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Hobi : Memasak
Motto : *“It will pass, everything you’ve gone through it will
pass” – Rachel venny*

**“Allah tidak membebani seseorang melainkan
sesuai dengan kesanggupannya”**

- (Q.S Al-Baqarah 2:286)

Pendidikan :
1. SD Negeri 02 Gumilir Cilacap
2. SD Negeri 01 Slarang Cilacap
3. SD Al-Irsyad 02 Cilacap
4. SMP Negeri 7 Cilacap
5. SMA Negeri 3 Cilacap

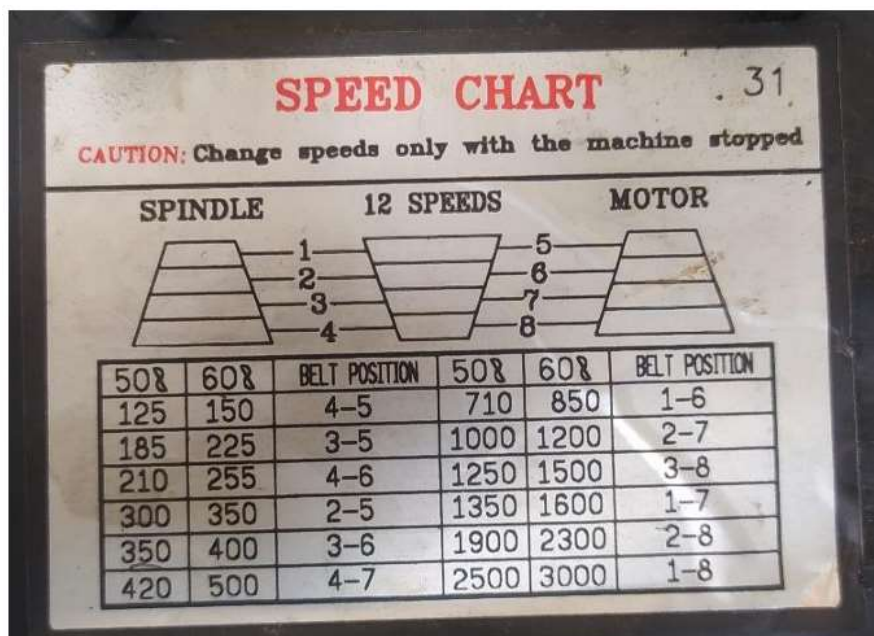
BILL OF MATERIAL (BOM)

No.	Komponen	Spesifikasi	Harga (Rp)	Jumlah	Total Harga (Rp)
1	Besi siku	40×40×2 mm	77.000	3 batang	231.000
2	Besi silinder hollow	Ø 75×72mm ×5mm	25.000	1 batang	25.000
3	Pipa bulat stainless	Ø 75 mm ×1,2 mm × 200 mm	42.000	1 batang	42.000
4	Pipa bulat stainless diameter + elbow	Ø 1¼ inch	75.000	1 batang	75.000
5	Plat besi	5 mm	50.000	1 lembar	50.000
6	Plat besi	2 mm	20.000	1 lembar	20.000
7	Plat nilon	100 × 250 ×250 mm	57.000	1 buah	57.000
8	Plat besi silinder	Tebal 5mm , Ø 200mm	51.000	1 lembar	102.000
9	Plat besi silinder	5 mm Ø 160 mm	25.000	1 lembar	25.000
10	Besi silinder pejal	1 inch	42.500	1 buah	42.500
11	Plat besi	1 mm	150.000	1 lembar	150.000
12	Plat galvanis	0,6 mm	18.000	1 lembar	18.000
13	Plat stainless	0.8 mm	10.000	1 lembar	10.000
14	Motor power windows	0,060 HP	80.000	2 buah	160.000
15	Roda gigi	2:1	75.000	2 buah	150.000
16	Cat besi	Avian	53.000	1 buah	53.000
17	Thinner	Thiner Impala	30.000	1 buah	30.000
18	Kuas cat	2 ½ inch	5.000	2 buah	10.000
19	Elektroda las	RD - 460	22.500	½ kg	22.500
20	Mata gerinda potong	405 ×3.0 ×25.40 mm	3.500	6 buah	21.000
21	Mata gerinda asah	100×6×16 mm	10.000	1 buah	10.000
22	Mata gerinda brush	3 inch	15.000	1 buah	15.000
23	Mur dan baut	M8,M10	5.000	30 pasang	150.000
24	Sekrup	5 mm	200	50 pasang	10.000

