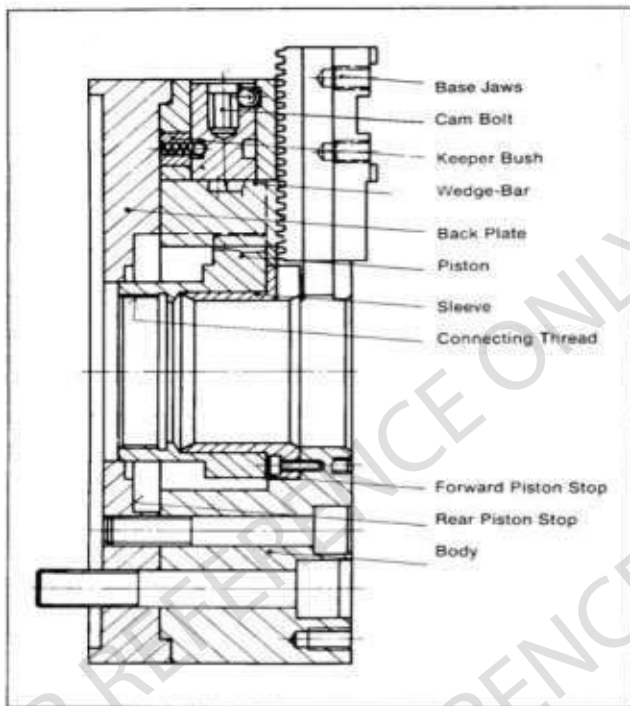


# POWER OPERATED HOLLOW HIGH SPEED QUICK CHANGE JAW CHUCK – PHQC





The range of our PHNC Chucks is medium. PHNC is meant to provide a high speed range. Power Operated Quick Change Jaw Chuck really provides a super high speed range. The machines of the immediate future will require very high speed range of speeds without almost any loss of clamping pressure at high speed.

CNC Lathes are used particularly to machine small and medium sized batches. This involves frequent change over of the chuck jaws, which can be accomplished without undue cost by using chucks with quick change jaws.

**GMT** has designed a power chuck with a quick change jaw system. This chuck helps in reducing the jaw changing time to a minimum.

The wedge bars are designed to help counteract the effects of centrifugal force, and in fact this is done by setting them into the angled pockets in the body of the chuck. Moreover, the angles chosen by GMT for the piston shoulders and wedge bar teeth provide high mechanical efficiency ratio that provides for both sensitive and high pressure clamping.

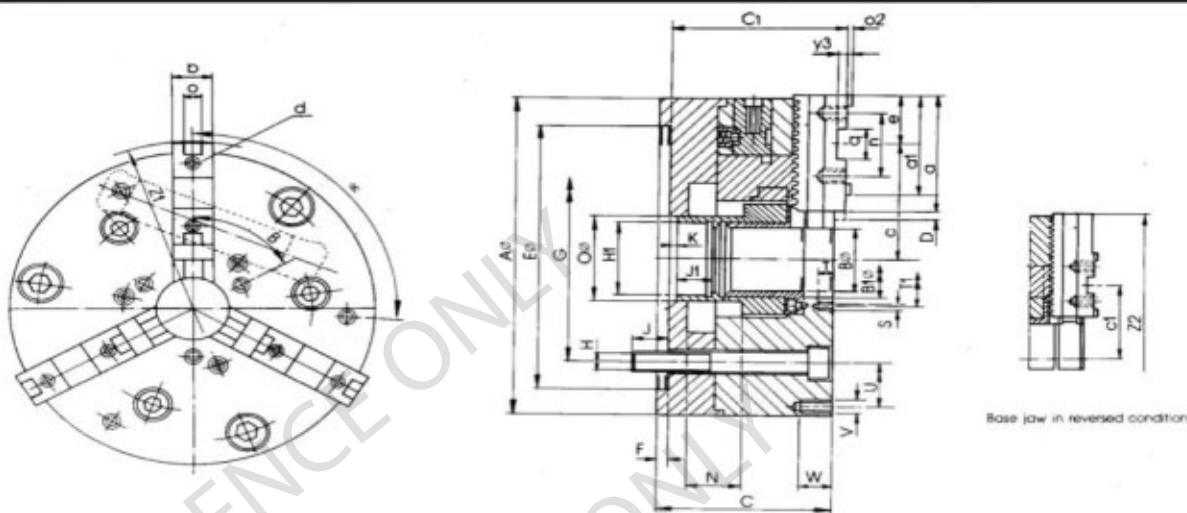
To withstand the most arduous working conditions, all PHQC chucks are designed with a high factor of safety. PHQC Chucks are operated by means of rotary cylinders controlled by proximity switches that provide signals concerning the state of the chuck i.e. clamping or declamping.

## WORKING

This power chuck is different from other chucks. Its quick change jaw system has the inherent advantage for rapid resetting or changing of the gripping jaw. It is only necessary to release an eccentric locking pin with a special hexagonal key in each of the jaws keeping the chuck stationary. This disengages the gripping jaws, which can then be -reset to the required gripping diameter or can be reversed or can be replaced by a jaw from another set. Turning the key again re-engages the gripping jaw and enables the key to be withdrawn and this operation provide great reliability.

PHQC chucks offer an effectively simple but technically advanced design to satisfy the high demands in both production and safety and modern machining. In addition the chuck offers a genuinely quick change jaw system with a speed and strength combination compatible with increased production and safety.



