CITIZEN





Machine Specification

Item			BNA-42CY5	BNA-42SY5
Capabilities/Capacities				
Max. machining length			200 mm	100 mm
Standard machining diameter (Chuck	k diameter)	SP1	42 mm dia.	
Travel distance		SP2		34 mm dia.
Turret slide travel distance	X axis		140 mm	
Turret side traver distance	Zaxis		285 mm	
	Y axis		70 (+/-35) mm	
Back spindle slide travel distance				360 mm
Spindles				
Number of spindles			1	2
Spindle speed	SP1		60 to 6,000 min ⁻¹	
	SP2			50 to 5,000 min ⁻¹
Closing tube through-hole diameter			43 mm dia.	
Collat abuak tura	SP2			30 mm dia.
Collet chuck type	SP1 SP2		Hardinge S20, DIN173E, B&S	JPN, DIN171E
	312			DIN173E, B&S #22
Power chuck type	SP1		5" and 6" hollow chucks	5" hollow chuck
	SP2			4" hollow chuck
Tool post				
Number of tool posts			1	
Type of tool post			12 ST.	
Opposite side distance of tool pos	t		300 mm	
Max. turning radius of tool post			505 mm dia.	
Dimensions of tools used			20 mm sq.	
Dimensions of tool post holes			25 mm dia.	
Rotary tools Number of installed rotary tools			Max.12	
Type of rotary tool drive			Independent clutch drive	
Rotating speed of rotary tools			50 to 5,000 min ⁻¹	
Machining capacities	Drill		Max. 10 dia.	
3.4	Тар		Max. M6 × 1	
			(Limited to spiral and point ta	ps for M8 x 1.25)
			Max. M8 x 1.25 for BSBM	
Feed rate				
Rapid feed rate	X axis		20 m/min	
	Z axis		20 m/min	
	Y axis		12 m/min	
Slide thrust	B axis			20 m/min
Side triust	X axis		5 kN	
	Zaxis		5 kN	
	Y axis		6.7 kN	
	B axis			5 kN
Tailstock				1
	Max. travel di	stance	200 mm	
	Morse taper	size	MT2	
	Max. slide th	nrust	4.3 kN (at 3.4 MPa)	
	Min. slide th		0.57kN (at0.45 MPa)	
	Drive metho	d	Hydraulic	
Motors				()
Spindle motor	SP1		11/ 7.5/ 5.5 kW (15%/ 15 min	i/ cont.)
Botany tools motor	SP2		5.5/ 3.7 kW (15 min/ cont.) 2.8/ 1.0 kW	
Rotary tools motor Coolant pump motor			2.8/ 1.0 kW 0.25 kW	
High-pressure coolant motor			1.1/0.75 kW (60/ 50Hz)	
Required power source			, 0.7 0 (00/ 001/2/	
Power supply			AC 200/ 220 +5%/ -10%, 50/	60 Hz ±1%
Power supply capacity			16 kVA	26 kVA
Air pressure source			0.5 MPa	
Fuse capacity on facilities side			75 A	100 A
Tank capacities				
Hydraulic tank capacity			18 L	
Lubricating oil tank capacity			2 L	
Coolant tank capacity			235 L	
Machine size			1 745	
Mashina haisht			1,745 mm	
Machine height				W/ 2 2E0 v D 1 400 mm
Machine height Required floor surface area Machine weight			W 2,260 x D 1,433 mm 3,220 kg	W 2,350 x D 1,433 mm 3,650 kg

