BAB 6

KESIMPULAN

6.1. Kesimpulan

a. Dari analisis data anthropometri didapatkan dimensi perabot kamar mandi yang ergonomi:

Tabel 6.1. Tabel perabot kamar mandi dan ukurannya

No	Perabot	Panjang (Cm)	Lebar (Cm)	Tinggi (Cm)	Berat (Kg)
1	Bak mandi	55	55	95	
2	Kloset	55	44		
3	Tinggi tempat sabun dan sikat gigi, gantungan baju dan keran	125			
4	Pintu	180	66		
5	Dinding Kamar mandi	180			
6	Atap kanan Kamar Mandi	198			
7	Atap kiri kamar mandi	200			
8	Tinggi Lampu			170	
9	Kamar mandi	140	140		
10	Berat badan				95

Lanjutan Tabel 6.1. Tabel perabot kamar mandi dan ukurannya

No	Perabot	Panjang (Cm)	Lebar (Cm)	Tinggi (Cm)	Berat (Kg)
11	Tangga				
	a. Undakan pertama	66	30	15	
	b. Undakan ke dua	66	30	30	
	c. Undakan ke tiga	66	30	45	
	d. Undakan ke empat	66	30	60	

b. Material yang diunakan berdasarkan *weighted objectives evaluation chart*

Tabel 6.2. Tabel material yang diunakan berdasarkan *weighted objectives evaluation chart*

No	Komponen	Nama	***Weighted Objectives Evaluation Chart***
1	Rangka kamar mandi	Besi siku tanpa lubang tebal 3 mm	244,23084
2	Pintu kamar mandi	Sudah jadi dari bahan Aluminium	253,801687
3	Dinding kamar mandi	Seng dan Triplek	236,538487
4	Atap	Fiber putih bergelombang	263,4615
5	Lanta kamar mandi	gypsum	253,846197
6	Bak mandi	Fiber	253,89618
7	Kloset	Jongkok	275,00004

c. Berat material 1.244,487785 Kg tidak melebihi 3.500 Kg
d. Biaya yang diperlukan untuk membuat MCK Movable ini Rp.92.680.250,00

6.2. Saran

Dengan keterbatasan kamar mandi yang dapat dipindah pindahkan ini, penulis menyarankan agar selanjutnya dilakukan pengembangan:

a. Kamar mandi ini dilengkapi dengan alat biogas, sehingga selain terpenuhi kebutuhan jumlah Kamar mandi juga dapat mengolah limbah tinja kamar mandi.
b. Kamar mandi ini dilengkapi dengan alat penjernihan air, sehingga selain terpenuhi kebutuhan jumlah kamar mandi juga terpenuhi kebutuhan air bersih.

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LAMPIRAN

UJI DATA ANTROPOMETRI

Keterangan : Data BB (Berat Badan)

Keterangan	%	Nilai
Tingkat keyakinan	95	2
Tingkat ketelitian	5	0.05
K/S		40

Tabel Perhitungan Harga Rata - rata Subgroup

Jumlah Subgroup = 1 + 3.3 log n
Jumlah data (n) = 30
Jumlah Subgroup = 5.8745 ≈ 6

Subgroup	Data (Xi)					Rerata-rata	Keterangan	
1	56.0	59.0	65.0	57.0	62.0	59.8	seragam	1
2	58.0	55.0	56.0	65.0	56.5	58.1	seragam	1
3	59.0	59.0	59.0	61.0	62.0	60	seragam	1
4	56.0	56.0	63.0	58.0	57.0	58	seragam	1
5	56.5	60.0	62.0	59.5	65.0	60.6	seragam	1
6	62.5	55.0	60.0	65.0	58.0	60.1	seragam	1
Jumlah Rata - Rata Subgroup						356.6		6
Total Xi						1783		
Total Xi^2						3179089		

$(Xi)^2$				
3136	3481	4225	3249	3844
3364	3025	3136	4225	3192.25
3481	3481	3481	3721	3844
3136	3136	3969	3364	3249
3192.25	3600	3844	3540.25	4225
3906.25	3025	3600	4225	3364
Total $(Xi)^2$				**106261**

Harga Rata - Rata Subgroup 59.43333
Standard Deviasi 3.16972

UJI KESERAGAMAN DATA
Std rata2 1.417542
Batas Kendali Bawah 55.18071
Batas Kendali Atas 63.68596
Keterangan : Data Seragam

UJI KECUKUPAN DATA

Nilai N Hitungan 4.399248
Keterangan : Data Cukup

NILAI PERCENTIL
Percentil 5% 55.45
Percentil 50% 59
Percentil 95% 65

UJI DATA ANTROPOMETRI

Keterangan : Data TBB (Tinggi Tubuh)

Keterangan	%	Nilai
Tingkat keyakinan	95	2
Tingkat ketelitian	5	0.05
K/S		40

Tabel Perhitungan Harga Rata - rata Subgroup

Jumlah Subgroup = 1 + 3.3 log n
Jumlah data (n) = 30
Jumlah Subgroup = 5.8745 ≈ 6

Subgroup	Data (Xi)					Rerata-rata	Keterangan	
1	158.1	176.2	171.2	164.8	169.0	167.86	seragam	1
2	170.6	163.0	160.5	165.5	177.6	167.44	seragam	1
3	169.5	155.9	166.0	172.0	169.8	166.64	seragam	1
4	162.7	172.6	165.9	165.8	170.5	167.5	seragam	1
5	167.0	176.4	168.0	168.0	159.9	167.86	seragam	1
6	177.4	158.6	170.6	166.6	179.6	170.56	seragam	1
Jumlah Rata - Rata Subgroup						1007.86		6
Total Xi						5039.3		
Total Xi^2						25394544.49		

$(Xi)^2$				
24995.61	31046.44	29309.44	27159.04	28561
29104.36	26569	25760.25	27390.25	31541.76
28730.25	24304.81	27556	29584	28832.04
26471.29	29790.76	27522.81	27489.64	29070.25
27889	31116.96	28224	28224	25568.01
31470.76	25153.96	29104.36	27756.56	32256.16
Total $(Xi)^2$				**847551.8**

Harga Rata - Rata Subgroup 167.9767
Standard Deviasi 6.0656

UJI KESERAGAMAN DATA
Std rata2 2.712619
Batas Kendali Bawah 159.8388
Batas Kendali Atas 176.1145
Keterangan : Data Seragam

UJI KECUKUPAN DATA

Nilai N Hitungan 2.016724
Keterangan : Data Cukup

NILAI PERCENTIL
Percentil 5% 158.325
Percentil 50% 168
Percentil 95% 177.51

UJI DATA ANTROPOMETRI

Keterangan : Data LBH (Lebar Bahu)

Keterangan	%	Nilai
Tingkat keyakinan	95	2
Tingkat ketelitian	5	0.05
K/S		40

Tabel Perhitungan Harga Rata - rata Subgroup

Jumlah Subgroup = 1 + 3.3 log n

Jumlah data (n) = 30

Jumlah Subgroup = 5.8745 ≈ 6

Subgroup	Data (Xi)					Rerata-rata	Keterangan		(Xi)²				
1	33.5	41.3	43.2	38.3	43.0	39.86	seragam	1	1122.25	1705.69	1866.24	1466.89	1849
2	41.2	41.0	40.0	37.8	39.0	39.8	seragam	1	1697.44	1681	1600	1428.84	1521
3	37.0	36.3	43.4	43.4	41.1	40.24	seragam	1	1369	1317.69	1883.56	1883.56	1689.21
4	38.5	40.9	40.5	40.8	43.5	40.84	seragam	1	1482.25	1672.81	1640.25	1664.64	1892.25
5	41.2	41.6	41.4	43.5	37.5	41.04	seragam	1	1697.44	1730.56	1713.96	1892.25	1406.25
6	42.0	37.5	40.7	43.5	42.8	41.3	seragam	1	1764	1406.25	1656.49	1892.25	1831.84
Jumlah Rata - Rata Subgroup						243.08		6	Total $(Xi)^2$				**49424.86**
Total Xi						1215.4							
Total Xi^2						1477197.16							

Harga Rata - Rata Subgroup 40.51333

Standard Deviasi 2.52542

UJI KESERAGAMAN DATA

Std rata2 1.129402

Batas Kendali Bawah 37.12513

Batas Kendali Atas 43.90154

Keterangan : Data Seragam

UJI KECUKUPAN DATA

Nilai N Hitungan 6.009911

Keterangan : Data Cukup

NILAI PERCENTIL

Percentil 5% 36.615

Percentil 50% 41.05

Percentil 95% 43.5

UJI DATA ANTROPOMETRI

Keterangan : Data LPD (Lebar Pinggul Duduk)

Keterangan	%	Nilai
Tingkat keyakinan	95	2
Tingkat ketelitian	5	0.05
K/S		40

Tabel Perhitungan Harga Rata - rata Subgroup

Jumlah Subgroup = 1 + 3.3 log n

Jumlah data (n) = 30

Jumlah Subgroup = 5.8745 ≈ 6

Subgroup	Data (Xi)					Rerata-rata	Keterangan	
1	34.4	30.2	35.6	32.5	33.7	33.28	seragam	1
2	30.3	29.0	34.2	35.2	27.3	31.2	seragam	1
3	35.0	37.3	27.8	33.8	33.6	33.5	seragam	1
4	34.3	45.7	32.3	33.2	32.9	35.68	seragam	1
5	31.2	32.0	31.0	33.7	37.9	33.16	seragam	1
6	33.3	33.8	33.3	34.7	32.3	33.48	seragam	1
Jumlah Rata - Rata Subgroup						200.3		6
Total Xi						1001.5		
Total Xi^2						1003002		

$(Xi)^2$				
1183.36	912.04	1267.36	1056.25	1135.69
918.09	841	1169.64	1239.04	745.29
1225	1391.29	772.84	1142.44	1128.96
1176.49	2088.49	1043.29	1102.24	1082.41
973.44	1024	961	1135.69	1436.41
1108.89	1142.44	1108.89	1204.09	1043.29
Total $(Xi)^2$				**33759.35**

Harga Rata - Rata Subgroup 33.38333

Standard Deviasi 3.352517

UJI KESERAGAMAN DATA

Std rata2 1.499291

Batas Kendali Bawah 28.88546

Batas Kendali Atas 37.88121

Keterangan : Data Seragam

UJI KECUKUPAN DATA

Nilai N Hitungan 15.59837

Keterangan : Data Cukup

NILAI PERCENTIL

Percentil 5% 28.34

Percentil 50% 33.45

Percentil 95% 37.63

UJI DATA ANTROPOMETRI

Keterangan : Data LBD (Lebar Bahu Duduk)

Keterangan	%	Nilai
Tingkat keyakinan	95	2
Tingkat ketelitian	5	0.05
K/S		40

Tabel Perhitungan Harga Rata - rata Subgroup

Jumlah Subgroup = 1 + 3.3 log n

Jumlah data (n) = 30

Jumlah Subgroup = 5.8745 ≈ 6

Subgroup	Data (Xi)					Rerata-rata	Keterangan	
1	33.6	39.3	42.4	37.8	40.6	38.74	seragam	1
2	40.8	41.5	38.1	39.0	38.4	39.56	seragam	1
3	37.0	35.8	43.5	42.9	38.7	39.58	seragam	1
4	37.6	39.0	39.7	39.3	43.1	39.74	seragam	1
5	39.1	41.9	39.5	40.0	40.4	40.18	seragam	1
6	47.2	38.1	41.5	42.0	42.9	42.34	seragam	1
Jumlah Rata - Rata Subgroup						240.14		6
Total Xi						1200.7		
Total Xi^2						1441680.49		

