# LAMPIRAN

## A. SPESIFIKASI MESIN PEMIPIL JAGUNG

| NO. | SPESIFIKASI MESIN PEMIPIL JAGUNG |
|---|---|
| 1. | Kapasitas Input (Q) = 350 kg/jam |
| 2. | Motor Penggerak = Motor Bensin 4 Tak (OHV) |
| 3. | Torsi Pisau Pemipil = 33,61 Nm |
| 4. | Daya (P) = 5,5 Hp |
| 5. | Putaran maksimal = 3600 rpm |
| 6. | Putaran pisau pemipil = 1000 rpm |

## B. PERINCIAN BIAYA FABRIKASI ALAT PEMIPIL JAGUNG

| No | Macam Pengeluaran | Harga per Satuan (Rp) | Jumlah | Harga (Rp) |
|---|---|---|---|---|
| | a. Harga Material | | | |
| 1. | Motor bensin 5.5 HP | 1.400.000 | 1 | 1.400.000 |
| 2. | Besi Siku 40 x 40 | 185.000 | 2 | 370.000 |
| 3. | Besi Hollow 40x 40 x x 1.6 mm | 175.000 | 2 | 350.000 |
| 4. | Besi UNP 50 x 40 x 5 mm | 285.000 | 2 | 570.000 |
| 5. | Besi Beton Dia 10 mm | 75.000 | 2 | 150.000 |
| 6. | AS ST 40 Dia 1 inch | 220.000 | 1 | 220.000 |
| 7. | Pillow Blosk UCP 205 | 75.000 | 2 | 150.000 |
| 8. | Mur Baut 5/8 inch x 2 inch | 12.500 | 4 | 50.000 |
| 9. | Engsel Bubut Dia 1 inch | 17.500 | 2 | 35.000 |
| 10. | Plat Mild steel plate thk 1.2 mm | 375.000 | 1 | 375.000 |
| 11. | Primary Coating | 125.000 | 1 | 125.000 |
| 12. | Cat Hammertone Medium Green | 75.000 | 1 | 75.000 |
| 13. | Thinner | 17.000 | 4 | 68.000 |
| 14. | Pipa Dia 4 inch SCH 10 | 250.000 | 1 | 250.000 |
| 15. | Bubut Flens Roll Dia 4 inch | 175.000 | 1 | 175.000 |
| 16. | Gerinda/kawat las | 150.000 | 1 | 150.000 |
| | b. Biaya Manufactur | | | |
| 17. | Biaya las | 500.000 | | 500.000 |
| 18. | Biaya transportasi | 550.000 | | 550.000 |
| 19. | Biaya cat dan fabrikasi | 450.000 | | 450.000 |
| | | | | |
| Jumlah Total Biaya ( Enam Juta Tiga Belas Ribu Rupiah) | | | | 6.013.000 |

NB : Dana ini ditanggung oleh satu kelompok

## C. TABEL PULLEY V TIPE A

| D ( mm ) | α ( º ) | t ( mm ) | a ( mm ) |
|---|---|---|---|
| 65 – 100 | 34 | 12 | 12 |
| 101 – 125 | 36 | 12 | 12 |
| 126> | 38 | 12 | 12 |

http://gambarteknik.blogspot.com

**D. TABEL PULLEY V TIPE B**

| D ( mm ) | α ( º ) | t ( mm ) | a ( mm ) |
|---|---|---|---|
| 115 – 160 | 34 | 15 | 16/19 |
| 161 – 200 | 36 | 15 | 16/19 |
| 201> | 38 | 15 | 16/19 |

http://gambarteknik.blogspot.com

**E. TABEL PULLEY V TIPE C**

| D ( mm ) | α ( º ) | t ( mm ) | a ( mm ) |
|---|---|---|---|
| 175 – 250 | 34 | 19 | 20/23 |
| 251 – 315 | 36 | 19 | 20/23 |
| 316> | 38 | 19 | 20/23 |

http://gambarteknik.blogspot.com

**F. TABEL PULLEY V TIPE D**

| D ( mm ) | α ( º ) | t ( mm ) | a ( mm ) |
|---|---|---|---|
| 300 – 450 | 36 | 25 | 30 |
| 451> | 38 | 25 | 30 |