Control unit		BNA-42CY5	BNA-42SY5
Control axis		FS.0i-TF PLUS	
HD1		X1, Z1, Y1, C1, E1 (Turre A1 (Rotary tools)	(Turret), A1 (Rotary too During superimposed operation: X1, Z1, Y1, C1, E1 (Turret)
HD2			A1 (Rotary tools) During superimpose
Feed axis abso	plute position detector	X. Z1. Y1	operation: Z2, C2, X1,Z1,Y1,B
Min. set un Interpolation	it	0.001 mm/0.001 deg.	1
Positioner		G00	
Linear inte		G01	
Circular int Dwell	erpolation	G02, G03 (multiple qua G04	adrants available)
Threading		G32	
Multiple th	nreading	G33	
Feed function			
Cutting fee Per minute fe Manual ha Reference	ding override d speed override eed and per rotation indle feeding point return point return chuck	0 to 100% (10% increa 0 to 150% (10% increa G98/G99 x1, x10, x100 G28 C27	
	nce point return		
Program inp			
Tape code	1	EIA/ISO auto-detection	
	commands	X,Z,Y,C	X,Z,Y,C,B
	al commands able data input	U, W, V, H G10	
	system settings	G50	
	coordinate system		
	prage and editing		1 Millionte (Truss anatoms test
	torage capacity egistered programs	400	1 Mbyte (Two system tot 800 (Two system tot
	supplementary		
	ntary functions		
	ipheral speed contro		
	ol compensation		
Tool functi	ons	T4 digits command Upper 2 digits: Tool se Lower 2 digits: Wear of	lection & Geometry offs offset
	is compensation	G40,G41,G42	
Operating f	unctions	M01	
Operating for Optional st	unctions top	M01 0 to 1.260 mm/min	
Operating f	unctions top Ig	M01 0 to 1,260 mm/min	
Operating for Optional s Jog feedin Input/Output PC card slo	unctions top ig ut interface ot and USB mem	0 to 1,260 mm/min	
Operating fr Optional s Jog feedin Input/Outpu PC card sl Automatic o	unctions top Ig ut interface ot and USB mem operation	0 to 1,260 mm/min hory slot	
Operating fr Optional s Jog feedin Input/Outpu PC card sl Automatic o One-cycle,	unctions top ig ut interface ot and USB mem operation /Continuous oper	0 to 1,260 mm/min hory slot ration, Single block, Blo	ck delete, Machine lock
Operating fr Optional s Jog feedin Input/Outpu PC card sl Automatic o One-cycle,	unctions top ig ut interface ot and USB mem operation /Continuous oper	0 to 1,260 mm/min hory slot	
Operating fi Optional s Jog feedin Input/Outpu PC card sli Automatic c One-cycle/ Optional b Other 10.4° color L0	unctions top ig ut interface ot and USB mem operation /Continuous oper lock skip, Dry run CD, Supporting multi	0 to 1,260 mm/min nory slot ration, Single block, Blo n, Feed-hold, Optional s ple languages, Decimal-point	stop
Operating fr Optional s Jog feedin Input/Outpu PC card sk Automatic o One-cycle, Optional b Other 10.4° color L0 Memory p Standard No	unctions top g tr interface ot and USB mem operation /Continuous oper lock skip, Dry ru CD, Supporting multi rotection, AC dig C functions	0 to 1,260 mm/min nory slot ration, Single block, Blo n, Feed-hold, Optional s ple languages, Decimal-point jital servos, etc.	stop input, Manual pulse generator
Operating fr Optional s Jog feedin Input/Outpu PC card slid Automatic c One-cycle, Optional b Other 10.4* color L(Memory p Standard Nt Chamfering	unctions top g at interface ot and USB men poperation /Continuous oper lock skip, Dry run CD, Supporting multi rotection, AC dig C functions /corner R, Backgro	0 to 1,260 mm/min nory slot ration, Single block, Blo n, Feed-hold, Optional s ple languages, Decimal-point jital servos, etc. und editing, Operating tin	input, Manual pulse generator ne/Number of parts display
Operating for Optional s Jog feedim Input/Outpu- PC card sk Automatic of One-cycle, Optional b Other 10.4* color L0 Memory p Standard N0 Chamfering Canned cor	unctions top g ut interface ot and USB men opperation (Continuous opei lock skip, Dry rur CD, Supporting multi rotection, AC dig C functions C functions /corner R, Backgro mposite cycles (G7	0 to 1,260 mm/min nory slot ration, Single block, Blo n, Feed-hold, Optional s ple languages, Decimal-point jital servos, etc. und editing, Operating tin 0 to G76), Spindle synchro	stop input, Manual pulse generator