$(Xi)^2$				
1128.96	1544.49	1797.76	1428.84	1648.36
1664.64	1722.25	1451.61	1521	1474.56
1369	1281.64	1892.25	1840.41	1497.69
1413.76	1521	1576.09	1544.49	1857.61
1528.81	1755.61	1560.25	1600	1632.16
2227.84	1451.61	1722.25	1764	1840.41
Total $(Xi)^2$				**48259.35**

Harga Rata - Rata Subgroup 40.02333
Standard Deviasi 2.647925

UJI KESERAGAMAN DATA

Std rata2 1.184188
Batas Kendali Bawah 36.47077
Batas Kendali Atas 43.5759
Keterangan : Data Seragam

UJI KECUKUPAN DATA

Nilai N Hitungan 6.769888
Keterangan : Data Cukup

NILAI PERCENTIL

Percentil 5% 36.34
Percentil 50% 39.6
Percentil 95% 43.32

UJI DATA ANTROPOMETRI

Keterangan : Data PKP (Jarak Pantat ke Politeal)

Keterangan	%	Nilai
Tingkat keyakinan	95	2
Tingkat ketelitian	5	0.05
K/S		40

Tabel Perhitungan Harga Rata - rata Subgroup

Jumlah Subgroup = 1 + 3.3 log n
Jumlah data (n) = 30
Jumlah Subgroup = 5.8745 ≈ 6

Subgroup	Data (Xi)					Rerata-rata	Keterangan		$(Xi)^2$				
1	47.0	43.8	46.9	47.7	49.1	46.9	seragam	1	2209	1918.44	2199.61	2275.29	2410.81
2	49.4	45.0	46.8	46.0	49.8	47.4	seragam	1	2440.36	2025	2190.24	2116	2480.04
3	49.6	48.0	45.6	45.0	48.0	47.24	seragam	1	2460.16	2304	2079.36	2025	2304
4	46.0	47.6	47.5	48.0	53.4	48.5	seragam	1	2116	2265.76	2256.25	2304	2851.56
5	47.4	49.5	49.4	49.3	49.0	48.92	seragam	1	2246.76	2450.25	2440.36	2430.49	2401
6	44.2	46.0	48.8	47.1	47.7	46.76	seragam	1	1953.64	2116	2381.44	2218.41	2275.29
Jumlah Rata - Rata Subgroup						285.72		6	Total $(Xi)^2$				**68144.52**
Total Xi						**1428.6**							
Total Xi^2						2040897.96							

Harga Rata - Rata Subgroup 47.62
Standard Deviasi 1.9878

UJI KESERAGAMAN DATA

Std rata2 0.889
Batas Kendali Bawah 44.953
Batas Kendali Atas 50.287
Keterangan : Data Seragam

UJI KECUKUPAN DATA

Nilai N Hitungan 2.695
Keterangan : Data Cukup

NILAI PERCENTIL

Percentil 5% 44.56
Percentil 50% 47.65
Percentil 95% 49.71

UJI DATA ANTROPOMETRI

Keterangan : Data JKT (Jangkauan Tangan)

Keterangan	%	Nilai
Tingkat keyakinan	95	2
Tingkat ketelitian	5	0.05
K/S		40

Tabel Perhitungan Harga Rata - rata Subgroup

Jumlah Subgroup = 1 + 3.3 log n

Jumlah data (n) = 30

Jumlah Subgroup = 5.8745 ≈ 6

Subgroup	Data (Xi)					Rerata-rata	Keterangan	
1	76.0	76.1	85.0	69.4	85.9	78.48	seragam	1
2	82.3	78.0	77.8	77.0	80.3	79.08	seragam	1
3	80.8	77.5	79.5	76.3	82.8	79.38	seragam	1
4	79.4	79.5	81.7	81.2	91.0	82.56	seragam	1
5	76.4	89.5	75.7	82.9	71.2	79.14	seragam	1
6	83.0	77.3	88.3	81.0	85.9	83.1	seragam	1
Jumlah Rata - Rata Subgroup						481.74		6
Total Xi						2408.7		
Total Xi^2						5801835.69		

$(Xi)^2$				
5776	5791.21	7225	4816.36	7378.81
6773.29	6084	6052.84	5929	6448.09
6528.64	6006.25	6320.25	5821.69	6855.84
6304.36	6320.25	6674.89	6593.44	8281
5836.96	8010.25	5730.49	6872.41	5069.44
6889	5975.29	7796.89	6561	7378.81
Total $(Xi)^2$				**194101.8**

Harga Rata - Rata Subgroup 80.29

Standard Deviasi 4.9383

UJI KESERAGAMAN DATA

Std rata2 2.2085

Batas Kendali Bawah 73.665

Batas Kendali Atas 86.915

Keterangan : Data Seragam

UJI KECUKUPAN DATA

Nilai N Hitungan 5.8511

Keterangan : Data Cukup

NILAI PERCENTIL

Percentil 5% 73.225

Percentil 50% 79.9

Percentil 95% 88.96

UJI DATA ANTROPOMETRI

Keterangan : Data TDD (Tebal Dada)

Keterangan	%	Nilai
Tingkat keyakinan	95	2
Tingkat ketelitian	5	0.05
K/S		40

Tabel Perhitungan Harga Rata - rata Subgroup

Jumlah Subgroup = 1 + 3.3 log n
Jumlah data (n) = 30
Jumlah Subgroup = 5.8745 ≈ 6

Subgroup	Data (Xi)					Rerata-rata	Keterangan		$(Xi)^2$				
1	20.9	19.1	21.3	24.6	20.6	21.3	seragam	1	436.81	364.81	453.69	605.16	424.36
2	19.3	19.3	23.8	21.9	19.5	20.76	seragam	1	372.49	372.49	566.44	479.61	380.25
3	19.8	20.5	16.4	19.9	22.0	19.72	seragam	1	392.04	420.25	268.96	396.01	484
4	22.6	18.9	21.9	18.5	19.8	20.34	seragam	1	510.76	357.21	479.61	342.25	392.04
5	20.4	17.0	19.8	20.0	23.4	20.12	seragam	1	416.16	289	392.04	400	547.56
6	19.5	20.2	19.1	18.8	18.3	19.18	seragam	1	380.25	408.04	364.81	353.44	334.89
Jumlah Rata - Rata Subgroup						121.42		6	Total $(Xi)^2$				12385.43
Total Xi						607.1							
Total Xi^2						368570.41							

Harga Rata - Rata Subgroup 20.23667
Standard Deviasi 1.854628

UJI KESERAGAMAN DATA

Std rata2 0.829415
Batas Kendali Bawah 17.74842
Batas Kendali Atas 22.72491
Keterangan : Data Seragam

UJI KECUKUPAN DATA

Nilai N Hitungan 12.99069
Keterangan : Data Cukup

NILAI PERCENTIL

Percentil 5% 17.585
Percentil 50% 19.85
Percentil 95% 23.62

UJI DATA ANTROPOMETRI

Keterangan : Data TPG (Tinggi Pinggang)

Keterangan	%	Nilai
Tingkat keyakinan	95	2
Tingkat ketelitian	5	0.05
K/S		40

Tabel Perhitungan Harga Rata - rata Subgroup

Jumlah Subgroup = 1 + 3.3 log n
Jumlah data (n) = 30
Jumlah Subgroup = 5.8745 ≈ 6

Subgroup	Data (Xi)					Rerata-rata	Keterangan	
1	88.6	101.6	100.7	103.7	101.8	99.28	seragam	1
2	95.4	95.5	81.3	98.5	104.5	95.04	seragam	1
3	108.9	94.0	92.9	106.0	94.3	99.22	seragam	1
4	105.4	102.0	92.1	90.5	109.3	99.86	seragam	1
5	100.4	96.6	104.6	94.0	100.0	99.12	seragam	1
6	102.0	101.0	94.5	94.2	104.0	99.14	seragam	1
Jumlah Rata - Rata Subgroup						591.66		6
Total Xi						2958.3		
Total Xi^2						8751538.89		

$(Xi)^2$				
7849.96	10322.56	10140.49	10753.69	10363.24
9101.16	9120.25	6609.69	9702.25	10920.25
11859.21	8836	8630.41	11236	8892.49
11109.16	10404	8482.41	8190.25	11946.49
10080.16	9331.56	10941.16	8836	10000
10404	10201	8930.25	8873.64	10816
Total $(Xi)^2$				**292883.7**

Harga Rata - Rata Subgroup 98.61
Standard Deviasi 6.34026

UJI KESERAGAMAN DATA
Std rata2 2.83545
Batas Kendali Bawah 90.1037
Batas Kendali Atas 107.116
Keterangan : Data Seragam

UJI KECUKUPAN DATA

Nilai N Hitungan 6.39394
Keterangan : Data Cukup

NILAI PERCENTIL
Percentil 5% 89.455
Percentil 50% 100.2
Percentil 95% 107.6

UJI DATA ANTROPOMETRI

Keterangan : TBH (Tinggi Bahu)

Keterangan	%	Nilai
Tingkat keyakinan	95	2
Tingkat ketelitian	5	0.05
K/S		40

Tabel Perhitungan Harga Rata - rata Subgroup

Jumlah Subgroup = 1 + 3.3 log n

Jumlah data (n) = 30

Jumlah Subgroup 5.8745 ≈ 6

Subgroup	Data (Xi)					Rerata-rata	Keterangan	
1	132.3	145.5	141.8	137.5	137.5	138.92	seragam	1
2	140.0	131.0	103.8	138.0	145.5	131.66	seragam	1
3	142.6	121.5	137.6	145.0	137.0	136.74	seragam	1
4	134.5	143.0	137.9	133.5	143.7	138.52	seragam	1
5	139.3	147.3	137.4	138.5	134.0	139.3	seragam	1
6	146.3	132.0	140.5	132.6	150.3	140.34	seragam	1
Jumlah Rata - Rata Subgroup						825.48		6
Total Xi						4127.4		
Total Xi^2						17035430.8		

$(Xi)^2$				
17503.29	21170.25	20107.24	18906.25	18906.25
19600	17161	10774.44	19044	21170.25
20334.76	14762.25	18933.76	21025	18769
18090.25	20449	19016.41	17822.25	20649.69
19404.49	21697.29	18878.76	19182.25	17956
21403.69	17424	19740.25	17582.76	22590.09
Total $(Xi)^2$				**570054.9**

Harga Rata - Rata Subgrou 137.58

Standard Deviasi 8.7242

UJI KESERAGAMAN DATA

Std rata2 3.9016

Batas Kendali Bawah 125.88

Batas Kendali Atas 149.28

Keterangan : Data Seragam

UJI KECUKUPAN DATA

Nilai N Hitungan 6.2192

Keterangan : Data Cukup

NILAI PERCENTIL

Percentil 5% 125.78

Percentil 50% 137.95

Percentil 95% 146.85

UJI DATA ANTROPOMETRI

Keterangan : Data PTK (Panjang Telapak Kaki)

Keterangan	%	Nilai
Tingkat keyakinan	95	2
Tingkat ketelitian	5	0.05
K/S		40

Tabel Perhitungan Harga Rata - rata Subgroup

Jumlah Subgroup = 1 + 3.3 log n

Jumlah data (n) = 30

Jumlah Subgroup : 5.8745 ≈ 6

Subgroup	Data (Xi)					Rerata-rata	Keterangan	
1	24.5	26.4	25.7	24.0	25.6	25.24	seragam	1
2	24.9	24.0	23.5	23.5	25.8	24.34	seragam	1
3	24.0	22.0	24.0	25.4	23.5	23.78	seragam	1
4	22.0	27.0	24.5	24.9	26.5	24.98	seragam	1
5	25.6	27.0	26.1	27.1	23.3	25.82	seragam	1
6	27.0	23.2	28.0	24.0	26.5	25.74	seragam	1
Jumlah Rata - Rata Subgroup						149.9		6
Total Xi						749.5		
Total Xi^2						561750.25		