25	Arduino	R3 SMD	125.000	2 buah	250.000
26	Motor driver	BTS7960	45.000	2 buah	90.000
27	Bread board	MB-102	15.000	1 buah	15.000
28	Kabel jumper	20 CM FM-M	15.000	1 set	15.000
29	Step down DC	LM2596	10.000	1 buah	10.000
30	Sensor infra red	HC SR04	10.000	1 buah	10.000
31	Motor servo	SG 90	25.000	1 buah	25.000
32	LCD	1602 16 × 2	35.000	1 buah	35.000
33	Power supply	12V 10A	100.000	1 buah	100.000
34	Switch ON/OFF	2 PIN	5.000	1 buah	5.000
35	Kabel <i>power</i>	Tembaga	20.000	1 ½ meter	20.000
Jumlah					Rp. 2.054.000

Tabel 3A. Tabel data material dan *cutting speed* (Taufiq Rochim, 2007)

MATERIAL	CUTTING SPEEDS v_c		POINT ANGLE	LIP CLEARANCE	COOLANTS
	(METERS/MINUTE) MPM	(FEET/MINUTE) FPM			
Aluminum And Alloys	61.00 - 91.50	200 - 300	90 - 120 deg	12 - 15 deg	Kerosene/Kerosene & Lard Oil/ Soluble Oil
Armor Plate	12.20 - 18.25	40 - 50	135 - 140 deg	6 - 9 deg	Light Machine Oil
Brass	61.00 - 91.50	200 - 300	118 - 118 deg	12 - 15 deg	Dry/ Soluble Oil/Kerosene/Lard Oil
Bronze	61.00 - 91.50	200 - 300	110 - 118 deg	12 - 15 deg	Dry/ Soluble Oil/Mineral Oil/Lard Oil
Bronze, High Tensile	21.35 - 45.75	70 - 150	100 - 110 deg	12 - 15 deg	Dry/ Soluble Oil/Mineral Oil/Lard Oil
Cast Iron, Soft	30.50 - 45.75	100 - 150	90 - 100 deg	12 - 15 deg	Air Jet Dry/ Soluble Oil
Cast Iron, Medium	21.35 - 30.50	70 - 100	100 - 110 deg	12 - 15 deg	Air Jet Dry/ Soluble Oil
Cast Iron, Hard	21.35 - 30.50	70 - 100	100 - 118 deg	8 - 12 deg	Air Jet Dry/ Soluble Oil
Cast Iron, Chilled	9.15 - 12.20	30 - 40	118 - 135 deg	5 - 9 deg	Air Jet Dry/ Soluble Oil
Copper	61.00 - 91.50	200 - 300	100 - 118 deg	12 - 15 deg	Air Jet Dry/ Soluble Oil
Copper Graphite Alloy (Carbon Drills)	18.30 - 21.35	60 - 70	**_**	**_**	Soluble Oil/Dry/Mineral Oil/Kerosene
Glass (Carbon Drills)	6.10 - 9.15	20 - 30	**_**	**_**	Soluble Oil/Dry/Mineral Oil/Kerosene
Iron, Malleable	15.25 - 27.45	50 - 90	90 - 100 deg	12 - 15 deg	Light Machine Oil
Magnesium And Alloys	76.25 - 122.0	250 - 400	70 - 118 deg	12 - 15 deg	Soluble Oil
Monel Nickel	4.15 - 15.20	30 - 50	118 - 125 deg	10 - 12 deg	Compressed Air/Mineral Oil
Nickel Alloys	12.20 - 18.30	40 - 60	135 - 140 deg	5 - 7 deg	Lard Oil/Soluble Oil
Plastic, Hot Set	30.50 - 91.50	100 - 300	60 - 90 deg	10 - 12 deg	Lard Oil/Soluble Oil
Plastic, Cold Set	30.50 - 91.50	100 - 300	118 - 135 deg	12 - 20 deg	Soap Solution
Steel, Low Carbon, 0.2-0.3%	24.40 - 33.55	80 - 110	110 - 118 deg	7 - 9 deg	Soap Solution
Steel, Medium Carbon 0.4-0.5%	21.35 - 24.40	70 - 90	118 - 125 deg	7 - 9 deg	Soluble Oil/Mineral Oil/Sulfur Oil/Lard Oil
Steel (High Carbon 1.2%)	15.25 - 18.30	50 - 60	118 - 145 deg	7 - 9 deg	Soluble Oil/Mineral Oil/Sulfur Oil/Lard Oil
Steel, Freezed	15.25 - 18.30	50 - 60	118 - 145 deg	7 - 12 deg	Soluble Oil/Mineral Oil/Sulfur Oil/Lard Oil
Steel, Alloy	15.25 - 21.35	50 - 70	118 - 125 deg	10 - 12 deg	Mineral Lard Oil
Steel, Alloy 300 To 100 Bristal	8.10 - 9.15	20 - 30	130 - 140 deg	7 - 10 deg	Soluble Oil
Steel, Stainless, Free Machining	9.15 - 24.40	30 - 90	110 - 118 deg	8 - 12 deg	Soluble Oil
Steel, Stainless, Hard	4.57 - 15.25	15 - 50	118 - 135 deg	6 - 8 deg	Soluble Oil
Steel, Manganese	3.66 - 4.57	12 - 15	140 - 150 deg	7 - 10 deg	Soluble Oil
Stone (Carbide Drills)	7.63 - 9.15	25 - 30	**_**	**_**	Water Solution
Wood	91.50 - 122.2	300 - 400	60 - 70 deg	10 - 15 deg	Dry



