN	5 x 20mm
4	1	STOP SCREW With Nylon	M6 x 16
5*	1	WRENCH OPEN END (30mm)	72102-30mm
6	1	WRENCH PIN FACE	920170

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 3: DRILL HOLDERS

DH QC 83/25 OD40.....83224



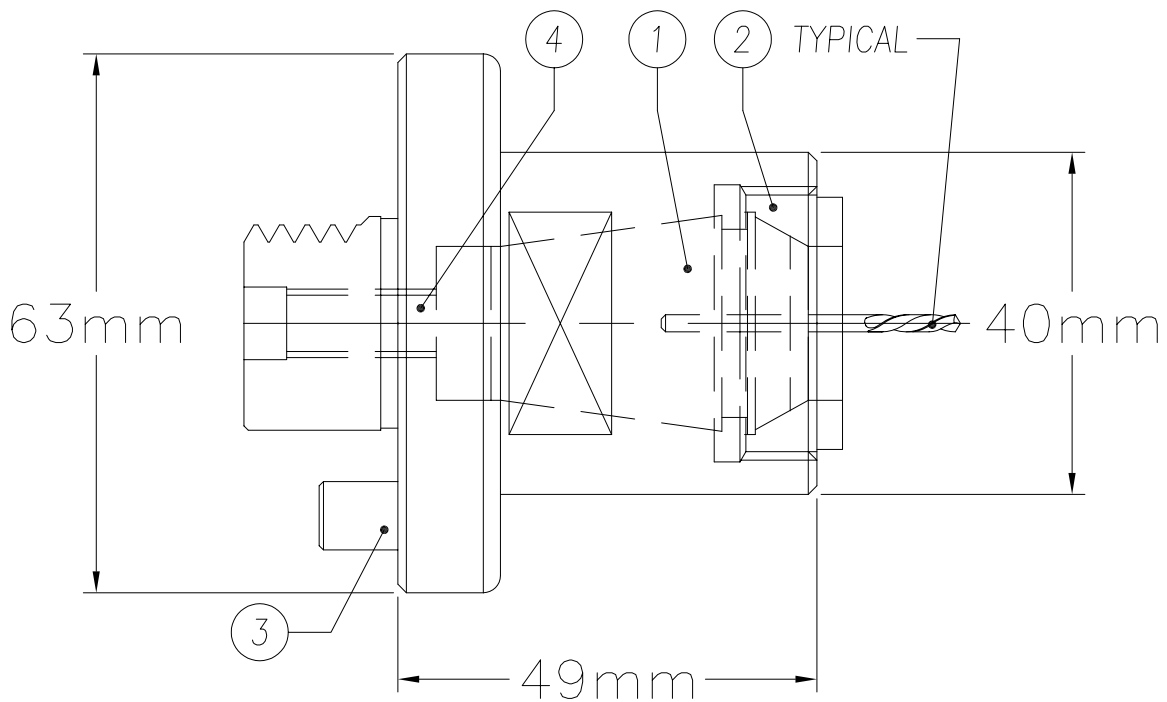
USE TORQUE WRENCH #S-0-060-048-02

ITEM	QTY.	DESCRIPTION	PART NUMBER
1*	1	COLLET (RANGE 1-16mm)	ER25
2	1	CLAMP NUT	925110
3	1	DOWEL PIN	6 x 20mm
4	1	STOP SCREW M8 x 1 With Nylon	1100-088-P03
5*	1	WRENCH OPEN END (30mm)	72102-30mm
6	1	WRENCH PIN FACE	925170

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 3: DRILL HOLDERS

DH QC 84/25 OD40.....84224



USE TORQUE WRENCH #S-0-060-048-03

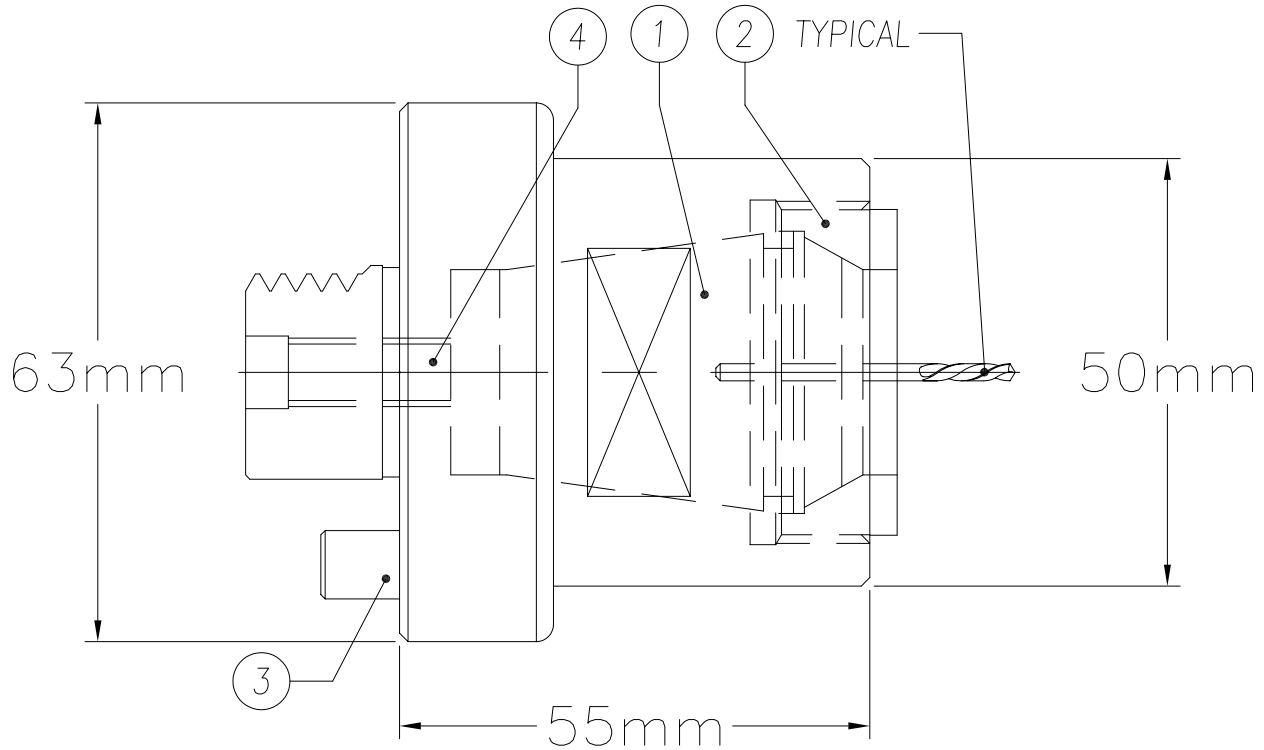
ITEM	QTY.	DESCRIPTION	PART NUMBER
1*	1	COLLET (RANGE 1-16mm)	ER25
2	1	CLAMP NUT	925110
3	1	DOWEL PIN	8 x 20mm
4	1	STOP SCREW M8 x 1 With Nylon	1100-088-P03
5*	1	WRENCH OPEN END (30mm)	72102-30mm
6	1	WRENCH PIN FACE	925170

\* NOT INCLUDED WITH TOOLHEAD



# SECTION 3: DRILL HOLDERS

DH QC 84/32 OD50.....84225



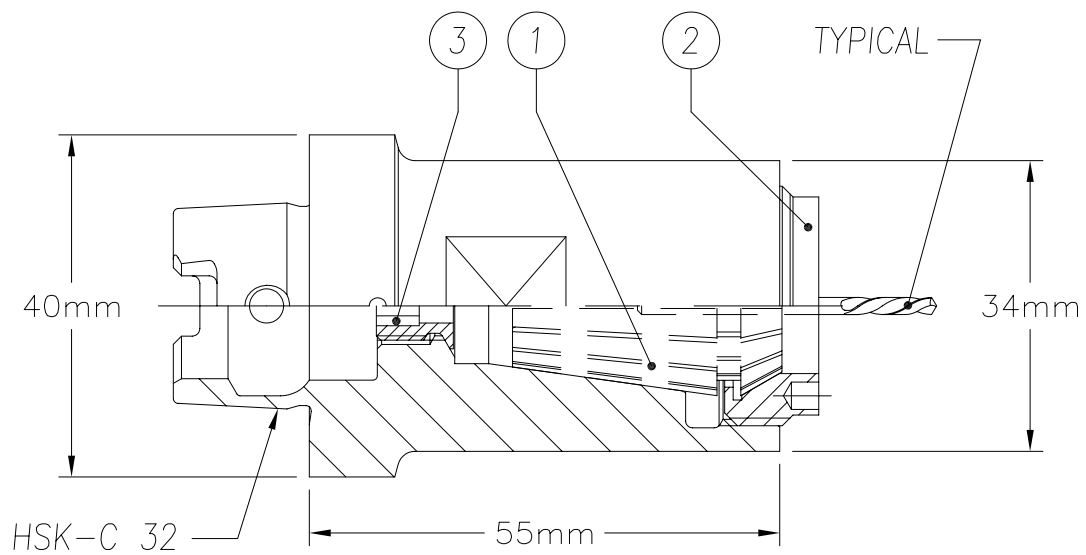
USE TORQUE WRENCH #S-0-060-048-03

ITEM	QTY.	DESCRIPTION	PART NUMBER
1*	1	COLLET (RANGE 2-20mm)	ER32
2	1	CLAMP NUT	932110
3	1	DOWEL PIN	8 x 20mm
4	1	STOP SCREW M8 x 1 With Nylon	1100-088-P03
5*	1	WRENCH OPEN END (41mm)	72102-41mm
6	1	WRENCH PIN FACE	932170

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 3: DRILL HOLDERS

DH HSK C32/20 OD 34.....H92223



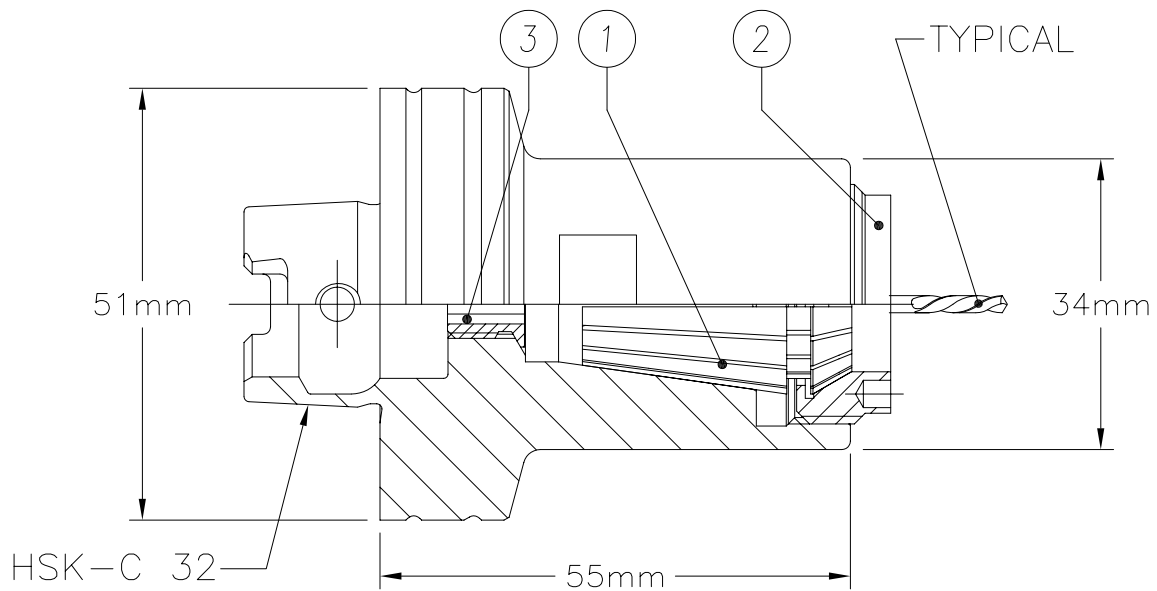
ITEM	QTY	DESCRIPTION	PART NUMBER
1*	1	COLLET (RANGE 1-13mm)	ER20
2	1	CLAMP NUT	920110
3	1	STOP SCREW	
4*	1	WRENCH OPEN END (30mm)	72102 30mm
5*	1	WRENCH PIN FACE	920170
6*	1	HEX KEY	4912 C32

\* NOT INCLUDED WITH TOOLHEAD

REV 12/15/2003

# SECTION 3: DRILL HOLDERS

DH HSK C32/20 OD 34.....HB92223

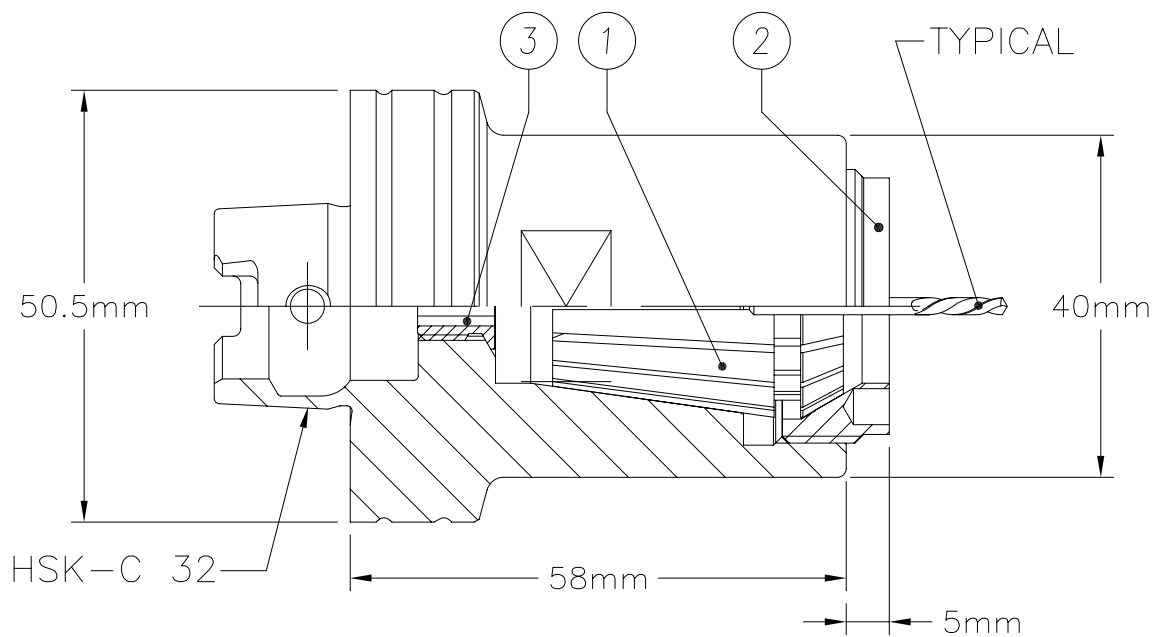


ITEM	QTY	DESCRIPTION	PART NUMBER
1*	1	COLLET (RANGE 1-13mm)	ER20
2	1	CLAMP NUT	3320.20000
3	1	STOP SCREW	
4*	1	WRENCH OPEN END (30mm)	72102 30mm
5*	1	WRENCH PIN FACE	920170
6*	1	HEX KEY	4912 C32
7*	1	BALANCE RINGS (FWR 700)	8020.12200

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 3: DRILL HOLDERS

DH HSK C32/25 OD 40.....HB92224



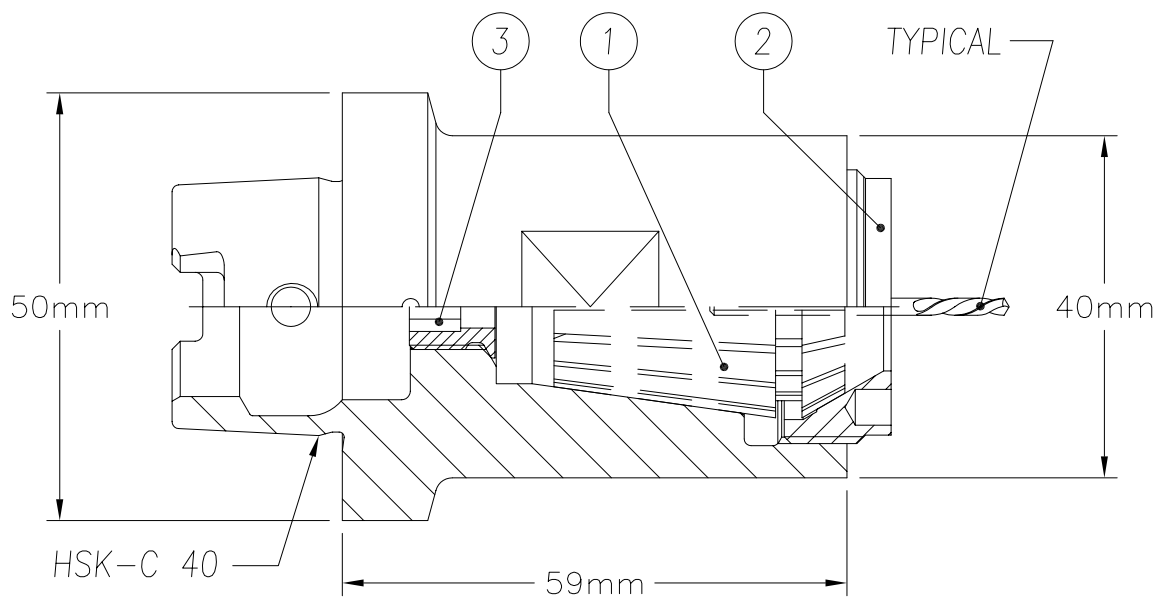
ITEM	QTY	DESCRIPTION	PART NUMBER
1*	1	COLLET (RANGE 1-16mm)	ER25
2	1	CLAMP NUT	3325.20000
3	1	STOP SCREW	
4*	1	WRENCH OPEN END (36mm)	72102 36mm
5*	1	WRENCH PIN FACE	925170
6*	1	HEX KEY	4912 C32
7*	1	BALANCE RINGS (FWR 505)	7490.50500

\* NOT INCLUDED WITH TOOLHEAD

REV 12/05/03

# SECTION 3: DRILL HOLDERS

DH HSK C40/25 OD40.....H93224



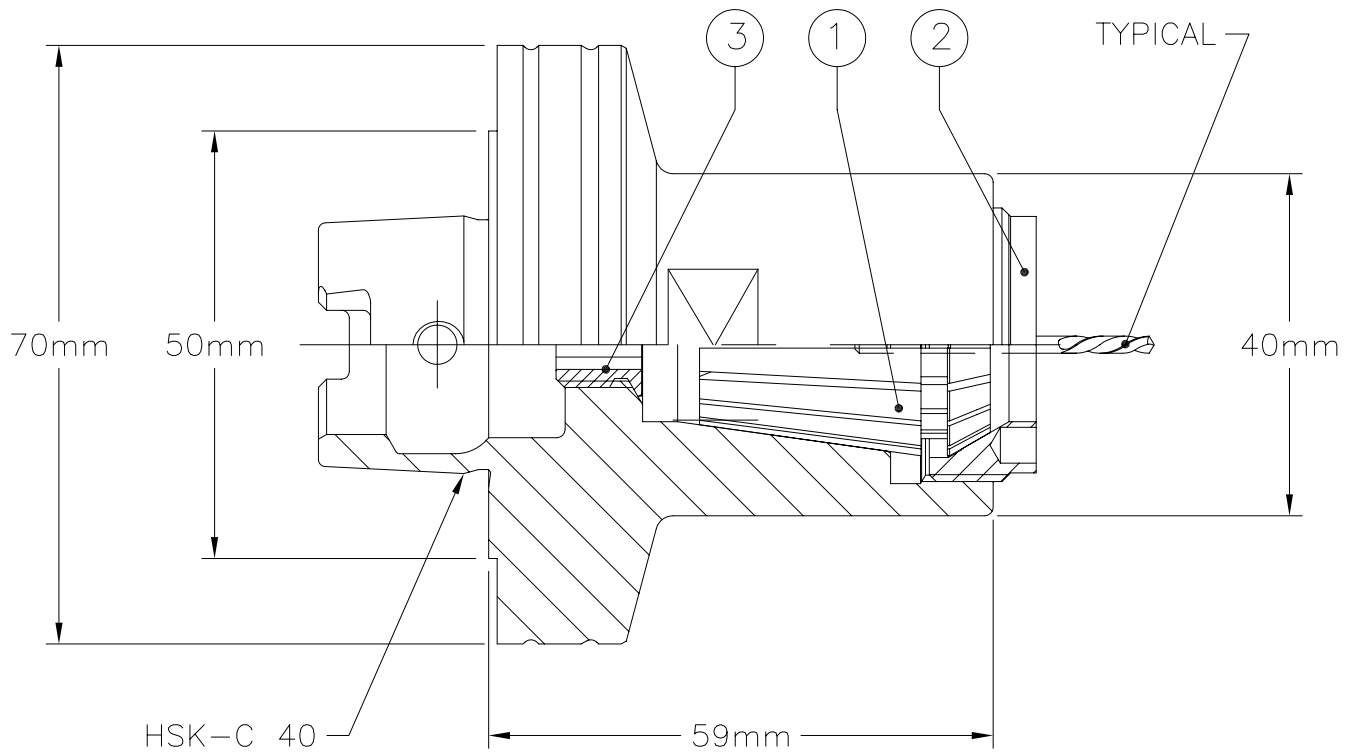
ITEM	QTY	DESCRIPTION	PART NUMBER
1*	1	COLLET (RANGE 1–16mm)	ER25
2	1	CLAMP NUT	925110
3	1	STOP SCREW	
4*	1	WRENCH OPEN END (36mm)	72102–36mm
5*	1	WRENCH PIN FACE	925170
6*	1	HEX KEY	4912 C40

\* NOT INCLUDED WITH TOOLHEAD

REV 12/15/2003

# SECTION 3: DRILL HOLDERS

DH HSK C40/25 OD40.....HB93224



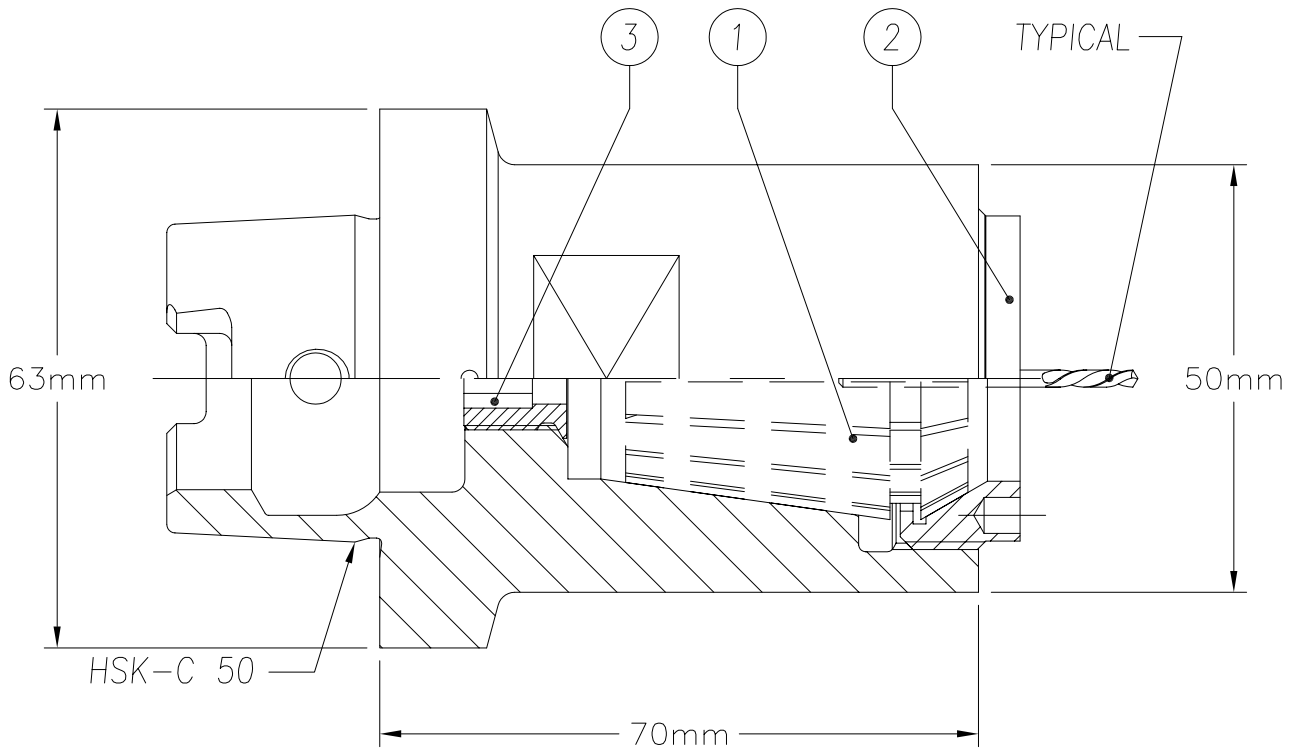
ITEM	QTY	DESCRIPTION	PART NUMBER
1*	1	COLLET (RANGE 1-16mm)	ER25
2	1	CLAMP NUT	3325.20000
3	1	STOP SCREW	
4*	1	WRENCH OPEN END (36mm)	72102-36mm
5*	1	WRENCH PIN FACE	925170
6*	1	HEX KEY	4912 C40
7*	1	BALANCE RINGS (FRW 700)	8020.12200

\* NOT INCLUDED WITH TOOLHEAD

REV 12/05/2003

# SECTION 3: DRILL HOLDERS

DH HSK C50/32 OD50.....H94225



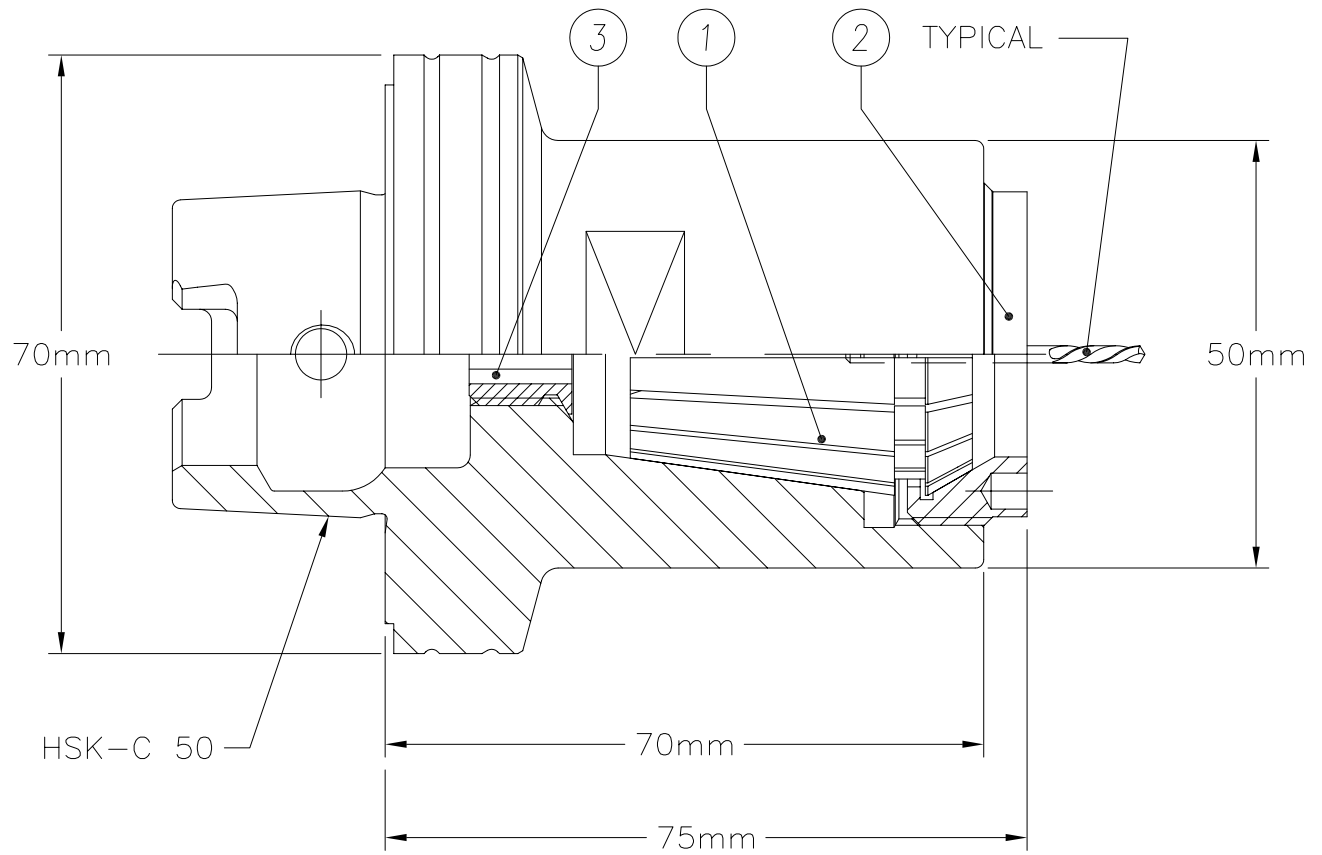
ITEM	QTY	DESCRIPTION	PART NUMBER
1*	1	COLLET (RANGE 2-20mm)	ER32
2	1	CLAMP NUT	932110
3	1	STOP SCREW	
4*	1	WRENCH OPEN END (41mm)	72102-41mm
5*	1	WRENCH PIN FACE	932170
6*	1	HEX KEY	4912 C50

\* NOT INCLUDED WITH TOOLHEAD

REV 12/15/2003

# SECTION 3: DRILL HOLDERS

DH HSK C50/32 OD50.....HB94225



ITEM	QTY	DESCRIPTION	PART NUMBER
1*	1	COLLET (RANGE 2-20mm)	ER32
2	1	CLAMP NUT	3332.20000
3	1	STOP SCREW	
4*	1	WRENCH OPEN END (41mm)	72102-41mm
5*	1	WRENCH PIN FACE	932170
6*	1	HEX KEY	4912 C50
7*	1	BALANCE RINGS (FRW 700)	8020.12200

\* NOT INCLUDED WITH TOOLHEAD

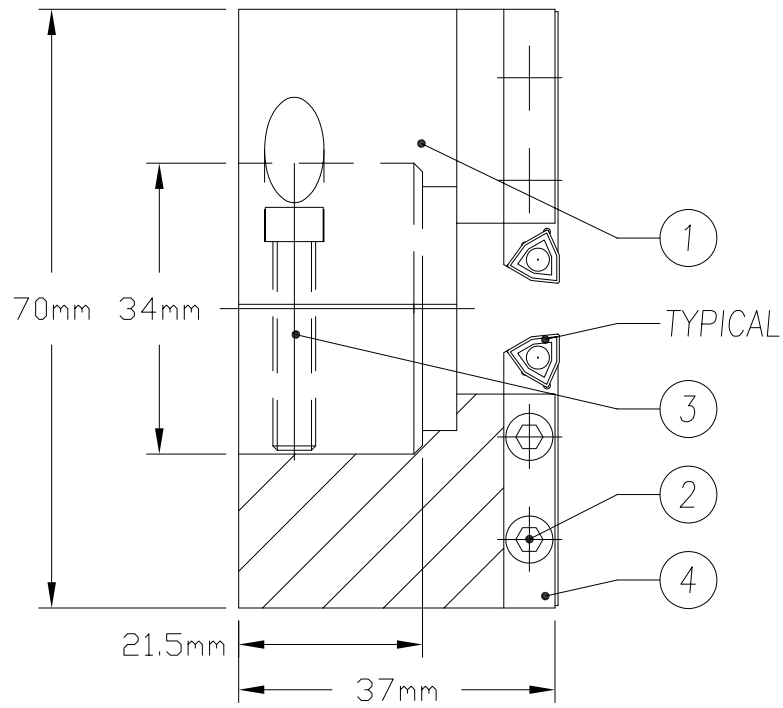


**SECTION 4**

**CHAMFER HEADS**

# SECTION 4: CHAMFER HEADS

CH 182/ 1/4 ID34.....5.37.005

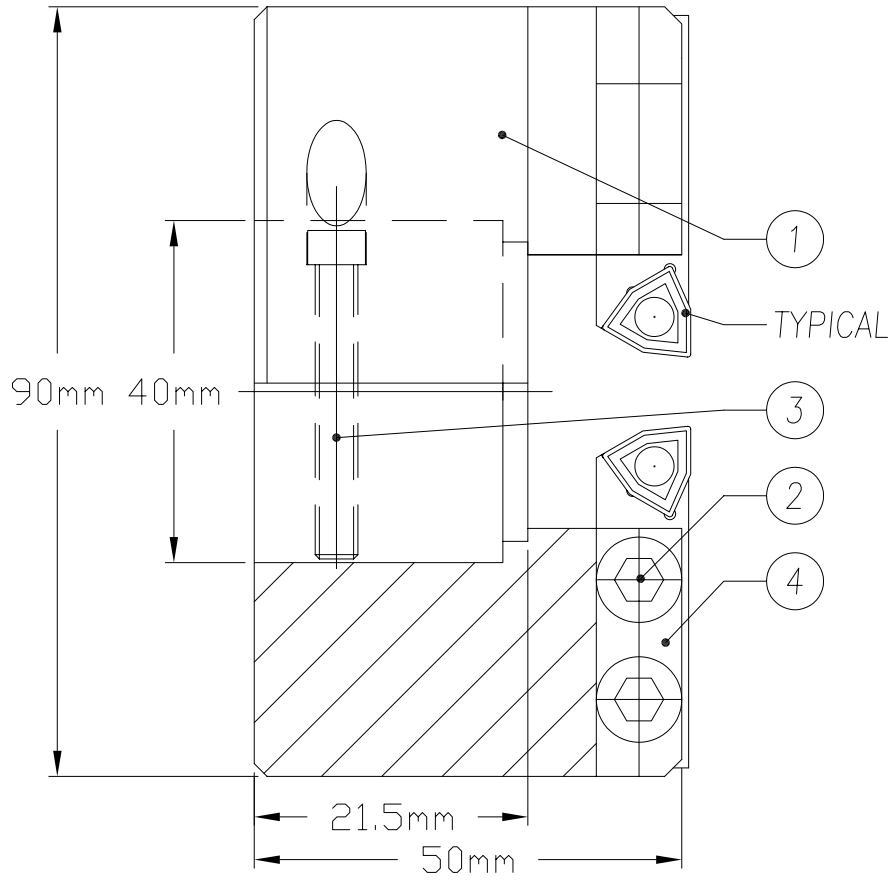


ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	CHAMFER HEAD	5.37.106
2	4	SOCKET HEAD CAP SCREW	M6 x 16mm
3	1	SOCKET HEAD CAP SCREW	M8 x 25mm
4*	2	TOOL (1/4" MAXIMUM)	

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 4: CHAMFER HEADS

CH 325/ 3/8 ID40.....5.37.004

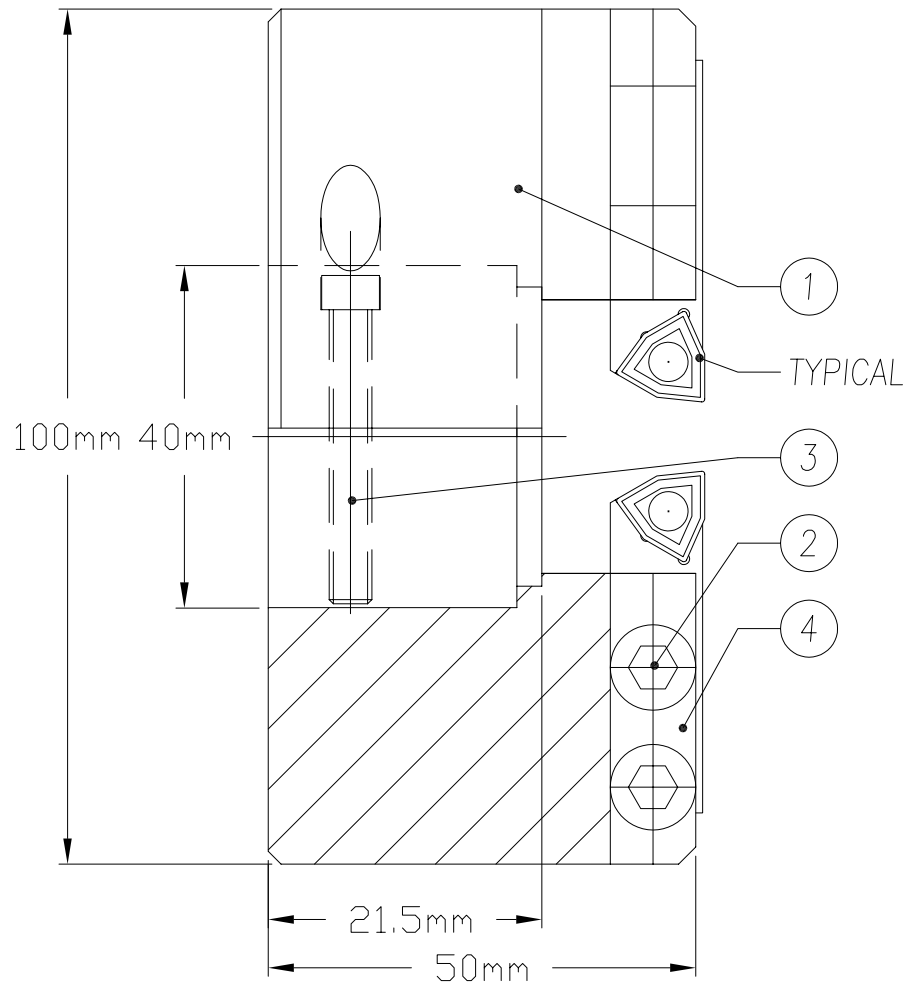


ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	CHAMFER HEAD	5.37.105-1
2	4	SOCKET HEAD CAP SCREW	M6 x 20mm
3	1	SOCKET HEAD CAP SCREW	M8 x 35mm
4*	2	TOOL (3/8" MAXIMUM)	