Operating for Optional s Jog feedin Input/Outpu PC card sli Automatic of One-cycle, Optional b Other 10.4° color L0 Memory p Standard NU Chamfering Canned cor Spindle rig	unctions top g g t it interface ot and USB mem opperation (Continuous opee lock skip, Dry ruu CD, Supporting multi rotection, AC dig C functions (cormer R, Backgro prosite cycles (G7 id tapping (Main	0 to 1,260 mm/min nory slot ration, Single block, Blo n, Feed-hold, Optional s ple languages, Decimal-point jital servos, etc. und editing, Operating tin 0 to G760, Spindle synchra and sub (SY only))	itop input, Manual pulse generator ne/Number of parts display onization function (SY only)
Operating for Optional s Jog feedim Input/Outpu PC card sli Automatic d One-cycle, Optional b Other 10.4° color L0 Memory p Standard Ni Chamfering Canned cor Spindle rig Cylindrical	unctions top g ut interface ot and USB mem yperation /Continuous opel lock skip, Dry rur CD, Supporting multi rotection, AC dig /corner R, Backgro mposite cycles (G7 gid tapping (Main interpolation, Cus	0 to 1,260 mm/min nory slot ration, Single block, Blo n, Feed-hold, Optional s ple languages, Decimal-point jital servos, etc. und editing, Operating tin 0 to G76), Spindle synchr and sub (SY only)) tom macro B, Canned d	input, Manual pulse generator ne/Number of parts display
Operating fn Optional s Jog feedin Input/Outpu- PC card sla Automatic c One-cycle, Optional b Other 10.4° color Lf Memory p Standard Nt Chamfering Canned cor Spindle rig Cylindrical Tool service	unctions top g ut interface ot and USB mem yperation /Continuous opel lock skip, Dry rur CD, Supporting multi rotection, AC dig /corner R, Backgro mposite cycles (G7 gid tapping (Main interpolation, Cus	0 to 1,260 mm/min nory slot ration, Single block, Blo n, Feed-hold, Optional s ple languages, Decimal-point jital servos, etc. und editing, Operating tin 0 to G76), Spindle synchr and sub (SY only)) tom macro B, Canned d ent, Superimposition co	itop input, Manual pulse generator ne/Number of parts display onization function (SY only) rilling cycles (G80 to G86)
Operating fr Optional s Jog feedin Input/Outpu PC card sil Automatic C One-cycle, Optional b Other 10.4" color LC Memory p Standard Nit Chamfering Canned cor Spindle rig Cylindrical Tool service	unctions top g it interface ot and USB men yperation /Continuous oper lock skip, Dry rur CD, Supporting multi rotection, AC dig /comer R, Backgro mposite cycles (G7 jid tapping (Main interpolation, Cus ze life management tal Performance	0 to 1,260 mm/min nory slot ration, Single block, Blo h, Feed-hold, Optional s ple languages, Decimal-point jital servos, etc. und editing, Operating tin 0 to G76), Spindle synchr and sub (SY only)) tom macro B, Canned d ent, Superimposition co Information	itop input, Manual pulse generator ne/Number of parts display onization function (SY only) rilling cycles (G80 to G86) ntrol function (SY only)
Operating fn Optional s Jog feedin Input/Outpu- PC card sla Automatic c One-cycle, Optional b Other 10.4° color Lf Memory p Standard Nt Chamfering Canned cor Spindle rig Cylindrical Tool service	unctions top g ut interface ot and USB mem yperation /Continuous opel lock skip, Dry rur CD, Supporting multi rotection, AC dig /corner R, Backgrc mposite cycles (G7 jid tapping (Main interpolation, Cus ze life managem tal Performance	0 to 1,260 mm/min nory slot ration, Single block, Blo n, Feed-hold, Optional s ple languages, Decimal-point jital servos, etc. und editing, Operating tin 0 to G76), Spindle synchr and sub (SY only)) tom macro B, Canned d ant, Superimposition co Information BNA-42CY5	itop input, Manual pulse generator ne/Number of parts display onization function (SY only) rilling cycles (G80 to G86) ontrol function (SY only) BNA-42SY5