Gambar 3A. Spesifikasi kecepatan spindel mesin gudi

Bahan	Pahat Bubut HSS		Pahat Bubut Karbida	
	m/men	Ft/min	M/men	Ft/min
Baja lunak (<i>Mild Steel</i>)	18 – 21	60 – 70	30 – 250	100 – 800
Besi Tuang (<i>Cast Iron</i>)	14 – 17	45 – 55	45 – 150	150 – 500
Perunggu	21 – 24	70 – 80	90 – 200	300 – 700
Tembaga	45 – 90	150 – 300	150 – 450	500 – 1500
Kuningan	30 – 120	100 – 400	120 – 300	400 – 1000
Aluminium	90 – 150	300 – 500	90 – 180	b. – 600

Gambar 4A Data material dan *cutting speed* proses bubut

	1	2	3
A	60	220	860
B	92	360	1400
C	140	530	2000

Gambar 4B Variasi kecepatan *spindle* mesin bubut

LONGITUDINAL FEED					TRANSVERSE FEED				
M					M				
	D	E	F	G		D	E	F	G
1	0.044	0.088	0.176	0.352	1	0.020	0.039	0.079	0.158
2	0.050	0.099	0.198	0.396	2	0.022	0.044	0.089	0.178
3	0.052	0.105	0.210	0.420	3	0.023	0.047	0.094	0.188
4	0.055	0.110	0.220	0.440	4	0.024	0.049	0.098	0.196
5	0.060	0.121	0.242	0.484	5	0.027	0.054	0.109	0.218
6	0.063	0.127	0.254	0.508	6	0.028	0.057	0.114	0.228
7	0.066	0.132	0.264	0.528	7	0.029	0.059	0.118	0.236
8	0.072	0.144	0.287	0.574	8	0.032	0.064	0.128	0.256
9	0.075	0.149	0.298	0.596	9	0.033	0.067	0.134	0.268
10	0.077	0.154	0.308	0.616	10	0.034	0.069	0.138	0.276
11	0.083	0.166	0.331	0.662	11	0.037	0.074	0.148	0.296

Gambar 3C Variasi *feeding* mesin bubut

DOKUMENTASI PROSES PRODUKSI