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 4: CHAMFER HEADS

CH 335/ 1/2 ID40.....5.37.003

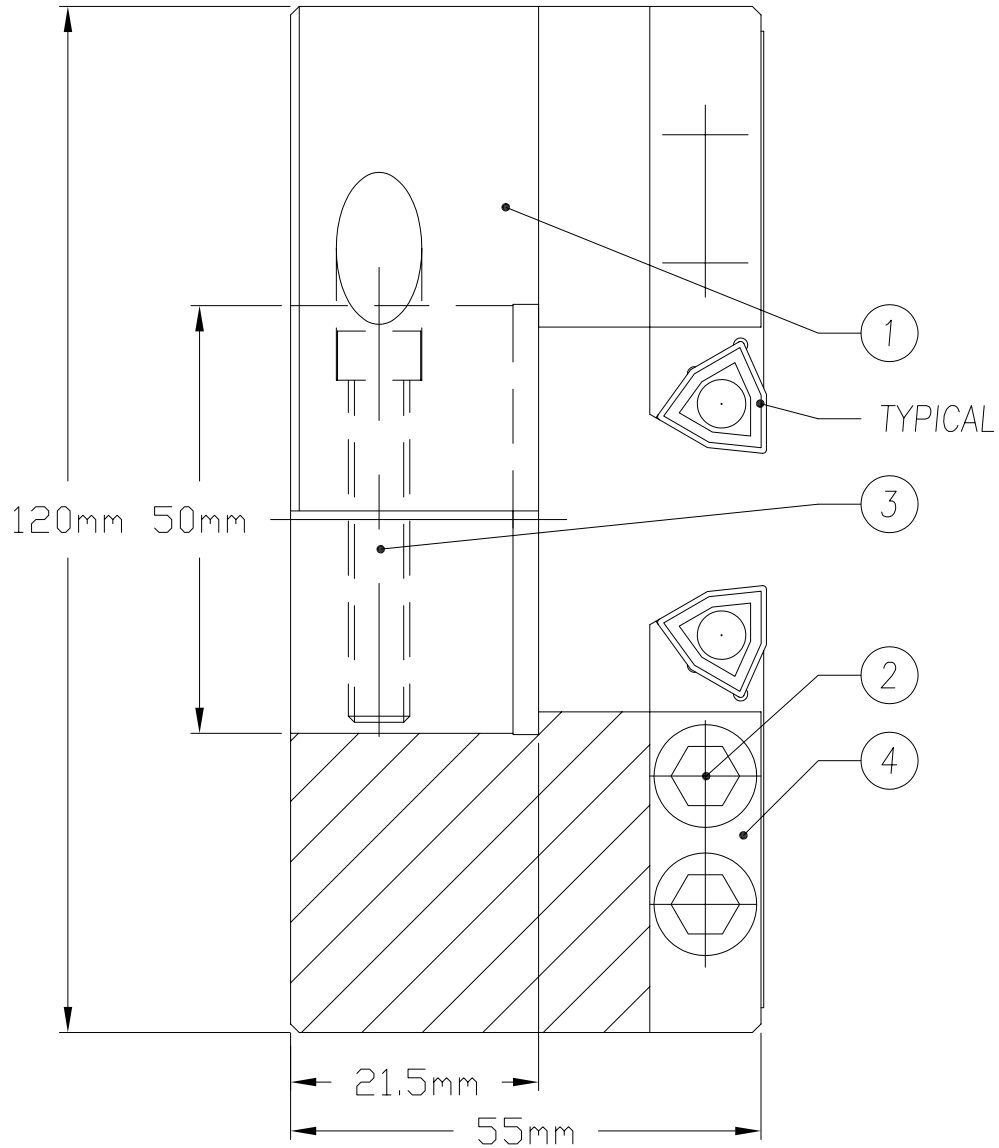


ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	CHAMFER HEAD	5.37.105
2	4	SOCKET HEAD CAP SCREW	M6 x 20mm
3	1	SOCKET HEAD CAP SCREW	M8 x 35mm
4*	2	TOOL (1/2" MAXIMUM)	

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 4: CHAMFER HEADS

CH 600/ 1/2 ID50.....6.37.002



ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	CHAMFER HEAD	6.37.104
2	4	SOCKET HEAD CAP SCREW	M8 x 20mm
3	1	SOCKET HEAD CAP SCREW	M10 x 40mm
4*	2	TOOL (1/2" MAXIMUM)	

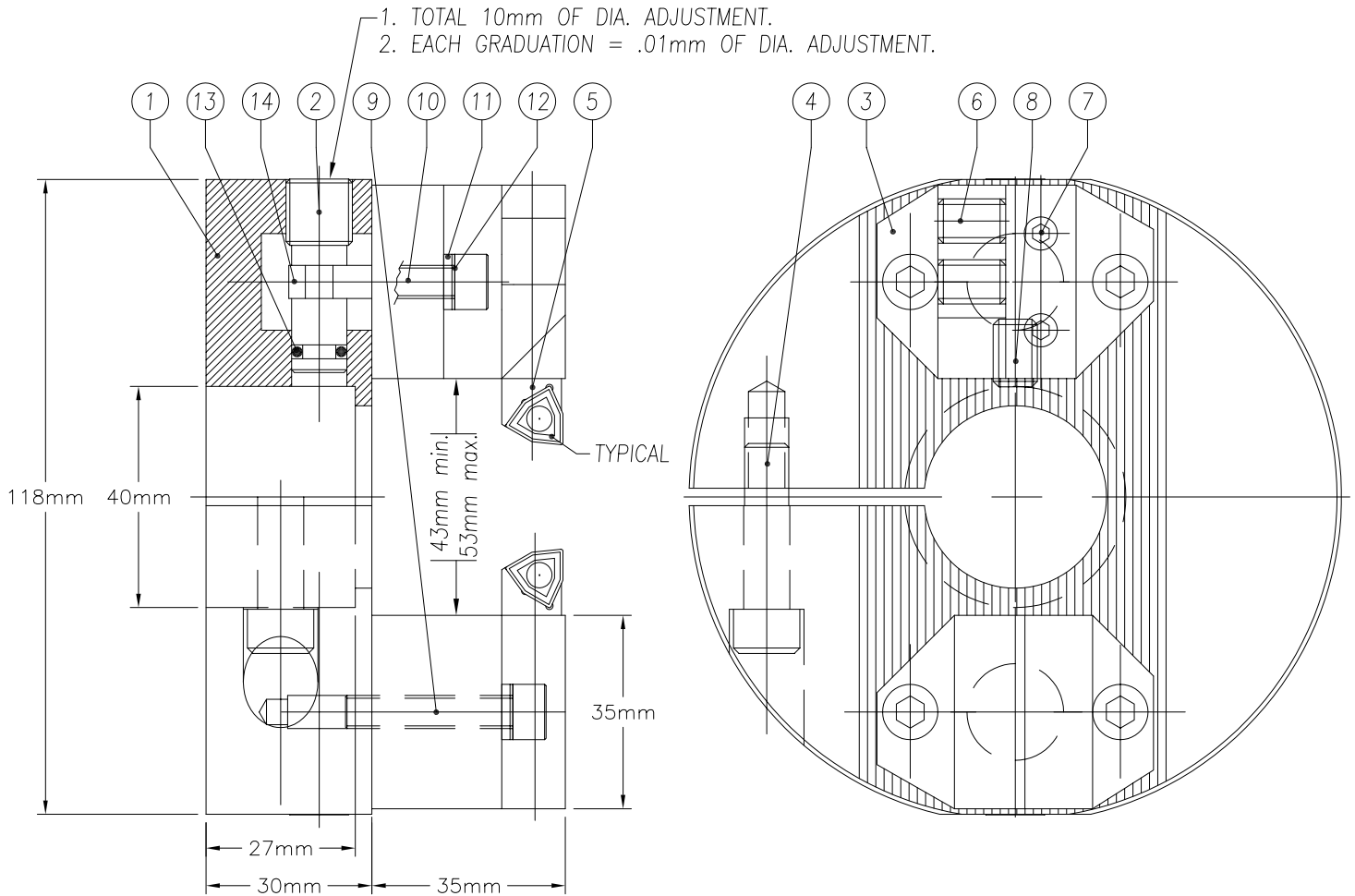
\* NOT INCLUDED WITH TOOLHEAD

**SECTION 5**

**CHAMFER HEADS,  
ADJUSTABLE**

# SECTION 5: CHAMFER HEADS, ADJUSTABLE

CHA 350/ 1/2 ID40 35.....0.060.0483-35

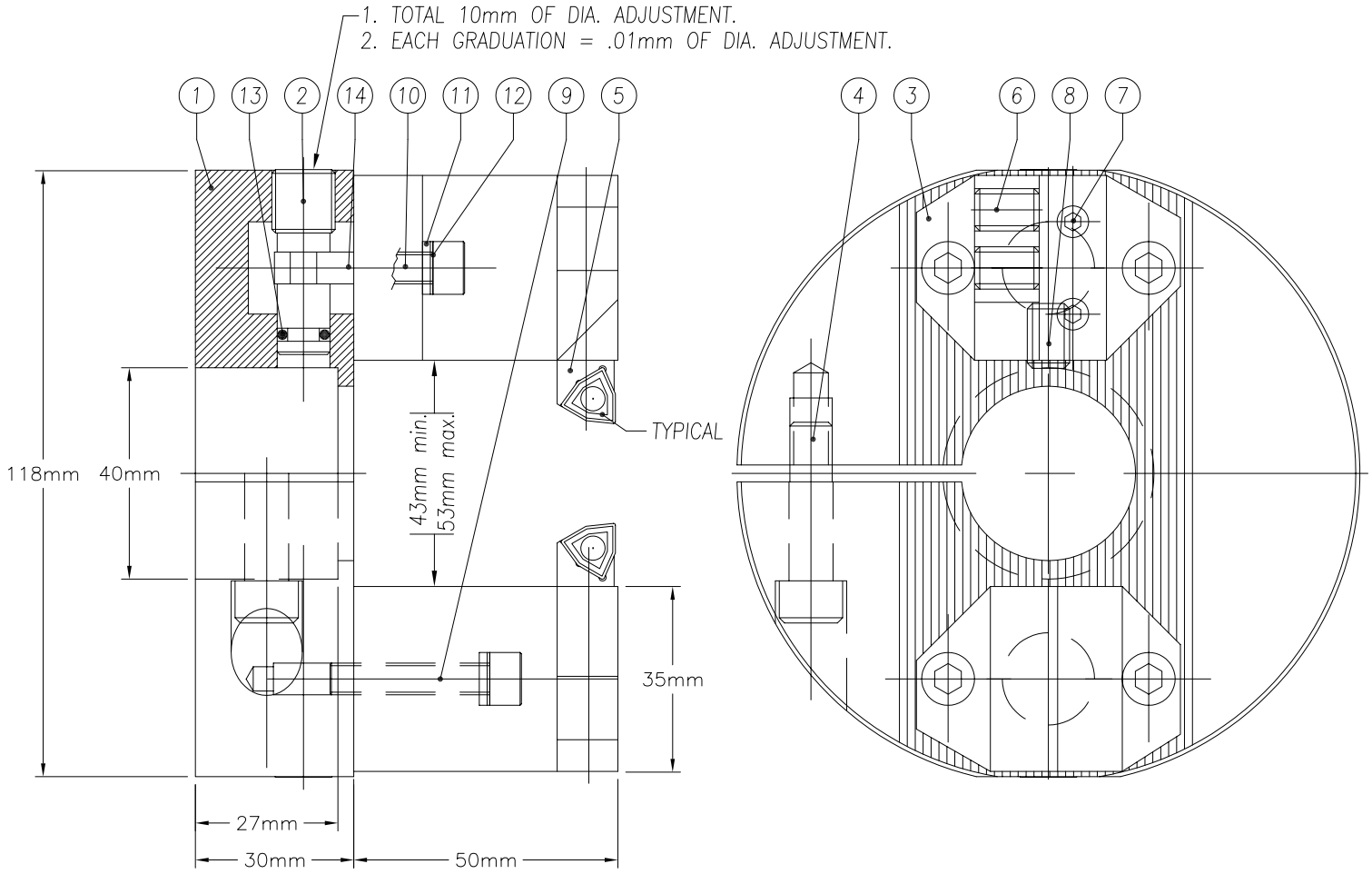


ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	CHAMFER HEAD ADJUSTABLE	0.060.487
2	2	ADJUSTING DIAL	4915-03
3	2	TOOL HOLDER	4922-35-127
4	1	SOCKET HEAD CAP SCREW	M8 x 30mm
5	2	TOOL SHANK (1/2" MAXIMUM)	
6*	4	SOCKET SET SCREW	M8 x 12mm
7	4	SOCKET SET SCREW	M6 x 6mm
8	2	SOCKET SET SCREW	M6 x 12mm
9	2	SOCKET HEAD CAP SCREW	M6 x 30mm
10	2	SOCKET HEAD CAP SCREW	M6 x 22mm
11	4	SPACER	4911-19
12	4	SPRING WASHER	212748 M6
13	2	O-RING	ORM 0060-20
14	2	FORK	4915-10

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 5: CHAMFER HEADS, ADJUSTABLE

CHA 375/ 1/2 ID40 50.....0.060.0483-50



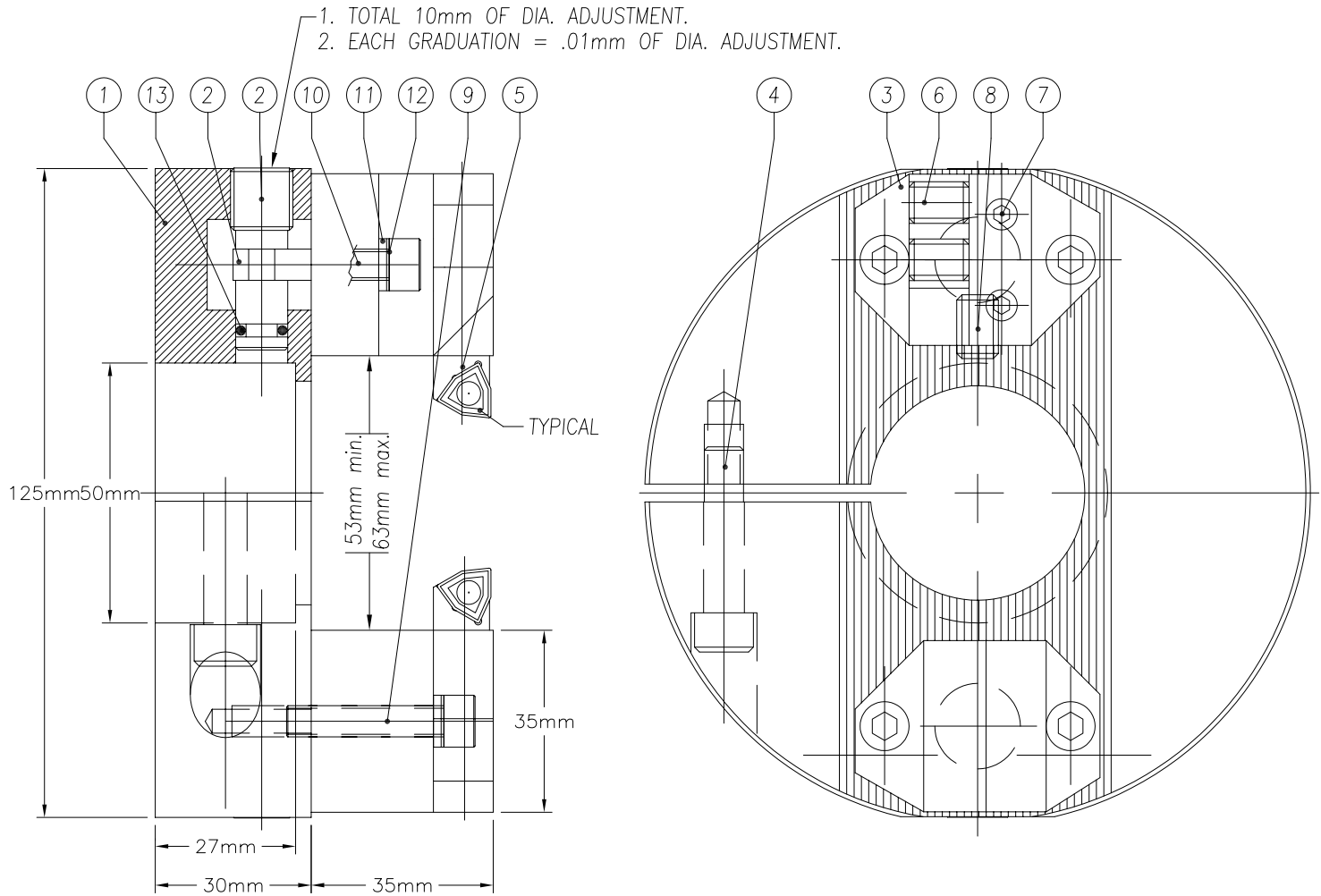
ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	CHAMFER HEAD ADJUSTABLE	0.060.487
2	2	ADJUSTING DIAL	4915-03
3	2	TOOL HOLDER	4922-50-127
4	1	SOCKET HEAD CAP SCREW	M8 x 30mm
5	2	TOOL SHANK (1/2" MAXIMUM)	
6*	4	SOCKET SET SCREW	M8 x 12mm
7	4	SOCKET SET SCREW	M6 x 6mm
8	2	SOCKET SET SCREW	M6 x 12mm
9	2	SOCKET HEAD CAP SCREW	M6 x 30mm
10	2	SOCKET HEAD CAP SCREW	M6 x 22mm
11	4	SPACER	4911-19
12	4	SPRING WASHER	212748 M6
13	2	O-RING	ORM 0060-20
14	2	FORK	4915-10

\* NOT INCLUDED WITH TOOLHEAD



# SECTION 5: CHAMFER HEADS, ADJUSTABLE

CHA 650/ 1/2 ID50 35.....0.060.0486-35

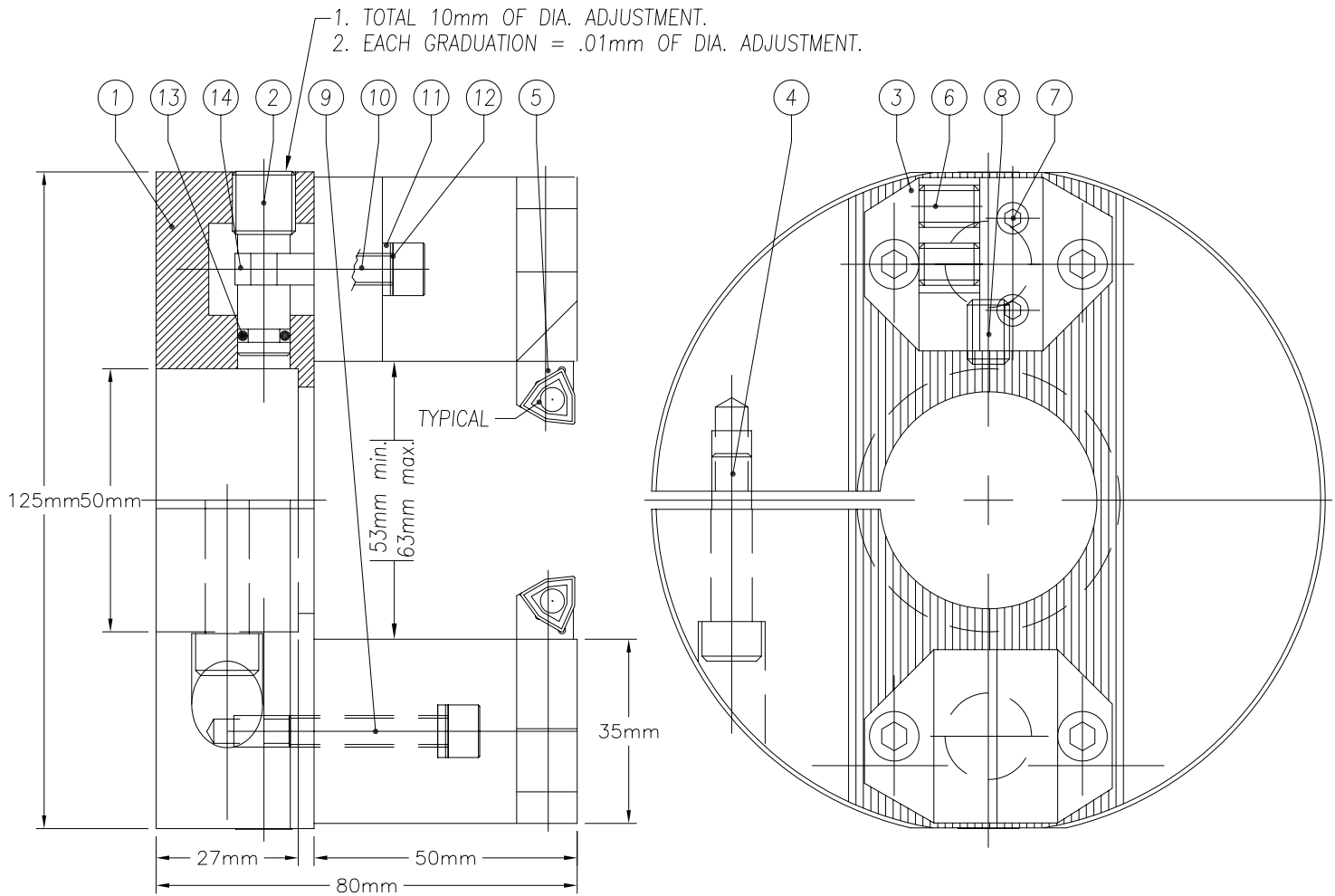


ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	CHAMFER HEAD ADJUSTABLE	0.060.489
2	2	ADJUSTING DIAL	4915-03
3	2	TOOL HOLDER	4922-35-127
4	1	SOCKET HEAD CAP SCREW	M8 x 30mm
5	2	TOOL SHANK (1/2" MAXIMUM)	
6*	4	SOCKET SET SCREW	M8 x 12mm
7	4	SOCKET SET SCREW	M6 x 6mm
8	2	SOCKET SET SCREW	M6 x 12mm
9	2	SOCKET HEAD CAP SCREW	M6 x 30mm
10	2	SOCKET HEAD CAP SCREW	M6 x 22mm
11	4	SPACER	4911-19
12	4	SPRING WASHER	212748 M6
13	2	O-RING	ORM 0060-20
14	2	FORK	4915-10

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 5: CHAMFER HEADS, ADJUSTABLE

CHA 675/ 1/2 ID50 50.....0.060.0486-50



ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	CHAMFER HEAD ADJUSTABLE	0.060.489
2	2	ADJUSTING DIAL	4915-03
3	2	TOOL HOLDER	4922-50-127
4	1	SOCKET HEAD CAP SCREW	M8 x 30mm
5	2	TOOL SHANK (1/2" MAXIMUM)	
6*	4	SOCKET SET SCREW	M8 x 12mm
7	4	SOCKET SET SCREW	M6 x 6mm
8	2	SOCKET SET SCREW	M6 x 12mm
9	2	SOCKET HEAD CAP SCREW	M6 x 30mm
10	2	SOCKET HEAD CAP SCREW	M6 x 22mm
11	4	SPACER	4911-19
12	4	SPRING WASHER	212748 M6
13	2	O-RING	ORM 0060-20
14	2	FORK	4915-10

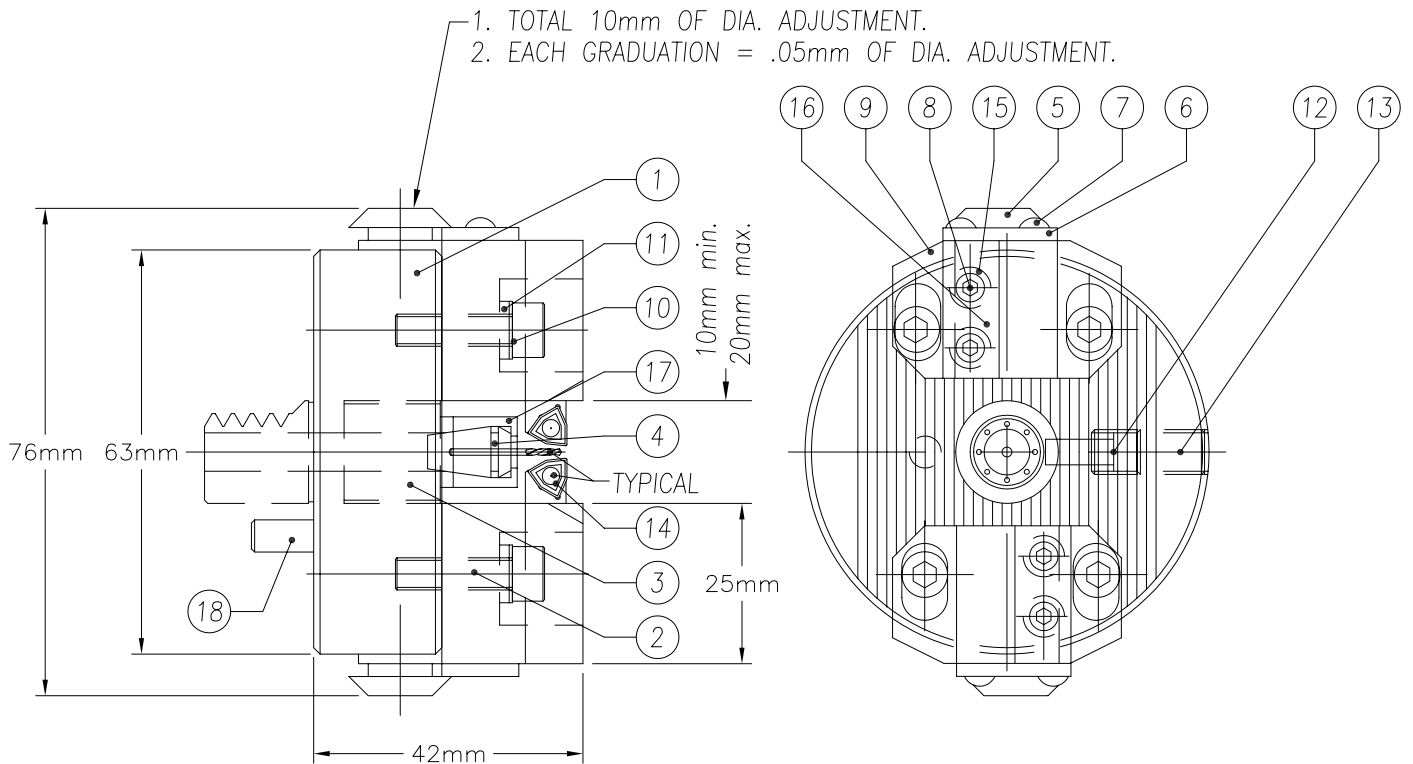
\* NOT INCLUDED WITH TOOLHEAD

# **SECTION 6**

## **TURNING HEADS ROUGH**

# SECTION 6: TURNING HEADS

TH QC82-63/8.....82933-952



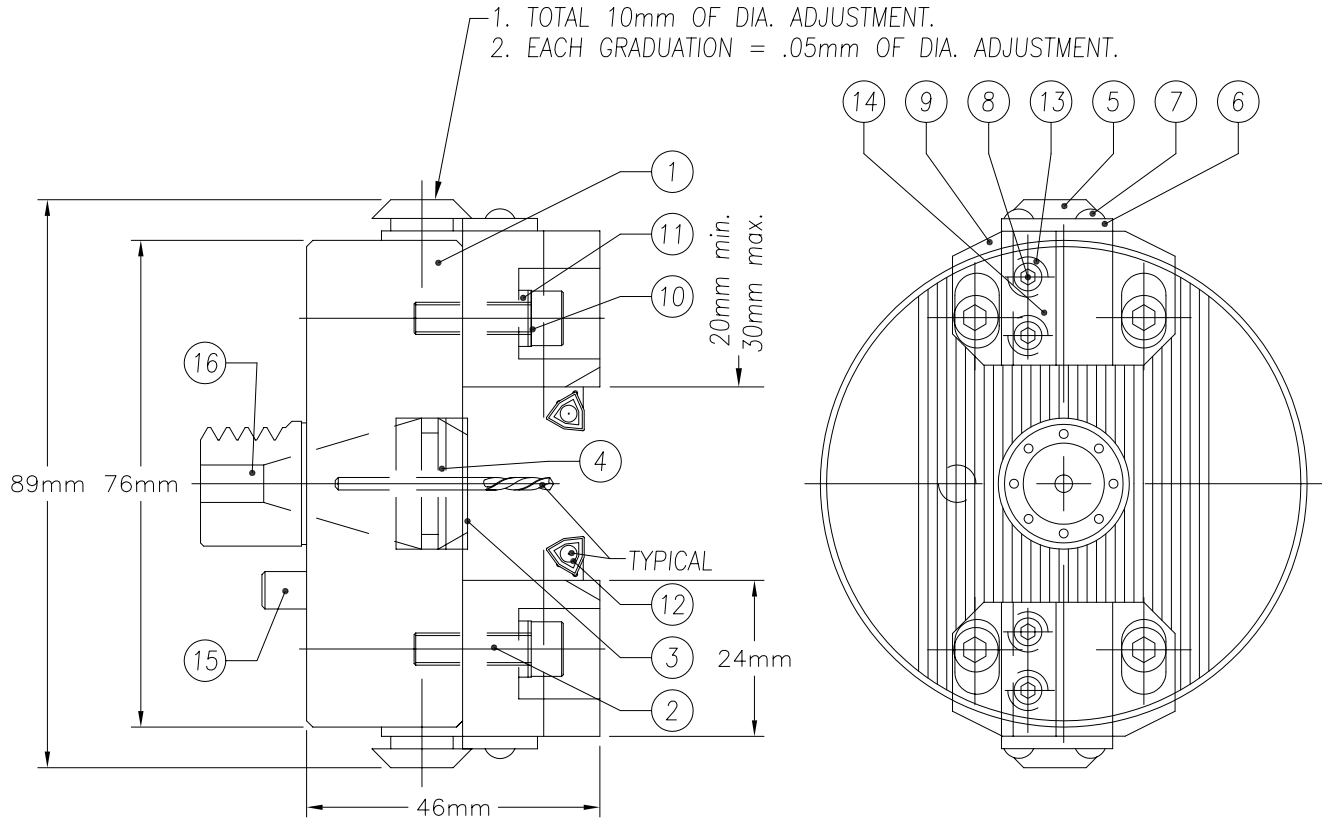
USE TORQUE WRENCH #S-0-060-048-1

ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	ROUGH TURNING HEAD	PCM 82933
2	4	SOCKET HEAD CAP SCREW	M5 x 18mm
3	1	DRILL HOLDER	PCM 4933-19
4*	1	COLLET (RANGE .05-5mm)	ER8
5	2	ADJUSTING DIAL	4931-03
6	2	PLATE	4933-04
7	4	BUTTON HEAD CAP SCREW	M4 x 6mm
8	4	SOCKET SET SCREW	M5 x 10mm
9	2	TOOL HOLDER	PCM 4933-952
10	4	SPRING WASHER	212748 M5
11	4	SPACER	4931-06
12	1	BRASS SHOE	4931-07
13	1	SOCKET SET SCREW	M6 x 10mm
14*	2	TOOL SHANK(10mm MAXIMUM)	
15*	4	O-RING	ORM 0045-15
16	2	WEDGE BLOCK	4933-08
17	1	PIN FACE NUT	908100
18	1	DOWEL PIN	5 x 20mm
19	1	WRENCH PIN FACE ER8A	908160

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 6: TURNING HEADS

TH QC 83-78/16.....83944-952



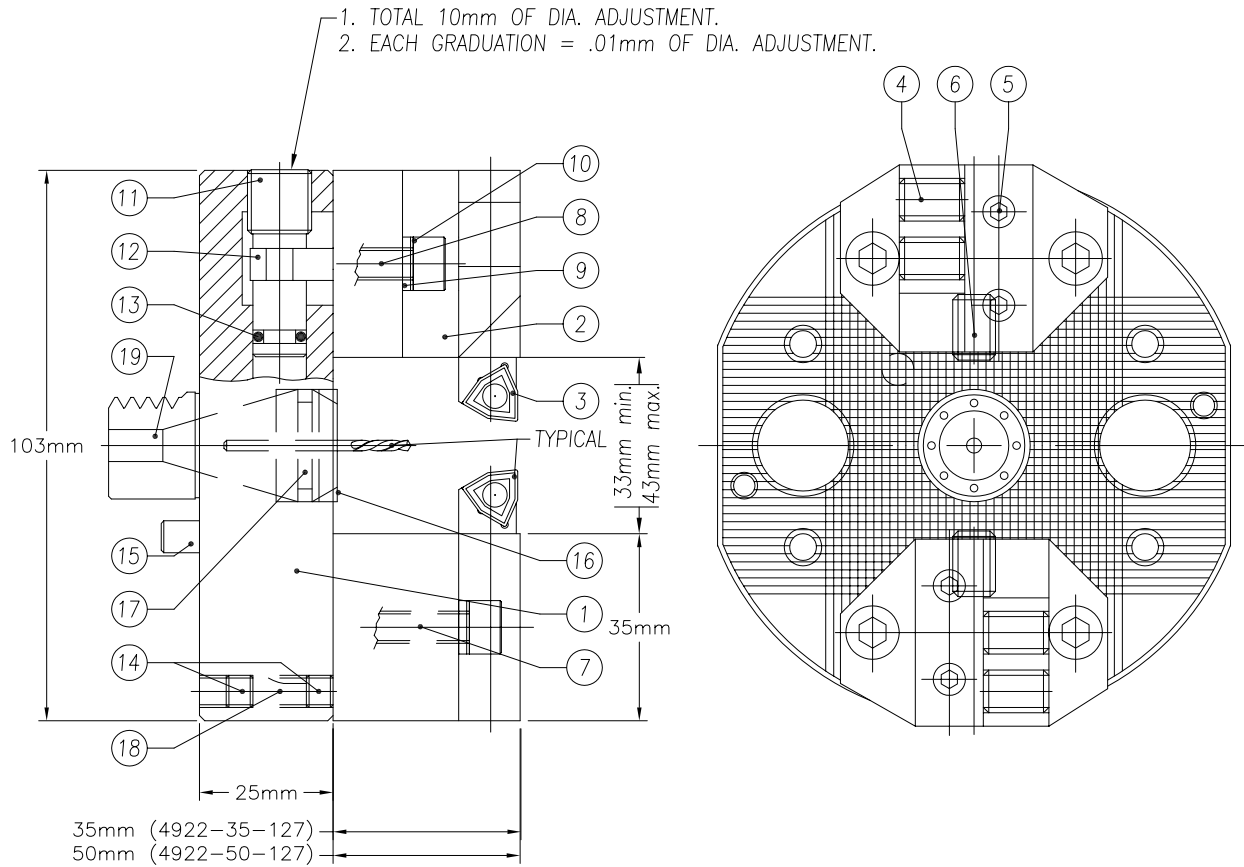
USE TORQUE WRENCH #S-0-060-048-2

ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	ROUGH TURNING HEAD	PCM 83944
2	4	SOCKET HEAD CAP SCREW	M5 x 18mm
3	1	PIN FACE NUT ER16A	916110
4*	1	COLLET (RANGE .5-10mm)	ER16
5	2	ADJUSTING DIAL	4931-03
6	2	PLATE	4933-04
7	4	BUTTON HEAD CAP SCREW	M4 x 6mm
8	4	SOCKET SET SCREW	M5 x 10mm
9	2	TOOL HOLDER	PCM 4933-952
10	4	SPRING WASHER	212748 M5
11	4	SPACER	4931-06
12*	2	TOOL SHANK(10mm MAXIMUM)	
13*	4	O-RING	ORM 0045-15
14	2	WEDGE BLOCK	4933-08
15	1	DOWEL PIN	6 x 20mm
16	1	STOP SCREW M8 x 1 With Nylon	1100-088-P03
17	1	WRENCH PIN FACE ER16A	916170

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 6: TURNING HEADS

TH QC 83-103/16.....83945-127



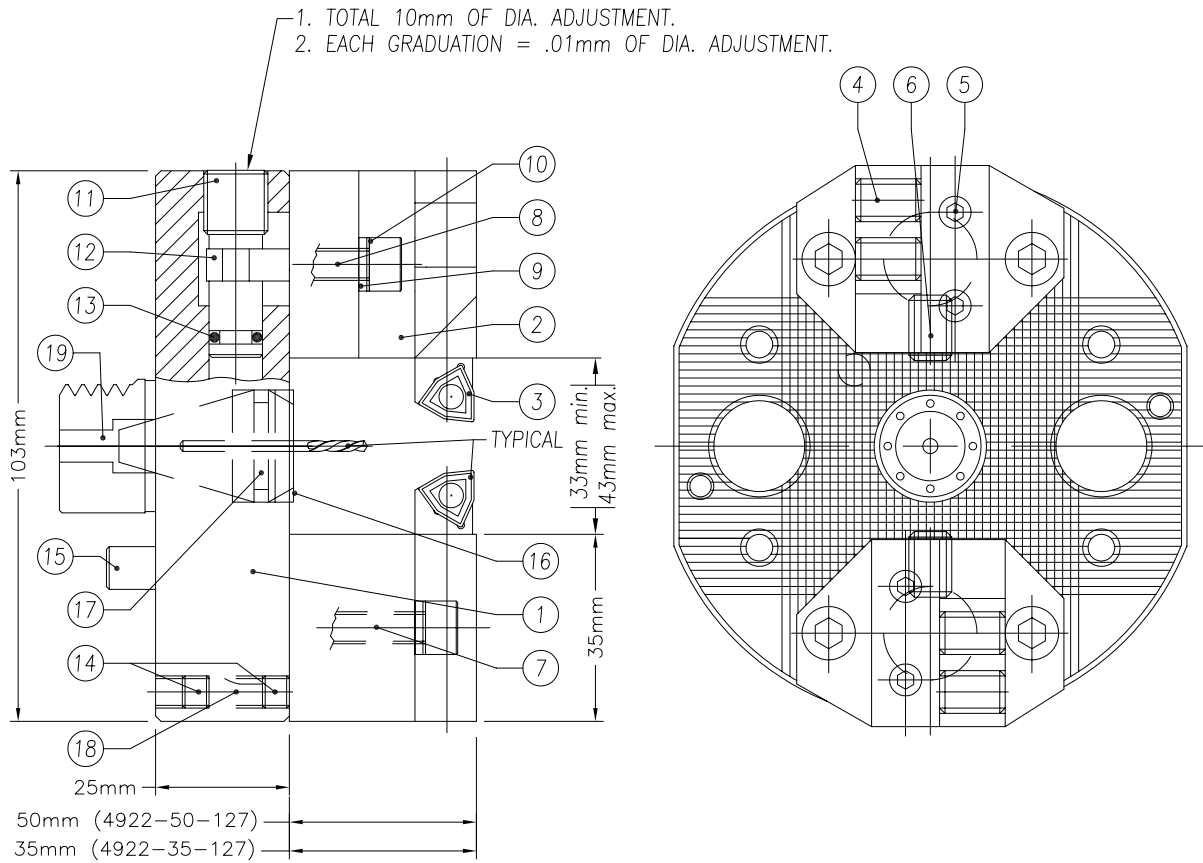
USE TORQUE WRENCH #S-0-060-048-02

ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	ROUGH TURNING HEAD	PCM 83945
2a	2	TOOL HOLDER (35mm length)	4922-35-127
2b	2	TOOL HOLDER (50mm length)	4922-50-127
3*	2	TOOL SHANK (1/2" MAXIMUM)	
4	4	SOCKET SET SCREW	M8 x 12mm
5	4	SOCKET SET SCREW	M6 x 6mm
6	2	SOCKET SET SCREW	M6 x 12mm
7	2	SOCKET HEAD CAP SCREW	M6 x 30mm
8	2	SOCKET HEAD CAP SCREW	M6 x 22mm
9	4	SPACER	4911-19
10	4	SPRING WASHER	212748 M6
11	2	ADJUSTING DIAL	4915-03
12	2	FORK	4915-10
13	2	O-RING	ORM 0060-20
14	4	SOCKET SET SCREW	M5 x 5mm
15	1	DOWEL PIN	6 x 20mm
16	1	PIN FACE NUT	916110
17*	1	COLLET (RANGE 0.5-10mm)	ER16
18	2	BRASS SHOE	4915-26
19	1	STOP SCREW M8 x 1 With Nylon	1100-088-P03
20	1	WRENCH PIN FACE ER16A	916170