Operating fn Optional s Jog feedin Input/Outpu- PC card sla Automatic c One-cycle, Optional b Other 10.4° color Lf Memory p Standard Nt Chamfering Canned cor Spindle rig Cylindrical Tool service	unctions top g it interface ot and USB mem yperation /Continuous oper lock skip, Dry rur CD, Supporting multi rotection, AC dig comer R, Backgro mposite cycles (G7 jid tapping (Main interpolation, Cus ze life managem tal Performance item Standby power	0 to 1,260 mm/min nory slot ration, Single block, Blo n, Feed-hold, Optional s ple languages, Decimal-point jital servos, etc. und editing, Operating tin 0 to G76), Spindle synchr and sub (SY only)) tom macro B, Canned d ant, Superimposition co Information BNA-42CY5 0.591 kW	itop input, Manual pulse generator ne/Number of parts display onization function (SY only) rilling cycles (G80 to G86) ntrol function (SY only)
Operating fn Optional s Jog feedin Input/Outpu- PC card sla Automatic c One-cycle, Optional b Other 10.4° color Lf Memory p Standard Nt Chamfering Canned cor Spindle rig Cylindrical Tool service	unctions top g g tt interface ot and USB mem opperation (Continuous opei lock skip, Dry rur CD, Supporting multi rotection, AC dig C functions / Cormer R, Backgroc mposite cycles (37 jid tapping (Main interpolation, Cus e life managemu tal Performance i Item	0 to 1,260 mm/min nory slot ration, Single block, Blo h, Feed-hold, Optional s ple languages, Decimal-point jital servos, etc. und editing, Operating tin 0 to G76), Spindle synchra and sub (SY only)) tom macro B, Canned d ant, Superimposition co Information	itop input, Manual pulse generator ne/Number of parts display onization function (SY only) rilling cycles (G80 to G86) ontrol function (SY only) BNA-42SY5
Operating fn Optional s Jog feedin Input/Outpu PC card sl Automatic c One-cycle, Optional b Other 10.4" color L Memory p Standard Nt Chamfering Cylindrical Tool servic Environment	unctions top g it interface ot and USB mem yperation /Continuous oper lock skip, Dry rur CD, Supporting multi rotection, AC dig comer R, Backgro mposite cycles (G7 jid tapping (Main interpolation, Cus ze life managem tal Performance item Standby power	0 to 1,260 mm/min nory slot ration, Single block, Blo h, Feed-hold, Optional s ple languages, Decimal-point jital servos, etc. und editing, Operating tin 0 to G76), Spindle synchra and sub (SY only)) tom macro B, Canned d ant, Superimposition co Information BNA-42CY5 0.591 kW acce 1 0.551 kW/cycle 1 yalue	itop input, Manual pulse generator ne/Number of parts display onization function (SY only) rilling cycles (G80 to G86) ontrol function (SY only) BNA-42SY5 0.661 kW
Operating fn Optional s Jog feedin Input/Outpu PC card sl Automatic c One-cycle, Optional b Other 10.4" color L Memory p Standard Nt Chamfering Cylindrical Tool servic Environment	unctions top g dt interface ot and USB men opperation (Continuous oper lock skip, Dry rur CD, Supporting multi rotection, AC dig C functions /corner R, Backgro mposite cycles (G7 di tapping (INain interpolation, Cus ce life managemu tal Performance litem Standby power Power consumption Power consumption Power consumption Power consumption	0 to 1,260 mm/min hory slot ration, Single block, Blo h, Feed-hold, Optional s ple languages, Decimal-point jital servos, etc. und editing, Operating tin 0 to G76), Spindle synchr and sub (SY only)) tom macro B, Canned d ent, Superimposition co Information BNA-42CY5 0.591 kW 1.055 kWh/cycle Value 71.0 g/cycle 2.01 kl / minument	top input, Manual pulse generator ne/Number of parts display onization function (SY only) rilling cycles (G80 to G86) ontrol function (SY only) BNA-42SY5 0.661 kW 0.187 kWh/ cycle 89.0 g / cycle ar toe 52.7 NL/ min webcarate de
