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## LAMPIRAN

## Lampiran A

Tabel A 1 Kecepatan upstream ( $U$ ) dan bilangan Reynolds ( $Re$ ) pada konfigurasi seri dan konfigurasi paralel

Konfigurasi seri		Konfigurasi paralel	
$U$ (m/s)	$Re$	$U$ (m/s)	$Re$
8	21891	8	43781
10	27363	10	54726
12	32836	12	65672
14	38308	14	76617
16	43781	16	87562
18	49254	18	98507
20	54726	20	109453

Tabel A 2 Diameter hidraulik benda uji eksperimen pada mobil 1 dan mobil 2

No	Konfigurasi seri (model 1)	$D$ (m)	Konfigurasi paralel (model 2)	$D$ (m)
1	1 <sub>A</sub>	0.044	2 <sub>A</sub>	0.044
2	2 <sub>B</sub>	0.044	2 <sub>B</sub>	0.044
3	3 <sub>C</sub>	0.044	2 <sub>C</sub>	0.044
4	4 <sub>D</sub>	0.044	2 <sub>D</sub>	0.044
5	5 <sub>E</sub>	0.044	2 <sub>E</sub>	0.044

Tabel A 3 Luas frontal area ( $A$ ) pada model konfigurasi seri dan konfigurasi paralel

No	Konfigurasi seri (model 1)	$A$ (m)	Konfigurasi paralel (model 2)	$A$ (m)
1	1 <sub>A</sub>	0.0016	2 <sub>A</sub>	0.0032
2	2 <sub>B</sub>	0.0016	2 <sub>B</sub>	0.0032
3	3 <sub>C</sub>	0.0016	2 <sub>C</sub>	0.0032
4	4 <sub>D</sub>	0.0016	2 <sub>D</sub>	0.0032
5	5 <sub>E</sub>	0.0016	2 <sub>E</sub>	0.0032

Tabel A 4 Nilai gaya drag ( $F_D$ ) minibus tersusun tandem konfigurasi seri untuk pendekatan komputasi

Re	$L/D$				
	0.227	0.455	0.682	0.909	1.136
21891	0.064	0.061	0.068	0.070	0.070
27363	0.097	0.095	0.103	0.105	0.106
32836	0.136	0.135	0.145	0.149	0.150
38308	0.182	0.177	0.194	0.198	0.199
43781	0.235	0.226	0.248	0.253	0.256



Re	L/D				
	0.227	0.455	0.682	0.909	1.136
<b>49254</b>	0.296	0.279	0.309	0.316	0.319
<b>54726</b>	0.363	0.335	0.377	0.385	0.390

Tabel A 5 Nilai gaya drag ( $F_D$ ) minibus tersusun tandem konfigurasi paralel untuk pendekatan komputasi

Re	M/D				
	0.227	0.455	0.682	0.909	1.136
<b>43781</b>	0.133	0.115	0.114	0.114	0.126
<b>54726</b>	0.194	0.172	0.170	0.170	0.188
<b>65672</b>	0.273	0.240	0.236	0.237	0.254
<b>76617</b>	0.364	0.318	0.307	0.314	0.332
<b>87562</b>	0.471	0.397	0.393	0.392	0.423
<b>98507</b>	0.585	0.495	0.491	0.488	0.519
<b>109453</b>	0.711	0.604	0.598	0.594	0.630



Tabel A 6 Hasil pengamatan distribusi tekanan minibus yang tersusun secara tandem pada konfigurasi seri dengan  $L/D = 0.227$  untuk pendekatan eksperimental

$L/D$	NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )		
				P0	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12		P13	
0.227	1	8	Mobil 1	33.52	22.35	-11.17	-9.68	-6.33	-9.98	-7.45	-6.33	-7.45	-9.98	-6.33	-9.68	-11.17	22.35	1.164	
	2	10		52.67	36.38	-18.19	-16.73	-10.77	-16.73	-8.73	-8.73	-8.73	-16.73	-10.77	-16.73	-18.19	36.38	1.164	
	3	12		76.19	53.88	-28.43	-20.95	-13.47	-20.95	-13.47	-11.97	-13.47	-20.95	-13.47	-20.95	-28.43	53.88	1.164	
	4	14		106.20	70.80	-37.05	-30.33	-18.22	-30.33	-19.67	-14.62	-19.67	-30.33	-18.22	-30.33	-37.05	70.80	1.164	
	5	16		141.15	99.59	-52.54	-47.05	-23.53	-39.21	-23.53	-18.66	-23.53	-39.21	-23.53	-47.05	-52.54	99.59	1.164	
	6	18		172.85	125.71	-62.86	-55.00	-31.43	-51.07	-31.43	-23.26	-31.43	-51.07	-31.43	-55.00	-62.86	125.71	1.164	
	7	20		209.52	147.44	-81.48	-62.08	-36.47	-57.42	-38.80	-28.01	-38.80	-57.42	-36.47	-62.08	-81.48	147.44	1.164	
		NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )	
					P14	P15	P16	P17	18	P19	P20	P21	P22	P23	P24	P25	P26		P27
		1	8	Mobil 2	4.30	10.43	-4.47	-5.21	-7.08	-12.66	-11.17	-11.17	-11.17	-12.66	-7.08	-5.21	-4.47	10.43	1.164
		2	10		6.61	21.82	-8.29	-9.02	-11.64	-18.19	-17.17	-17.17	-17.17	-18.19	-11.64	-9.02	-8.29	21.82	1.164
		3	12		8.75	23.95	-10.48	-13.47	-16.31	-28.43	-26.82	-23.89	-26.82	-28.43	-16.31	-13.47	-10.48	23.95	1.164
		4	14		11.04	33.04	-15.73	-18.09	-23.99	-39.34	-35.52	-31.39	-35.52	-39.34	-23.99	-18.09	-15.73	33.04	1.164
		5	16		13.41	47.05	-15.68	-23.53	-32.15	-50.97	-46.50	-40.01	-46.50	-50.97	-32.15	-23.53	-15.68	47.05	1.164
	6	18	15.96		55.00	-21.21	-31.43	-42.43	-62.86	-60.34	-50.13	-60.34	-62.86	-42.43	-31.43	-21.21	55.00	1.164	
	7	20	18.97		69.84	-23.28	-34.92	-46.56	-78.38	-70.62	-60.53	-70.62	-78.38	-46.56	-34.92	-23.28	69.84	1.164	

Tekanan dan temperatur ruangan :

P (mmHg)	T (°C)
711	30

Keterangan :



: Mobil 1



: Mobil 2



Tabel A 7 Hasil pengamatan distribusi tekanan minibus yang tersusun secara tandem pada konfigurasi seri dengan  $L/D = 0.455$  untuk pendekatan eksperimental

$L/D$	NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )		
				P0	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12		P13	
0.455	1	8	Mobil 1	33.52	22.35	-11.17	-8.57	-7.45	-8.94	-7.45	-5.48	-7.45	-8.94	-7.45	-8.57	-11.17	22.35	1.164	
	2	10		52.67	36.38	-19.35	-14.55	-11.06	-14.55	-9.89	-8.15	-9.89	-14.55	-11.06	-14.55	-19.35	36.38	1.164	
	3	12		76.33	53.33	-26.67	-19.05	-15.24	-19.05	-15.24	-11.43	-15.24	-19.05	-15.24	-19.05	-26.67	53.33	1.164	
	4	14		104.55	70.80	-37.05	-29.50	-20.04	-28.01	-20.04	-13.45	-20.04	-28.01	-20.04	-29.50	-37.05	70.80	1.164	
	5	16		134.88	98.02	-50.97	-39.21	-23.53	-35.29	-23.53	-14.26	-23.53	-35.29	-23.53	-39.21	-50.97	98.02	1.164	
	6	18		172.85	121.78	-70.71	-45.49	-31.43	-41.48	-31.43	-15.71	-31.43	-41.48	-31.43	-45.49	-70.71	121.78	1.164	
	7	20		213.40	143.56	-79.15	-51.37	-34.14	-48.89	-38.80	-19.40	-38.80	-48.89	-34.14	-51.37	-79.15	143.56	1.164	
		NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )	
					P14	P15	P16	P17	18	P19	P20	P21	P22	P23	P24	P25	P26		P27
		1	8	Mobil 2	2.83	12.29	-2.98	-5.21	-6.70	-11.17	-11.55	-10.80	-11.55	-11.17	-6.70	-5.21	-2.98	12.29	1.164
		2	10		4.66	18.19	-4.66	-7.27	-10.42	-19.28	-16.73	-16.59	-16.73	-19.28	-10.42	-7.27	-4.66	18.19	1.164
		3	12		6.32	22.86	-7.62	-11.43	-14.48	-26.67	-27.05	-23.69	-27.05	-26.67	-14.48	-11.43	-7.62	22.86	1.164
		4	14		7.87	31.47	-7.87	-18.53	-20.57	-39.34	-37.17	-30.82	-37.17	-39.34	-20.57	-18.53	-7.87	31.47	1.164
		5	16		9.88	39.21	-12.31	-23.53	-27.68	-50.97	-42.74	-40.31	-42.74	-50.97	-27.68	-23.53	-12.31	39.21	1.164
	6	18	10.87		47.14	-11.79	-31.43	-34.57	-66.78	-56.57	-49.56	-56.57	-66.78	-34.57	-31.43	-11.79	47.14	1.164	
	7	20	12.11		54.32	-15.52	-31.04	-38.80	-76.05	-65.96	-58.20	-65.96	-76.05	-38.80	-31.04	-15.52	54.32	1.164	

Tekanan dan temperatur ruangan :

P (mmHg)	T (°C)
711	30

Keterangan :



: Mobil 1



: Mobil 2



Tabel A 8 Hasil pengamatan distribusi tekanan minibus yang tersusun secara tandem pada konfigurasi seri dengan  $L/D = 0.682$  untuk pendekatan eksperimental

$L/D$	NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )		
				P0	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12		P13	
0.682	1	8	Mobil 1	33.60	22.64	-13.69	-9.86	-7.01	-10.30	-6.57	-6.57	-6.57	-10.30	-7.01	-9.86	-13.69	22.64	1.164	
	2	10		52.38	36.38	-20.37	-16.73	-9.89	-14.55	-9.31	-9.31	-9.31	-14.55	-9.89	-16.73	-20.37	36.38	1.164	
	3	12		76.19	53.33	-28.95	-22.86	-15.24	-19.05	-13.71	-12.88	-13.71	-19.05	-15.24	-22.86	-28.95	53.33	1.164	
	4	14		103.41	70.80	-39.34	-31.47	-20.04	-31.47	-15.73	-15.73	-15.73	-31.47	-20.04	-31.47	-39.34	70.80	1.164	
	5	16		133.31	94.10	-47.05	-43.13	-23.53	-39.21	-21.96	-19.72	-21.96	-39.21	-23.53	-43.13	-47.05	94.10	1.164	
	6	18		172.85	124.14	-64.43	-61.28	-31.43	-47.46	-29.86	-24.33	-29.86	-47.46	-31.43	-61.28	-64.43	124.14	1.164	
	7	20		209.52	147.44	-83.03	-69.84	-38.80	-57.42	-31.04	-29.49	-31.04	-57.42	-38.80	-69.84	-83.03	147.44	1.164	
		NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )	
					P14	P15	P16	P17	18	P19	P20	P21	P22	P23	P24	P25	P26		P27
		1	8	Mobil 2	4.38	15.34	-4.84	-6.11	-6.57	-12.57	-12.16	-12.16	-12.16	-12.57	-6.57	-6.11	-4.84	15.34	1.164
		2	10		7.27	21.82	-8.51	-10.18	-8.73	-20.37	-18.33	-18.33	-18.33	-20.37	-8.73	-10.18	-8.51	21.82	1.164
		3	12		10.02	22.86	-11.43	-15.24	-14.48	-28.95	-27.05	-25.20	-27.05	-28.95	-14.48	-15.24	-11.43	22.86	1.164
		4	14		7.87	35.40	-15.73	-17.31	-20.06	-39.34	-35.60	-33.10	-35.60	-39.34	-20.06	-17.31	-15.73	35.40	1.164
		5	16		15.68	50.97	-15.68	-26.66	-24.31	-47.05	-42.74	-41.80	-42.74	-47.05	-24.31	-26.66	-15.68	50.97	1.164
	6	18	15.71		62.86	-23.57	-31.43	-36.14	-62.86	-56.57	-52.48	-56.57	-62.86	-36.14	-31.43	-23.57	62.86	1.164	
	7	20	17.07		69.84	-31.04	-38.80	-38.80	-77.60	-65.96	-61.69	-65.96	-77.60	-38.80	-38.80	-31.04	69.84	1.164	

Tekanan dan temperatur ruangan :

P (mmHg)	T (°C)
711	30

Keterangan :



: Mobil 1



: Mobil 2



Tabel A 9 Hasil pengamatan distribusi tekanan minibus yang tersusun secara tandem pada konfigurasi seri dengan  $L/D = 0.909$  untuk pendekatan eksperimental

$L/D$	NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )		
				P0	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12		P13	
0.909	1	8	Mobil 1	33.15	22.35	-14.90	-13.41	-7.45	-7.45	-7.45	-6.89	-7.45	-7.45	-7.45	-13.41	-14.90	22.35	1.164	
	2	10		50.93	36.38	-20.37	-20.88	-10.18	-13.82	-10.48	-9.89	-10.48	-13.82	-10.18	-20.88	-20.37	36.38	1.164	
	3	12		76.19	53.33	-30.48	-22.86	-15.24	-19.05	-13.71	-13.71	-13.71	-19.05	-15.24	-22.86	-30.48	53.33	1.164	
	4	14		106.99	70.80	-39.34	-31.47	-23.60	-31.47	-18.02	-16.87	-18.02	-31.47	-23.60	-31.47	-39.34	70.80	1.164	
	5	16		141.15	92.53	-52.54	-43.13	-23.53	-39.21	-21.64	-21.64	-21.64	-39.21	-23.53	-43.13	-52.54	92.53	1.164	
	6	18		172.85	124.14	-70.71	-61.28	-31.43	-55.00	-29.86	-26.09	-29.86	-55.00	-31.43	-61.28	-70.71	124.14	1.164	
	7	20		209.52	147.44	-85.36	-69.84	-38.80	-62.08	-31.04	-31.04	-31.04	-62.08	-38.80	-69.84	-85.36	147.44	1.164	
		NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )	
					P14	P15	P16	P17	18	P19	P20	P21	P22	P23	P24	P25	P26		P27
		1	8	Mobil 2	7.45	13.41	-7.45	-7.45	-7.45	-13.41	-12.30	-12.30	-12.30	-13.41	-7.45	-7.45	-7.45	13.41	1.164
		2	10		10.91	21.82	-8.73	-10.77	-11.17	-18.19	-19.03	-18.91	-19.03	-18.19	-11.17	-10.77	-8.73	21.82	1.164
		3	12		13.71	22.86	-13.71	-15.24	-14.48	-30.48	-27.05	-27.05	-27.05	-30.48	-14.48	-15.24	-13.71	22.86	1.164
		4	14		15.73	31.47	-15.73	-23.60	-20.06	-39.34	-37.17	-35.60	-37.17	-39.34	-20.06	-23.60	-15.73	31.47	1.164
		5	16		23.53	37.72	-23.53	-24.31	-25.88	-47.05	-45.09	-45.09	-45.09	-47.05	-25.88	-24.31	-23.53	37.72	1.164
	6	18	23.57		55.00	-29.86	-33.00	-40.07	-66.78	-56.57	-56.57	-56.57	-66.78	-40.07	-33.00	-29.86	55.00	1.164	
	7	20	34.92		69.84	-31.04	-38.80	-42.68	-79.15	-65.96	-62.08	-65.96	-79.15	-42.68	-38.80	-31.04	69.84	1.164	

Tekanan dan temperatur ruangan :

P (mmHg)	T (°C)
711	30

Keterangan :



: Mobil 1



: Mobil 2





Tabel A 10 Hasil pengamatan distribusi tekanan minibus yang tersusun secara tandem pada konfigurasi seri dengan  $L/D = 1.136$  untuk pendekatan eksperimental

$L/D$	NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )		
				P0	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12		P13	
1.136	1	8	Mobil 1	33.52	22.35	-14.15	-13.41	-7.82	-11.17	-7.82	-7.82	-7.82	-11.17	-7.82	-13.41	-14.15	22.35	1.164	
	2	10		53.11	36.38	-14.55	-14.40	-7.27	-16.30	-10.88	-10.88	-10.88	-16.30	-7.27	-14.40	-14.55	36.38	1.164	
	3	12		74.03	53.33	-30.48	-22.86	-15.24	-22.86	-15.24	-15.24	-15.24	-22.86	-15.24	-22.86	-30.48	53.33	1.164	
	4	14		99.35	70.80	-39.34	-32.25	-23.60	-31.47	-19.16	-18.70	-19.16	-31.47	-23.60	-32.25	-39.34	70.80	1.164	
	5	16		129.62	98.02	-47.05	-43.13	-23.53	-39.21	-23.88	-23.88	-23.88	-39.21	-23.53	-43.13	-47.05	98.02	1.164	
	6	18		160.06	124.93	-64.43	-61.28	-31.43	-47.14	-29.86	-29.86	-29.86	-47.14	-31.43	-61.28	-64.43	124.93	1.164	
	7	20		193.27	147.44	-82.26	-65.96	-38.80	-62.08	-29.49	-29.49	-29.49	-62.08	-38.80	-65.96	-82.26	147.44	1.164	
		NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )	
					P14	P15	P16	P17	18	P19	P20	P21	P22	P23	P24	P25	P26		P27
		1	8	Mobil 2	7.45	12.66	-6.33	-8.72	-8.19	-13.26	-12.66	-12.66	-12.66	-13.26	-8.19	-8.72	-6.33	12.66	1.164
		2	10		12.80	21.10	-9.46	-12.95	-14.55	-21.53	-20.81	-20.22	-20.81	-21.53	-14.55	-12.95	-9.46	21.10	1.164
		3	12		16.76	31.43	-12.65	-18.97	-19.05	-29.40	-29.26	-27.90	-29.26	-29.40	-19.05	-18.97	-12.65	31.43	1.164
		4	14		23.60	40.48	-18.45	-23.44	-21.63	-42.88	-40.55	-37.67	-40.55	-42.88	-21.63	-23.44	-18.45	40.48	1.164
		5	16		34.74	49.17	-25.88	-27.03	-23.53	-54.89	-54.81	-48.85	-54.81	-54.89	-23.53	-27.03	-25.88	49.17	1.164
	6	18	41.48		62.86	-31.90	-35.51	-34.57	-62.38	-57.36	-57.11	-57.36	-62.38	-34.57	-35.51	-31.90	62.86	1.164	
	7	20	43.46		69.88	-33.37	-38.80	-38.80	-80.70	-68.29	-62.86	-68.29	-80.70	-38.80	-33.37	69.88	1.164		

Tekanan dan temperatur ruangan :

P (mmHg)	T (°C)
711	30

Keterangan :



: Mobil 1



: Mobil 2



Tabel A 11 Hasil pengamatan distribusi tekanan minibus yang tersusun secara tandem pada konfigurasi paralel dengan  $M/D = 0.227$  untuk pendekatan eksperimental

$M/D$	NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )		
				P0	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12		P13	
0.227	1	8	Mobil 1	33.52	18.62	-18.62	-16.76	-16.76	-22.35	-16.76	-16.76	-16.76	-18.62	-18.62	-16.76	-16.76	29.80	1.164	
	2	10		52.96	29.10	-28.37	-22.99	-22.26	-32.74	-26.07	-25.90	-25.90	-28.37	-28.37	-24.74	-24.74	43.65	1.164	
	3	12		76.19	45.71	-36.42	-30.48	-30.48	-53.33	-36.42	-36.42	-30.48	-41.90	-41.90	-36.42	-36.42	60.95	1.164	
	4	14		102.27	62.94	-62.94	-49.14	-47.20	-74.74	-49.14	-49.14	-47.20	-62.94	-62.94	-49.14	-35.40	78.67	1.164	
	5	16		133.31	86.26	-63.67	-62.73	-54.89	-94.10	-63.67	-63.67	-54.89	-63.67	-63.67	-63.67	-62.73	109.78	1.164	
	6	18		173.48	105.60	-94.28	-73.54	-64.11	-113.14	-79.20	-79.20	-67.88	-82.97	-79.20	-79.20	-79.20	135.77	1.164	
	7	20		209.52	131.92	-116.40	-93.12	-85.36	-147.44	-94.98	-94.98	-85.36	-116.40	-108.64	-94.98	-93.12	170.72	1.164	
		NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )	
					P14	P15	P16	P17	18	P19	P20	P21	P22	P23	P24	P25	P26		P27
		1	8	Mobil 2	33.52	29.80	-16.76	-16.76	-18.62	-18.62	-16.76	-16.76	-16.76	-22.35	-16.76	-16.76	-18.62	18.62	1.164
		2	10		52.96	43.65	-24.74	-24.74	-28.37	-28.37	-25.90	-25.90	-26.07	-32.74	-22.26	-22.99	-28.37	29.10	1.164
		3	12		76.19	60.95	-36.42	-36.42	-41.90	-41.90	-30.48	-36.42	-36.42	-53.33	-30.48	-30.48	-36.42	45.71	1.164
		4	14		102.27	78.67	-35.40	-49.14	-62.94	-62.94	-47.20	-49.14	-49.14	-74.74	-47.20	-49.14	-62.94	62.94	1.164
		5	16		133.31	109.78	-62.73	-63.67	-63.67	-63.67	-54.89	-63.67	-63.67	-94.10	-54.89	-62.73	-63.67	86.26	1.164
	6	18	173.48		135.77	-79.20	-79.20	-79.20	-82.97	-67.88	-79.20	-79.20	-113.14	-64.11	-73.54	-94.28	105.60	1.164	
	7	20	209.52		170.72	-93.12	-94.98	-108.64	-116.40	-85.36	-94.98	-94.98	-147.44	-85.36	-93.12	-116.40	131.92	1.164	

Tekanan dan temperatur ruangan :

P (mmHg)	T (°C)
711	30

Keterangan :



: Mobil 1



: Mobil 2



Tabel A 12 Hasil pengamatan distribusi tekanan minibus yang tersusun secara tandem pada konfigurasi paralel dengan  $M/D = 0.455$  untuk pendekatan eksperimental

M/D	NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )			
				P0	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12		P13		
0.455	1	8	Mobil 1	35.39	22.35	-15.64	-15.64	-15.64	-22.35	-15.64	-15.64	-15.64	-22.35	-15.64	-15.64	-15.64	27.94	1.164		
	2	10		52.96	36.38	-29.10	-24.30	-24.30	-36.38	-24.30	-24.30	-24.30	-24.30	-32.01	-29.10	-24.30	-24.30	36.38	1.164	
	3	12		76.19	45.71	-41.90	-33.52	-30.48	-53.33	-33.52	-33.52	-30.48	-41.90	-33.52	-30.48	-30.48	-30.48	53.33	1.164	
	4	14		103.03	66.24	-51.52	-44.16	-36.80	-62.56	-44.16	-44.16	-36.80	-51.52	-47.84	-36.80	-36.80	-36.80	80.95	1.164	
	5	16		137.23	86.26	-78.42	-66.65	-54.89	-86.26	-56.93	-56.93	-54.89	-70.58	-70.58	-56.93	-54.89	-54.89	101.94	1.164	
	6	18		171.60	105.60	-98.06	-75.43	-64.11	-105.60	-75.43	-69.77	-64.11	-82.97	-79.20	-69.77	-69.77	-69.77	126.34	1.164	
	7	20		209.52	131.92	-120.28	-93.12	-78.38	-128.04	-83.81	-83.81	-83.03	-101.66	-93.90	-88.46	-83.03	-83.03	155.20	1.164	
		NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )		
					P14	P15	P16	P17	18	P19	P20	P21	P22	P23	P24	P25	P26		P27	
		1	8	Mobil 2	35.39	27.94	-15.64	-15.64	-15.64	-22.35	-15.64	-15.64	-15.64	-22.35	-15.64	-15.64	-15.64	22.35	1.164	
		2	10		52.96	36.38	-24.30	-24.30	-29.10	-32.01	-24.30	-24.30	-24.30	-24.30	-36.38	-24.30	-24.30	-29.10	36.38	1.164
		3	12		76.19	53.33	-30.48	-30.48	-33.52	-41.90	-30.48	-33.52	-33.52	-53.33	-30.48	-33.52	-41.90	45.71	1.164	
		4	14		103.03	80.95	-36.80	-36.80	-47.84	-51.52	-36.80	-44.16	-44.16	-62.56	-36.80	-44.16	-51.52	66.24	1.164	
		5	16		137.23	101.94	-54.89	-56.93	-70.58	-70.58	-54.89	-56.93	-56.93	-86.26	-54.89	-66.65	-78.42	86.26	1.164	
	6	18	171.60		126.34	-69.77	-69.77	-79.20	-82.97	-64.11	-69.77	-75.43	-105.60	-64.11	-75.43	-98.06	105.60	1.164		
	7	20	209.52		155.20	-83.03	-88.46	-93.90	-101.66	-83.03	-83.81	-83.81	-128.04	-78.38	-93.12	-120.28	131.92	1.164		

Tekanan dan temperatur ruangan :

P (mmHg)	T (°C)
711	30

Keterangan :

 : Mobil 1

 : Mobil 2



Tabel A 13 Hasil pengamatan distribusi tekanan minibus yang tersusun secara tandem pada konfigurasi paralel dengan  $M/D = 0.682$  untuk pendekatan eksperimental

M/D	NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )			
				P0	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12		P13		
0.682	1	8	Mobil 1	33.52	22.35	-18.62	-15.35	-15.35	-22.35	-15.35	-15.35	-15.35	-22.35	-15.35	-15.35	-15.35	27.94	1.164		
	2	10		52.96	36.38	-23.72	-23.28	-23.28	-30.26	-23.28	-23.28	-23.28	-23.28	-26.63	-23.28	-19.35	-23.28	41.18	1.164	
	3	12		76.19	45.71	-45.71	-33.14	-30.48	-53.33	-33.14	-33.14	-34.29	-45.71	-33.14	-30.48	-33.14	-33.14	53.33	1.164	
	4	14		106.20	62.94	-60.65	-44.92	-40.99	-68.52	-44.06	-44.06	-44.92	-60.65	-44.06	-44.92	-48.85	-44.92	79.46	1.164	
	5	16		133.71	84.05	-72.59	-55.28	-53.48	-84.05	-64.95	-56.77	-57.30	-76.41	-64.95	-53.48	-53.48	-53.48	99.33	1.164	
	6	18		173.48	113.14	-94.28	-67.88	-64.11	-109.37	-75.43	-71.28	-67.88	-82.97	-75.43	-64.11	-67.88	-67.88	128.23	1.164	
	7	20		213.72	133.57	-114.49	-95.41	-83.96	-141.21	-95.41	-83.66	-83.96	-114.49	-95.41	-72.51	-87.78	-87.78	160.29	1.164	
		NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )		
					P14	P15	P16	P17	18	P19	P20	P21	P22	P23	P24	P25	P26		P27	
		1	8	Mobil 2	33.52	27.94	-15.35	-15.35	-15.35	-22.35	-15.35	-15.35	-15.35	-22.35	-15.35	-15.35	-18.62	22.35	1.164	
		2	10		52.96	41.18	-23.28	-19.35	-23.28	-26.63	-23.28	-23.28	-23.28	-30.26	-23.28	-23.28	-23.28	-23.72	36.38	1.164
		3	12		76.19	53.33	-33.14	-30.48	-33.14	-45.71	-32.61	-33.14	-33.14	-53.33	-30.48	-33.14	-45.71	45.71	1.164	
		4	14		106.20	79.46	-48.85	-44.92	-44.06	-60.65	-43.50	-44.06	-44.06	-68.52	-40.99	-44.92	-60.65	62.94	1.164	
		5	16		133.71	99.33	-53.48	-53.48	-64.95	-76.41	-55.89	-56.77	-64.95	-84.05	-53.48	-55.28	-72.59	84.05	1.164	
	6	18	173.48		128.23	-67.88	-64.11	-75.43	-82.97	-67.88	-71.28	-75.43	-109.37	-64.11	-67.88	-94.28	113.14	1.164		
	7	20	213.72		160.29	-87.78	-72.51	-95.41	-114.49	-83.96	-83.66	-95.41	-141.21	-83.96	-95.41	-114.49	133.57	1.164		

Tekanan dan temperatur ruangan :

P (mmHg)	T (°C)
711	30

Keterangan :

 : Mobil 1

 : Mobil 2



Tabel A 14 Hasil pengamatan distribusi tekanan minibus yang tersusun secara tandem pada konfigurasi paralel dengan  $M/D = 0.909$  untuk pendekatan eksperimental

M/D	NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )			
				P0	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12		P13		
0.909	1	8	Mobil 1	33.52	22.35	-14.53	-14.53	-14.53	-22.35	-14.53	-14.53	-14.53	-14.53	-14.53	-14.53	-14.90	27.94	1.164		
	2	10		52.96	36.38	-22.55	-22.55	-22.55	-32.74	-22.55	-22.55	-22.55	-22.55	-29.10	-22.55	-22.55	-21.82	40.01	1.164	
	3	12		76.19	45.71	-41.90	-32.30	-30.48	-53.33	-32.30	-32.30	-30.48	-41.90	-32.30	-30.48	-30.48	-30.48	60.95	1.164	
	4	14		110.14	62.94	-59.00	-43.50	-43.27	-70.80	-43.50	-43.50	-43.50	-59.00	-43.50	-43.27	-43.27	-43.27	82.60	1.164	
	5	16		138.37	81.91	-72.59	-55.81	-49.66	-87.68	-55.81	-55.81	-55.62	-64.95	-55.81	-54.13	-54.13	-54.13	110.79	1.164	
	6	18		173.17	103.90	-100.06	-69.35	-65.42	-111.60	-69.35	-69.35	-69.27	-88.51	-69.35	-65.42	-69.27	-69.27	134.69	1.164	
	7	20		210.27	127.66	-112.65	-90.12	-75.10	-135.17	-90.12	-82.61	-78.85	-108.89	-90.12	-75.10	-82.61	-82.61	168.97	1.164	
		NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )		
					P14	P15	P16	P17	18	P19	P20	P21	P22	P23	P24	P25	P26		P27	
		1	8	Mobil 2	33.52	27.94	-14.90	-14.53	-14.53	-14.53	-14.53	-14.53	-14.53	-22.35	-14.53	-14.53	-14.53	22.35	1.164	
		2	10		52.96	40.01	-21.82	-22.55	-22.55	-29.10	-22.55	-22.55	-22.55	-22.55	-32.74	-22.55	-22.55	-22.55	36.38	1.164
		3	12		76.19	60.95	-30.48	-30.48	-32.30	-41.90	-30.48	-32.30	-32.30	-53.33	-30.48	-32.30	-41.90	45.71	1.164	
		4	14		110.14	82.60	-43.27	-43.27	-43.50	-59.00	-43.50	-43.50	-43.50	-70.80	-43.27	-43.50	-59.00	62.94	1.164	
		5	16		138.37	110.79	-54.13	-54.13	-55.81	-64.95	-55.62	-55.81	-55.81	-87.68	-49.66	-55.81	-72.59	81.91	1.164	
	6	18	173.17		134.69	-69.27	-65.42	-69.35	-88.51	-69.27	-69.35	-69.35	-111.60	-65.42	-69.35	-100.06	103.90	1.164		
	7	20	210.27		168.97	-82.61	-75.10	-90.12	-108.89	-78.85	-82.61	-90.12	-135.17	-75.10	-90.12	-112.65	127.66	1.164		

Tekanan dan temperatur ruangan :

P (mmHg)	T (°C)
711	30

Keterangan :

 : Mobil 1

 : Mobil 2



Tabel A 15 Hasil pengamatan distribusi tekanan minibus yang tersusun secara tandem pada konfigurasi paralel dengan  $M/D = 1.136$  untuk pendekatan eksperimental

$M/D$	NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )		
				P0	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12		P13	
1.136	1	8	Mobil 1	33.52	22.35	-18.62	-16.50	-16.50	-22.35	-16.50	-16.50	-16.50	-16.50	-16.50	-16.50	-16.50	22.35	1.164	
	2	10		52.96	32.74	-27.97	-25.06	-22.26	-33.76	-25.58	-25.58	-25.58	-30.12	-24.15	-20.37	-24.47	36.52	1.164	
	3	12		76.19	45.71	-36.42	-34.29	-30.48	-53.33	-36.42	-36.42	-34.29	-41.90	-34.29	-30.48	-36.42	53.33	1.164	
	4	14		98.86	60.84	-57.04	-48.71	-41.83	-68.44	-48.71	-48.71	-48.71	-53.23	-45.63	-38.02	-48.71	76.05	1.164	
	5	16		137.23	86.26	-74.50	-62.73	-54.89	-86.26	-62.73	-62.73	-54.89	-70.58	-58.81	-50.97	-62.73	101.94	1.164	
	6	18		173.48	109.37	-96.17	-79.20	-78.63	-111.26	-78.63	-78.63	-70.71	-86.74	-73.54	-66.00	-75.43	128.23	1.164	
	7	20		209.52	131.92	-124.16	-104.76	-77.60	-139.68	-93.12	-92.34	-85.36	-116.40	-93.12	-77.60	-93.12	155.20	1.164	
		NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )	
					P14	P15	P16	P17	18	P19	P20	P21	P22	P23	P24	P25	P26		P27
		1	8	Mobil 2	33.52	22.35	-16.50	-16.50	-16.50	-16.50	-16.50	-16.50	-16.50	-22.35	-16.50	-16.50	-18.62	22.35	1.164
		2	10		52.96	36.52	-24.47	-20.37	-24.15	-30.12	-25.58	-25.58	-25.58	-33.76	-22.26	-25.06	-27.97	32.74	1.164
		3	12		76.19	53.33	-36.42	-30.48	-34.29	-41.90	-34.29	-36.42	-36.42	-53.33	-30.48	-34.29	-36.42	45.71	1.164
		4	14		98.86	76.05	-48.71	-38.02	-45.63	-53.23	-48.71	-48.71	-48.71	-68.44	-41.83	-48.71	-57.04	60.84	1.164
		5	16		137.23	101.94	-62.73	-50.97	-58.81	-70.58	-54.89	-62.73	-62.73	-86.26	-54.89	-62.73	-74.50	86.26	1.164
	6	18	173.48		128.23	-75.43	-66.00	-73.54	-86.74	-70.71	-78.63	-78.63	-111.26	-78.63	-79.20	-96.17	109.37	1.164	
	7	20	209.52		155.20	-93.12	-77.60	-93.12	-116.40	-85.36	-92.34	-93.12	-139.68	-77.60	-104.76	-124.16	131.92	1.164	

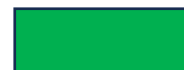
Tekanan dan temperatur ruangan :

P (mmHg)	T (°C)
711	30

Keterangan :



: Mobil 1



: Mobil 2



Tabel A 16 Hasil pengamatan distribusi tekanan minibus yang tersusun secara tandem pada konfigurasi seri dengan  $L/D = 0.227$  untuk pendekatan komputasi

$L/D$	NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )		
				P0	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12		P13	
0.227	1	8	Mobil 1	35.49	23.32	-11.67	-10.15	-7.11	-10.35	-7.87	-7.11	-7.87	-10.35	-7.11	-10.15	-11.67	23.32	1.164	
	2	10		53.53	36.95	-18.73	-17.55	-11.62	-17.62	-9.25	-9.25	-9.25	-17.62	-11.62	-17.55	-18.73	36.95	1.164	
	3	12		76.34	56.99	-29.98	-23.16	-14.63	-23.16	-14.63	-12.92	-14.63	-23.16	-14.63	-23.16	-29.98	56.99	1.164	
	4	14		108.08	71.89	-41.93	-32.64	-21.03	-32.64	-21.03	-15.78	-21.03	-32.64	-21.03	-32.64	-41.93	71.89	1.164	
	5	16		141.54	102.16	-55.80	-49.73	-25.42	-40.61	-25.42	-19.35	-25.42	-40.61	-25.42	-49.73	-55.80	102.16	1.164	
	6	18		175.10	128.60	-63.91	-60.06	-33.11	-56.21	-33.11	-24.00	-33.11	-56.21	-33.11	-60.06	-63.91	128.60	1.164	
	7	20		213.73	152.13	-84.63	-65.59	-41.79	-60.83	-41.79	-28.87	-41.79	-60.83	-41.79	-65.59	-84.63	152.13	1.164	
		NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )	
					P14	P15	P16	P17	18	P19	P20	P21	P22	P23	P24	P25	P26		P27
		1	8	Mobil 2	4.30	10.87	-4.83	-5.97	-7.87	-13.20	-12.43	-12.43	-12.43	-13.20	-7.87	-5.97	-4.83	10.87	1.164
		2	10		7.33	22.73	-9.25	-9.25	-12.81	-21.10	-18.73	-18.73	-18.73	-21.10	-12.81	-9.25	-9.25	22.73	1.164
		3	12		9.24	24.59	-11.22	-14.63	-18.04	-29.98	-28.27	-26.57	-28.27	-29.98	-18.04	-14.63	-11.22	24.59	1.164
		4	14		11.49	34.72	-16.38	-18.70	-25.67	-41.93	-37.29	-34.96	-37.29	-41.93	-25.67	-18.70	-16.38	34.72	1.164
		5	16		14.07	50.52	-17.55	-25.42	-34.54	-52.76	-49.73	-43.65	-49.73	-52.76	-34.54	-25.42	-17.55	50.52	1.164
	6	18	16.95		59.30	-21.55	-33.11	-44.66	-67.76	-63.91	-52.36	-63.91	-67.76	-44.66	-33.11	-21.55	59.30	1.164	
	7	20	20.09		75.97	-26.11	-37.03	-51.31	-79.87	-75.11	-60.83	-75.11	-79.87	-51.31	-37.03	-26.11	75.97	1.164	

Tekanan dan temperatur ruangan :

T (°C)
30

Keterangan :



: Mobil 1



: Mobil 2



Tabel A 17 Hasil pengamatan distribusi tekanan minibus yang tersusun secara tandem pada konfigurasi seri dengan  $L/D = 0.455$  untuk pendekatan komputasi

$L/D$	NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )		
				P0	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12		P13	
0.455	1	8	Mobil 1	36.03	23.39	-11.60	-8.62	-7.88	-9.36	-7.88	-6.39	-7.88	-9.36	-7.88	-8.62	-11.60	23.39	1.164	
	2	10		54.63	36.96	-20.25	-15.65	-12.21	-15.65	-10.66	-8.96	-10.66	-15.65	-12.21	-15.65	-20.25	36.96	1.164	
	3	12		79.90	55.29	-28.39	-20.19	-16.30	-20.19	-16.90	-11.98	-16.90	-20.19	-16.30	-20.19	-28.39	55.29	1.164	
	4	14		105.92	74.82	-40.71	-34.05	-22.94	-32.85	-22.94	-14.05	-22.94	-32.85	-22.94	-34.05	-40.71	74.82	1.164	
	5	16		135.19	100.61	-55.01	-40.60	-26.19	-37.72	-26.19	-16.10	-26.19	-37.72	-26.19	-40.60	-55.01	100.61	1.164	
	6	18		173.73	125.12	-71.11	-48.74	-34.77	-45.67	-33.14	-17.51	-33.14	-45.67	-34.77	-48.74	-71.11	125.12	1.164	
	7	20		215.53	148.31	-80.08	-57.69	-39.78	-53.21	-39.78	-21.06	-39.78	-53.21	-39.78	-57.69	-80.08	148.31	1.164	
		NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )	
					P14	P15	P16	P17	18	P19	P20	P21	P22	P23	P24	P25	P26		P27
		1	8	Mobil 2	3.11	12.97	-3.21	-5.64	-7.13	-11.74	-11.60	-11.60	-11.60	-11.74	-7.13	-5.64	-3.21	12.97	1.164
		2	10		4.81	18.59	-4.92	-7.82	-11.26	-19.30	-17.00	-17.00	-17.00	-19.30	-11.26	-7.82	-4.92	18.59	1.164
		3	12		6.51	24.11	-8.30	-11.98	-15.26	-26.75	-27.15	-24.07	-27.15	-26.75	-15.26	-11.98	-8.30	24.11	1.164
		4	14		8.16	32.60	-8.01	-20.72	-22.54	-40.71	-38.49	-31.83	-38.49	-40.71	-22.54	-20.72	-8.01	32.60	1.164
		5	16		10.95	42.97	-12.86	-26.19	-29.07	-52.13	-43.48	-41.32	-43.48	-52.13	-29.07	-26.19	-12.86	42.97	1.164
	6	18	11.27		50.64	-12.97	-34.77	-34.77	-67.48	-60.21	-51.54	-60.21	-67.48	-34.77	-34.77	-12.97	50.64	1.164	
	7	20	13.04		58.75	-17.39	-34.50	-39.78	-80.08	-71.13	-62.17	-71.13	-80.08	-39.78	-34.50	-17.39	58.75	1.164	

Tekanan dan temperatur ruangan :

T (°C)
30

Keterangan :

: Mobil 1

: Mobil 2





Tabel A 18 Hasil pengamatan distribusi tekanan minibus yang tersusun secara tandem pada konfigurasi seri dengan  $L/D = 0.682$  untuk pendekatan komputasi

$L/D$	NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )		
				P0	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12		P13	
0.682	1	8	Mobil 1	35.62	22.93	-13.69	-10.70	-7.71	-10.70	-7.57	-7.57	-7.57	-10.70	-7.71	-10.70	-13.69	22.93	1.164	
	2	10		54.37	37.74	-21.17	-17.70	-10.77	-15.39	-10.77	-10.77	-10.77	-15.39	-10.77	-17.70	-21.17	37.74	1.164	
	3	12		78.17	53.69	-29.09	-24.12	-15.85	-20.81	-14.19	-14.19	-14.19	-20.81	-15.85	-24.12	-29.09	53.69	1.164	
	4	14		105.42	73.65	-41.16	-32.16	-23.15	-32.11	-16.40	-18.65	-16.40	-32.11	-23.15	-32.16	-41.16	73.65	1.164	
	5	16		138.62	100.47	-47.81	-43.34	-25.73	-40.41	-22.80	-21.26	-22.80	-40.41	-25.73	-43.34	-47.81	100.47	1.164	
	6	18		173.88	125.67	-67.16	-63.46	-33.79	-48.62	-30.08	-26.37	-30.08	-48.62	-33.79	-63.46	-67.16	125.67	1.164	
	7	20		213.38	149.33	-84.00	-70.27	-41.22	-61.12	-33.67	-30.30	-33.67	-61.12	-41.22	-70.27	-84.00	149.33	1.164	
		NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )	
					P14	P15	P16	P17	18	P19	P20	P21	P22	P23	P24	P25	P26		P27
		1	8	Mobil 2	4.59	16.20	-5.47	-6.22	-6.97	-13.69	-13.69	-13.69	-13.69	-13.69	-6.97	-6.22	-5.47	16.20	1.164
		2	10		7.71	22.72	-9.62	-10.77	-9.62	-21.17	-20.59	-20.01	-20.59	-21.17	-9.62	-10.77	-9.62	22.72	1.164
		3	12		10.64	23.89	-12.54	-15.85	-15.85	-29.09	-27.44	-27.44	-27.44	-29.09	-15.85	-15.85	-12.54	23.89	1.164
		4	14		8.36	35.78	-16.40	-18.65	-20.90	-40.31	-36.66	-36.66	-36.66	-40.31	-20.90	-18.65	-16.40	35.78	1.164
		5	16		17.29	53.57	-16.93	-28.67	-25.73	-47.68	-43.34	-43.34	-43.34	-47.68	-25.73	-28.67	-16.93	53.57	1.164
	6	18	16.53		64.03	-25.77	-32.29	-37.50	-63.46	-59.75	-54.04	-59.75	-63.46	-37.50	-32.29	-25.77	64.03	1.164	
	7	20	18.85		71.55	-33.67	-41.02	-41.02	-79.42	-66.50	-65.70	-66.50	-79.42	-41.02	-41.02	-33.67	71.55	1.164	

Tekanan dan temperatur ruangan :

T (°C)
30

Keterangan :

: Mobil 1

: Mobil 2



Tabel A 19 Hasil pengamatan distribusi tekanan minibus yang tersusun secara tandem pada konfigurasi seri dengan  $L/D = 0.909$  untuk pendekatan komputasi