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 6: TURNING HEADS

TH QC 84-103/16.....84945-127



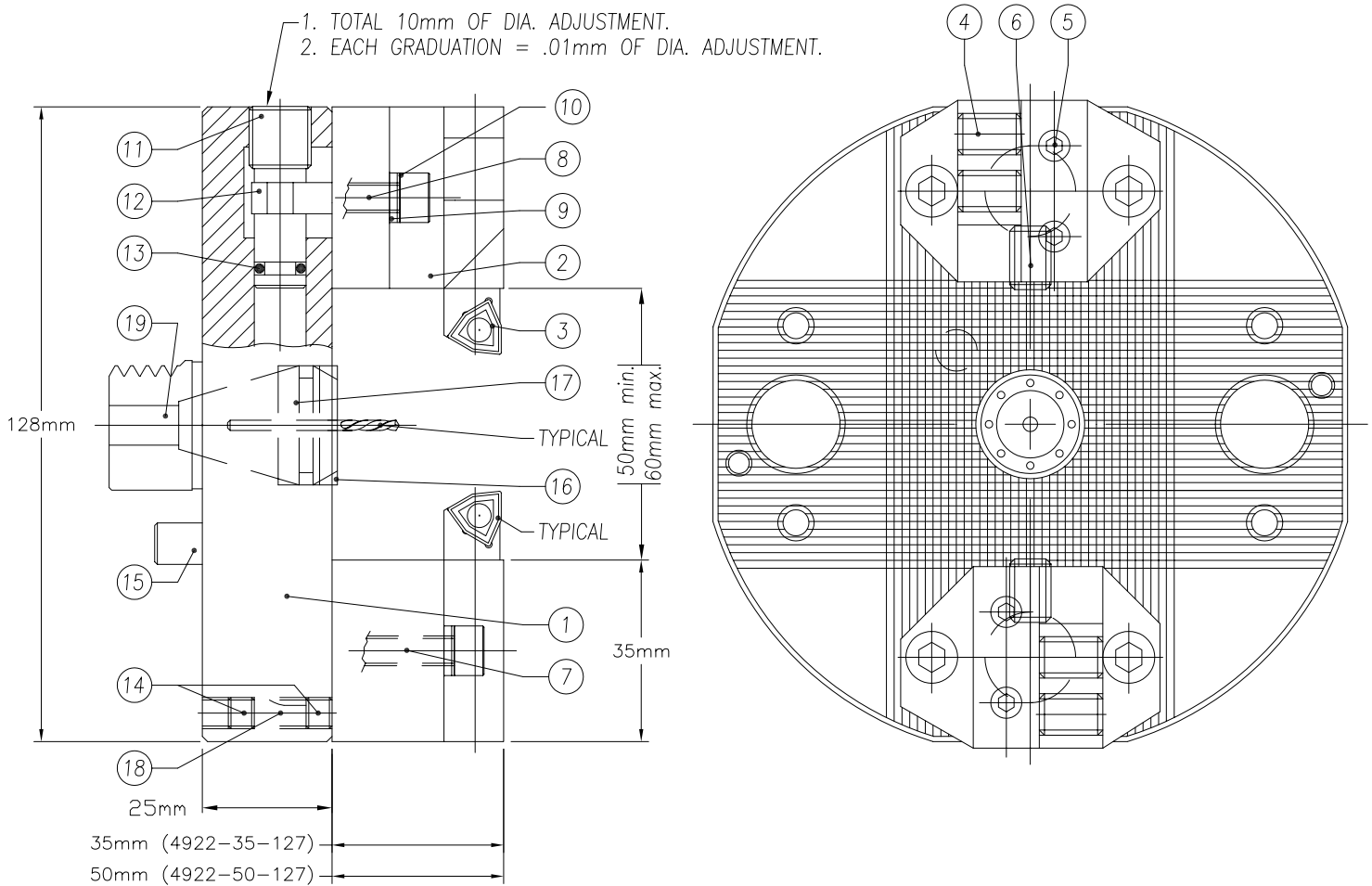
USE TORQUE WRENCH #S-0-060-048-03

ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	ROUGH TURNING HEAD	PCM 84945
2a	2	TOOL HOLDER (35mm length)	4922-35-127
2b	2	TOOL HOLDER (50mm length)	4922-50-127
3*	2	TOOL SHANK (1/2" MAXIMUM)	
4	4	SOCKET SET SCREW	M8 x 12mm
5	4	SOCKET SET SCREW	M6 x 6mm
6	2	SOCKET SET SCREW	M6 x 12mm
7	2	SOCKET HEAD CAP SCREW	M6 x 30mm
8	2	SOCKET HEAD CAP SCREW	M6 x 22mm
9	4	SPACER	4911-19
10	4	SPRING WASHER	212748 M6
11	2	ADJUSTING DIAL	4915-03
12	2	FORK	4915-10
13	2	O-RING	ORM 0060-20
14	4	SOCKET SET SCREW	M5 x 5mm
15	1	DOWEL PIN	8 x 20mm
16	1	PIN FACE NUT	916110
17*	1	COLLET (RANGE 0.5-10mm)	ER16
18	2	BRASS SHOE	4915-26
19	1	STOP SCREW M8 x 1 With Nylon	1100-088-P03
20	1	WRENCH PIN FACE ER16A	916170

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 6: TURNING HEADS

TH QC 84-128/20.....84946-127



USE TORQUE WRENCH #S-0-060-048-03

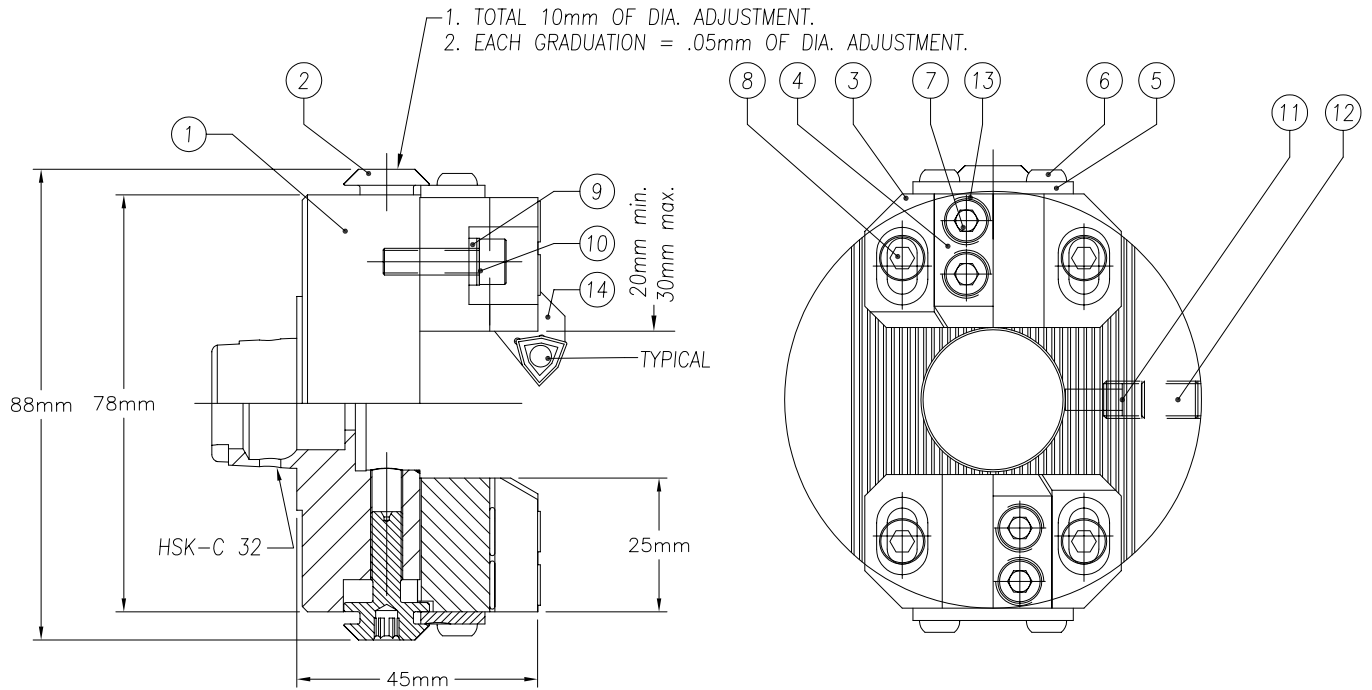
ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	ROUGH TURNING HEAD	PCM 84946
2a	2	TOOL HOLDER (35mm length)	4922-35-127
2b	2	TOOL HOLDER (50mm length)	4922-50-127
3*	2	TOOL SHANK (1/2" MAXIMUM)	
4	4	SOCKET SET SCREW	M8 x 12mm
5	4	SOCKET SET SCREW	M6 x 6mm
6	2	SOCKET SET SCREW	M6 x 12mm
7	2	SOCKET HEAD CAP SCREW	M6 x 30mm
8	2	SOCKET HEAD CAP SCREW	M6 x 22mm
9	4	SPACER	4911-19
10	4	SPRING WASHER	212748 M6
11	2	ADJUSTING DIAL	4915-03
12	2	FORK	4915-10
13	2	O-RING	ORM 0060-20
14	4	SOCKET SET SCREW	M5 x 5mm
15	1	DOWEL PIN	8 x 20mm
16	1	PIN FACE NUT	920110
17*	1	COLLET (RANGE 1-13mm)	ER20
18	2	BRASS SHOE	4915-26
19	1	STOP SCREW M8 x 1 With Nylon	1100-088-P03
20	1	WRENCH PIN FACE ER20A	920170

\* NOT INCLUDED WITH TOOLHEAD



# SECTION 6: TURNING HEADS

TH HSK C32-78.....H92924-952

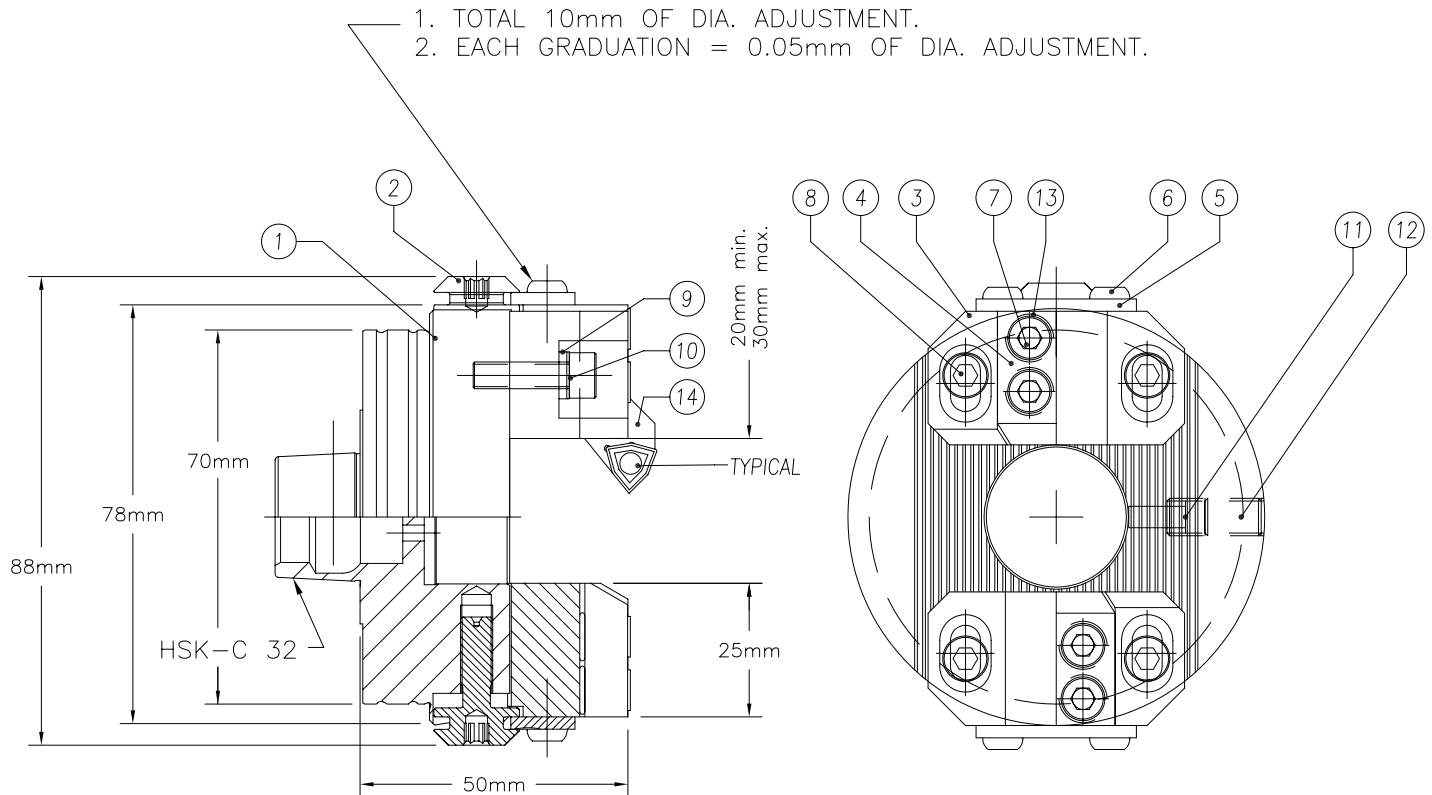


ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	ROUGH TURNING HEAD	PCM H92924-95
2	2	ADJUSTING DIAL	4931-03
3	2	TOOL HOLDER	PCM 4933-952
4	2	WEDGE BLOCK	4933-08
5	2	PLATE	4933-04
6	4	BUTTON HEAD CAP SCREW	M4 x 6mm
7	4	SOCKET SET SCREW	M5 x 10mm
8	4	SOCKET HEAD CAP SCREW	M5 x 18mm
9	4	SPACER	4931-06
10	4	SPRING WASHER	212748 M5
11	1	BRASS SHOE	4931-07
12	1	SOCKET SET SCREW	M6 x 10mm
13	4	O-RING	ORM 0045-15
14*	2	TOOL SHANK(10mm MAXIMUM)	

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 6: TURNING HEADS

TH HSK C32-78.....HB92924-952

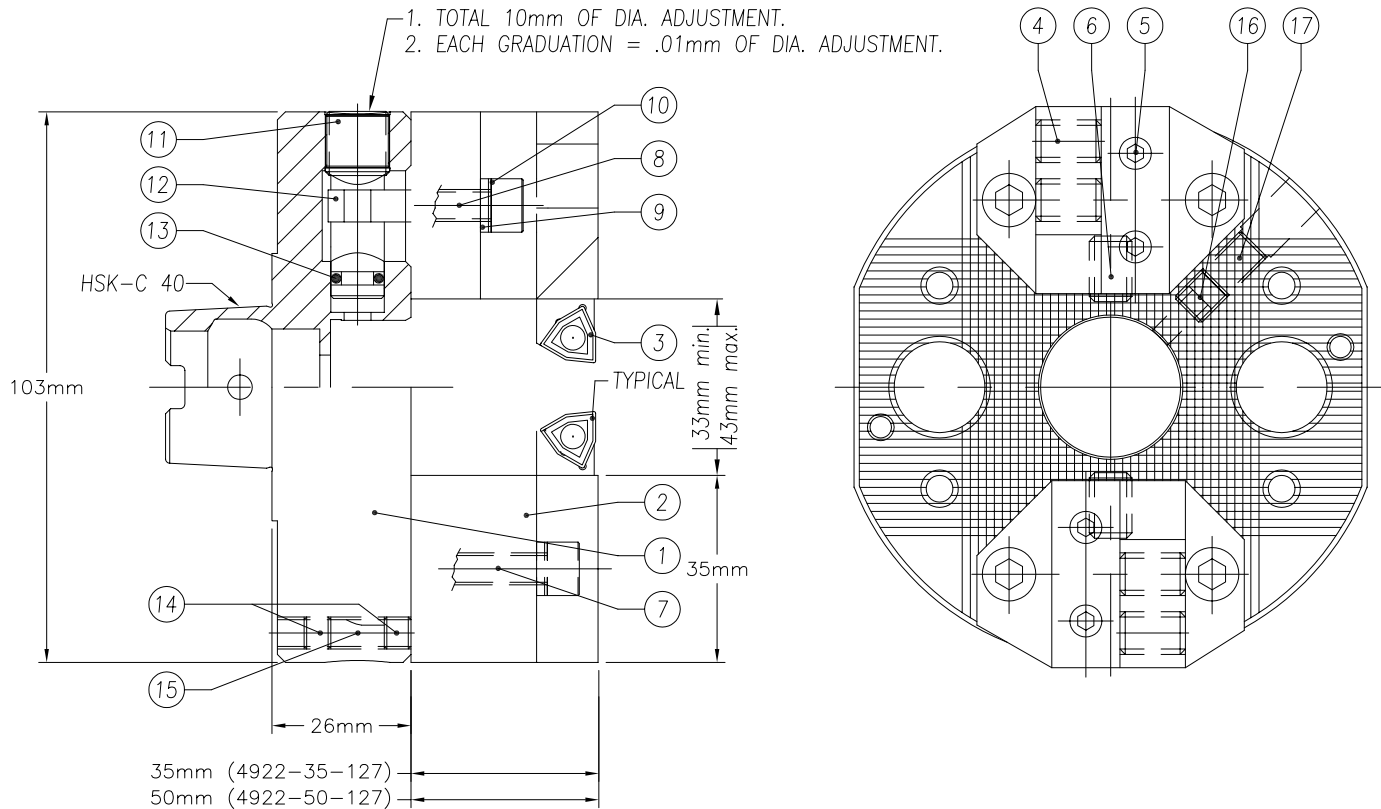


ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	ROUGH TURNING HEAD	PCM H92924-95
2	2	ADJUSTING DIAL	4931-03
3	2	TOOL HOLDER	PCM 4933-952
4	2	WEDGE BLOCK	4933-08
5	2	PLATE	4933-04
6	4	BUTTON HEAD CAP SCREW	M4 x 6mm
7	4	SOCKET SET SCREW	M5 x 10mm
8	4	SOCKET HEAD CAP SCREW	M5 x 18mm
9	4	SPACER	4931-06
10	4	SPRING WASHER	212748 M5
11	1	BRASS SHOE	4931-07
12	1	SOCKET SET SCREW	M6 x 10mm
13	4	O-RING	ORM 0045-15
14*	2	TOOL SHANK (10mm MAXIMUM)	
15*	1	BALANCE RINGS (FWR 700)	8020.12200

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 6: TURNING HEADS

TH HSK C40-103.....H93925-127

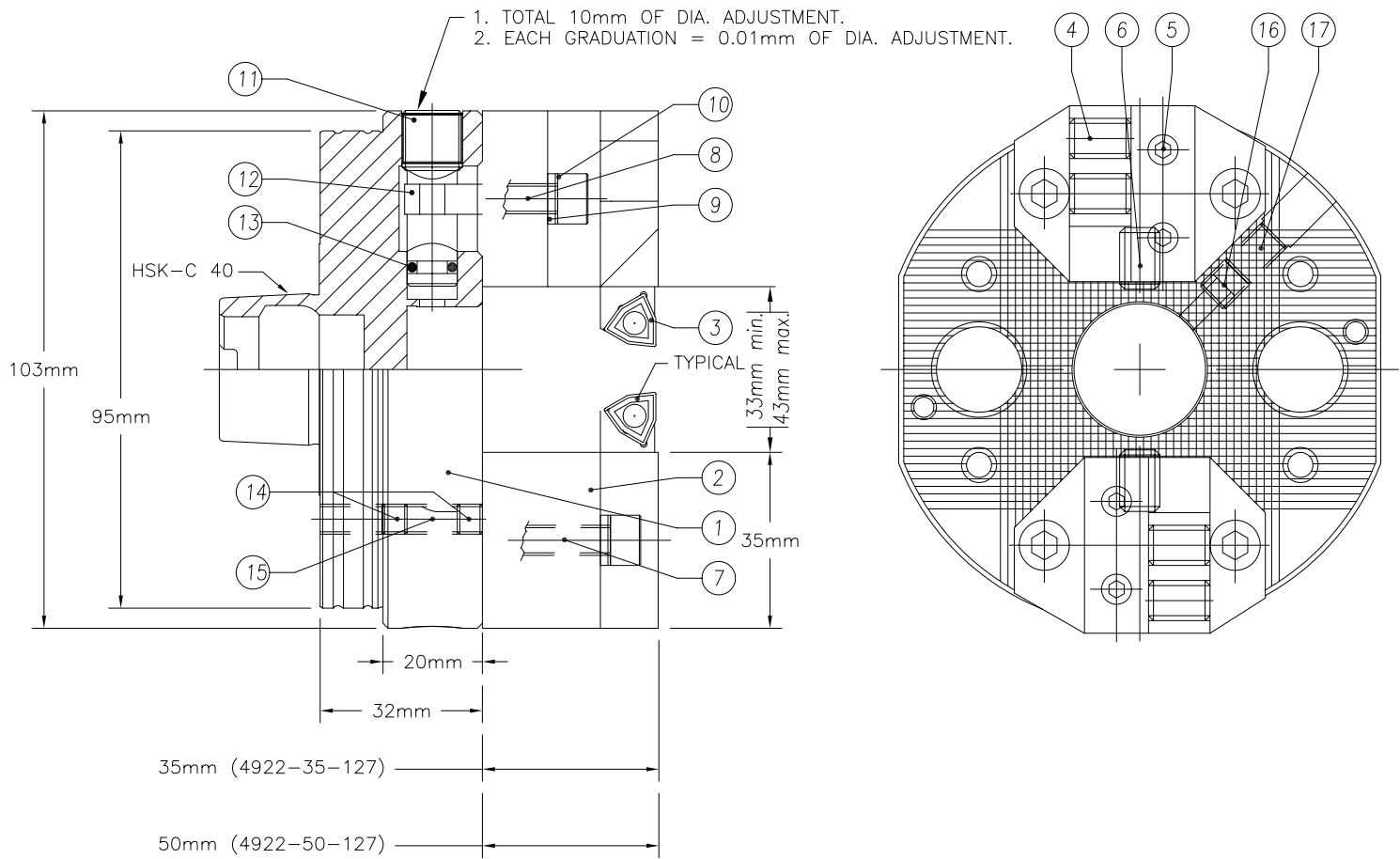


ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	TURNING HEAD	PCM H93925-127
2a	2	TOOLHOLDER (35mm Length)	4922-35-127
2b	2	TOOLHOLDER (50mm Length)	4922-50-127
3*	2	TOOL SHANK (1/2" MAXIMUM)	
4	4	SOCKET SET SCREW	M8 x 12mm
5	4	SOCKET SET SCREW	M6 x 6mm
6	2	SOCKET SET SCREW	M6 x 12mm
7	2	SOCKET HEAD CAP SCREW	M6 x 30mm
8	2	SOCKET HEAD CAP SCREW	M6 x 22mm
9	4	SPACER	4911-19
10	4	SPRING WASHER	212748 M6
11	2	ADJUSTING DIAL	4915-03
12	2	FORK	4915-10
13	2	O-RING	ORM 0060-20
14	4	SOCKET SET SCREW	M5 x 5mm
15	2	BRASS SHOE	4915-26
16	1	BRASS PIN	4915-28
17	1	SOCKET SET SCREW	M8 x 10mm

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 6: TURNING HEADS

TH HSK C40-103.....HB93925-127



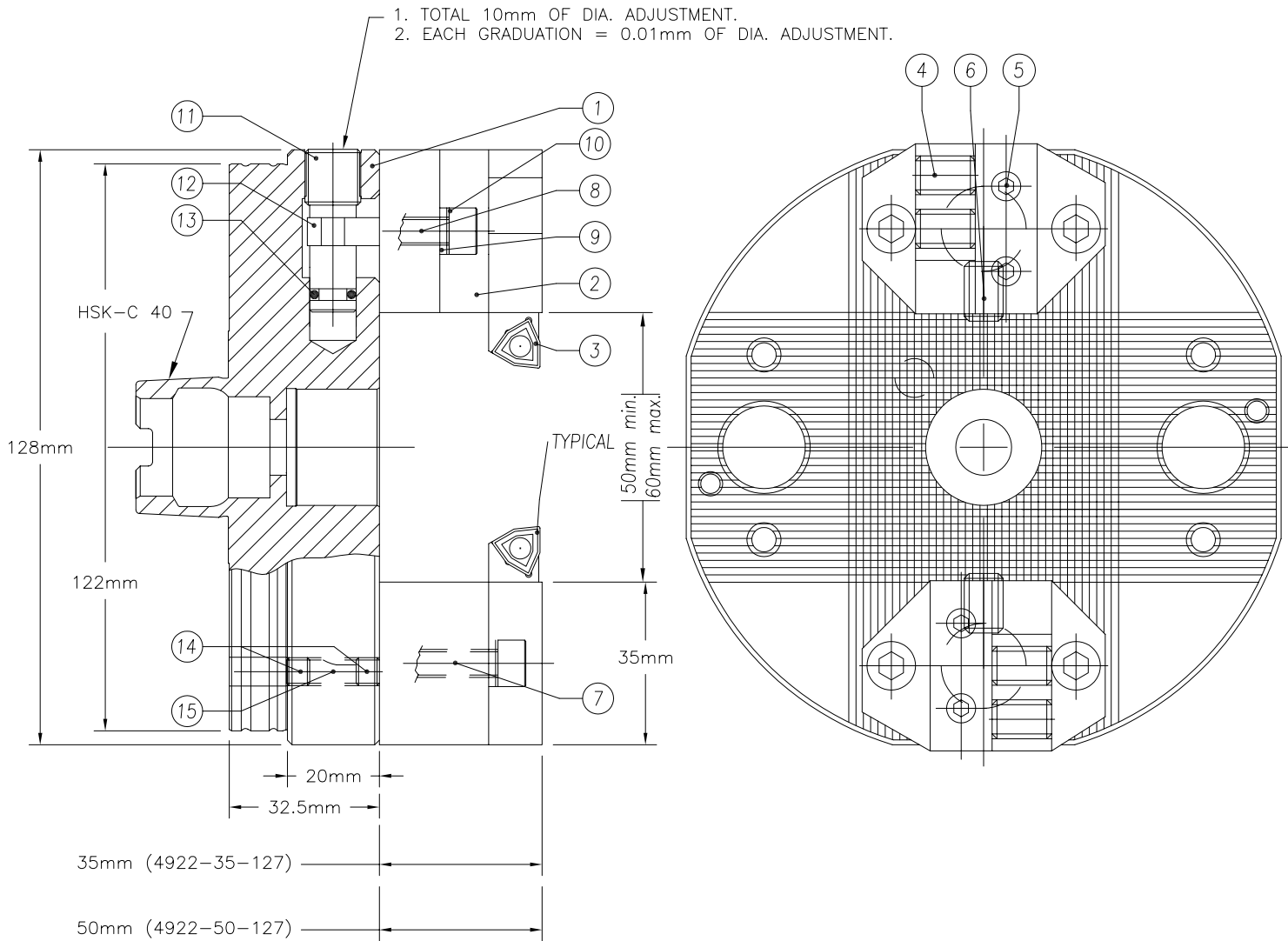
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	TURNING HEAD	PCM HB93925-127
2a	1	TOOLHOLDER (35mm Length)	4922-35-127
2b	1	TOOLHOLDER (50mm Length)	4922-55-127
3*	1	TOOL SHANK (1/2" MAXIMUM)	
4	1	SOCKET SET SCREW	M8 x 12mm
5	1	SOCKET SET SCREW	M6 x 6mm
6	1	SOCKET SET SCREW	M6 x 12mm
7	1	SOCKET HEAD CAP SCREW	M6 x 30mm
8	1	SOCKET HEAD CAP SCREW	M6 x 22mm
9	1	SPACER	4911-19
10	1	SPRING WASHER	212748 M6
11	1	ADJUSTING DIAL	4915-03
12	1	FORK	4915-10
13	1	O-RING	ORM 0060-20
14	1	SOCKET SET SCREW	M5 x 5mm
15	1	BRASS SHOE	4915-26
16	1	BRASS PIN	4915-28
17	1	SOCKET SET SCREW	M8 x 10mm
18*	1	BALANCE RINGS (FRW 950)	8020.12300

\* NOT INCLUDED WITH TOOLHEAD

REV 12/4/2003

# SECTION 6: TURNING HEADS

TH HSK C40-128.....HB93926-127



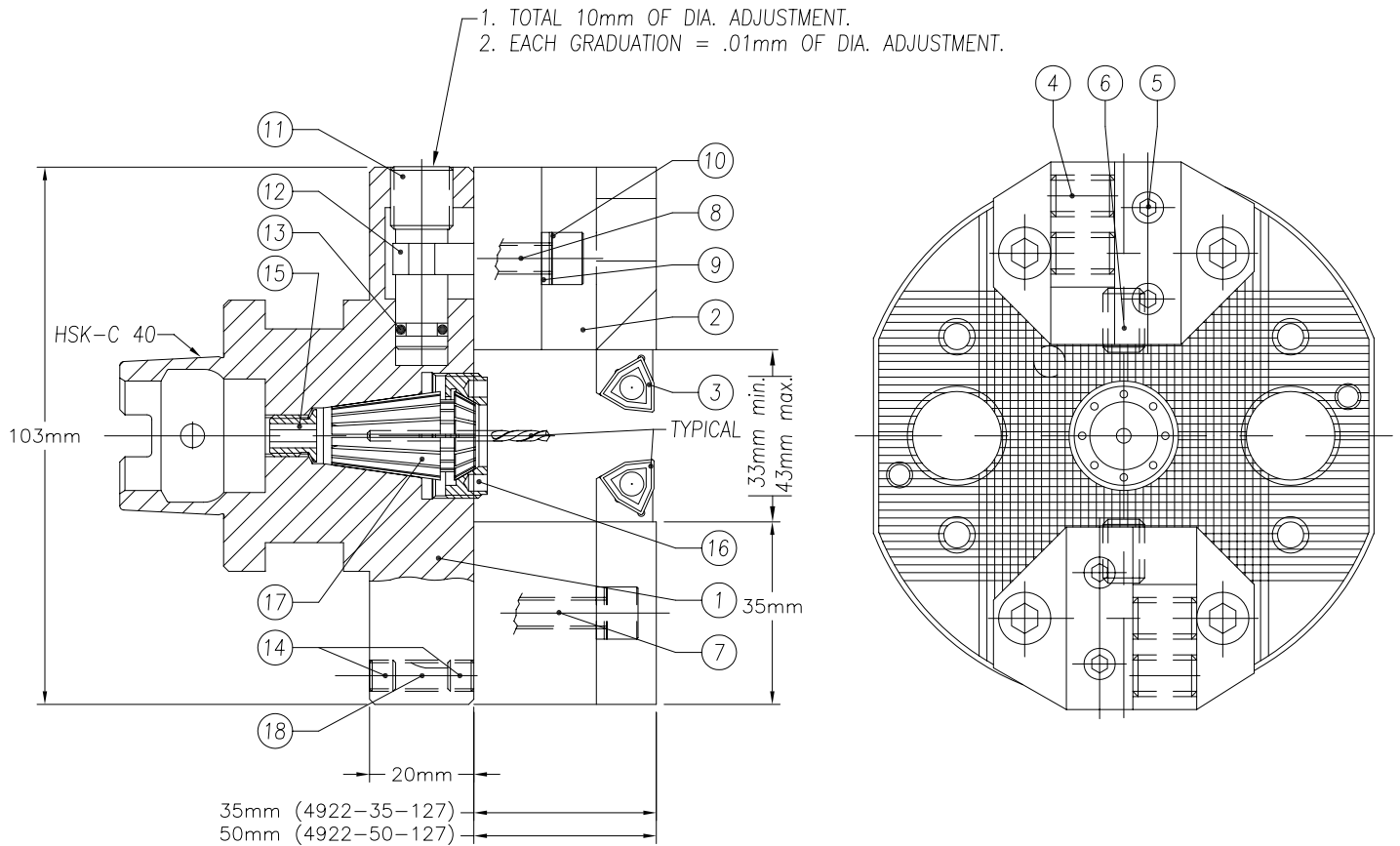
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	TURNING HEAD	PCM HB93926-127
2a	2	TOOLHOLDER (35mm Length)	4922-35-127
2b	2	TOOLHOLDER (50mm Length)	4922-55-127
3*	2	TOOL SHANK (1/2" MAXIMUM)	
4	4	SOCKET SET SCREW	M8 x 12mm
5	4	SOCKET SET SCREW	M6 x 6mm
6	2	SOCKET SET SCREW	M6 x 12mm
7	2	SOCKET HEAD CAP SCREW	M6 x 30mm
8	2	SOCKET HEAD CAP SCREW	M6 x 22mm
9	4	SPACER	4911-19
10	4	SPRING WASHER	212748 M6
11	2	ADJUSTING DIAL	4915-03
12	2	FORK	4915-10
13	2	O-RING	ORM 0060-20
14	4	SOCKET SET SCREW	M5 x 5mm
15	2	BRASS SHOE	4915-26
16*	1	BALANCE RINGS (FWR 1220)	8020.12400

\* NOT INCLUDED WITH TOOLHEAD

REV 12/4/2003

# SECTION 6: TURNING HEADS

TH HSK C40-103/16.....H93945-127

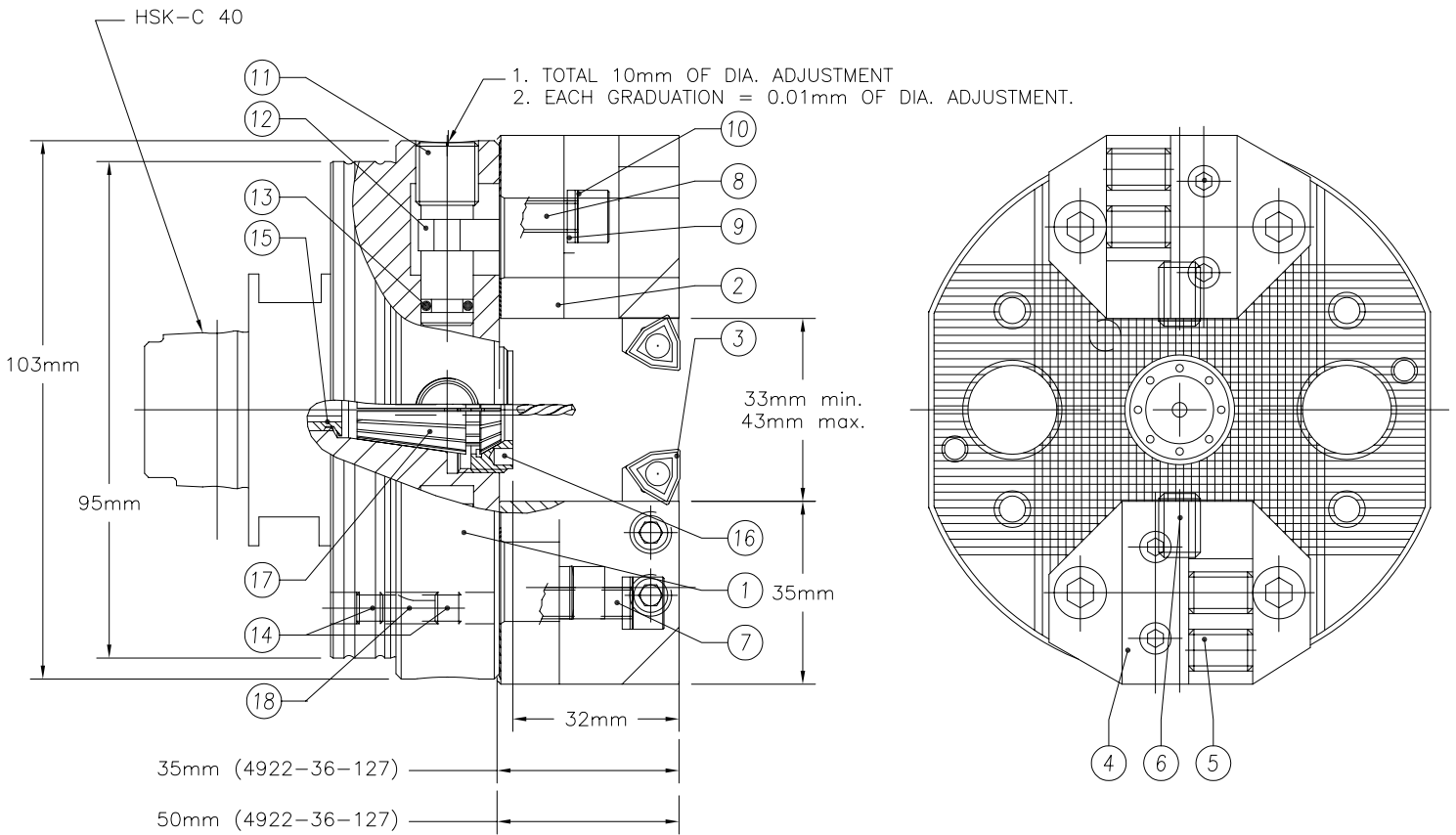


ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	TURNING HEAD	PCM H93945-127
2a	2	TOOLHOLDER (35mm Length)	4922-35-127
2b	2	TOOLHOLDER (50mm Length)	4922-50-127
3*	2	TOOL SHANK (1/2" MAXIMUM)	
4	4	SOCKET SET SCREW	M8 x 12mm
5	4	SOCKET SET SCREW	M6 x 6mm
6	2	SOCKET SET SCREW	M6 x 12mm
7	2	SOCKET HEAD CAP SCREW	M6 x 35mm
8	2	SOCKET HEAD CAP SCREW	M6 x 25mm
9	4	SPACER	4911-19
10	4	SPRING WASHER	212748 M6
11	2	ADJUSTING DIAL	4915-03
12	2	FORK	4915-10
13	2	O-RING	ORM 0060-20
14	4	SOCKET SET SCREW	M5 x 5mm
15	1	STOP SCREW	
16	1	PIN FACE NUT	916110
17*	1	COLLET (RANGE .5-10mm)	ER16
18	1	BRASS PIN	4915-28
19	1	WRENCH PIN FACE ER16A	916170