**G. TABEL PULLEY V TIPE 3V/9N/9J**

| D ( mm ) | α ( º ) | t ( mm ) | a ( mm ) |
|---|---|---|---|
| 67 – 90 | 36 | 10 | 8 |
| 91 – 150 | 38 | 10 | 8 |

| | | | |
|---|---|---|---|
| 151 – 305 | 40 | 10 | 8 |
| 306> | 42 | 10 | 8 |

Sumber : http://gambarteknik.blogspot.com

## H. TABEL PULLEY V TIPE 5V/15N/15J

| D ( mm ) | α ( º ) | t ( mm ) | a ( mm ) |
|---|---|---|---|
| 180 – 255 | 38 | 15 | 14 |
| 256 – 405 | 40 | 15 | 14 |
| 406> | 42 | 15 | 14 |

Sumber : http://gambarteknik.blogspot.com

## I. TABEL PULLEY V TIPE 8V/25N/25J

| D ( mm ) | α ( º ) | t ( mm ) | a ( mm ) |
|---|---|---|---|
| 315 – 405 | 38 | 25 | 23 |
| 406 – 570 | 40 | 25 | 23 |
| 571> | 42 | 25 | 23 |

Sumber : http://gambarteknik.blogspot.com

## J. Tabel Tipe V-belt

| *Type of belt* | *Power ranges in kW* | *Minimum pitch diameter of pulley (D) mm* |
|---|---|---|
| *A* | 0.7 – 3.5 | 75 |
| *B* | 2 – 15 | 125 |
| *C* | 7.5 – 75 | 200 |
| *D* | 20 – 150 | 355 |
| *E* | 30 – 350 | 500 |

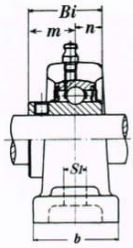
Sumber : A Textbook of Machine Design. CH-20 V-belt, Hal 729

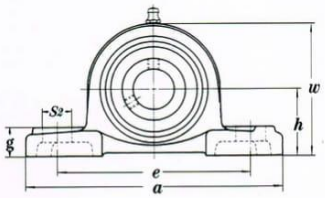
## K. Tabel Ukuran pillow blok ball bearing

# Pillow Block Ball Bearings

## UCP 200

(normal–duty)




| Unit No. | Shaft Dia d (mm) | Dimensions(mm) | | | | | | | | | | | Bolt Used (mm) | Bearing No. | Housing No. | Weight (kg) | Covers (mm) t |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | h | a | e | b | S2 | S1 | g | w | Bi | n | m | | | | | |
| UCP 201<br>201-8<br>202<br>202-10<br>203 | 12<br>15<br>17 | 30.2 | 127 | 95 | 38 | 19 | 13 | 13 | 60 | 31.0 | 12.7 | 18.3 | 10 | UC 201<br>201-8<br>202<br>202-10<br>203 | P202 | 0.61 | 44 |
| UCP 204-12<br>204 | 20 | 33.3 | 127 | 95 | 38 | 19 | 13 | 15 | 64 | 31.0 | 12.7 | 18.3 | 10 | 204-12<br>204 | P204 | 0.66 | 44 |
| UCP 205-14<br>205-15<br>205<br>205-16 | 25 | 36.5 | 140 | 105 | 38 | 19 | 13 | 16 | 71 | 34.0 | 14.3 | 19.7 | 10 | UC 205-14<br>205-15<br>205<br>205-16 | P205 | 0.8 | 48 |
| UCP 206-18<br>206<br>206-19<br>206-20 | 30 | 42.9 | 165 | 121 | 48 | 21 | 17 | 18 | 84 | 38.1 | 15.9 | 22.2 | 14 | UC 206-18<br>206<br>206-19<br>206-20 | P206 | 1.3 | 52 |
| UCP 207-20<br>207-21<br>207-22<br>207<br>207-23 | 35 | 47.6 | 167 | 127 | 48 | 21 | 17 | 19 | 93 | 42.9 | 17.5 | 25.4 | 14 | UC 207-20<br>207-21<br>207-22<br>207<br>207-23 | P207 | 1.6 | 59 |
| UCP 208-24<br>208-25<br>208 | 40 | 49.2 | 184 | 137 | 54 | 22 | 17 | 19 | 98 | 49.2 | 19.0 | 30.2 | 14 | UC 208-24<br>208-25<br>208 | P208 | 2.0 | 68 |
| UCP 209-26<br>209-27<br>209-28<br>209 | 45 | 54.0 | 190 | 146 | 54 | 22 | 17 | 20 | 106 | 49.2 | 19 | 30.2 | 14 | UC 209-26<br>209-27<br>209-28<br>209 | P209 | 2.2 | 68 |
| UCP 210-30<br>210-31<br>210 | 50 | 57.2 | 206 | 159 | 60 | 25 | 20 | 22 | 113 | 51.6 | 19.0 | 32.6 | 16 | UC 210-30<br>210-31<br>210 | P210 | 2.9 | 73 |
| UCP 211-32<br>211-34<br>211<br>211-35 | 55 | 63.5 | 219 | 171 | 60 | 25 | 20 | 22 | 125 | 55.6 | 22.2 | 33.4 | 16 | UC 211-32<br>211-34<br>211<br>211-35 | P211 | 3.6 | 75 |
| UCP 212-36<br>212<br>212-38<br>212-39 | 60 | 69.8 | 241 | 184 | 70 | 25 | 20 | 25 | 138 | 65.1 | 25.4 | 39.7 | 16 | UC 212-36<br>212<br>212-38<br>212-39 | P212 | 4.9 | 88 |
| UCP 213-40<br>213 | 65 | 76.2 | 265 | 203 | 70 | 29 | 25 | 27 | 150 | 65.1 | 25.4 | 39.7 | 20 | UC 213-40<br>213 | P213 | 5.9 | 88 |
| UCP 214-44<br>214 | 70 | 79.4 | 266 | 210 | 72 | 31 | 25 | 27 | 156 | 74.6 | 30.2 | 44.4 | 20 | UC 214-44<br>214 | P214 | 6.8 | 98 |
| UCP 215<br>215-48 | 75 | 82.6 | 275 | 217 | 74 | 31 | 25 | 28 | 162 | 77.8 | 33.3 | 44.5 | 20 | UC 215<br>215-48 | P215 | 7.4 | 98 |
| UCP 216 | 80 | 88.9 | 292 | 232 | 78 | 31 | 25 | 30 | 174 | 82.6 | 33.3 | 49.3 | 20 | UC 216 | P216 | 9.0 | 108 |
| UCP 217-52<br>217 | 85 | 95.2 | 310 | 247 | 83 | 31 | 25 | 32 | 185 | 85.7 | 34.1 | 51.6 | 20 | UC 217-52<br>217 | P217 | 10.8 | 112 |
| UCP 218-56<br>218 | 90 | 101.6 | 327 | 262 | 88 | 33 | 27 | 34 | 198 | 96.0 | 39.7 | 56.3 | 22 | UC 218-56<br>218 | P218 | 13.9 | 122 |