$L/D$	NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )		
				P0	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12		P13	
0.909	1	8	Mobil 1	34.72	22.57	-14.96	-13.51	-8.46	-8.66	-8.46	-8.46	-8.46	-8.66	-8.46	-13.51	-14.96	22.57	1.164	
	2	10		54.06	37.15	-21.10	-21.70	-12.04	-14.28	-10.92	-10.92	-10.92	-14.28	-12.04	-21.70	-21.10	37.15	1.164	
	3	12		77.50	53.77	-30.81	-23.77	-16.34	-19.55	-14.73	-14.73	-14.73	-19.55	-16.34	-23.77	-30.81	53.77	1.164	
	4	14		107.17	73.71	-41.60	-32.47	-24.95	-32.16	-20.90	-19.21	-20.90	-32.16	-24.95	-32.47	-41.60	73.71	1.164	
	5	16		141.69	94.05	-53.15	-44.66	-24.84	-41.83	-23.64	-23.64	-23.64	-41.83	-24.84	-44.66	-53.15	94.05	1.164	
	6	18		174.18	124.29	-72.33	-65.18	-33.01	-57.03	-32.01	-29.43	-32.01	-57.03	-33.01	-65.18	-72.33	124.29	1.164	
	7	20		211.05	147.69	-86.13	-72.89	-42.01	-64.07	-33.19	-33.19	-33.19	-64.07	-42.01	-72.89	-86.13	147.69	1.164	
		NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )	
					P14	P15	P16	P17	18	P19	P20	P21	P22	P23	P24	P25	P26		P27
		1	8	Mobil 2	7.82	13.67	-7.74	-7.74	-7.94	-14.23	-13.79	-13.79	-13.79	-14.23	-7.94	-7.74	-7.74	13.67	1.164
		2	10		11.44	22.62	-9.81	-10.92	-12.04	-21.50	-20.30	-20.30	-20.30	-21.50	-12.04	-10.92	-9.81	22.62	1.164
		3	12		14.40	23.85	-14.73	-16.34	-14.73	-30.81	-29.20	-29.20	-29.20	-30.81	-14.73	-16.34	-14.73	23.85	1.164
		4	14		16.86	32.37	-16.40	-25.40	-20.90	-42.11	-40.51	-38.91	-40.51	-42.11	-20.90	-25.40	-16.40	32.37	1.164
		5	16		25.51	40.27	-24.84	-26.47	-27.67	-47.49	-45.86	-45.86	-45.86	-47.49	-27.67	-26.47	-24.84	40.27	1.164
	6	18	25.96		56.94	-31.03	-35.18	-41.16	-68.76	-58.03	-58.03	-58.03	-68.76	-41.16	-35.18	-31.03	56.94	1.164	
	7	20	37.40		72.69	-33.19	-40.61	-46.42	-81.72	-70.69	-68.48	-70.69	-81.72	-46.42	-40.61	-33.19	72.69	1.164	

Tekanan dan temperatur ruangan :

T (°C)
30

Keterangan :

: Mobil 1

: Mobil 2



Tabel A 20 Hasil pengamatan distribusi tekanan minibus yang tersusun secara tandem pada konfigurasi seri dengan  $L/D = 1.136$  untuk pendekatan komputasi

$L/D$	NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )		
				P0	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12		P13	
1.136	1	8	Mobil 1	35.51	23.63	-14.26	-13.97	-8.32	-11.29	-9.06	-9.06	-9.06	-11.29	-8.32	-13.97	-14.26	23.63	1.164	
	2	10		56.34	36.83	-14.82	-14.82	-7.93	-17.11	-11.38	-11.38	-11.38	-17.11	-7.93	-14.82	-14.82	36.83	1.164	
	3	12		78.87	55.75	-31.15	-23.54	-16.08	-23.54	-16.08	-16.08	-16.08	-23.54	-16.08	-23.54	-31.15	55.75	1.164	
	4	14		104.90	73.53	-40.72	-32.96	-25.04	-34.00	-20.99	-19.56	-20.99	-34.00	-25.04	-32.96	-40.72	73.53	1.164	
	5	16		134.85	99.82	-49.02	-43.18	-25.67	-40.26	-25.67	-24.55	-25.67	-40.26	-25.67	-43.18	-49.02	99.82	1.164	
	6	18		168.83	126.78	-65.61	-63.52	-34.01	-48.77	-30.33	-30.33	-30.33	-48.77	-34.01	-63.52	-65.61	126.78	1.164	
	7	20		206.97	152.34	-84.39	-69.33	-42.02	-66.18	-34.31	-34.31	-34.31	-66.18	-42.02	-69.33	-84.39	152.34	1.164	
		NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )	
					P14	P15	P16	P17	18	P19	P20	P21	P22	P23	P24	P25	P26		P27
		1	8	Mobil 2	8.03	13.23	-6.83	-9.06	-9.06	-14.63	-14.26	-14.26	-14.26	-14.63	-9.06	-9.06	-6.83	13.23	1.164
		2	10		13.88	21.91	-10.23	-13.67	-14.82	-21.71	-21.71	-20.56	-21.71	-21.71	-14.82	-13.67	-10.23	21.91	1.164
		3	12		17.75	32.62	-13.63	-20.24	-20.24	-31.39	-30.15	-29.30	-30.15	-31.39	-20.24	-20.24	-13.63	32.62	1.164
		4	14		26.49	42.17	-19.32	-25.04	-22.80	-42.96	-40.72	-39.04	-40.72	-42.96	-22.80	-25.04	-19.32	42.17	1.164
		5	16		37.94	53.13	-27.79	-28.59	-25.67	-56.06	-56.06	-49.02	-56.06	-56.06	-25.67	-28.59	-27.79	53.13	1.164
	6	18	45.72		65.57	-34.01	-37.70	-35.86	-63.52	-59.83	-59.83	-59.83	-63.52	-35.86	-37.70	-34.01	65.57	1.164	
	7	20	47.63		74.94	-34.31	-39.47	-39.47	-84.39	-71.33	-71.33	-71.33	-84.39	-39.47	-39.47	-34.31	74.94	1.164	

Tekanan dan temperatur ruangan :

T (°C)
30

Keterangan :



: Mobil 1



: Mobil 2



Tabel A 21 Hasil pengamatan distribusi tekanan minibus yang tersusun secara tandem pada konfigurasi paralel dengan  $M/D = 0.227$  untuk pendekatan komputasi

M/D	NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )			
				P0	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12		P13		
0.227	1	8	Mobil 1	35.36	19.91	-19.17	-19.03	-19.03	-22.77	-19.03	-19.03	-19.03	-19.23	-19.23	-19.03	-19.03	30.45	1.164		
	2	10		54.71	30.72	-29.46	-23.94	-22.97	-33.23	-29.46	-29.46	-29.46	-29.46	-29.46	-25.50	-25.50	45.14	1.164		
	3	12		78.52	47.06	-39.09	-31.60	-31.60	-54.07	-39.09	-39.09	-31.60	-42.83	-42.83	-39.09	-39.09	62.05	1.164		
	4	14		108.42	66.50	-64.85	-51.41	-49.01	-77.48	-51.41	-51.41	-49.01	-64.85	-64.85	-51.41	-36.78	83.34	1.164		
	5	16		140.84	90.20	-65.40	-69.75	-55.84	-97.57	-65.40	-65.40	-55.84	-65.40	-65.40	-65.40	-69.75	111.06	1.164		
	6	18		180.55	110.18	-102.12	-75.59	-66.74	-119.82	-81.63	-81.63	-75.59	-84.43	-84.43	-81.63	-81.63	136.72	1.164		
	7	20		220.24	144.02	-117.29	-95.52	-92.32	-149.96	-95.52	-95.52	-92.32	-117.29	-117.29	-95.52	-103.20	176.68	1.164		
		NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )		
					P14	P15	P16	P17	18	P19	P20	P21	P22	P23	P24	P25	P26		P27	
		1	8	Mobil 2	35.36	30.45	-19.03	-19.03	-19.23	-19.23	-19.03	-19.03	-19.03	-22.77	-19.03	-19.03	-19.17	19.91	1.164	
		2	10		54.71	45.14	-25.50	-25.50	-29.46	-29.46	-29.46	-29.46	-29.46	-29.46	-33.23	-22.97	-23.94	-29.46	30.72	1.164
		3	12		78.52	62.05	-39.09	-39.09	-42.83	-42.83	-31.60	-39.09	-39.09	-54.07	-31.60	-31.60	-39.09	47.06	1.164	
		4	14		108.42	83.34	-36.78	-51.41	-64.85	-64.85	-49.01	-51.41	-51.41	-77.48	-49.01	-51.41	-64.85	66.50	1.164	
		5	16		140.84	111.06	-69.75	-65.40	-65.40	-65.40	-55.84	-65.40	-65.40	-97.57	-55.84	-69.75	-65.40	90.20	1.164	
	6	18	180.55		136.72	-81.63	-81.63	-84.43	-84.43	-75.59	-81.63	-81.63	-119.82	-66.74	-75.59	-102.12	110.18	1.164		
	7	20	220.24		176.68	-103.20	-95.52	-117.29	-117.29	-92.32	-95.52	-95.52	-149.96	-92.32	-95.52	-117.29	144.02	1.164		

Tekanan dan temperatur ruangan :

T (°C)
30

Keterangan :



: Mobil 1



: Mobil 2



Tabel A 22 Hasil pengamatan distribusi tekanan minibus yang tersusun secara tandem pada konfigurasi paralel dengan  $M/D = 0.455$  untuk pendekatan komputasi

M/D	NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )		
				P0	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12		P13	
0.455	1	8	Mobil 1	36.30	23.34	-17.72	-17.72	-17.72	-24.08	-17.72	-17.72	-17.72	-24.08	-17.72	-17.72	-17.72	29.12	1.164	
	2	10		55.70	38.68	-29.25	-27.46	-27.46	-38.19	-27.46	-27.46	-27.46	-32.83	-29.25	-27.46	-27.46	38.68	1.164	
	3	12		79.30	47.42	-42.01	-36.90	-31.79	-54.79	-36.90	-36.90	-31.79	-42.01	-36.90	-31.79	-31.79	55.09	1.164	
	4	14		107.77	68.30	-52.87	-49.40	-39.02	-63.25	-49.40	-49.40	-39.02	-52.87	-49.40	-39.02	-39.02	82.15	1.164	
	5	16		140.07	88.80	-80.66	-67.15	-58.14	-89.67	-64.44	-59.94	-58.14	-71.65	-71.65	-64.44	-58.14	104.02	1.164	
	6	18		177.41	110.05	-99.14	-82.06	-64.99	-110.52	-82.06	-74.57	-64.99	-87.75	-82.06	-70.68	-70.68	128.50	1.164	
	7	20		218.49	134.28	-125.33	-97.27	-83.23	-132.35	-90.25	-90.25	-90.25	-104.28	-97.27	-92.27	-83.23	162.34	1.164	
		NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )	
					P14	P15	P16	P17	18	P19	P20	P21	P22	P23	P24	P25	P26		P27
		1	8	Mobil 2	36.30	29.12	-17.72	-17.72	-17.72	-24.08	-17.72	-17.72	-17.72	-24.08	-17.72	-17.72	-17.72	23.34	1.164
		2	10		55.70	38.68	-27.46	-27.46	-29.25	-32.83	-27.46	-27.46	-27.46	-38.19	-27.46	-27.46	-29.25	38.68	1.164
		3	12		79.30	55.09	-31.79	-31.79	-36.90	-42.01	-31.79	-36.90	-36.90	-54.79	-31.79	-36.90	-42.01	47.42	1.164
		4	14		107.77	82.15	-39.02	-39.02	-49.40	-52.87	-39.02	-49.40	-49.40	-63.25	-39.02	-49.40	-52.87	68.30	1.164
		5	16		140.07	104.02	-58.14	-64.44	-71.65	-71.65	-58.14	-59.94	-64.44	-89.67	-58.14	-67.15	-80.66	88.80	1.164
	6	18	177.41		128.50	-70.68	-70.68	-82.06	-87.75	-64.99	-74.57	-82.06	-110.52	-64.99	-82.06	-99.14	110.05	1.164	
	7	20	218.49		162.34	-83.23	-92.27	-97.27	-104.28	-90.25	-90.25	-90.25	-132.35	-83.23	-97.27	-125.33	134.28	1.164	

Tekanan dan temperatur ruangan :

T (°C)
30

Keterangan :

: Mobil 1

: Mobil 2



Tabel A 23 Hasil pengamatan distribusi tekanan minibus yang tersusun secara tandem pada konfigurasi paralel dengan  $M/D = 0.682$  untuk pendekatan komputasi

M/D	NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )			
				P0	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12		P13		
0.682	1	8	Mobil 1	35.57	22.75	-18.90	-17.16	-17.16	-23.52	-17.16	-17.16	-17.16	-23.52	-17.16	-17.16	-17.16	29.69	1.164		
	2	10		55.30	37.58	-24.77	-24.77	-24.77	-31.90	-24.77	-24.77	-24.77	-24.77	-28.34	-24.77	-21.21	-24.77	42.92	1.164	
	3	12		79.29	48.56	-48.18	-35.45	-32.91	-55.62	-35.45	-35.45	-35.45	-35.45	-48.18	-35.45	-32.91	-35.45	56.20	1.164	
	4	14		108.38	66.70	-64.21	-46.98	-43.54	-71.10	-46.98	-46.98	-46.98	-43.54	-64.21	-46.98	-46.98	-50.43	80.48	1.164	
	5	16		140.34	88.58	-77.31	-63.86	-54.89	-86.28	-68.34	-59.38	-59.38	-59.38	-81.79	-68.34	-54.89	-54.89	102.03	1.164	
	6	18		177.12	120.21	-94.85	-72.21	-66.55	-111.83	-77.87	-72.21	-72.21	-72.21	-89.19	-77.87	-66.55	-72.21	131.53	1.164	
	7	20		218.76	138.17	-119.64	-98.74	-84.80	-147.51	-98.74	-84.80	-84.80	-84.80	-119.64	-98.74	-77.83	-91.77	166.05	1.164	
		NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )		
					P14	P15	P16	P17	18	P19	P20	P21	P22	P23	P24	P25	P26		P27	
		1	8	Mobil 2	35.57	29.69	-17.16	-17.16	-17.16	-23.52	-17.16	-17.16	-17.16	-23.52	-17.16	-17.16	-18.90	22.75	1.164	
		2	10		55.30	42.92	-24.77	-21.21	-24.77	-28.34	-24.77	-24.77	-24.77	-24.77	-31.90	-24.77	-24.77	-24.77	37.58	1.164
		3	12		79.29	56.20	-35.45	-32.91	-35.45	-48.18	-35.45	-35.45	-35.45	-55.62	-32.91	-35.45	-48.18	48.56	1.164	
		4	14		108.38	80.48	-50.43	-46.98	-46.98	-64.21	-43.54	-46.98	-46.98	-71.10	-43.54	-46.98	-64.21	66.70	1.164	
		5	16		140.34	102.03	-54.89	-54.89	-68.34	-81.79	-59.38	-59.38	-68.34	-86.28	-54.89	-63.86	-77.31	88.58	1.164	
	6	18	177.12		131.53	-72.21	-66.55	-77.87	-89.19	-72.21	-72.21	-77.87	-111.83	-66.55	-72.21	-94.85	120.21	1.164		
	7	20	218.76		166.05	-91.77	-77.83	-98.74	-119.64	-84.80	-84.80	-98.74	-147.51	-84.80	-98.74	-119.64	138.17	1.164		

Tekanan dan temperatur ruangan :

T (°C)
30

Keterangan :



: Mobil 1



: Mobil 2



Tabel A 24 Hasil pengamatan distribusi tekanan minibus yang tersusun secara tandem pada konfigurasi paralel dengan  $M/D = 0.909$  untuk pendekatan komputasi

$M/D$	NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )			
				P0	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12		P13		
0.909	1	8	Mobil 1	35.78	23.36	-15.78	-15.78	-15.78	-23.15	-15.78	-15.78	-15.78	-15.78	-15.78	-15.78	-16.34	29.60	1.164		
	2	10		55.16	37.11	-24.27	-24.27	-24.27	-34.79	-24.27	-24.27	-24.27	-24.27	-31.28	-24.27	-24.27	-22.51	42.37	1.164	
	3	12		79.64	48.00	-44.80	-34.76	-32.26	-54.83	-34.76	-34.76	-32.26	-44.80	-34.76	-32.26	-32.26	-32.26	63.05	1.164	
	4	14		110.20	65.84	-59.86	-46.27	-46.27	-73.45	-46.27	-46.27	-46.27	-59.86	-46.27	-46.27	-46.27	-46.27	86.23	1.164	
	5	16		141.60	91.73	-76.19	-58.51	-54.09	-89.45	-58.51	-58.51	-58.51	-67.35	-58.51	-58.51	-58.51	-58.51	113.83	1.164	
	6	18		176.99	107.35	-104.55	-71.09	-71.09	-115.70	-71.09	-71.09	-71.09	-93.40	-71.09	-71.09	-71.09	-71.09	140.81	1.164	
	7	20		219.12	129.09	-118.18	-90.71	-76.97	-138.79	-90.71	-83.84	-83.84	-111.31	-90.71	-76.97	-83.84	-83.84	170.30	1.164	
		NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )		
					P14	P15	P16	P17	18	P19	P20	P21	P22	P23	P24	P25	P26		P27	
		1	8	Mobil 2	35.78	29.60	-16.34	-15.78	-15.78	-15.78	-15.78	-15.78	-15.78	-23.15	-15.78	-15.78	-15.78	23.36	1.164	
		2	10		55.16	42.37	-22.51	-24.27	-24.27	-31.28	-24.27	-24.27	-24.27	-24.27	-34.79	-24.27	-24.27	-24.27	37.11	1.164
		3	12		79.64	63.05	-32.26	-32.26	-34.76	-44.80	-32.26	-34.76	-34.76	-54.83	-32.26	-34.76	-44.80	48.00	1.164	
		4	14		110.20	86.23	-46.27	-46.27	-46.27	-59.86	-46.27	-46.27	-46.27	-73.45	-46.27	-46.27	-59.86	65.84	1.164	
		5	16		141.60	113.83	-58.51	-58.51	-58.51	-67.35	-58.51	-58.51	-58.51	-89.45	-54.09	-58.51	-76.19	91.73	1.164	
	6	18	176.99		140.81	-71.09	-71.09	-71.09	-93.40	-71.09	-71.09	-71.09	-115.70	-71.09	-71.09	-104.55	107.35	1.164		
	7	20	219.12		170.30	-83.84	-76.97	-90.71	-111.31	-83.84	-83.84	-90.71	-138.79	-76.97	-90.71	-118.18	129.09	1.164		



Tekanan dan temperatur ruangan :

T (°C)
30

Keterangan :



: Mobil 1



: Mobil 2

Tabel A 25 Hasil pengamatan distribusi tekanan minibus yang tersusun secara tandem pada konfigurasi paralel dengan  $M/D = 1.136$  untuk pendekatan komputasi

M/D	NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )		
				P0	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12		P13	
1.136	1	8	Mobil 1	35.61	22.85	-19.78	-18.00	-18.00	-23.33	-18.00	-18.00	-18.00	-18.00	-18.00	-18.00	-18.00	22.85	1.164	
	2	10		55.02	35.23	-28.11	-25.36	-22.60	-36.38	-27.71	-27.71	-27.71	-30.87	-25.36	-22.60	-25.96	37.99	1.164	
	3	12		79.10	49.64	-38.78	-36.90	-33.13	-55.71	-38.78	-38.78	-36.90	-44.42	-36.90	-33.13	-38.78	57.16	1.164	
	4	14		107.24	64.88	-61.13	-52.01	-42.97	-71.21	-52.01	-52.01	-52.01	-56.09	-46.01	-40.97	-52.01	80.00	1.164	
	5	16		140.51	88.46	-80.69	-67.68	-61.17	-87.20	-67.68	-67.68	-61.17	-74.19	-65.28	-54.67	-67.68	107.98	1.164	
	6	18		175.74	112.38	-101.45	-85.61	-81.49	-117.29	-81.49	-81.49	-78.49	-93.53	-79.29	-69.77	-84.41	134.94	1.164	
	7	20		215.18	138.40	-130.35	-111.16	-82.36	-139.95	-95.56	-95.56	-89.56	-120.76	-101.56	-82.36	-101.56	157.59	1.164	
		NO	Upstream (m/s)	Model uji	Distribusi tekanan (Pa)													$\rho$ (kg/m <sup>3</sup> )	
					P14	P15	P16	P17	18	P19	P20	P21	P22	P23	P24	P25	P26		P27
		1	8	Mobil 2	35.61	22.85	-18.00	-18.00	-18.00	-18.00	-18.00	-18.00	-18.00	-23.33	-18.00	-18.00	-19.78	22.85	1.164
		2	10		55.02	37.99	-25.96	-22.60	-25.36	-30.87	-27.71	-27.71	-27.71	-36.38	-22.60	-25.36	-28.11	35.23	1.164
		3	12		79.10	57.16	-38.78	-33.13	-36.90	-44.42	-36.90	-38.78	-38.78	-55.71	-33.13	-36.90	-38.78	49.64	1.164
		4	14		107.24	80.00	-52.01	-40.97	-46.01	-56.09	-52.01	-52.01	-52.01	-71.21	-42.97	-52.01	-61.13	64.88	1.164
		5	16		140.51	107.98	-67.68	-54.67	-65.28	-74.19	-61.17	-67.68	-67.68	-87.20	-61.17	-67.68	-80.69	88.46	1.164
	6	18	175.74		134.94	-84.41	-69.77	-79.29	-93.53	-78.49	-81.49	-81.49	-117.29	-81.49	-85.61	-101.45	112.38	1.164	
	7	20	215.18		157.59	-101.56	-82.36	-101.56	-120.76	-89.56	-95.56	-95.56	-139.95	-82.36	-111.16	-130.35	138.40	1.164	

Tekanan dan temperatur ruangan :

T (°C)
30

Keterangan :

 : Mobil 1

 : Mobil 2





Tabel A 26 Nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi seri dengan  $L/D = 0.227$  untuk pendekatan eksperimental

L/D	NO	Upstream (m/s)	Model uji	Koefisien tekanan (Cp)														
				Cp0	Cp1	Cp2	Cp3	Cp4	Cp5	Cp6	Cp7	Cp8	Cp9	Cp10	Cp11	Cp12	Cp13	
0.227	1	8	Mobil 1	0.900	0.600	-0.300	-0.260	-0.170	-0.268	-0.200	-0.170	-0.200	-0.268	-0.170	-0.260	-0.300	0.600	
	2	10		0.905	0.625	-0.313	-0.288	-0.185	-0.288	-0.150	-0.150	-0.150	-0.288	-0.185	-0.288	-0.313	0.625	
	3	12		0.909	0.643	-0.339	-0.250	-0.161	-0.250	-0.161	-0.143	-0.161	-0.250	-0.161	-0.250	-0.339	0.643	
	4	14		0.931	0.621	-0.325	-0.266	-0.160	-0.266	-0.172	-0.128	-0.172	-0.266	-0.160	-0.266	-0.325	0.621	
	5	16		0.947	0.668	-0.353	-0.316	-0.158	-0.263	-0.158	-0.125	-0.158	-0.263	-0.158	-0.316	-0.353	0.668	
	6	18		0.917	0.667	-0.333	-0.292	-0.167	-0.271	-0.167	-0.123	-0.167	-0.271	-0.167	-0.292	-0.333	0.667	
	7	20		0.900	0.633	-0.350	-0.267	-0.157	-0.247	-0.167	-0.120	-0.167	-0.247	-0.157	-0.267	-0.350	0.633	
		NO	Upstream (m/s)	Model uji	Koefisien tekanan (Cp)													
					Cp14	Cp15	Cp16	Cp17	Cp18	Cp19	Cp20	Cp21	Cp22	Cp23	Cp24	Cp25	Cp26	Cp27
		1	8	Mobil 2	0.115	0.280	-0.120	-0.140	-0.190	-0.340	-0.300	-0.300	-0.300	-0.340	-0.190	-0.140	-0.120	0.280
		2	10		0.114	0.375	-0.142	-0.155	-0.200	-0.313	-0.295	-0.295	-0.295	-0.313	-0.200	-0.155	-0.142	0.375
		3	12		0.104	0.286	-0.125	-0.161	-0.195	-0.339	-0.320	-0.285	-0.320	-0.339	-0.195	-0.161	-0.125	0.286
		4	14		0.097	0.290	-0.138	-0.159	-0.210	-0.345	-0.311	-0.275	-0.311	-0.345	-0.210	-0.159	-0.138	0.290
		5	16		0.090	0.316	-0.105	-0.158	-0.216	-0.342	-0.312	-0.269	-0.312	-0.342	-0.216	-0.158	-0.105	0.316
	6	18	0.085		0.292	-0.113	-0.167	-0.225	-0.333	-0.320	-0.266	-0.320	-0.333	-0.225	-0.167	-0.113	0.292	
	7	20	0.082		0.300	-0.100	-0.150	-0.200	-0.337	-0.303	-0.260	-0.303	-0.337	-0.200	-0.150	-0.100	0.300	

Keterangan :



: Mobil 1



: Mobil 2



Tabel A 27 Nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi seri dengan  $L/D = 0.455$  untuk pendekatan eksperimental

$L/D$	NO	Upstream (m/s)	Model uji	Koefisien tekanan ( $C_p$ )														
				Cp0	Cp1	Cp2	Cp3	Cp4	Cp5	Cp6	Cp7	Cp8	Cp9	Cp10	Cp11	Cp12	Cp13	
0.455	1	8	Mobil 1	0.900	0.600	-0.300	-0.230	-0.200	-0.240	-0.200	-0.147	-0.200	-0.240	-0.200	-0.230	-0.300	0.600	
	2	10		0.905	0.625	-0.333	-0.250	-0.190	-0.250	-0.170	-0.140	-0.170	-0.250	-0.190	-0.250	-0.333	0.625	
	3	12		0.911	0.636	-0.318	-0.227	-0.182	-0.227	-0.182	-0.136	-0.182	-0.227	-0.182	-0.227	-0.318	0.636	
	4	14		0.917	0.621	-0.325	-0.259	-0.176	-0.246	-0.176	-0.118	-0.176	-0.246	-0.176	-0.259	-0.325	0.621	
	5	16		0.905	0.658	-0.342	-0.263	-0.158	-0.237	-0.158	-0.096	-0.158	-0.237	-0.158	-0.263	-0.342	0.658	
	6	18		0.917	0.646	-0.375	-0.241	-0.167	-0.220	-0.167	-0.083	-0.167	-0.220	-0.167	-0.241	-0.375	0.646	
	7	20		0.917	0.617	-0.340	-0.221	-0.147	-0.210	-0.167	-0.083	-0.167	-0.210	-0.147	-0.221	-0.340	0.617	
		NO	Upstream (m/s)	Model uji	Koefisien tekanan ( $C_p$ )													
					Cp14	Cp15	Cp16	Cp17	Cp18	Cp19	Cp20	Cp21	Cp22	Cp23	Cp24	Cp25	Cp26	Cp27
		1	8	Mobil 2	0.076	0.330	-0.080	-0.140	-0.180	-0.300	-0.310	-0.290	-0.310	-0.300	-0.180	-0.140	-0.080	0.330
		2	10		0.080	0.313	-0.080	-0.125	-0.179	-0.331	-0.288	-0.285	-0.288	-0.331	-0.179	-0.125	-0.080	0.313
		3	12		0.075	0.273	-0.091	-0.136	-0.173	-0.318	-0.323	-0.283	-0.323	-0.318	-0.173	-0.136	-0.091	0.273
		4	14		0.069	0.276	-0.069	-0.162	-0.180	-0.345	-0.326	-0.270	-0.326	-0.345	-0.180	-0.162	-0.069	0.276
		5	16		0.066	0.263	-0.083	-0.158	-0.186	-0.342	-0.287	-0.271	-0.287	-0.342	-0.186	-0.158	-0.083	0.263
	6	18	0.058		0.250	-0.063	-0.167	-0.183	-0.354	-0.300	-0.263	-0.300	-0.354	-0.183	-0.167	-0.063	0.250	
	7	20	0.052		0.233	-0.067	-0.133	-0.167	-0.327	-0.283	-0.250	-0.283	-0.327	-0.167	-0.133	-0.067	0.233	

Keterangan :



: Mobil 1



: Mobil 2



Tabel A 28 Nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi seri dengan  $L/D = 0.682$  untuk pendekatan eksperimental

$L/D$	NO	Upstream (m/s)	Model uji	Koefisien tekanan (Cp)														
				Cp0	Cp1	Cp2	Cp3	Cp4	Cp5	Cp6	Cp7	Cp8	Cp9	Cp10	Cp11	Cp12	Cp13	
0.682	1	8	Mobil 1	0.902	0.608	-0.367	-0.265	-0.188	-0.276	-0.182	-0.182	-0.182	-0.276	-0.188	-0.265	-0.367	0.608	
	2	10		0.900	0.625	-0.350	-0.288	-0.170	-0.250	-0.160	-0.160	-0.160	-0.250	-0.170	-0.288	-0.350	0.625	
	3	12		0.909	0.636	-0.345	-0.273	-0.182	-0.227	-0.164	-0.154	-0.164	-0.227	-0.182	-0.273	-0.345	0.636	
	4	14		0.907	0.621	-0.345	-0.276	-0.176	-0.276	-0.138	-0.138	-0.138	-0.276	-0.176	-0.276	-0.345	0.621	
	5	16		0.895	0.632	-0.316	-0.289	-0.158	-0.263	-0.147	-0.132	-0.147	-0.263	-0.158	-0.289	-0.316	0.632	
	6	18		0.917	0.658	-0.342	-0.325	-0.167	-0.252	-0.158	-0.129	-0.158	-0.252	-0.167	-0.325	-0.342	0.658	
	7	20		0.900	0.633	-0.357	-0.300	-0.167	-0.247	-0.133	-0.127	-0.133	-0.247	-0.167	-0.300	-0.357	0.633	
		NO	Upstream (m/s)	Model uji	Koefisien tekanan (Cp)													
					Cp14	Cp15	Cp16	Cp17	Cp18	Cp19	Cp20	Cp21	Cp22	Cp23	Cp24	Cp25	Cp26	Cp27
		1	8	Mobil 2	0.118	0.412	-0.130	-0.164	-0.176	-0.337	-0.326	-0.326	-0.326	-0.337	-0.176	-0.164	-0.130	0.412
		2	10		0.125	0.375	-0.146	-0.175	-0.150	-0.350	-0.315	-0.315	-0.315	-0.350	-0.150	-0.175	-0.146	0.375
		3	12		0.120	0.273	-0.136	-0.182	-0.173	-0.345	-0.323	-0.301	-0.323	-0.345	-0.173	-0.182	-0.136	0.273
		4	14		0.069	0.310	-0.138	-0.152	-0.176	-0.345	-0.312	-0.290	-0.312	-0.345	-0.176	-0.152	-0.138	0.310
		5	16		0.105	0.342	-0.105	-0.179	-0.163	-0.316	-0.287	-0.281	-0.287	-0.316	-0.163	-0.179	-0.105	0.342
	6	18	0.083		0.333	-0.125	-0.167	-0.192	-0.333	-0.300	-0.278	-0.300	-0.333	-0.192	-0.167	-0.125	0.333	
	7	20	0.073		0.300	-0.133	-0.167	-0.167	-0.333	-0.283	-0.265	-0.283	-0.333	-0.167	-0.167	-0.133	0.300	

Keterangan :



: Mobil 1



: Mobil 2



Tabel A 29 Nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi seri dengan  $L/D = 0.909$  untuk pendekatan eksperimental

$L/D$	NO	Upstream (m/s)	Model uji	Koefisien tekanan ( $C_p$ )														
				Cp0	Cp1	Cp2	Cp3	Cp4	Cp5	Cp6	Cp7	Cp8	Cp9	Cp10	Cp11	Cp12	Cp13	
0.909	1	8	Mobil 1	0.890	0.600	-0.400	-0.360	-0.200	-0.200	-0.200	-0.185	-0.200	-0.200	-0.200	-0.360	-0.400	0.600	
	2	10		0.875	0.625	-0.350	-0.359	-0.175	-0.238	-0.180	-0.170	-0.180	-0.238	-0.175	-0.359	-0.350	0.625	
	3	12		0.909	0.636	-0.364	-0.273	-0.182	-0.227	-0.164	-0.164	-0.164	-0.227	-0.182	-0.273	-0.364	0.636	
	4	14		0.938	0.621	-0.345	-0.276	-0.207	-0.276	-0.158	-0.148	-0.158	-0.276	-0.207	-0.276	-0.345	0.621	
	5	16		0.947	0.621	-0.353	-0.289	-0.158	-0.263	-0.145	-0.145	-0.145	-0.263	-0.158	-0.289	-0.353	0.621	
	6	18		0.917	0.658	-0.375	-0.325	-0.167	-0.292	-0.158	-0.138	-0.158	-0.292	-0.167	-0.325	-0.375	0.658	
	7	20		0.900	0.633	-0.367	-0.300	-0.167	-0.267	-0.133	-0.133	-0.133	-0.267	-0.167	-0.300	-0.367	0.633	
		NO	Upstream (m/s)	Model uji	Koefisien tekanan ( $C_p$ )													
					Cp14	Cp15	Cp16	Cp17	Cp18	Cp19	Cp20	Cp21	Cp22	Cp23	Cp24	Cp25	Cp26	Cp27
		1	8	Mobil 2	0.200	0.360	-0.200	-0.200	-0.200	-0.360	-0.330	-0.330	-0.330	-0.360	-0.200	-0.200	-0.200	0.360
		2	10		0.188	0.375	-0.150	-0.185	-0.192	-0.313	-0.327	-0.325	-0.327	-0.313	-0.192	-0.185	-0.150	0.375
		3	12		0.164	0.273	-0.164	-0.182	-0.173	-0.364	-0.323	-0.323	-0.323	-0.364	-0.173	-0.182	-0.164	0.273
		4	14		0.138	0.276	-0.138	-0.207	-0.176	-0.345	-0.326	-0.312	-0.326	-0.345	-0.176	-0.207	-0.138	0.276
		5	16		0.158	0.253	-0.158	-0.163	-0.174	-0.316	-0.303	-0.303	-0.303	-0.316	-0.174	-0.163	-0.158	0.253
	6	18	0.125		0.292	-0.158	-0.175	-0.213	-0.354	-0.300	-0.300	-0.300	-0.354	-0.213	-0.175	-0.158	0.292	
	7	20	0.150		0.300	-0.133	-0.167	-0.183	-0.340	-0.283	-0.267	-0.283	-0.340	-0.183	-0.167	-0.133	0.300	

Keterangan :

 : Mobil 1

 : Mobil 2


Tabel A 30 Nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi seri dengan  $L/D = 1.136$  untuk pendekatan eksperimental

$L/D$	NO	Upstream (m/s)	Model uji	Koefisien tekanan ( $C_p$ )														
				Cp0	Cp1	Cp2	Cp3	Cp4	Cp5	Cp6	Cp7	Cp8	Cp9	Cp10	Cp11	Cp12	Cp13	
1.136	1	8	Mobil 1	0.900	0.600	-0.380	-0.360	-0.210	-0.300	-0.210	-0.210	-0.210	-0.300	-0.210	-0.360	-0.380	0.600	
	2	10		0.913	0.625	-0.250	-0.248	-0.125	-0.280	-0.187	-0.187	-0.187	-0.280	-0.125	-0.248	-0.250	0.625	
	3	12		0.883	0.636	-0.364	-0.273	-0.182	-0.273	-0.182	-0.182	-0.182	-0.273	-0.182	-0.273	-0.364	0.636	
	4	14		0.871	0.621	-0.345	-0.283	-0.207	-0.276	-0.168	-0.164	-0.168	-0.276	-0.207	-0.283	-0.345	0.621	
	5	16		0.870	0.658	-0.316	-0.289	-0.158	-0.263	-0.160	-0.160	-0.160	-0.263	-0.158	-0.289	-0.316	0.658	
	6	18		0.849	0.663	-0.342	-0.325	-0.167	-0.250	-0.158	-0.158	-0.158	-0.250	-0.167	-0.325	-0.342	0.663	
	7	20		0.830	0.633	-0.353	-0.283	-0.167	-0.267	-0.127	-0.127	-0.127	-0.267	-0.167	-0.283	-0.353	0.633	
		NO	Upstream (m/s)	Model uji	Koefisien tekanan ( $C_p$ )													
					Cp14	Cp15	Cp16	Cp17	Cp18	Cp19	Cp20	Cp21	Cp22	Cp23	Cp24	Cp25	Cp26	Cp27
		1	8	Mobil 2	0.200	0.340	-0.170	-0.234	-0.220	-0.356	-0.340	-0.340	-0.340	-0.356	-0.220	-0.234	-0.170	0.340
		2	10		0.220	0.363	-0.163	-0.223	-0.250	-0.370	-0.358	-0.348	-0.358	-0.370	-0.250	-0.223	-0.163	0.363
		3	12		0.200	0.375	-0.151	-0.226	-0.227	-0.351	-0.349	-0.333	-0.349	-0.351	-0.227	-0.226	-0.151	0.375
		4	14		0.207	0.355	-0.162	-0.206	-0.190	-0.376	-0.356	-0.330	-0.356	-0.376	-0.190	-0.206	-0.162	0.355
		5	16		0.233	0.330	-0.174	-0.181	-0.158	-0.368	-0.368	-0.328	-0.368	-0.368	-0.158	-0.181	-0.174	0.330
	6	18	0.220		0.333	-0.169	-0.188	-0.183	-0.331	-0.304	-0.303	-0.304	-0.331	-0.183	-0.188	-0.169	0.333	
	7	20	0.187		0.300	-0.143	-0.167	-0.167	-0.347	-0.293	-0.270	-0.293	-0.347	-0.167	-0.167	-0.143	0.300	

Keterangan :



: Mobil 1



: Mobil 2



Tabel A 31 Nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi paralel dengan  $M/D = 0.227$  untuk pendekatan eksperimental

M/D	NO	Upstream (m/s)	Model uji	Koefisien tekanan (Cp)														
				Cp0	Cp1	Cp2	Cp3	Cp4	Cp5	Cp6	Cp7	Cp8	Cp9	Cp10	Cp11	Cp12	Cp13	
0.227	1	8	Mobil 1	0.900	0.500	-0.500	-0.450	-0.450	-0.600	-0.450	-0.450	-0.450	-0.500	-0.500	-0.450	-0.450	0.800	
	2	10		0.910	0.500	-0.488	-0.395	-0.383	-0.563	-0.448	-0.445	-0.445	-0.488	-0.488	-0.425	-0.425	0.750	
	3	12		0.909	0.545	-0.435	-0.364	-0.364	-0.636	-0.435	-0.435	-0.364	-0.500	-0.500	-0.435	-0.435	0.727	
	4	14		0.897	0.552	-0.552	-0.431	-0.414	-0.655	-0.431	-0.431	-0.414	-0.552	-0.552	-0.431	-0.310	0.690	
	5	16		0.895	0.579	-0.427	-0.421	-0.368	-0.632	-0.427	-0.427	-0.368	-0.427	-0.427	-0.427	-0.421	0.737	
	6	18		0.920	0.560	-0.500	-0.390	-0.340	-0.600	-0.420	-0.420	-0.360	-0.440	-0.420	-0.420	-0.420	0.720	
	7	20		0.900	0.567	-0.500	-0.400	-0.367	-0.633	-0.408	-0.408	-0.367	-0.500	-0.467	-0.408	-0.400	0.733	
		NO	Upstream (m/s)	Model uji	Koefisien tekanan (Cp)													
					Cp14	Cp15	Cp16	Cp17	Cp18	Cp19	Cp20	Cp21	Cp22	Cp23	Cp24	Cp25	Cp26	Cp27
		1	8	Mobil 2	0.900	0.800	-0.450	-0.450	-0.500	-0.500	-0.450	-0.450	-0.450	-0.600	-0.450	-0.450	-0.500	0.500
		2	10		0.910	0.750	-0.425	-0.425	-0.488	-0.488	-0.445	-0.445	-0.448	-0.563	-0.383	-0.395	-0.488	0.500
		3	12		0.909	0.727	-0.435	-0.435	-0.500	-0.500	-0.364	-0.435	-0.435	-0.636	-0.364	-0.364	-0.435	0.545
		4	14		0.897	0.690	-0.310	-0.431	-0.552	-0.552	-0.414	-0.431	-0.431	-0.655	-0.414	-0.431	-0.552	0.552
		5	16		0.895	0.737	-0.421	-0.427	-0.427	-0.427	-0.368	-0.427	-0.427	-0.632	-0.368	-0.421	-0.427	0.579
	6	18	0.920		0.720	-0.420	-0.420	-0.420	-0.440	-0.360	-0.420	-0.420	-0.600	-0.340	-0.390	-0.500	0.560	
	7	20	0.900		0.733	-0.400	-0.408	-0.467	-0.500	-0.367	-0.408	-0.408	-0.633	-0.367	-0.400	-0.500	0.567	

Keterangan :



: Mobil 1



: Mobil 2



Tabel A 32 Nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi paralel dengan  $M/D = 0.455$  untuk pendekatan eksperimental

M/D	NO	Upstream (m/s)	Model uji	Koefisien tekanan (Cp)														
				Cp0	Cp1	Cp2	Cp3	Cp4	Cp5	Cp6	Cp7	Cp8	Cp9	Cp10	Cp11	Cp12	Cp13	
0.455	1	8	Mobil 1	0.950	0.600	-0.420	-0.420	-0.420	-0.600	-0.420	-0.420	-0.420	-0.600	-0.420	-0.420	-0.420	0.750	
	2	10		0.910	0.625	-0.500	-0.418	-0.418	-0.625	-0.418	-0.418	-0.418	-0.550	-0.500	-0.418	-0.418	0.625	
	3	12		0.909	0.545	-0.500	-0.400	-0.364	-0.636	-0.400	-0.400	-0.364	-0.500	-0.400	-0.364	-0.364	0.636	
	4	14		0.903	0.581	-0.452	-0.387	-0.323	-0.548	-0.387	-0.387	-0.323	-0.452	-0.419	-0.323	-0.323	0.710	
	5	16		0.921	0.579	-0.526	-0.447	-0.368	-0.579	-0.382	-0.382	-0.368	-0.474	-0.474	-0.382	-0.368	0.684	
	6	18		0.910	0.560	-0.520	-0.400	-0.340	-0.560	-0.400	-0.370	-0.340	-0.440	-0.420	-0.370	-0.370	0.670	
	7	20		0.900	0.567	-0.517	-0.400	-0.337	-0.550	-0.360	-0.360	-0.357	-0.437	-0.403	-0.380	-0.357	0.667	
		NO	Upstream (m/s)	Model uji	Koefisien tekanan (Cp)													
					Cp14	Cp15	Cp16	Cp17	Cp18	Cp19	Cp20	Cp21	Cp22	Cp23	Cp24	Cp25	Cp26	Cp27
		1	8	Mobil 2	0.950	0.750	-0.420	-0.420	-0.420	-0.600	-0.420	-0.420	-0.420	-0.600	-0.420	-0.420	-0.420	0.600
		2	10		0.910	0.625	-0.418	-0.418	-0.500	-0.550	-0.418	-0.418	-0.418	-0.625	-0.418	-0.418	-0.500	0.625
		3	12		0.909	0.636	-0.364	-0.364	-0.400	-0.500	-0.364	-0.400	-0.400	-0.636	-0.364	-0.400	-0.500	0.545
		4	14		0.903	0.710	-0.323	-0.323	-0.419	-0.452	-0.323	-0.387	-0.387	-0.548	-0.323	-0.387	-0.452	0.581
		5	16		0.921	0.684	-0.368	-0.382	-0.474	-0.474	-0.368	-0.382	-0.382	-0.579	-0.368	-0.447	-0.526	0.579
	6	18	0.910		0.670	-0.370	-0.370	-0.420	-0.440	-0.340	-0.370	-0.400	-0.560	-0.340	-0.400	-0.520	0.560	
	7	20	0.900		0.667	-0.357	-0.380	-0.403	-0.437	-0.357	-0.360	-0.360	-0.550	-0.337	-0.400	-0.517	0.567	

Keterangan :



: Mobil 1



: Mobil 2



Tabel A 33 Nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi paralel dengan  $M/D = 0.682$  untuk pendekatan eksperimental

$M/D$	NO	Upstream (m/s)	Model uji	Koefisien tekanan ( $C_p$ )														
				Cp0	Cp1	Cp2	Cp3	Cp4	Cp5	Cp6	Cp7	Cp8	Cp9	Cp10	Cp11	Cp12	Cp13	
0.682	1	8	Mobil 1	0.900	0.600	-0.500	-0.412	-0.412	-0.600	-0.412	-0.412	-0.412	-0.600	-0.412	-0.412	-0.412	0.750	
	2	10		0.910	0.625	-0.408	-0.400	-0.400	-0.520	-0.400	-0.400	-0.400	-0.458	-0.400	-0.333	-0.400	0.708	
	3	12		0.909	0.545	-0.545	-0.395	-0.364	-0.636	-0.395	-0.395	-0.389	-0.545	-0.395	-0.364	-0.395	0.636	
	4	14		0.931	0.552	-0.532	-0.394	-0.359	-0.601	-0.386	-0.386	-0.381	-0.532	-0.386	-0.394	-0.428	0.697	
	5	16		0.897	0.564	-0.487	-0.371	-0.359	-0.564	-0.436	-0.381	-0.375	-0.513	-0.436	-0.359	-0.359	0.667	
	6	18		0.920	0.600	-0.500	-0.360	-0.340	-0.580	-0.400	-0.378	-0.360	-0.440	-0.400	-0.340	-0.360	0.680	
	7	20		0.918	0.574	-0.492	-0.410	-0.361	-0.607	-0.410	-0.359	-0.361	-0.492	-0.410	-0.311	-0.377	0.689	
		NO	Upstream (m/s)	Model uji	Koefisien tekanan ( $C_p$ )													
					Cp14	Cp15	Cp16	Cp17	Cp18	Cp19	Cp20	Cp21	Cp22	Cp23	Cp24	Cp25	Cp26	Cp27
		1	8	Mobil 2	0.900	0.750	-0.412	-0.412	-0.412	-0.600	-0.412	-0.412	-0.412	-0.600	-0.412	-0.412	-0.500	0.600
		2	10		0.910	0.708	-0.400	-0.333	-0.400	-0.458	-0.400	-0.400	-0.400	-0.520	-0.400	-0.400	-0.408	0.625
		3	12		0.909	0.636	-0.395	-0.364	-0.395	-0.545	-0.389	-0.395	-0.395	-0.636	-0.364	-0.395	-0.545	0.545
		4	14		0.931	0.697	-0.428	-0.394	-0.386	-0.532	-0.381	-0.386	-0.386	-0.601	-0.359	-0.394	-0.532	0.552
		5	16		0.897	0.667	-0.359	-0.359	-0.436	-0.513	-0.375	-0.381	-0.436	-0.564	-0.359	-0.371	-0.487	0.564
	6	18	0.920		0.680	-0.360	-0.340	-0.400	-0.440	-0.360	-0.378	-0.400	-0.580	-0.340	-0.360	-0.500	0.600	
	7	20	0.918		0.689	-0.377	-0.311	-0.410	-0.492	-0.361	-0.359	-0.410	-0.607	-0.361	-0.410	-0.492	0.574	