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 6: TURNING HEADS

TH HSK C40-103/16.....HB93945-127



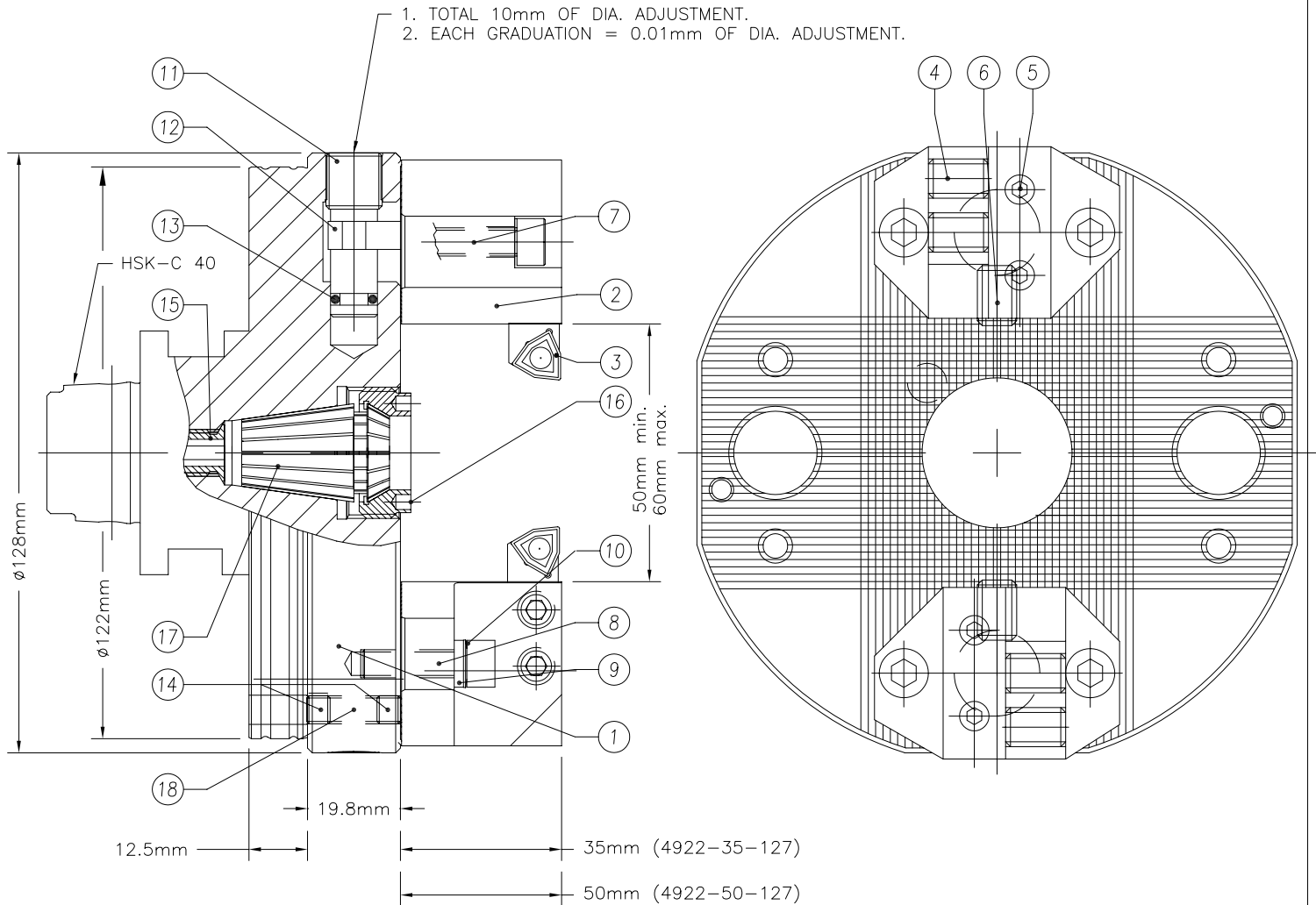
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	TURNING HEAD	PCM HB93926-127
2a	2	TOOLHOLDER (35mm Length)	4922-35-127
2b	2	TOOLHOLDER (50mm Length)	4922-55-127
3*	2	TOOL SHANK (1/2" MAXIMUM)	
4	4	SOCKET SET SCREW	M8 x 12mm
5	4	SOCKET SET SCREW	M6 x 6mm
6	2	SOCKET SET SCREW	M6 x 12mm
7	2	SOCKET HEAD CAP SCREW	M6 x 30mm
8	2	SOCKET HEAD CAP SCREW	M6 x 22mm
9	4	SPACER	4911-19
10	4	SPRING WASHER	212748 M6
11	2	ADJUSTING DIAL	4915-03
12	2	FORK	4915-10
13	2	O-RING	ORM 0060-20
14	4	SOCKET SET SCREW	M5 x 5mm
15	1	STOP SCREW	
16	1	PIN FACE NUT	916110
17*	1	COLLET (RANGE 0.5-10mm)	ER16
18	1	BRASS PIN	4915-28
19	1	WRENCH PIN FACE ER16A	916170
20*	1	BALANCE RINGS (FWR 950)	8020.12300

\* NOT INCLUDED WITH TOOLHEAD

REV 12/4/2003

# SECTION 6: TURNING HEADS

TH HSK C40-128/20.....HB93946-127



ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	TURNING HEAD	PCM HB93946-127
2a	2	TOOLHOLDER (35mm Length)	4922-35-127
2b	2	TOOLHOLDER (50mm Length)	4922-55-127
3*	2	TOOL SHANK (1/2" MAXIMUM)	
4	4	SOCKET SET SCREW	M8 x 12mm
5	4	SOCKET SET SCREW	M6 x 6mm
6	2	SOCKET SET SCREW	M6 x 12mm
7	2	SOCKET HEAD CAP SCREW	M6 x 35mm
8	2	SOCKET HEAD CAP SCREW	M6 x 25mm
9	4	SPACER	4911-19
10	4	SPRING WASHER	212748 M6
11	2	ADJUSTING DIAL	4915-03
12	2	FORK	4915-10
13	2	O-RING	ORM 0060-20
14	4	SOCKET SET SCREW	M5 x 5mm
15	1	STOP SCREW	
16	1	PIN FACE NUT	916110
17*	1	COLLET (RANGE 1-13mm)	ER20
18	1	BRASS PIN	4915-28
19	1	WRENCH PIN FACE ER20A	920170
20*	1	BALANCE RINGS (FWR 1220)	8020.12400

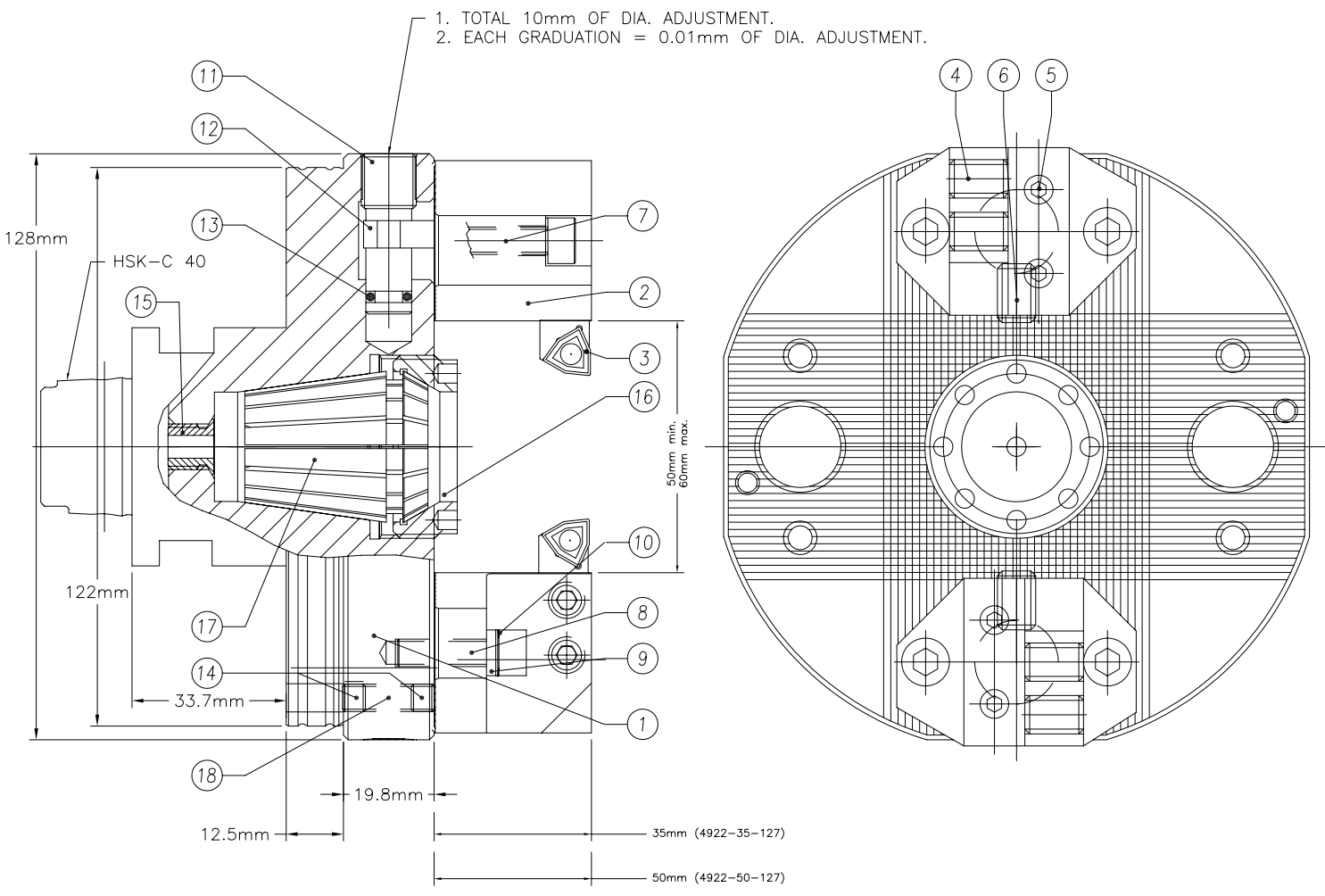
\* NOT INCLUDED WITH TOOLHEAD

REV 12/4/2003



# SECTION 6: TURNING HEADS

TH HSK C40-128/32.....HB93948-127

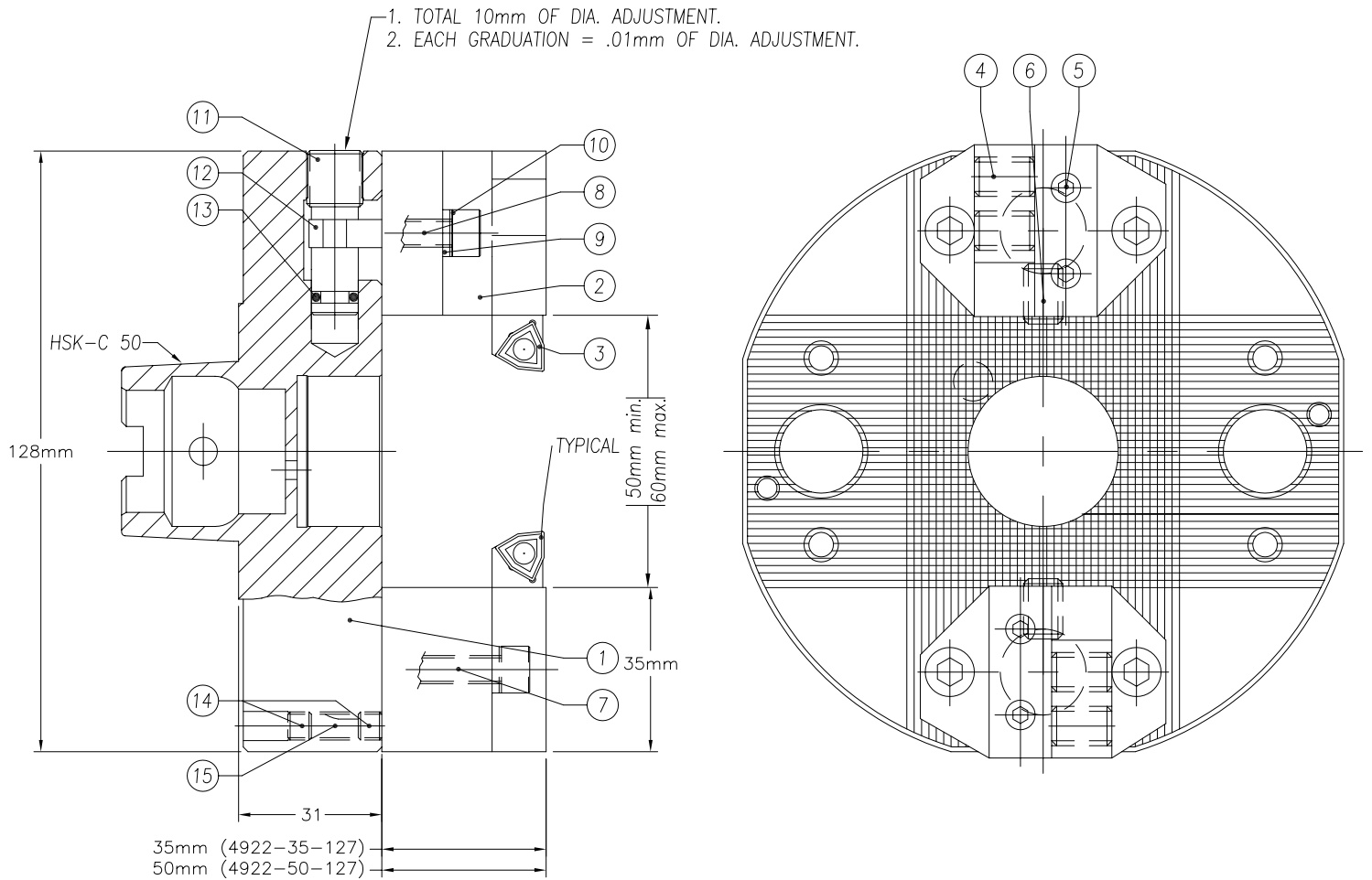


ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	TURNING HEAD	PCM HB93946-127
2a	2	TOOLHOLDER (35mm Length)	4922-35-127
2b	2	TOOLHOLDER (50mm Length)	4922-55-127
3*	2	TOOL SHANK (1/2" MAXIMUM)	
4	4	SOCKET SET SCREW	M8 x 12mm
5	4	SOCKET SET SCREW	M6 x 6mm
6	2	SOCKET SET SCREW	M6 x 12mm
7	2	SOCKET HEAD CAP SCREW	M6 x 35mm
8	2	SOCKET HEAD CAP SCREW	M6 x 25mm
9	4	SPACER	4911-19
10	4	SPRING WASHER	212748 M6
11	2	ADJUSTING DIAL	4915-03
12	2	FORK	4915-10
13	2	O-RING	ORM 0060-20
14	4	SOCKET SET SCREW	M5 x 5mm
15	1	STOP SCREW	
16	1	PIN FACE NUT	932110
17*	1	COLLET (RANGE 2-20mm)	ER32
18	1	BRASS PIN	4915-28
19	1	WRENCH PIN FACE ER32A	932170
20*	1	BALANCE RINGS (FWR 1220)	8020.12400

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 6: TURNING HEADS

TH HSK C50-128.....H94926-127

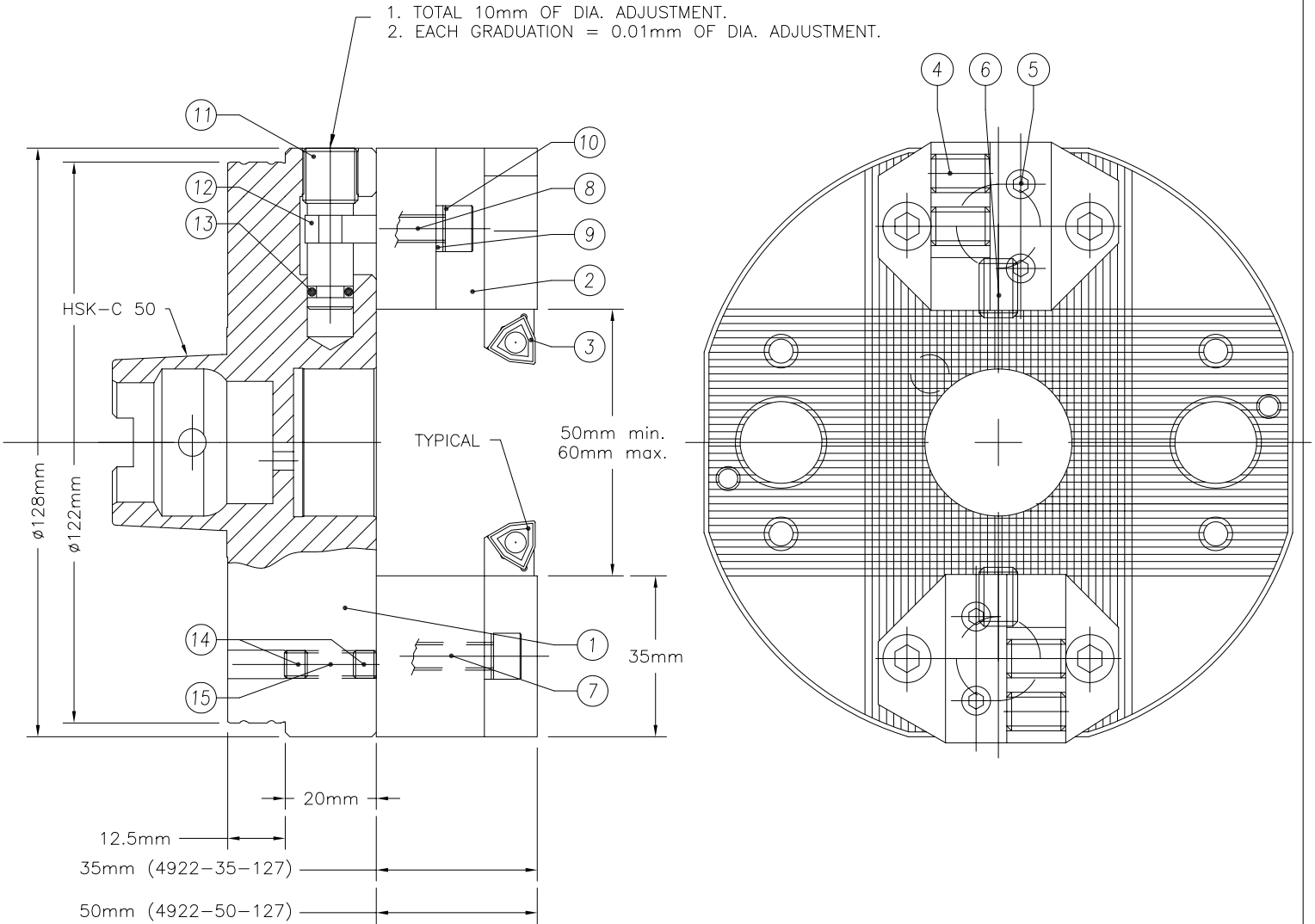


ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	TURNING HEAD	PCM H93925-127
2a	2	TOOLHOLDER (35mm Length)	4922-35-127
2b	2	TOOLHOLDER (50mm Length)	4922-50-127
3*	2	TOOL SHANK (1/2" MAXIMUM)	
4	4	SOCKET SET SCREW	M8 x 12mm
5	4	SOCKET SET SCREW	M6 x 6mm
6	2	SOCKET SET SCREW	M6 x 12mm
7	2	SOCKET HEAD CAP SCREW	M6 x 30mm
8	2	SOCKET HEAD CAP SCREW	M6 x 22mm
9	4	SPACER	4911-19
10	4	SPRING WASHER	212748 M6
11	2	ADJUSTING DIAL	4915-03
12	2	FORK	4915-10
13	2	O-RING	ORM 0060-20
14	4	SOCKET SET SCREW	M5 x 5mm
15	2	BRASS SHOE	4915-28

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 6: TURNING HEADS

TH HSK C50-128.....HB94926-127



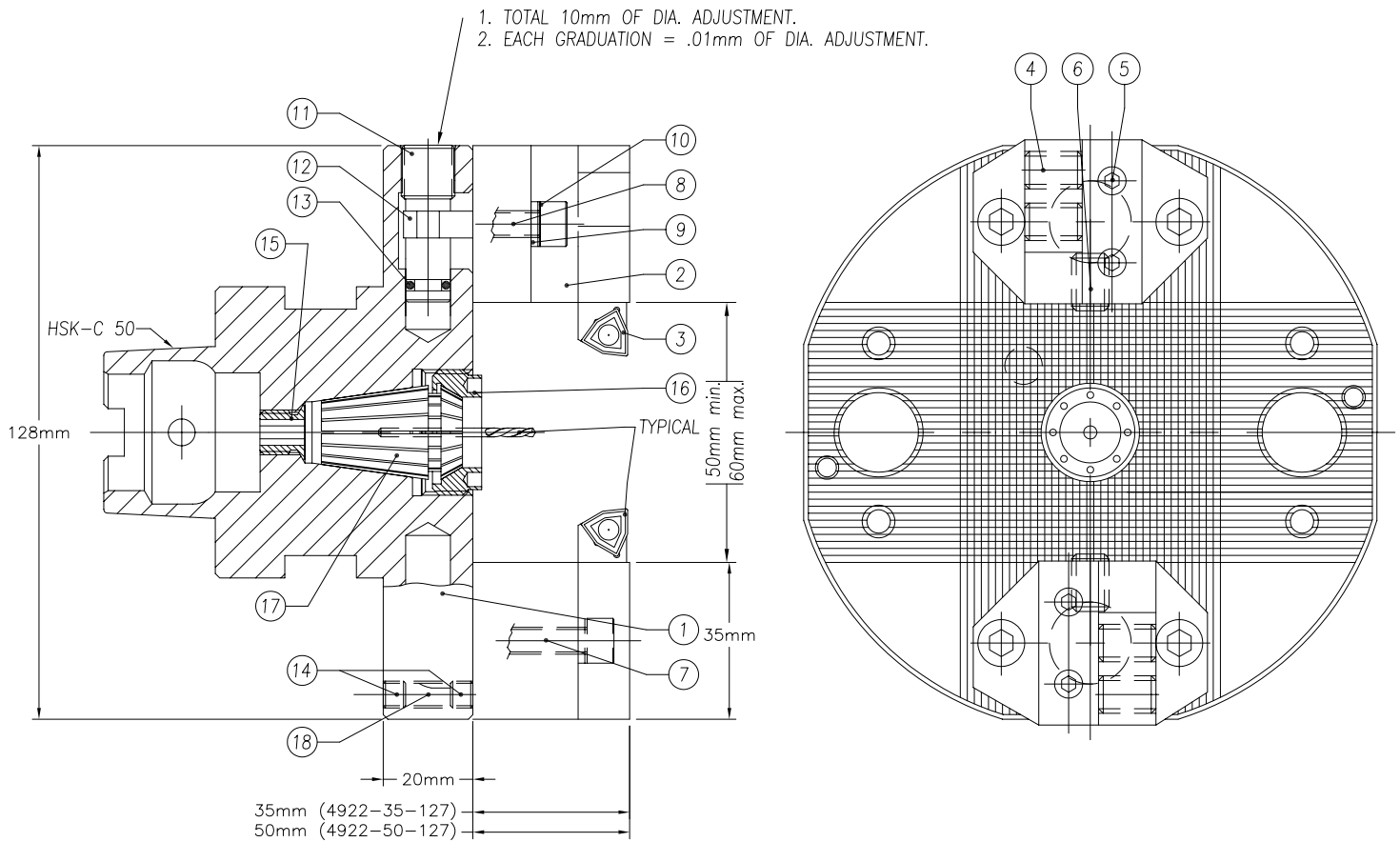
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	TURNING HEAD	PCM HB93925-127
2a	1	TOOLHOLDER (35mm Length)	4922-35-127
2b	1	TOOLHOLDER (50mm Length)	4922-55-127
3*	1	TOOL SHANK (1/2" MAXIMUM)	
4	1	SOCKET SET SCREW	M8 x 12mm
5	1	SOCKET SET SCREW	M6 x 6mm
6	1	SOCKET SET SCREW	M6 x 12mm
7	1	SOCKET HEAD CAP SCREW	M6 x 30mm
8	1	SOCKET HEAD CAP SCREW	M6 x 22mm
9	1	SPACER	4911-19
10	1	SPRING WASHER	212748 M6
11	1	ADJUSTING DIAL	4915-03
12	1	FORK	4915-10
13	1	O-RING	ORM 0060-20
14	1	SOCKET SET SCREW	M5 x 5mm
15	1	BRASS SHOE	4915-26
16*	1	BALANCE RINGS (FRW 1220)	8020.12400

\* NOT INCLUDED WITH TOOLHEAD

REV 12/4/2003

# SECTION 6: TURNING HEADS

TH HSK C50-128/20.....H94946-127

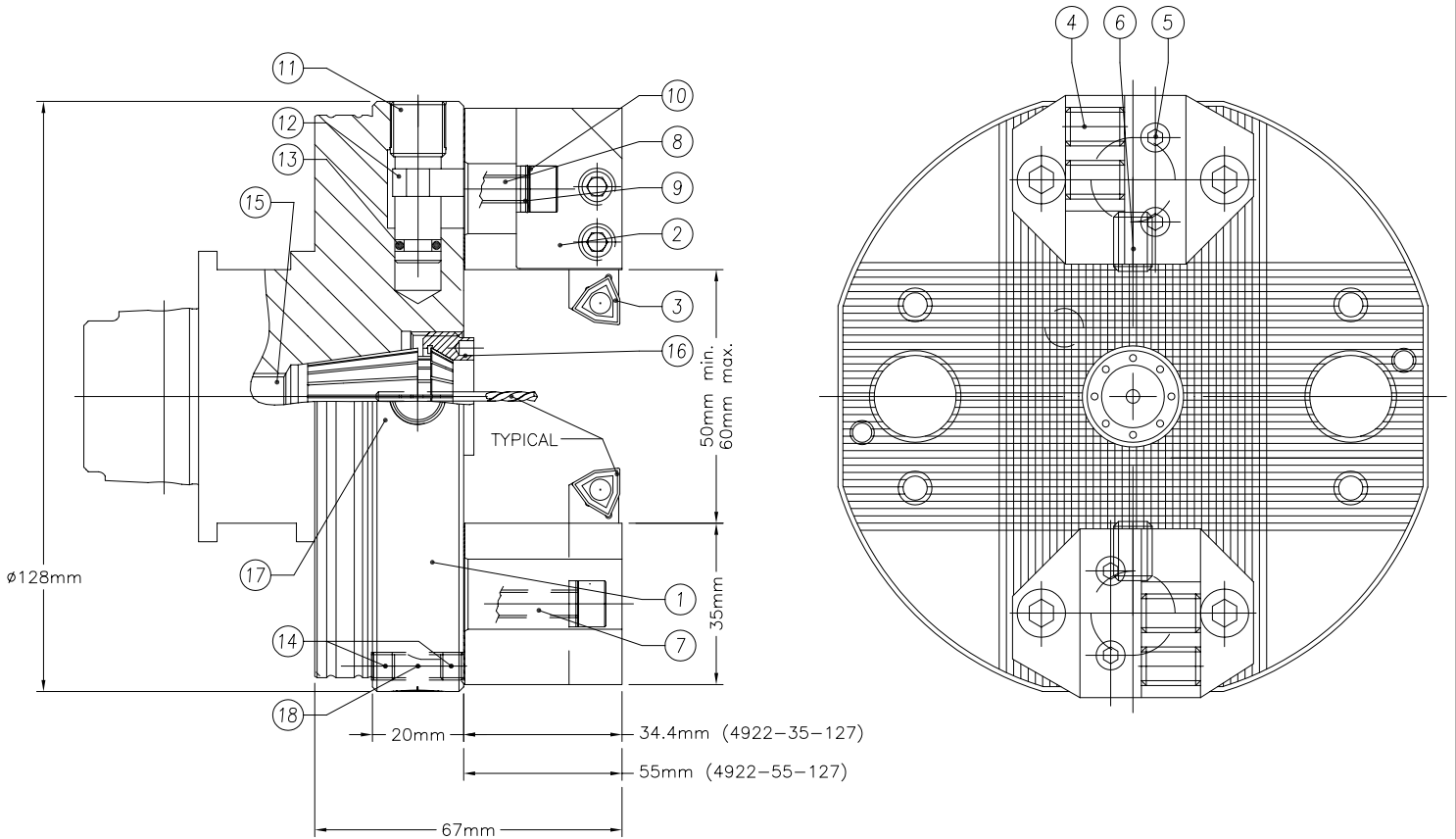


ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	TURNING HEAD	PCM H94946-127
2a	2	TOOLHOLDER (35mm Length)	4922-35-127
2b	2	TOOLHOLDER (50mm Length)	4922-50-127
3*	2	TOOL SHANK (1/2" MAXIMUM)	
4	4	SOCKET SET SCREW	M8 x 12mm
5	4	SOCKET SET SCREW	M6 x 6mm
6	2	SOCKET SET SCREW	M6 x 12mm
7	2	SOCKET HEAD CAP SCREW	M6 x 35mm
8	2	SOCKET HEAD CAP SCREW	M6 x 25mm
9	4	SPACER	4911-19
10	4	SPRING WASHER	212748 M6
11	2	ADJUSTING DIAL	4915-03
12	2	FORK	4915-10
13	2	O-RING	ORM 0060-20
14	4	SOCKET SET SCREW	M5 x 5mm
15	1	STOP SCREW	
16	1	PIN FACE NUT	920110
17*	1	COLLET (RANGE 1-13mm)	ER20
18	1	BRASS PIN	4915-28
19	1	WRENCH PIN FACE ER20A	920170

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 6: TURNING HEADS

TH HSK C50-128/20.....HB94946-127



ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	TURNING HEAD	PCM HB94946-127
2a	1	TOOLHOLDER (35mm Length)	4922-35-127
2b	1	TOOLHOLDER (50mm Length)	4922-55-127
3*	1	TOOL SHANK (1/2" MAXIMUM)	
4	1	SOCKET SET SCREW	M8 x 12mm
5	1	SOCKET SET SCREW	M6 x 6mm
6	1	SOCKET SET SCREW	M6 x 12mm
7	1	SOCKET HEAD CAP SCREW	M6 x 35mm
8	1	SOCKET HEAD CAP SCREW	M6 x 25mm
9	1	SPACER	4911-19
10	1	SPRING WASHER	212748 M6
11	1	ADJUSTING DIAL	4915-03
12	1	FORK	4915-10
13	1	O-RING	ORM 0060-20
14	1	SOCKET SET SCREW	M5 x 5mm
15	1	STOP SCREW	
16	1	PIN FACE NUT	920110
17*	1	COLLET (RANGE 1 - 13mm)	ER20
18	1	BRASS PIN	4915-28
19	1	WRENCH PIN FACE ER20A	920170
20	1	BALANCE RINGS (FRW 1220)	8020.12400

\* NOT INCLUDED WITH TOOLHEAD

REV 12/4/2003

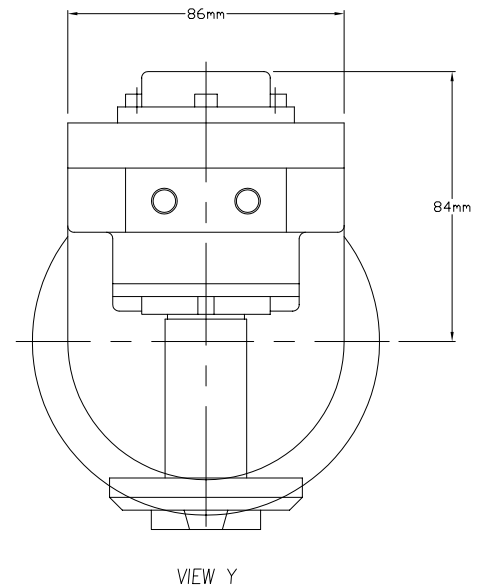
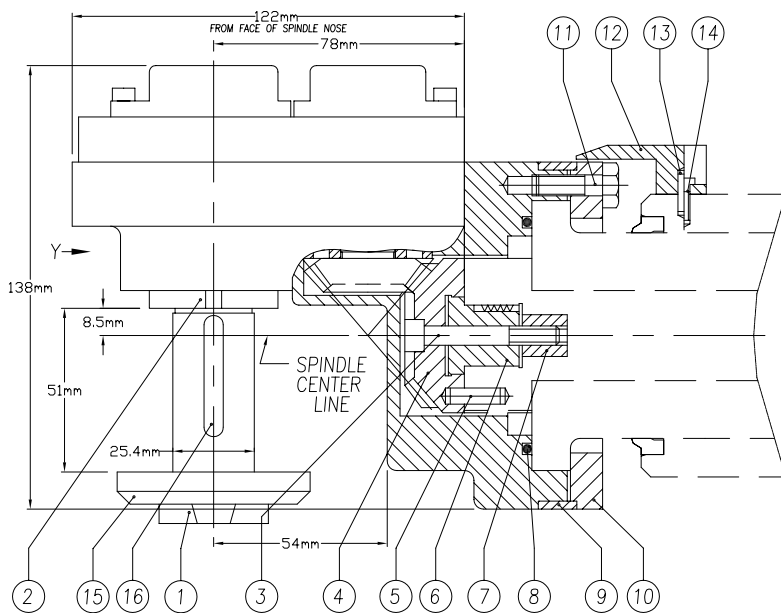
**SECTION 7**

**MILLING HEADS**

# SECTION 7: MILLING HEADS

FK 26-2/4 FQ.....5.19.035-2

TOOLHEAD SPECIFICATIONS		
MAX. MILLING CUTTER DIAMETER		4"
MAXIMUM RPM		1640
SHANK SIZE		1" x 2"
GEAR RATIO:	TOOLSPINDLE INPUT RPM	MILLING ARBOR OUTPUT RPM
	1.95	1

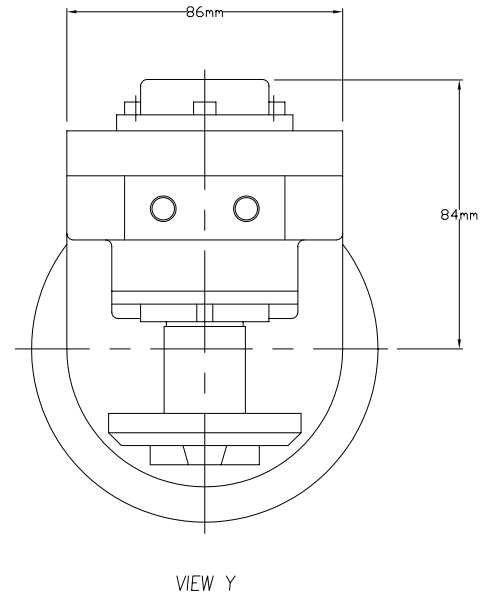
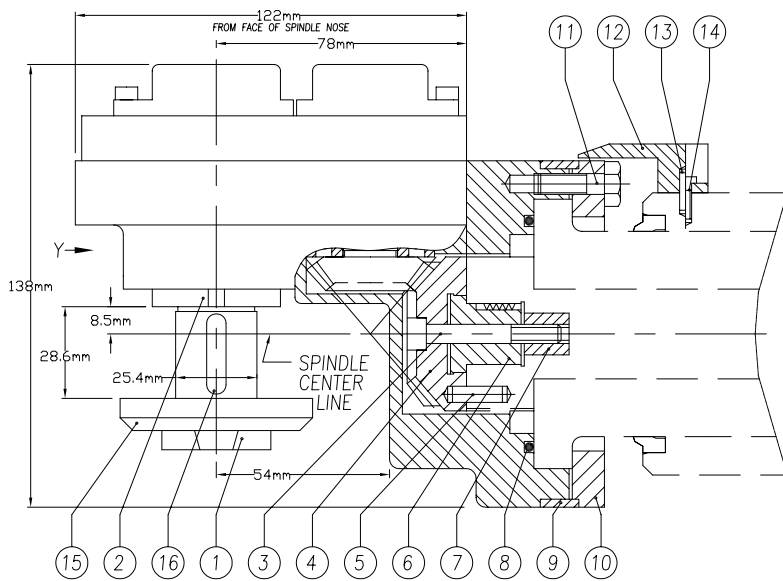


ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	LOCKING SCREW	61340 M12/27
2	1	SHANK (SIZE 1.0" x 2")	5.19.009-12
3	1	SOCKET HEAD CAP SCREW	M8 x 40mm
4	1	BEVEL GEAR	5.19.181
5	1	DOWEL PIN	6 x 16mm
6	1	SPINDLE NOSE ADAPTOR	5.19.321
7	1	THREADED BUSHING	5.19.313
8	1	O-RING	ORM 0690-30
9	1	CALIBRATION RING	5.19.351
10	1	FLANGE CLAMP	5.20.314
11	8	BOLTS	M6 x 20mm
12	1	INDICATOR	5.19.350
13	1	DOWEL PIN	4 x 10mm
14	2	SOCKET HEAD CAP SCREW	M5 x 12mm
15	1	CAP	5.19.135
16	1	KEY (IF APPLICABLE)	1/4"x1/4"x1.5"
17	1	WRENCH HOOK SPANNER	61350 #27
18	1	WRENCH HOOK SPANNER	73900 40-42mm

# SECTION 7: MILLING HEADS

FK 26-2/4 FQ.....5.19.035-4

TOOLHEAD SPECIFICATIONS		
MAX. MILLING CUTTER DIAMETER		4"
MAXIMUM RPM		1640
SHANK SIZE		1"x1 1/8"
GEAR RATIO:	TOOLSPINDLE INPUT RPM	MILLING ARBOR OUTPUT RPM
	1.95	1