Sumber : Sularso &KiyokadsuSuga,1990

## L. Tabel Pasak menurut standar JIS

| Ukuran nominal (b x h) mm | Ukuran pasak prismatis mm | C mm | *L* mm | $h_1$ mm | $h_2$ mm | Diameter mm |
|---|---|---|---|---|---|---|
| 2 x 2 | 2 | 0,16- 0,25 | 6-20 | 1,2 | 1,0 | 6-8 |
| 3 x 3 | 3 | | 6-36 | 1,8 | 1,4 | 8-10 |
| 4 x 4 | 4 | | 8-48 | 2,5 | 1,8 | 10-12 |
| 5 x 5 | 5 | | 10-56 | 3,0 | 2,3 | 12-17 |
| 6 x 6 | 6 | | 14-70 | 3,5 | 2,8 | 17-22 |
| 7 x 7 | 7 | 0,25- 0,40 | 16- 80 | 4,0 | 3,0 | 20-25 |
| 8 x 7 | 7 | | 18-90 | 4,0 | 3,3 | 22-30 |
| 10x 8 | 8 | | 22-110 | 5,0 | 3,3 | 30-38 |
| 12 x 8 | 8 | | 28-140 | 5,0 | 3,3 | 38-44 |
| 14 x 9 | 9 | | 36-160 | 5,5 | 3,8 | 44-50 |
| 14 x 10 | 10 | 0,40- 0,60 | 40-180 | 5,0 | 5,0 | 50-55 |
| 16 x 10 | 10 | | 45-180 | 6,0 | 4,3 | 50-58 |
| 18 x 11 | 11 | | 50-200 | 7,0 | 4,4 | 58-65 |
| 20 x 12 | 12 | | 56-220 | 7,5 | 4,9 | 65-75 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 22 x 14 | 14 | | 63-250 | 9,0 | 5,4 | 75-85 |
| 24x16 | 16 | 0,60-0,80 | 70-280 | 8,0 | 8,0 | 80-90 |
| 25x14 | 14 | | 70-280 | 9,0 | 5,4 | 85-95 |
| 28x16 | 16 | | 80x320 | 10,0 | 6,4 | 95-110 |
| 32x18 | 18 | | 90x360 | 11,0 | 7,4 | 110-130 |