Keterangan :



: Mobil 1



: Mobil 2





Tabel A 34 Nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi paralel dengan  $M/D = 0.909$  untuk pendekatan eksperimental

$M/D$	NO	Upstream (m/s)	Model uji	Koefisien tekanan ( $C_p$ )														
				$C_{p0}$	$C_{p1}$	$C_{p2}$	$C_{p3}$	$C_{p4}$	$C_{p5}$	$C_{p6}$	$C_{p7}$	$C_{p8}$	$C_{p9}$	$C_{p10}$	$C_{p11}$	$C_{p12}$	$C_{p13}$	
0.909	1	8	Mobil 1	0.900	0.600	-0.390	-0.390	-0.390	-0.600	-0.390	-0.390	-0.390	-0.390	-0.390	-0.390	-0.400	0.750	
	2	10		0.910	0.625	-0.388	-0.388	-0.388	-0.563	-0.388	-0.388	-0.388	-0.500	-0.388	-0.388	-0.375	0.688	
	3	12		0.909	0.545	-0.500	-0.385	-0.364	-0.636	-0.385	-0.385	-0.364	-0.500	-0.385	-0.364	-0.364	0.727	
	4	14		0.966	0.552	-0.517	-0.381	-0.379	-0.621	-0.381	-0.381	-0.381	-0.517	-0.381	-0.379	-0.379	0.724	
	5	16		0.929	0.550	-0.487	-0.375	-0.333	-0.588	-0.375	-0.375	-0.373	-0.436	-0.375	-0.363	-0.363	0.744	
	6	18		0.918	0.551	-0.531	-0.368	-0.347	-0.592	-0.368	-0.368	-0.367	-0.469	-0.368	-0.347	-0.367	0.714	
	7	20		0.903	0.548	-0.484	-0.387	-0.323	-0.581	-0.387	-0.355	-0.339	-0.468	-0.387	-0.323	-0.355	0.726	
		NO	Upstream (m/s)	Model uji	Koefisien tekanan ( $C_p$ )													
					$C_{p14}$	$C_{p15}$	$C_{p16}$	$C_{p17}$	$C_{p18}$	$C_{p19}$	$C_{p20}$	$C_{p21}$	$C_{p22}$	$C_{p23}$	$C_{p24}$	$C_{p25}$	$C_{p26}$	$C_{p27}$
		1	8	Mobil 2	0.900	0.750	-0.400	-0.390	-0.390	-0.390	-0.390	-0.390	-0.390	-0.600	-0.390	-0.390	-0.390	0.600
		2	10		0.910	0.688	-0.375	-0.388	-0.388	-0.500	-0.388	-0.388	-0.388	-0.563	-0.388	-0.388	-0.388	0.625
		3	12		0.909	0.727	-0.364	-0.364	-0.385	-0.500	-0.364	-0.385	-0.385	-0.636	-0.364	-0.385	-0.500	0.545
		4	14		0.966	0.724	-0.379	-0.379	-0.381	-0.517	-0.381	-0.381	-0.381	-0.621	-0.379	-0.381	-0.517	0.552
		5	16		0.929	0.744	-0.363	-0.363	-0.375	-0.436	-0.373	-0.375	-0.375	-0.588	-0.333	-0.375	-0.487	0.550
	6	18	0.918		0.714	-0.367	-0.347	-0.368	-0.469	-0.367	-0.368	-0.368	-0.592	-0.347	-0.368	-0.531	0.551	
	7	20	0.903		0.726	-0.355	-0.323	-0.387	-0.468	-0.339	-0.355	-0.387	-0.581	-0.323	-0.387	-0.484	0.548	

Keterangan :



: Mobil 1



: Mobil 2



Tabel A 35 Nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi paralel dengan  $M/D = 1.136$  untuk pendekatan eksperimental

$M/D$	NO	Upstream (m/s)	Model uji	Koefisien tekanan ( $C_p$ )														
				$C_{p0}$	$C_{p1}$	$C_{p2}$	$C_{p3}$	$C_{p4}$	$C_{p5}$	$C_{p6}$	$C_{p7}$	$C_{p8}$	$C_{p9}$	$C_{p10}$	$C_{p11}$	$C_{p12}$	$C_{p13}$	
1.136	1	8	Mobil 1	0.900	0.600	-0.500	-0.443	-0.443	-0.600	-0.443	-0.443	-0.443	-0.443	-0.443	-0.443	-0.443	0.600	
	2	10		0.910	0.563	-0.481	-0.431	-0.383	-0.580	-0.440	-0.440	-0.440	-0.518	-0.415	-0.350	-0.421	0.628	
	3	12		0.909	0.545	-0.435	-0.409	-0.364	-0.636	-0.435	-0.435	-0.409	-0.500	-0.409	-0.364	-0.435	0.636	
	4	14		0.867	0.533	-0.500	-0.427	-0.367	-0.600	-0.427	-0.427	-0.427	-0.467	-0.400	-0.333	-0.427	0.667	
	5	16		0.921	0.579	-0.500	-0.421	-0.368	-0.579	-0.421	-0.421	-0.368	-0.474	-0.395	-0.342	-0.421	0.684	
	6	18		0.920	0.580	-0.510	-0.420	-0.417	-0.590	-0.417	-0.417	-0.375	-0.460	-0.390	-0.350	-0.400	0.680	
	7	20		0.900	0.567	-0.533	-0.450	-0.333	-0.600	-0.400	-0.397	-0.367	-0.500	-0.400	-0.333	-0.400	0.667	
		NO	Upstream (m/s)	Model uji	Koefisien tekanan ( $C_p$ )													
					$C_{p14}$	$C_{p15}$	$C_{p16}$	$C_{p17}$	$C_{p18}$	$C_{p19}$	$C_{p20}$	$C_{p21}$	$C_{p22}$	$C_{p23}$	$C_{p24}$	$C_{p25}$	$C_{p26}$	$C_{p27}$
		1	8	Mobil 2	0.900	0.600	-0.443	-0.443	-0.443	-0.443	-0.443	-0.443	-0.443	-0.600	-0.443	-0.443	-0.500	0.600
		2	10		0.910	0.628	-0.421	-0.350	-0.415	-0.518	-0.440	-0.440	-0.440	-0.580	-0.383	-0.431	-0.481	0.563
		3	12		0.909	0.636	-0.435	-0.364	-0.409	-0.500	-0.409	-0.435	-0.435	-0.636	-0.364	-0.409	-0.435	0.545
		4	14		0.867	0.667	-0.427	-0.333	-0.400	-0.467	-0.427	-0.427	-0.427	-0.600	-0.367	-0.427	-0.500	0.533
		5	16		0.921	0.684	-0.421	-0.342	-0.395	-0.474	-0.368	-0.421	-0.421	-0.579	-0.368	-0.421	-0.500	0.579
	6	18	0.920		0.680	-0.400	-0.350	-0.390	-0.460	-0.375	-0.417	-0.417	-0.590	-0.417	-0.420	-0.510	0.580	
	7	20	0.900		0.667	-0.400	-0.333	-0.400	-0.500	-0.367	-0.397	-0.400	-0.600	-0.333	-0.450	-0.533	0.567	

Keterangan :



: Mobil 1



: Mobil 2



Tabel A 36 Nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi seri dengan  $L/D = 0.227$  untuk pendekatan komputasi

$L/D$	NO	Upstream (m/s)	Model uji	Koefisien tekanan ( $C_p$ )														
				$C_{p0}$	$C_{p1}$	$C_{p2}$	$C_{p3}$	$C_{p4}$	$C_{p5}$	$C_{p6}$	$C_{p7}$	$C_{p8}$	$C_{p9}$	$C_{p10}$	$C_{p11}$	$C_{p12}$	$C_{p13}$	
0.227	1	8	Mobil 1	0.953	0.626	-0.313	-0.273	-0.191	-0.278	-0.211	-0.191	-0.211	-0.278	-0.191	-0.273	-0.313	0.626	
	2	10		0.920	0.635	-0.322	-0.301	-0.200	-0.303	-0.159	-0.159	-0.159	-0.303	-0.200	-0.301	-0.322	0.635	
	3	12		0.911	0.680	-0.358	-0.276	-0.175	-0.276	-0.175	-0.154	-0.175	-0.276	-0.175	-0.276	-0.358	0.680	
	4	14		0.948	0.630	-0.368	-0.286	-0.184	-0.286	-0.184	-0.138	-0.184	-0.286	-0.184	-0.286	-0.368	0.630	
	5	16		0.950	0.686	-0.375	-0.334	-0.171	-0.273	-0.171	-0.130	-0.171	-0.273	-0.171	-0.334	-0.375	0.686	
	6	18		0.929	0.682	-0.339	-0.318	-0.176	-0.298	-0.176	-0.127	-0.176	-0.298	-0.176	-0.318	-0.339	0.682	
	7	20		0.918	0.653	-0.364	-0.282	-0.180	-0.261	-0.180	-0.124	-0.180	-0.261	-0.180	-0.282	-0.364	0.653	
		NO	Upstream (m/s)	Model uji	Koefisien tekanan ( $C_p$ )													
					$C_{p14}$	$C_{p15}$	$C_{p16}$	$C_{p17}$	$C_{p18}$	$C_{p19}$	$C_{p20}$	$C_{p21}$	$C_{p22}$	$C_{p23}$	$C_{p24}$	$C_{p25}$	$C_{p26}$	$C_{p27}$
		1	8	Mobil 2	0.115	0.292	-0.130	-0.160	-0.211	-0.354	-0.334	-0.334	-0.334	-0.354	-0.211	-0.160	-0.130	0.292
		2	10		0.126	0.391	-0.159	-0.159	-0.220	-0.363	-0.322	-0.322	-0.322	-0.363	-0.220	-0.159	-0.159	0.391
		3	12		0.110	0.293	-0.134	-0.175	-0.215	-0.358	-0.337	-0.317	-0.337	-0.358	-0.215	-0.175	-0.134	0.293
		4	14		0.101	0.304	-0.144	-0.164	-0.225	-0.368	-0.327	-0.307	-0.327	-0.368	-0.225	-0.164	-0.144	0.304
		5	16		0.094	0.339	-0.118	-0.171	-0.232	-0.354	-0.334	-0.293	-0.334	-0.354	-0.232	-0.171	-0.118	0.339
	6	18	0.090		0.314	-0.114	-0.176	-0.237	-0.359	-0.339	-0.278	-0.339	-0.359	-0.237	-0.176	-0.114	0.314	
	7	20	0.086		0.326	-0.112	-0.159	-0.220	-0.343	-0.323	-0.261	-0.323	-0.343	-0.220	-0.159	-0.112	0.326	

Keterangan :

 : Mobil 1

 : Mobil 2


Tabel A 37 Nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi seri dengan  $L/D = 0.455$  untuk pendekatan komputasi

L/D	NO	Upstream (m/s)	Model uji	Koefisien tekanan (Cp)														
				Cp0	Cp1	Cp2	Cp3	Cp4	Cp5	Cp6	Cp7	Cp8	Cp9	Cp10	Cp11	Cp12	Cp13	
0.455	1	8	Mobil 1	0.967	0.628	-0.311	-0.231	-0.211	-0.251	-0.211	-0.171	-0.211	-0.251	-0.211	-0.231	-0.311	0.628	
	2	10		0.939	0.635	-0.348	-0.269	-0.210	-0.269	-0.183	-0.154	-0.183	-0.269	-0.210	-0.269	-0.348	0.635	
	3	12		0.953	0.660	-0.339	-0.241	-0.195	-0.241	-0.202	-0.143	-0.202	-0.241	-0.195	-0.241	-0.339	0.660	
	4	14		0.929	0.656	-0.357	-0.298	-0.201	-0.288	-0.201	-0.123	-0.201	-0.288	-0.201	-0.298	-0.357	0.656	
	5	16		0.907	0.675	-0.369	-0.272	-0.176	-0.253	-0.176	-0.108	-0.176	-0.253	-0.176	-0.272	-0.369	0.675	
	6	18		0.921	0.664	-0.377	-0.258	-0.184	-0.242	-0.176	-0.093	-0.176	-0.242	-0.184	-0.258	-0.377	0.664	
	7	20		0.926	0.637	-0.344	-0.248	-0.171	-0.229	-0.171	-0.090	-0.171	-0.229	-0.171	-0.248	-0.344	0.637	
		NO	Upstream (m/s)	Model uji	Koefisien tekanan (Cp)													
					Cp14	Cp15	Cp16	Cp17	Cp18	Cp19	Cp20	Cp21	Cp22	Cp23	Cp24	Cp25	Cp26	Cp27
		1	8	Mobil 2	0.084	0.348	-0.086	-0.151	-0.191	-0.315	-0.311	-0.311	-0.311	-0.315	-0.191	-0.151	-0.086	0.348
		2	10		0.083	0.319	-0.085	-0.134	-0.193	-0.332	-0.292	-0.292	-0.292	-0.332	-0.193	-0.134	-0.085	0.319
		3	12		0.078	0.288	-0.099	-0.143	-0.182	-0.319	-0.324	-0.287	-0.324	-0.319	-0.182	-0.143	-0.099	0.288
		4	14		0.072	0.286	-0.070	-0.182	-0.198	-0.357	-0.337	-0.279	-0.337	-0.357	-0.198	-0.182	-0.070	0.286
		5	16		0.074	0.288	-0.086	-0.176	-0.195	-0.350	-0.292	-0.277	-0.292	-0.350	-0.195	-0.176	-0.086	0.288
	6	18	0.060		0.269	-0.069	-0.184	-0.184	-0.358	-0.319	-0.273	-0.319	-0.358	-0.184	-0.184	-0.069	0.269	
	7	20	0.056		0.252	-0.075	-0.148	-0.171	-0.344	-0.306	-0.267	-0.306	-0.344	-0.171	-0.148	-0.075	0.252	

Keterangan :



: Mobil 1



: Mobil 2



Tabel A 38 Nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi seri dengan  $L/D = 0.682$  untuk pendekatan komputasi

$L/D$	NO	Upstream (m/s)	Model uji	Koefisien tekanan ( $C_p$ )														
				Cp0	Cp1	Cp2	Cp3	Cp4	Cp5	Cp6	Cp7	Cp8	Cp9	Cp10	Cp11	Cp12	Cp13	
0.682	1	8	Mobil 1	0.956	0.616	-0.368	-0.287	-0.207	-0.287	-0.203	-0.203	-0.203	-0.287	-0.207	-0.287	-0.368	0.616	
	2	10		0.934	0.648	-0.364	-0.304	-0.185	-0.264	-0.185	-0.185	-0.185	-0.264	-0.185	-0.304	-0.364	0.648	
	3	12		0.933	0.641	-0.347	-0.288	-0.189	-0.248	-0.169	-0.169	-0.169	-0.248	-0.189	-0.288	-0.347	0.641	
	4	14		0.924	0.646	-0.361	-0.282	-0.203	-0.281	-0.144	-0.164	-0.144	-0.281	-0.203	-0.282	-0.361	0.646	
	5	16		0.930	0.674	-0.321	-0.291	-0.173	-0.271	-0.153	-0.143	-0.153	-0.271	-0.173	-0.291	-0.321	0.674	
	6	18		0.922	0.666	-0.356	-0.337	-0.179	-0.258	-0.160	-0.140	-0.160	-0.258	-0.179	-0.337	-0.356	0.666	
	7	20		0.917	0.641	-0.361	-0.302	-0.177	-0.263	-0.145	-0.130	-0.145	-0.263	-0.177	-0.302	-0.361	0.641	
		NO	Upstream (m/s)	Model uji	Koefisien tekanan ( $C_p$ )													
					Cp14	Cp15	Cp16	Cp17	Cp18	Cp19	Cp20	Cp21	Cp22	Cp23	Cp24	Cp25	Cp26	Cp27
		1	8	Mobil 2	0.123	0.435	-0.147	-0.167	-0.187	-0.368	-0.368	-0.368	-0.368	-0.368	-0.187	-0.167	-0.147	0.435
		2	10		0.132	0.390	-0.165	-0.185	-0.165	-0.364	-0.354	-0.344	-0.354	-0.364	-0.165	-0.185	-0.165	0.390
		3	12		0.127	0.285	-0.150	-0.189	-0.189	-0.347	-0.327	-0.327	-0.327	-0.347	-0.189	-0.189	-0.150	0.285
		4	14		0.073	0.314	-0.144	-0.164	-0.183	-0.353	-0.321	-0.321	-0.321	-0.353	-0.183	-0.164	-0.144	0.314
		5	16		0.116	0.360	-0.114	-0.192	-0.173	-0.320	-0.291	-0.291	-0.291	-0.320	-0.173	-0.192	-0.114	0.360
	6	18	0.088		0.340	-0.137	-0.171	-0.199	-0.337	-0.317	-0.287	-0.317	-0.337	-0.199	-0.171	-0.137	0.340	
	7	20	0.081		0.307	-0.145	-0.176	-0.176	-0.341	-0.286	-0.282	-0.286	-0.341	-0.176	-0.176	-0.145	0.307	

Keterangan :



: Mobil 1



: Mobil 2



Tabel A 39 Nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi seri dengan  $L/D = 0.909$  untuk pendekatan komputasi

$L/D$	NO	Upstream (m/s)	Model uji	Koefisien tekanan ( $C_p$ )														
				Cp0	Cp1	Cp2	Cp3	Cp4	Cp5	Cp6	Cp7	Cp8	Cp9	Cp10	Cp11	Cp12	Cp13	
0.909	1	8	Mobil 1	0.932	0.606	-0.402	-0.363	-0.227	-0.233	-0.227	-0.227	-0.227	-0.233	-0.227	-0.363	-0.402	0.606	
	2	10		0.929	0.638	-0.363	-0.373	-0.207	-0.245	-0.188	-0.188	-0.188	-0.245	-0.207	-0.373	-0.363	0.638	
	3	12		0.925	0.642	-0.368	-0.284	-0.195	-0.233	-0.176	-0.176	-0.176	-0.233	-0.195	-0.284	-0.368	0.642	
	4	14		0.940	0.646	-0.365	-0.285	-0.219	-0.282	-0.183	-0.168	-0.183	-0.282	-0.219	-0.285	-0.365	0.646	
	5	16		0.951	0.631	-0.357	-0.300	-0.167	-0.281	-0.159	-0.159	-0.159	-0.281	-0.167	-0.300	-0.357	0.631	
	6	18		0.924	0.659	-0.384	-0.346	-0.175	-0.302	-0.170	-0.156	-0.170	-0.302	-0.175	-0.346	-0.384	0.659	
	7	20		0.907	0.634	-0.370	-0.313	-0.180	-0.275	-0.143	-0.143	-0.143	-0.275	-0.180	-0.313	-0.370	0.634	
		NO	Upstream (m/s)	Model uji	Koefisien tekanan ( $C_p$ )													
					Cp14	Cp15	Cp16	Cp17	Cp18	Cp19	Cp20	Cp21	Cp22	Cp23	Cp24	Cp25	Cp26	Cp27
		1	8	Mobil 2	0.210	0.367	-0.208	-0.208	-0.213	-0.382	-0.370	-0.370	-0.370	-0.382	-0.213	-0.208	-0.208	0.367
		2	10		0.196	0.389	-0.168	-0.188	-0.207	-0.369	-0.349	-0.349	-0.349	-0.369	-0.207	-0.188	-0.168	0.389
		3	12		0.172	0.285	-0.176	-0.195	-0.176	-0.368	-0.348	-0.348	-0.348	-0.368	-0.176	-0.195	-0.176	0.285
		4	14		0.148	0.284	-0.144	-0.223	-0.183	-0.369	-0.355	-0.341	-0.355	-0.369	-0.183	-0.223	-0.144	0.284
		5	16		0.171	0.270	-0.167	-0.178	-0.186	-0.319	-0.308	-0.308	-0.308	-0.319	-0.186	-0.178	-0.167	0.270
	6	18	0.138		0.302	-0.165	-0.187	-0.218	-0.365	-0.308	-0.308	-0.308	-0.365	-0.218	-0.187	-0.165	0.302	
	7	20	0.161		0.312	-0.143	-0.174	-0.199	-0.351	-0.304	-0.294	-0.304	-0.351	-0.199	-0.174	-0.143	0.312	

Keterangan :



: Mobil 1



: Mobil 2



Tabel A 40 Nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi seri dengan  $L/D = 1.136$  untuk pendekatan komputasi

$L/D$	NO	Upstream (m/s)	Model uji	Koefisien tekanan ( $C_p$ )														
				Cp0	Cp1	Cp2	Cp3	Cp4	Cp5	Cp6	Cp7	Cp8	Cp9	Cp10	Cp11	Cp12	Cp13	
1.136	1	8	Mobil 1	0.953	0.634	-0.383	-0.375	-0.223	-0.303	-0.243	-0.243	-0.243	-0.303	-0.223	-0.375	-0.383	0.634	
	2	10		0.968	0.633	-0.255	-0.255	-0.136	-0.294	-0.195	-0.195	-0.195	-0.294	-0.136	-0.255	-0.255	0.633	
	3	12		0.941	0.665	-0.372	-0.281	-0.192	-0.281	-0.192	-0.192	-0.192	-0.281	-0.192	-0.281	-0.372	0.665	
	4	14		0.920	0.645	-0.357	-0.289	-0.220	-0.298	-0.184	-0.171	-0.184	-0.298	-0.220	-0.289	-0.357	0.645	
	5	16		0.905	0.670	-0.329	-0.290	-0.172	-0.270	-0.172	-0.165	-0.172	-0.270	-0.172	-0.290	-0.329	0.670	
	6	18		0.895	0.672	-0.348	-0.337	-0.180	-0.259	-0.161	-0.161	-0.161	-0.259	-0.180	-0.337	-0.348	0.672	
	7	20		0.889	0.654	-0.363	-0.298	-0.180	-0.284	-0.147	-0.147	-0.147	-0.284	-0.180	-0.298	-0.363	0.654	
		NO	Upstream (m/s)	Model uji	Koefisien tekanan ( $C_p$ )													
					Cp14	Cp15	Cp16	Cp17	Cp18	Cp19	Cp20	Cp21	Cp22	Cp23	Cp24	Cp25	Cp26	Cp27
		1	8	Mobil 2	0.215	0.355	-0.183	-0.243	-0.243	-0.393	-0.383	-0.383	-0.383	-0.393	-0.243	-0.243	-0.183	0.355
		2	10		0.238	0.376	-0.176	-0.235	-0.255	-0.373	-0.373	-0.353	-0.373	-0.373	-0.255	-0.235	-0.176	0.376
		3	12		0.212	0.389	-0.163	-0.241	-0.241	-0.375	-0.360	-0.350	-0.360	-0.375	-0.241	-0.241	-0.163	0.389
		4	14		0.232	0.370	-0.169	-0.220	-0.200	-0.377	-0.357	-0.342	-0.357	-0.377	-0.200	-0.220	-0.169	0.370
		5	16		0.255	0.357	-0.187	-0.192	-0.172	-0.376	-0.376	-0.329	-0.376	-0.376	-0.172	-0.192	-0.187	0.357
	6	18	0.242		0.348	-0.180	-0.200	-0.190	-0.337	-0.317	-0.317	-0.317	-0.337	-0.190	-0.200	-0.180	0.348	
	7	20	0.205		0.322	-0.147	-0.170	-0.170	-0.363	-0.306	-0.306	-0.306	-0.363	-0.170	-0.170	-0.147	0.322	

Keterangan :



: Mobil 1



: Mobil 2



Tabel A 41 Nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi paralel dengan  $M/D = 0.227$  untuk pendekatan komputasi

$M/D$	NO	Upstream (m/s)	Model uji	Koefisien tekanan (Cp)														
				Cp0	Cp1	Cp2	Cp3	Cp4	Cp5	Cp6	Cp7	Cp8	Cp9	Cp10	Cp11	Cp12	Cp13	
0.227	1	8	Mobil 1	0.949	0.534	-0.515	-0.511	-0.511	-0.611	-0.511	-0.511	-0.511	-0.516	-0.516	-0.511	-0.511	0.817	
	2	10		0.940	0.528	-0.506	-0.411	-0.395	-0.571	-0.506	-0.506	-0.506	-0.506	-0.506	-0.438	-0.438	0.776	
	3	12		0.937	0.562	-0.466	-0.377	-0.377	-0.645	-0.466	-0.466	-0.377	-0.511	-0.511	-0.466	-0.466	0.740	
	4	14		0.950	0.583	-0.569	-0.451	-0.430	-0.679	-0.451	-0.451	-0.430	-0.569	-0.569	-0.451	-0.322	0.731	
	5	16		0.945	0.605	-0.439	-0.468	-0.375	-0.655	-0.439	-0.439	-0.375	-0.439	-0.439	-0.439	-0.439	-0.468	0.745
	6	18		0.957	0.584	-0.542	-0.401	-0.354	-0.635	-0.433	-0.433	-0.401	-0.448	-0.448	-0.433	-0.433	0.725	
	7	20		0.946	0.619	-0.504	-0.410	-0.397	-0.644	-0.410	-0.410	-0.397	-0.504	-0.504	-0.410	-0.443	0.759	
		NO	Upstream (m/s)	Model uji	Koefisien tekanan (Cp)													
					Cp14	Cp15	Cp16	Cp17	Cp18	Cp19	Cp20	Cp21	Cp22	Cp23	Cp24	Cp25	Cp26	Cp27
		1	8	Mobil 2	0.949	0.817	-0.511	-0.511	-0.516	-0.516	-0.511	-0.511	-0.511	-0.611	-0.511	-0.511	-0.515	0.534
		2	10		0.940	0.776	-0.438	-0.438	-0.506	-0.506	-0.506	-0.506	-0.506	-0.571	-0.395	-0.411	-0.506	0.528
		3	12		0.937	0.740	-0.466	-0.466	-0.511	-0.511	-0.377	-0.466	-0.466	-0.645	-0.377	-0.377	-0.466	0.562
		4	14		0.950	0.731	-0.322	-0.451	-0.569	-0.569	-0.430	-0.451	-0.451	-0.679	-0.430	-0.451	-0.569	0.583
		5	16		0.945	0.745	-0.468	-0.439	-0.439	-0.439	-0.375	-0.439	-0.439	-0.655	-0.375	-0.468	-0.439	0.605
	6	18	0.957		0.725	-0.433	-0.433	-0.448	-0.448	-0.401	-0.433	-0.433	-0.635	-0.354	-0.401	-0.542	0.584	
	7	20	0.946		0.759	-0.443	-0.410	-0.504	-0.504	-0.397	-0.410	-0.410	-0.644	-0.397	-0.410	-0.504	0.619	

Keterangan :

 : Mobil 1

 : Mobil 2




Tabel A 42 Nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi paralel dengan  $M/D = 0.455$  untuk pendekatan komputasi

$M/D$	NO	Upstream (m/s)	Model uji	Koefisien tekanan ( $C_p$ )														
				Cp0	Cp1	Cp2	Cp3	Cp4	Cp5	Cp6	Cp7	Cp8	Cp9	Cp10	Cp11	Cp12	Cp13	
0.455	1	8	Mobil 1	0.975	0.627	-0.476	-0.476	-0.476	-0.646	-0.476	-0.476	-0.476	-0.646	-0.476	-0.476	-0.476	0.782	
	2	10		0.957	0.665	-0.503	-0.472	-0.472	-0.656	-0.472	-0.472	-0.472	-0.564	-0.503	-0.472	-0.472	0.665	
	3	12		0.946	0.566	-0.501	-0.440	-0.379	-0.654	-0.440	-0.440	-0.379	-0.501	-0.440	-0.379	-0.379	0.657	
	4	14		0.945	0.599	-0.463	-0.433	-0.342	-0.554	-0.433	-0.433	-0.342	-0.463	-0.433	-0.342	-0.342	0.720	
	5	16		0.940	0.596	-0.541	-0.451	-0.390	-0.602	-0.433	-0.402	-0.390	-0.481	-0.481	-0.433	-0.390	0.698	
	6	18		0.941	0.584	-0.526	-0.435	-0.345	-0.586	-0.435	-0.395	-0.345	-0.465	-0.435	-0.375	-0.375	0.681	
	7	20		0.939	0.577	-0.538	-0.418	-0.358	-0.569	-0.388	-0.388	-0.388	-0.448	-0.418	-0.396	-0.358	0.697	
		NO	Upstream (m/s)	Model uji	Cp14	Cp15	Cp16	Cp17	Cp18	Cp19	Cp20	Cp21	Cp22	Cp23	Cp24	Cp25	Cp26	Cp27
		1	8	Mobil 2	0.975	0.782	-0.476	-0.476	-0.476	-0.646	-0.476	-0.476	-0.476	-0.646	-0.476	-0.476	-0.476	0.627
		2	10		0.957	0.665	-0.472	-0.472	-0.503	-0.564	-0.472	-0.472	-0.472	-0.656	-0.472	-0.472	-0.503	0.665
		3	12		0.946	0.657	-0.379	-0.379	-0.440	-0.501	-0.379	-0.440	-0.440	-0.654	-0.379	-0.440	-0.501	0.566
		4	14		0.945	0.720	-0.342	-0.342	-0.433	-0.463	-0.342	-0.433	-0.433	-0.554	-0.342	-0.433	-0.463	0.599
		5	16		0.940	0.698	-0.390	-0.433	-0.481	-0.481	-0.390	-0.402	-0.433	-0.602	-0.390	-0.451	-0.541	0.596
		6	18		0.941	0.681	-0.375	-0.375	-0.435	-0.465	-0.345	-0.395	-0.435	-0.586	-0.345	-0.435	-0.526	0.584
	7	20	0.939		0.697	-0.358	-0.396	-0.418	-0.448	-0.388	-0.388	-0.388	-0.569	-0.358	-0.418	-0.538	0.577	

Keterangan :

 : Mobil 1

 : Mobil 2


Tabel A 43 Nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi paralel dengan  $M/D = 0.682$  untuk pendekatan komputasi

$M/D$	NO	Upstream (m/s)	Model uji	Koefisien tekanan ( $C_p$ )														
				Cp0	Cp1	Cp2	Cp3	Cp4	Cp5	Cp6	Cp7	Cp8	Cp9	Cp10	Cp11	Cp12	Cp13	
0.682	1	8	Mobil 1	0.955	0.611	-0.507	-0.461	-0.461	-0.632	-0.461	-0.461	-0.461	-0.632	-0.461	-0.461	-0.461	0.797	
	2	10		0.950	0.646	-0.426	-0.426	-0.426	-0.548	-0.426	-0.426	-0.426	-0.426	-0.487	-0.426	-0.364	-0.426	0.738
	3	12		0.946	0.579	-0.575	-0.423	-0.393	-0.664	-0.423	-0.423	-0.423	-0.423	-0.575	-0.423	-0.393	-0.423	0.671
	4	14		0.950	0.585	-0.563	-0.412	-0.382	-0.623	-0.412	-0.412	-0.382	-0.563	-0.412	-0.412	-0.442	-0.442	0.706
	5	16		0.942	0.595	-0.519	-0.429	-0.368	-0.579	-0.459	-0.399	-0.399	-0.549	-0.459	-0.368	-0.368	-0.368	0.685
	6	18		0.939	0.637	-0.503	-0.383	-0.353	-0.593	-0.413	-0.383	-0.383	-0.473	-0.413	-0.353	-0.383	-0.383	0.698
	7	20		0.940	0.594	-0.514	-0.424	-0.364	-0.634	-0.424	-0.364	-0.364	-0.364	-0.514	-0.424	-0.334	-0.394	0.713
		NO	Upstream (m/s)	Model uji	Koefisien tekanan ( $C_p$ )													
					Cp14	Cp15	Cp16	Cp17	Cp18	Cp19	Cp20	Cp21	Cp22	Cp23	Cp24	Cp25	Cp26	Cp27
		1	8	Mobil 2	0.955	0.797	-0.461	-0.461	-0.461	-0.632	-0.461	-0.461	-0.461	-0.632	-0.461	-0.461	-0.507	0.611
		2	10		0.950	0.738	-0.426	-0.364	-0.426	-0.487	-0.426	-0.426	-0.426	-0.548	-0.426	-0.426	-0.426	0.646
		3	12		0.946	0.671	-0.423	-0.393	-0.423	-0.575	-0.423	-0.423	-0.423	-0.664	-0.393	-0.423	-0.575	0.579
		4	14		0.950	0.706	-0.442	-0.412	-0.412	-0.563	-0.382	-0.412	-0.412	-0.623	-0.382	-0.412	-0.563	0.585
		5	16		0.942	0.685	-0.368	-0.368	-0.459	-0.549	-0.399	-0.399	-0.459	-0.579	-0.368	-0.429	-0.519	0.595
	6	18	0.939		0.698	-0.383	-0.353	-0.413	-0.473	-0.383	-0.383	-0.413	-0.593	-0.353	-0.383	-0.503	0.637	
	7	20	0.940		0.713	-0.394	-0.334	-0.424	-0.514	-0.364	-0.364	-0.424	-0.634	-0.364	-0.424	-0.514	0.594	

Keterangan :



: Mobil 1



: Mobil 2



Tabel A 44 Nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi paralel dengan  $M/D = 0.909$  untuk pendekatan komputasi

$M/D$	NO	Upstream (m/s)	Model uji	Koefisien tekanan ( $C_p$ )														
				Cp0	Cp1	Cp2	Cp3	Cp4	Cp5	Cp6	Cp7	Cp8	Cp9	Cp10	Cp11	Cp12	Cp13	
0.909	1	8	Mobil 1	0.961	0.627	-0.424	-0.424	-0.424	-0.622	-0.424	-0.424	-0.424	-0.424	-0.424	-0.424	-0.439	0.795	
	2	10		0.948	0.638	-0.417	-0.417	-0.417	-0.598	-0.417	-0.417	-0.417	-0.537	-0.417	-0.417	-0.387	0.728	
	3	12		0.950	0.573	-0.535	-0.415	-0.385	-0.654	-0.415	-0.415	-0.385	-0.535	-0.415	-0.385	-0.385	0.752	
	4	14		0.966	0.577	-0.525	-0.406	-0.406	-0.644	-0.406	-0.406	-0.406	-0.525	-0.406	-0.406	-0.406	0.756	
	5	16		0.950	0.616	-0.511	-0.393	-0.363	-0.600	-0.393	-0.393	-0.393	-0.452	-0.393	-0.393	-0.393	0.764	
	6	18		0.939	0.569	-0.554	-0.377	-0.377	-0.614	-0.377	-0.377	-0.377	-0.495	-0.377	-0.377	-0.377	0.747	
	7	20		0.941	0.555	-0.508	-0.390	-0.331	-0.596	-0.390	-0.360	-0.360	-0.478	-0.390	-0.331	-0.360	0.732	
		NO	Upstream (m/s)	Model uji	Koefisien tekanan ( $C_p$ )													
					Cp14	Cp15	Cp16	Cp17	Cp18	Cp19	Cp20	Cp21	Cp22	Cp23	Cp24	Cp25	Cp26	Cp27
		1	8	Mobil 2	0.961	0.795	-0.439	-0.424	-0.424	-0.424	-0.424	-0.424	-0.424	-0.622	-0.424	-0.424	-0.424	0.627
		2	10		0.948	0.728	-0.387	-0.417	-0.417	-0.537	-0.417	-0.417	-0.417	-0.598	-0.417	-0.417	-0.417	0.638
		3	12		0.950	0.752	-0.385	-0.385	-0.415	-0.535	-0.385	-0.415	-0.415	-0.654	-0.385	-0.415	-0.535	0.573
		4	14		0.966	0.756	-0.406	-0.406	-0.406	-0.525	-0.406	-0.406	-0.406	-0.644	-0.406	-0.406	-0.525	0.577
		5	16		0.950	0.764	-0.393	-0.393	-0.393	-0.452	-0.393	-0.393	-0.393	-0.600	-0.363	-0.393	-0.511	0.616
	6	18	0.939		0.747	-0.377	-0.377	-0.377	-0.495	-0.377	-0.377	-0.377	-0.614	-0.377	-0.377	-0.554	0.569	
	7	20	0.941		0.732	-0.360	-0.331	-0.390	-0.478	-0.360	-0.360	-0.390	-0.596	-0.331	-0.390	-0.508	0.555	

Keterangan :

 : Mobil 1

 : Mobil 2


Tabel A 45 Nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi paralel dengan  $M/D = 1.136$  untuk pendekatan komputasi

$M/D$	NO	Upstream (m/s)	Model uji	Koefisien tekanan ( $C_p$ )														
				Cp0	Cp1	Cp2	Cp3	Cp4	Cp5	Cp6	Cp7	Cp8	Cp9	Cp10	Cp11	Cp12	Cp13	
1.136	1	8	Mobil 1	0.956	0.614	-0.531	-0.483	-0.483	-0.626	-0.483	-0.483	-0.483	-0.483	-0.483	-0.483	-0.483	0.614	
	2	10		0.945	0.605	-0.483	-0.436	-0.388	-0.625	-0.476	-0.476	-0.476	-0.530	-0.436	-0.388	-0.446	0.653	
	3	12		0.944	0.592	-0.463	-0.440	-0.395	-0.665	-0.463	-0.463	-0.440	-0.530	-0.440	-0.395	-0.463	0.682	
	4	14		0.940	0.569	-0.536	-0.456	-0.377	-0.624	-0.456	-0.456	-0.456	-0.492	-0.403	-0.359	-0.456	0.701	
	5	16		0.943	0.594	-0.542	-0.454	-0.411	-0.585	-0.454	-0.454	-0.411	-0.498	-0.438	-0.367	-0.454	0.725	
	6	18		0.932	0.596	-0.538	-0.454	-0.432	-0.622	-0.432	-0.432	-0.416	-0.496	-0.420	-0.370	-0.448	0.716	
	7	20		0.924	0.594	-0.560	-0.477	-0.354	-0.601	-0.410	-0.410	-0.385	-0.519	-0.436	-0.354	-0.436	0.677	
		NO	Upstream (m/s)	Model uji	Koefisien tekanan ( $C_p$ )													
					Cp14	Cp15	Cp16	Cp17	Cp18	Cp19	Cp20	Cp21	Cp22	Cp23	Cp24	Cp25	Cp26	Cp27
		1	8	Mobil 2	0.956	0.614	-0.483	-0.483	-0.483	-0.483	-0.483	-0.483	-0.483	-0.626	-0.483	-0.483	-0.531	0.614
		2	10		0.945	0.653	-0.446	-0.388	-0.436	-0.530	-0.476	-0.476	-0.476	-0.625	-0.388	-0.436	-0.483	0.605
		3	12		0.944	0.682	-0.463	-0.395	-0.440	-0.530	-0.440	-0.463	-0.463	-0.665	-0.395	-0.440	-0.463	0.592
		4	14		0.940	0.701	-0.456	-0.359	-0.403	-0.492	-0.456	-0.456	-0.456	-0.624	-0.377	-0.456	-0.536	0.569
		5	16		0.943	0.725	-0.454	-0.367	-0.438	-0.498	-0.411	-0.454	-0.454	-0.585	-0.411	-0.454	-0.542	0.594
	6	18	0.932		0.716	-0.448	-0.370	-0.420	-0.496	-0.416	-0.432	-0.432	-0.622	-0.432	-0.454	-0.538	0.596	
	7	20	0.924		0.677	-0.436	-0.354	-0.436	-0.519	-0.385	-0.410	-0.410	-0.601	-0.354	-0.477	-0.560	0.594	

Keterangan :

 : Mobil 1

 : Mobil 2


Tabel A 46 Perbandingan nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi seri dengan  $L/D = 0.227$  untuk pendekatan komputasi dan eksperimental

L/D	NO	U (m/s)	Model uji	MOBIL 1														
				SELISIH														
				0	1	2	3	4	5	6	7	8	9	10	11	12	13	
0.227	1	8	Mobil 1	5.54%	4.16%	4.28%	4.61%	10.93%	3.54%	5.34%	10.93%	5.34%	3.54%	10.93%	4.61%	4.28%	4.16%	
	2	10		1.61%	1.55%	2.90%	4.64%	7.37%	5.05%	5.66%	5.66%	5.66%	5.05%	7.37%	4.64%	2.90%	1.55%	
	3	12		0.20%	5.46%	5.14%	9.51%	7.93%	9.51%	7.93%	7.37%	7.93%	9.51%	7.93%	9.51%	5.14%	5.46%	
	4	14		1.74%	1.51%	11.64%	7.09%	13.37%	7.09%	6.47%	7.38%	6.47%	7.09%	13.37%	7.09%	11.64%	1.51%	
	5	16		0.28%	2.52%	5.85%	5.38%	7.47%	3.46%	7.47%	3.54%	7.47%	3.46%	7.47%	5.38%	5.85%	2.52%	
	6	18		1.28%	2.25%	1.64%	8.42%	5.07%	9.14%	5.07%	3.12%	5.07%	9.14%	5.07%	8.42%	1.64%	2.25%	
	7	20		1.97%	3.08%	3.72%	5.35%	12.72%	5.60%	7.15%	2.96%	7.15%	5.60%	12.72%	5.35%	3.72%	3.08%	
				Model uji	MOBIL 2													
	SELISIH																	
					14.5	15	16	17	18	19	20	21	22	23	24	25	26	27
		1	8	Mobil 2	0.08%	4.01%	7.41%	12.64%	10.08%	4.02%	10.13%	10.13%	10.13%	4.02%	10.08%	12.64%	7.41%	4.01%
		2	10		9.79%	3.99%	10.38%	2.52%	9.12%	13.81%	8.34%	8.34%	8.34%	13.81%	9.12%	2.52%	10.38%	3.99%
		3	12		5.38%	2.61%	6.63%	7.93%	9.57%	5.14%	5.14%	10.09%	5.14%	5.14%	9.57%	7.93%	6.63%	2.61%
		4	14		3.94%	4.84%	3.95%	3.26%	6.54%	6.20%	4.74%	10.24%	4.74%	6.20%	6.54%	3.26%	3.95%	4.84%
	5	16	4.68%		6.87%	10.63%	7.47%	6.91%	3.40%	6.49%	8.34%	6.49%	3.40%	6.91%	7.47%	10.63%	6.87%	
	6	18	5.85%		7.25%	1.58%	5.07%	4.99%	7.23%	5.58%	4.26%	5.58%	7.23%	4.99%	5.07%	1.58%	7.25%	
	7	20	5.55%		8.07%	10.84%	5.70%	9.26%	1.87%	5.98%	0.49%	5.98%	1.87%	9.26%	5.70%	10.84%	8.07%	



Keterangan :

: Mobil 1

: Mobil 2

Tabel A 47 Perbandingan nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi seri dengan  $L/D = 0.455$  untuk pendekatan komputasi dan eksperimental

L/D	NO	U (m/s)	Model uji	MOBIL 1														
				SELISIH														
				0	1	2	3	4	5	6	7	8	9	10	11	12	13	
0.455	1	8	Mobil 1	6.95%	4.46%	3.66%	0.62%	5.41%	4.54%	5.41%	14.27%	5.41%	4.54%	5.41%	0.62%	3.66%	4.46%	
	2	10		3.59%	1.59%	4.41%	7.04%	9.42%	7.04%	7.18%	9.10%	7.18%	7.04%	9.42%	7.04%	4.41%	1.59%	
	3	12		4.48%	3.54%	6.07%	5.64%	6.54%	5.64%	9.86%	4.63%	9.86%	5.64%	6.54%	5.64%	6.07%	3.54%	
	4	14		1.29%	5.36%	8.99%	13.35%	12.63%	14.72%	12.63%	4.27%	12.63%	14.72%	12.63%	13.35%	8.99%	5.36%	
	5	16		0.23%	2.57%	7.34%	3.42%	10.17%	6.44%	10.17%	11.42%	10.17%	6.44%	10.17%	3.42%	7.34%	2.57%	
	6	18		0.50%	2.67%	0.56%	6.66%	9.61%	9.17%	5.16%	10.26%	5.16%	9.17%	9.61%	6.66%	0.56%	2.67%	
	7	20		0.99%	3.21%	1.16%	10.96%	14.16%	8.13%	2.46%	7.90%	2.46%	8.13%	14.16%	10.96%	1.16%	3.21%	
	0.455	NO	U (m/s)	Mobil 2	MOBIL 2													
		SELISIH																
		14.5	15		16	17	18	19	20	21	22	23	24	25	26	27		
		1	8		9.02%	5.23%	7.14%	7.58%	5.98%	4.80%	0.44%	6.87%	0.44%	4.80%	5.98%	7.58%	7.14%	5.23%
		2	10		3.30%	2.18%	5.34%	6.91%	7.48%	0.09%	1.58%	2.43%	1.58%	0.09%	7.48%	6.91%	5.34%	2.18%
		3	12		2.82%	5.22%	8.22%	4.63%	5.16%	0.31%	0.38%	1.55%	0.38%	0.31%	5.16%	4.63%	8.22%	5.22%
		4	14		3.64%	3.48%	1.78%	10.58%	8.73%	3.38%	3.43%	3.18%	3.43%	3.38%	8.73%	10.58%	1.78%	3.48%
5		16	9.80%		8.76%	4.29%	10.17%	4.78%	2.21%	1.71%	2.45%	1.71%	2.21%	4.78%	10.17%	4.29%	8.76%	
6	18	3.51%	6.91%	9.11%	9.61%	0.58%	1.02%	6.04%	3.84%	6.04%	1.02%	0.58%	9.61%	9.11%	6.91%			
7	20	7.17%	7.53%	10.73%	10.03%	2.46%	5.04%	7.26%	6.39%	7.26%	5.04%	2.46%	10.03%	10.73%	7.53%			