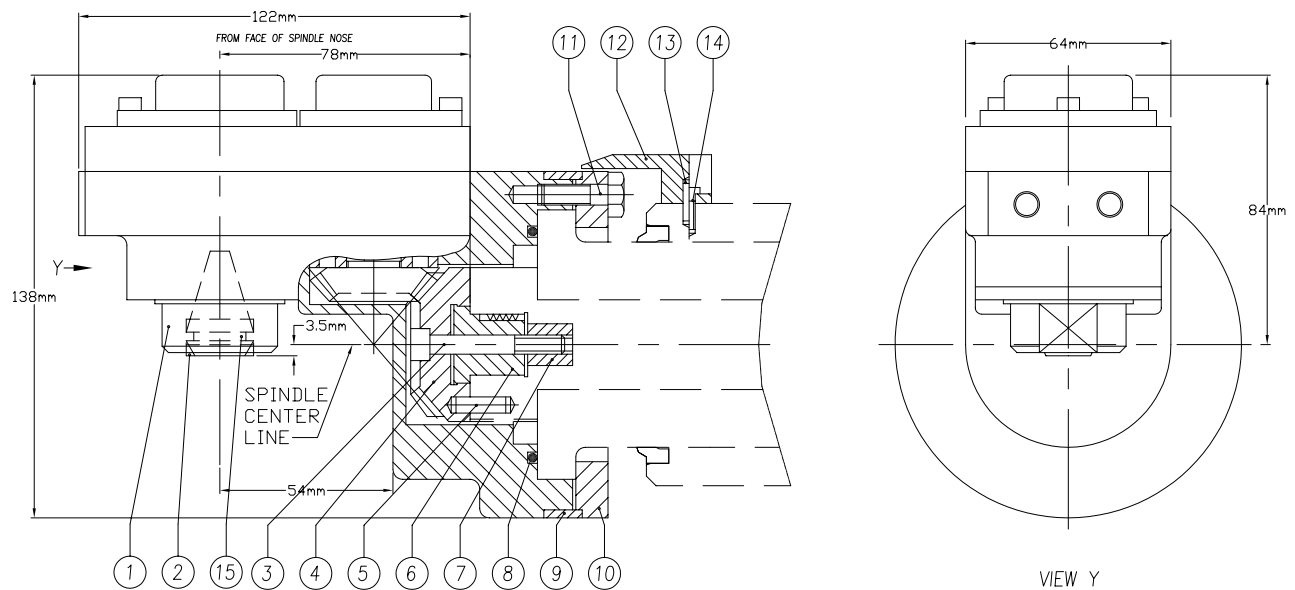
ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	LOCKING SCREW	61340 M12/27
2	1	SHANK (SIZE 1.0" x 1.125")	5.19.009-14
3	1	SOCKET HEAD CAP SCREW	M8 x 40mm
4	1	BEVEL GEAR	5.19.181
5	1	DOWEL PIN	6 x 16mm
6	1	SPINDLE NOSE ADAPTOR	5.19.321
7	1	THREADED BUSHING	5.19.313
8	1	O-RING	ORM 0690-30
9	1	CALIBRATION RING	5.19.351
10	1	FLANGE CLAMP	5.20.314
11	8	BOLTS	M6 x 20mm
12	1	INDICATOR	5.19.350
13	1	DOWEL PIN	4 x 10mm
14	2	SOCKET HEAD CAP SCREW	M5 x 12mm
15	1	CAP	5.19.135
16	1	KEY (IF APPLICABLE)	1/4"x1/4"x1.0"
17	1	WRENCH HOOK SPANNER	61350 #27
18	1	WRENCH HOOK SPANNER	73900 40-42mm



# SECTION 7: MILLING HEADS

FK 26-1/20 FQ.....5.19.036-1

TOOLHEAD SPECIFICATIONS		
MAX. CUTTER SHANK SIZE		1/2" DIA.
MAXIMUM RPM		1640
COLLET TYPE		ER20
GEAR RATIO:	TOOLSPINDLE INPUT RPM	MILLING ARBOR OUTPUT RPM
	1	1.13



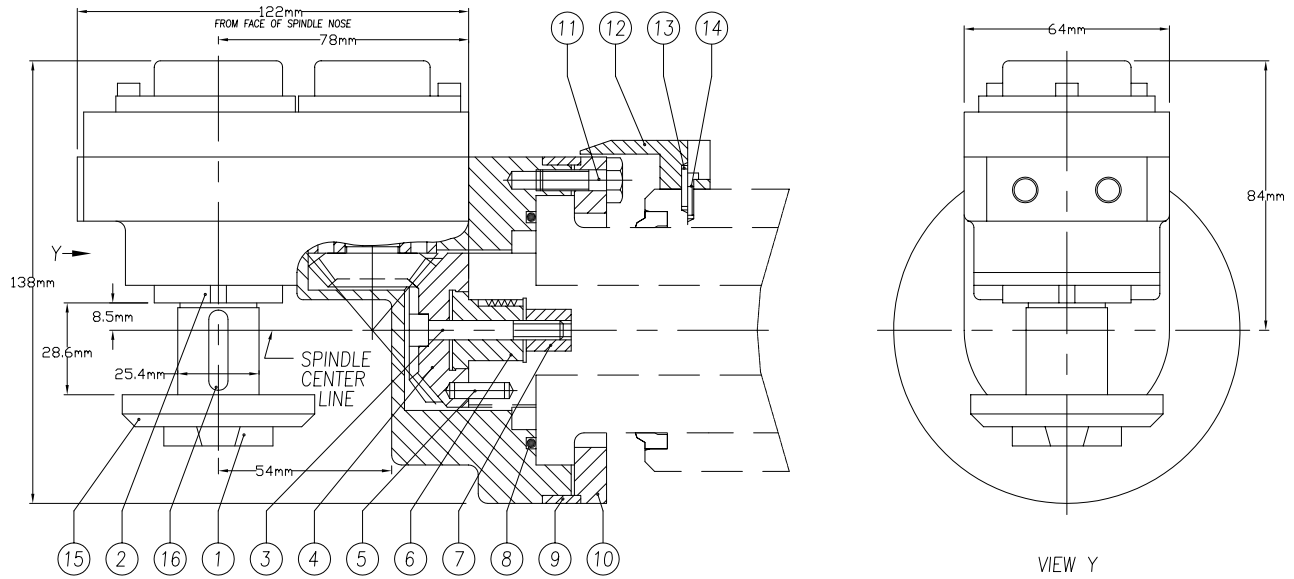
ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	SPINDLE	5.19.009-7
2	1	PIN FACE NUT ER20A	920110
3	1	SOCKET HEAD CAP SCREW	M8 x 40mm
4	1	BEVEL GEAR	5.19.181
5	1	DOWEL PIN	6 x 16mm
6	1	SPINDLE NOSE ADAPTOR	5.19.321
7	1	THREADED BUSHING	5.19.313
8	1	O-RING	ORM 0690-30
9	1	CALIBRATION RING	5.19.351
10	1	FLANGE CLAMP	5.20.314
11	8	BOLTS	M6 x 20mm
12	1	INDICATOR	5.19.350
13	1	DOWEL PIN	4 x 10mm
14	2	SOCKET HEAD CAP SCREW	M5 x 12mm
15*	1	COLLET (RANGE 1-13mm)	ER20
16	1	WRENCH PIN FACE ER20A	920170
17	1	WRENCH OPEN END	72102 32mm

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 7: MILLING HEADS

FK 26-1/4 FQ.....5.19.036-2

TOOLHEAD SPECIFICATIONS		
MAX. MILLING CUTTER DIAMETER	4"	
MAXIMUM RPM	1640	
SHANK SIZE	1"x1 1/8"	
GEAR RATIO:	TOOLSPINDLE INPUT RPM	MILLING ARBOR OUTPUT RPM
	1	1.13

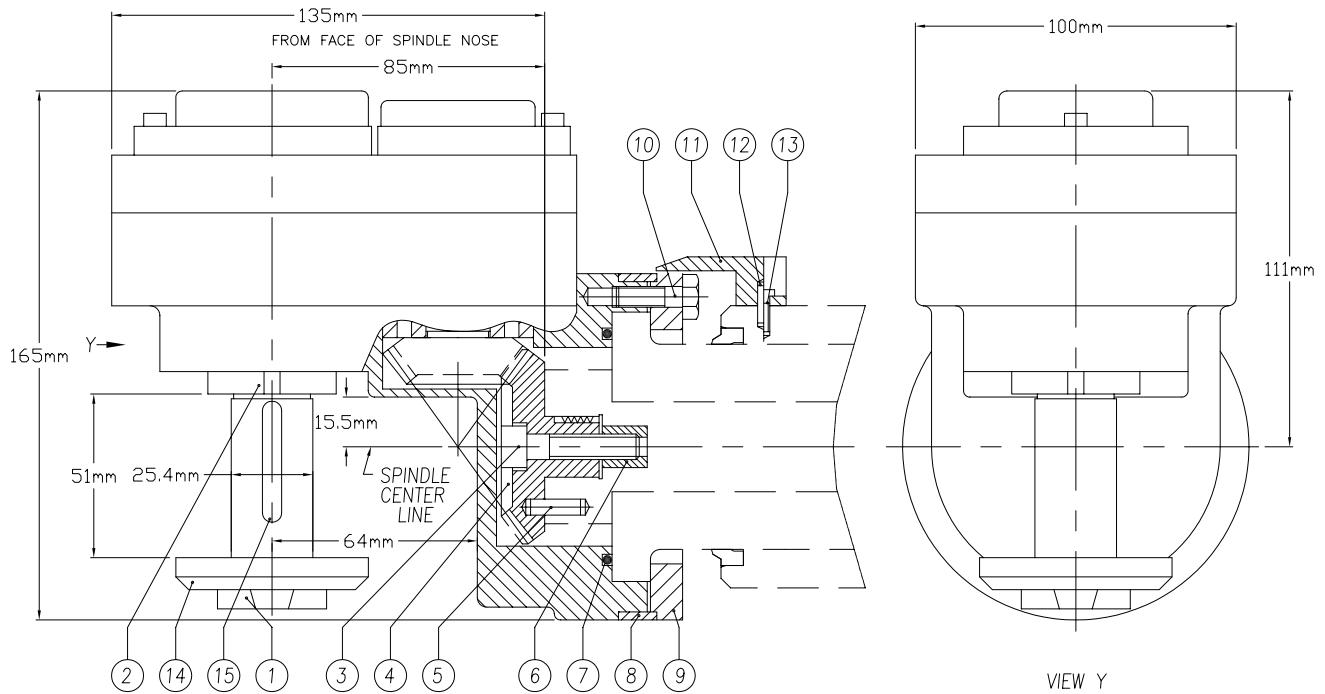


ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	LOCKING SCREW	61340 M12/27
2	1	SHANK (SIZE 1.0" x 1.125")	5.19.009-14
3	1	SOCKET HEAD CAP SCREW	M8 x 40mm
4	1	BEVEL GEAR	5.19.181
5	1	DOWEL PIN	6 x 16mm
6	1	SPINDLE NOSE ADAPTOR	5.19.321
7	1	THREADED BUSHING	5.19.313
8	1	O-RING	ORM 0690-30
9	1	CALIBRATION RING	5.19.351
10	1	FLANGE CLAMP	5.20.314
11	8	BOLTS	M6 x 20mm
12	1	INDICATOR	5.19.350
13	1	DOWEL PIN	4 x 10mm
14	2	SOCKET HEAD CAP SCREW	M5 x 12mm
15	1	CAP	5.19.135
16	1	KEY (IF APPLICABLE)	1/4"x1/4"x1"
17	1	WRENCH HOOK SPANNER	61350 #27
18	1	WRENCH HOOK SPANNER	73900 40-42mm

# SECTION 7: MILLING HEADS

FK 26-1.4/5 FQ.....5.19.038-2

TOOLHEAD SPECIFICATIONS		
MAX. MILLING CUTTER DIAMETER		5"
MAXIMUM RPM		1640
SHANK SIZE		1" x 2"
GEAR RATIO:	TOOLSPINDLE INPUT RPM	MILLING ARBOR OUTPUT RPM
	1	1.46

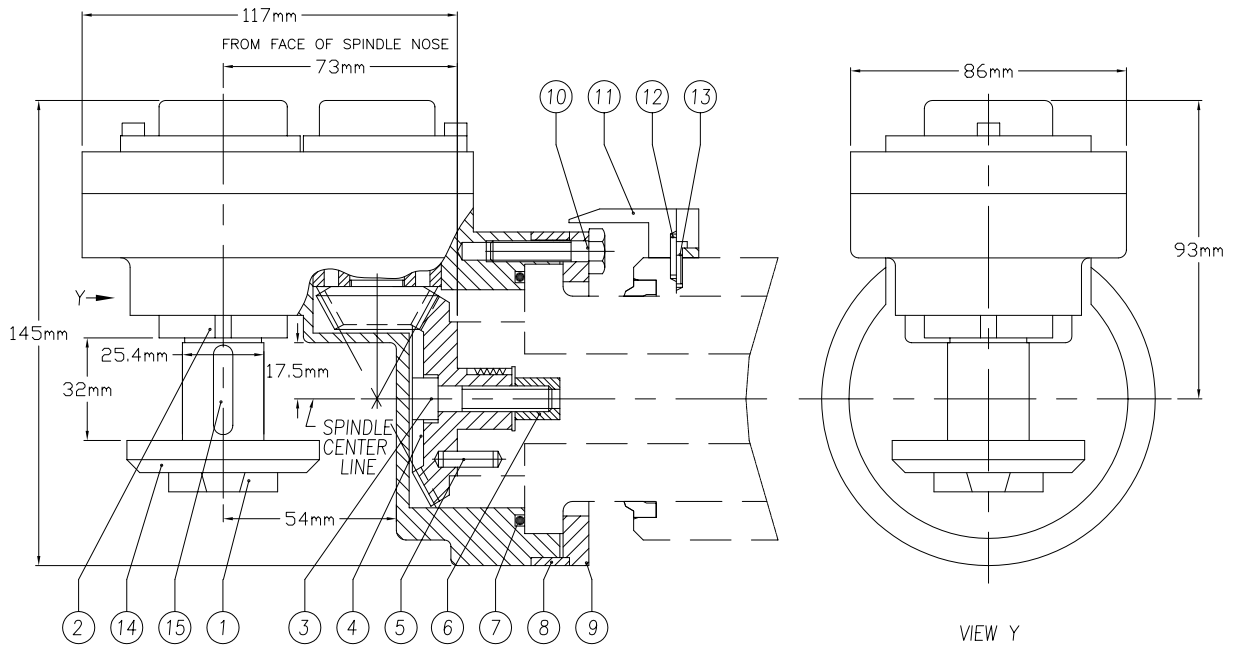


ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	LOCKING SCREW	61340 M12/27
2	1	SHANK (SIZE 1.0" x 2.0")	5.19.027-2
3	1	SOCKET HEAD CAP SCREW	M8 x 35mm
4	1	BEVEL GEAR	5.19.311
5	1	DOWEL PIN	6 x 16mm
6	1	THREADED BUSHING	5.19.313
7	1	O-RING	ORM 0690-30
8	1	CALIBRATION RING	5.19.351
9	1	FLANGE CLAMP	5.20.314
10	8	BOLTS	M6 x 20mm
11	1	INDICATOR	5.19.350
12	1	DOWEL PIN	4 x 10mm
13	2	SOCKET HEAD CAP SCREW	M5 x 12mm
14	1	CAP	5.19.135
15	1	KEY (IF APPLICABLE)	1/4"x1/4"x1.5"
16	1	WRENCH HOOK SPANNER	61350 #27
17	1	WRENCH HOOK SPANNER	73900 40-42mm

# SECTION 7: MILLING HEADS

FK 26-1.2/4 FQ.....5.19.078-2

TOOLHEAD SPECIFICATIONS		
MAX. MILLING CUTTER DIAMETER		4"
MAXIMUM RPM		1640
SHANK SIZE		1"x1 1/4"
GEAR RATIO:	TOOLSPINDLE INPUT RPM	MILLING ARBOR OUTPUT RPM
	1.21	1

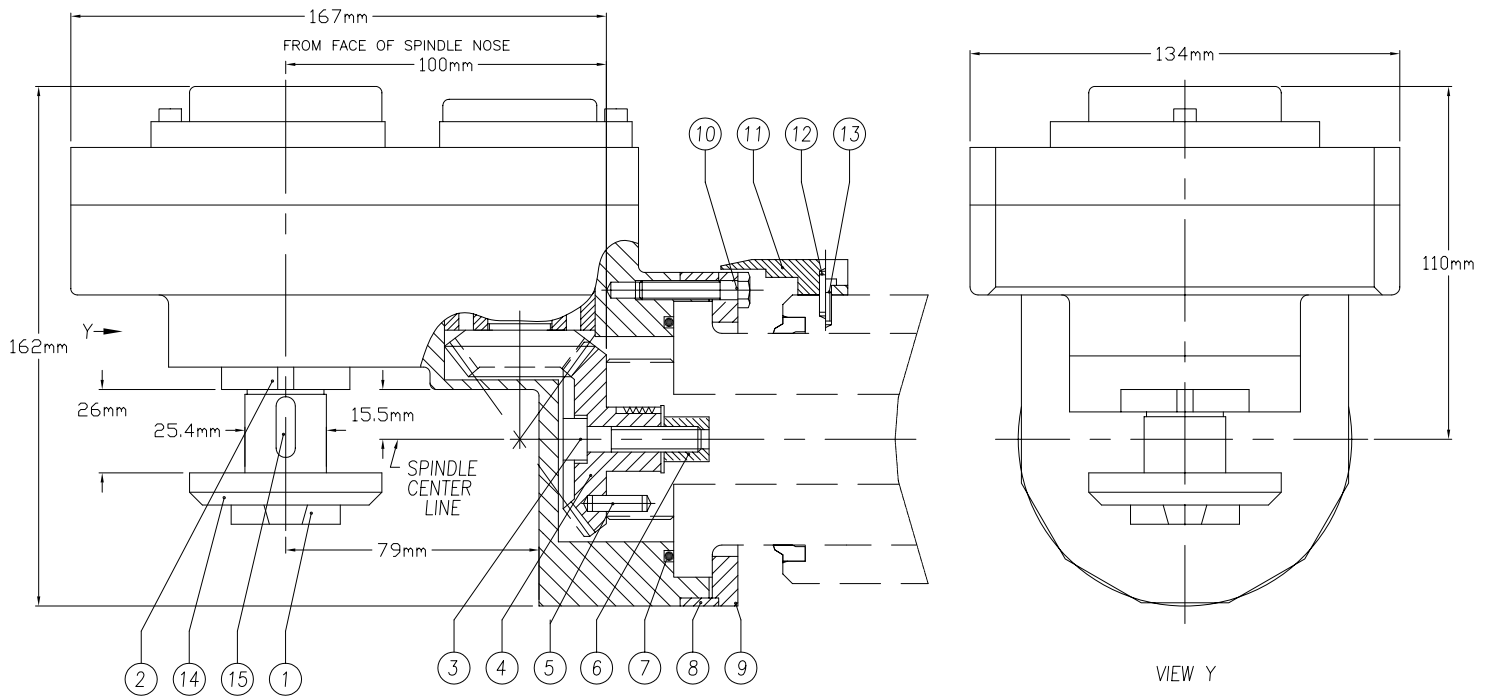


ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	LOCKING SCREW	61340 M12/27
2	1	SHANK (SIZE 1.0" x 1.25")	5.19.045-2
3	1	SOCKET HEAD CAP SCREW	M8 x 35mm
4	1	BEVEL GEAR	5.19.404
5	1	DOWEL PIN	6 x 16mm
6	1	THREADED BUSHING	5.19.313
7	1	O-RING	OR-3281
8	1	CALIBRATION RING	5.19.405
9	1	FLANGE CLAMP	5.20.406
10	8	BOLTS	M6 x 30mm
11	1	INDICATOR	5.19.407
12	1	DOWEL PIN	4 x 10mm
13	2	SOCKET HEAD CAP SCREW	M5 x 12mm
14	1	CAP	5.19.135
15	1	KEY (IF APPLICABLE)	1/4"x1/4"x1.0"
16	1	WRENCH HOOK SPANNER	61350 #27
17	1	WRENCH HOOK SPANNER	73900 40-42mm

# SECTION 7: MILLING HEADS

FK 26-2/6 FQ.....5.19.047-2

TOOLHEAD SPECIFICATIONS		
MAX. MILLING CUTTER DIAMETER		6"
MAXIMUM RPM		1640
SHANK SIZE		1"x26mm
GEAR RATIO:	TOOLSPINDLE INPUT RPM	MILLING ARBOR OUTPUT RPM
	2	1

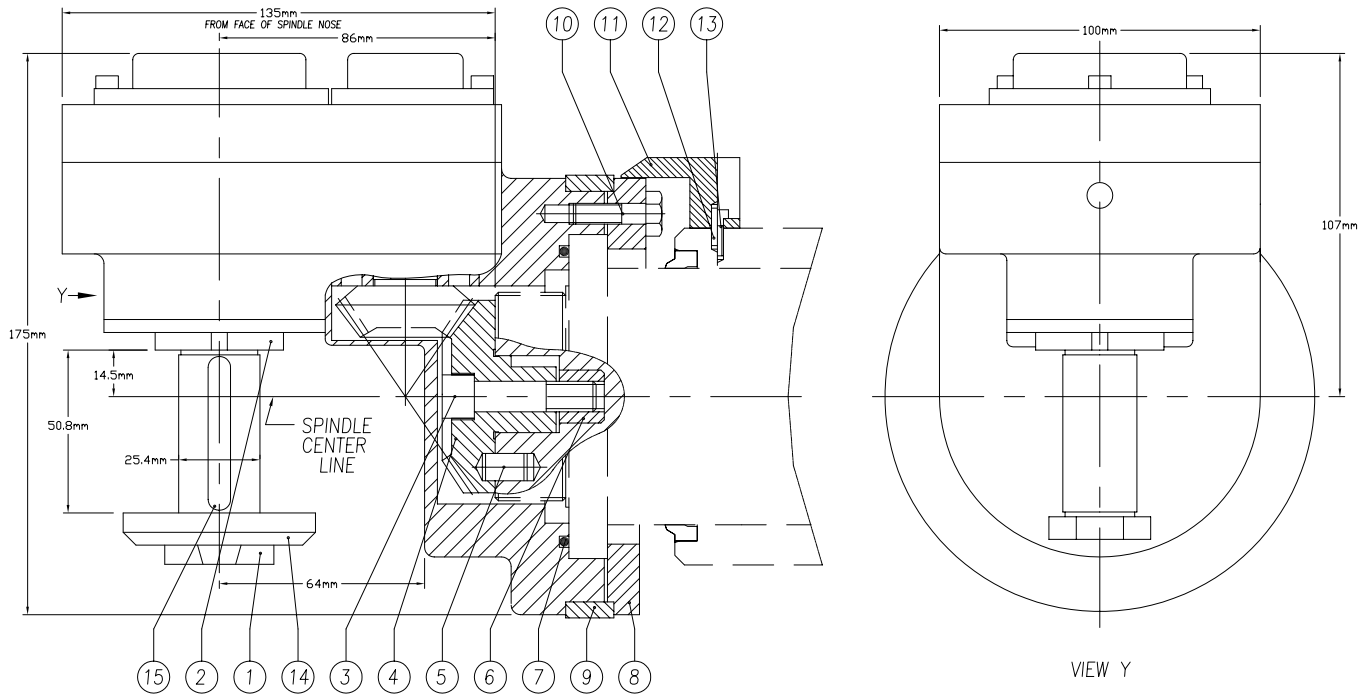


ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	LOCKING SCREW	61340 M12/27
2	1	SHANK (SIZE 1.0" x 26mm)	5.19.027-8
3	1	SOCKET HEAD CAP SCREW	M8 x 35mm
4	1	BEVEL GEAR	5.19.311
5	1	DOWEL PIN	6 x 16mm
6	1	THREADED BUSHING	5.19.313
7	1	O-RING	ORM 0690-30
8	1	CALIBRATION RING	5.19.405
9	1	FLANGE CLAMP	5.20.406
10	8	BOLTS	M6 x 30mm
11	1	INDICATOR	5.19.407
12	1	DOWEL PIN	4 x 10mm
13	2	SOCKET HEAD CAP SCREW	M5 x 12mm
14	1	CAP	5.19.135
15	1	KEY (IF APPLICABLE)	1/4"x1/4"x3/4"
16	1	WRENCH HOOK SPANNER	61350 #27
17	1	WRENCH HOOK SPANNER	73900 40-42mm

# SECTION 7: MILLING HEADS

FK 36-1.5/5 FQ-T.....6.19.004-2

TOOLHEAD SPECIFICATIONS		
MAX. MILLING CUTTER DIAMETER		5"
MAXIMUM RPM		1000
SHANK SIZE		1" x 2"
GEAR RATIO:	TOOLSPINDLE INPUT RPM	MILLING ARBOR OUTPUT RPM
	1.46	1

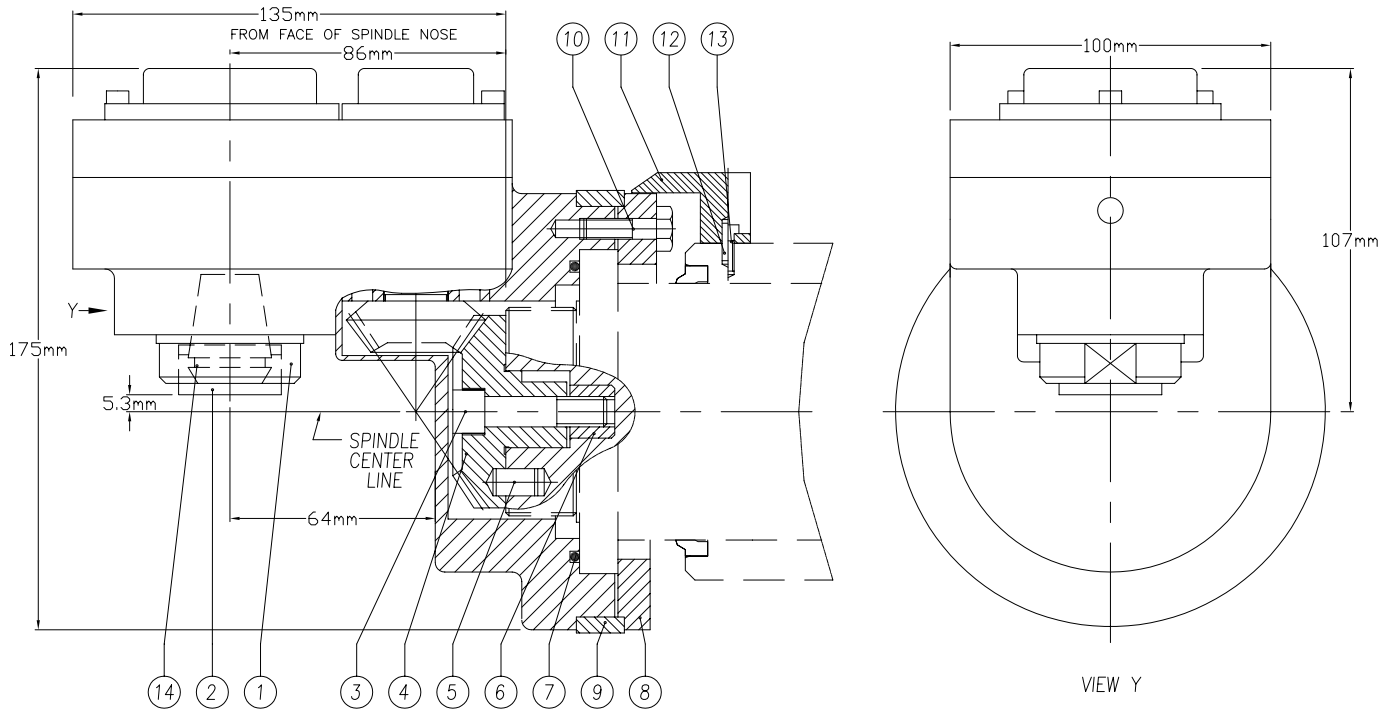


ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	LOCKING SCREW	61340 M12/27
2	1	SHANK (SIZE 1.0" x 2.0")	5.19.027-2
3	1	SOCKET HEAD CAP SCREW	M10 x 40mm
4	1	BEVEL GEAR	6.19.142
5	1	DOWEL PIN	8 x 14mm
6	1	THREADED BUSHING	6.19.143
7	1	O-RING	ORM 0880-30
8	1	FLANGE CLAMP	6.19.144
9	1	CALIBRATION RING	6.19.145
10	8	BOLT	M8 x 25mm
11	1	INDICATOR	6.19.146
12	1	DOWEL PIN	4 x 10mm
13	2	SOCKET HEAD CAP SCREW	M5 x 14mm
14	1	SPACER	5.19.135
15	1	KEY (IF APPLICABLE)	1/4"x1/4"x1.5"
16	1	WRENCH HOOK SPANNER	61350 #27
17	1	WRENCH HOOK SPANNER	73900 45-50mm

# SECTION 7: MILLING HEADS

FK 36-1.5/25 FQ-T.....6.19.004-4

TOOLHEAD SPECIFICATIONS		
MAX. CUTTER SHANK DIAMETER		5/8"
MAXIMUM RPM		1000
COLLET TYPE		ER25
GEAR RATIO:	TOOLSPINDLE INPUT RPM	MILLING ARBOR OUTPUT RPM
	1.46	1



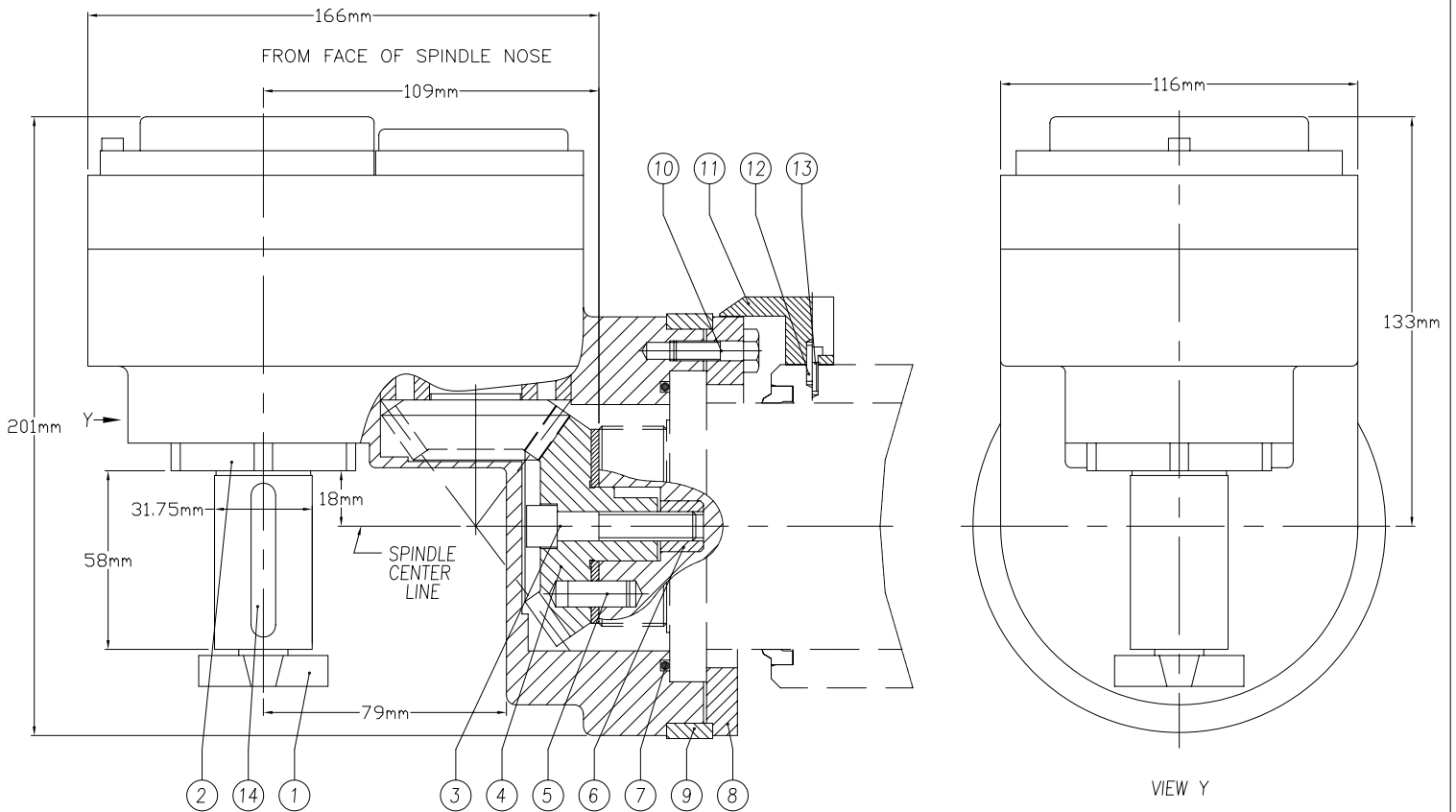
ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	SPINDLE	6.19.184
2	1	PIN FACE NUT ER25A	925110
3	1	SOCKET HEAD CAP SCREW	M10 x 40mm
4	1	BEVEL GEAR	6.19.142
5	1	DOWEL PIN	8 x 14mm
6	1	THREADED BUSHING	6.19.143
7	1	O-RING	ORM 0880-30
8	1	FLANGE CLAMP	6.19.144
9	1	CALIBRATION RING	6.19.145
10	8	BOLT	M8 x 25mm
11	1	INDICATOR	6.19.146
12	1	DOWEL PIN	4 x 10mm
13	2	SOCKET HEAD CAP SCREW	M5 x 14mm
14*	1	COLLET (RANGE 1-16mm)	ER25
15	1	WRENCH PIN FACE ER25A	925170
16	1	WRENCH OPEN END	72102 42mm

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 7: MILLING HEADS

FK 36-1.3/6 FQ.....6.19.010-2

TOOLHEAD SPECIFICATIONS		
MAX. MILLING CUTTER DIAMETER	6"	
MAXIMUM RPM	1000	
SHANK SIZE	1.25"x55mm	
GEAR RATIO:	TOOLSPINDLE INPUT RPM	MILLING ARBOR OUTPUT RPM
	1.25	1



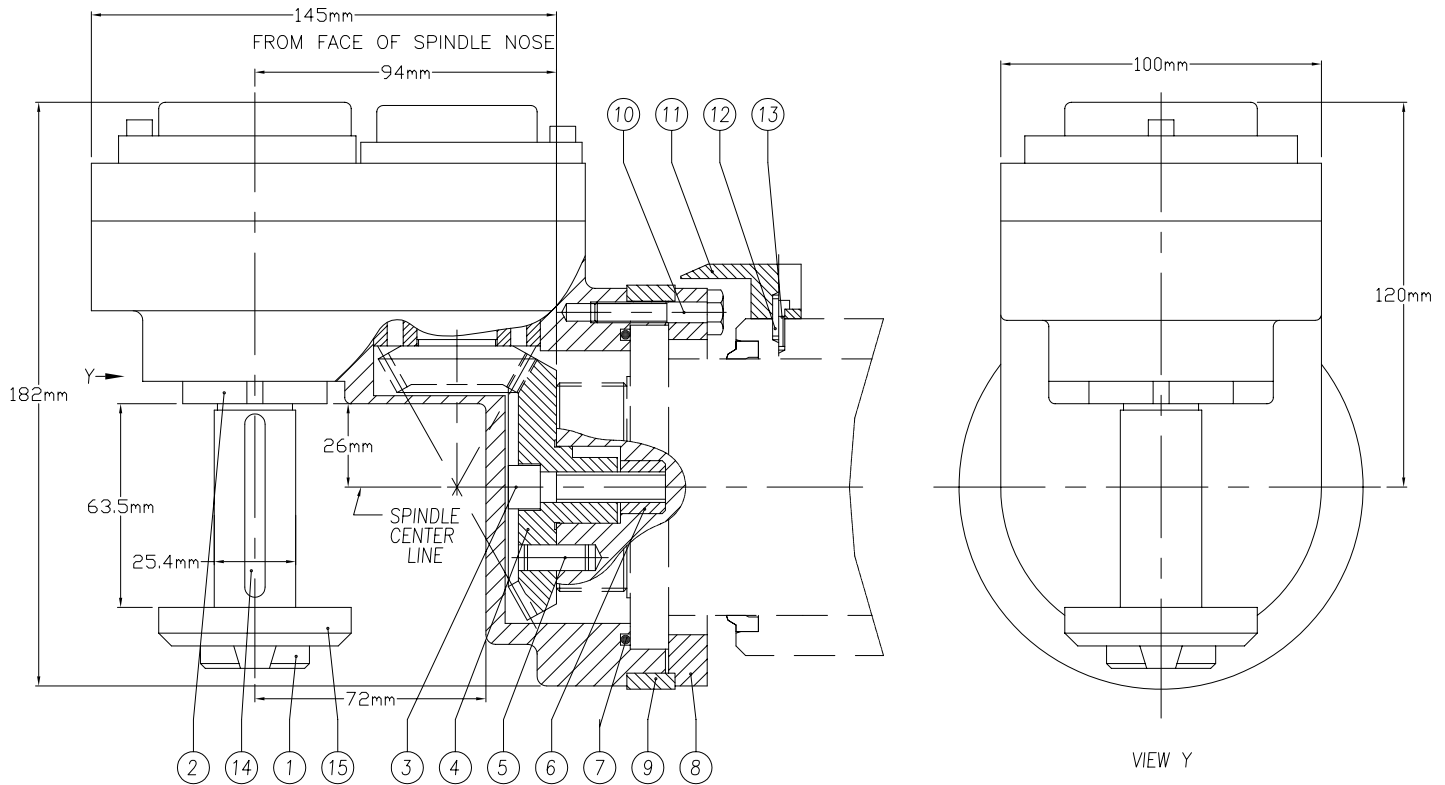
ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	LOCKING SCREW	61340 M16/32
2	1	SHANK (SIZE 1.25" x 58mm)	6.19.150
3	1	SOCKET HEAD CAP SCREW	M10 x 45mm
4	1	BEVEL GEAR	6.19.166
5	1	DOWEL PIN	8 x 20mm
6	1	THREADED BUSHING	6.19.143
7	1	O-RING	ORM 0880-30
8	1	FLANGE CLAMP	6.19.144
9	1	CALIBRATION RING	6.19.145
10	8	BOLT	M8 x 25mm
11	1	INDICATOR	6.19.146
12	1	DOWEL PIN	4 x 10mm
13	2	SOCKET HEAD CAP SCREW	M5 x 14mm
14	1	KEY (IF APPLICABLE)	8 x 7 x 50mm
15	1	WRENCH HOOK SPANNER	61350 #32
16	1	WRENCH HOOK SPANNER	73900 58-62mm



# SECTION 7: MILLING HEADS

FK 36-1/5.5 FQ.....6.19.011-2

TOOLHEAD SPECIFICATIONS		
MAX. MILLING CUTTER DIAMETER		5.5"
MAXIMUM RPM		1000
SHANK SIZE		1" x 2.5"
GEAR RATIO:	TOOLSPINDLE INPUT RPM	MILLING ARBOR OUTPUT RPM
	1.12	1



ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	LOCKING SCREW	61340 M12/27
2	1	SHANK (SIZE 1" x 2.5")	6.19.013-2
3	1	SOCKET HEAD CAP SCREW	M10 x 40mm
4	1	BEVEL GEAR	6.19.177
5	1	DOWEL PIN	8 x 20mm
6	1	THREADED BUSHING	6.19.143
7	1	O-RING	OR-4362
8	1	FLANGE CLAMP	6.19.176
9	1	CALIBRATION RING	6.19.175
10	8	BOLT	M8 x 35mm
11	1	INDICATOR	6.19.178
12	1	DOWEL PIN	4 x 10mm
13	2	SOCKET HEAD CAP SCREW	M5 x 12mm
14	1	KEY (IF APPLICABLE)	1/4x1/4x2 1/4"
15	1	CAP	
16	1	WRENCH HOOK SPANNER	61350 #27
17	1	WRENCH HOOK SPANNER	73900 45-50mm