$(Xi)^2$				
600.25	696.96	660.49	576	655.36
620.01	576	552.25	552.25	685.64
576	484	576	645.16	552.25
484	729	600.25	620.01	702.25
655.36	729	681.21	734.41	542.89
729	538.24	784	576	702.25
Total $(Xi)^2$				**18796.49**

Harga Rata - Rata Subgroup 24.9833

Standard Deviasi 1.57

UJI KESERAGAMAN DATA

Std rata2 0.70212

Batas Kendali Bawah 22.877

Batas Kendali Atas 27.0897

Keterangan : Data Seragam

UJI KECUKUPAN DATA

Nilai N Hitungan 6.10791

Keterangan : Data Cukup

NILAI PERCENTIL

Percentil 5% 22.54

Percentil 50% 24.9

Percentil 95% 27.055

UJI DATA ANTROPOMETRI

Keterangan : TJT (Tinggi Jangkauan Tangan)

Keterangan	%	Nilai
Tingkat keyakinan	95	2
Tingkat ketelitian	5	0.05
K/S		40

Tabel Perhitungan Harga Rata - rata Subgroup

Jumlah Subgroup = 1 + 3.3 log n

Jumlah data (n) = 30

Jumlah Subgroup = 5.8745 ≈ 6

Subgroup	Data (Xi)					Rerata-rata	Keterangan		$(Xi)^2$				
1	199.0	208.0	215.0	207.0	216.8	209.16	seragam	1	39601	43264	46225	42849	47002.24
2	214.5	206.0	197.7	205.0	225.0	209.64	seragam	1	46010.25	42436	39085.29	42025	50625
3	218.0	198.5	207.0	220.5	210.0	210.8	seragam	1	47524	39402.25	42849	48620.25	44100
4	211.0	208.0	211.0	205.0	219.0	210.8	seragam	1	44521	43264	44521	42025	47961
5	202.0	222.0	211.4	212.7	201.7	209.96	seragam	1	40804	49284	44689.96	45241.29	40682.89
6	210.0	195.0	213.0	213.9	226.0	211.58	seragam	1	44100	38025	45369	45753.21	51076
Jumlah Rata - Rata Subgroup						1261.94		6	Total $(Xi)^2$				1328936
Total Xi						6309.7							
Total Xi^2						39812314.09							

Harga Rata - Rata Subgroup 210.32

Standard Deviasi 8.0054

UJI KESERAGAMAN DATA

Std rata2 3.5801

Batas Kendali Bawah 199.58

Batas Kendali Atas 221.06

Keterangan : Data Seragam

UJI KECUKUPAN DATA

Nilai N Hitungan 2.2407

Keterangan : Data Cukup

NILAI PERCENTIL

Percentil 5% 198.06

Percentil 50% 210.5

Percentil 95% 223.65

HASIL PERHITUNGAN DENGAN MENGGUNAKAN PROGRAM SPSS 10.0 for Windows

One-Sample Kolmogorov-Smirnov Test

		TBB
N		30
Normal Parameters[a,b]	Mean	167.977
	Std. Deviation	6.066
Most Extreme Differences	Absolute	.079
	Positive	.066
	Negative	-.079
Kolmogorov-Smirnov Z		.433
Asymp. Sig. (2-tailed)		.992

a. Test distribution is Normal.

b. Calculated from data.

One-Sample Kolmogorov-Smirnov Test

		LBH
N		30
Normal Parameters[a,b]	Mean	40.513
	Std. Deviation	2.525
Most Extreme Differences	Absolute	.165
	Positive	.118
	Negative	-.165
Kolmogorov-Smirnov Z		.901
Asymp. Sig. (2-tailed)		.391

a. Test distribution is Normal.

b. Calculated from data.

One-Sample Kolmogorov-Smirnov Test

		LPD
N		30
Normal Parameters[a,b]	Mean	33.383
	Std. Deviation	3.353
Most Extreme Differences	Absolute	.161
	Positive	.161
	Negative	-.107
Kolmogorov-Smirnov Z		.880
Asymp. Sig. (2-tailed)		.421

a. Test distribution is Normal.

b. Calculated from data.

One-Sample Kolmogorov-Smirnov Test

		LBD
N		30
Normal Parameters[a,b]	Mean	40.023
	Std. Deviation	2.648
Most Extreme Differences	Absolute	.082
	Positive	.082
	Negative	-.080
Kolmogorov-Smirnov Z		.449
Asymp. Sig. (2-tailed)		.988

a. Test distribution is Normal.

b. Calculated from data.

One-Sample Kolmogorov-Smirnov Test

		PKP
N		30
Normal Parameters[a,b]	Mean	47.620
	Std. Deviation	1.988
Most Extreme Differences	Absolute	.103
	Positive	.103
	Negative	-.073
Kolmogorov-Smirnov Z		.564
Asymp. Sig. (2-tailed)		.908

a. Test distribution is Normal.

b. Calculated from data.

One-Sample Kolmogorov-Smirnov Test

		JKT
N		30
Normal Parameters[a,b]	Mean	80.290
	Std. Deviation	4.938
Most Extreme Differences	Absolute	.110
	Positive	.092
	Negative	-.110
Kolmogorov-Smirnov Z		.601
Asymp. Sig. (2-tailed)		.863

a. Test distribution is Normal.

b. Calculated from data.

One-Sample Kolmogorov-Smirnov Test

		TDD
N		30
Normal Parameters[a,b]	Mean	20.237
	Std. Deviation	1.855
Most Extreme Differences	Absolute	.122
	Positive	.122
	Negative	-.086
Kolmogorov-Smirnov Z		.670
Asymp. Sig. (2-tailed)		.760

a. Test distribution is Normal.

b. Calculated from data.

One-Sample Kolmogorov-Smirnov Test

		TPG
N		30
Normal Parameters[a,b]	Mean	98.610
	Std. Deviation	6.340
Most Extreme Differences	Absolute	.120
	Positive	.088
	Negative	-.120
Kolmogorov-Smirnov Z		.658
Asymp. Sig. (2-tailed)		.780

a. Test distribution is Normal.

b. Calculated from data.

One-Sample Kolmogorov-Smirnov Test

		TBH
N		30
Normal Parameters[a,b]	Mean	137.580
	Std. Deviation	8.724
Most Extreme Differences	Absolute	.173
	Positive	.099
	Negative	-.173
Kolmogorov-Smirnov Z		.950
Asymp. Sig. (2-tailed)		.327

a. Test distribution is Normal.

b. Calculated from data.

One-Sample Kolmogorov-Smirnov Test

		BB
N		30
Normal Parameters[a]	Mean	59.433
	Std. Deviation	3.1697
Most Extreme Differences	Absolute	.121
	Positive	.121
	Negative	-.094
Kolmogorov-Smirnov Z		.663
Asymp. Sig. (2-tailed)		.772

a. Test distribution is Normal.

One-Sample Kolmogorov-Smirnov Test

		TJT
N		30
Normal Parameters[a,,b]	Mean	210.323
	Std. Deviation	8.0054
Most Extreme Differences	Absolute	.055
	Positive	.055
	Negative	-.053
Kolmogorov-Smirnov Z		.300
Asymp. Sig. (2-tailed)		1.000

a. Test distribution is Normal.

b. Calculated from data.

One-Sample Kolmogorov-Smirnov Test

		PTK
N		30
Normal Parameters[a]	Mean	24.983
	Std. Deviation	1.5700
Most Extreme Differences	Absolute	.134
	Positive	.134
	Negative	-.086
Kolmogorov-Smirnov Z		.736
Asymp. Sig. (2-tailed)		.650

a. Test distribution is Normal.

Berat Material

Select objects: baut 15	Select objects: baut 30
-------- SOLIDS --------	-------- SOLIDS --------
Mass: 1168.7587	Mass: 1711.9614
Volume: 1168.7587	Volume: 1711.9614
Bounding box:	Bounding box:
X: 335.9423 -- 349.9423	X: 354.9824 -- 368.9824
Y: 179.6933 -- 199.9539	Y: 289.0207 -- 324.3739
Z: -4.0633 -- 8.0610	Z: -6.0622 -- 6.0622
Centroid:	Centroid:
X: 342.9428	X: 361.9825
Y: 186.8881	Y: 302.6623
Z: 1.9954	Z: 0.0002
Moments of inertia:	Moments of inertia:
X: 40873879.2601	X: 157035962.8854
Y: 137477788.3407	Y: 224339436.3186
Z: 178326667.5857	Z: 381356532.6913
Products of inertia:	Products of inertia:
XY: 74907999.0288	XY: 187559864.4214
YZ: 435828.1887	YZ: 169.4594
ZX: 799785.3904	ZX: 109.8108
Radii of gyration:	Radii of gyration:
X: 187.0081	X: 302.8674
Y: 342.9682	Y: 361.9977
Z: 390.6121	Z: 471.9746

Select objects: baut 20	Select objects: baut 40
-------- SOLIDS --------	-------- SOLIDS --------
Mass: 1349.6397	Mass: 2167.1259
Volume: 1349.6397	Volume: 2167.1259
Bounding box:	Bounding box:
X: 313.3469 -- 327.3469	X: 252.1199 -- 266.1199
Y: 133.7390 -- 158.9995	Y: 169.1899 -- 214.2624
Z: -4.0633 -- 8.0610	Z: -6.0622 -- 6.0622
Centroid:	Centroid:
X: 320.3460	X: 259.1199
Y: 142.9852	Y: 187.7191
Z: 1.9985	Z: 0.0000
Moments of inertia:	Moments of inertia:
X: 27683858.5827	X: 76807154.3084
Y: 138524305.4459	Y: 145530193.9208
Z: 166180633.3261	Z: 222314771.9977
Products of inertia:	Products of inertia:
XY: 61819866.5757	XY: 105412710.5749
YZ: 385709.1794	YZ: 179.1131
ZX: 864062.2471	ZX: -2.9800
Radii of gyration:	Radii of gyration:
X: 143.2202	X: 188.2603
Y: 320.3716	Y: 259.1400
Z: 350.8983	Z: 320.2890

Select objects: baut gede	Select objects: Atap
-------- SOLIDS --------	-------- SOLIDS --------
Mass: 2995.7557	Mass: 1674800.8445
Volume: 2995.7557	Volume: 1674800.8445
Bounding box:	Bounding box:
X: 277.2525 -- 293.2525	X: -2242.7016 -- -1442.7016
Y: 136.2803 -- 181.3328	Y: -2230.3275 -- -430.0845
Z: -20.7846 -- -6.9282	Z: -213946.7851 -- -213891.8751
Centroid:	Centroid:
X: 285.2525	X: -1842.7110
Y: 155.3062	Y: -1330.1863
Z: -13.8564	Z: -213918.7293
Moments of inertia:	Moments of inertia:
X: 73440040.0346	X: 7.6644E+16
Y: 244377024.4780	Y: 7.6647E+16
Z: 316626416.0284	Z: 9.1915E+12
Products of inertia:	Products of inertia:
XY: 132716428.3446	XY: 4.1052E+12
YZ: -6446605.6918	YZ: 4.7656E+14
ZX: -11840944.0551	ZX: 6.6019E+14
Radii of gyration:	Radii of gyration:
X: 156.5717	X: 213923.4960
Y: 285.6124	Y: 213926.7906
Z: 325.1026	Z: 2342.6759