Keterangan :



: Mobil 1



: Mobil 2

Tabel A 48 Perbandingan nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi seri dengan  $L/D = 0.682$  untuk pendekatan komputasi dan eksperimental

L/D	NO	U (m/s)	Model uji	MOBIL 1																	
				SELISIH																	
				0	1	2	3	4	5	6	7	8	9	10	11	12	13				
0.682	1	8	Mobil 1	5.69%	1.25%	0.04%	7.88%	9.10%	3.78%	10.57%	10.57%	10.57%	3.78%	9.10%	7.88%	0.04%	1.25%				
	2	10		3.67%	3.61%	3.77%	5.49%	8.17%	5.48%	13.57%	13.57%	13.57%	5.48%	8.17%	5.49%	3.77%	3.61%				
	3	12		2.54%	0.66%	0.48%	5.26%	3.85%	8.49%	3.37%	9.27%	3.37%	8.49%	3.85%	5.26%	0.48%	0.66%				
	4	14		1.90%	3.87%	4.44%	2.15%	13.44%	1.99%	4.06%	15.64%	4.06%	1.99%	13.44%	2.15%	4.44%	3.87%				
	5	16		3.83%	6.34%	1.60%	0.50%	8.58%	2.97%	3.70%	7.25%	3.70%	2.97%	8.58%	0.50%	1.60%	6.34%				
	6	18		0.59%	1.22%	4.07%	3.42%	6.99%	2.40%	0.74%	7.76%	0.74%	2.40%	6.99%	3.42%	4.07%	1.22%				
	7	20		1.81%	1.27%	1.15%	0.62%	5.88%	6.05%	7.82%	2.68%	7.82%	6.05%	5.88%	0.62%	1.15%	1.27%				
		NO	U (m/s)	Model uji	MOBIL 2																
					SELISIH																
					14.5	15	16	17	18	19	20	21	22	23	24	25	26	27			
					1	8	Mobil 2	4.56%	5.34%	11.50%	1.81%	5.64%	8.20%	11.19%	11.19%	11.19%	8.20%	5.64%	1.81%	11.50%	5.34%
					2	10		5.60%	3.95%	11.51%	5.46%	9.24%	3.77%	10.97%	8.40%	10.97%	3.77%	9.24%	5.46%	11.51%	3.95%
					3	12		5.85%	4.31%	8.84%	3.85%	8.65%	0.48%	1.42%	8.14%	1.42%	0.48%	8.65%	3.85%	8.84%	4.31%
					4	14		5.94%	1.05%	4.06%	7.20%	4.02%	2.42%	2.90%	9.70%	2.90%	2.42%	4.02%	7.20%	4.06%	1.05%
5	16	9.29%	4.86%	7.36%	7.00%	5.54%		1.32%	1.40%	3.57%	1.40%	1.32%	5.54%	7.00%	7.36%	4.86%					
6	18	4.93%	1.83%	8.54%	2.66%	3.61%		0.94%	5.32%	2.88%	5.32%	0.94%	3.61%	2.66%	8.54%	1.83%					
7	20	9.44%	2.39%	7.82%	5.42%	5.42%		2.30%	0.81%	6.10%	0.81%	2.30%	5.42%	5.42%	7.82%	2.39%					



Keterangan :



: Mobil 1



: Mobil 2

Tabel A 49 Perbandingan nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi seri dengan  $L/D = 0.909$  untuk pendekatan komputasi dan eksperimental

L/D	NO	U (m/s)	Model uji	MOBIL 1																	
				SELISIH																	
				0	1	2	3	4	5	6	7	8	9	10	11	12	13				
0.909	1	8	Mobil 1	4.53%	0.98%	0.36%	0.76%	11.95%	13.99%	11.95%	18.56%	11.95%	13.99%	11.95%	0.76%	0.36%	0.98%				
	2	10		5.79%	2.09%	3.48%	3.80%	15.43%	3.19%	4.11%	9.43%	4.11%	3.19%	15.43%	3.80%	3.48%	2.09%				
	3	12		1.69%	0.82%	1.07%	3.84%	6.74%	2.59%	6.90%	6.90%	6.90%	2.59%	6.74%	3.84%	1.07%	0.82%				
	4	14		0.17%	3.95%	5.45%	3.09%	5.42%	2.15%	13.81%	12.17%	13.81%	2.15%	5.42%	3.09%	5.45%	3.95%				
	5	16		0.38%	1.62%	1.15%	3.43%	5.31%	6.27%	8.46%	8.46%	8.46%	6.27%	5.31%	3.43%	1.15%	1.62%				
	6	18		0.76%	0.12%	2.24%	5.98%	4.79%	3.57%	6.72%	11.38%	6.72%	3.57%	4.79%	5.98%	2.24%	0.12%				
	7	20		0.72%	0.17%	0.89%	4.19%	7.65%	3.11%	6.47%	6.47%	6.47%	3.11%	7.65%	4.19%	0.89%	0.17%				
		NO	U (m/s)	Model uji	MOBIL 2																
					SELISIH																
					14.5	15	16	17	18	19	20	21	22	23	24	25	26	27			
					1	8	Mobil 2	4.68%	1.88%	3.75%	3.75%	6.17%	5.80%	10.80%	10.80%	10.80%	5.80%	6.17%	3.75%	3.75%	1.88%
					2	10		4.58%	3.50%	10.98%	1.44%	7.27%	15.43%	6.26%	6.88%	6.26%	15.43%	7.27%	1.44%	10.98%	3.50%
					3	12		4.74%	4.16%	6.90%	6.74%	1.73%	1.07%	7.37%	7.37%	7.37%	1.07%	1.73%	6.74%	6.90%	4.16%
					4	14		6.67%	2.80%	4.06%	7.10%	4.02%	6.59%	8.25%	8.52%	8.25%	6.59%	4.02%	7.10%	4.06%	2.80%
5					16	7.79%		6.33%	5.31%	8.18%	6.49%	0.93%	1.68%	1.68%	1.68%	0.93%	6.49%	8.18%	5.31%	6.33%	
6	18	9.22%	3.41%	3.79%	6.21%	2.64%		2.87%	2.52%	2.52%	2.52%	2.87%	2.64%	6.21%	3.79%	3.41%					
7	20	6.63%	3.93%	6.47%	4.46%	8.06%		3.14%	6.69%	9.35%	6.69%	3.14%	8.06%	4.46%	6.47%	3.93%					



Keterangan :



: Mobil 1



: Mobil 2



Tabel A 50 Perbandingan nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi seri dengan  $L/D = 1.136$  untuk pendekatan komputasi dan eksperimental

L/D	NO	U (m/s)	Model uji	MOBIL 1														
				SELISIH														
				0	1	2	3	4	5	6	7	8	9	10	11	12	13	
1.136	1	8	Mobil 1	5.60%	5.40%	0.74%	4.05%	5.96%	1.01%	13.67%	13.67%	13.67%	1.01%	5.96%	4.05%	0.74%	5.40%	
	2	10		5.74%	1.24%	1.82%	2.80%	8.29%	4.78%	4.33%	4.33%	4.33%	4.78%	8.29%	2.80%	1.82%	1.24%	
	3	12		6.14%	4.33%	2.17%	2.92%	5.26%	2.92%	5.26%	5.26%	5.26%	2.92%	5.26%	2.92%	2.17%	4.33%	
	4	14		5.28%	3.71%	3.40%	2.14%	5.74%	7.45%	8.73%	4.39%	8.73%	7.45%	5.74%	2.14%	3.40%	3.71%	
	5	16		3.87%	1.81%	4.02%	0.12%	8.36%	2.62%	6.99%	2.75%	6.99%	2.62%	8.36%	0.12%	4.02%	1.81%	
	6	18		5.19%	1.46%	1.80%	3.52%	7.60%	3.33%	1.55%	1.55%	1.55%	3.33%	7.60%	3.52%	1.80%	1.46%	
	7	20		6.62%	3.21%	2.53%	4.87%	7.66%	6.20%	14.06%	14.06%	14.06%	6.20%	7.66%	4.87%	2.53%	3.21%	
				Mobil 2	MOBIL 2													
					SELISIH													
					14.5	15	16	17	18	19	20	21	22	23	24	25	26	27
		1	8		7.17%	4.24%	7.31%	3.80%	9.56%	9.37%	11.19%	11.19%	11.19%	9.37%	9.56%	3.80%	7.31%	4.24%
		2	10		7.72%	3.71%	7.53%	5.28%	1.82%	0.79%	4.14%	1.62%	4.14%	0.79%	1.82%	5.28%	7.53%	3.71%
		3	12		5.58%	3.65%	7.22%	6.27%	5.89%	6.33%	2.97%	4.77%	2.97%	6.33%	5.89%	6.27%	7.22%	3.65%
		4	14		10.89%	4.01%	4.51%	6.37%	5.11%	0.20%	0.41%	3.51%	0.41%	0.20%	5.11%	6.37%	4.51%	4.01%
	5	16	8.43%		7.46%	6.88%	5.46%	8.36%	2.08%	2.22%	0.34%	2.22%	2.08%	8.36%	5.46%	6.88%	7.46%	
	6	18	9.27%	4.13%	6.22%	5.81%	3.59%	1.79%	4.14%	4.55%	4.14%	1.79%	3.59%	5.81%	6.22%	4.13%		
	7	20	8.76%	6.75%	2.76%	1.69%	1.69%	4.37%	4.27%	11.88%	4.27%	4.37%	1.69%	1.69%	2.76%	6.75%		



Keterangan :



: Mobil 1



: Mobil 2

Tabel A 51 Perbandingan nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi paralel dengan  $M/D = 0.227$  untuk pendekatan komputasi dan eksperimental

M/D	NO	U (m/s)	Model uji	MOBIL 1																	
				SELISIH																	
				0	1	2	3	4	5	6	7	8	9	10	11	12	13				
0.227	1	8	Mobil 1	5.19%	6.44%	2.85%	11.91%	11.91%	1.85%	11.91%	11.91%	11.91%	3.14%	3.14%	11.91%	11.91%	2.13%				
	2	10		3.20%	5.28%	3.70%	3.96%	3.10%	1.47%	11.50%	12.10%	12.10%	3.70%	3.70%	3.00%	3.00%	3.29%				
	3	12		2.97%	2.87%	6.83%	3.55%	3.55%	1.37%	6.83%	6.83%	3.55%	2.17%	2.17%	6.83%	6.83%	1.76%				
	4	14		5.67%	5.36%	2.96%	4.42%	3.69%	3.54%	4.42%	4.42%	3.69%	2.96%	2.96%	4.42%	3.75%	5.61%				
	5	16		5.35%	4.37%	2.64%	10.06%	1.70%	3.56%	2.64%	2.64%	1.70%	2.64%	2.64%	2.64%	10.06%	1.15%				
	6	18		3.91%	4.16%	7.68%	2.70%	3.94%	5.57%	2.98%	2.98%	10.19%	1.73%	6.20%	2.98%	2.98%	0.69%				
	7	20		4.87%	8.40%	0.76%	2.51%	7.54%	1.68%	0.56%	0.56%	7.54%	0.76%	7.38%	0.56%	9.77%	3.38%				
		NO	U (m/s)	Model uji	MOBIL 2																
					SELISIH																
					14.5	15	16	17	18	19	20	21	22	23	24	25	26	27			
					1	8	Mobil 2	5.19%	2.13%	11.91%	11.91%	3.14%	3.14%	11.91%	11.91%	11.91%	1.85%	11.91%	11.91%	2.85%	6.44%
					2	10		3.20%	3.29%	3.00%	3.00%	3.70%	3.70%	12.10%	12.10%	11.50%	1.47%	3.10%	3.96%	3.70%	5.28%
					3	12		2.97%	1.76%	6.83%	6.83%	2.17%	2.17%	3.55%	6.83%	6.83%	1.37%	3.55%	3.55%	6.83%	2.87%
					4	14		5.67%	5.61%	3.75%	4.42%	2.96%	2.96%	3.69%	4.42%	4.42%	3.54%	3.69%	4.42%	2.96%	5.36%
5					16	5.35%		1.15%	10.06%	2.64%	2.64%	2.64%	1.70%	2.64%	2.64%	3.56%	1.70%	10.06%	2.64%	4.37%	
6	18	3.91%	0.69%	2.98%	2.98%	6.20%		1.73%	10.19%	2.98%	2.98%	5.57%	3.94%	2.70%	7.68%	4.16%					
7	20	4.87%	3.38%	9.77%	0.56%	7.38%		0.76%	7.54%	0.56%	0.56%	1.68%	7.54%	2.51%	0.76%	8.40%					



Keterangan :

: Mobil 1

: Mobil 2

Tabel A 52 Perbandingan nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi paralel dengan  $M/D = 0.455$  untuk pendekatan komputasi dan eksperimental

M/D	NO	U (m/s)	Model uji	MOBIL 1																
				SELISIH																
				0	1	2	3	4	5	6	7	8	9	10	11	12	13			
0.455	1	8	Mobil 1	2.52%	4.24%	11.70%	11.70%	11.70%	7.18%	11.70%	11.70%	11.70%	7.18%	11.70%	11.70%	11.70%	4.07%			
	2	10		4.92%	5.95%	0.52%	11.53%	11.53%	4.75%	11.53%	11.53%	11.53%	2.49%	0.52%	11.53%	11.53%	5.95%			
	3	12		3.93%	3.60%	0.26%	9.16%	4.15%	2.66%	9.16%	9.16%	4.15%	0.26%	9.16%	4.15%	4.15%	3.18%			
	4	14		4.39%	3.03%	2.55%	10.62%	5.69%	1.10%	10.62%	10.62%	5.69%	2.55%	3.17%	5.69%	5.69%	1.45%			
	5	16		2.03%	2.87%	2.78%	0.73%	5.58%	3.80%	11.66%	5.02%	5.58%	1.50%	1.50%	11.66%	5.58%	2.00%			
	6	18		3.28%	4.04%	1.09%	8.09%	1.35%	4.45%	8.09%	6.44%	1.35%	5.45%	3.49%	1.29%	1.29%	1.68%			
	7	20		4.11%	1.75%	4.03%	4.26%	5.83%	3.25%	7.14%	7.14%	8.00%	2.52%	3.46%	4.12%	0.24%	4.40%			
		NO	U (m/s)	Model uji	MOBIL 2															
					SELISIH															
					14.5	15	16	17	18	19	20	21	22	23	24	25	26	27		
					1	8	2.52%	4.07%	11.70%	11.70%	11.70%	7.18%	11.70%	11.70%	11.70%	7.18%	11.70%	11.70%	11.70%	4.24%
					2	10	4.92%	5.95%	11.53%	11.53%	0.52%	2.49%	11.53%	11.53%	11.53%	4.75%	11.53%	11.53%	0.52%	5.95%
					3	12	3.93%	3.18%	4.15%	4.15%	9.16%	0.26%	4.15%	9.16%	9.16%	2.66%	4.15%	9.16%	0.26%	3.60%
					4	14	4.39%	1.45%	5.69%	5.69%	3.17%	2.55%	5.69%	10.62%	10.62%	1.10%	5.69%	10.62%	2.55%	3.03%
5					16	2.03%	2.00%	5.58%	11.66%	1.50%	1.50%	5.58%	5.02%	11.66%	3.80%	5.58%	0.73%	2.78%	2.87%	
6	18	3.28%	1.68%	1.29%	1.29%	3.49%	5.45%	1.35%	6.44%	8.09%	4.45%	1.35%	8.09%	1.09%	4.04%					
7	20	4.11%	4.40%	0.24%	4.12%	3.46%	2.52%	8.00%	7.14%	7.14%	3.25%	5.83%	4.26%	4.03%	1.75%					



Keterangan :

 : Mobil 1

 : Mobil 2

Tabel A 53 Perbandingan nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi paralel dengan  $M/D = 0.682$  untuk pendekatan komputasi dan eksperimental

M/D	NO	U (m/s)	Model uji	MOBIL 1																
				SELISIH																
				0	1	2	3	4	5	6	7	8	9	10	11	12	13			
0.682	1	8	Mobil 1	5.75%	1.75%	1.44%	10.57%	10.57%	4.99%	10.57%	10.57%	10.57%	4.99%	10.57%	10.57%	10.57%	5.90%			
	2	10		4.23%	3.20%	4.26%	6.02%	6.02%	5.12%	6.02%	6.02%	6.02%	6.03%	6.02%	8.76%	6.02%	4.07%			
	3	12		3.91%	5.86%	5.12%	6.51%	7.38%	4.11%	6.51%	6.51%	8.02%	5.12%	6.51%	7.38%	6.51%	5.10%			
	4	14		2.01%	5.65%	5.53%	4.39%	5.86%	3.62%	6.21%	6.21%	0.07%	5.53%	6.21%	4.39%	3.12%	1.27%			
	5	16		4.73%	5.11%	6.11%	13.43%	2.56%	2.58%	4.97%	4.39%	5.86%	6.59%	4.97%	2.56%	2.56%	2.65%			
	6	18		2.05%	5.88%	0.60%	5.99%	3.66%	2.20%	3.14%	1.29%	5.99%	6.97%	3.14%	3.66%	5.99%	2.51%			
	7	20		2.30%	3.33%	4.30%	3.37%	0.99%	4.27%	3.37%	1.35%	0.99%	4.30%	3.37%	6.84%	4.35%	3.47%			
		NO	U (m/s)	Model uji	MOBIL 2															
					SELISIH															
					14.5	15	16	17	18	19	20	21	22	23	24	25	26	27		
					1	8	5.75%	5.90%	10.57%	10.57%	10.57%	4.99%	10.57%	10.57%	10.57%	4.99%	10.57%	10.57%	1.44%	1.75%
					2	10	4.23%	4.07%	6.02%	8.76%	6.02%	6.03%	6.02%	6.02%	6.02%	5.12%	6.02%	6.02%	4.26%	3.20%
					3	12	3.91%	5.10%	6.51%	7.38%	6.51%	5.12%	8.02%	6.51%	6.51%	4.11%	7.38%	6.51%	5.12%	5.86%
					4	14	2.01%	1.27%	3.12%	4.39%	6.21%	5.53%	0.07%	6.21%	6.21%	3.62%	5.86%	4.39%	5.53%	5.65%
5					16	4.73%	2.65%	2.56%	2.56%	4.97%	6.59%	5.86%	4.39%	4.97%	2.58%	2.56%	13.43%	6.11%	5.11%	
6	18	2.05%	2.51%	5.99%	3.66%	3.14%	6.97%	5.99%	1.29%	3.14%	2.20%	3.66%	5.99%	0.60%	5.88%					
7	20	2.30%	3.47%	4.35%	6.84%	3.37%	4.30%	0.99%	1.35%	3.37%	4.27%	0.99%	3.37%	4.30%	3.33%					



Keterangan :

 : Mobil 1

 : Mobil 2

Tabel A 54 Perbandingan nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi paralel dengan  $M/D = 0.909$  untuk pendekatan komputasi dan eksperimental

M/D	NO	U (m/s)	Model uji	MOBIL 1																
				SELISIH																
				0	1	2	3	4	5	6	7	8	9	10	11	12	13			
0.909	1	8	Mobil 1	6.30%	4.33%	7.93%	7.93%	7.93%	3.47%	7.93%	7.93%	7.93%	7.93%	7.93%	7.93%	8.84%	5.62%			
	2	10		3.99%	1.97%	7.06%	7.06%	7.06%	5.89%	7.06%	7.06%	7.06%	6.97%	7.06%	7.06%	3.05%	5.56%			
	3	12		4.33%	4.77%	6.46%	7.08%	5.52%	2.73%	7.08%	7.08%	5.52%	6.46%	7.08%	5.52%	5.52%	3.33%			
	4	14		0.06%	4.42%	1.43%	5.98%	6.49%	3.60%	5.98%	5.98%	5.98%	1.43%	5.98%	6.49%	6.49%	4.20%			
	5	16		2.28%	10.71%	4.73%	4.61%	8.19%	1.98%	4.61%	4.61%	4.94%	3.57%	4.61%	7.48%	7.48%	2.67%			
	6	18		2.16%	3.21%	4.30%	2.46%	7.98%	3.55%	2.46%	2.46%	2.56%	5.23%	2.46%	7.98%	2.56%	4.34%			
	7	20		4.04%	1.10%	4.68%	0.65%	2.43%	2.60%	0.65%	1.47%	5.95%	2.18%	0.65%	2.43%	1.47%	0.78%			
		NO	U (m/s)	Model uji	MOBIL 2															
					SELISIH															
					14.5	15	16	17	18	19	20	21	22	23	24	25	26	27		
					1	8	6.30%	5.62%	8.84%	7.93%	7.93%	7.93%	7.93%	7.93%	7.93%	3.47%	7.93%	7.93%	7.93%	4.33%
					2	10	3.99%	5.56%	3.05%	7.06%	7.06%	6.97%	7.06%	7.06%	7.06%	5.89%	7.06%	7.06%	7.06%	1.97%
					3	12	4.33%	3.33%	5.52%	5.52%	7.08%	6.46%	5.52%	7.08%	7.08%	2.73%	5.52%	7.08%	6.46%	4.77%
					4	14	0.06%	4.20%	6.49%	6.49%	5.98%	1.43%	5.98%	5.98%	5.98%	3.60%	6.49%	5.98%	1.43%	4.42%
5					16	2.28%	2.67%	7.48%	7.48%	4.61%	3.57%	4.94%	4.61%	4.61%	1.98%	8.19%	4.61%	4.73%	10.71%	
6	18	2.16%	4.34%	2.56%	7.98%	2.46%	5.23%	2.56%	2.46%	2.46%	3.55%	7.98%	2.46%	4.30%	3.21%					
7	20	4.04%	0.78%	1.47%	2.43%	0.65%	2.18%	5.95%	1.47%	0.65%	2.60%	2.43%	0.65%	4.68%	1.10%					



Keterangan :

 : Mobil 1

 : Mobil 2

Tabel A 55 Perbandingan nilai koefisien tekanan minibus yang tersusun secara tandem pada konfigurasi paralel dengan  $M/D = 1.136$  untuk pendekatan komputasi dan eksperimental

M/D	NO	U (m/s)	Model uji	MOBIL 1													
				SELISIH													
				0	1	2	3	4	5	6	7	8	9	10	11	12	13
1.136	1	8	Mobil 1	5.87%	2.20%	5.82%	8.33%	8.33%	4.20%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	2.20%
	2	10		3.75%	7.09%	0.53%	1.20%	1.52%	7.20%	7.70%	7.70%	7.70%	2.43%	4.76%	9.89%	5.72%	3.86%
	3	12		3.67%	7.90%	6.08%	7.08%	8.02%	4.26%	6.08%	6.08%	7.08%	5.67%	7.08%	8.02%	6.08%	6.70%
	4	14		7.81%	6.22%	6.69%	6.34%	2.65%	3.88%	6.34%	6.34%	6.34%	5.09%	0.82%	7.18%	6.34%	4.94%
	5	16		2.33%	2.49%	7.68%	7.31%	10.27%	1.08%	7.31%	7.31%	10.27%	4.87%	9.91%	6.76%	7.31%	5.59%
	6	18		1.28%	2.68%	5.20%	7.49%	3.50%	5.14%	3.50%	3.50%	9.91%	7.26%	7.25%	5.40%	10.64%	4.98%
	7	20		2.63%	4.68%	4.75%	5.75%	5.78%	0.19%	2.55%	3.37%	4.69%	3.61%	8.31%	5.78%	8.31%	1.52%
				Mobil 2	MOBIL 2												
	SELISIH																
	14,5	15	16		17	18	19	20	21	22	23	24	25	26	27		
	1	8	5.87%		2.20%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	4.20%	8.33%	8.33%	5.82%	2.20%
	2	10	3.75%		3.86%	5.72%	9.89%	4.76%	2.43%	7.70%	7.70%	7.70%	7.20%	1.52%	1.20%	0.53%	7.09%
	3	12	3.67%		6.70%	6.08%	8.02%	7.08%	5.67%	7.08%	6.08%	6.08%	4.26%	8.02%	7.08%	6.08%	7.90%
	4	14	7.81%		4.94%	6.34%	7.18%	0.82%	5.09%	6.34%	6.34%	6.34%	3.88%	2.65%	6.34%	6.69%	6.22%
5	16	2.33%	5.59%		7.31%	6.76%	9.91%	4.87%	10.27%	7.31%	7.31%	1.08%	10.27%	7.31%	7.68%	2.49%	
6	18	1.28%	4.98%	10.64%	5.40%	7.25%	7.26%	9.91%	3.50%	3.50%	5.14%	3.50%	7.49%	5.20%	2.68%		
7	20	2.63%	1.52%	8.31%	5.78%	8.31%	3.61%	4.69%	3.37%	2.55%	0.19%	5.78%	5.75%	4.75%	4.68%		

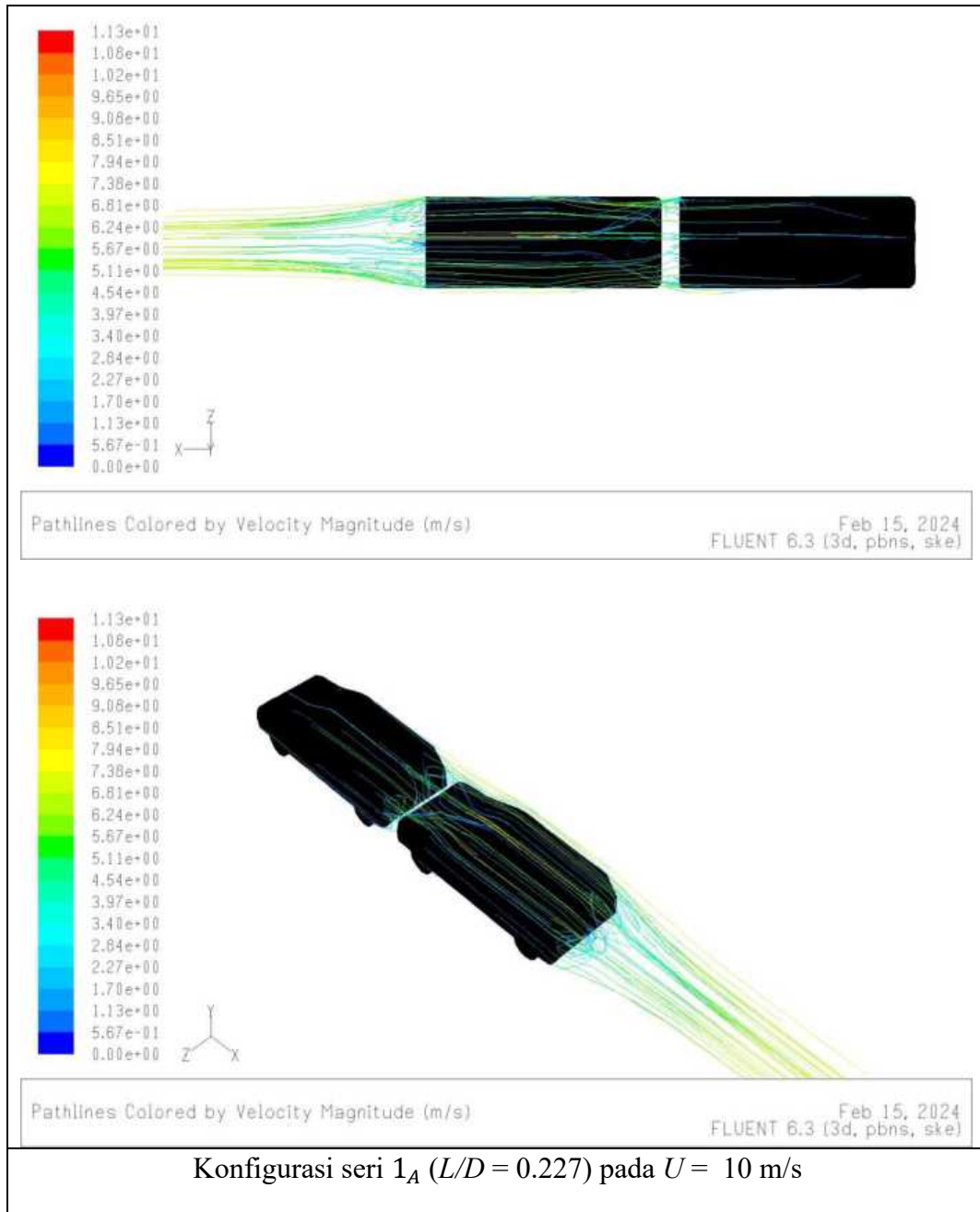


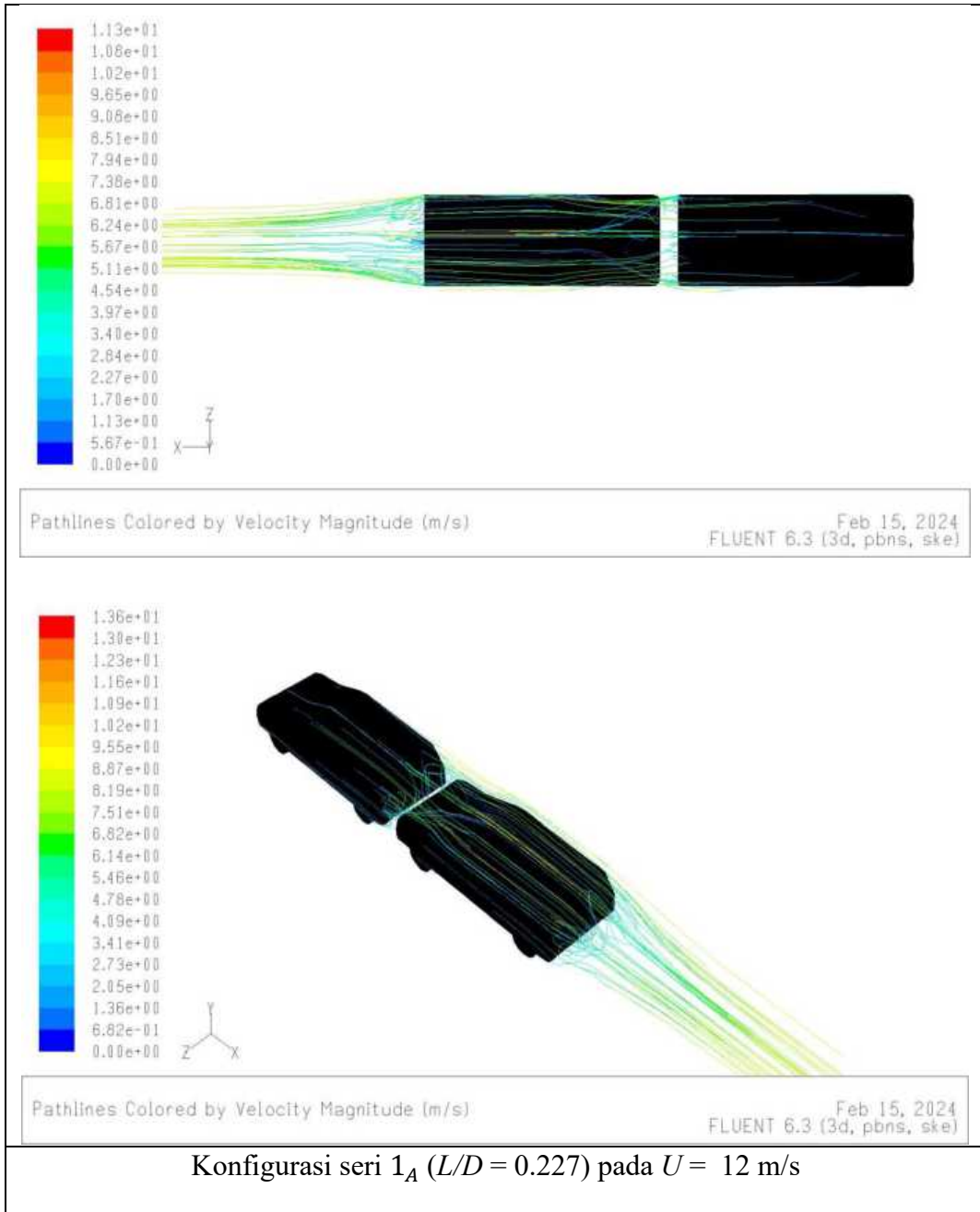
Keterangan :

: Mobil 1

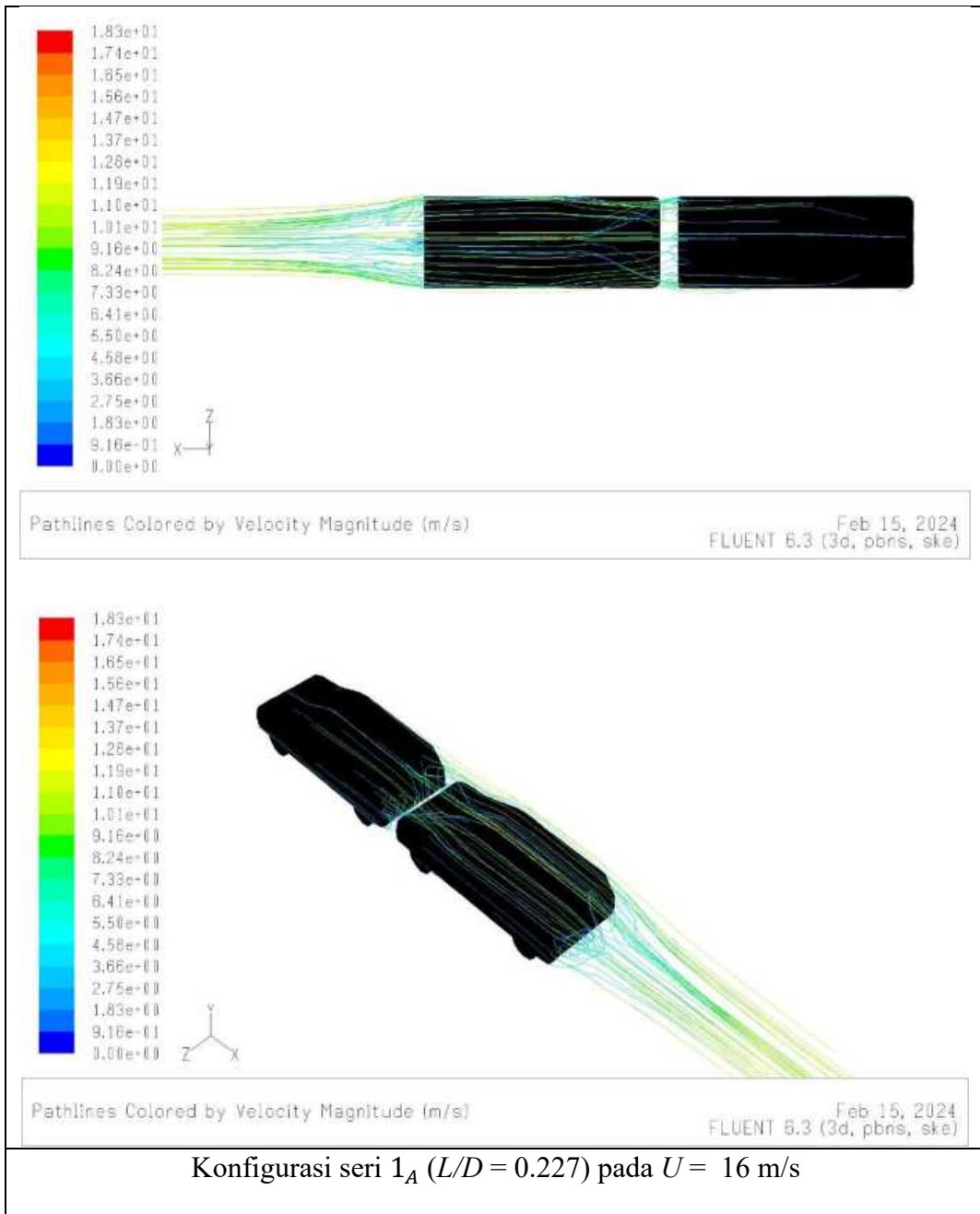
: Mobil 2

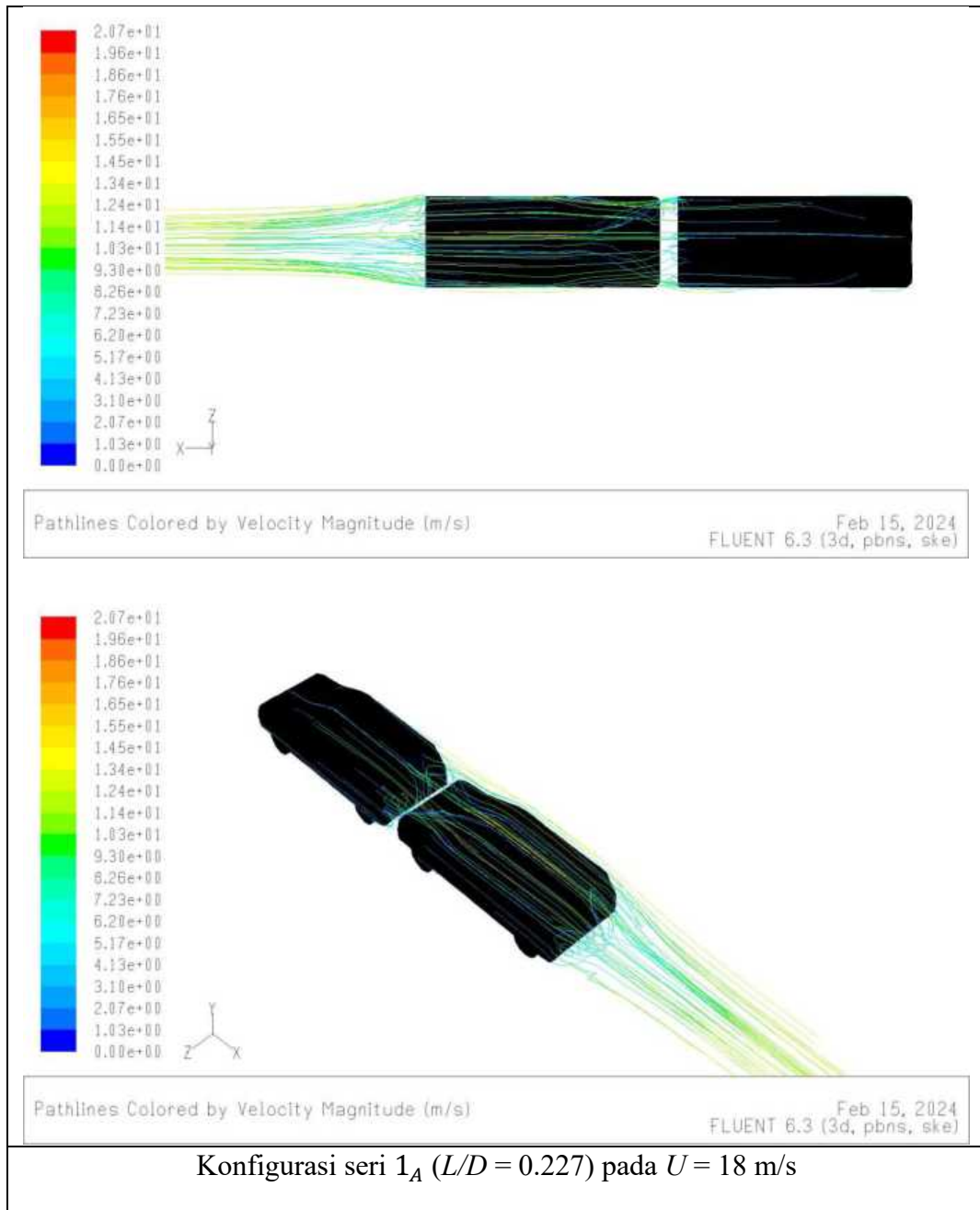
Tabel A 56 Karakteristik aliran melintasi minibus tersusun tandem konfigurasi seri (model 1) dengan  $U=10$  m/s, 12 m/s, 16 m/s, dan 18 m/s