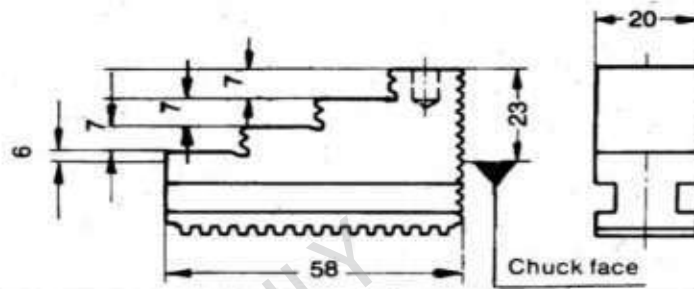


### DIMENSIONAL SPECIFICATION.

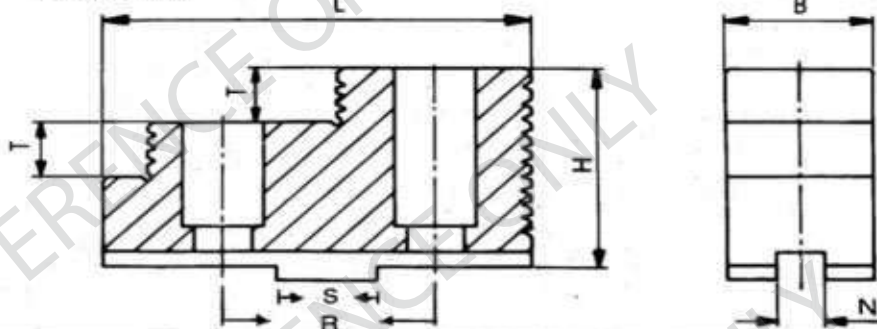
Model No	61-11	61-12	61-13	61-14	61-15	61-16
Size Ø	140	160	200	250	315	400
A Ø	140	160	204	250	315	400
B Ø	32	32	41	52	77	92
B1 Ø H7	32	32	41	52	82	95
C	88	88	99	109	120	138
C1	88.9	88.9	98	111	123	139
D jaw stroke	3	3	6	7	7.4	7.7
E Ø H7	120	140	170	235	300	380
F	6	6	6	6	6	8
G (PCD)	104.8	104.8	133.4	171.4	235	235
H	3xM10	3xM10	3xM12	3xM16	3xM20	3xM20
H 1	M40x1.5	M40x1.5	M48x1.5	M62x2	M85x2	M100x2
J	16	16	21	25	30	32
J 1	18	18	20	20	22	28
K min.	18.5	18.5	4.2	5.7	6.1	6
K max	0	0	-25.3	-28.3	-30.3	-34
N (Total piston stroke)	18.5	18.5	29.5	34	36.4	40
O Ø H7	48	48	56	70	97	114
S x T	M5 x10	M5 x10	M6x10	M8 x12	M8 x14	M8 x14
T1 PCD ± 0.2	65	65	60	74	103	120
U PCD ± 0.2	122	122	172	205	268	330
V x W	M8 x10	M8 x10	M10 x15	M10 x15	M12 x20	M16 x20
Z1 max swing dia.	162	180	240	295.5	352	425
Z2 max. swing dia	-	180	240	295.5	352	425
a	56	65	85	104	115	125
a1	56	56	66	72	72	86
b	20	20	22	26	32	32
c min.	38	47	66.5	83.5	100.4	108
c max.	52	61	85.5	111	138.9	168.5
c1 min.	-	38	49	52	57.1	69
c1 max.	-	52	68	79.5	95.6	129.5
d x depth	M8 x12	M8 x12	M8 x13	M12x15	M12x17	M12x17
E	28	28	33	36	36	43
n ± 0.2	32	32	40	40	40	54
O Ø 7	8	8	10	12	12	12
O2	2.5	2.5	2.5	3	3	3
qH7	18	18	20	20	20	26
y Ø <sup>3</sup>	5	5	5.5	5.5	6	7
α	95°	95°	92°	90°	97°	99°
β	73°	73°	60°	60°	60°	60°
Tooth pitch of the base jaw	4.712	4.172	4.712	5.498	5.498	5.498
Max. Drawbar pull (kgf)	2000	2000	4500	6000	9000	12000
Max. Gripping force (kgf)	3600	3800	10000	13200	16800	24000
RPM max.	6300	6300	5800	4700	4000	3500
Weight (Kg)	7.7	10.7	19	36.5	57	106
Flywheel effect GD kpm <sup>2</sup>	0.023	0.038	0.1	0.28	0.78	0.23

Each chuck is supplied with - one set of reversible hard jaws, one number box spanner with tommy bar, one number allen wrench for jaw screws and one set of body clamping screws.

For 140 $\phi$  & 160 $\phi$  only

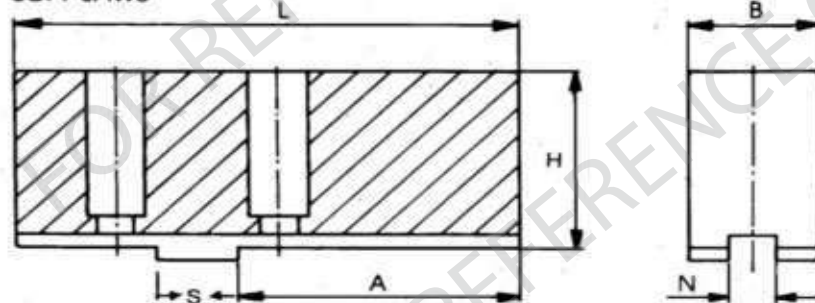


HARD JAWS



SIZE	200	250	315	400
B	22	30	30	36
H	38	50	50	56
L	72	90	90	105
N	10	12	12	12
R	40	40	40	54
S	20	20	20	26
T	10	14	14	15

SOFT JAWS



SIZE	140	160	200	250	315	400
A	26	42	50	70	70	74
B	20	20	22	30	30	35
H	35.5	35.5	46	50	50	54
N	8	8	10	12	12	12
L	69	85	105	125	125	145
S	18	18	20	20	20	26



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