Operating fr Optional s Jog feedin Input/Outpu PC card sli Automatic c One-cycle, Optional b Other 10.4° color LG Memory p Standard NUR Chamfering Canned cor Spindle rig Cylindrical Tool servic Environment	unctions top g dt interface ot and USB men opperation (Continuous oper lock skip, Dry rur CD, Supporting multi rotection, AC dig C functions /corner R, Backgro mposite cycles (G7 di tapping (Main interpolation, Cus ce life managem tal Performance litem Standby power Power consumption cycle and an and an an an an an an an an were nonsumption cycle and an	0 to 1,260 mm/min hory slot ration, Single block, Blo h, Feed-hold, Optional s ble languages, Decimal-point jital servos, etc. und editing, Operating tin 0 to G76), Spindle synchr and sub (SY only)) tom macro B, Canned d ent, Superimposition cc information BNA-42CY5 0.591 kW heat 1.0 g / cycle bla 291 NL/ min weteat	top input, Manual pulse generator ne/Number of parts display onization function (SY only) rilling cycles (G80 to G86) ontrol function (SY only) BNA-42SY5 0.661 kW 0.187 kWh/ cycle 89.0 g / cycle ar the 52.7 NL/ min webcara tek
Operating fr Optional s Jog feedin Input/Outpu PC card sli Automatic c One-cycle, Optional b Other 10.4" color LC Memory p Standard NI Chamfering Canned cor Spindle rig Cylindrical Tool servic Environment	unctions top top g ti interface ot and USB men yperation /Continuous oper lock skip, Dry rur CD, Supporting multi rotection, AC dig /Comer R, Backgro mostie cycles (37 /Comer R, Backgro Mathematical and the standby power Power consumption Power consumption CO2 value " Required air flow ra At power ON	0 to 1,260 mm/min nory slot ation, Single block, Blo h, Feed-hold, Optional s ble languages, Decimal-point gital servos, etc. und editing, Operating tin 0 to G76), Spindle synchra and sub (SY only)) tom macro B, Canned d ant, Superimposition cc Information BNA-42CY5 BNA-42CY5 BNA-42CY5 BNA-42CY5 Communication	top input, Manual pulse generator ne/Number of parts display onization function (SY only) rilling cycles (G80 to G86) ontrol function (SY only) BNA-42SY5 0.661 kW 0.187 kWh/ cycle 89.0 g / cycle ar tood 52.7 NL/ min (without ar blow) cycle ar tood 52.7 NL/ min (without ar blow)
Operating fr Optional s Jog feedin Input/Outpu PC card sl Automatic c One-cycle, Optional b Other 10.4' color L Memory p Standard Nt Chamfering Canned cor Spindle rig Cylindrical Tool servic Environment Air consumption	unctions top top g ut interface tot and USB mem opperation (Continuous opei lock skip, Dry rur CD, Supporting multi rotection, AC dig C functions /corner R, Backgro mposite cycles (G7 did tapping (Main interpolation, Cus e life managem tal Performance i Item Standby power Power consumption above converted to cO2 value" Required air flow ra At power ON Value measured ba on JIS	0 to 1,260 mm/min nory slot ration, Single block, Blo h, Feed-hold, Optional s ple languages, Decimal-point gital servos, etc. und editing, Operating tin 0 to G76), Spindle synchra and sub (SY only)) tom macro B, Canned d and, Superimposition cc Information BNA-42CY5 BNA-42CY5 BNA-42CY5 Construction Con	itop input, Manual pulse generator ne/Number of parts display onization function (SY only) rilling cycles (G80 to G86) nntrol function (SY only) BNA-42SY5 0.661 kW 0.187 kWh/ cycle 89.0 g / cycle arbon 52.7 NL/ min subout arb blow 3.0 cc / 15 min
Operating fr Optional s Jog feedin Input/Outpu PC card sl Automatic c One-cycle, Optional b Other 10.4' color L Memory p Standard Nt Chamfering Canned cor Spindle rig Cylindrical Tool servic Environment Air consumption	unctions top top g ti interface ot and USB men yperation /Continuous oper lock skip, Dry rur CD, Supporting multi rotection, AC dig /Comer R, Backgro mostie cycles (37 /Comer R, Backgro Mathematical and the second litem Power consumption Power consumption CO2 value " Required air flow ra At power ON	0 to 1,260 mm/min nory slot ration, Single block, Blo h, Feed-hold, Optional s ple languages, Decimal-point gital servos, etc. und editing, Operating tin 0 to G76), Spindle synchra and sub (SY only!) tom macro B, Canned d ant, Superimposition cc Information BNA-42CY5 BNA-42CY5 BNA-42CY5 Construction Con	itop input, Manual pulse generator ne/Number of parts display onization function (SY only) rilling cycles (G80 to G86) nntrol function (SY only) BNA-42SY5 0.661 kW 0.187 kWh/ cycle 89.0 g / cycle arbon 52.7 NL/ min subout arb blow 3.0 cc / 15 min