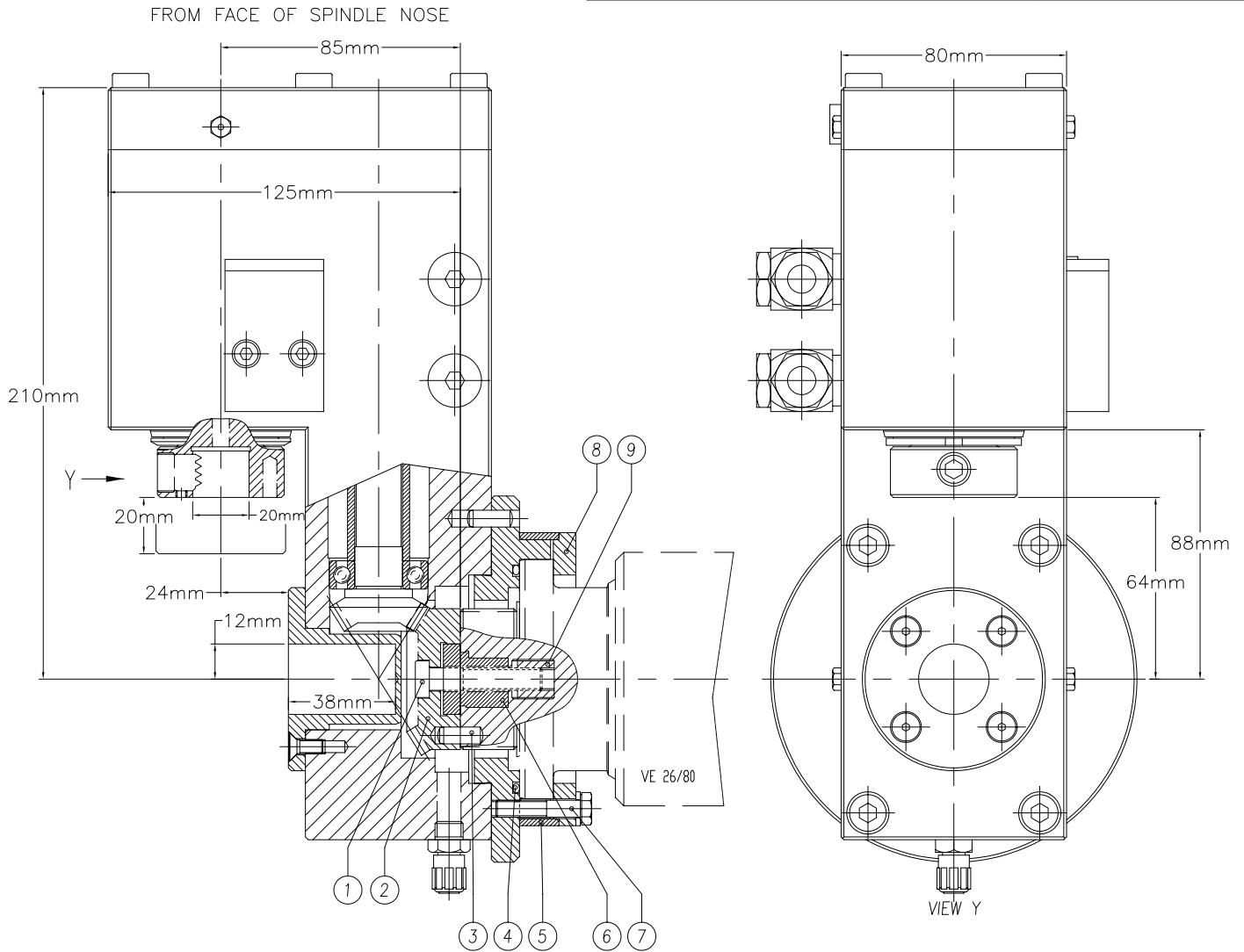
# **SECTION 8**

## **CROSS DRILL HEAD ASSEMBLY**

# SECTION 8: CROSS DRILLING HEAD ASSY.

QBE 261-20/QC 83/16.....5.20.0102-1

TOOLHEAD SPECIFICATIONS	
DRILL HEAD	83212
DRILL STROKE	.787"
DRILLING CAPACITY	3/8"
GEAR REDUCTION RATIO	1:2
MAXIMUM RPM	4100



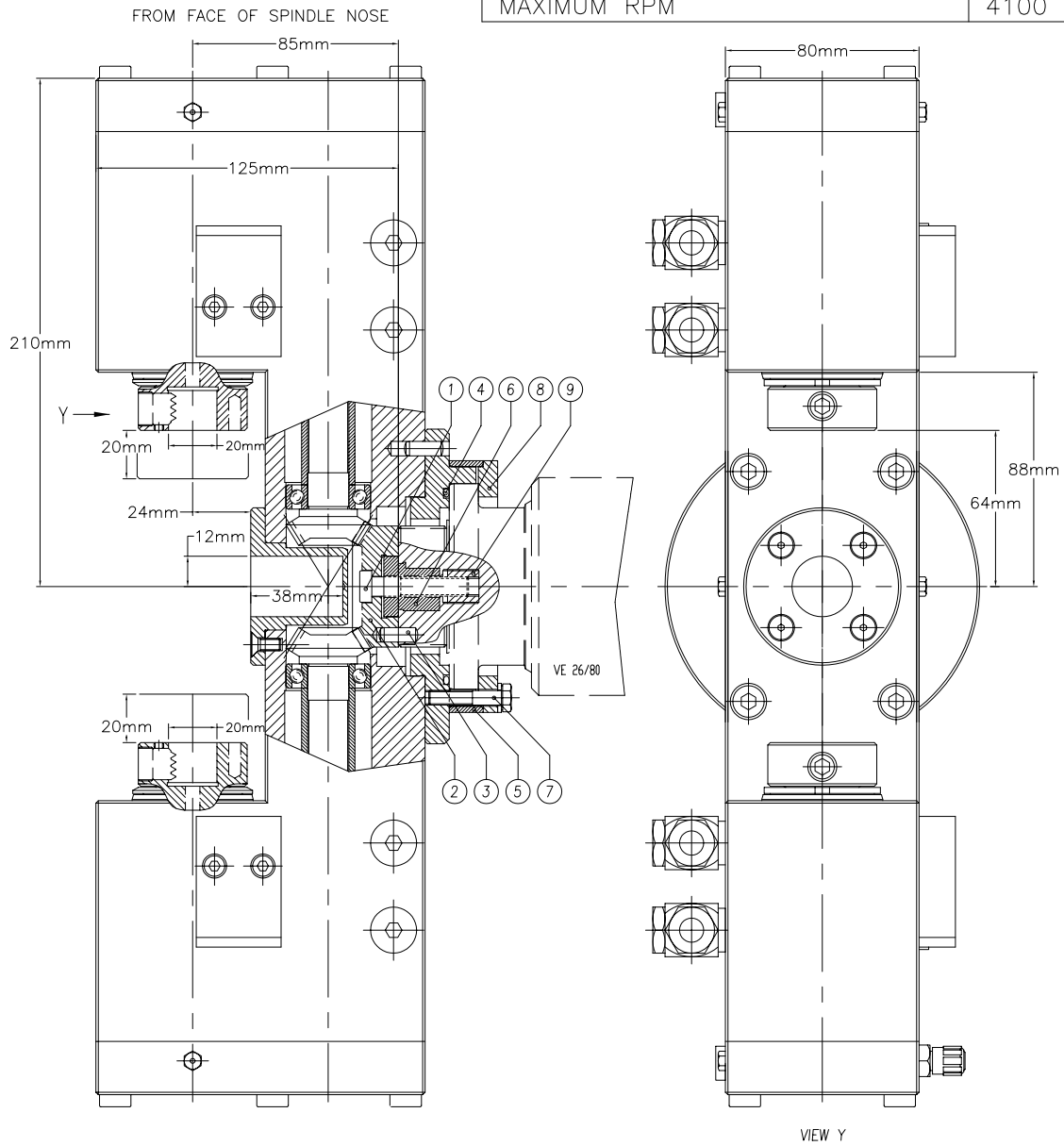
USE TORQUE WRENCH #S-0-060-048-02

ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	SOCKET HEAD CAP SCREW	M8 x 40mm
1	1	BEVEL GEAR	5.20.119-1
1	1	DOWEL PIN	8 x 16mm
1	1	O-RING	ORM 0690-30
1	1	CALIBRATION RING	5.19.405-1
1	1	CENTER PIVOT	5.19.321
1	8	BOLT	M6 x 30mm
1	1	FLANGE CLAMP	5.19.406
1	1	THREADED BUSHING	5.19.313

# SECTION 8: CROSS DRILLING HEAD ASSY.

QBE 262-20/QC 83/16.....5.20.0102-2

TOOLHEAD SPECIFICATIONS	
DRILL HEAD	83212
DRILL STROKE	.787"
DRILLING CAPACITY	3/8"
GEAR REDUCTION RATIO	1:2
MAXIMUM RPM	4100



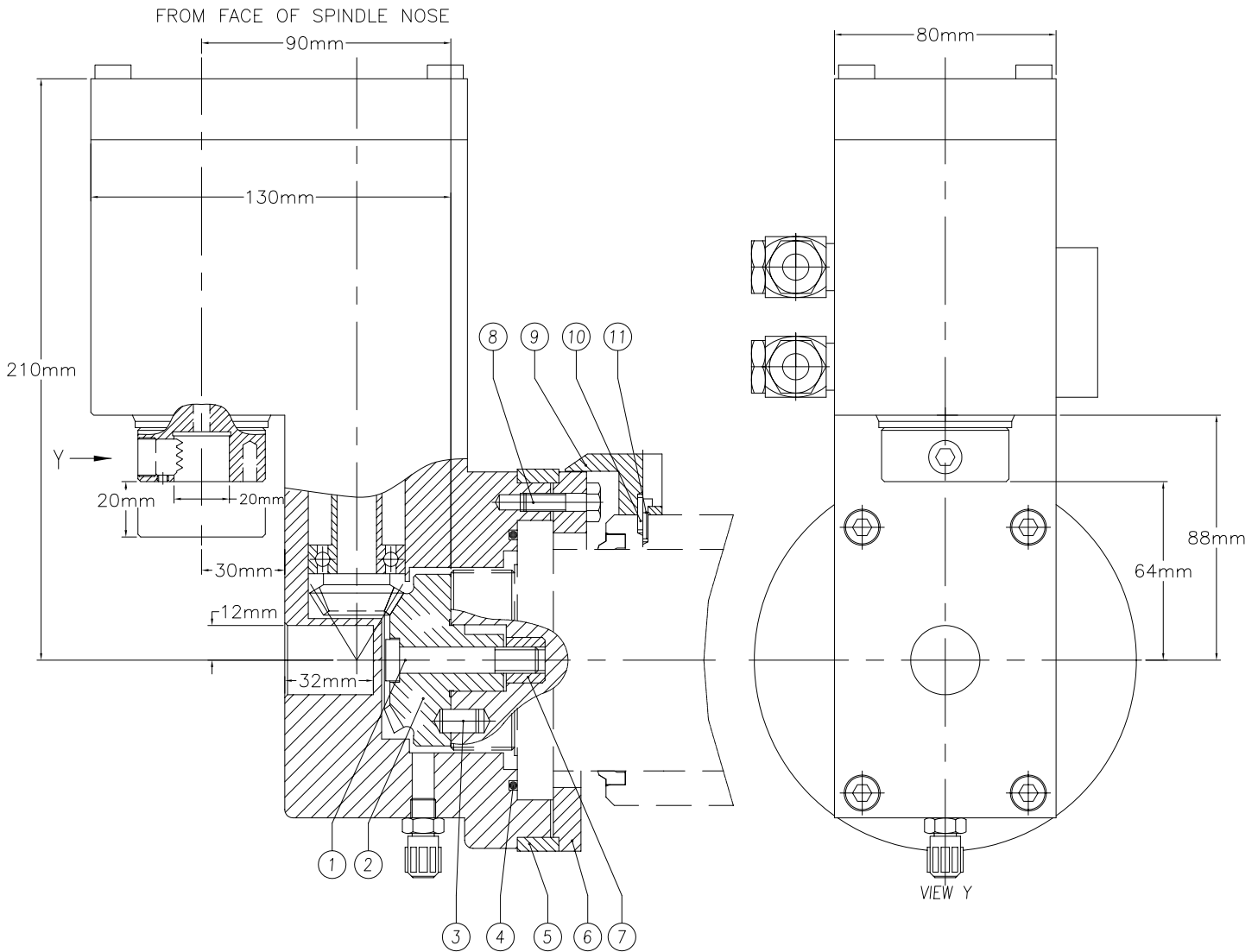
USE TORQUE WRENCH #S-0-060-048-02

ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	SOCKET HEAD CAP SCREW	M8 x 40mm
1	1	BEVEL GEAR	5.20.119-1
1	1	DOWEL PIN	8 x 16mm
1	1	O-RING	ORM 0690-30
1	1	CALIBRATION RING	5.19.405-1
1	1	CENTER PIVOT	5.19.321
1	8	BOLT	M6 x 30mm
1	1	FLANGE CLAMP	5.19.406
1	1	THREADED BUSHING	5.19.313

# SECTION 8: CROSS DRILLING HEAD ASSY.

QBE 362-20/QC 83/16.....5.20.058-1

TOOLHEAD SPECIFICATIONS	
DRILL HEAD	83212
DRILL STROKE	.787"
DRILLING CAPACITY	3/8"
GEAR REDUCTION RATIO	1:1.6
MAXIMUM RPM	4100



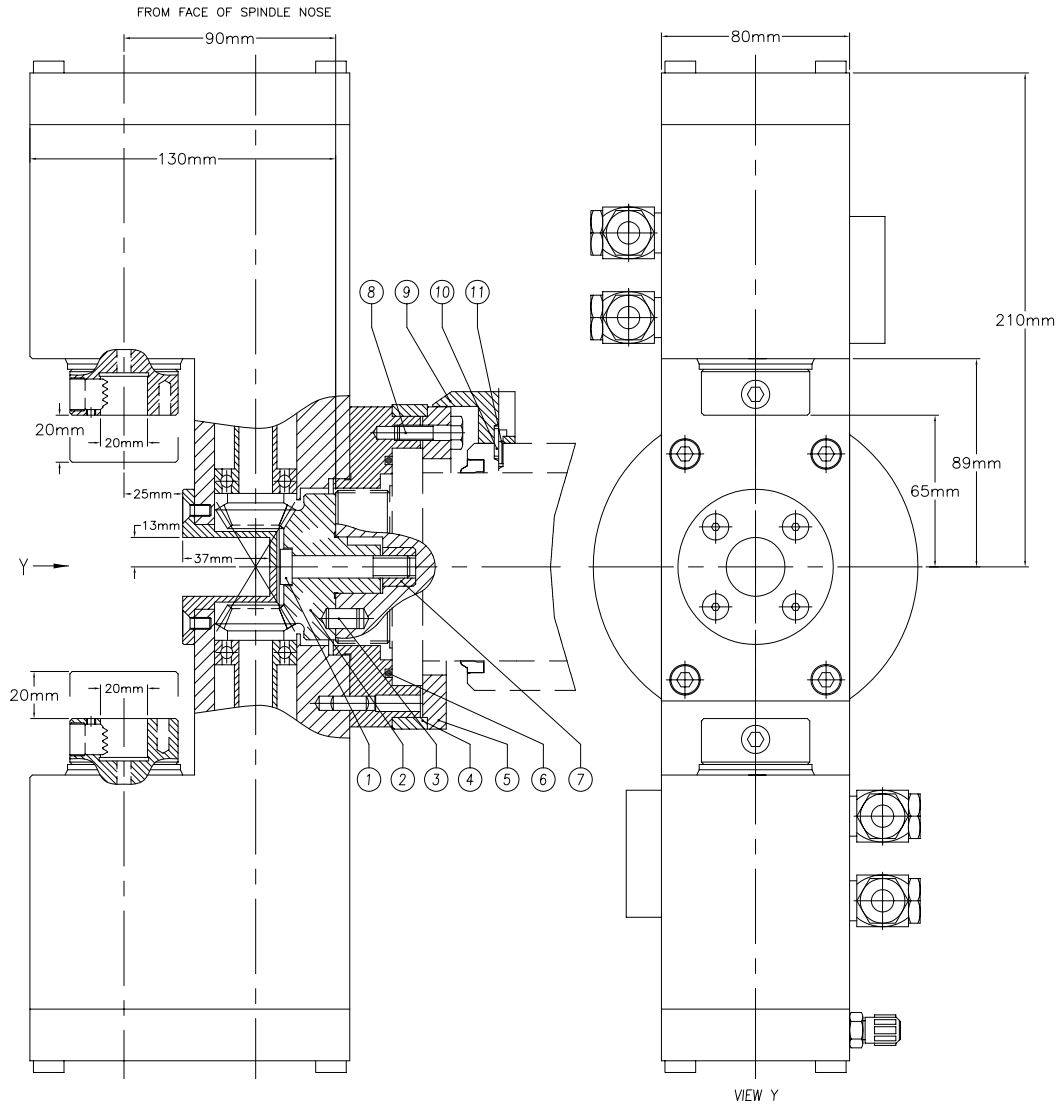
USE TORQUE WRENCH #S-0-060-048-02

ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	SOCKET HEAD CAP SCREW	M8 x 50mm
2	1	BEVEL GEAR	5.20.345
3	1	DOWEL PIN	8 x 14mm
4	1	O-RING	ORM 0880-30
5	1	CALIBRATION RING	6.19.145
6	1	FLANGE CLAMP	6.19.144
7	1	THREADED BUSHING	5.20.305
8	8	BOLT	M8 x 25mm
9	1	INDICATOR	6.19.146
10	1	DOWEL PIN	4 x 10mm
11	2	SOCKET HEAD CAP SCREW	M5 x 14mm

# SECTION 8: CROSS DRILLING HEAD ASSY.

QBE 362-20/QC 83/16.....5.20.057-2

TOOLHEAD SPECIFICATIONS	
DRILL HEAD	83212
DRILL STROKE	.787"
DRILLING CAPACITY	3/8"
GEAR REDUCTION RATIO	1:1.6
MAXIMUM RPM	4100



USE TORQUE WRENCH #S-0-060-048-02

ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	SOCKET HEAD CAP SCREW	M8 x 50mm
2	1	BEVEL GEAR	5.20.345
3	1	DOWEL PIN	8 x 14mm
4	1	O-RING	ORM 0880-30
5	1	CALIBRATION RING	6.19.145
6	1	FLANGE CLAMP	6.19.144
7	1	THREADED BUSHING	5.20.305
8	8	BOLT	M8 x 25mm
9	1	INDICATOR	6.19.146
10	1	DOWEL PIN	4 x 10mm
11	2	SOCKET HEAD CAP SCREW	M5 x 14mm

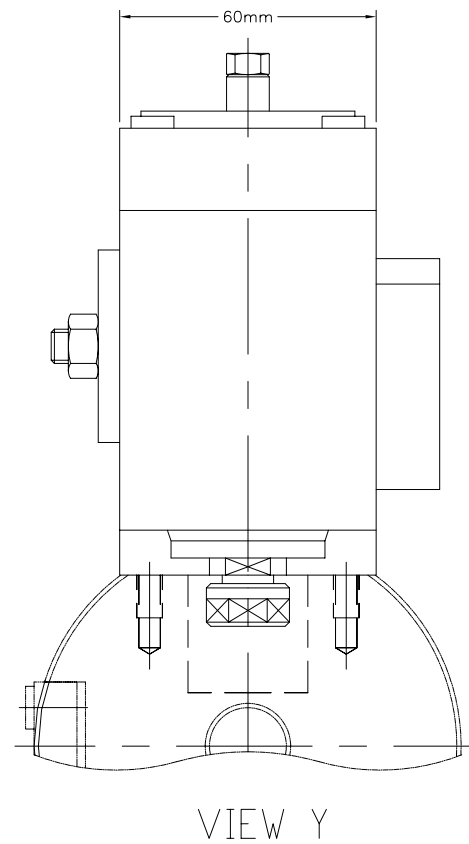
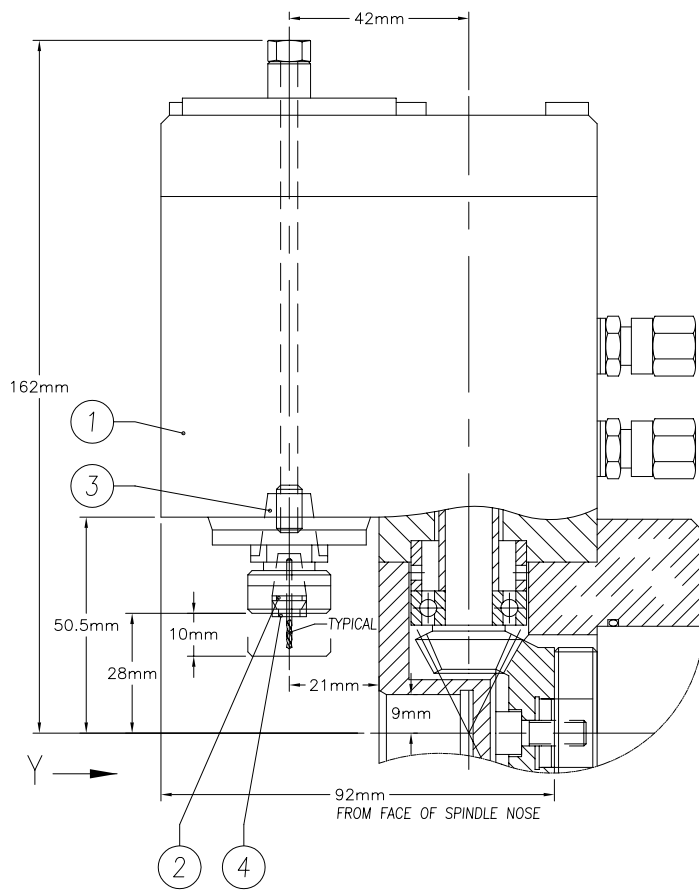
# **SECTION 9**

## **CROSS DRILLING HEADS**

# SECTION 9: CROSS DRILLING HEADS

QBE 20-10/11.....5.20.072-7

TOOLHEAD SPECIFICATIONS	
COLLET SIZE	ER11
DRILL STROKE	.394"
DRILLING CAPACITY	7/16"
GEAR REDUCTION RATIO	1:2
MAXIMUM RPM	4100



ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	CROSS DRILLING HEAD	5.20.072-7
2*	1	COLLET (RANGE .5-7mm)	ER11
3*	1	COLLET HOLDER ER11	5.20.011
4*	1	CLAMP NUT	911120
5*	1	WRENCH OPEN END (10mm)	72102-10mm
6*	1	WRENCH OPEN END (17mm)	72102-17mm

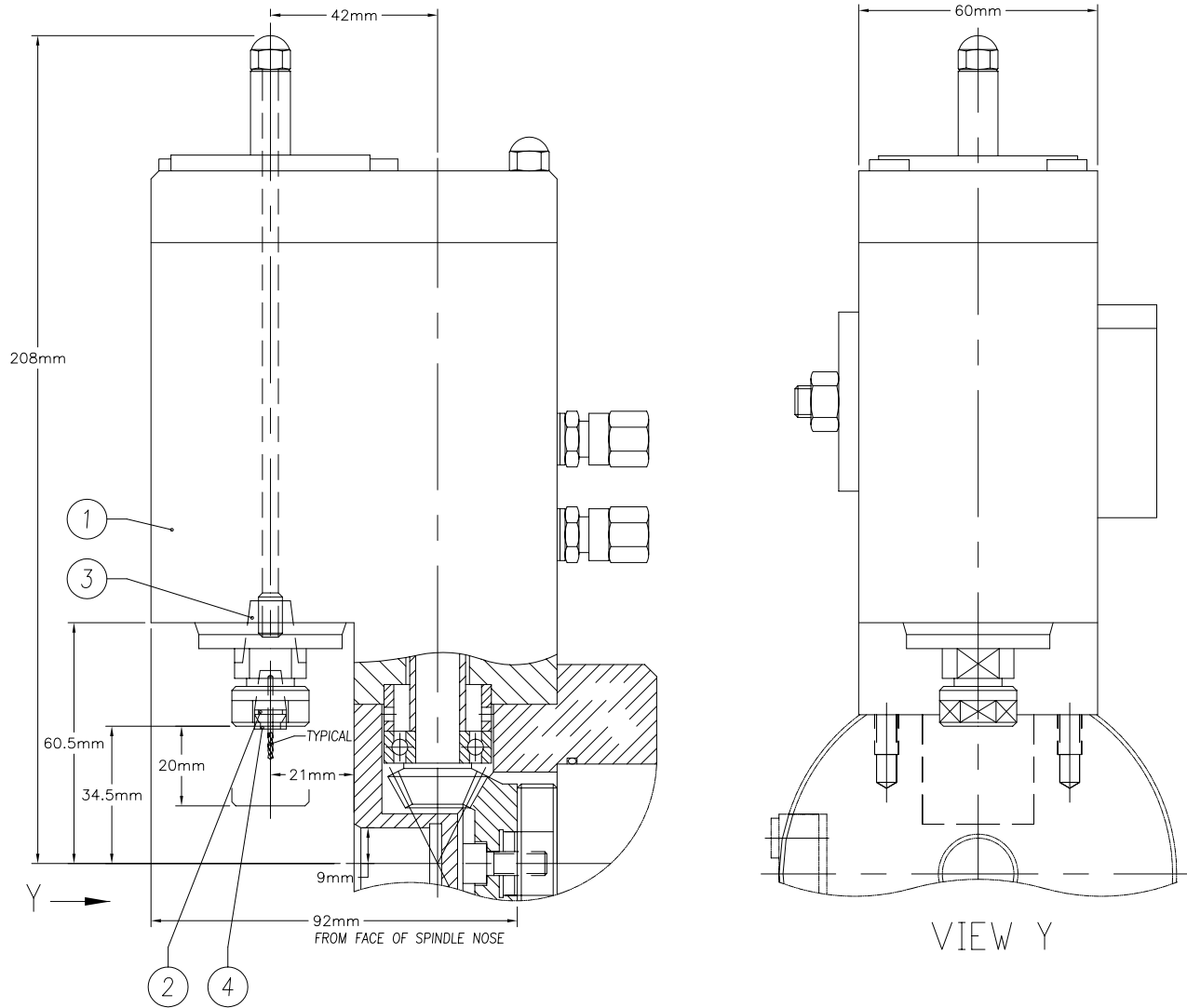
\* NOT INCLUDED WITH TOOLHEAD



# SECTION 9: CROSS DRILLING HEADS

QBE 20-20/11.....5.20.069-3

TOOLHEAD SPECIFICATIONS	
COLLET SIZE	ER11
DRILL STROKE	.787"
DRILLING CAPACITY	7/16"
GEAR REDUCTION RATIO	1:2
MAXIMUM RPM	4100



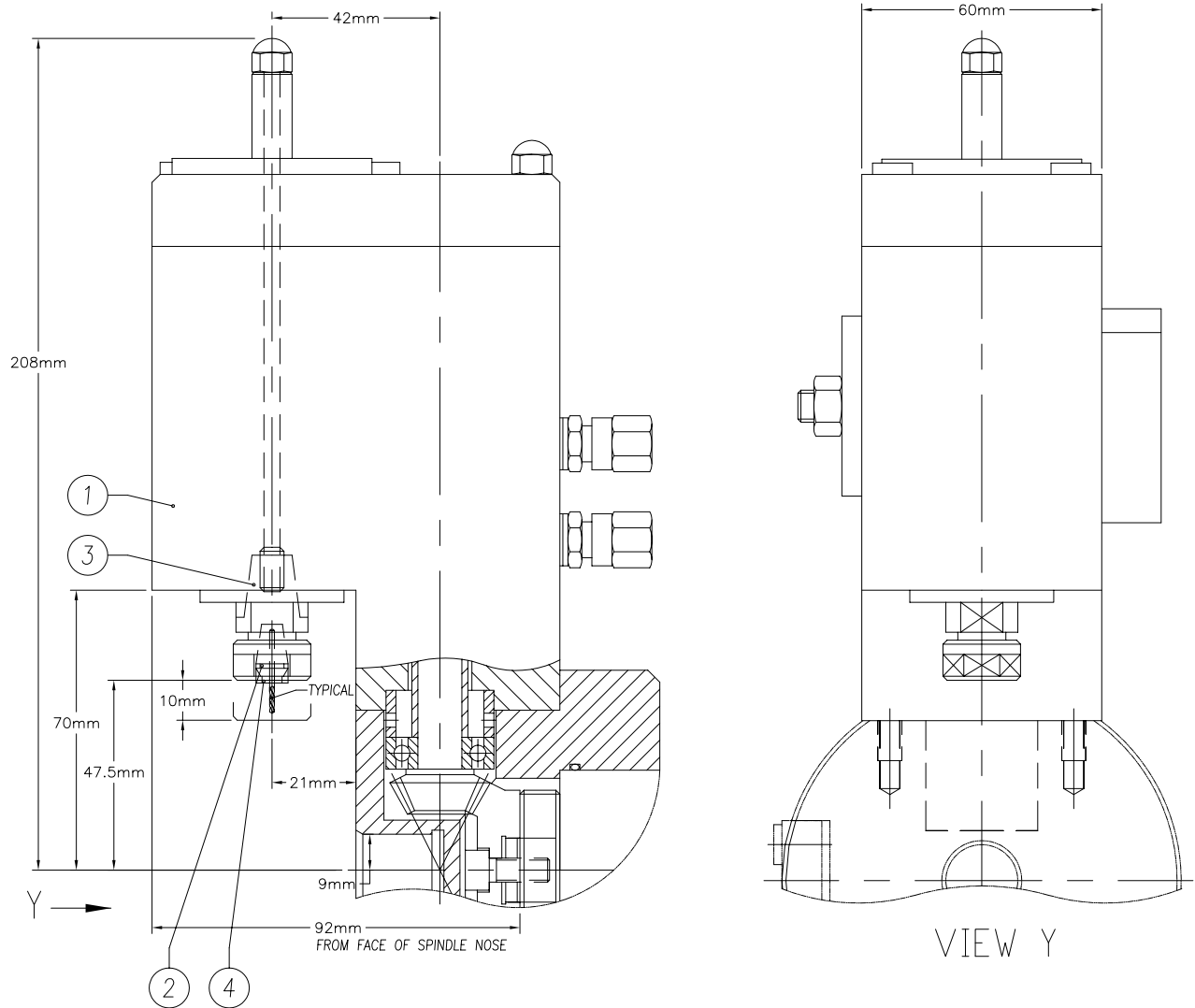
ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	CROSS DRILLING HEAD	5.20.069-3
2*	1	COLLET (RANGE .5-7mm)	ER11
3*	1	COLLET HOLDER ER11	5.20.011
4*	1	CLAMP NUT	911120
5*	1	WRENCH OPEN END (10mm)	72102-10mm
6*	1	WRENCH OPEN END (17mm)	72102-17mm

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 9: CROSS DRILLING HEADS

QBE 20-10/11 EH.....5.20.068-2

TOOLHEAD SPECIFICATIONS	
COLLET SIZE	ER11
DRILL STROKE	.394"
DRILLING CAPACITY	7/16"
GEAR REDUCTION RATIO	1:2
MAXIMUM RPM	4100



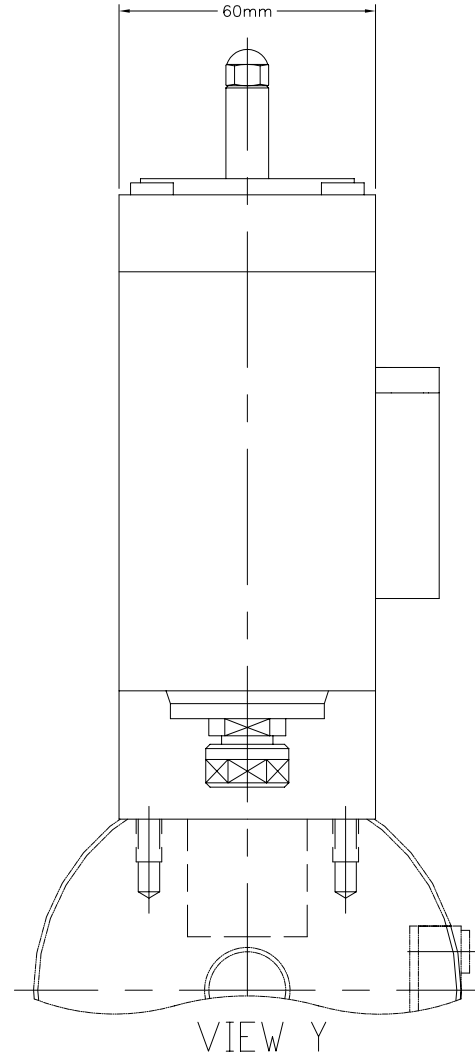
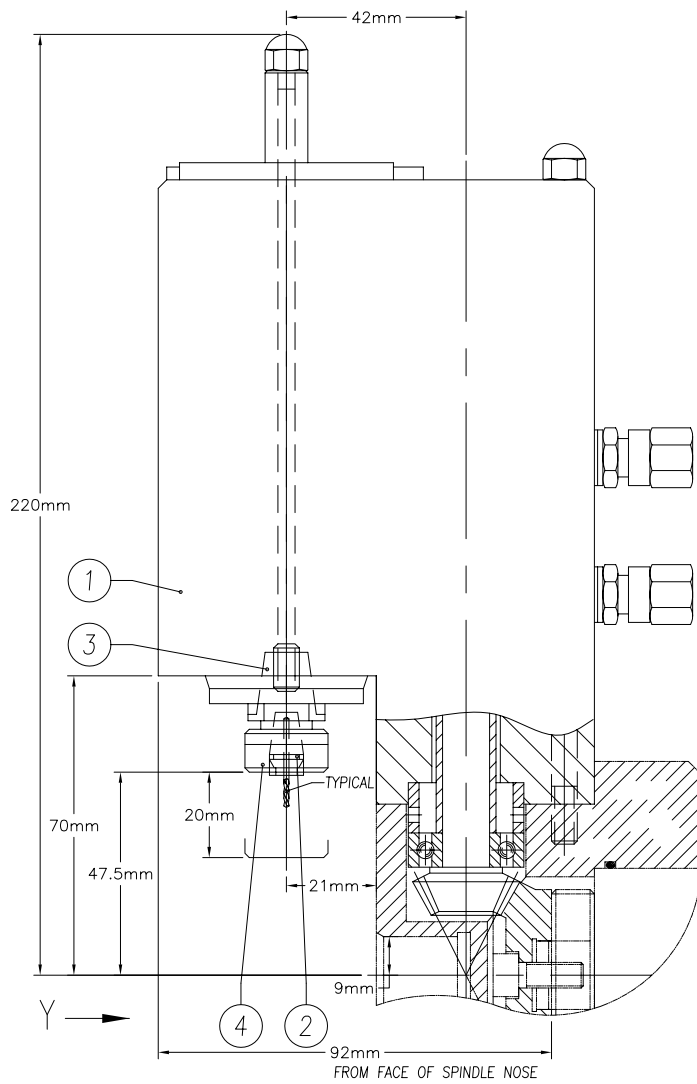
ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	CROSS DRILLING HEAD	5.20.068-2
2*	1	COLLET (RANGE .5-7mm)	ER11
3*	1	COLLET HOLDER ER11	5.20.011
4*	1	CLAMP NUT	911120
5*	1	WRENCH OPEN END (10mm)	72102-10mm
6*	1	WRENCH OPEN END (17mm)	72102-17mm

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 9: CROSS DRILLING HEADS

QBE 20-20/11 EH.....5.20.073-7

TOOLHEAD SPECIFICATIONS	
COLLET SIZE	ER11
DRILL STROKE	.787"
DRILLING CAPACITY	7/16"
GEAR REDUCTION RATIO	1:2
MAXIMUM RPM	4100



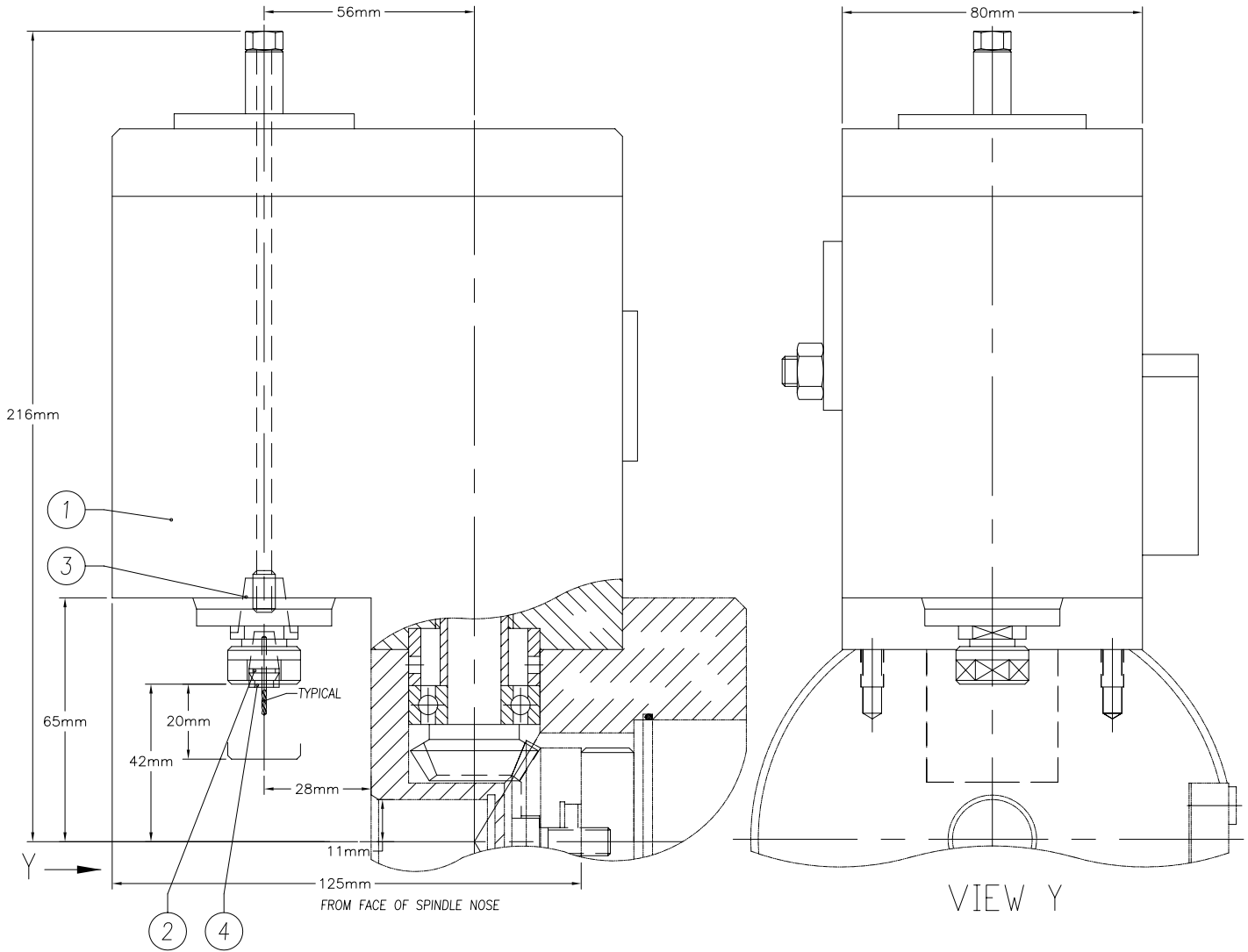
ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	CROSS DRILLING HEAD	5.20.073-7
2*	1	COLLET (RANGE .5-7mm)	ER11
3*	1	COLLET HOLDER ER11	5.20.011
4*	1	CLAMP NUT	911120
5*	1	WRENCH OPEN END (10mm)	72102-10mm
6*	1	WRENCH OPEN END (17mm)	72102-17mm