Select objects:bak mandi -------- SOLIDS -------- Mass: 7644653.5282 Volume: 7644653.5282 Bounding box: X: 3220.5865 -- 3773.5865 Y: -1087.7470 -- -537.7470 Z: -925.1781 -- -255.1781 Centroid: X: 3498.0086 Y: -814.4897 Z: -664.1249 Moments of inertia: X: 8.8804E+12 Y: 9.7352E+13 Z: 9.8987E+13 Products of inertia: XY: -2.1813E+13 YZ: 4.1409E+12 ZX: -1.7751E+13 Radii of gyration: X: 1077.7996 Y: 3568.5650 Z: 3598.4019	Select objects: gantungan baju -------- SOLIDS -------- Mass: 20157.6433 Volume: 20157.6433 Bounding box: X: 247.4336 -- 697.4336 Y: 98.4450 -- 198.4773 Z: -1.5196 -- 41.2955 Centroid: X: 473.7134 Y: 141.3249 Z: 6.5047 Moments of inertia: X: 424357221.4053 Y: 4869657935.8797 Z: 5286475472.4286 Products of inertia: XY: 1348939824.1227 YZ: 14119717.4259 ZX: 62306123.4834 Radii of gyration: X: 145.0928 Y: 491.5066 Z: 512.1100

Select objects: keran	Select objects: mur gede
-------- SOLIDS --------	-------- SOLIDS --------
Mass: 13739.5456	Mass: 685.0203
Volume: 13739.5456	Volume: 685.0203
Bounding box:	Bounding box:
X: 402.6284 -- 535.9175	X: 327.1129 -- 343.1129
Y: 141.2193 -- 200.8010	Y: 147.4784 -- 161.3348
Z: -5.8705 -- 18.7179	Z: -7.4774 -- 0.1266
Centroid:	Centroid:
X: 479.9064	X: 335.1137
Y: 171.0841	Y: 154.4066
Z: 6.6986	Z: -3.6700
Moments of inertia:	Moments of inertia:
X: 406168164.2098	X: 16356969.6937
Y: 3174798718.5339	Y: 76953749.1045
Z: 3579009439.5926	Z: 93286450.4812
Products of inertia:	Products of inertia:
XY: 1126135518.5529	XY: 35445529.0444
YZ: 15742452.2028	YZ: -388187.0524
ZX: 44175223.4624	ZX: -842477.6385
Radii of gyration:	Radii of gyration:
X: 171.9360	X: 154.5253
Y: 480.6976	Y: 335.1685
Z: 510.3819	Z: 369.0265

Select objects: kloset	Select objects: mur kecil
-------- SOLIDS --------	-------- SOLIDS --------
Mass: 9092189.4792	Mass: 447.2962
Volume: 9092189.4792	Volume: 447.2962
Bounding box:	Bounding box:
X: 52.2108 -- 602.2108	X: 288.0806 -- 302.0806
Y: 191.1523 -- 630.2266	Y: 157.0171 -- 166.3399
Z: 14.0260 -- 333.4189	Z: -180.4360 -- -168.3117
Centroid:	Centroid:
X: 316.3460	X: 295.1105
Y: 410.7052	Y: 161.7171
Z: 230.9014	Z: -174.4186
Moments of inertia:	Moments of inertia:
X: 2.1867E+12	X: 25313986.4138
Y: 1.6329E+12	Y: 52576189.6425
Z: 2.7042E+12	Z: 50661528.4311
Products of inertia:	Products of inertia:
XY: 1.1813E+12	XY: 21346868.0192
YZ: 8.6223E+11	YZ: -12616728.7737
ZX: 6.6506E+11	ZX: -23023574.5682
Radii of gyration:	Radii of gyration:
X: 490.4064	X: 237.8936
Y: 423.7893	Y: 342.8443
Z: 545.3639	Z: 336.5438

Select objects: pembuangan air -------- SOLIDS -------- Mass: 33200.7345 Volume: 33200.7345 Bounding box: X: 545.0539 -- 652.0539 Y: 169.9884 -- 276.9884 Z: -27.0000 -- 7.0000 Centroid: X: 598.5539 Y: 223.5755 Z: -2.4374 Moments of inertia: X: 1690252706.8655 Y: 11925398397.0488 Z: 13610202580.6676 Products of inertia: XY: 4442984319.6863 YZ: -18091727.3079 ZX: -48436314.4297 Radii of gyration: X: 225.6327 Y: 599.3253 Z: 640.2631	Select objects: Δ penyambung dan penguat rangka 197 -------- SOLIDS -------- Mass: 58044.4249 Volume: 58044.4249 Bounding box: X: 286.5469 -- 483.5469 Y: 269.9547 -- 469.9547 Z: 0.0000 -- 3.0000 Centroid: X: 352.3291 Y: 402.7205 Z: 1.5000 Moments of inertia: X: 9542128132.8628 Y: 7329799289.3251 Z: 16871579155.6387 Products of inertia: XY: 8299621154.4834 YZ: 35063518.0646 ZX: 30676106.5732 Radii of gyration: X: 405.4547 Y: 355.3577 Z: 539.1351

Select objects: pencekam pipa -------- SOLIDS -------- Mass: 39707.2227 Volume: 39707.2227 Bounding box: X: 743.7665 -- 957.3665 Y: 173.2596 -- 282.8596 Z: -25.0000 -- 25.0000 Centroid: X: 850.5665 Y: 228.0596 Z: 2.9005 Moments of inertia: X: 2123970804.2853 Y: 28817250113.2744 Z: 30922028204.6040 Products of inertia: XY: 7702402061.0766 YZ: 26266002.7617 ZX: 97961143.1033 Radii of gyration: X: 231.2808 Y: 851.9057 Z: 882.4685	Select objects: Δ penyambung dan penguat rangka pintu -------- SOLIDS -------- Mass: 58944.4249 Volume: 58944.4249 Bounding box: X: 576.3938 -- 776.3938 Y: 415.8342 -- 615.8342 Z: 0.0000 -- 3.0000 Centroid: X: 709.7802 Y: 548.6087 Z: 1.5000 Moments of inertia: X: 17870861674.9397 Y: 29825364666.0176 Z: 47695872674.4081 Products of inertia: XY: 22887297232.6585 YZ: 48506139.1714 ZX: 62756375.4920 Radii of gyration: X: 550.6192 Y: 711.3306 Z: 899.5370

Select objects: Δ penyambung dan penguat rangka 200	Select objects: pintu
-------- SOLIDS --------	-------- SOLIDS --------
Mass: 58944.4249	Mass: 2723804.3487
Volume: 58944.4249	Volume: 2723804.3487
Bounding box:	Bounding box:
X: 737.8621 -- 937.8621	X: 1892.8529 -- 2552.8529
Y: 572.8710 -- 772.8710	Y: 145.6248 -- 1915.6248
Z: 0.0000 -- 3.0000	Z: -36.9792 -- 54.0000
Centroid:	Centroid:
X: 804.6067	X: 2222.5833
Y: 705.6454	Y: 1048.0620
Z: 1.5000	Z: 16.9286
Moments of inertia:	Moments of inertia:
X: 29480787525.1707	X: 3.7279E+12
Y: 38290489552.3162	Y: 1.3572E+13
Z: 67770923410.9377	Z: 1.7297E+13
Products of inertia:	Products of inertia:
XY: 33532309273.9021	XY: 6.3445E+12
YZ: 62390797.0189	YZ: 49178029695.9180
ZX: 71140616.5874	ZX: 1.0253E+11
Radii of gyration:	Radii of gyration:
X: 707.2096	X: 1169.8934
Y: 805.9797	Y: 2232.2276
Z: 1072.2606	Z: 2519.9862

Select objects: penyambung lantai kamar mandi dengan bak mobil pick up -------- SOLIDS ------- Mass: 162429.2037 Volume: 162429.2037 Bounding box: X: 2746.6836 -- 2766.6836 Y: 102.1227 -- 1742.1227 Z: -383.6984 -- -378.6984 Centroid: X: 2756.6836 Y: 922.1227 Z: -381.1984 Moments of inertia: X: 1.9757E+11 Y: 1.2580E+12 Z: 1.4083E+12 Products of inertia: XY: 4.1290E+11 YZ: -5.7096E+10 ZX: -1.7069E+11 Radii of gyration: X: 1102.8761 Y: 2782.9215 Z: 2944.5474	Select objects: rangka 200 cm -------- SOLIDS -------- Mass: 338531.6817 Volume: 338531.6817 Bounding box: X: 490.9236 -- 520.9236 Y: 2717.8334 -- 4717.8334 Z: 0.0000 -- 30.0000 Centroid: X: 499.5086 Y: 3716.9946 Z: 8.5765 Moments of inertia: X: 4.7898E+12 Y: 84549173892.8118 Z: 4.8742E+12 Products of inertia: XY: 6.2854E+11 YZ: 10789889820.4153 ZX: 1433308248.3422 Radii of gyration: X: 3761.4796 Y: 499.7526 Z: 3794.4912

Select objects: besi rangka 202 cm	Select objects:ring
-------- SOLIDS --------	-------- SOLIDS --------
Mass: 341951.6817	Mass: 190.8518
Volume: 341951.6817	Volume: 190.8518
Bounding box:	Bounding box:
X: 513.7766 -- 543.7766	X: 133.1126 -- 151.1126
Y: 4245.4649 -- 6265.4649	Y: 96.1582 -- 114.1582
Z: 0.0000 -- 30.0000	Z: -4.7893 -- -3.7893
Centroid:	Centroid:
X: 522.3618	X: 142.1126
Y: 5254.7271	Y: 105.1582
Z: 21.4232	Z: -4.2893
Moments of inertia:	Moments of inertia:
X: 9.5582E+12	X: 2118845.8732
Y: 93520732999.2857	Y: 3862798.7725
Z: 9.6514E+12	Z: 5974590.0763
Products of inertia:	Products of inertia:
XY: 9.3861E+11	XY: 2852148.1725
YZ: 38496607103.4642	YZ: -86085.5674
ZX: 3843813763.9691	ZX: -116337.4698
Radii of gyration:	Radii of gyration:
X: 5286.9648	X: 105.3663
Y: 522.9637	Y: 142.2666
Z: 5312.6641	Z: 176.9318

Select objects:rangka 180 cm -------- SOLIDS -------- Mass: 306292.0355 Volume: 306292.0355 Bounding box: X: 958.4739 -- 988.4739 Y: 3460.0969 -- 5260.0969 Z: 0.0000 -- 30.0000 Centroid: X: 979.9273 Y: 4359.7809 Z: 8.6402 Moments of inertia: X: 5.9045E+12 Y: 2.9419E+11 Z: 6.1986E+12 Products of inertia: XY: 1.3086E+12 YZ: 11538581231.8244 ZX: 2608727736.7735 Radii of gyration: X: 4390.6023 Y: 980.0523 Z: 4498.6188	Select objects:rangka sisi untuk fiber -------- SOLIDS -------- Mass: 245908.8320 Volume: 245908.8320 Bounding box: X: 1357.4033 -- 2803.4033 Y: 272.7108 -- 302.7108 Z: 6.0000 -- 36.0000 Centroid: X: 2080.4012 Y: 294.0897 Z: 27.4371 Moments of inertia: X: 21495359323.7134 Y: 1.1073E+12 Z: 1.1283E+12 Products of inertia: XY: 1.5045E+11 YZ: 1971860690.0413 ZX: 14036515913.3758 Radii of gyration: X: 295.6550 Y: 2121.9550 Z: 2142.0619