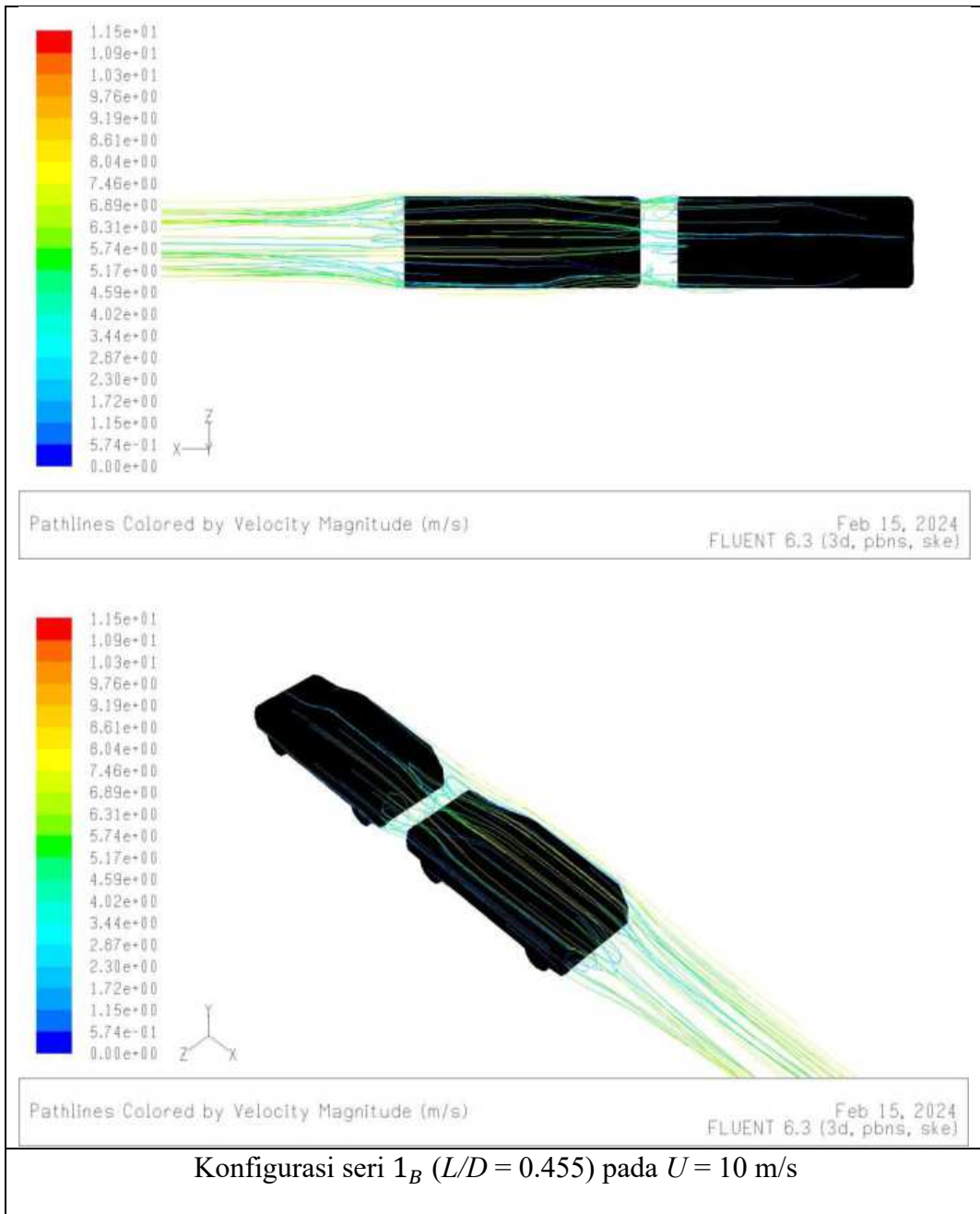


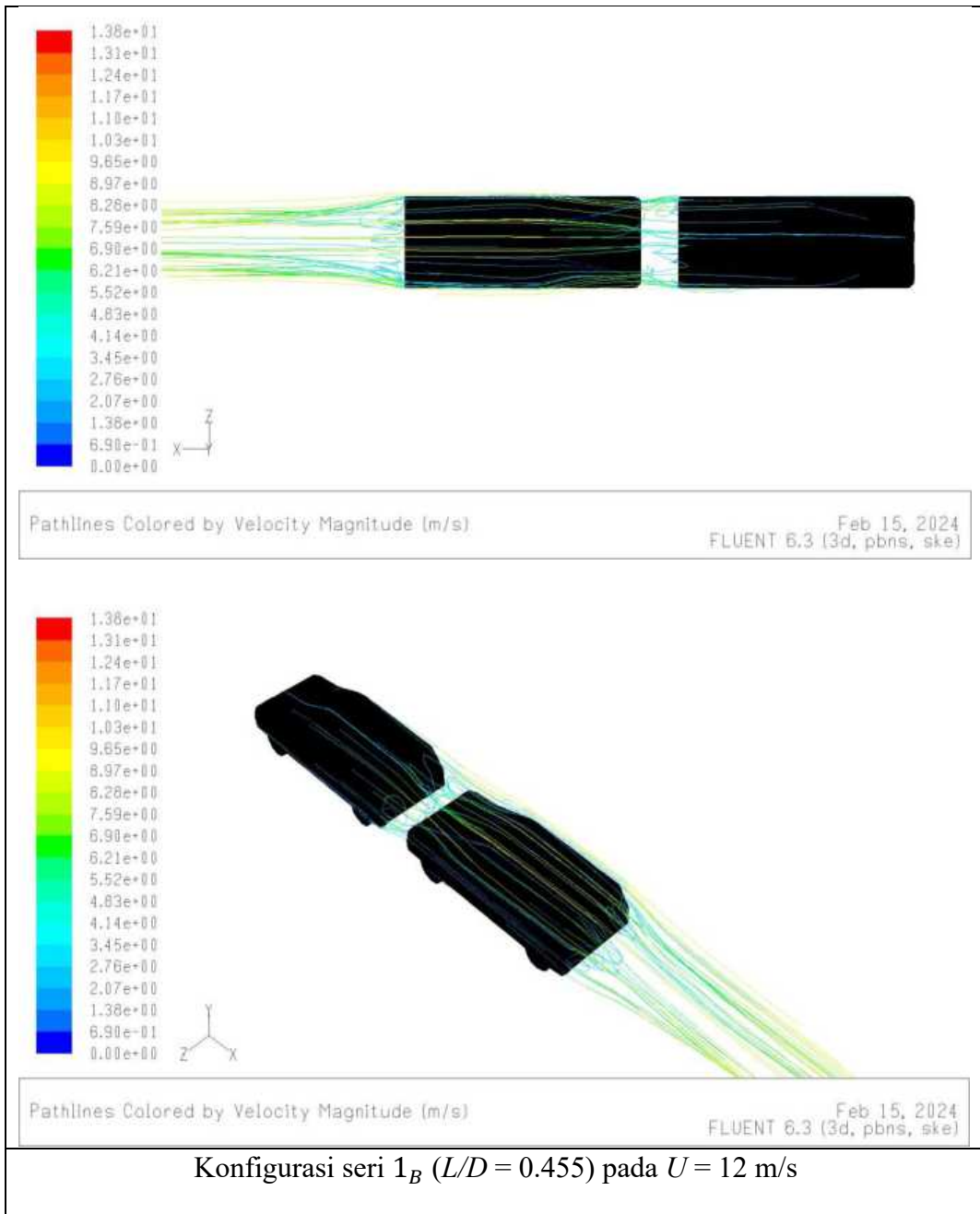


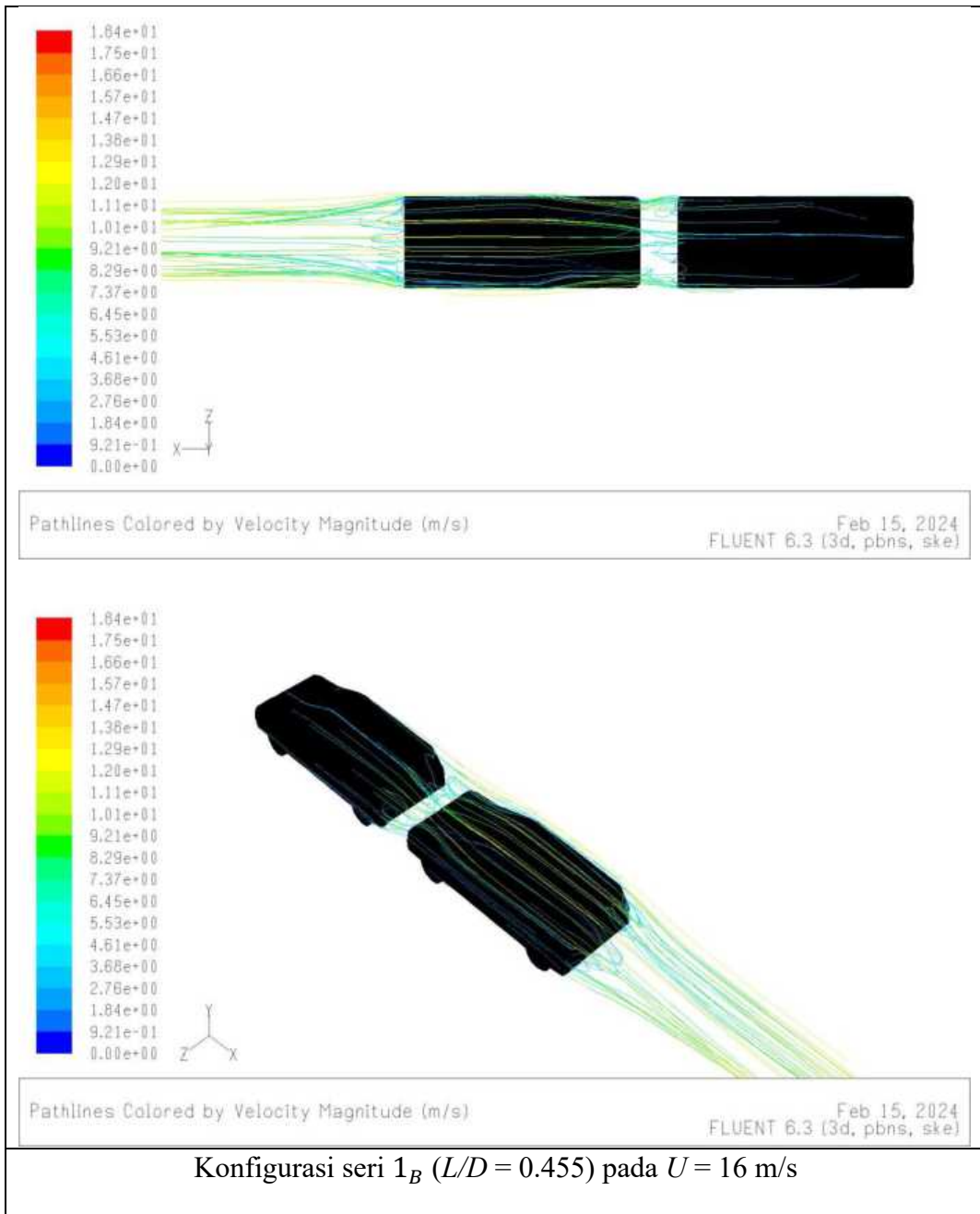


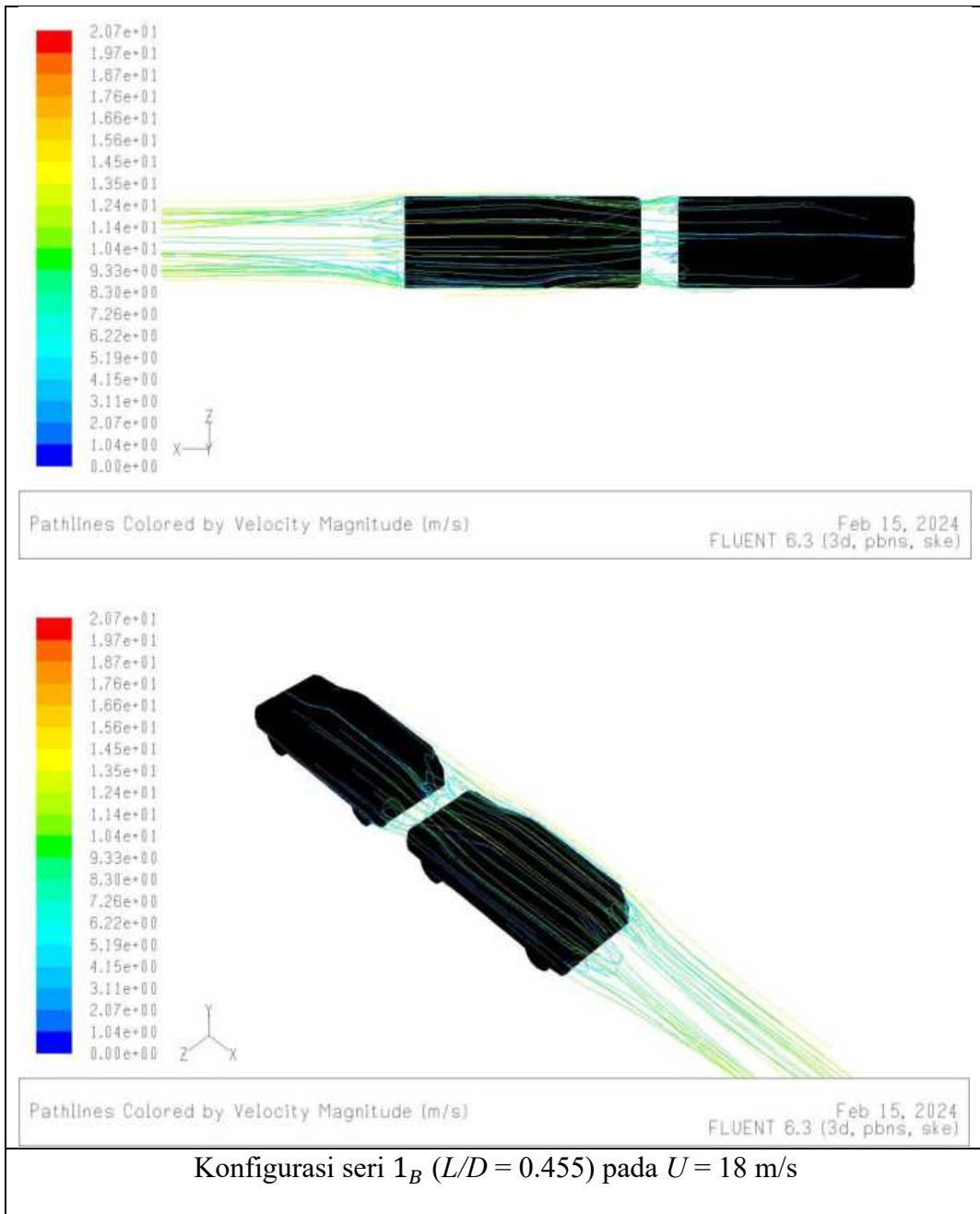




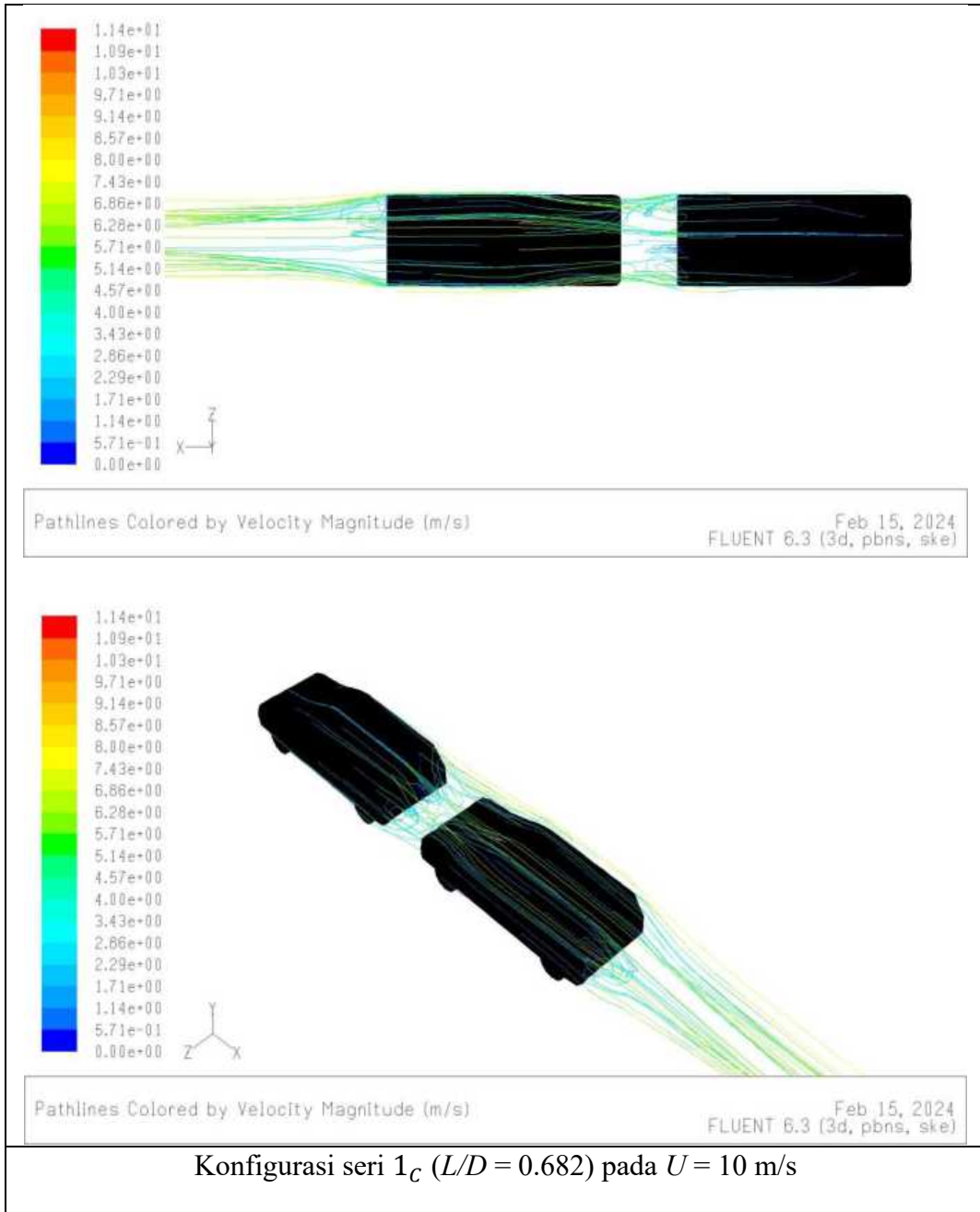


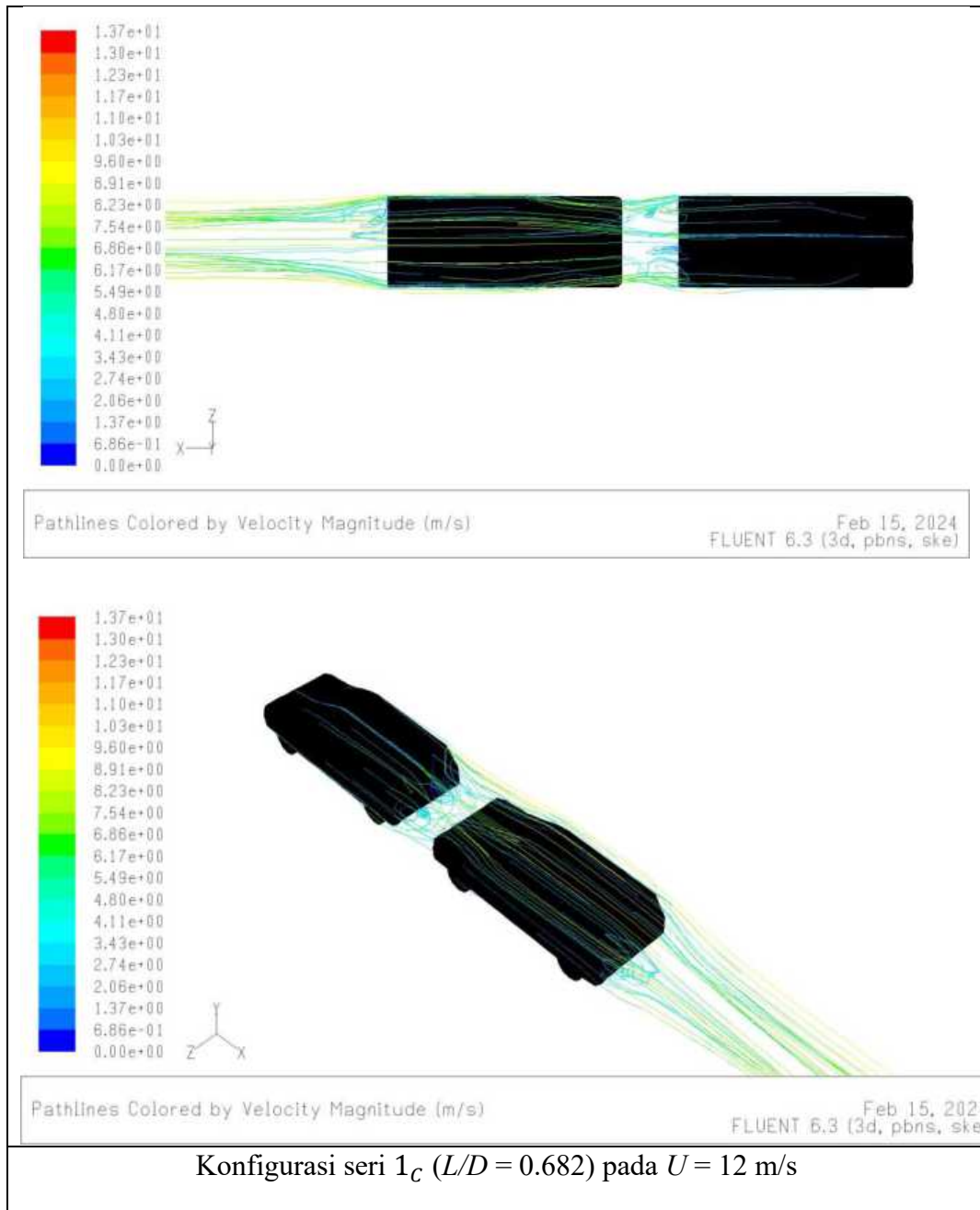




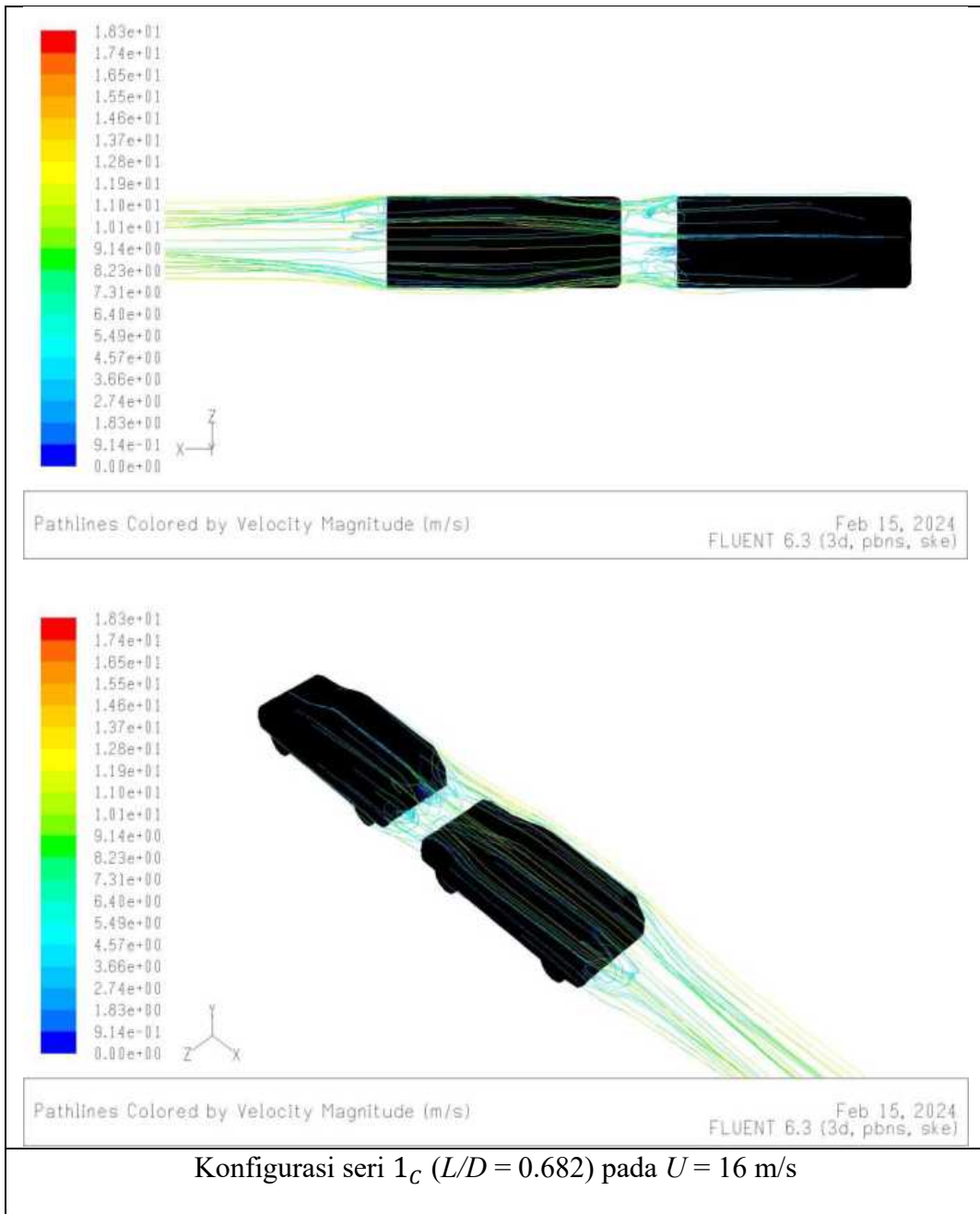


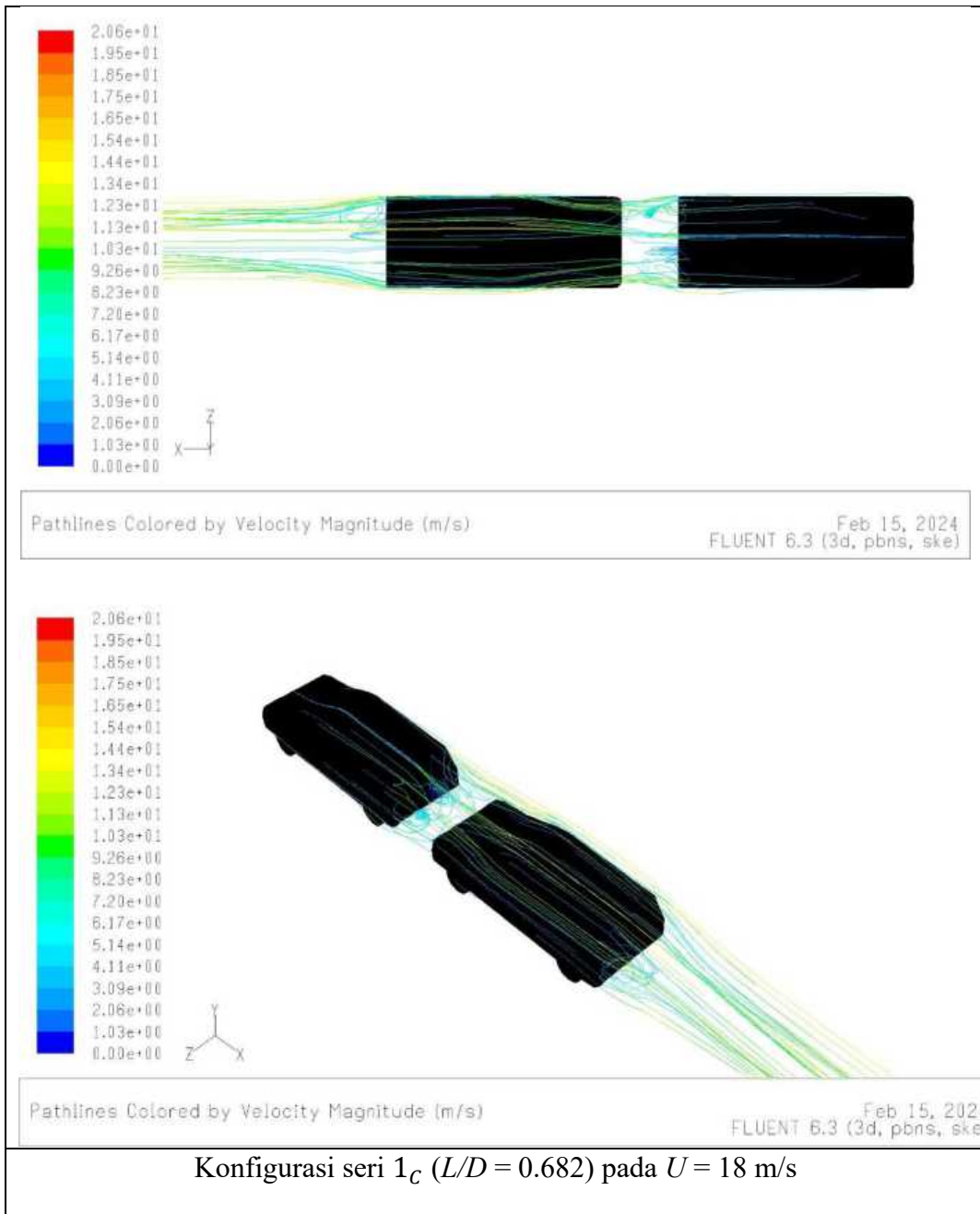


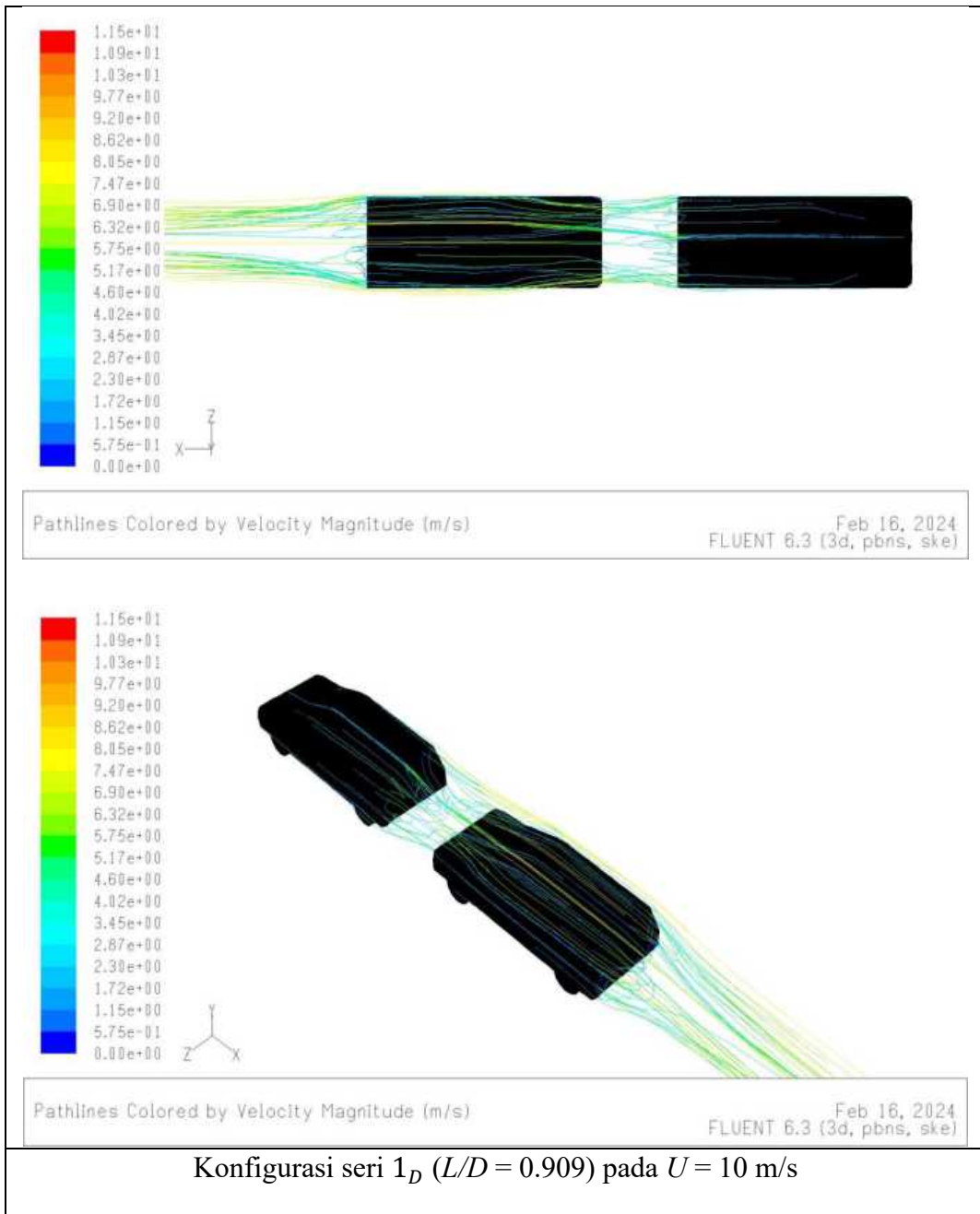






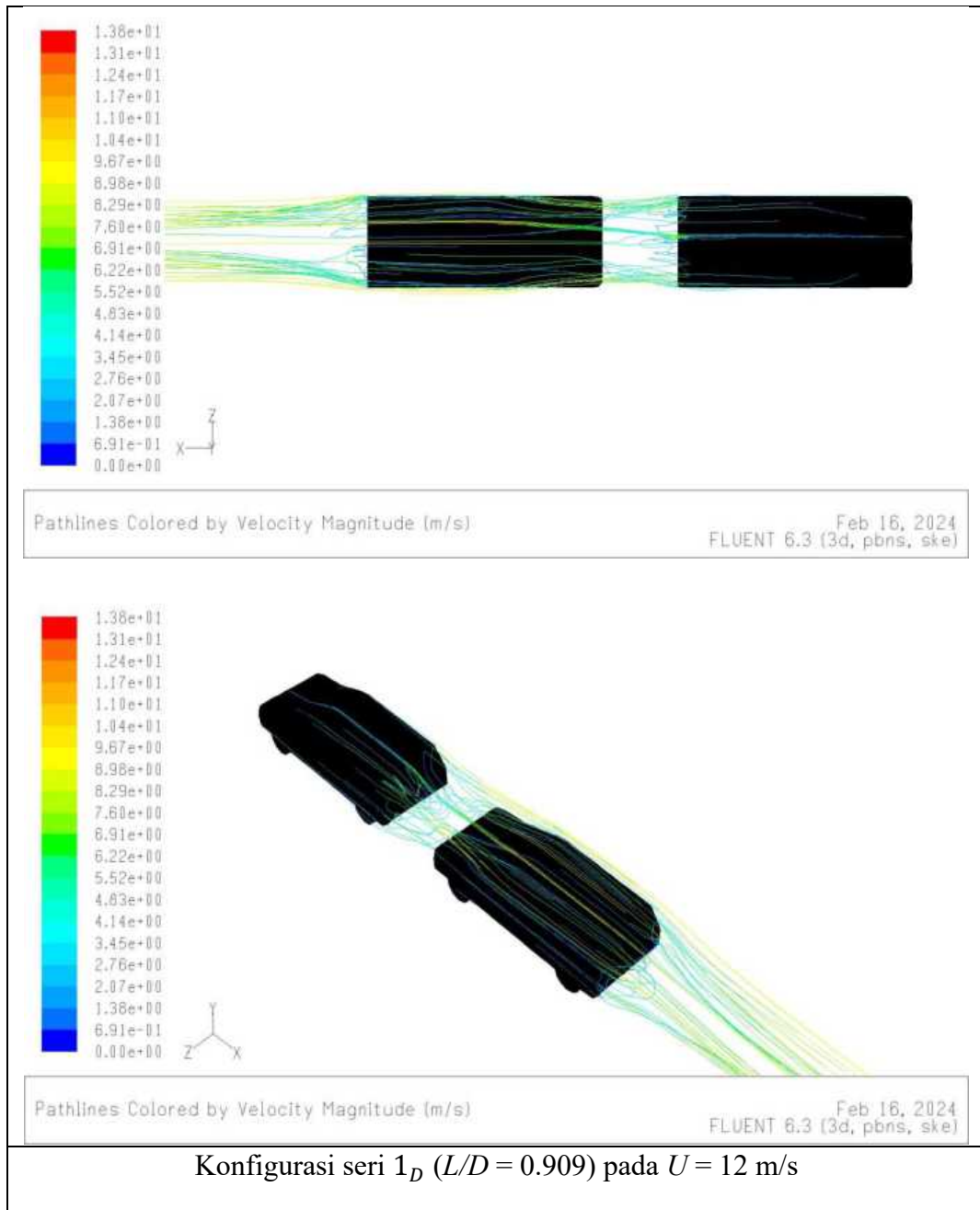


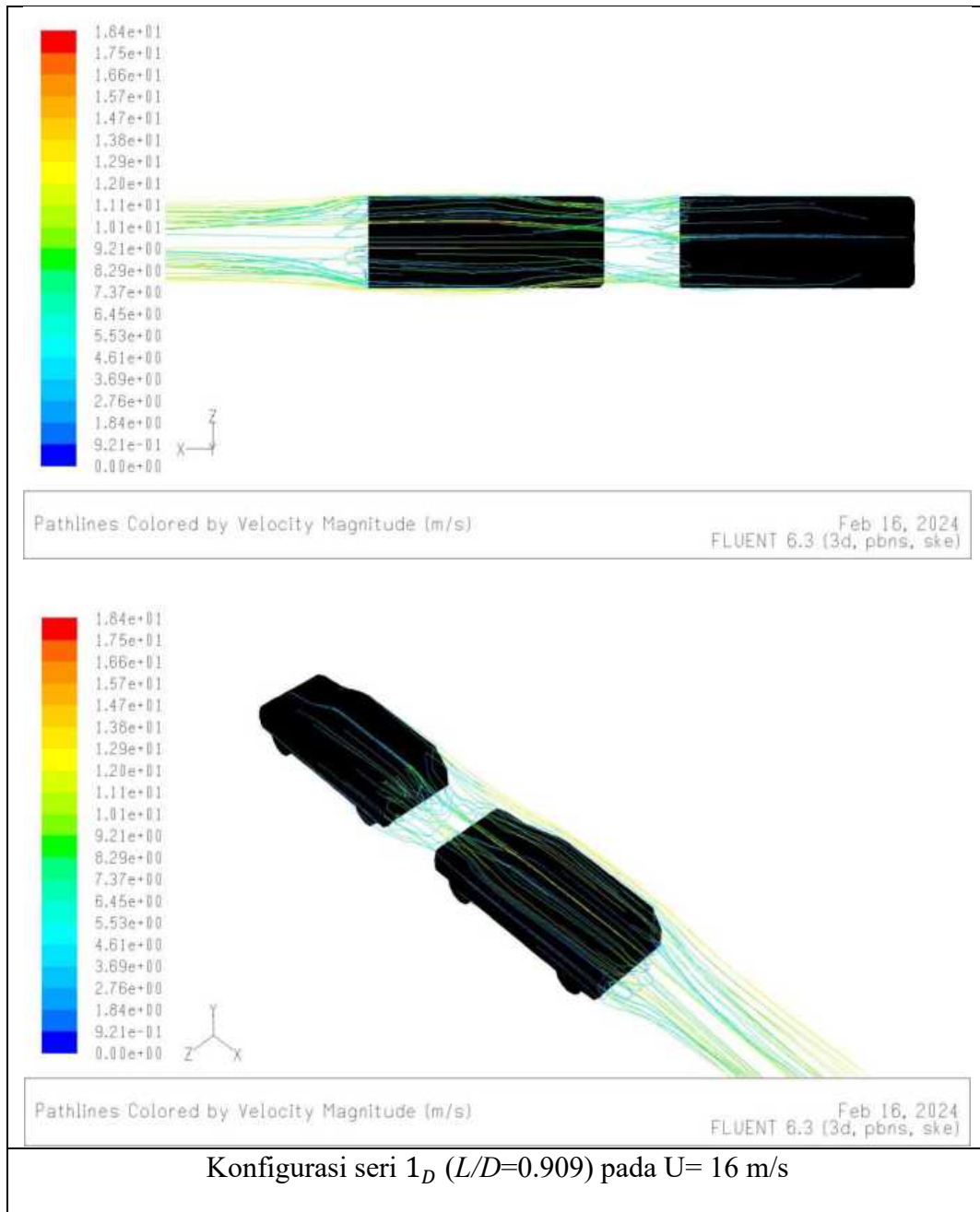


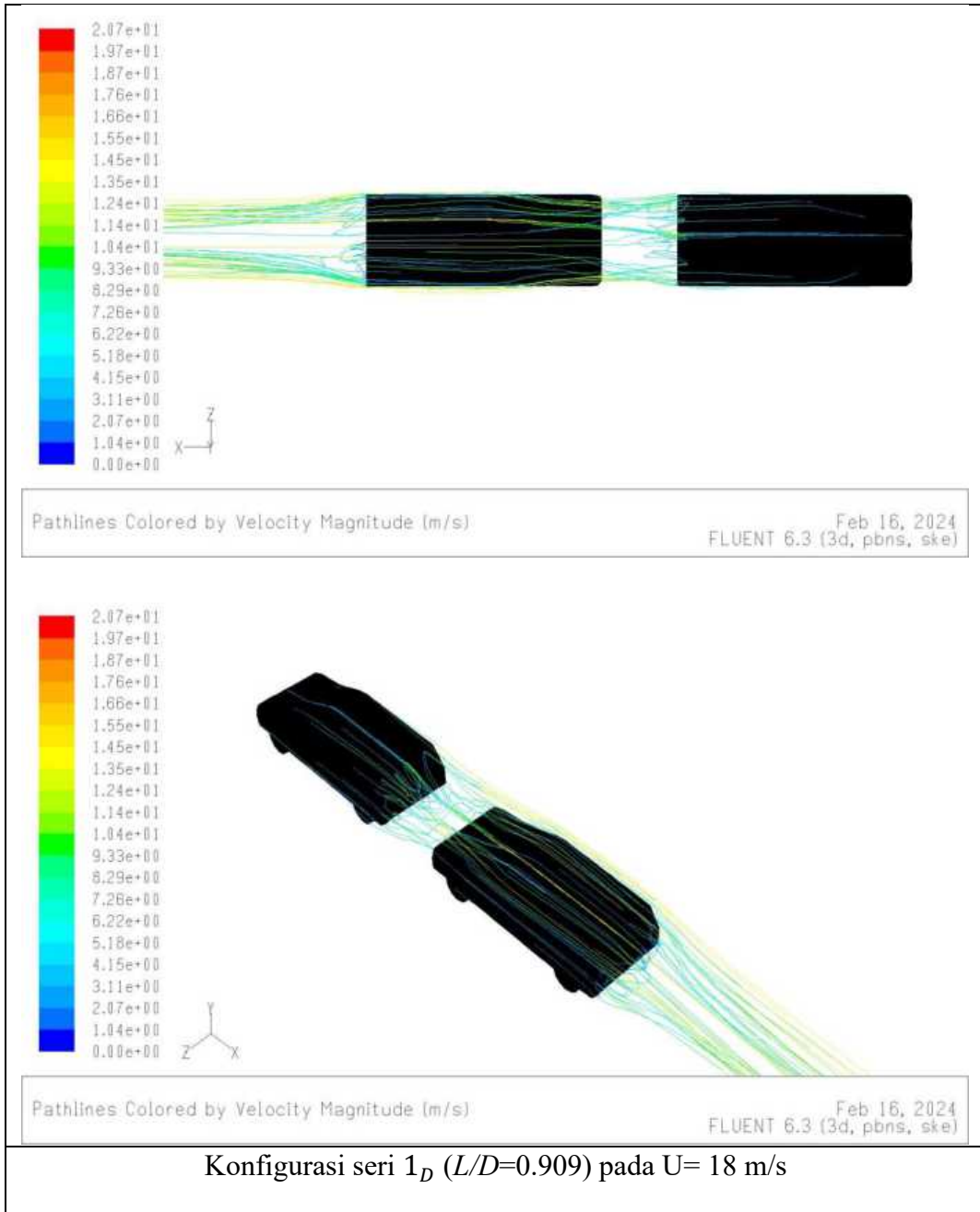