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 9: CROSS DRILLING HEADS

QBE 30-20/16.....5.20.070

TOOLHEAD SPECIFICATIONS	
COLLET SIZE	ER16
DRILL STROKE	.787"
DRILLING CAPACITY	5/8"
GEAR REDUCTION RATIO	1:1.6
MAXIMUM RPM	4100



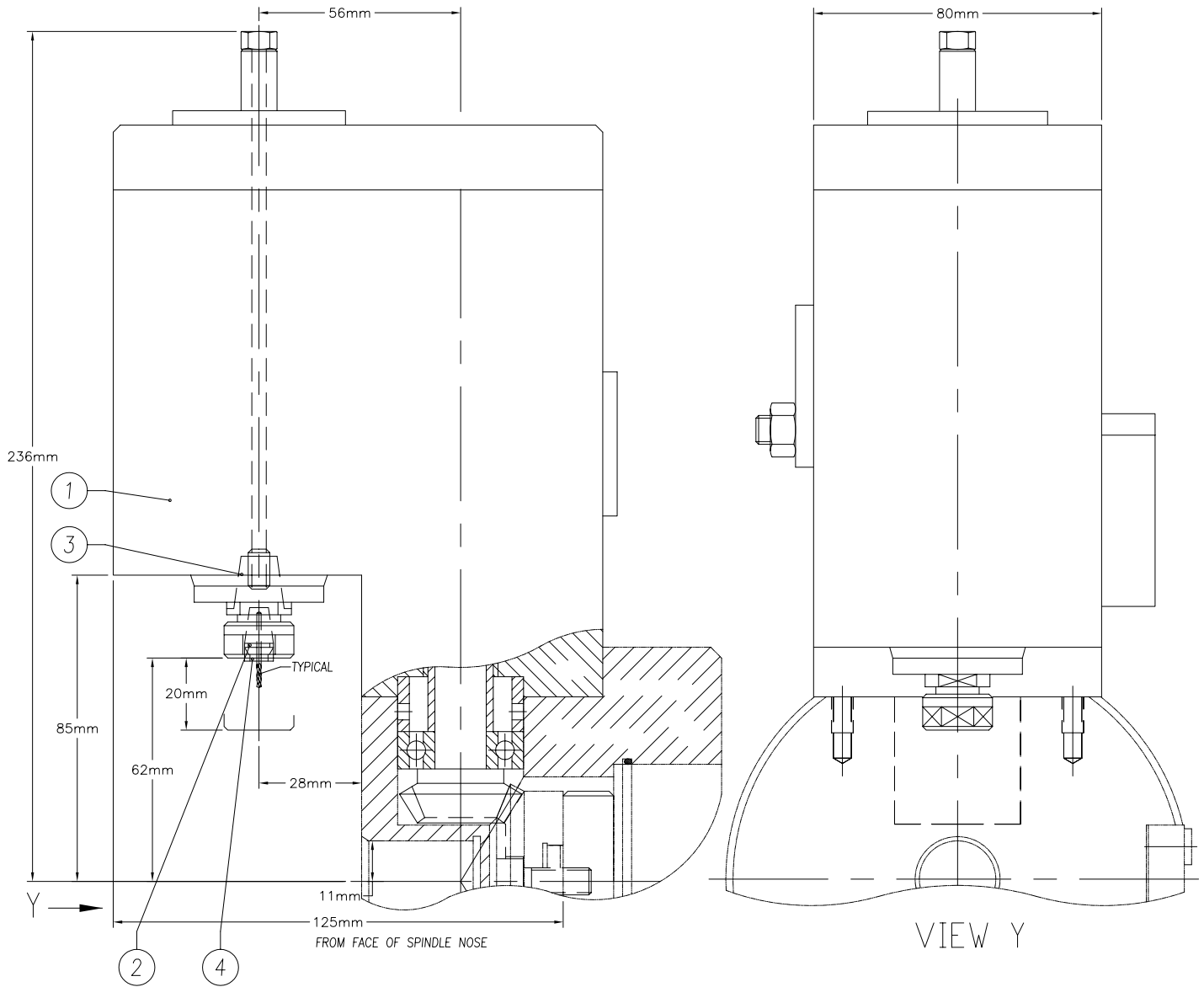
ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	CROSS DRILLING HEAD	5.20.070
2*	1	COLLET (RANGE .5-10mm)	ER16
3*	1	COLLET HOLDER ER16	5.20.015
4*	1	CLAMP NUT	916100
5*	1	SPANNER WRENCH	916160
6*	1	WRENCH OPEN END (13mm)	72102-13mm

\* NOT INCLUDED WITH TOOLHEAD

# SECTION 9: CROSS DRILLING HEADS

QBE 30-20/16 EH.....5.20.075

TOOLHEAD SPECIFICATIONS	
COLLET SIZE	ER16
DRILL STROKE	.787"
DRILLING CAPACITY	5/8"
GEAR REDUCTION RATIO	1:1.6
MAXIMUM RPM	4100



ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	CROSS DRILLING HEAD	5.20.075
2*	1	COLLET (RANGE .5-10mm)	ER16
3*	1	COLLET HOLDER ER16	5.20.015
4*	1	CLAMP NUT	916100
5*	1	SPANNER WRENCH	916160
6*	1	WRENCH OPEN END (13mm)	72102-13mm