Select objects: rangka sisi yang ada pintu	Select objects: seng dekat pintu
-------- SOLIDS --------	-------- SOLIDS --------
Mass: 80596.4604	Mass: 3345816.3171
Volume: 80596.4604	Volume: 3345816.3171
Bounding box:	Bounding box:
X: 357.5041 -- 1743.5041	X: 2751.4967 -- 3551.4967
Y: 332.9572 -- 352.9572	Y: 30.7018 -- 1830.7018
Z: 0.0000 -- 3.0000	Z: -25.0190 -- 5.0000
Centroid:	Centroid:
X: 1050.5646	X: 3151.5045
Y: 342.9573	Y: 930.7711
Z: 1.5000	Z: -8.8540
Moments of inertia:	Moments of inertia:
X: 9482733309.5139	X: 3.8019E+12
Y: 1.0172E+11	Y: 3.3409E+13
Z: 1.1120E+11	Z: 3.7210E+13
Products of inertia:	Products of inertia:
XY: 29038803939.8507	XY: 9.8144E+12
YZ: 41461711.2165	YZ: -2.7571E+10
ZX: 127007680.7075	ZX: -9.3365E+10
Radii of gyration:	Radii of gyration:
X: 343.0116	X: 1065.9749
Y: 1123.4215	Y: 3159.9537
Z: 1174.6178	Z: 3334.8705

Select objects:rangka sisi yang tidak ada pintu	Select objects: seng depan seng tempat keran
-------- SOLIDS --------	-------- SOLIDS --------
Mass: 81199.6462	Mass: 3346716.0435
Volume: 81199.6462	Volume: 3346716.0435
Bounding box:	Bounding box:
X: 166.4708 -- 1552.4708	X: 2080.9639 -- 2880.9639
Y: 185.5818 -- 205.5818	Y: 163.0328 -- 1963.0328
Z: 0.0000 -- 3.0000	Z: 27.0001 -- 57.0191
Centroid:	Centroid:
X: 859.4697	X: 2481.1002
Y: 195.5818	Y: 1063.0963
Z: 1.5000	Z: 40.8512
Moments of inertia:	Moments of inertia:
X: 3109075360.3595	X: 4.6913E+12
Y: 72749399619.5518	Y: 2.0786E+13
Z: 75857987782.0342	Z: 2.5466E+13
Products of inertia:	Products of inertia:
XY: 13649385271.6565	XY: 8.8274E+12
YZ: 23821756.4076	YZ: 1.4534E+11
ZX: 104682953.6993	ZX: 3.3921E+11
Radii of gyration:	Radii of gyration:
X: 195.6764	X: 1183.9573
Y: 946.5371	Y: 2492.1482
Z: 966.5484	Z: 2758.4648

Select objects:seng pasangan seng depan tempat keran	Select objects: seng pasangan seng gantungan baju
-------- SOLIDS --------	-------- SOLIDS --------
Mass: 3346841.9844	Mass: 3346781.9362
Volume: 3346841.9844	Volume: 3346781.9362
Bounding box:	Bounding box:
X: 1925.5873 -- 2725.5873	X: 1746.1763 -- 2546.1763
Y: 42.4105 -- 1842.4105	Y: 49.6260 -- 1849.6260
Z: 25.0000 -- 55.0190	Z: -341.1470 -- -311.1281
Centroid:	Centroid:
X: 2325.4677	X: 2146.2965
Y: 942.4711	Y: 949.6863
Z: 38.8513	Z: -324.9796
Moments of inertia:	Moments of inertia:
X: 3.8812E+12	X: 4.2753E+12
Y: 1.8282E+13	Y: 1.5949E+13
Z: 2.2153E+13	Z: 1.9517E+13
Products of inertia:	Products of inertia:
XY: 7.3352E+12	XY: 6.8218E+12
YZ: 1.2255E+11	YZ: -1.0329E+12
ZX: 3.0238E+11	ZX: -2.3344E+12
Radii of gyration:	Radii of gyration:
X: 1076.8780	X: 1130.2329
Y: 2337.2177	Y: 2182.9975
Z: 2572.7693	Z: 2414.8683

Select objects:seng gantungan baju -------- SOLIDS -------- Mass: 3346618.4611 Volume: 3346618.4611 Bounding box: X: 1323.8685 -- 2123.8685 Y: 15.8676 -- 1815.8676 Z: -356.3239 -- -326.3049 Centroid: X: 1723.7493 Y: 915.9402 Z: -340.1574 Moments of inertia: X: 4.0982E+12 Y: 1.0509E+13 Z: 1.3833E+13 Products of inertia: XY: 5.2839E+12 YZ: -1.0427E+12 ZX: -1.9623E+12 Radii of gyration: X: 1106.6047 Y: 1772.0906 Z: 2033.0699	Select objects: seng tempat keran -------- SOLIDS -------- Mass: 3345124.8553 Volume: 3345124.8553 Bounding box: X: 1722.9296 -- 2522.9296 Y: 180.5808 -- 1980.5808 Z: 4.9810 -- 35.0000 Centroid: X: 2123.0597 Y: 1080.4770 Z: 21.1518 Moments of inertia: X: 4.8098E+12 Y: 1.5258E+13 Z: 2.0064E+13 Products of inertia: XY: 7.6734E+12 YZ: 76454745709.8650 ZX: 1.5022E+11 Radii of gyration: X: 1199.1107 Y: 2135.6794 Z: 2449.0827

Select objects: seng pasangan tempat keran	Select objects: triplek atas depan tempat sabun
-------- SOLIDS --------	-------- SOLIDS --------
Mass: 3346534.5870	Mass: 3464569.2040
Volume: 3346534.5870	Volume: 3464569.2040
Bounding box:	Bounding box:
X: 1888.5825 -- 2688.5825	X: 2484.4138 -- 3930.4138
Y: 207.6093 -- 2007.6093	Y: 115.0745 -- 715.0745
Z: 4.9810 -- 35.0000	Z: 0.0000 -- 4.0000
Centroid:	Centroid:
X: 2288.4525	X: 3207.4137
Y: 1107.6650	Y: 414.7813
Z: 21.1475	Z: 2.0000
Moments of inertia:	Moments of inertia:
X: 5.0107E+12	X: 6.9988E+11
Y: 1.7706E+13	Y: 3.6244E+13
Z: 2.2713E+13	Z: 3.6944E+13
Products of inertia:	Products of inertia:
XY: 8.4830E+12	XY: 4.6092E+12
YZ: 78392341320.6191	YZ: 2874076717.9509
ZX: 1.6196E+11	ZX: 22224613747.1320
Radii of gyration:	Radii of gyration:
X: 1223.6366	X: 449.4557
Y: 2300.1605	Y: 3234.4164
Z: 2605.1945	Z: 3265.4937

Select objects: tempat sabun -------- SOLIDS -------- Mass: 73210.5432 Volume: 73210.5432 Bounding box: X: 703.4974 -- 873.4974 Y: 111.7056 -- 267.8316 Z: -24.0015 -- 91.0000 Centroid: X: 788.4963 Y: 213.7073 Z: 9.1370 Moments of inertia: X: 3601170770.3053 Y: 45835519906.1838 Z: 49245090484.2269 Products of inertia: XY: 12336522588.9958 YZ: 221648000.5954 ZX: 527449342.1623 Radii of gyration: X: 221.7865 Y: 791.2510 Z: 820.1526	Select objects: triplek atas tempat hanger -------- SOLIDS -------- Mass: 6932355.3989 Volume: 6932355.3989 Bounding box: X: 2143.8083 -- 3589.8083 Y: -100.5673 -- 1099.4327 Z: 0.0000 -- 4.0000 Centroid: X: 2866.8082 Y: 499.5771 Z: 2.0000 Moments of inertia: X: 2.5618E+12 Y: 5.8181E+13 Z: 6.0743E+13 Products of inertia: XY: 9.9285E+12 YZ: 6926492062.4398 ZX: 39747466005.8822 Radii of gyration: X: 607.9002 Y: 2897.0136 Z: 2960.1047

Select objects: triplek atas tempat keran dan sabun	Select objects: triplek dekat pintu
-------- SOLIDS --------	-------- SOLIDS --------
Mass: 3461704.0715	Mass: 5749142.6558
Volume: 3461704.0715	Volume: 5749142.6558
Bounding box:	Bounding box:
X: 2330.5954 -- 3776.5954	X: 1354.4459 -- 2154.4459
Y: 92.8473 -- 692.8473	Y: -96.0798 -- 1703.9202
Z: 0.0000 -- 4.0000	Z: 0.0000 -- 4.0000
Centroid:	Centroid:
X: 3053.8853	X: 1754.4455
Y: 392.7763	Y: 803.6997
Z: 2.0000	Z: 2.0000
Moments of inertia:	Moments of inertia:
X: 6.3766E+11	X: 5.2640E+12
Y: 3.2887E+13	Y: 1.8002E+13
Z: 3.3524E+13	Z: 2.3266E+13
Products of inertia:	Products of inertia:
XY: 4.1520E+12	XY: 8.1066E+12
YZ: 2719350656.4667	YZ: 9241168652.3786
ZX: 21143294151.2200	ZX: 20173114461.0412
Radii of gyration:	Radii of gyration:
X: 429.1899	X: 956.8755
Y: 3082.2383	Y: 1769.5524
Z: 3111.9746	Z: 2011.6947

Select objects: triplek bawah -------- SOLIDS -------- Mass: 3464167.0802 Volume: 3464167.0802 Bounding box: X: 2494.7391 -- 3940.7391 Y: 733.4303 -- 1333.4303 Z: 0.0000 -- 4.0000 Centroid: X: 3217.6981 Y: 1033.1584 Z: 2.0000 Moments of inertia: X: 3.8015E+12 Y: 3.6469E+13 Z: 4.0271E+13 Products of inertia: XY: 1.1516E+13 YZ: 7158066796.3215 ZX: 22293288010.1262 Radii of gyration: X: 1047.5604 Y: 3244.6158 Z: 3409.5313	Select objects: pipa dari sambungan pipa ke sambungan pipa L -------- SOLIDS -------- Mass: 17741.9089 Volume: 17741.9089 Bounding box: X: 450.5191 -- 472.5191 Y: 43.2308 -- 113.2308 Z: -11.0000 -- 11.0000 Centroid: X: 461.5191 Y: 78.2308 Z: 0.0000 Moments of inertia: X: 116541701.0094 Y: 3780454949.4234 Z: 3895565565.8842 Products of inertia: XY: 640571817.5063 YZ: 0.0000 ZX: 0.0000 Radii of gyration: X: 81.0477 Y: 461.6064 Z: 468.5814

Select objects: pipa pembuangan dia 4 Inc -------- SOLIDS -------- Mass: 650937.9978 Volume: 650937.9978 Bounding box: X: 648.3892 -- 753.9892 Y: 38.3549 -- 1038.3549 Z: -52.8000 -- 52.8000 Centroid: X: 701.1892 Y: 538.3549 Z: 0.0000 Moments of inertia: X: 2.4378E+11 Y: 3.2179E+11 Z: 5.6382E+11 Products of inertia: XY: 2.4572E+11 YZ: 0.0000 ZX: 0.0000 Radii of gyration: X: 611.9652 Y: 703.1007 Z: 930.6813	Select objects: sambungan pipa L -------- SOLIDS -------- Mass: 21206.3408 Volume: 21206.3408 Bounding box: X: 394.0854 -- 452.0854 Y: -95.5982 -- -37.5982 Z: -14.0003 -- 14.0003 Centroid: X: 418.3743 Y: -62.1695 Z: 0.0000 Moments of inertia: X: 88649662.4846 Y: 3718668922.4714 Z: 3804153059.2374 Products of inertia: XY: -549168964.4361 YZ: 0.4688 ZX: -3.2335 Radii of gyration: X: 64.6555 Y: 418.7559 Z: 423.5416