Konfigurasi seri  $1_D$  ( $L/D = 0.909$ ) pada  $U = 10$  m/s

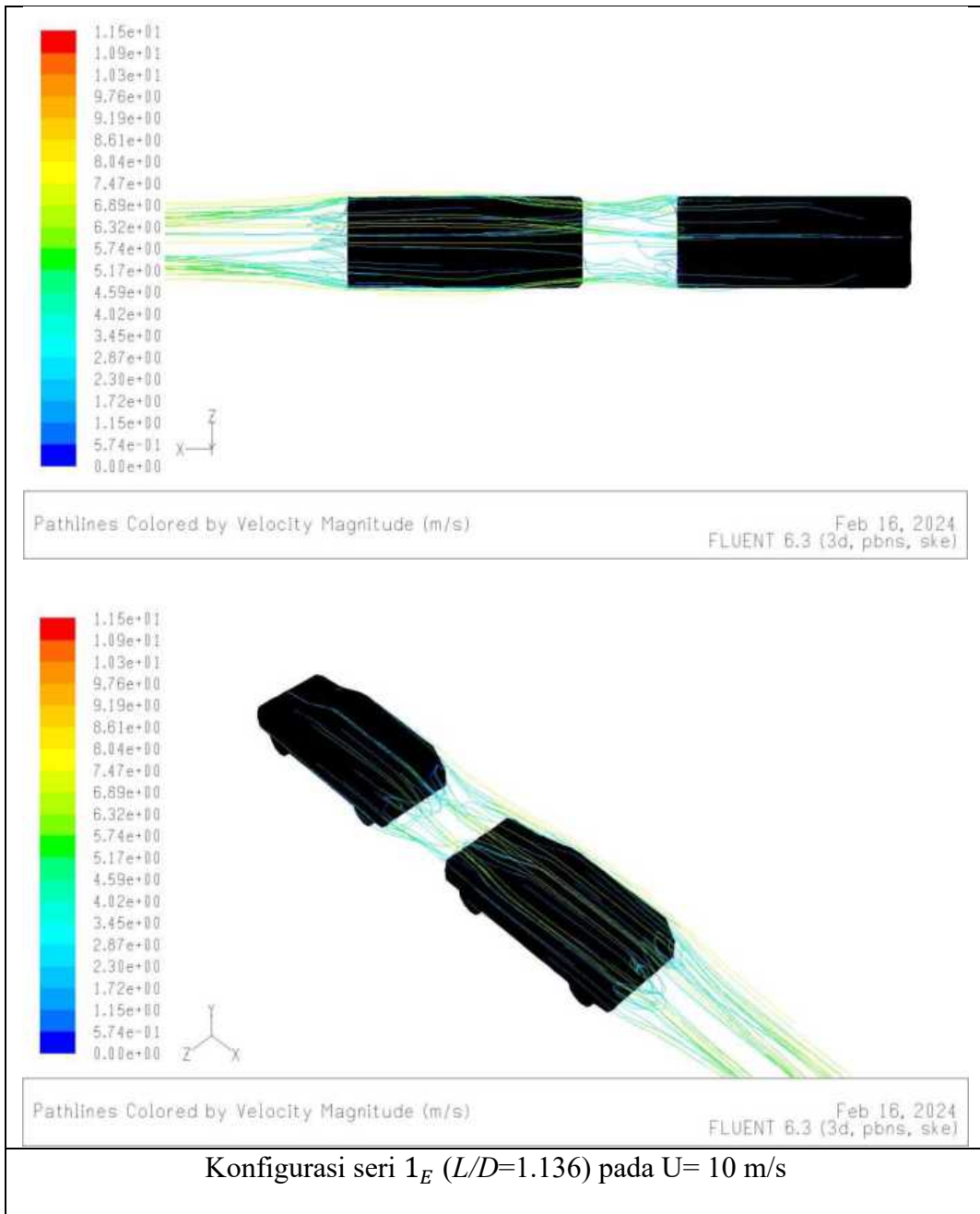


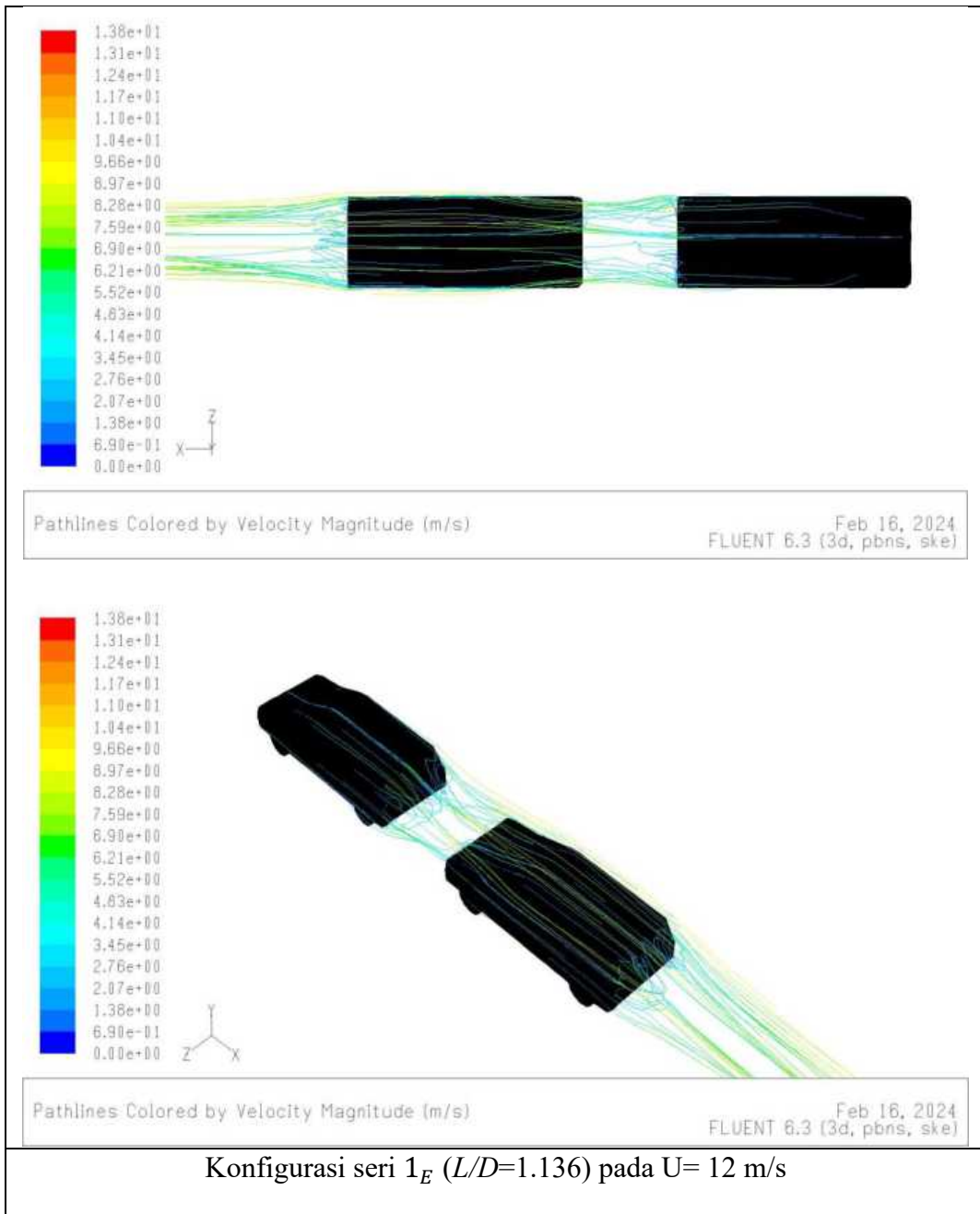




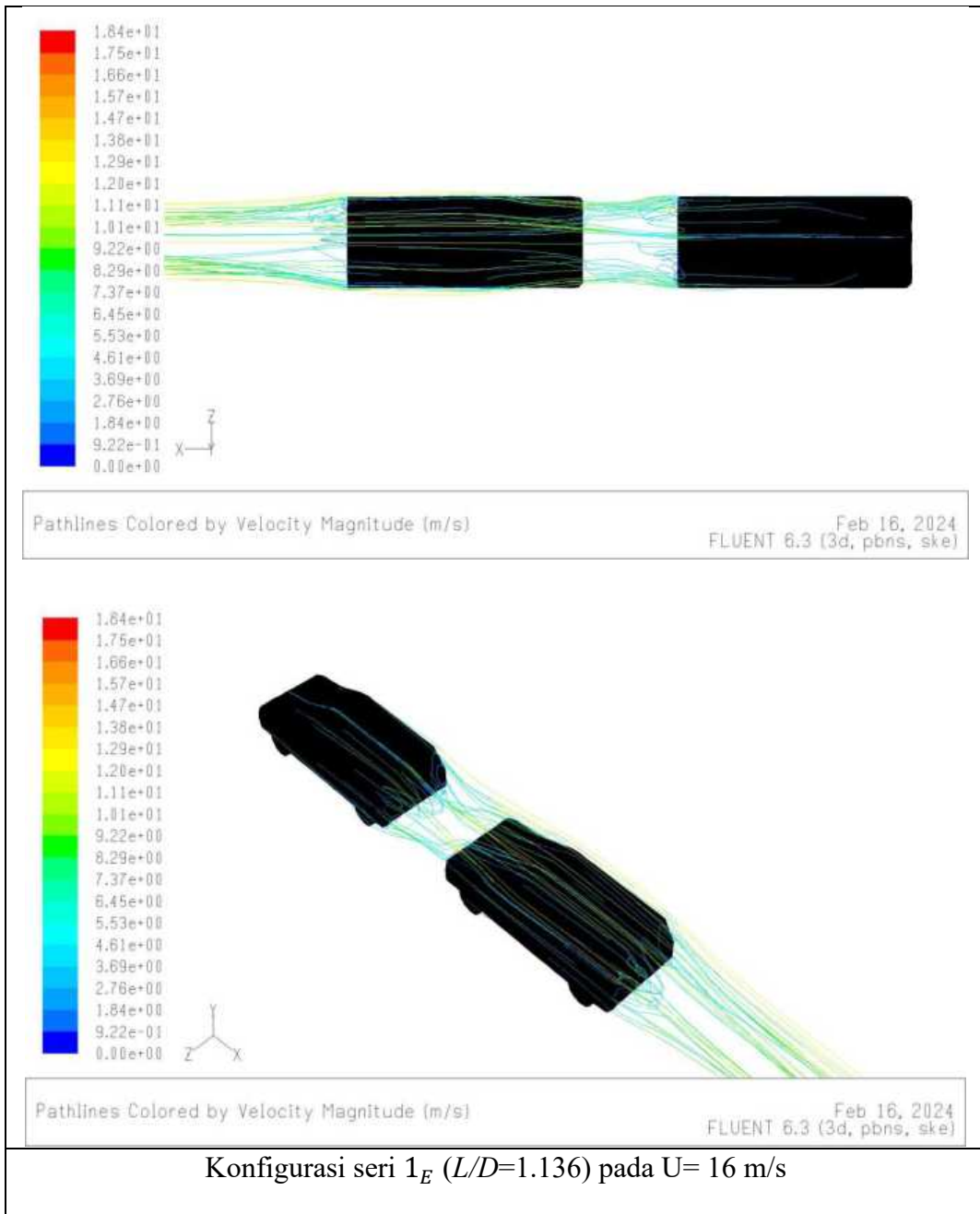


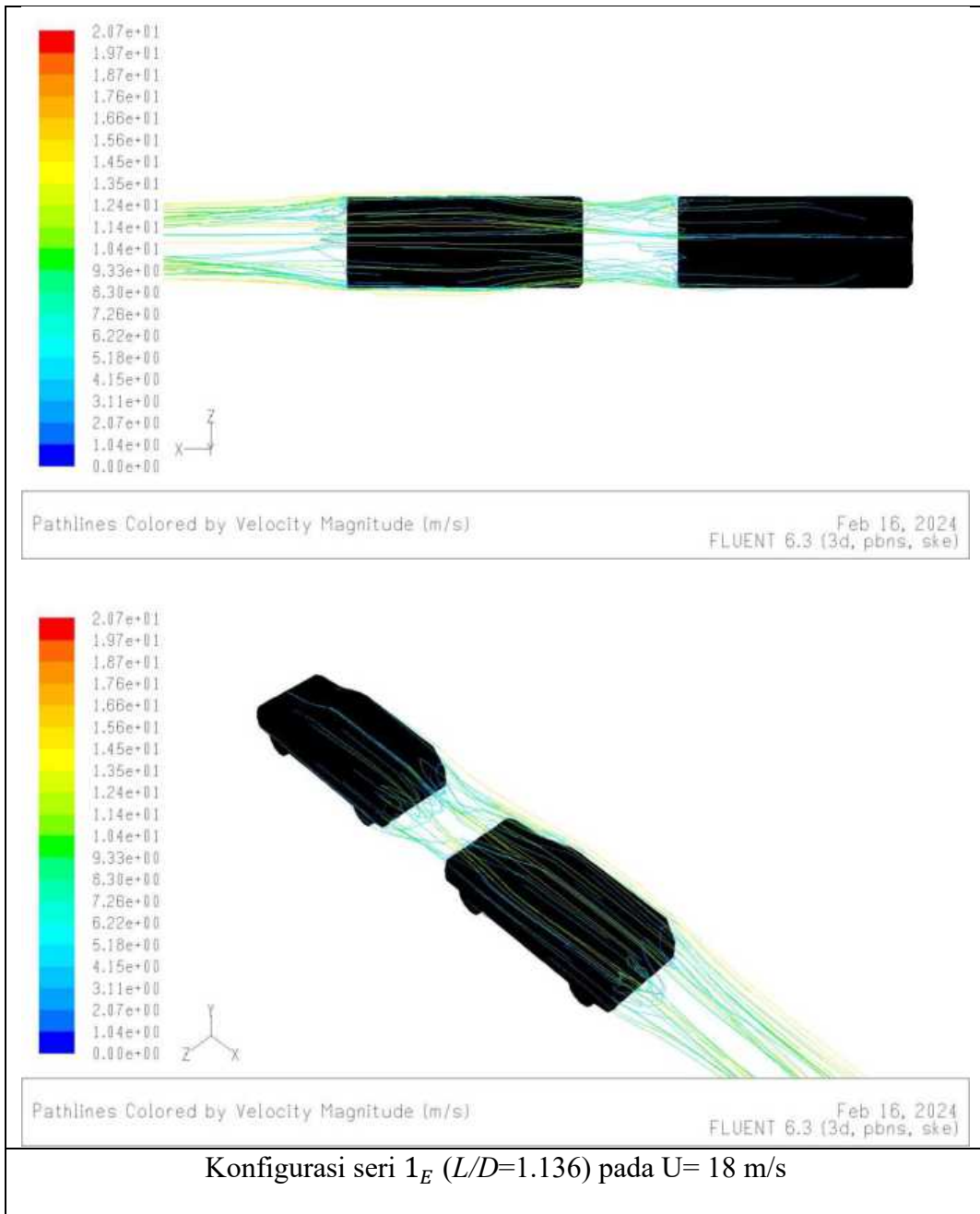




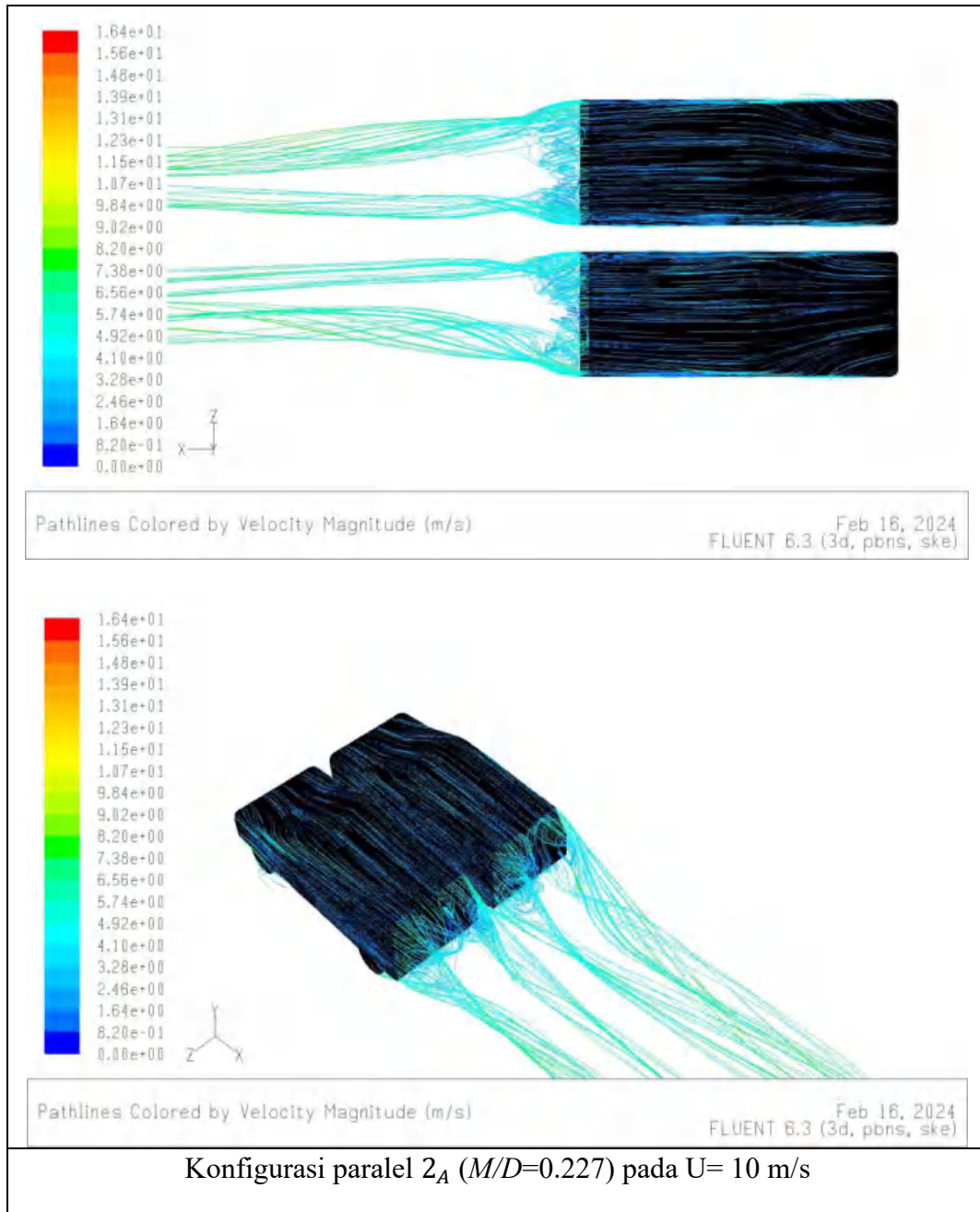


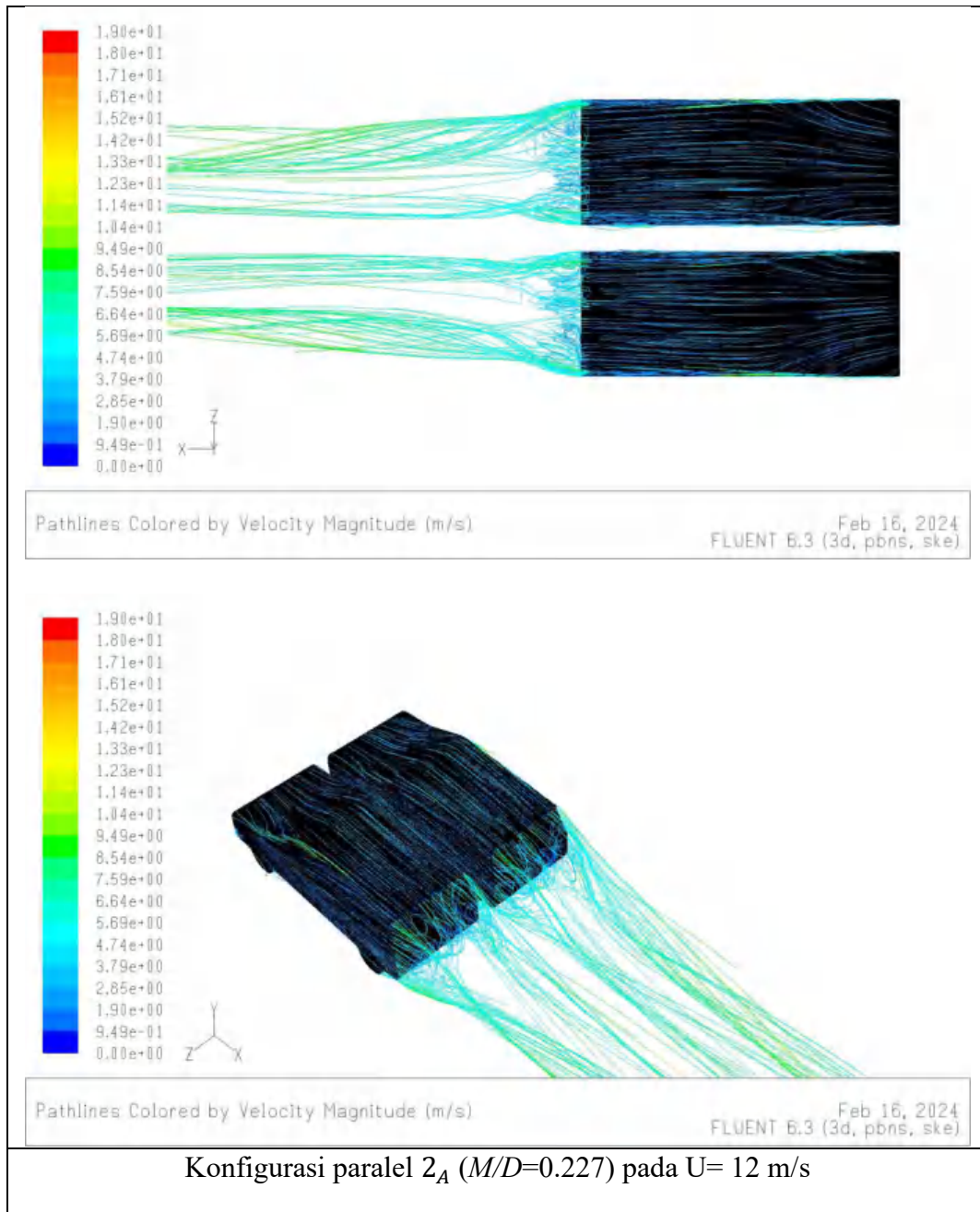


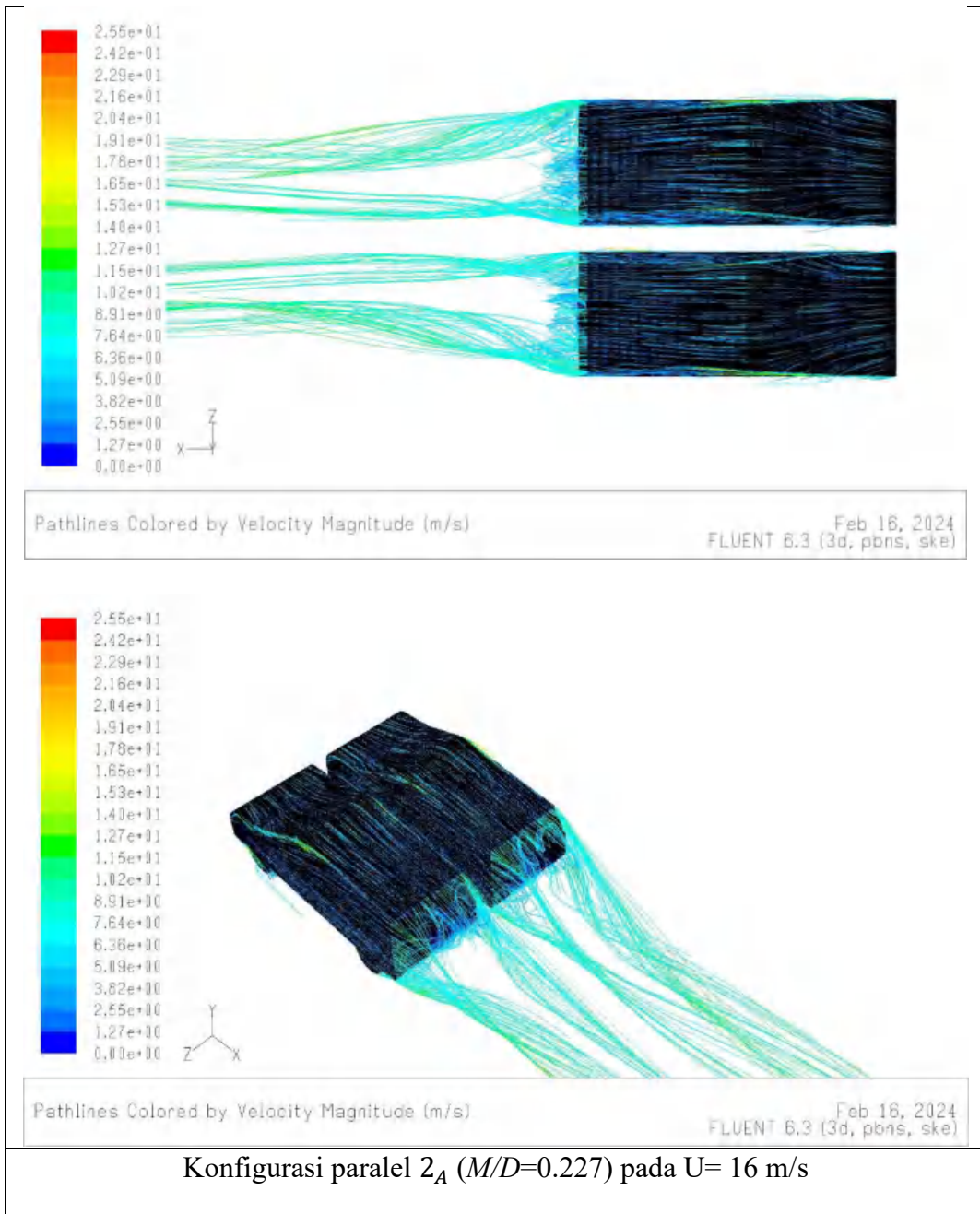




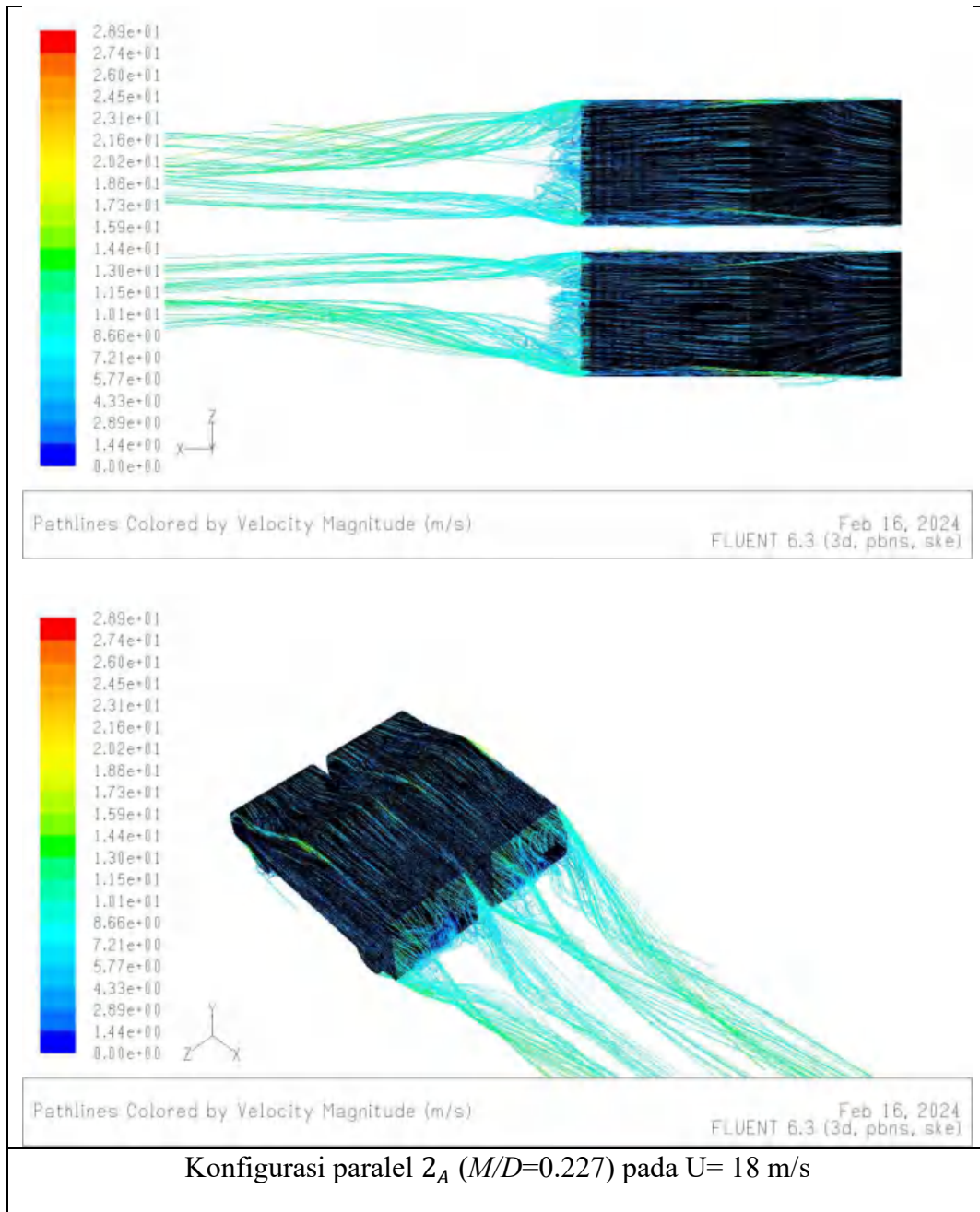
Tabel A 57 Karakteristik aliran melintasi minibus tersusun tandem konfigurasi paralel (model 2) dengan  $U=10$  m/s, 12 m/s, 16 m/s, dan 18 m/s