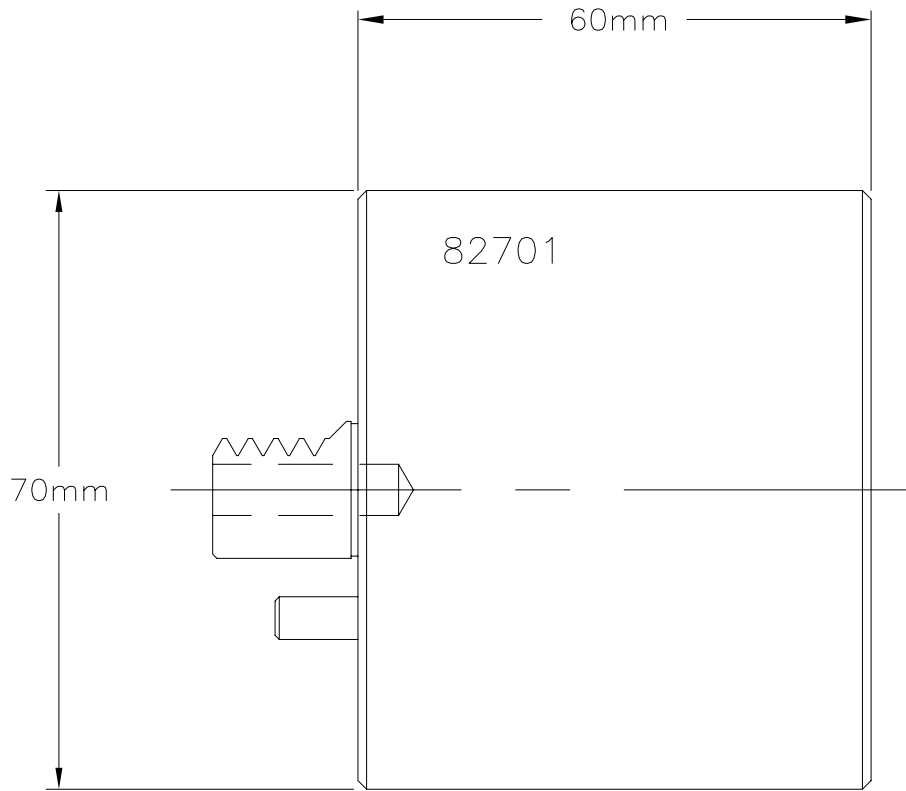
\* NOT INCLUDED WITH TOOLHEAD

**SECTION 10**

**BLANK HEADS**

# SECTION 10: BLANK HEADS

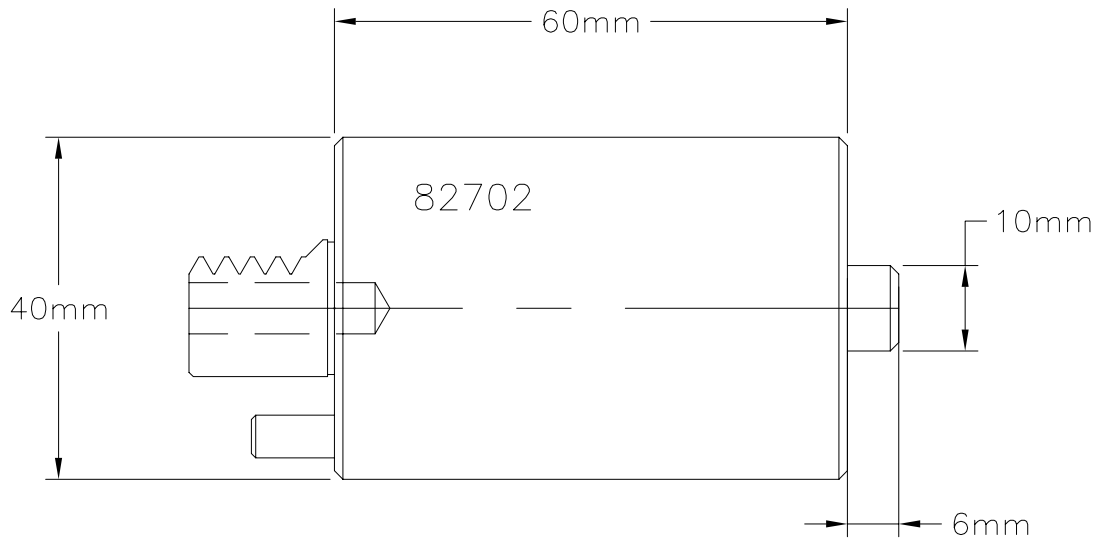
BLANK HEAD QC 82/70.....82701



USE TORQUE WRENCH #S-0-060-048-01

# SECTION 10: BLANK HEADS

BLANK HEAD QC 82/40.....82702

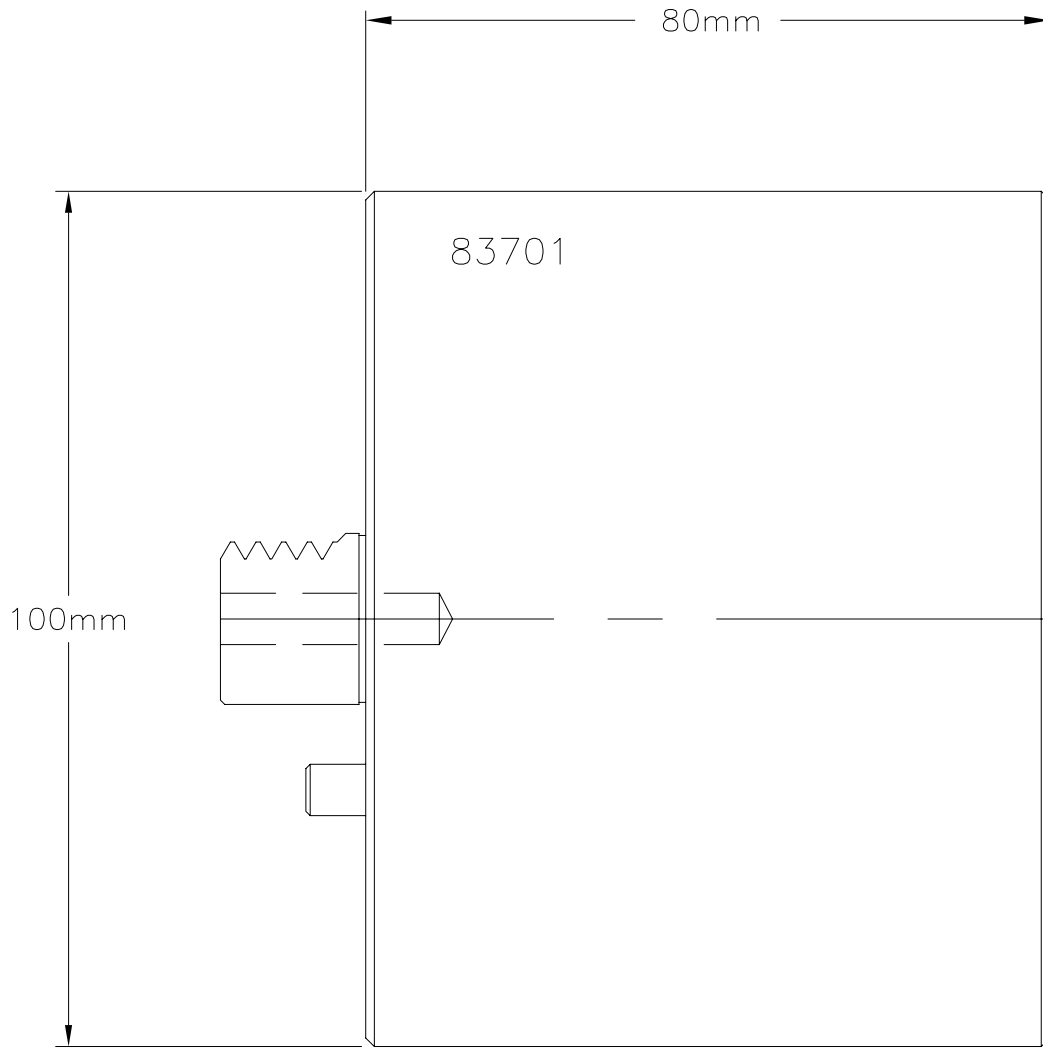


USE TORQUE WRENCH #S-0-060-048-01



# SECTION 10: BLANK HEADS

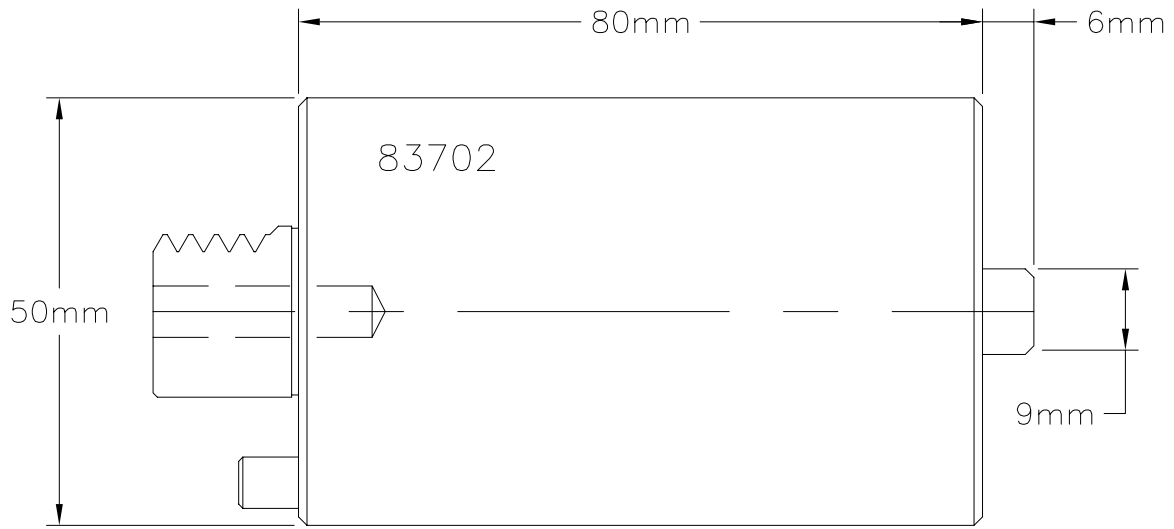
BLANK HEAD QC 83/100.....83701



USE TORQUE WRENCH #S-0-060-048-02

# SECTION 10: BLANK HEADS

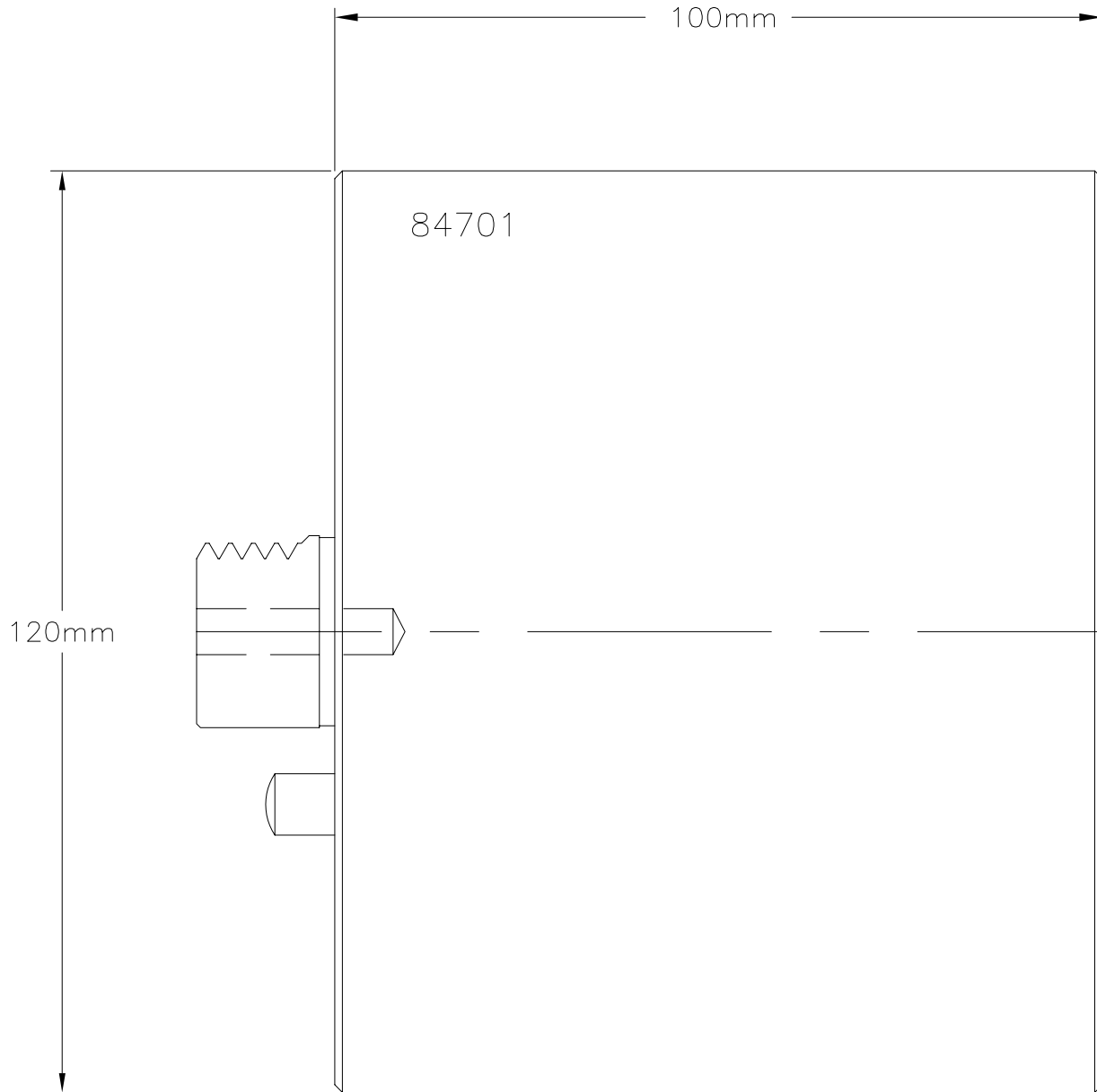
BLANK HEAD QC 83/50.....83702



USE TORQUE WRENCH #S-0-060-048-02

# SECTION 10: BLANK HEADS

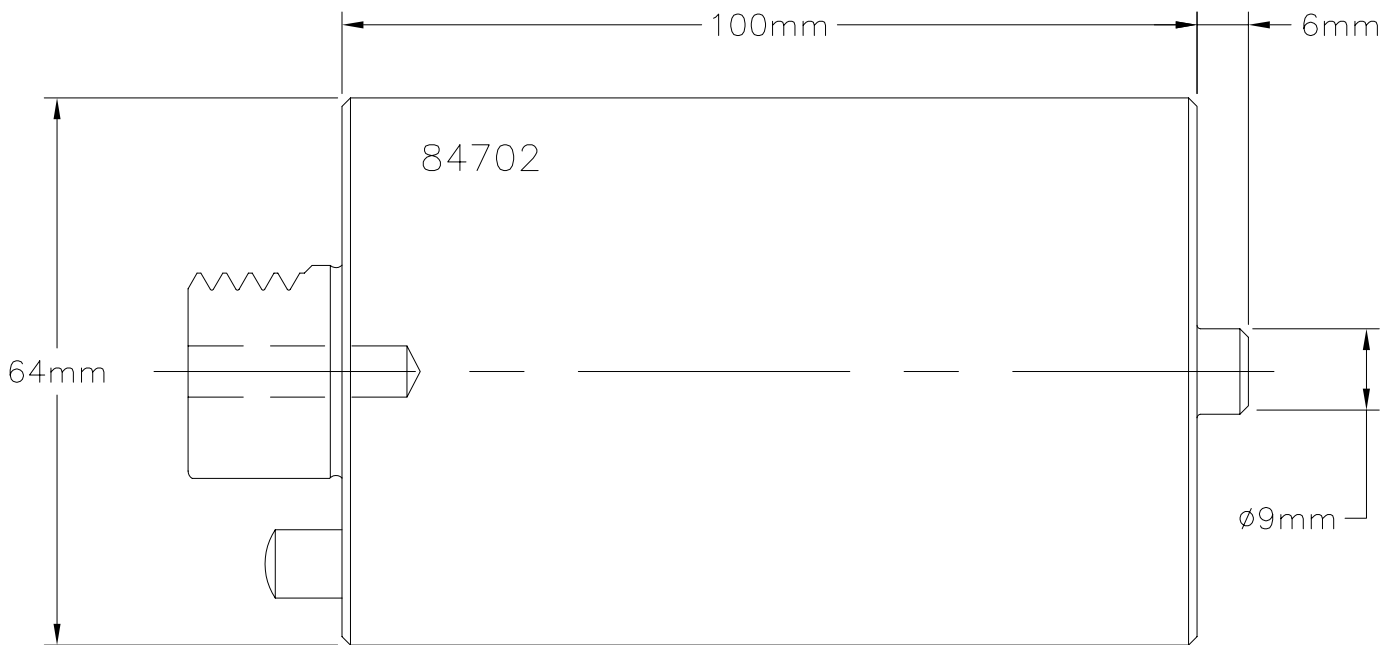
BLANK HEAD QC 84/120.....84701



USE TORQUE WRENCH #S-0-060-048-03

# SECTION 10: BLANK HEADS

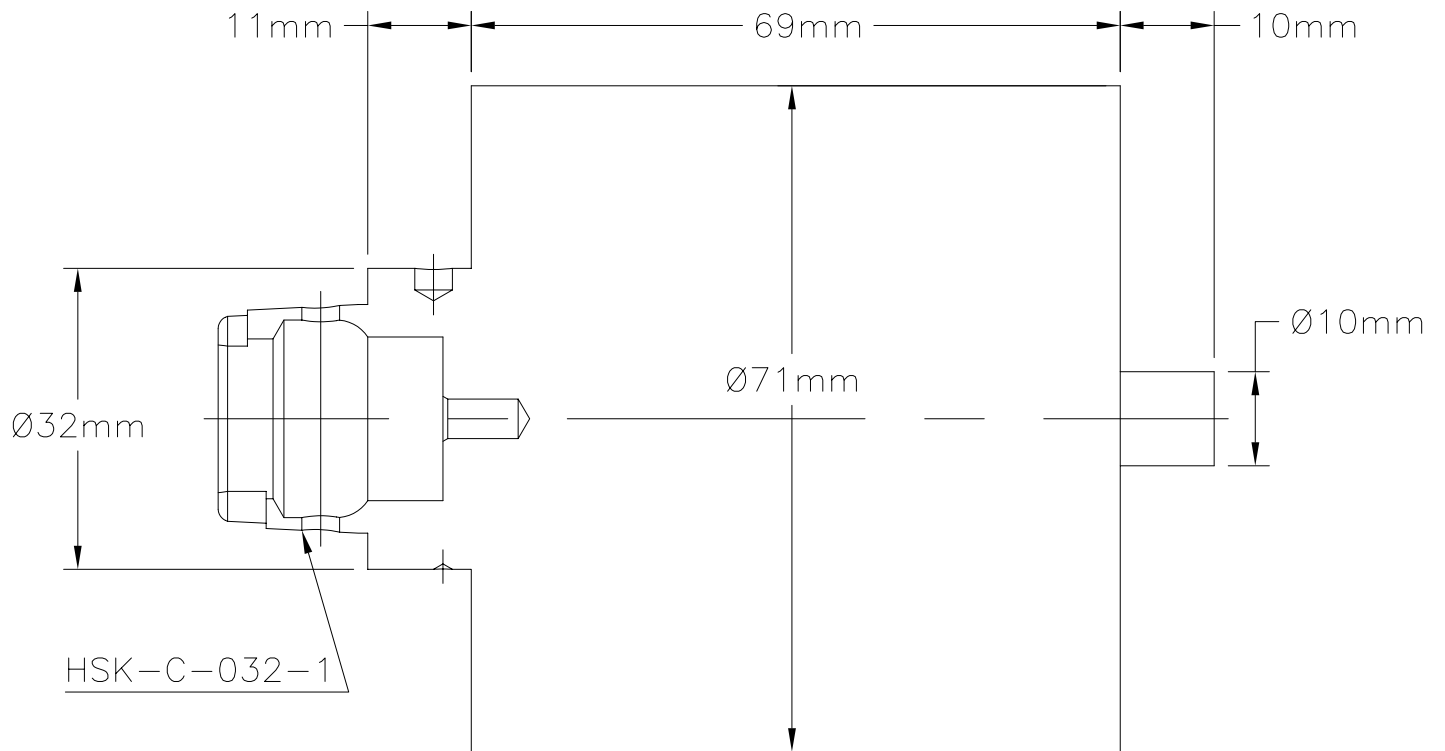
BLANK HEAD QC 84/64.....84702



USE TORQUE WRENCH #S-0-060-048-03

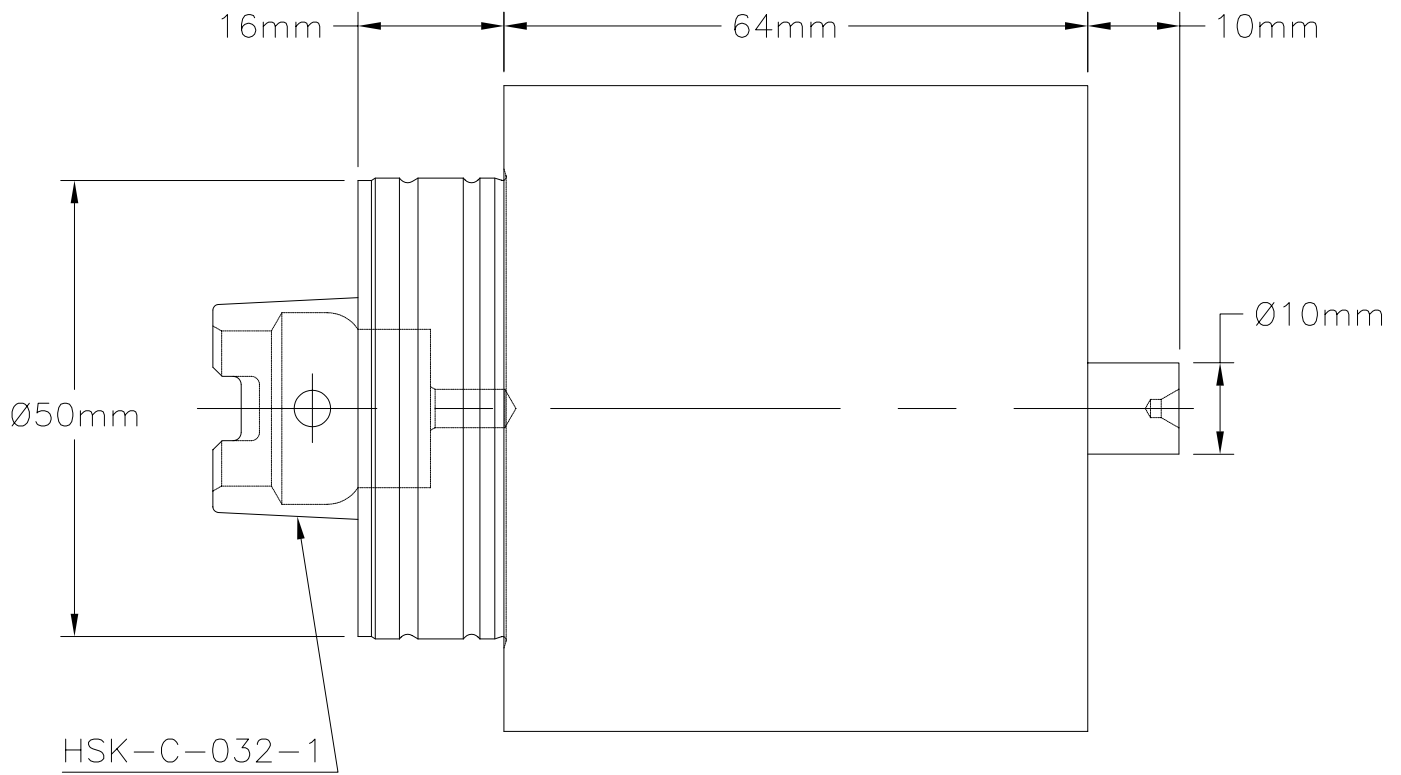
# SECTION 10: BLANK HEADS

BLANK HEAD HSK C-32.....HC032HF071080



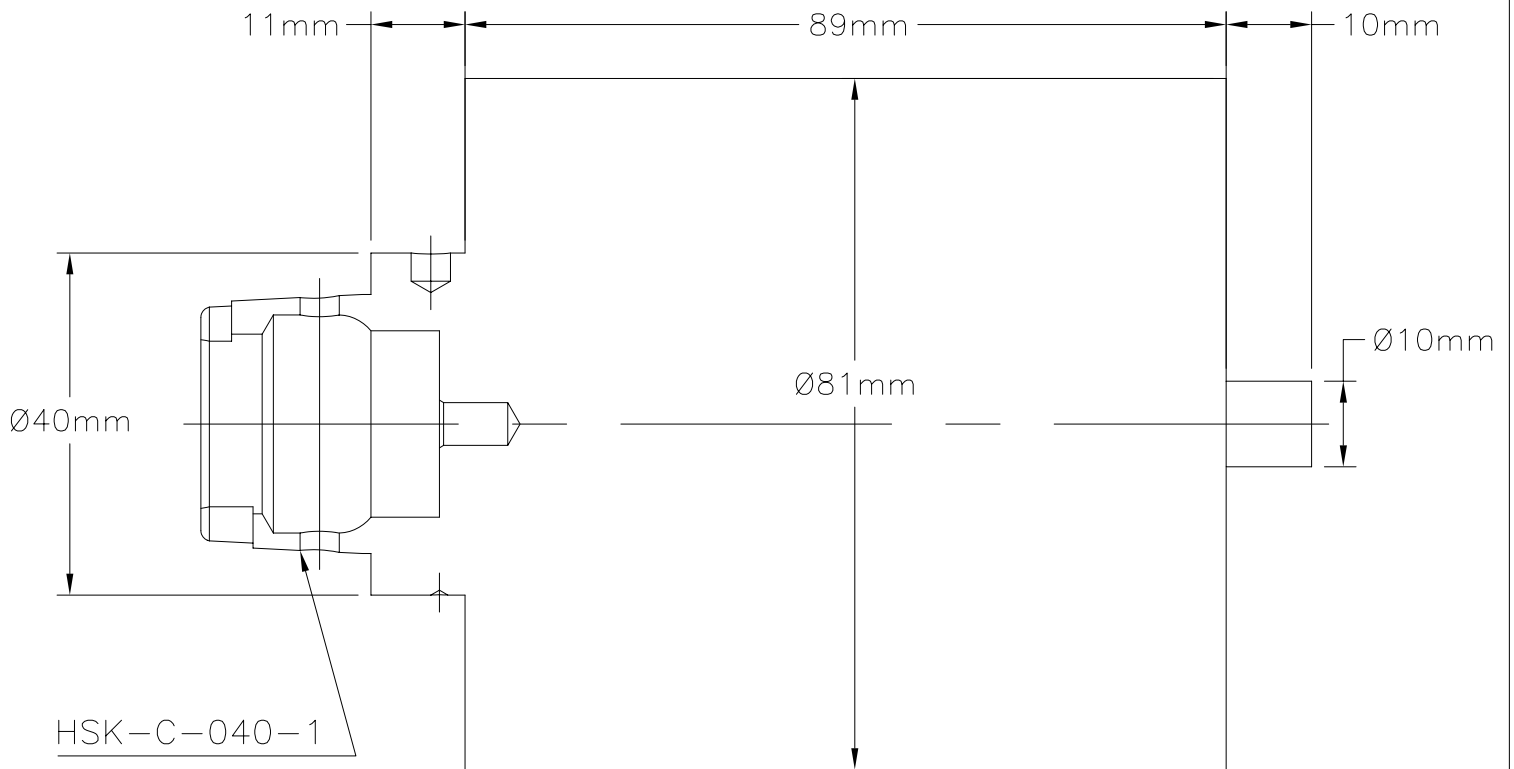
# SECTION 10: BLANK HEADS

BLANK HEAD HSK C-32.....HBC32HF071080



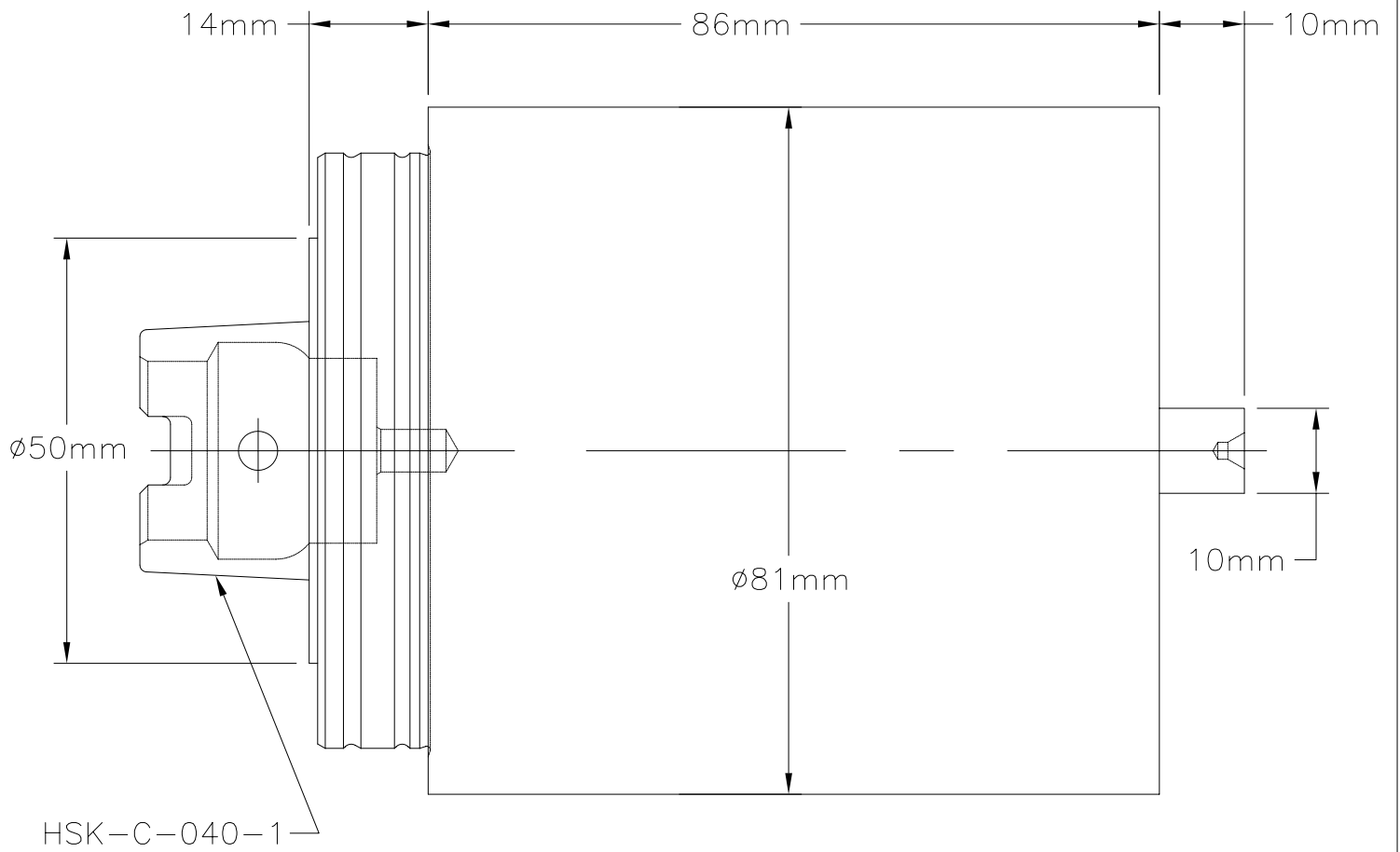
# SECTION 10: BLANK HEADS

BLANK HEAD HSK C-40.....HC040HF081100



# SECTION 10: BLANK HEADS

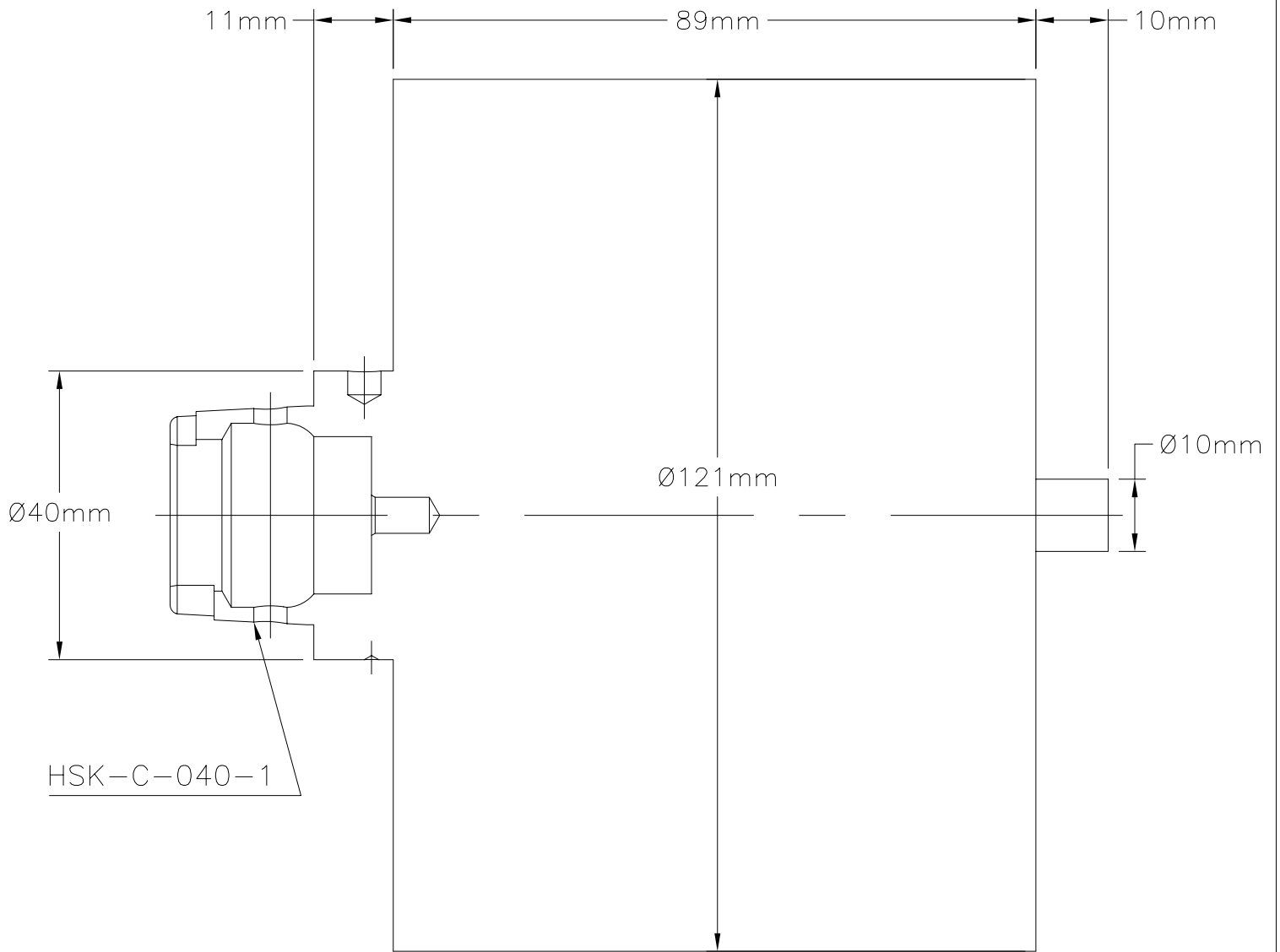
BLANK HEAD HSK C-40.....HBC40HF081100





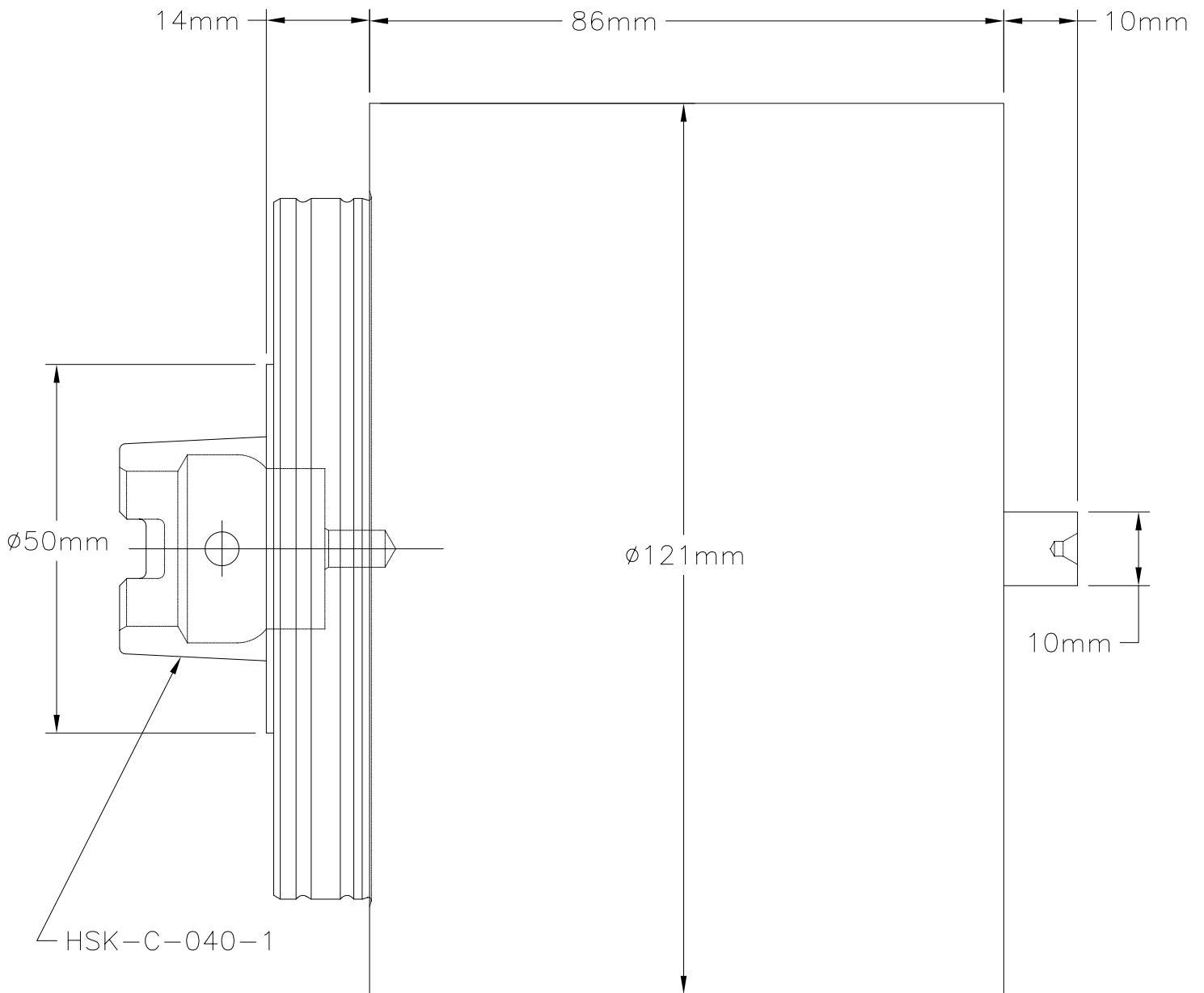
# SECTION 10: BLANK HEADS

BLANK HEAD HSK C-40.....HC040HF121100



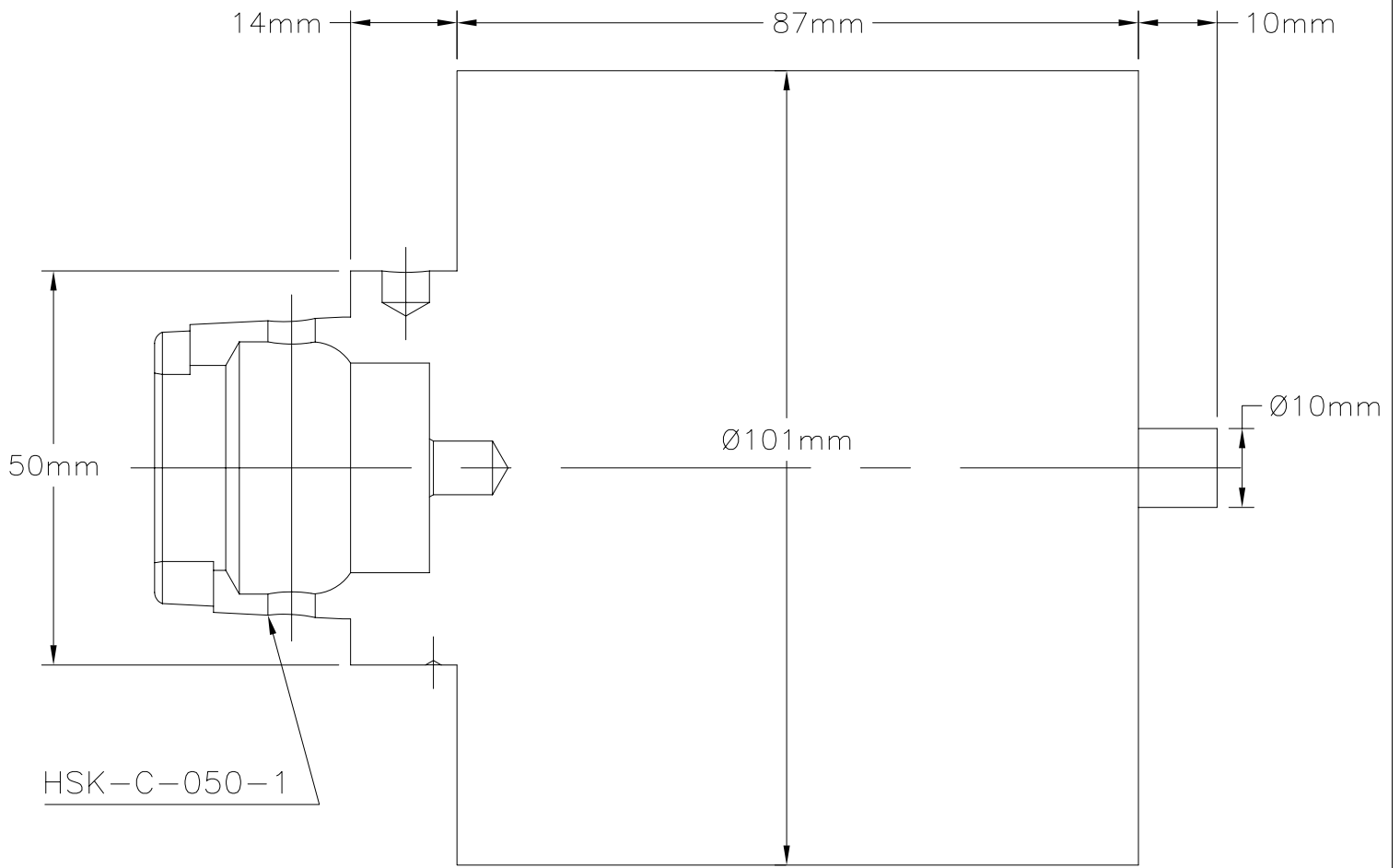
# SECTION 10: BLANK HEADS

BLANK HEAD HSK C-40.....HBC40HF121100.



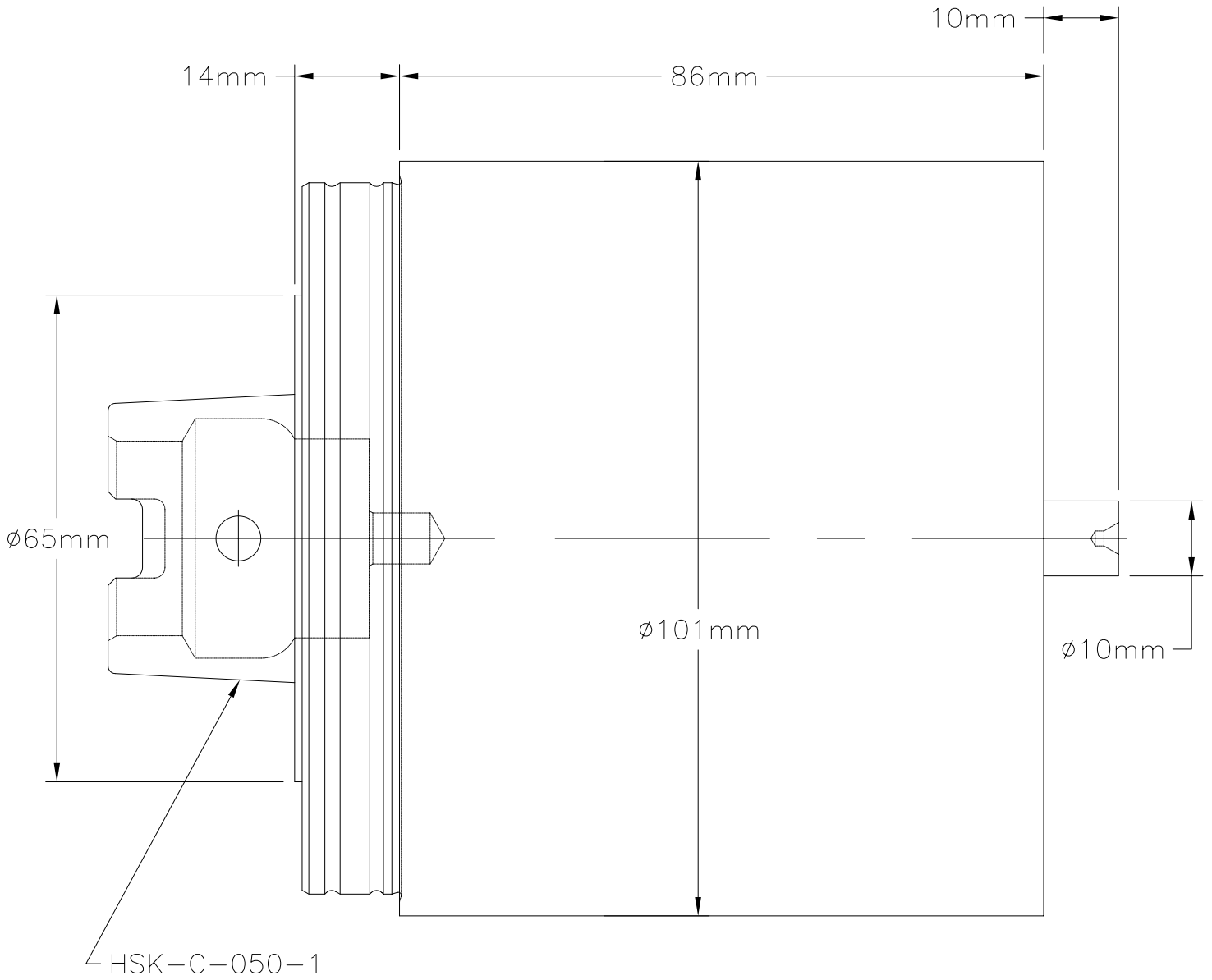
# SECTION 10: BLANK HEADS

BLANK HEAD HSK C-50.....HC050HF101100



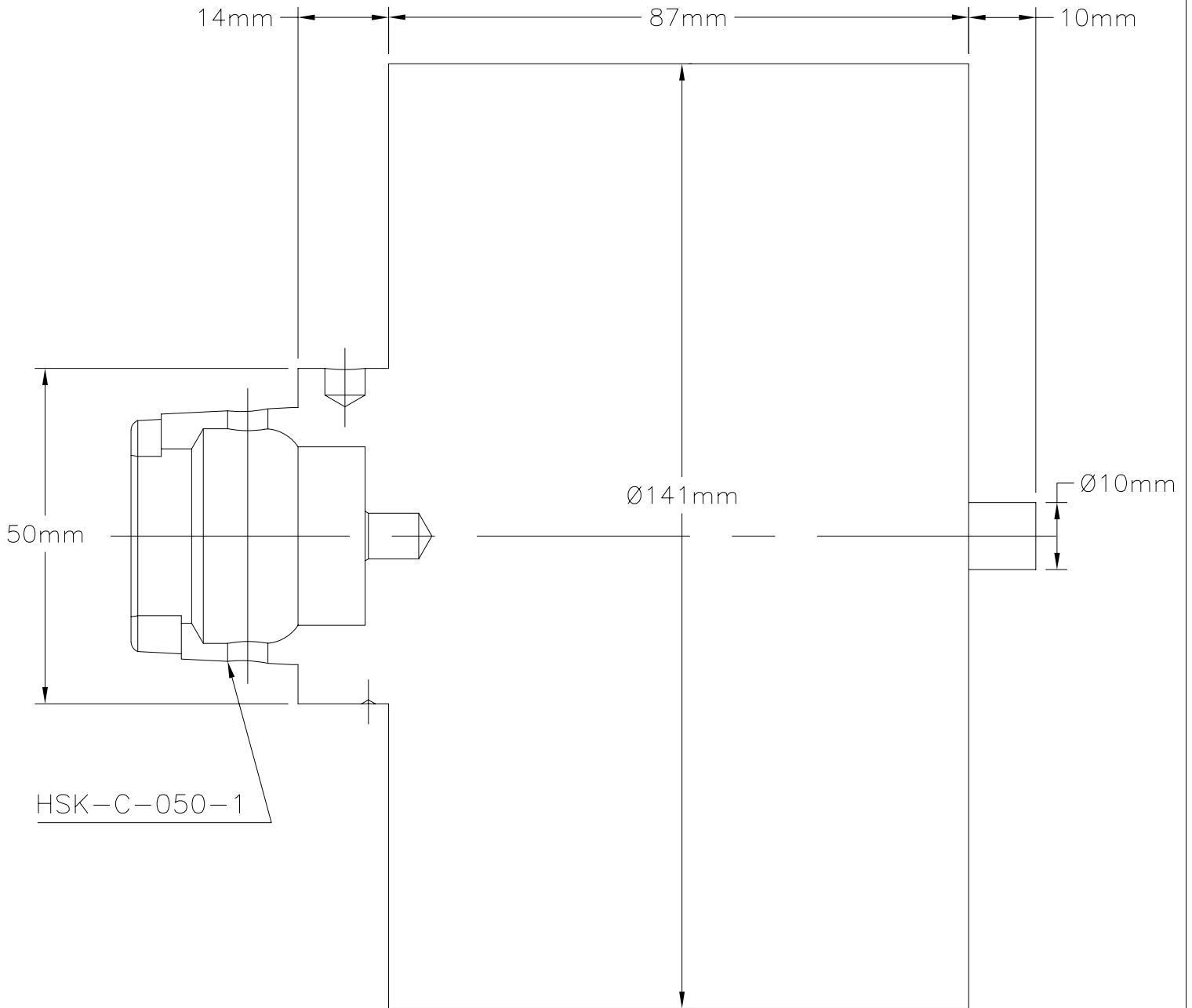
# SECTION 10: BLANK HEADS

BLANK HEAD HSK C-50.....HBC50HF101100



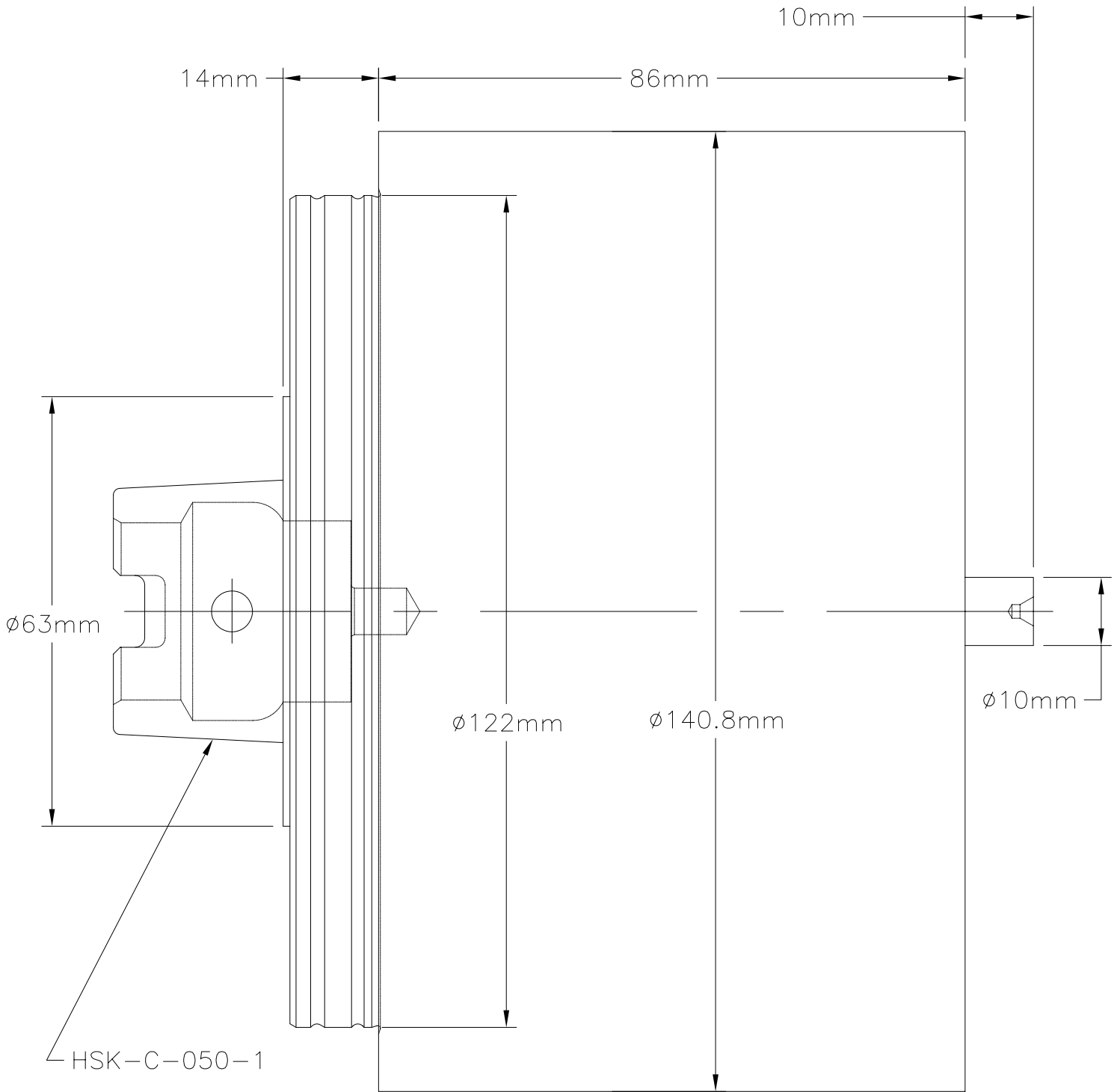
# SECTION 10: BLANK HEADS

BLANK HEAD HSK C-50.....HC050HF141100.



# SECTION 10: BLANK HEADS

BLANK HEAD HSK C-50.....HBC50HF141100

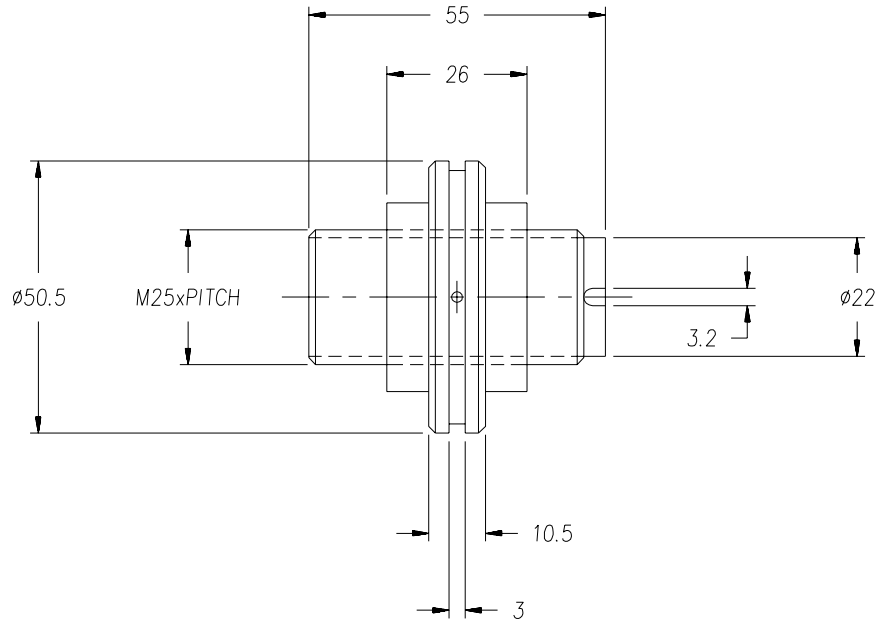


**SECTION 11**  
**MISC. ITEMS**

# SECTION 11: APPENDIX

## 4. THREADING UNIT 20/50 LEAD SCREW

5.21.017-PITCH (METRIC) 5.21.018-PITCH (INCH)



ITEM	QTY.	DESCRIPTION	PITCH	L/R	PART NUMBER
1	1	LEADSCREW 20/50 METRIC PITCH	.7	RH	5.21.017-0.7
2	1	LEADSCREW 20/50 METRIC PITCH	.75	RH	5.21.017-0.75
3	1	LEADSCREW 20/50 METRIC PITCH	1	RH	5.21.017-1
4	1	LEADSCREW 20/50 METRIC PITCH	1.25	RH	5.21.017-1.25
5	1	LEADSCREW 20/50 METRIC PITCH	1.5	RH	5.21.017-1.5
6	1	LEADSCREW 20/50 INCH PITCH	14	RH	5.21.018-14G
7	1	LEADSCREW 20/50 INCH PITCH	15	RH	5.21.018-15G
8	1	LEADSCREW 20/50 INCH PITCH	16	RH	5.21.018-16G
9	1	LEADSCREW 20/50 INCH PITCH	18	RH	5.21.018-18G
10	1	LEADSCREW 20/50 INCH PITCH	20	RH	5.21.018-20G
11	1	LEADSCREW 20/50 INCH PITCH	24	RH	5.21.018-24G
12	1	LEADSCREW 20/50 INCH PITCH	25	RH	5.21.018-25G
13	1	LEADSCREW 20/50 INCH PITCH	27	RH	5.21.018-27G
14	1	LEADSCREW 20/50 INCH PITCH	28	RH	5.21.018-28G
15	1	LEADSCREW 20/50 INCH PITCH	30	RH	5.21.018-30G
16	1	LEADSCREW 20/50 INCH PITCH	32	RH	5.21.018-32G
17	1	LEADSCREW 20/50 INCH PITCH	36	RH	5.21.018-36G
18	1	LEADSCREW 20/50 INCH PITCH	40	RH	5.21.018-40G

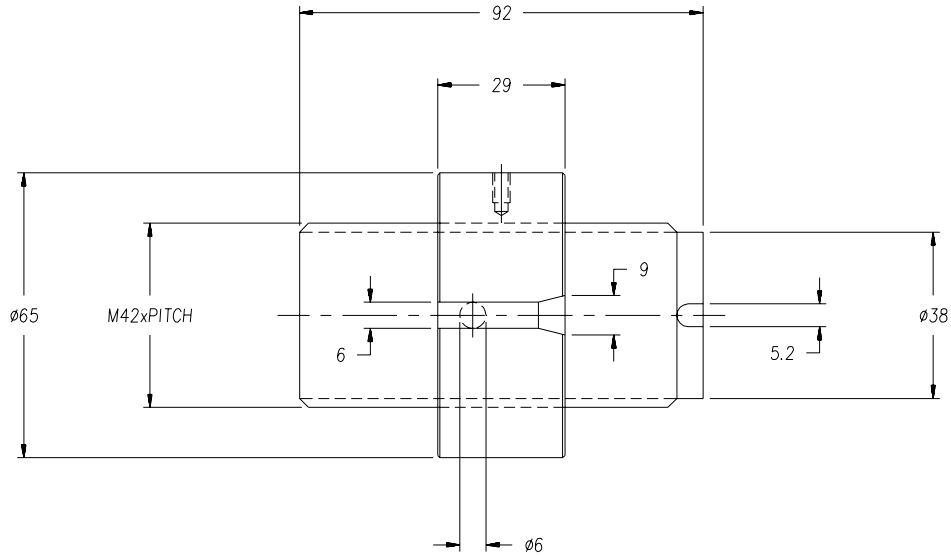
OTHER RIGHT HAND AND LEFT HAND SIZES AVAILABLE UPON REQUEST



# SECTION 11: APPENDIX

## 5. THREADING UNIT 30/60, 45/60, AND 45/80 LEAD SCREW

5.21.015-PITCH (METRIC) 5.21.016-PITCH (INCH)



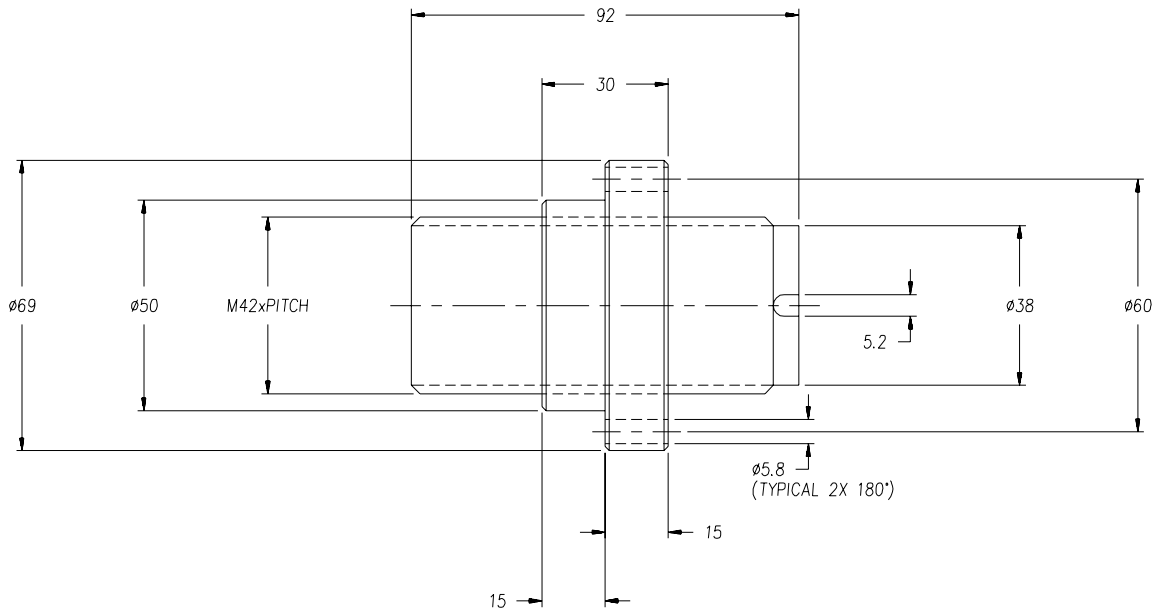
ITEM	QTY.	DESCRIPTION	PITCH	L/R	PART NUMBER
1	1	LEADSCREW 30/60 MM PITCH	.7	RH	5.21.015-0.7
2	1	LEADSCREW 30/60 MM PITCH	.75	RH	5.21.015-0.75
3	1	LEADSCREW 30/60 MM PITCH	1	RH	5.21.015-1
4	1	LEADSCREW 30/60 MM PITCH	1.25	RH	5.21.015-1.25
5	1	LEADSCREW 30/60 MM PITCH	1.5	RH	5.21.015-1.5
6	1	LEADSCREW 30/60 INCH PITCH	8	RH	5.21.016-8G
7	1	LEADSCREW 30/60 INCH PITCH	10	RH	5.21.016-10G
8	1	LEADSCREW 30/60 INCH PITCH	11.5	RH	5.21.016-11.5G
9	1	LEADSCREW 30/60 INCH PITCH	12	RH	5.21.016-12G
10	1	LEADSCREW 30/60 INCH PITCH	13	RH	5.21.016-13G
11	1	LEADSCREW 30/60 INCH PITCH	14	RH	5.21.016-14G
12	1	LEADSCREW 30/60 INCH PITCH	14	LH	5.21.016-14L
13	1	LEADSCREW 30/60 INCH PITCH	15	RH	5.21.016-15G
14	1	LEADSCREW 30/60 INCH PITCH	16	RH	5.21.016-16G
15	1	LEADSCREW 30/60 INCH PITCH	17	RH	5.21.016-17G
16	1	LEADSCREW 30/60 INCH PITCH	18	RH	5.21.016-18G
17	1	LEADSCREW 30/60 INCH PITCH	20	RH	5.21.016-20G
18	1	LEADSCREW 30/60 INCH PITCH	24	RH	5.21.016-24G
19	1	LEADSCREW 30/60 INCH PITCH	27	RH	5.21.016-27G
20	1	LEADSCREW 30/60 INCH PITCH	28	RH	5.21.016-28G
21	1	LEADSCREW 30/60 INCH PITCH	28	LH	5.21.016-28GL
22	1	LEADSCREW 30/60 INCH PITCH	32	RH	5.21.016-32G
23	1	LEADSCREW 30/60 INCH PITCH	36	RH	5.21.016-36G

OTHER RIGHT HAND AND LEFT HAND SIZES AVAILABLE UPON REQUEST

# SECTION 11: APPENDIX

## 6. THREADING UNIT 35/120 AND 45/120 LEAD SCREW

5.21.019-PITCH (METRIC) 5.21.020-PITCH (INCH)



ITEM	QTY.	DESCRIPTION	PITCH	L/R	PART NUMBER
1	1	LEADSCREW 35/120 MM PITCH	.75	RH	5.21.019-0.75
2	1	LEADSCREW 35/120 MM PITCH	1.75	RH	5.21.019-1.75
3	1	LEADSCREW 35/120 MM PITCH	2	RH	5.21.019-2
4	1	LEADSCREW 35/120 MM PITCH	2.5	RH	5.21.019-2.5
5	1	LEADSCREW 35/120 MM PITCH	3	RH	5.21.019-3
6	1	LEADSCREW 35/120 INCH PITCH	8	RH	5.21.020-8G
7	1	LEADSCREW 35/120 INCH PITCH	10	RH	5.21.020-10G
8	1	LEADSCREW 35/120 INCH PITCH	11	RH	5.21.020-11G
9	1	LEADSCREW 35/120 INCH PITCH	12	RH	5.21.020-12G
10	1	LEADSCREW 35/120 INCH PITCH	14	RH	5.21.020-14G
11	1	LEADSCREW 35/120 INCH PITCH	18	RH	5.21.020-18G
12	1	LEADSCREW 35/120 INCH PITCH	20	RH	5.21.020-20G
13	1	LEADSCREW 35/120 INCH PITCH	24	RH	5.21.020-24G
14	1	LEADSCREW 35/120 INCH PITCH	27	RH	5.21.020-27G
15	1	LEADSCREW 35/120 INCH PITCH	32	RH	5.21.020-32G

OTHER RIGHT HAND AND LEFT HAND SIZES AVAILABLE UPON REQUEST

# SECTION 11: APPENDIX

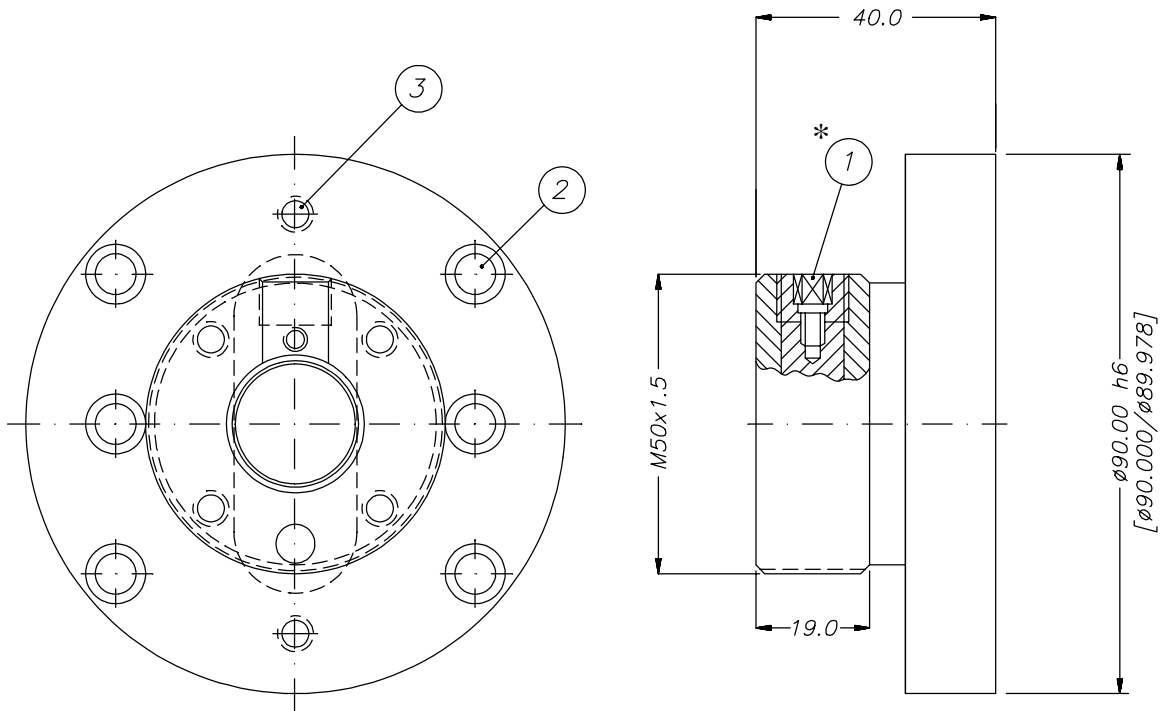
7. PCM ADAPTER - VE 30/60 QC to EIE 36/100 . . . . . O.060.1106

**APPLICATION:**

*THIS ADAPTER ALLOWS A RECESSING EIE-36/100 UNIT TO ACCEPT VE-30/60 AND 35/60 QUICK CHANGE TOOLHEADS.*

**INSTRUCTIONS:**

*THE RECESSING HEAD IS REMOVED AND THE ADAPTER IS MOUNTED TO THE FLANGE SPINDLE, LEAVING THE DRAWBAR IN THE UNIT.*



ITEM	QTY.	DESCRIPTION	PART NUMBER
1 *	1	CLAMP SCREW ASSEMBLY	83801
2	6	SOCKET HEAD CAP SCREW	M6 x 20mm
3	2	SOCKET SET SCREW	M6 x 12mm

\* PARTS INCLUDED IN QUILL ASSEMBLY, SHOWN FOR REPLACEMENT REFERENCE ONLY