Select objects: sambungan pipa dari keran -------- SOLIDS -------- Mass: 16880.7387 Volume: 16880.7387 Bounding box: X: 189.5953 -- 223.5953 Y: 281.9059 -- 337.9617 Z: -17.0000 -- 17.0000 Centroid: X: 206.6097 Y: 306.7365 Z: -0.0021 Moments of inertia: X: 1594003132.8654 Y: 723258023.6957 Z: 2314604187.6988 Products of inertia: XY: 1069807362.3499 YZ: -9966.0857 ZX: -7627.2523 Radii of gyration: X: 307.2903 Y: 206.9907 Z: 370.2906	Select objects: lantai -------- SOLIDS -------- Mass: 343462220.5315 Volume: 343462220.5315 Bounding box: X: 5168.6923 -- 6608.6923 Y: 224.9477 -- 1664.9477 Z: -80.1488 -- 340.8512 Centroid: X: 5580.9512 Y: 916.1023 Z: 67.1958 Moments of inertia: X: 3.5373E+14 Y: 1.0731E+16 Z: 1.1075E+16 Products of inertia: XY: 1756607744772210 YZ: 1.9842E+13 ZX: 1.2586E+14 Radii of gyration: X: 1014.8422 Y: 5589.5939 Z: 5678.4102

Select objects: volume bak mandi atau air	Select objects: baut buat piting ke kabel listrik
-------- SOLIDS --------	-------- SOLIDS --------
Mass: 95119309.2798	Mass: 68.8478
Volume: 95119309.2798	Volume: 68.8478
Bounding box:	Bounding box:
X: 1017.0370 -- 1467.0370	X: 37.3980 -- 43.3980
Y: 138.4329 -- 588.4329	Y: -11.6537 -- -4.6280
Z: -1927.1799 -- -1357.1799	Z: -3.0000 -- 3.0000
Centroid:	Centroid:
X: 1234.2745	X: 40.3980
Y: 355.5426	Y: -7.5131
Z: -1617.6048	Z: 0.0012
Moments of inertia:	Moments of inertia:
X: 2.6464E+14	X: 4224.5262
Y: 3.9752E+14	Y: 112547.2615
Z: 1.5973E+14	Z: 116586.1829
Products of inertia:	Products of inertia:
XY: 4.1651E+13	XY: -20896.5114
YZ: -5.4652E+13	YZ: -0.4551
ZX: -1.8986E+14	ZX: 3.3644
Radii of gyration:	Radii of gyration:
X: 1667.9823	X: 7.8333
Y: 2044.3096	Y: 40.4317
Z: 1295.8516	Z: 41.1508

Select objects: sekrup buat piting ke dinding -------- SOLIDS -------- Mass: 109.5255 Volume: 109.5255 Bounding box: X: 99.7932 -- 105.7932 Y: 8.5290 -- 27.6108 Z: -3.0000 -- 3.0000 Centroid: X: 102.7941 Y: 22.4281 Z: 0.0006 Moments of inertia: X: 57313.8159 Y: 1157538.7443 Z: 1214646.6191 Products of inertia: XY: 252508.7956 YZ: 1.2681 ZX: 6.3814 Radii of gyration: X: 22.8756 Y: 102.8040 Z: 105.3095	Select objects: piting 1 -------- SOLIDS -------- Mass: 5806.2791 Volume: 5806.2791 Bounding box: X: -290.4131 -- -243.4131 Y: -1618.3751 -- -1591.3751 Z: -23.5000 -- 23.5000 Centroid: X: -266.9106 Y: -1606.8470 Z: -0.0035 Moments of inertia: X: 14992872424.9708 Y: 415637356.9495 Z: 15406518767.2151 Products of inertia: XY: 2490230229.4006 YZ: 37992.0267 ZX: 5312.2719 Radii of gyration: X: 1606.9171 Y: 267.5521 Z: 1628.9333

Select objects: piting 2 -------- SOLIDS -------- Mass: 9973.4015 Volume: 9973.4015 Bounding box: X: 241.5211 -- 291.5211 Y: 115.4004 -- 165.4004 Z: -5.5000 -- 8.0000 Centroid: X: 266.5108 Y: 140.4004 Z: -0.1241 Moments of inertia: X: 198662075.7172 Y: 710310531.6655 Z: 908775446.1402 Products of inertia: XY: 373223964.6366 YZ: -173837.3410 ZX: -329556.9074 Radii of gyration: X: 141.1354 Y: 266.8717 Z: 301.8607	Select objects: piting 3 -------- SOLIDS -------- Mass: 101.2168 Volume: 101.2168 Bounding box: X: 92.4682 -- 133.3155 Y: 24.4198 -- 29.4198 Z: -2.5000 -- 2.5000 Centroid: X: 112.5818 Y: 28.1779 Z: 0.0000 Moments of inertia: X: 80686.4571 Y: 1301789.1313 Z: 1382030.8133 Products of inertia: XY: 320186.1947 YZ: 0.0000 ZX: 0.0000 Radii of gyration: X: 28.2341 Y: 113.4081 Z: 116.8510

Select objects: piting 4	Select objects: sakelar 1
------- SOLIDS -------	-------- SOLIDS --------
Mass: 1401.1176	Mass: 15551.2387
Volume: 1401.1176	Volume: 15551.2387
Bounding box:	Bounding box:
X: 134.2615 -- 164.5128	X: 244.1404 -- 304.1404
Y: 71.5941 -- 101.8495	Y: 11.2966 -- 33.2967
Z: 0.0000 -- 20.5057	Z: -25.0000 -- 25.0000
Centroid:	Centroid:
X: 150.0333	X: 274.1061
Y: 86.7058	Y: 24.7007
Z: 10.8668	Z: 0.0000
Moments of inertia:	Moments of inertia:
X: 10880685.2723	X: 14374467.4910
Y: 31871824.1540	Y: 1179073170.1533
Z: 42311064.7499	Z: 1184892936.8423
Products of inertia:	Products of inertia:
XY: 18226731.7001	XY: 105293283.5259
YZ: 1317820.4700	YZ: 0.0000
ZX: 2274315.8876	ZX: 0.0000
Radii of gyration:	Radii of gyration:
X: 88.1233	X: 30.4028
Y: 150.8225	Y: 275.3518
Z: 173.7760	Z: 276.0305

Select objects: sakelar 2 -------- SOLIDS -------- Mass: 62.5113 Volume: 62.5113 Bounding box: X: 129.5565 -- 148.5565 Y: -139.3509 -- -130.3509 Z: -43.9658 -- -42.4658 Centroid: X: 140.0567 Y: -134.8509 Z: -42.7518 Moments of inertia: X: 1251346.2587 Y: 1342350.6064 Z: 2365184.3870 Products of inertia: XY: -1180637.4602 YZ: 360385.5526 ZX: -374309.1073 Radii of gyration: X: 141.4847 Y: 146.5391 Z: 194.5150	Select objects:sekrup dari pencetan sakelar ke sakelar -------- SOLIDS -------- Mass: 29.8349 Volume: 29.8349 Bounding box: X: 56.7879 -- 60.7879 Y: 3.4754 -- 9.4636 Z: -55.6383 -- -51.6383 Centroid: X: 58.7874 Y: 6.8471 Z: -53.6378 Moments of inertia: X: 87325.9001 Y: 188982.3029 Z: 104598.9377 Products of inertia: XY: 12009.6329 YZ: -10957.0794 ZX: -94076.0532 Radii of gyration: X: 54.1015 Y: 79.5882 Z: 59.2109

Select objects: sakelar 3	Select objects: sakelar 4
-------- SOLIDS --------	-------- SOLIDS --------
Mass: 1138.0858	Mass: 87.5199
Volume: 1138.0858	Volume: 87.5199
Bounding box:	Bounding box:
X: 80.8175 -- 91.8175	X: 92.0811 -- 100.5811
Y: -2.5230 -- 28.4770	Y: 3.3675 -- 31.8675
Z: -47.0261 -- -36.0261	Z: 0.0000 -- 0.5000
Centroid:	Centroid:
X: 86.6025	X: 96.3311
Y: 13.4564	Y: 17.3527
Z: -41.5261	Z: 0.2500
Moments of inertia:	Moments of inertia:
X: 2301540.5087	X: 33884.7388
Y: 10526704.6405	Y: 812825.7212
Z: 8866938.0941	Z: 846695.8734
Products of inertia:	Products of inertia:
XY: 1326419.4840	XY: 146298.5291
YZ: -635954.4874	YZ: 379.6764
ZX: -4092852.1186	ZX: 2107.7216
Radii of gyration:	Radii of gyration:
X: 44.9699	X: 19.6765
Y: 96.1742	Y: 96.3708
Z: 88.2672	Z: 98.3581

Select objects: sakelar 5	Select objects: saklar 6
-------- SOLIDS --------	-------- SOLIDS --------
Mass: 86.1677	Mass: 16.4169
Volume: 86.1677	Volume: 16.4169
Bounding box:	Bounding box:
X: 96.9475 -- 104.9475	X: 83.5441 -- 87.1198
Y: -15.2466 -- -9.7466	Y: 20.9931 -- 34.5204
Z: 6.0000 -- 15.5000	Z: 83.6122 -- 88.1075
Centroid:	Centroid:
X: 99.8326	X: 85.5216
Y: -12.4966	Y: 27.9402
Z: 11.7847	Z: 85.8953
Moments of inertia:	Moments of inertia:
X: 26477.1379	X: 134156.4451
Y: 871913.5318	Y: 241234.9856
Z: 873142.7139	Z: 133105.9986
Products of inertia:	Products of inertia:
XY: -107500.0154	XY: 39239.7805
YZ: -12689.7726	YZ: 39402.4505
ZX: 101565.5358	ZX: 120598.3527
Radii of gyration:	Radii of gyration:
X: 17.5292	X: 90.3982
Y: 100.5922	Y: 121.2200
Z: 100.6631	Z: 90.0436