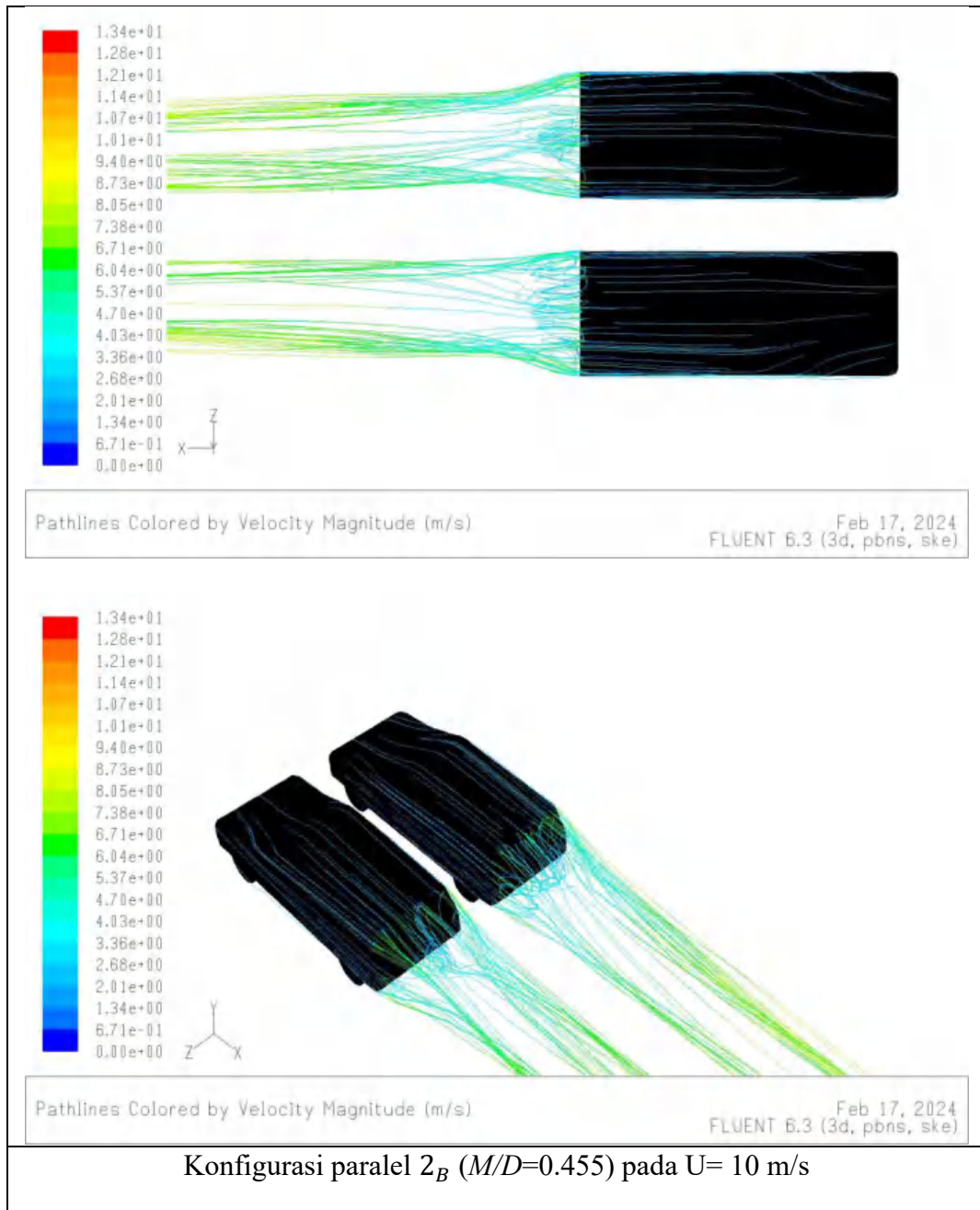


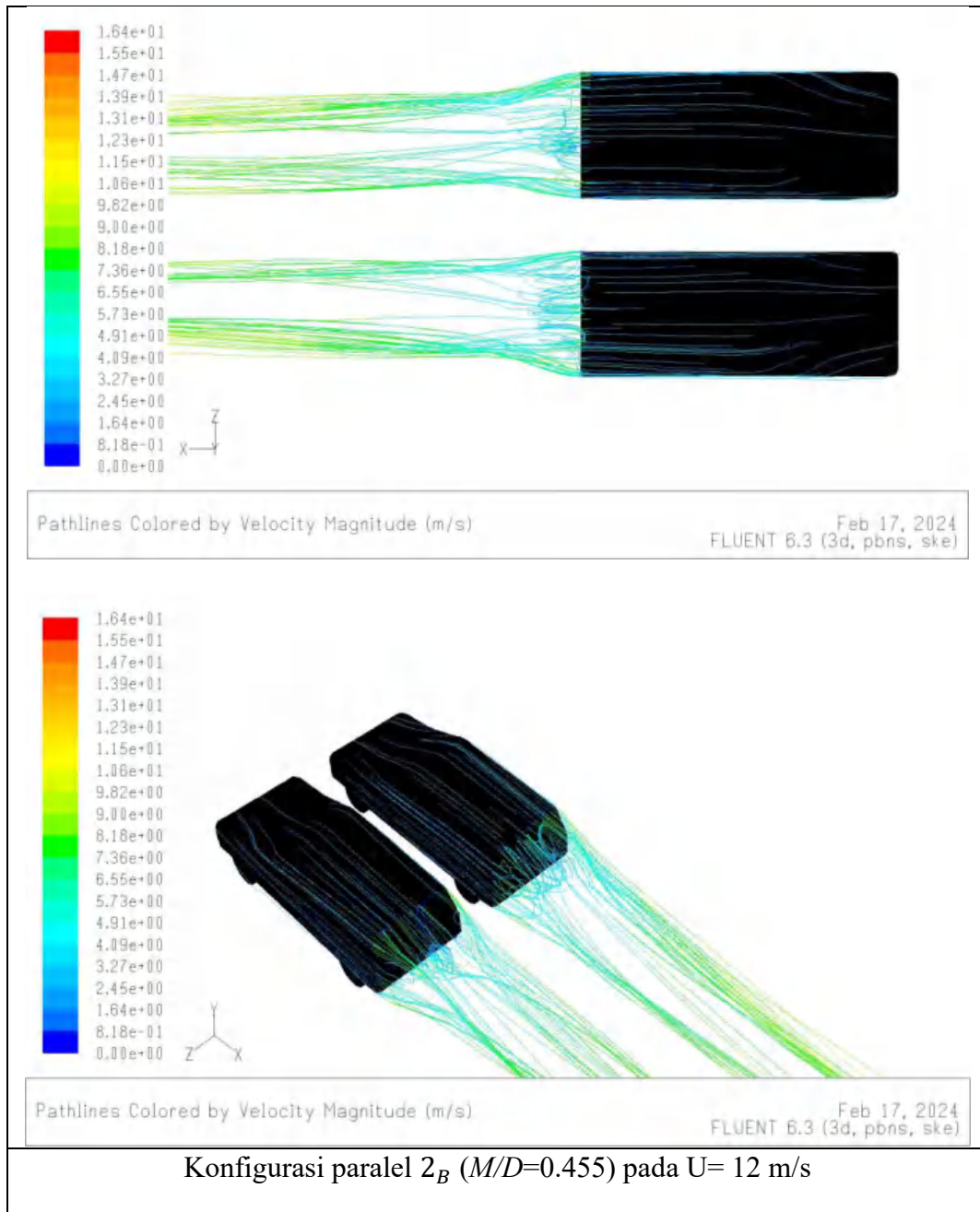




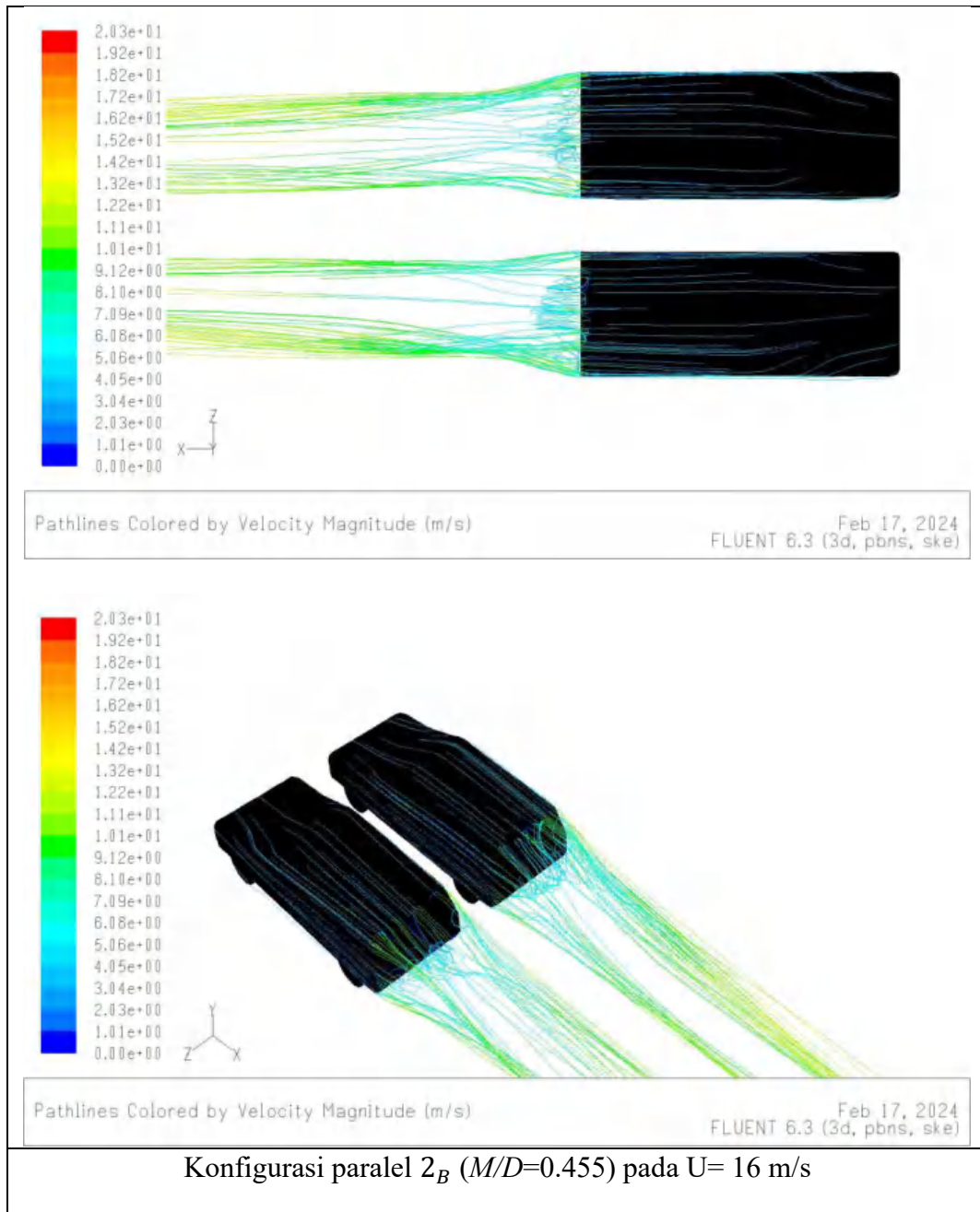


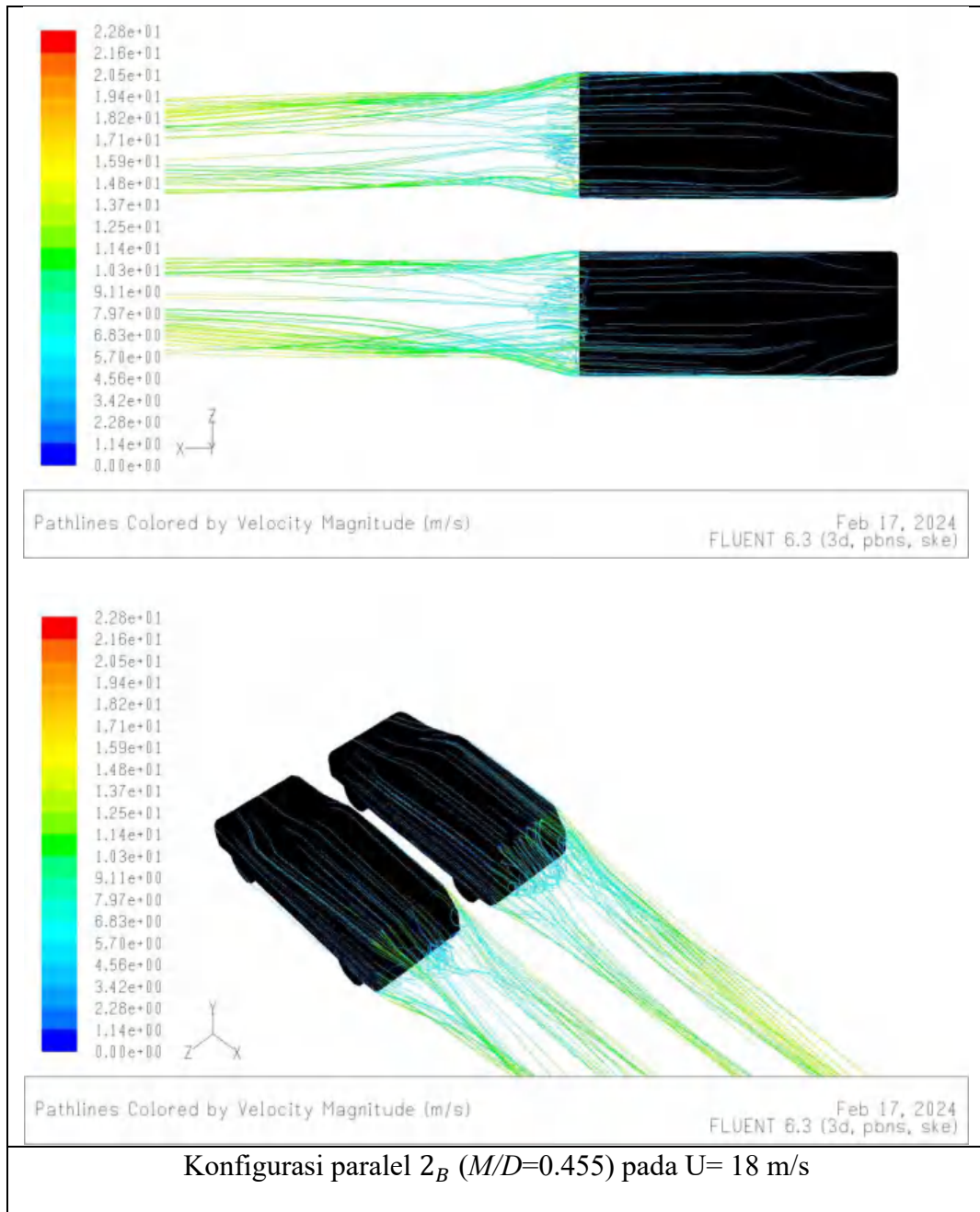


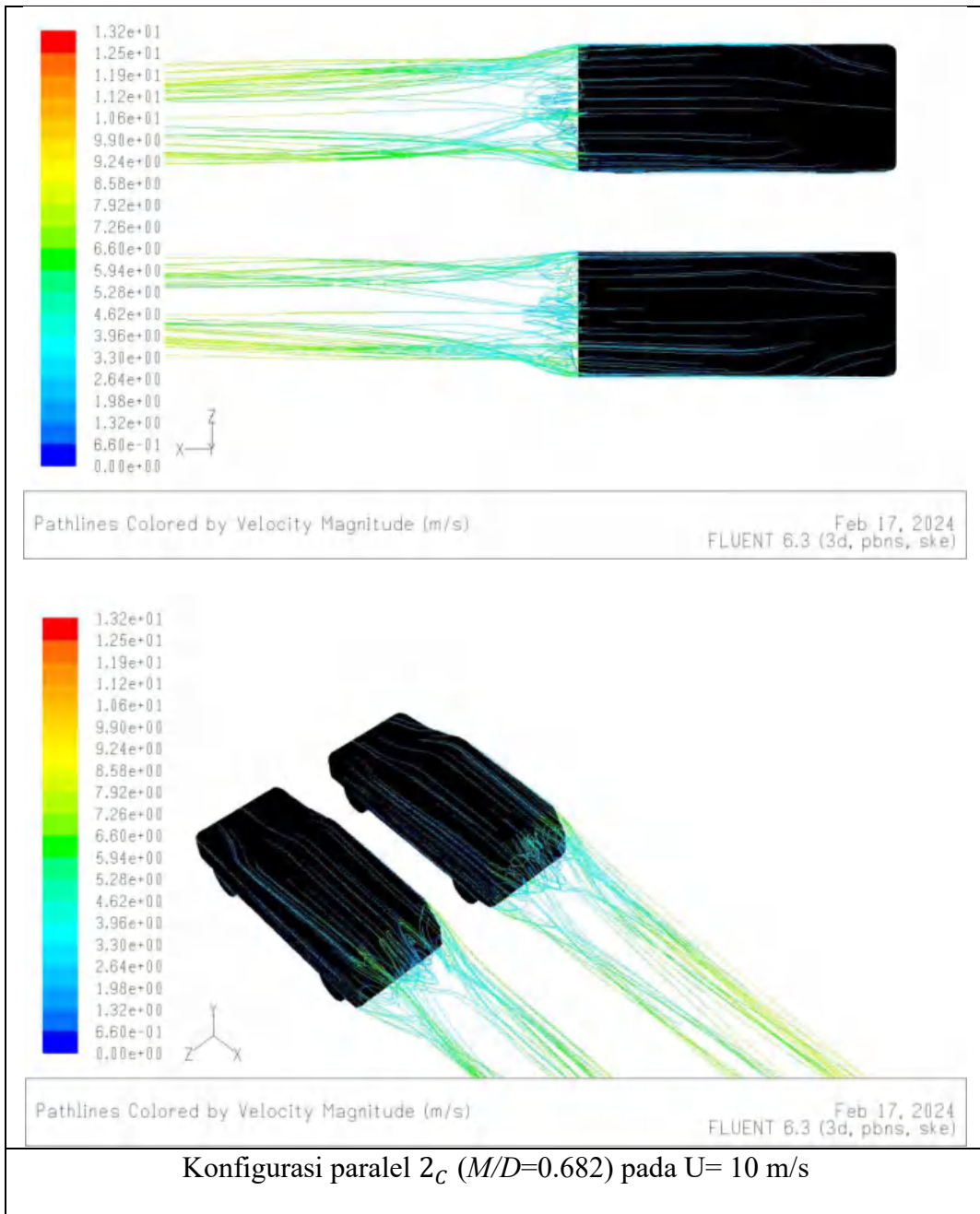


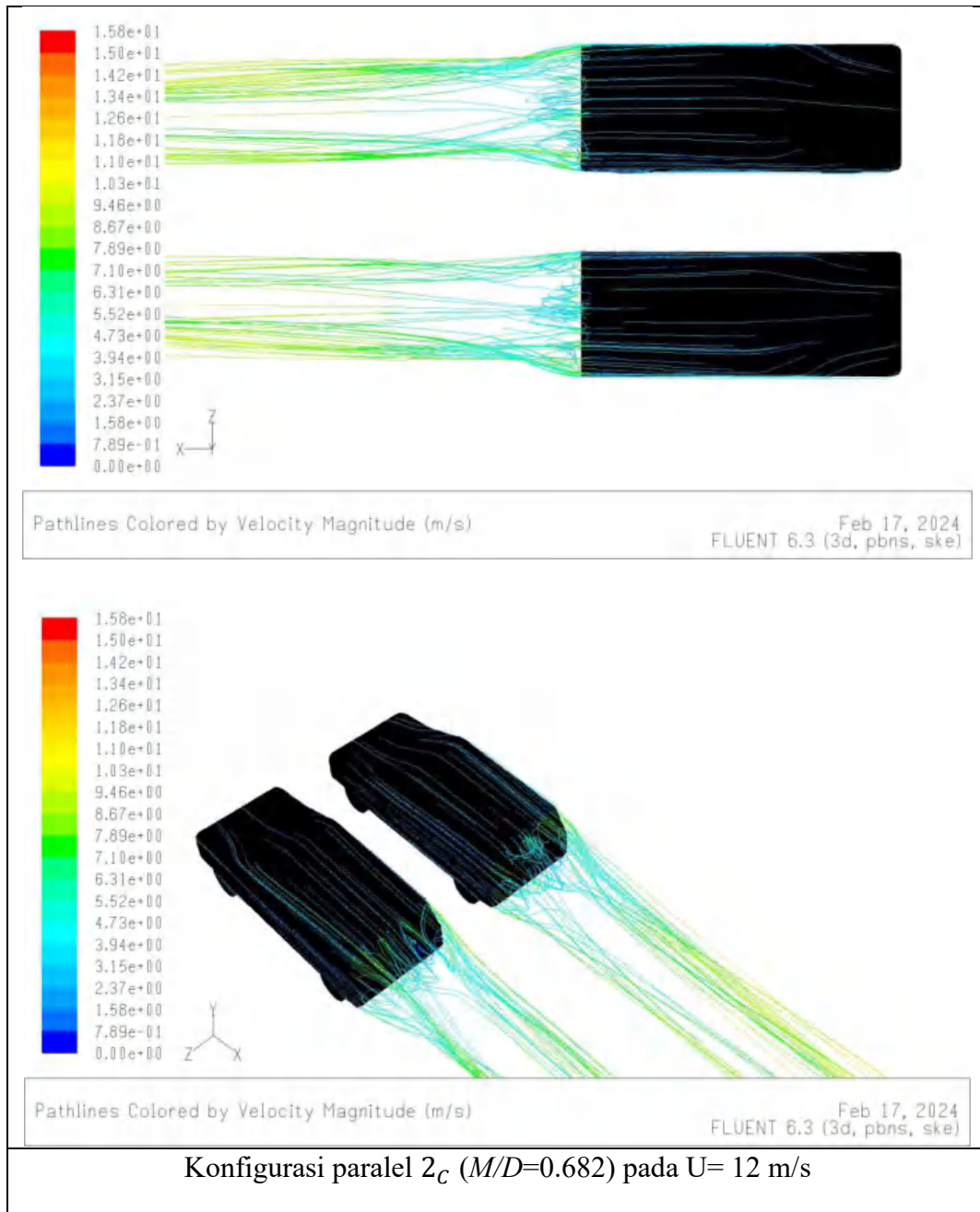




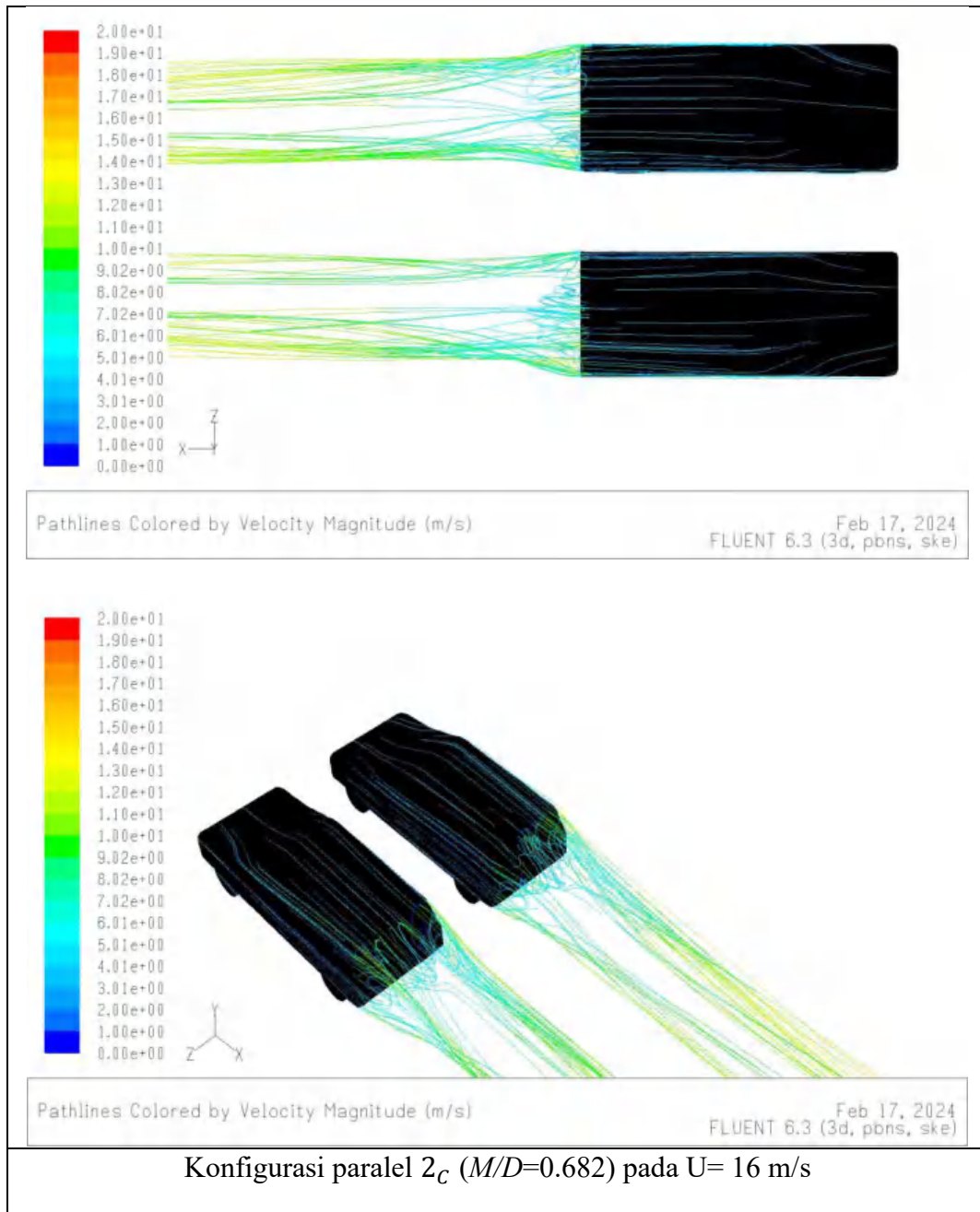


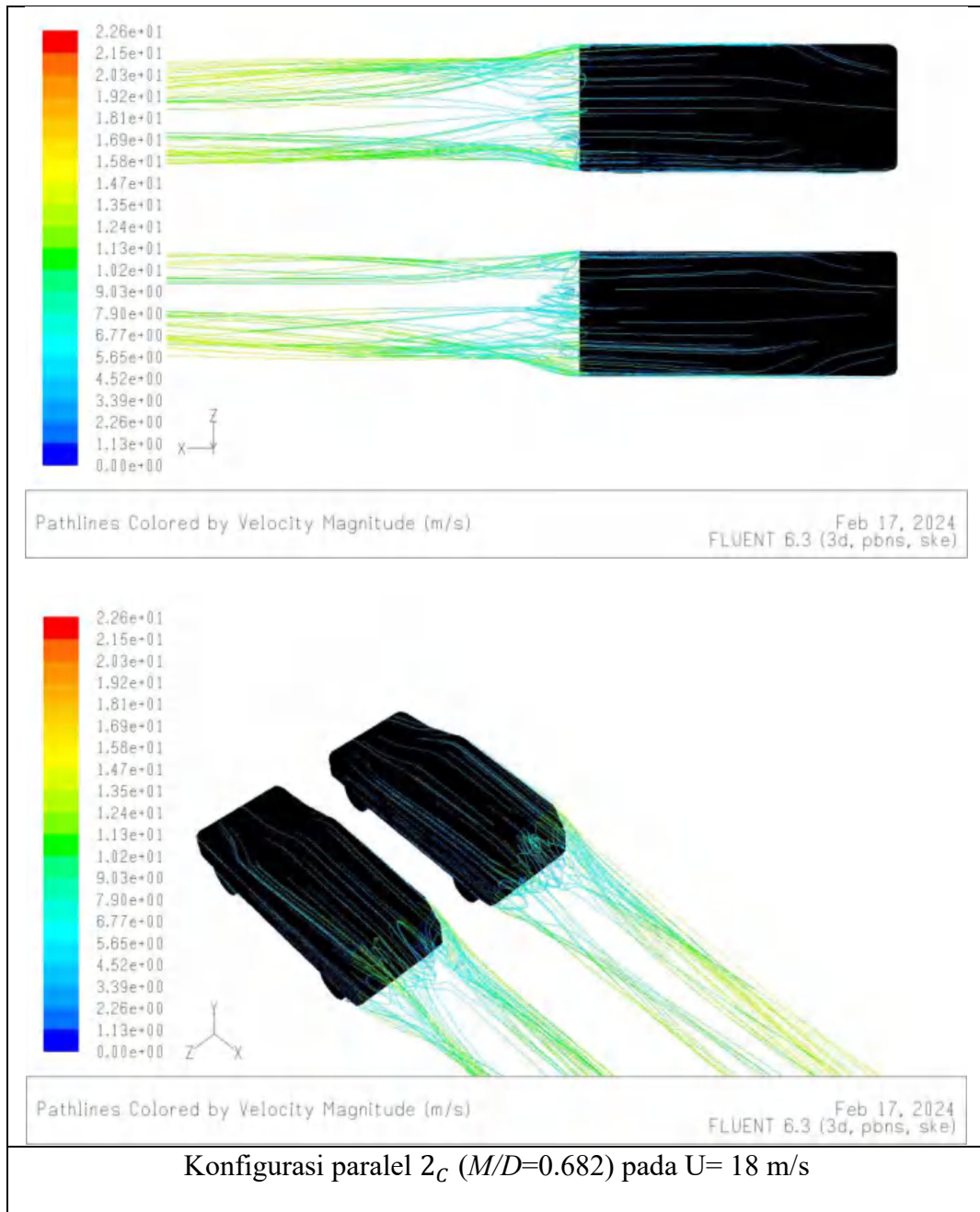


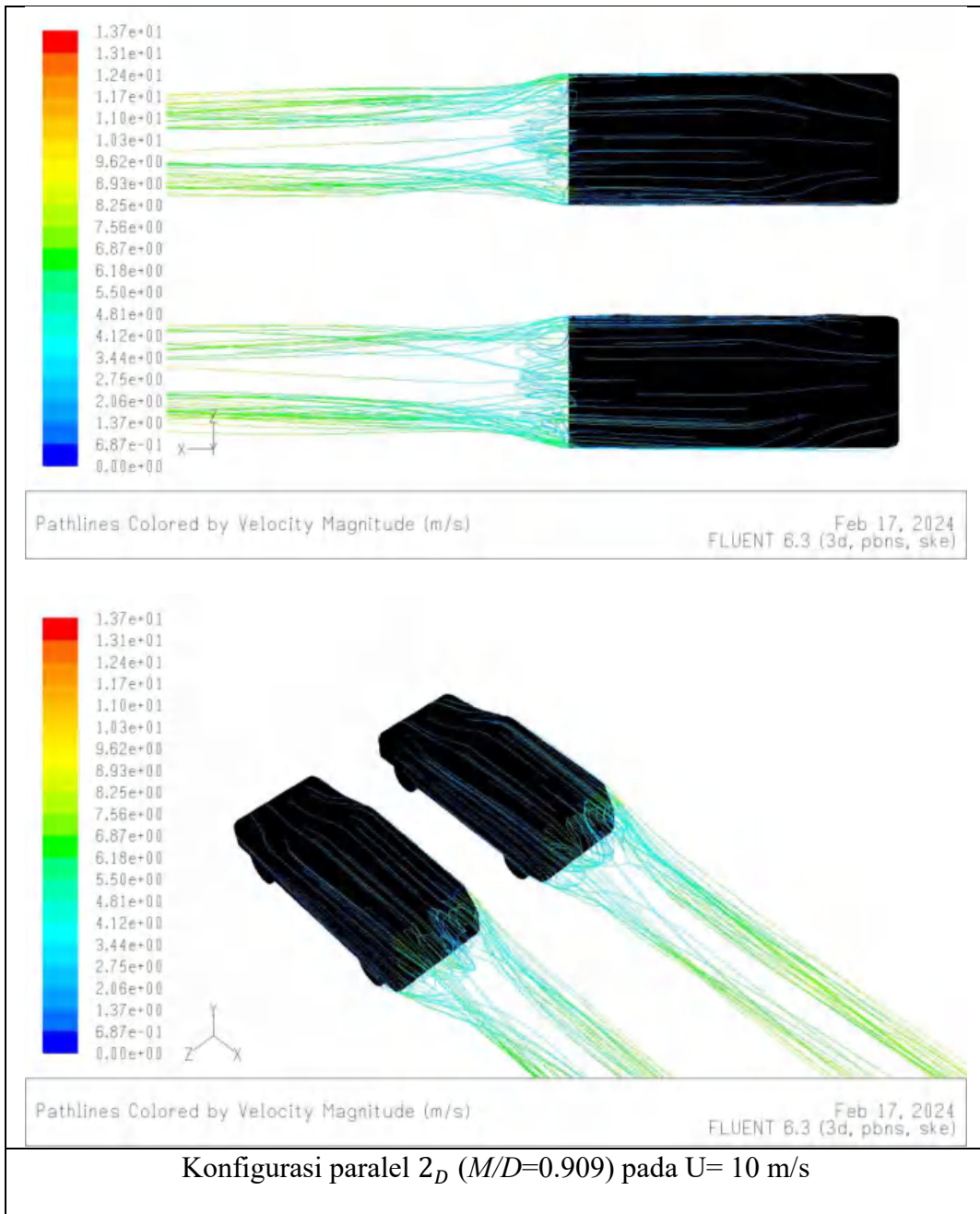


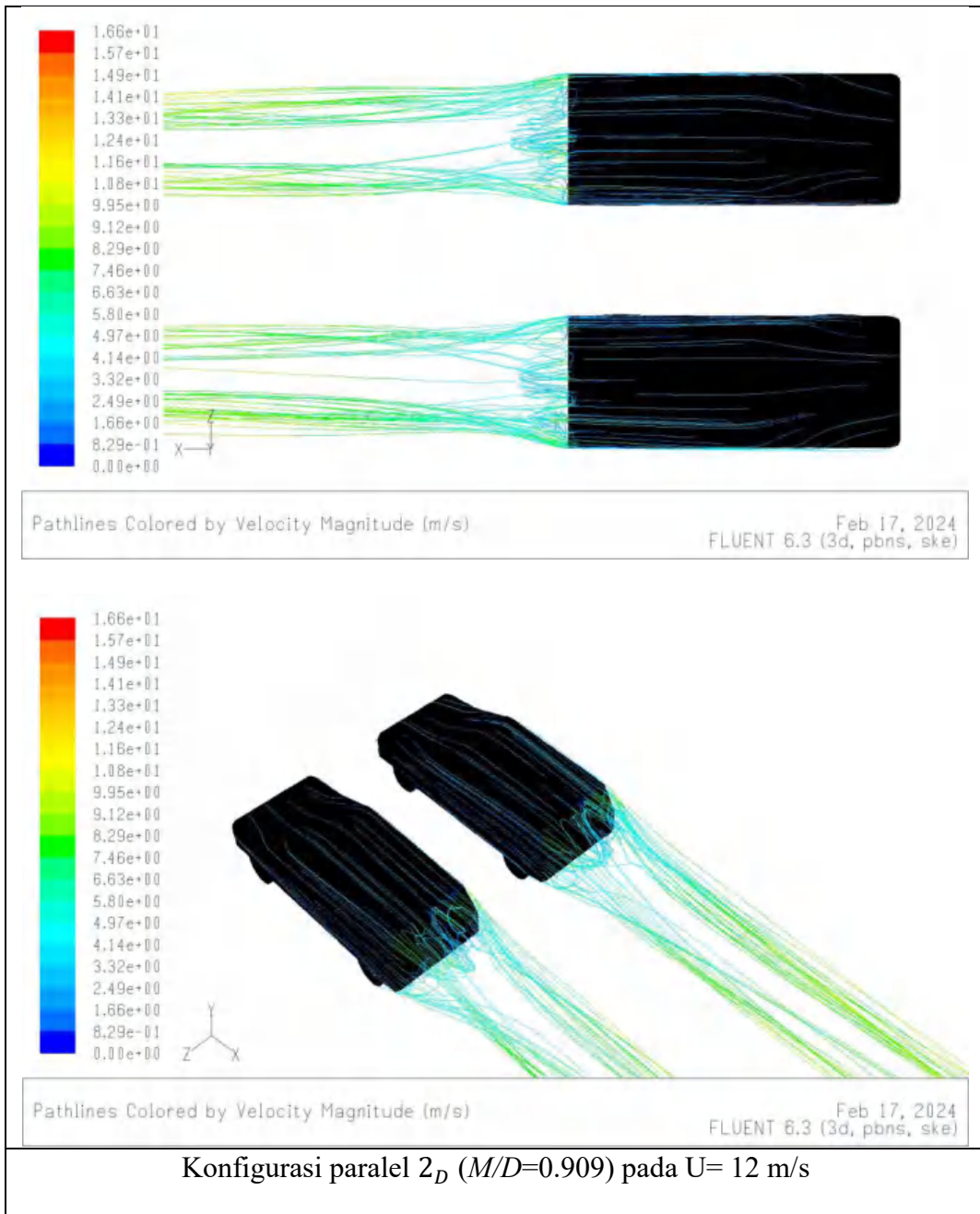




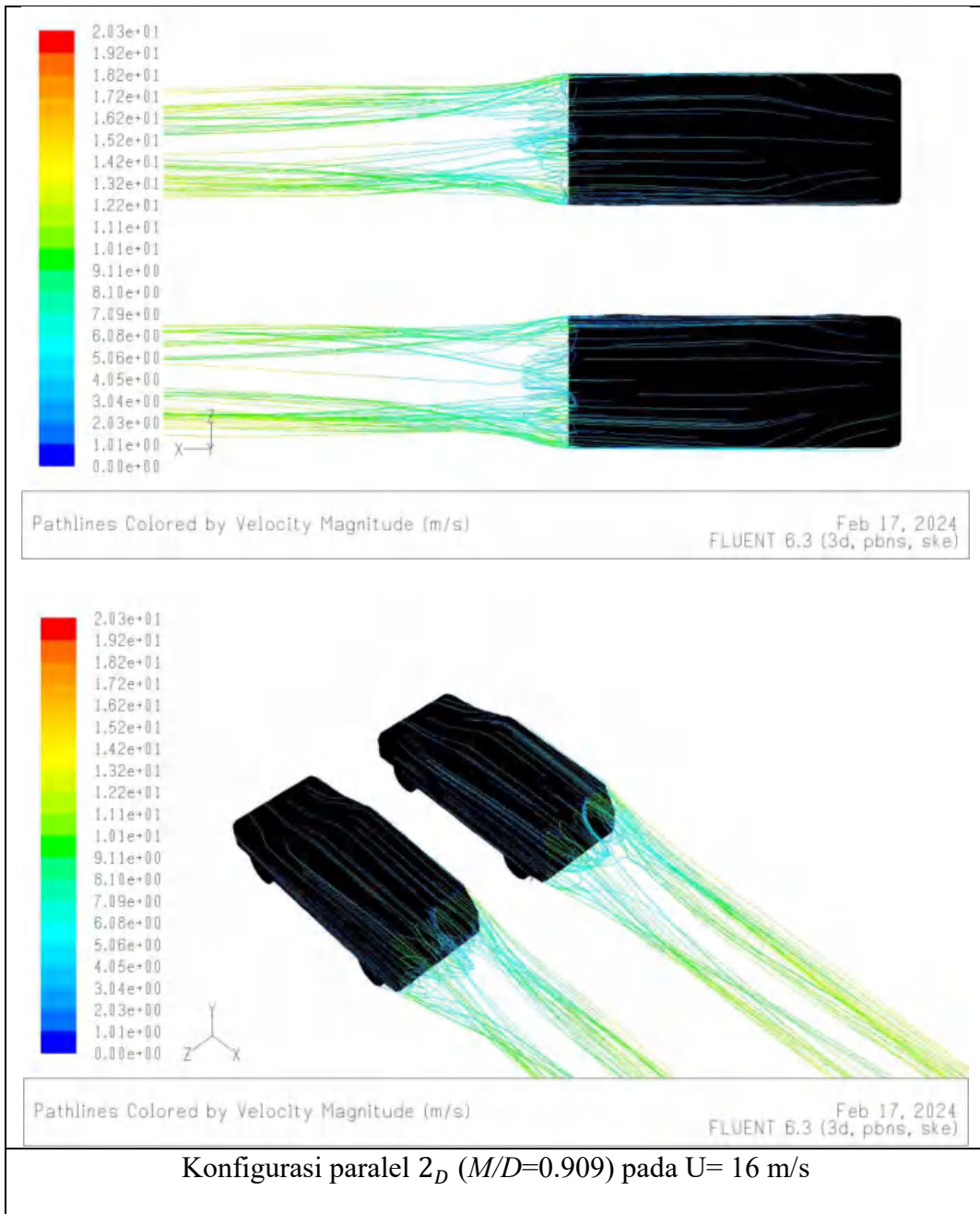


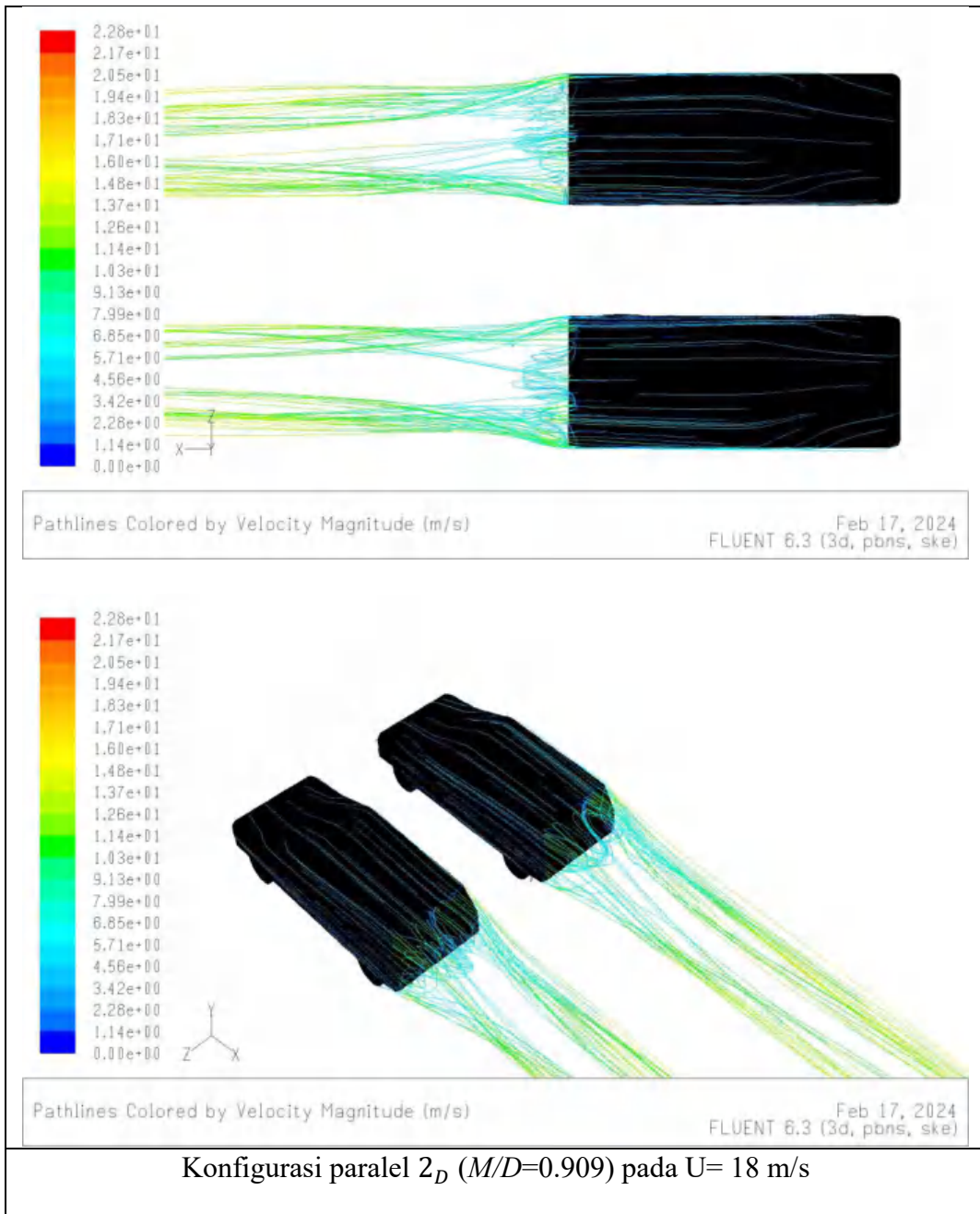


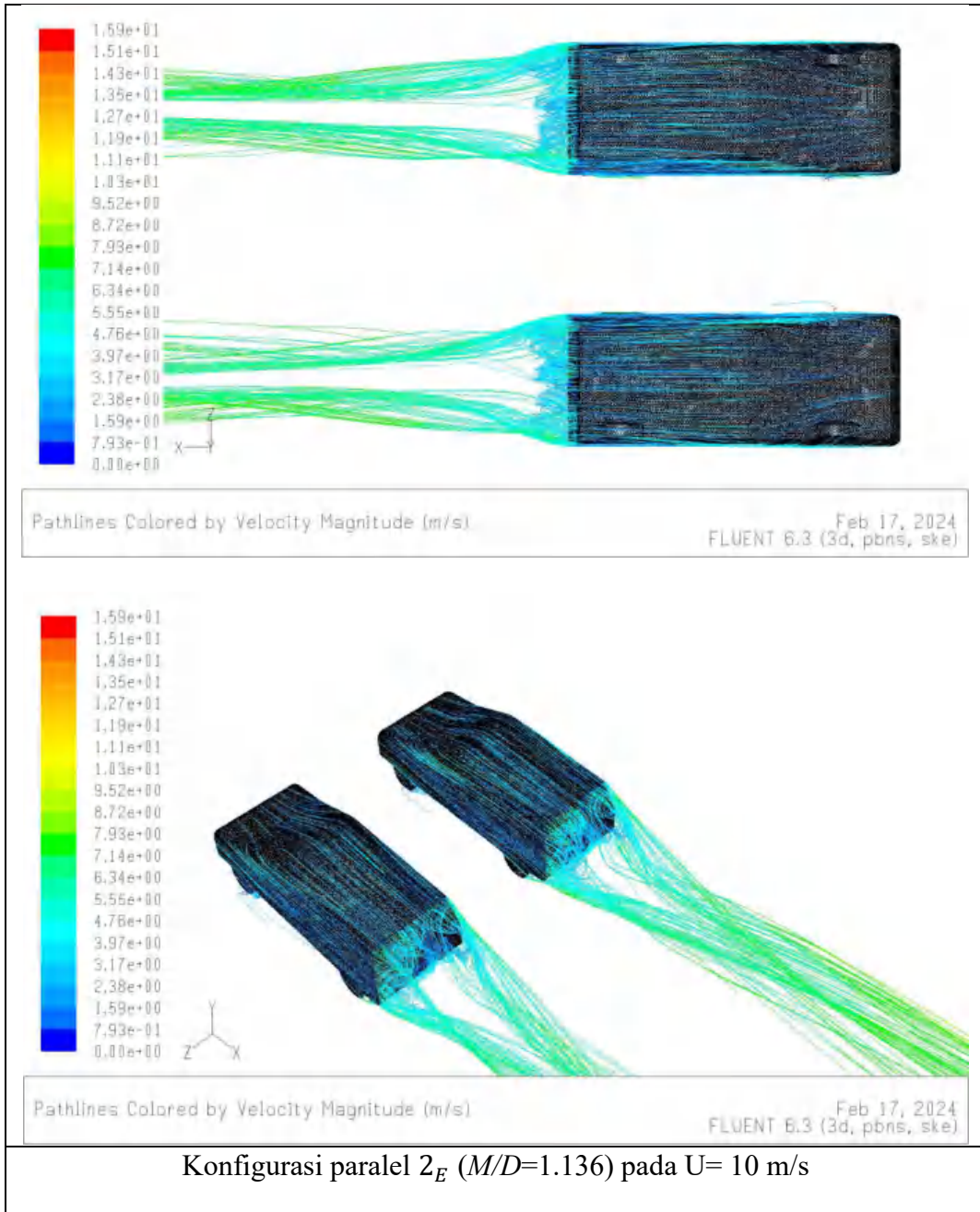


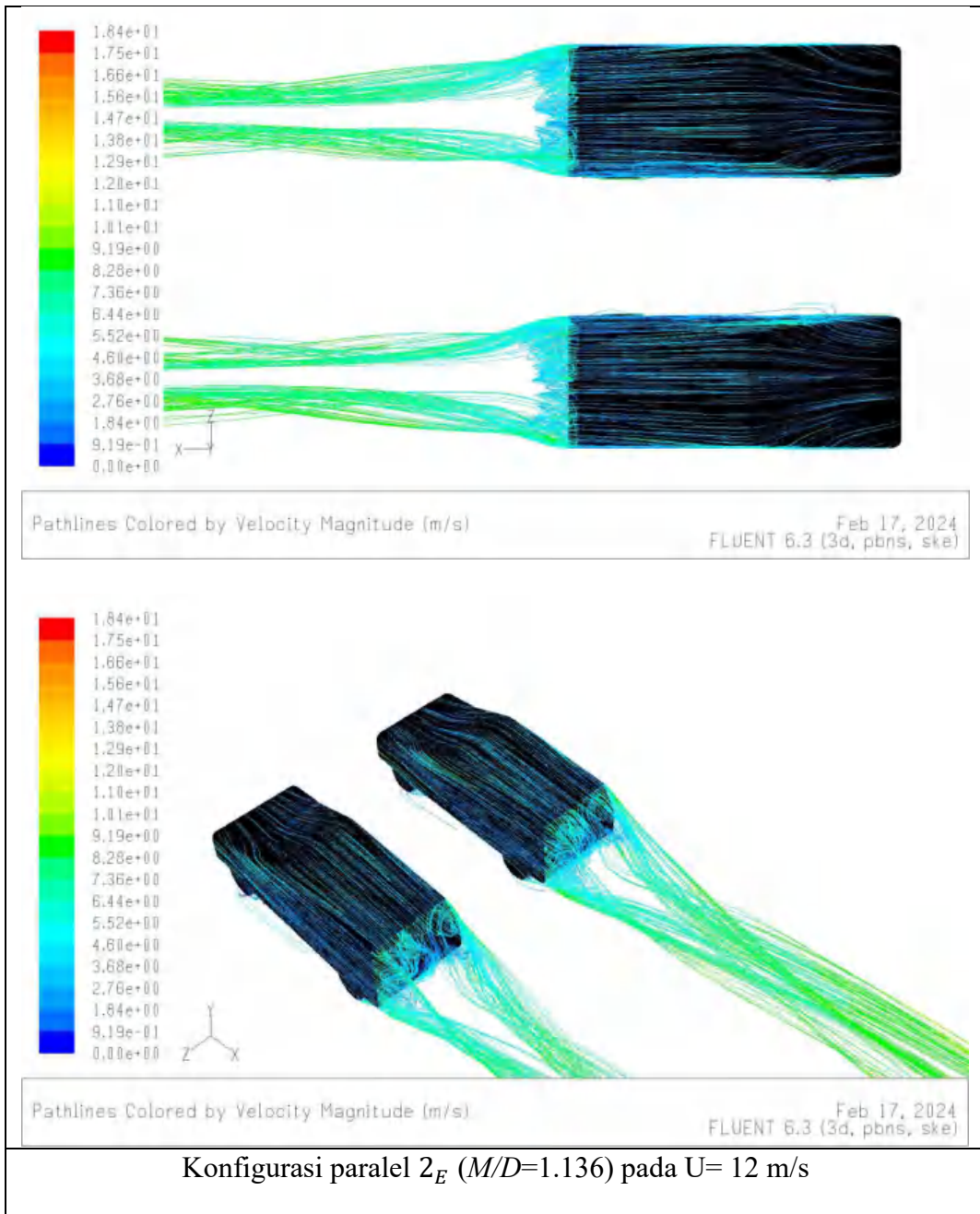




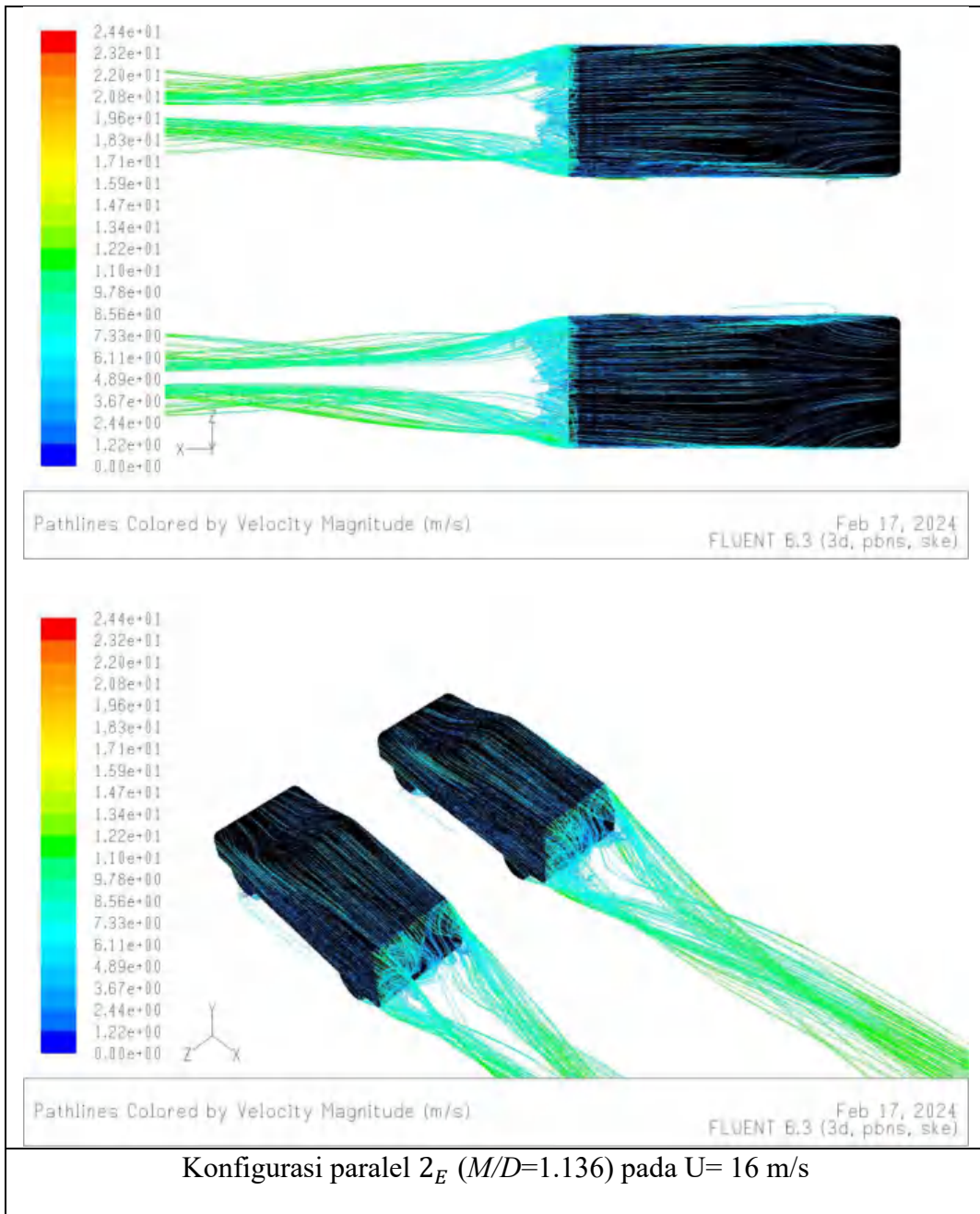


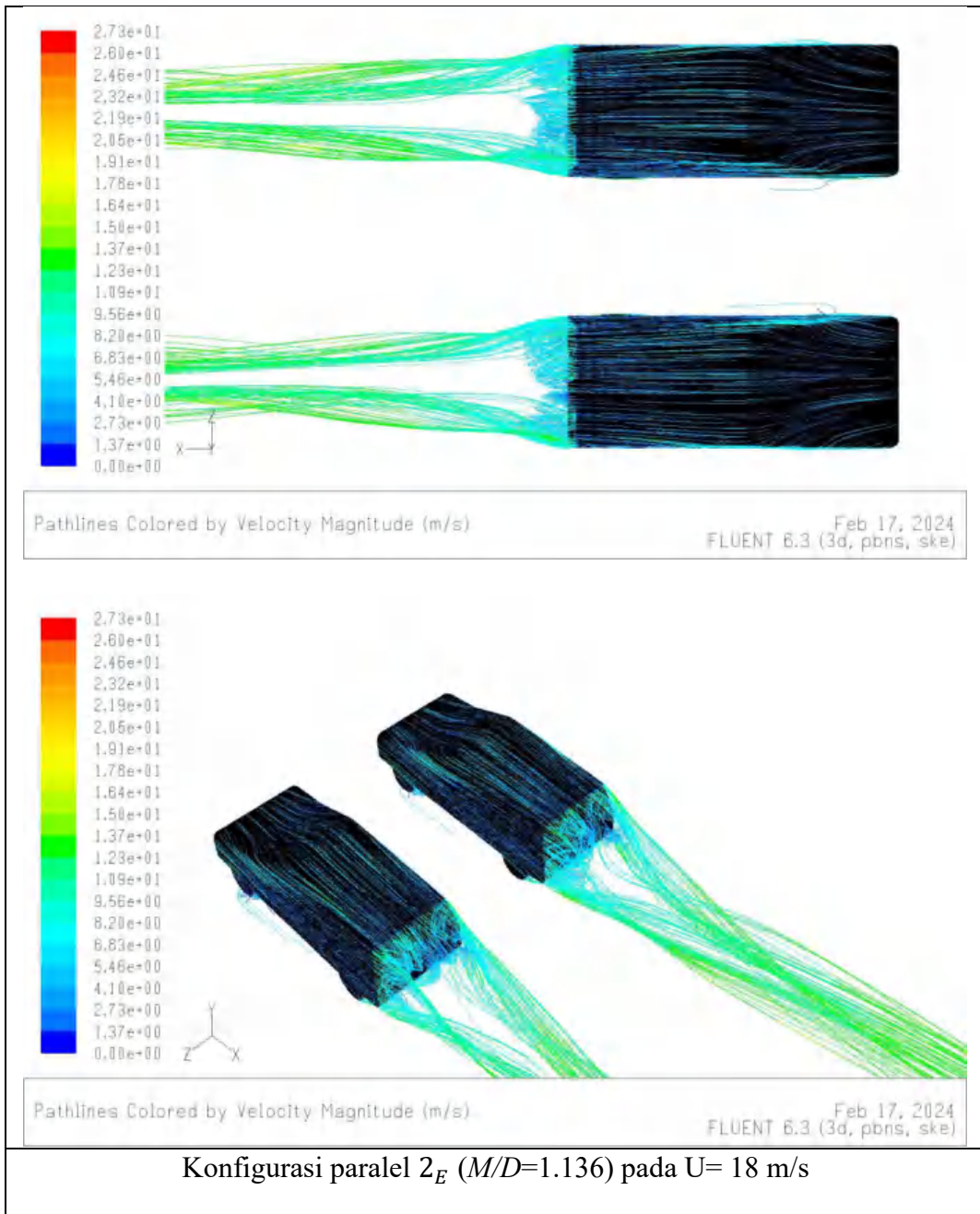




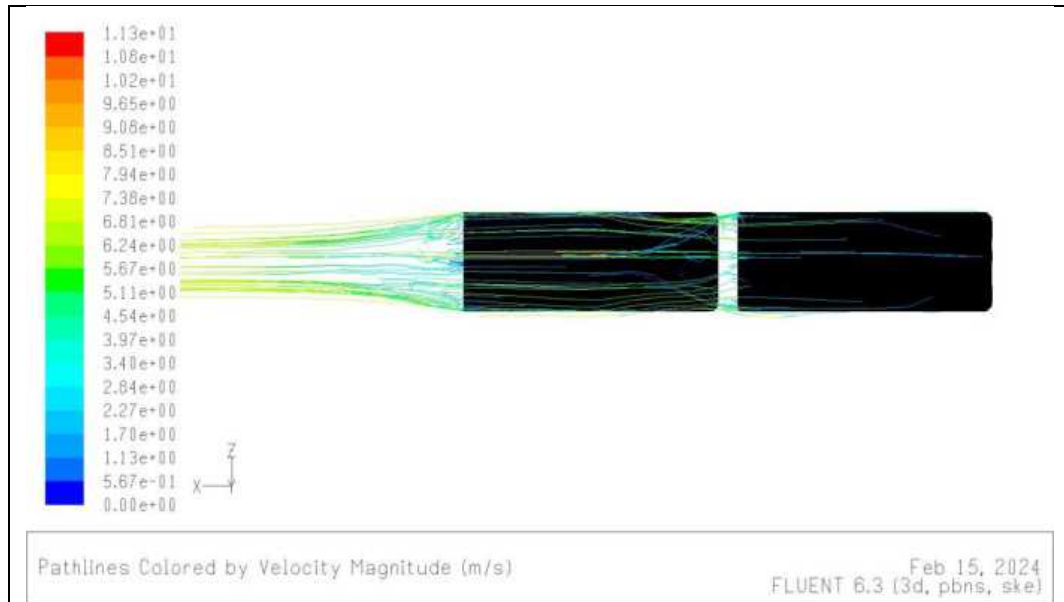




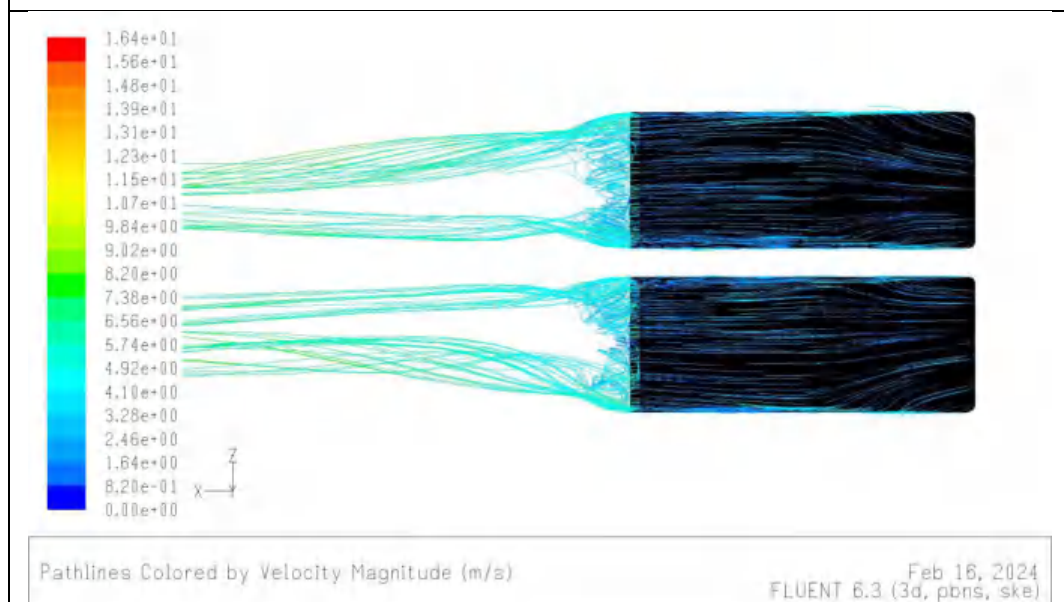




Tabel A 58 Karakteristik aliran melintasi minibus tersusun tandem menunjukkan (a) konfigurasi seri dan (b) konfigurasi paralel pada  $U=10$  m/s, 12 m/s, 16 m/s, dan 18 m/s

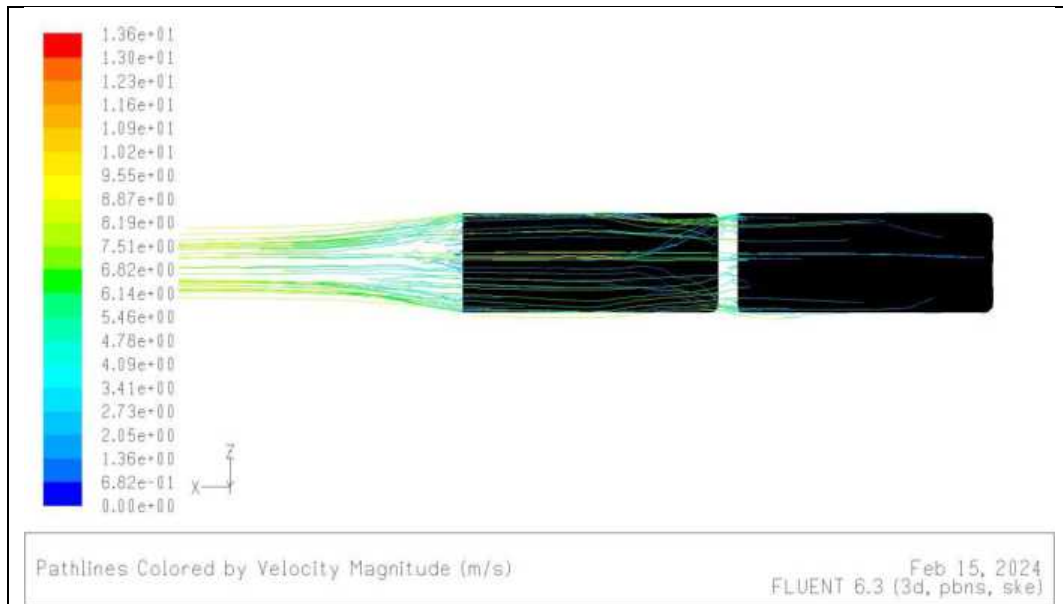
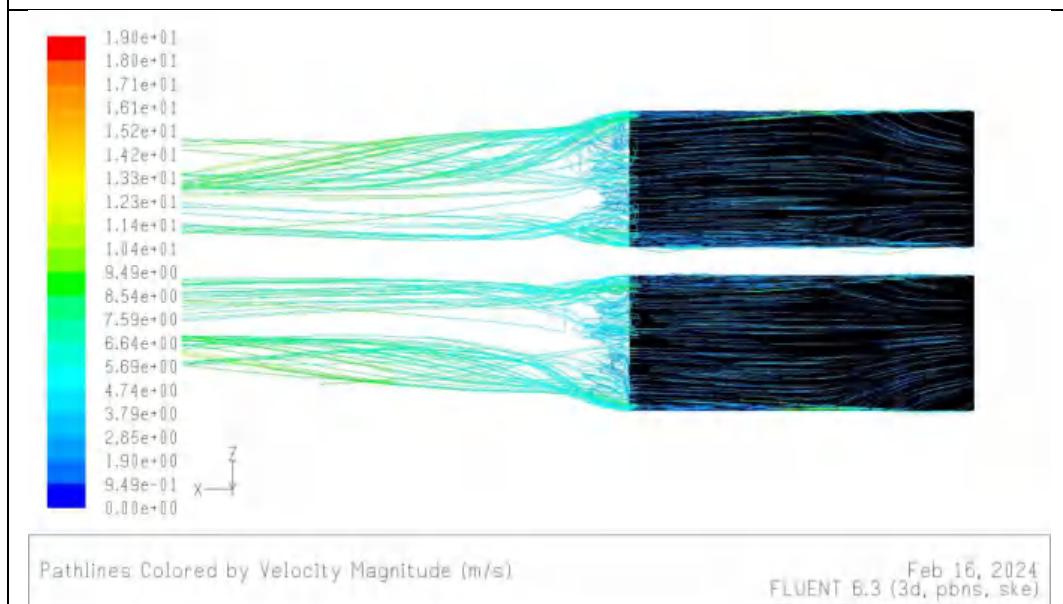