CITIZEN MACHINERY CO., LTD. 4107-6 Miyota, Miyota-machi, Kitasaku-gun, Nagano-ken, 389-0606, JAPAN **CITIZEN** JAPAN TEL.81-267-32-5901

 4107-6 Miyota, Miyota-machi, Kitasaku-gun, Nagano-ken, 389-0606, JAPAN

 SOUTH ASIA/ KOREA

 CITIZEN MACHINERY CO., LTD.

 4107-6 Miyota, Miyota-machi, Kitasaku-gun, Nagano-ken, 389-0606, JAPAN

 ASEAN

 CITIZEN MACHINERY ASIA CO., LTD.

 199, Mu 1, Phahon Yothin Road, Sanap Tuep Sub-district, Wang Noi District, Phra Nakhon Si Ayuthaya Province 13170, Thalland

 TEL.81-267-32-5961 TEL.66-35-90-2640 Phra Nakrion SI Ayutinaya Province 1370, finaland CINCOM MIYANO TAIWAN CO., LTD 10FI., No. 174, Fuh Sing N. Rd., Taipel, TAIWAN, R.O.C. CITIZEN (CHINA) PRECISION MACHINERY CO., LTD. 3010, SICHOU ROAD OF ZHOUCUN, ZIBO, SHANDONG, P.R.CHINA CITIZEN MACHINERY EUROPE GmbH. Mettinger Strasse 11, D-73728 Essingen GERMANY TAIWAN TEL.886-2-2715-0598 CHINA TEL.86-533-6150560 GERMANY TEL.49-711-3906-100 CITIZEN MACHINERY UK Ltd. 1 Park Avenue, Bushey, WD23 2DA, UK UΚ TEL.44-1923-691500 CITIZEN MACCHINE ITALIA s.r.I. Via Guglielmo Marconi 47 - 24040 Comun Nuovo (BG), ITALY ITALIA TEL.39-035-877738 HESTIKA FRANCE S.A.S. 1385 Avenue du Môle Z.A.E des Lacs 3, 74130 AYZE, FRANCE FRANCE TEL.33-4-5098-5269

 1385 Avenue du Móle Z.A.E des Lacs 3, 74130 AYZE, FRANCE

 1385 Avenue du Móle Z.A.E des Lacs 3, 74130 AYZE, FRANCE

 1385 Avenue du Móle Z.A.E des Lacs 3, 74130 AYZE, FRANCE

 1385 Avenue du Móle Z.A.E des Lacs 3, 74130 AYZE, FRANCE

 1385 Avenue du Móle Z.A.E des Lacs 3, 74130 AYZE, FRANCE

 1385 Avenue du Móle Z.A.E des Lacs 3, 74130 AYZE, FRANCE

 1385 Avenue du Móle Z.A.E des Lacs 3, 74130 AYZE, FRANCE

 11385 Avenue du Móle Z.A.E des Lacs 3, 74130 AYZE, FRANCE

 11385 Avenue du Móle Z.A.E des Lacs 3, 74130 AYZE, FRANCE

 11385 Avenue du Móle Z.A.E des Lacs 3, 74130 AYZE, FRANCE

 1110 Avenue du Móle Z.A.E des Lacs 3, 74130 AYZE, FRANCE

 1110 Avenue du Móle Z.A.E des Lacs 3, 74130 AYZE, FRANCE

 1110 Avenue du Móle Z.A.E des Lacs 3, 74130 AYZE, FRANCE

 1110 Avenue du Móle Z.A.E des Lacs 3, 74130 AYZE, FRANCE

 1111 Avenue du Móle Z.A.E des Lacs 3, 74130 AYZE, FRANCE

 1111 Avenue du Móle Z.A.E des Lacs 3, 74130 AYZE, FRANCE

 1111 Avenue du Móle Z.A.E des Lacs 3, 74130 AYZE, FRANCE

 1111 Avenue du Móle Z.A.E des Lacs 3, 74130 AYZE, FRANCE

 1111 Avenue du Móle Z.A.E des Lacs 3, 74130 AYZE, FRANCE

 1111 Avenue du Móle Z.A.E des Lacs 3, 74130 AYZE, FRANCE

 1111 Avenue du Móle Z.A.E des Lacs 3, 74130 AYZE, FRANCE

 1111 Avenue du Móle Z.A.E des Lacs 3, 74130 AYZE, FRANCE

 1111 Avenu