Select objects: sekrup dari sakelar ke dinding	Select objects: sekrup dari sakelar ke kabel
-------- SOLIDS --------	-------- SOLIDS --------
Mass: 108.4110	Mass: 68.8478
Volume: 108.4110	Volume: 68.8478
Bounding box:	Bounding box:
X: 88.2510 -- 93.2510	X: 149.1011 -- 155.1011
Y: 22.9342 -- 51.8686	Y: 57.9628 -- 64.9885
Z: -2.5000 -- 2.5000	Z: -3.0000 -- 3.0000
Centroid:	Centroid:
X: 90.7516	X: 152.1011
Y: 40.2450	Y: 62.1033
Z: -0.0004	Z: 0.0012
Moments of inertia:	Moments of inertia:
X: 183278.1925	X: 265872.1099
Y: 892977.5029	Y: 1592962.9989
Z: 1076135.7289	Z: 1858649.5039
Products of inertia:	Products of inertia:
XY: 395949.8946	XY: 650334.9422
YZ: -1.5344	YZ: 5.3417
ZX: -3.5084	ZX: 12.6657
Radii of gyration:	Radii of gyration:
X: 41.1167	X: 62.1429
Y: 90.7577	Y: 152.1101
Z: 99.6315	Z: 164.3061

```
Select objects: Sekrup
dalam untuk pencetan saklar

-------   SOLIDS    -------

Mass: 43.6429
Volume: 43.6429
Bounding box:
X: 306.5151  --  316.4523
Y: 89.2740  --  94.2740
Z: -2.5000  --  2.5000
Centroid:
X: 309.5413
Y: 91.7754
Z: -0.0013
Moments of inertia:
X: 367674.4552
Y: 4181947.3685
Z: 4549539.8505
Products of inertia:
XY: 1239820.6807
YZ: -5.3092
ZX: -17.8552
Radii of gyration:
X: 91.7856
Y: 309.5511
Z: 322.8693
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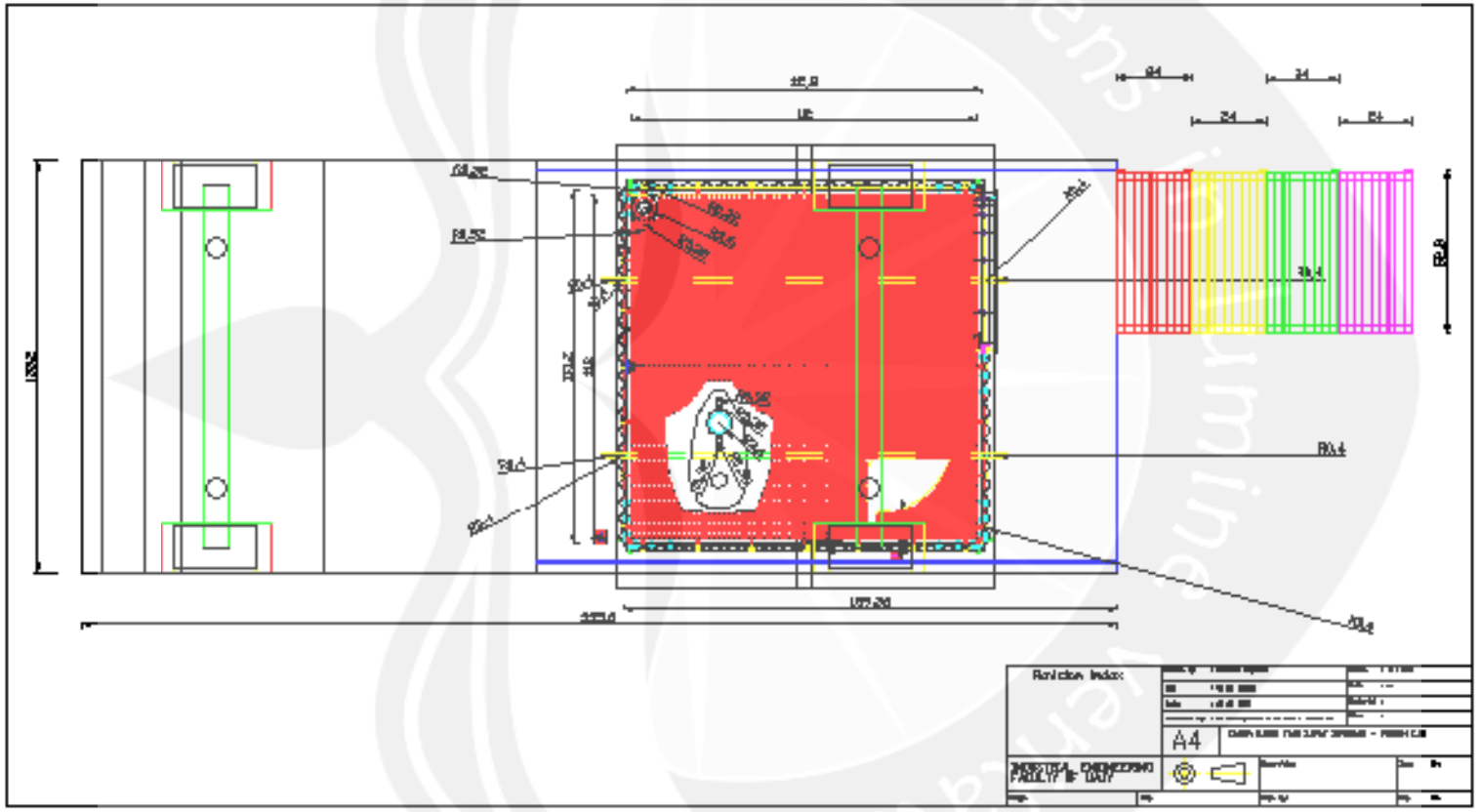
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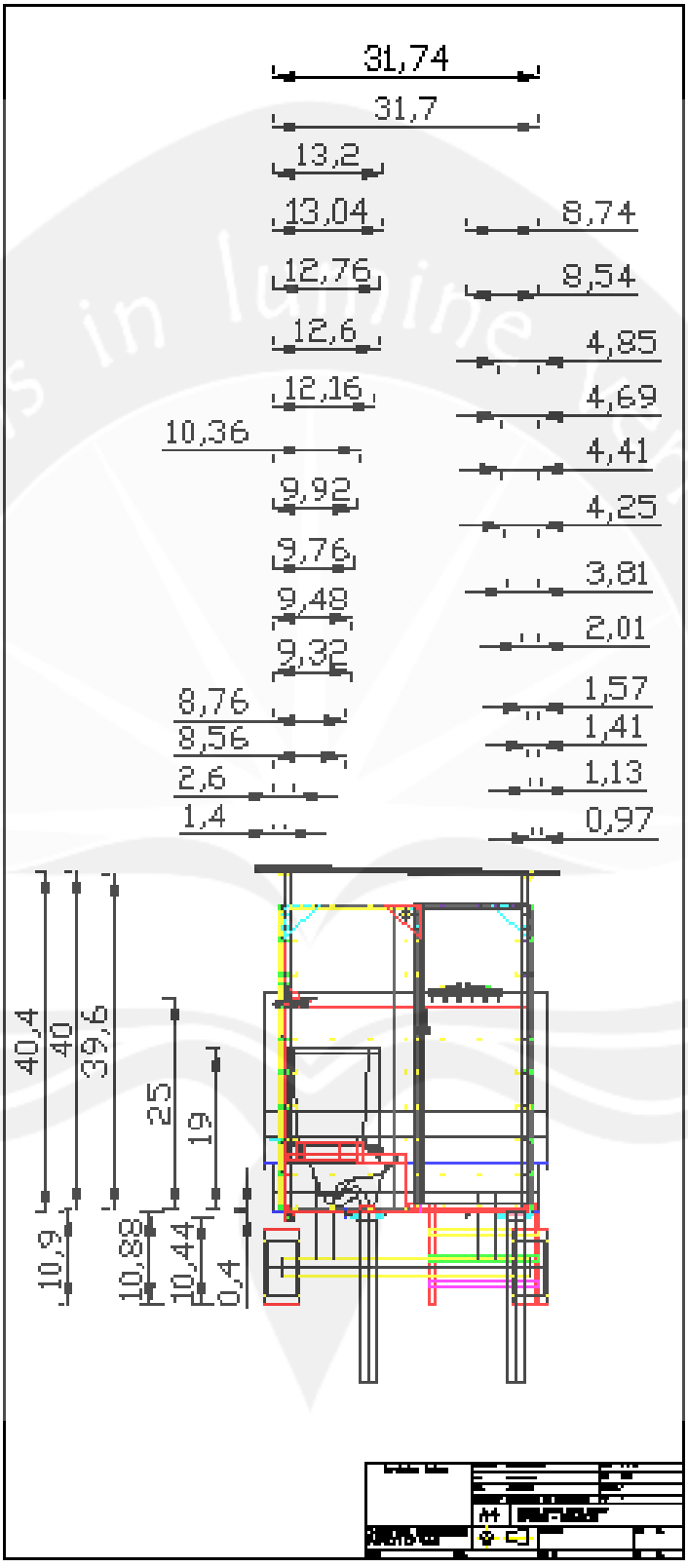
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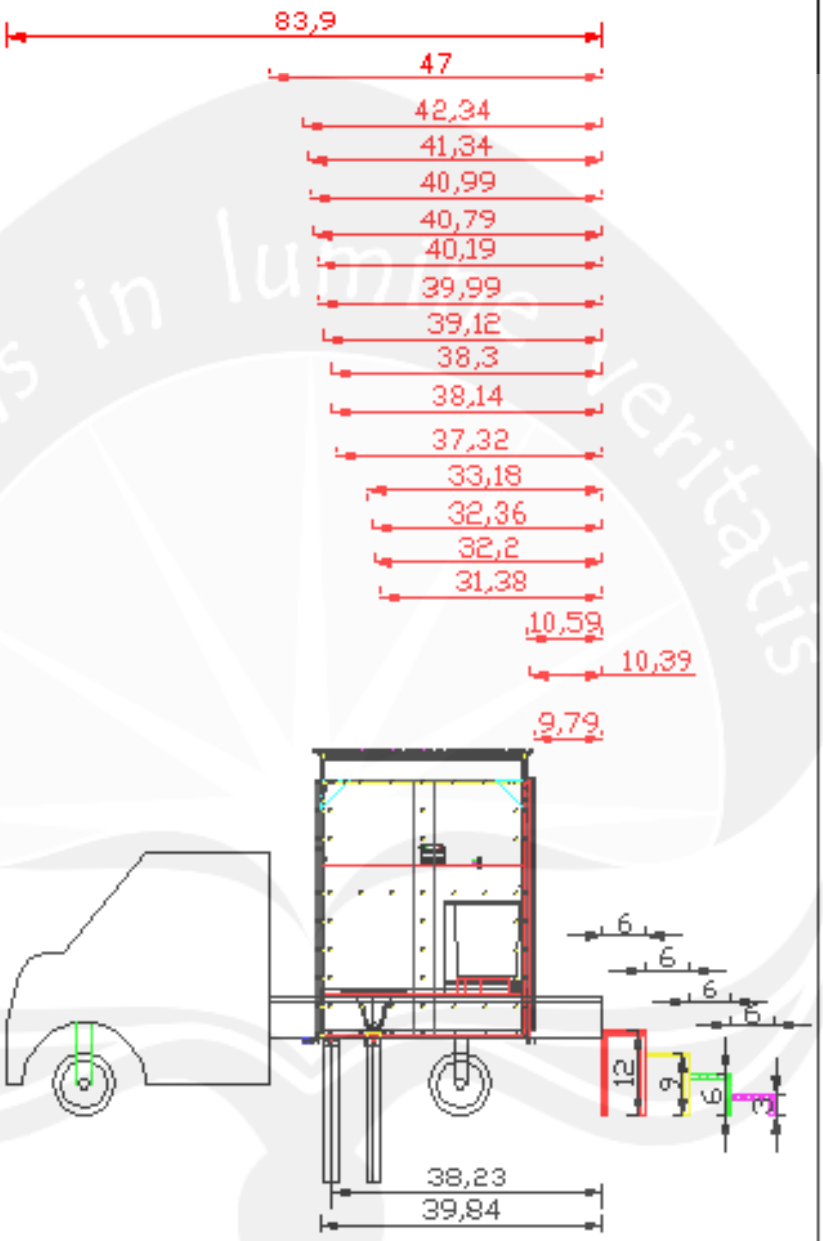

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	A4	KAMAR MANDI YANG DAPAT DIPINDAH - PINDAHKAN
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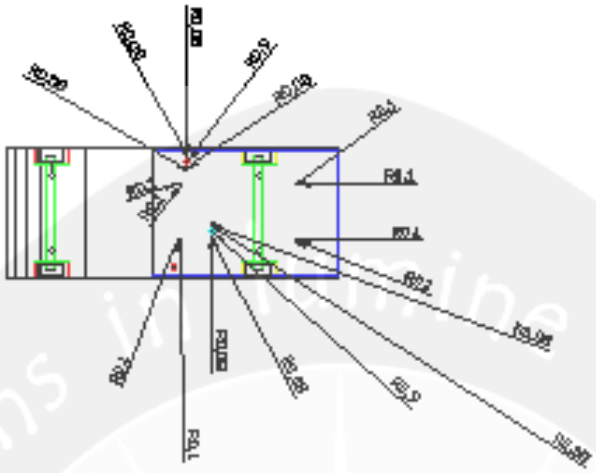

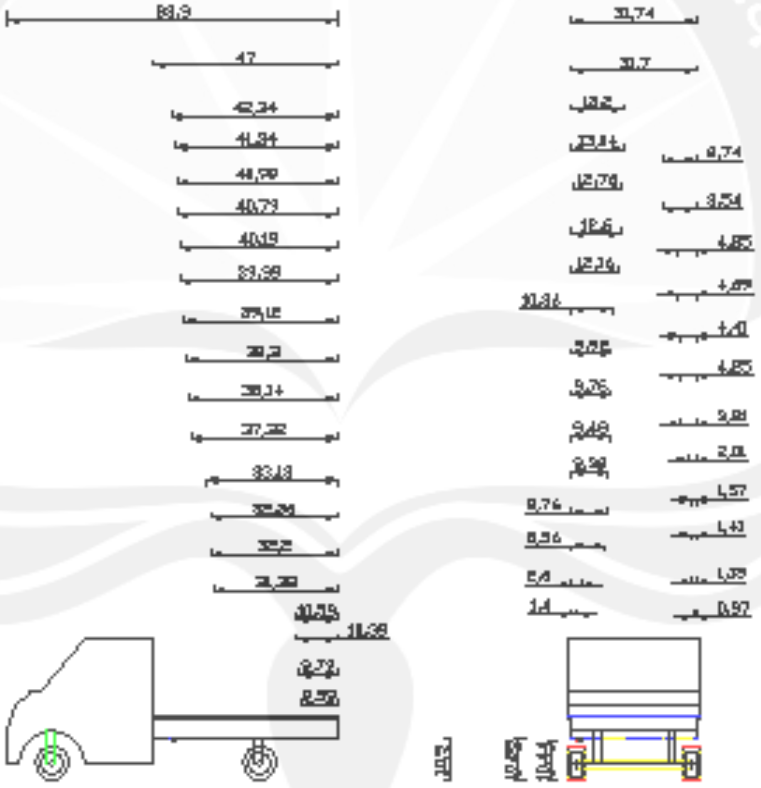

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	A4	MODEL PICKUP STAND MAX
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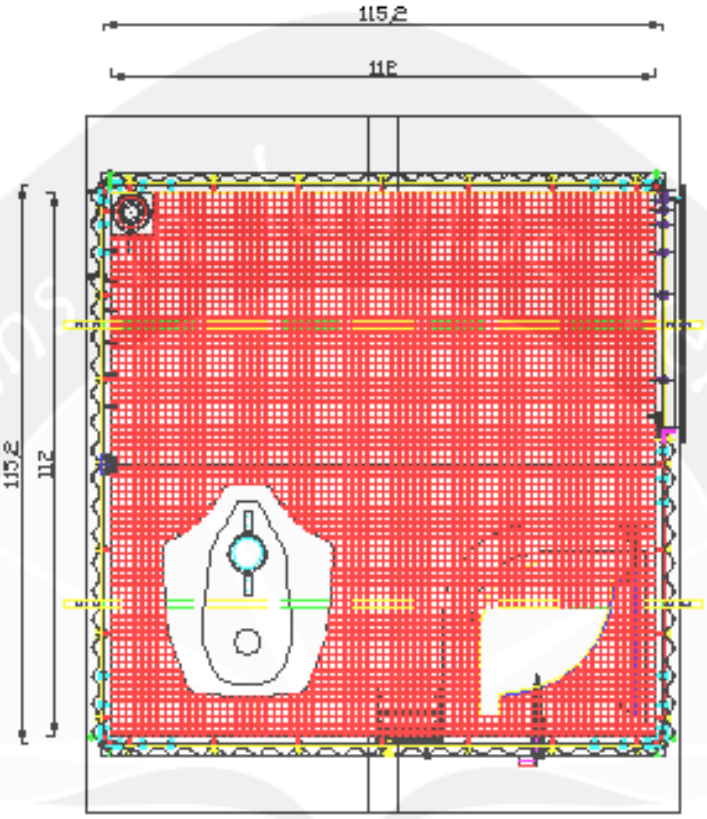

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	A4	KAMAR MANDI MOVABLE	
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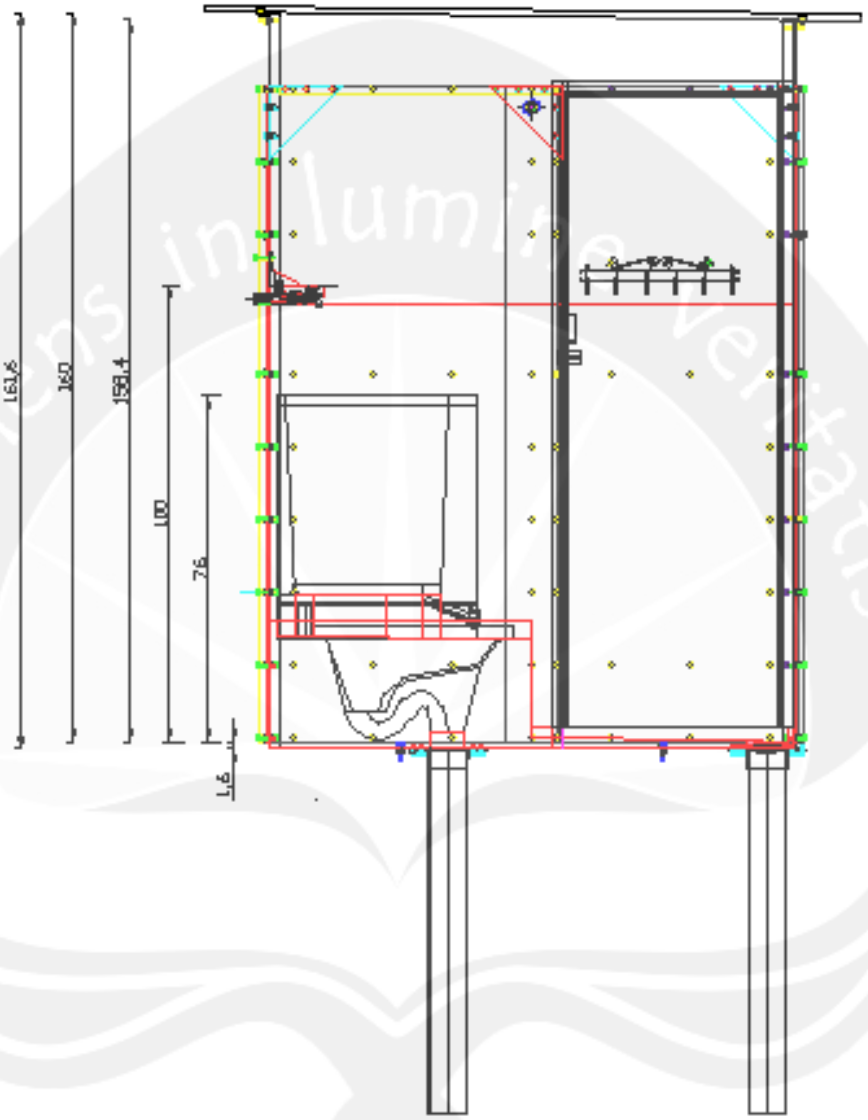

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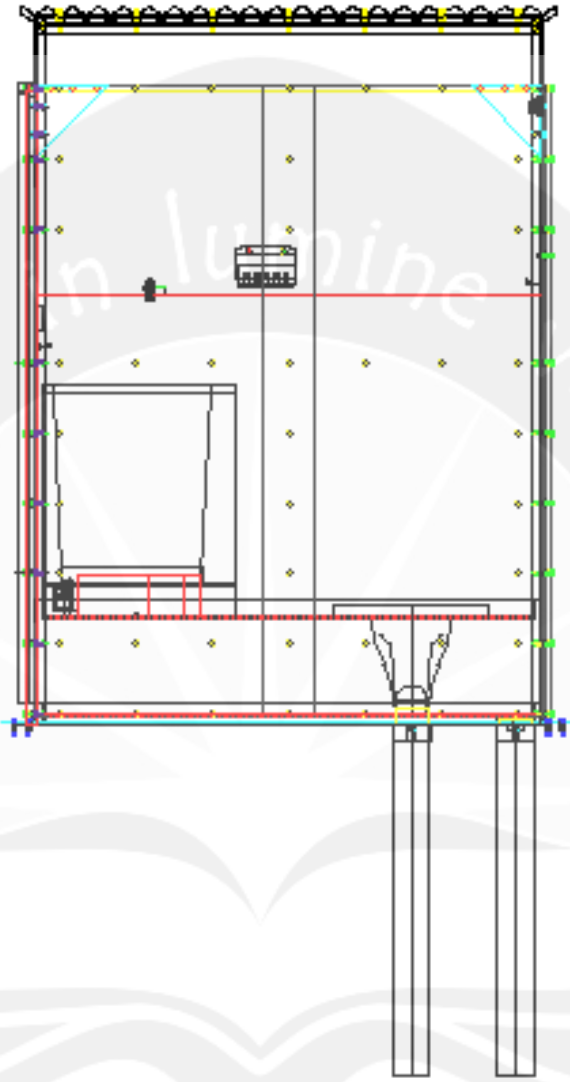

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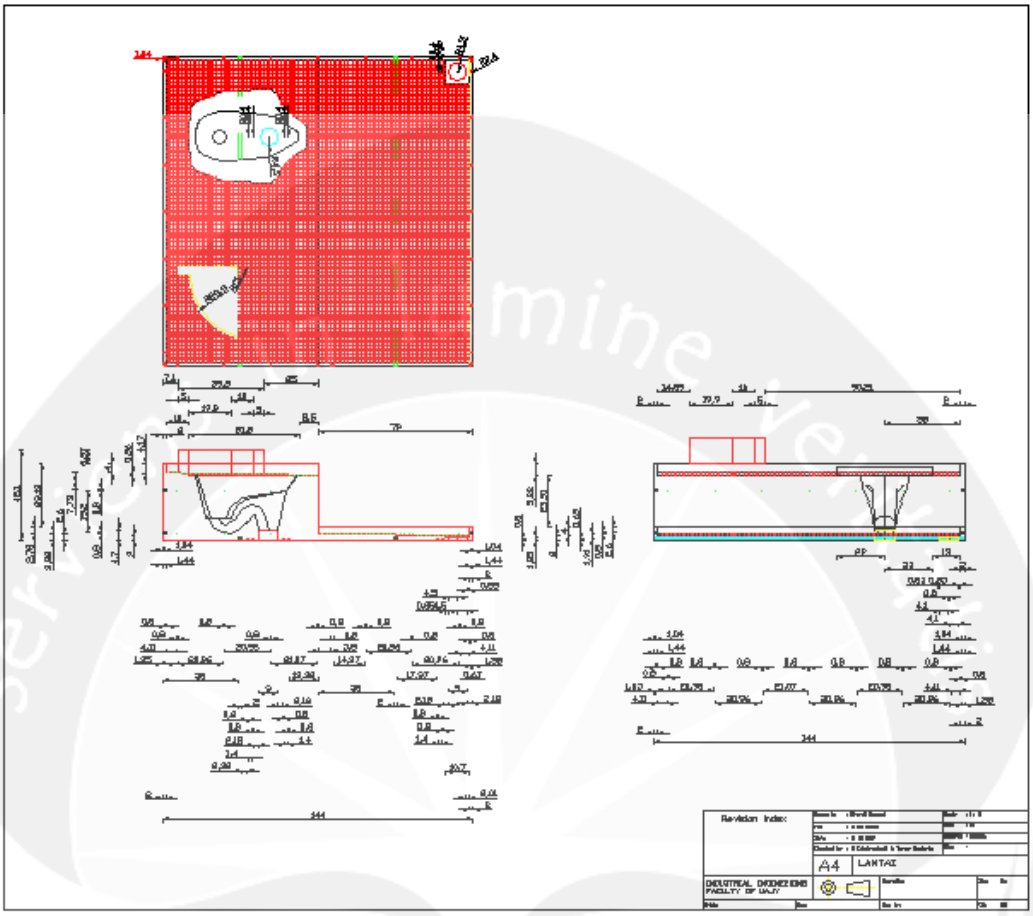
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