(a) Konfigurasi seri  $1_A$  ( $L/D=0.227$ ) pada  $U=10$  m/s

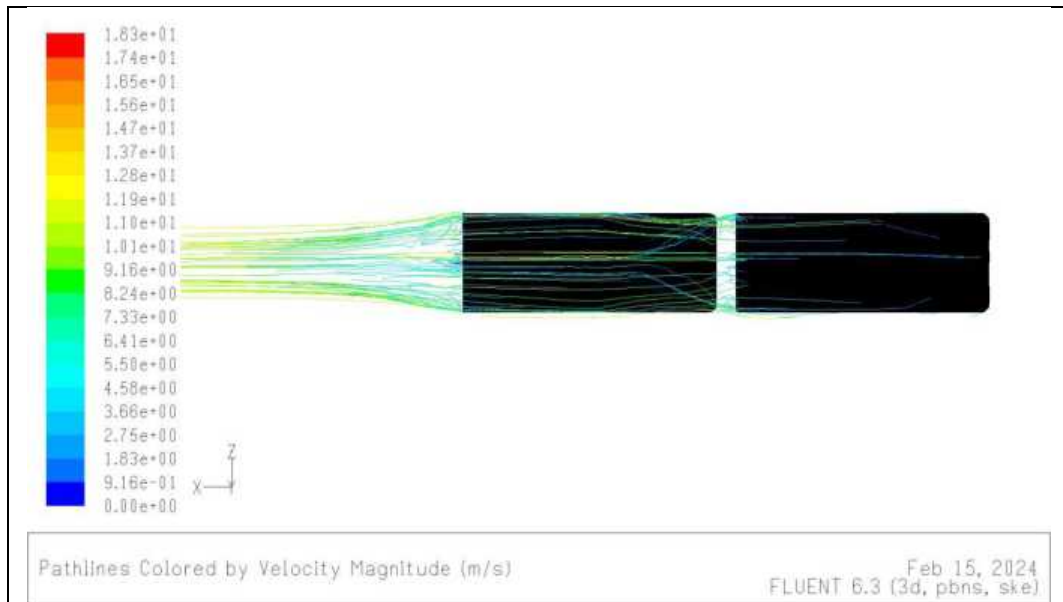
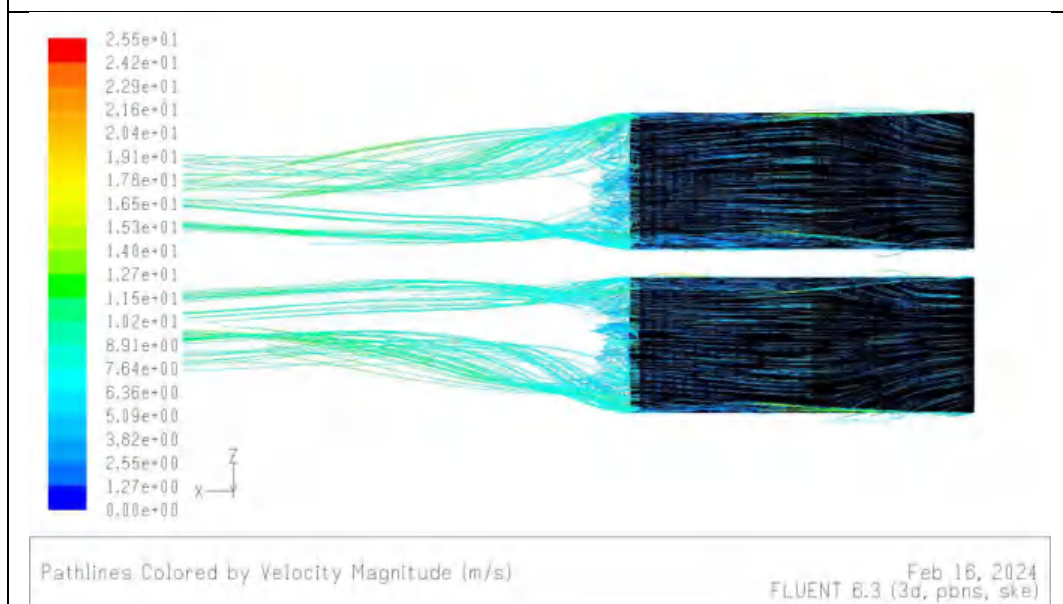


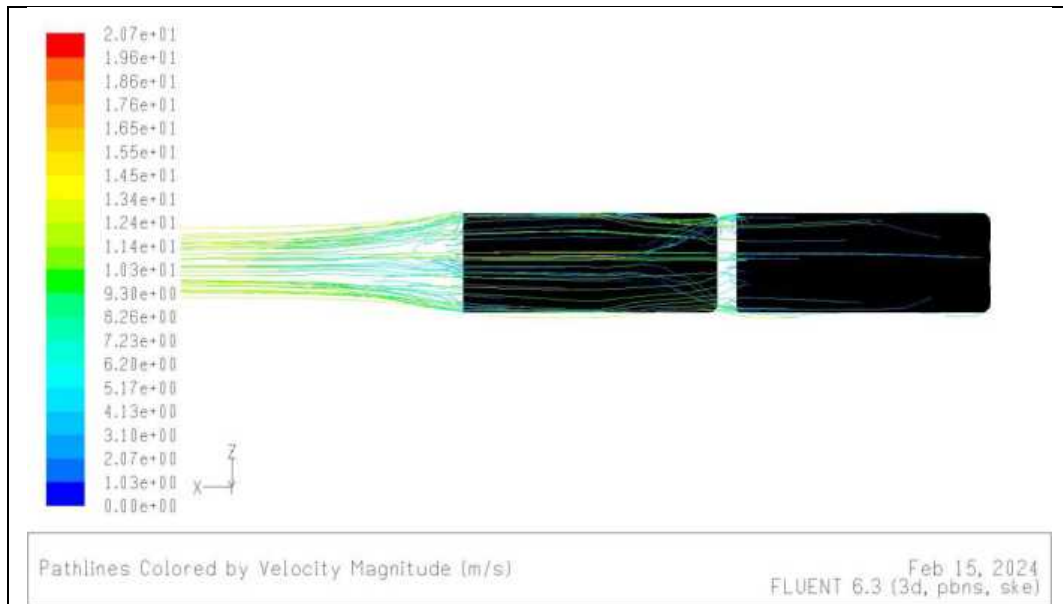
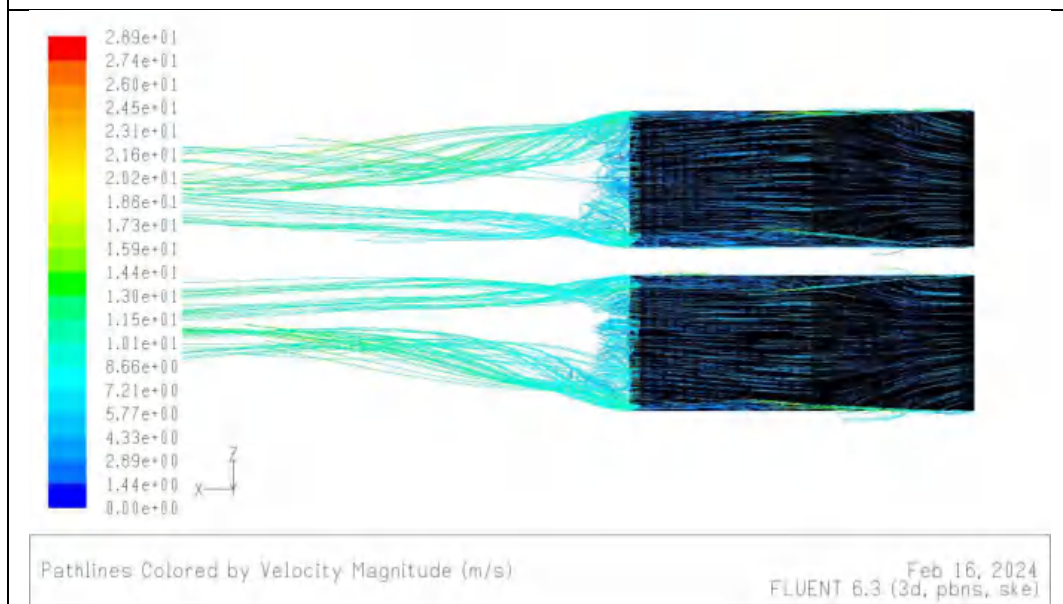
(b) Konfigurasi paralel  $2_A$  ( $M/D=0.227$ ) pada  $U=10$  m/s

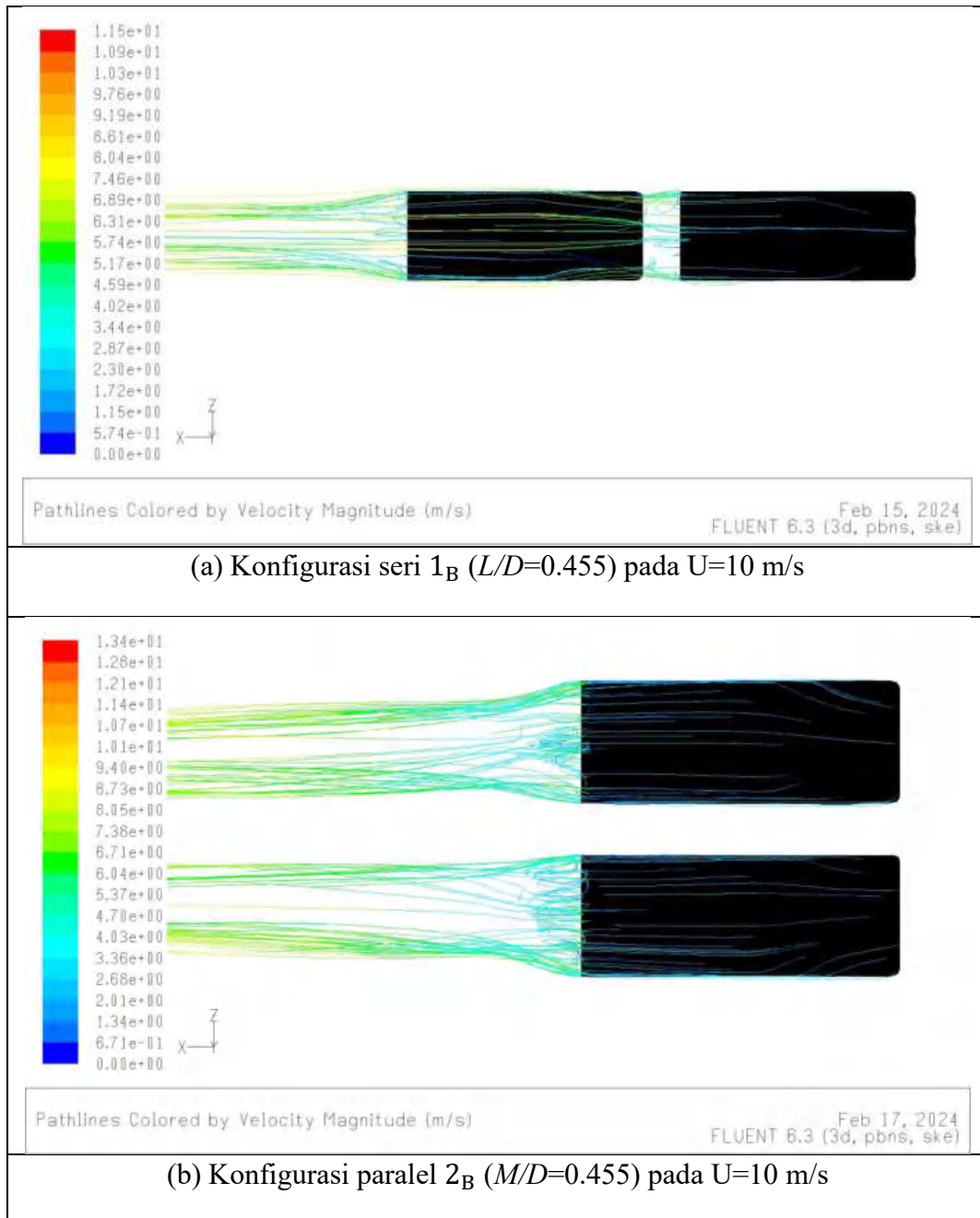


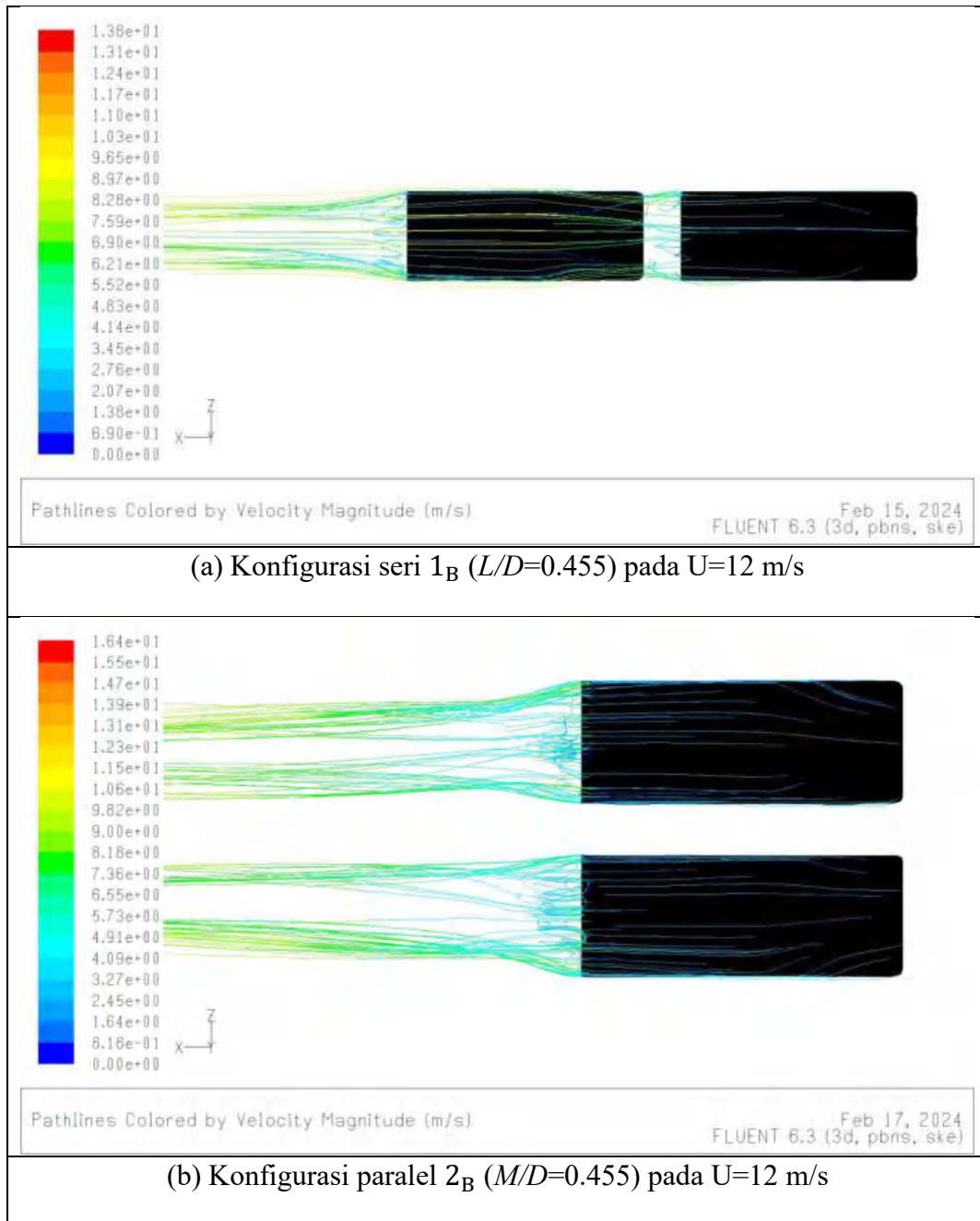
(a) Konfigurasi seri 1<sub>A</sub> ( $L/D=0.227$ ) pada  $U=12$  m/s(b) Konfigurasi paralel 2<sub>A</sub> ( $M/D=0.227$ ) pada  $U=12$  m/s

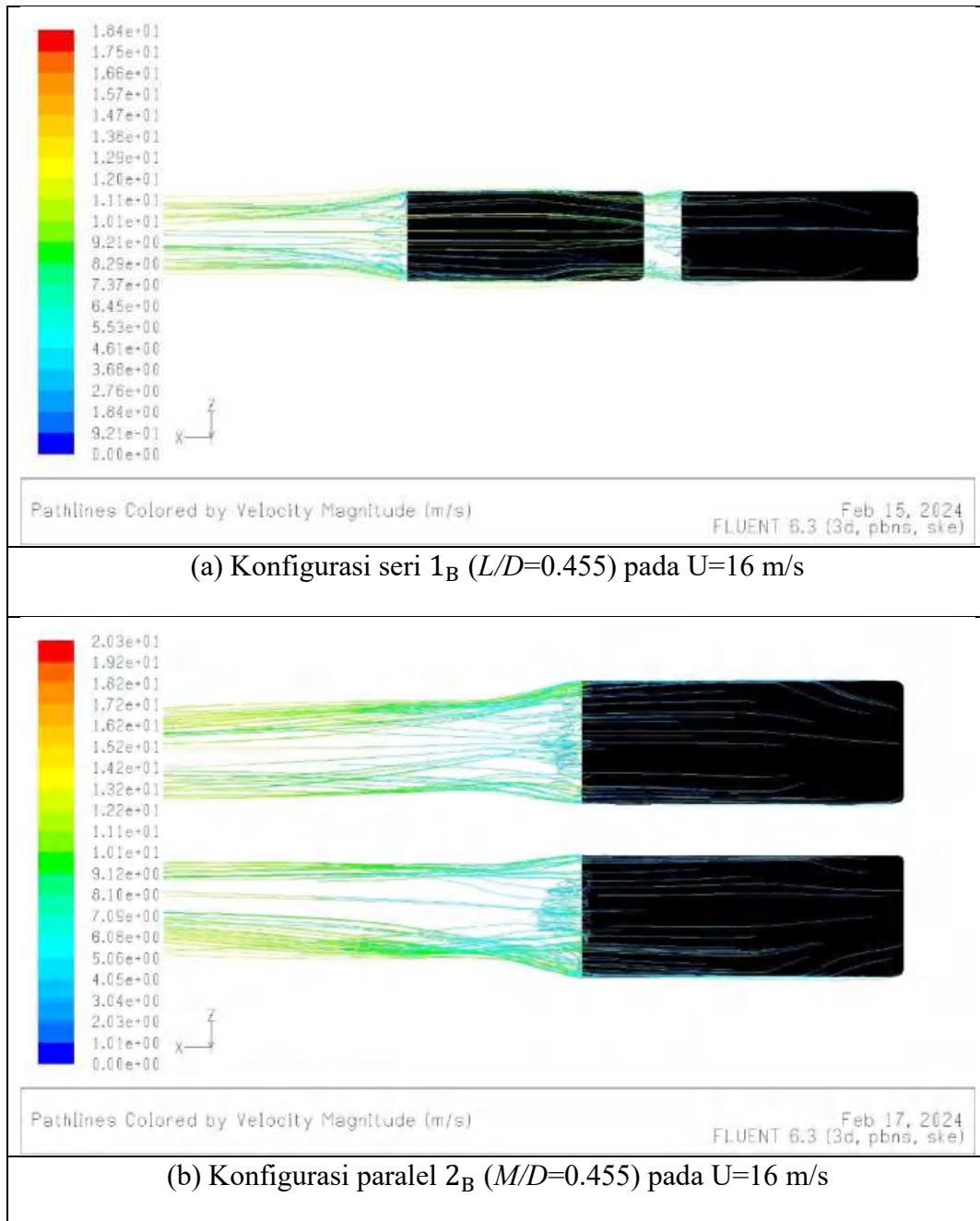


(a) Konfigurasi seri 1<sub>A</sub> ( $L/D=0.227$ ) pada  $U=16$  m/s(b) Konfigurasi paralel 2<sub>A</sub> ( $M/D=0.227$ ) pada  $U=16$  m/s

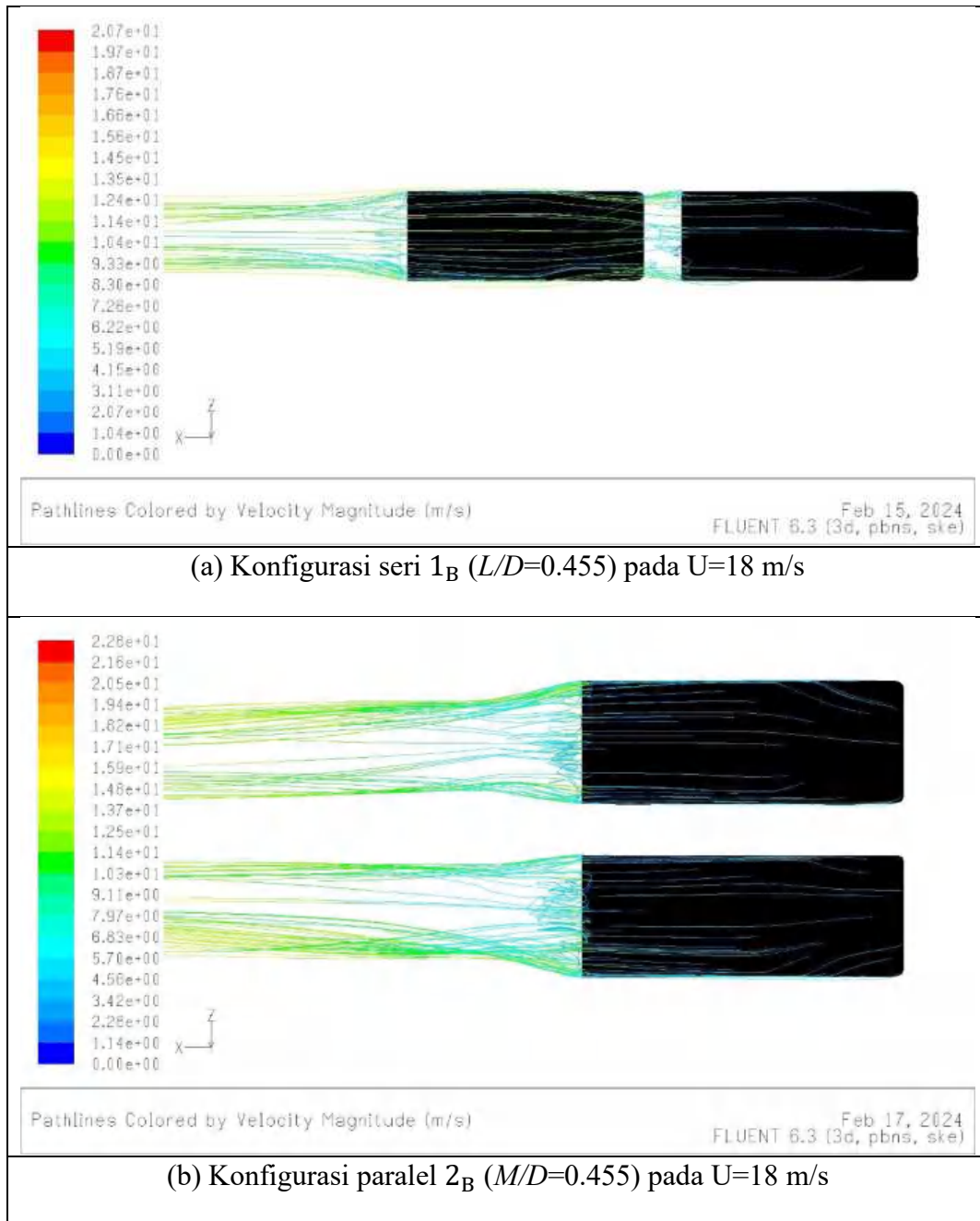
(a) Konfigurasi seri 1<sub>A</sub> ( $L/D=0.227$ ) pada  $U=18$  m/s(b) Konfigurasi paralel 2<sub>A</sub> ( $M/D=0.227$ ) pada  $U=18$  m/s

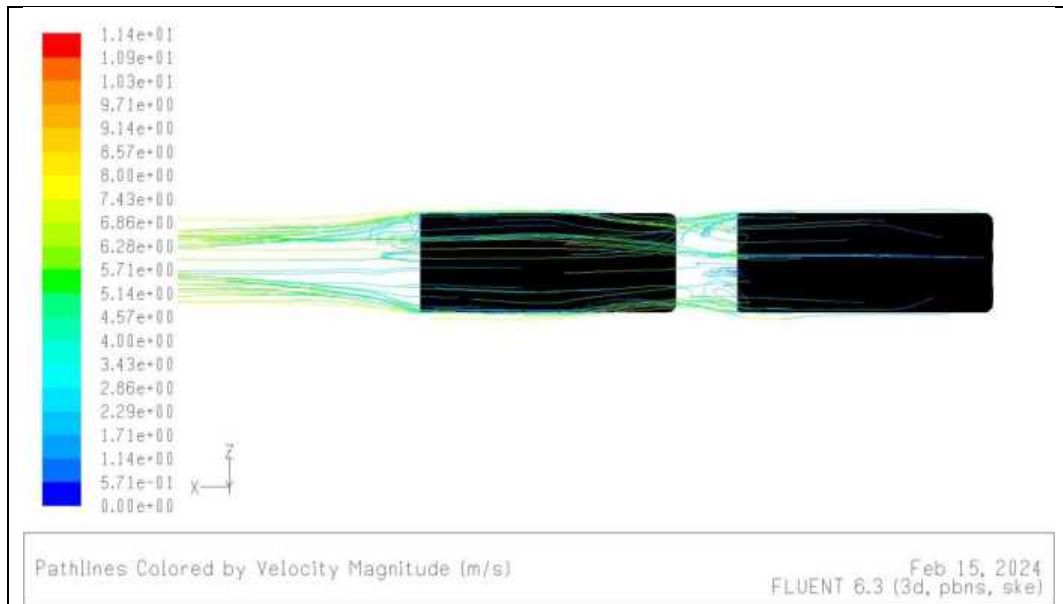
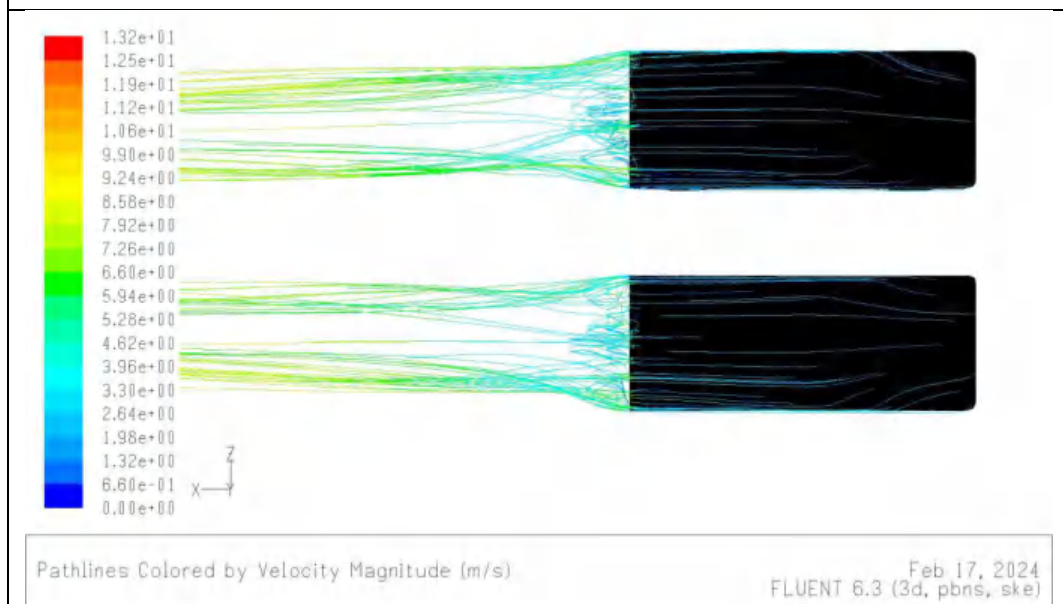


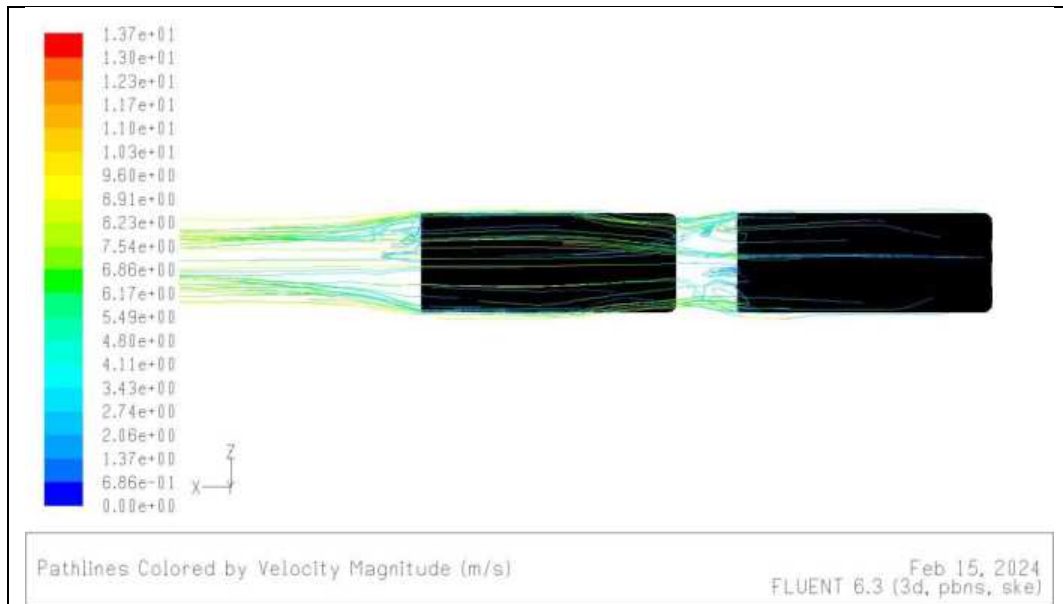
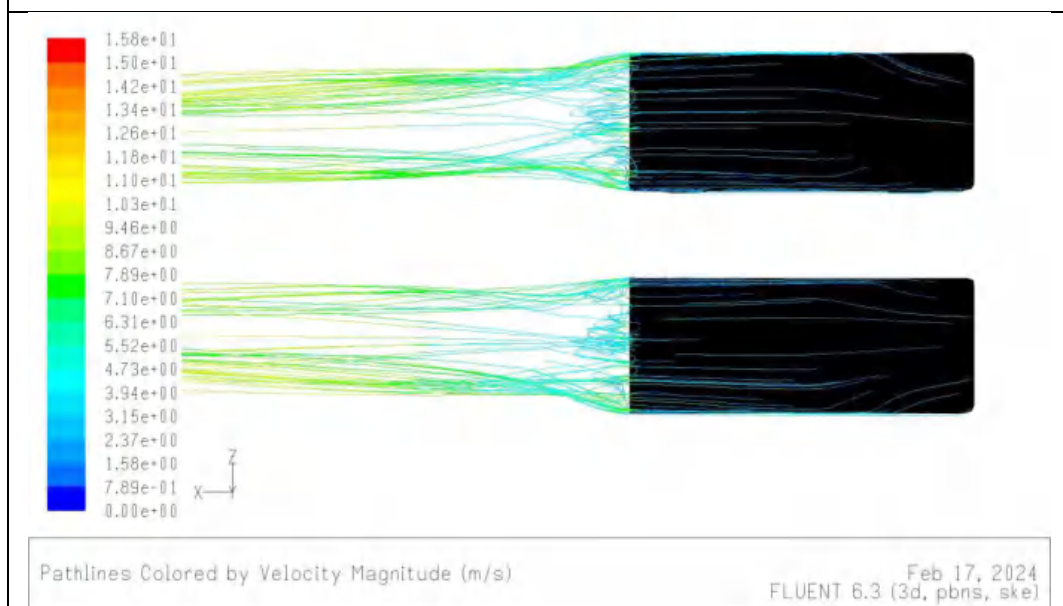




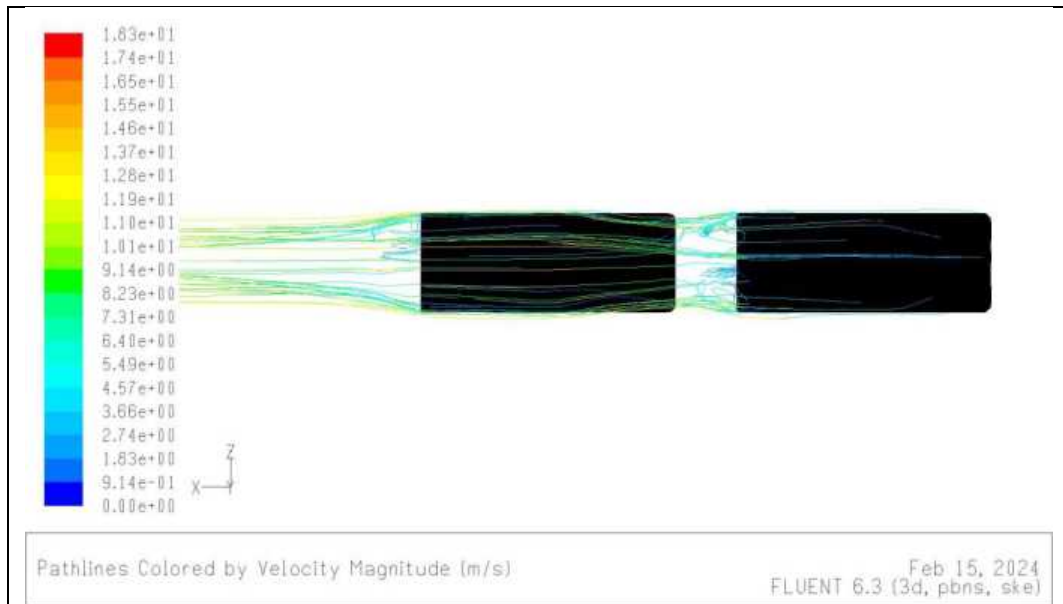
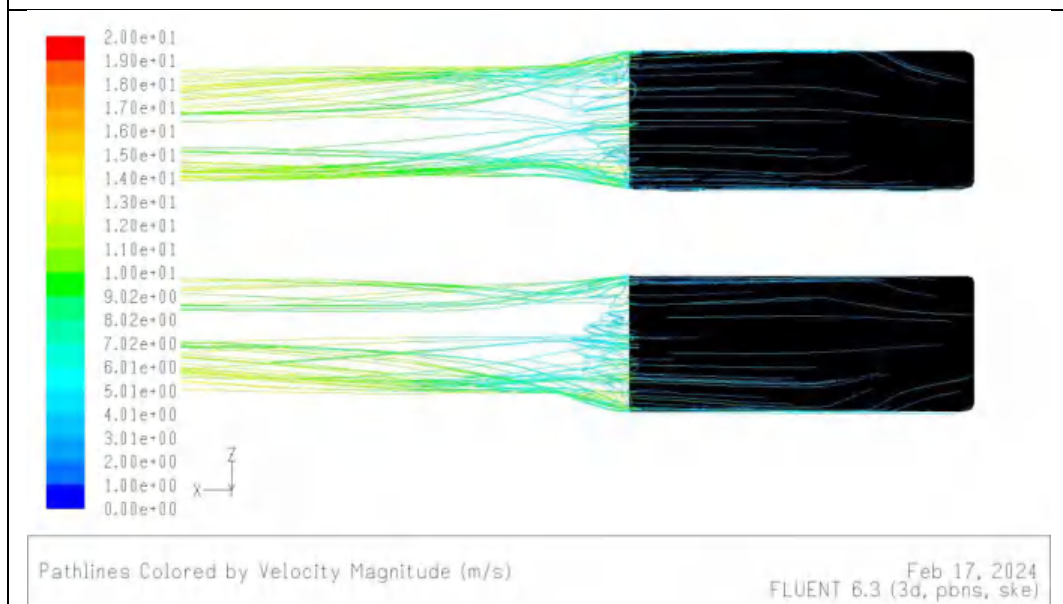


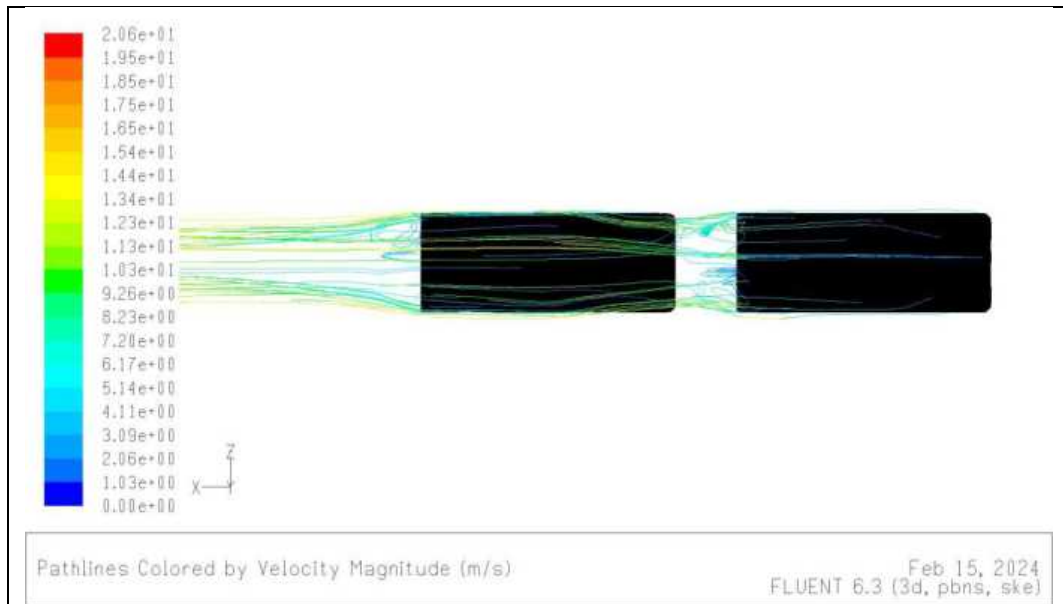
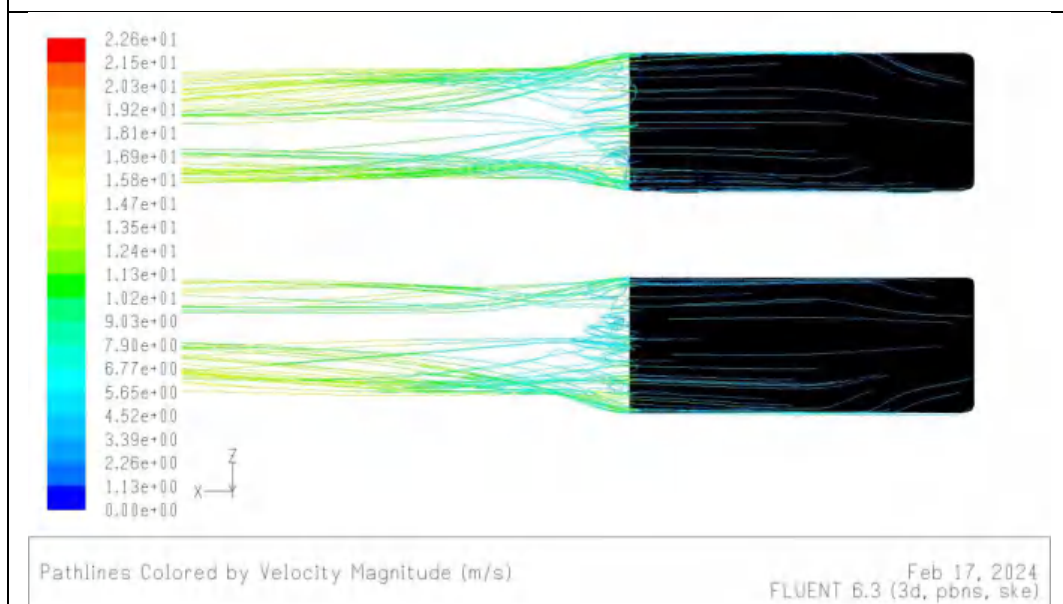


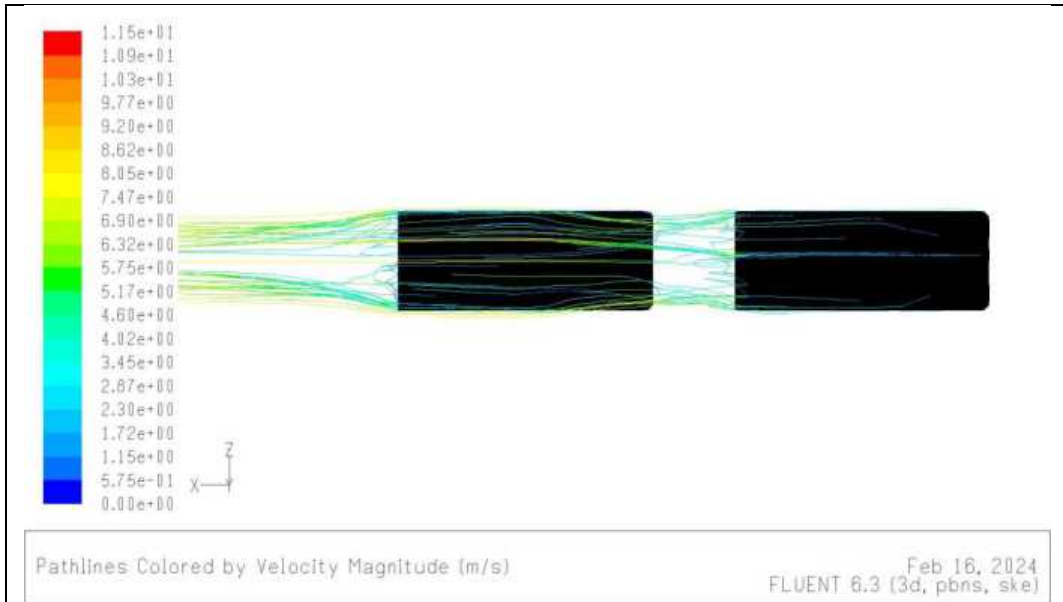
(a) Konfigurasi seri  $1_C$  ( $L/D=0.682$ ) pada  $U=10$  m/s(b) Konfigurasi paralel  $2_C$  ( $M/D=0.682$ ) pada  $U=10$  m/s

(a) Konfigurasi seri  $1_C$  ( $L/D=0.682$ ) pada  $U=12$  m/s(b) Konfigurasi paralel  $2_C$  ( $M/D=0.682$ ) pada  $U=12$  m/s

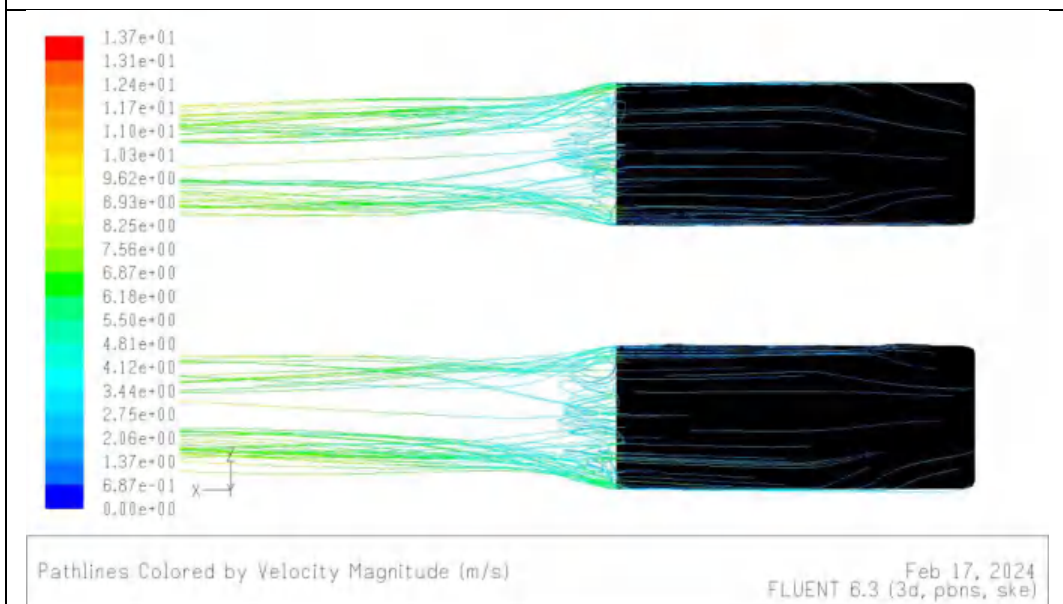


(a) Konfigurasi seri  $1_C$  ( $L/D=0.682$ ) pada  $U=16$  m/s(b) Konfigurasi paralel  $2_C$  ( $M/D=0.682$ ) pada  $U=16$  m/s

(a) Konfigurasi seri  $1_C$  ( $L/D=0.682$ ) pada  $U=18$  m/s(b) Konfigurasi paralel  $2_C$  ( $M/D=0.682$ ) pada  $U=18$  m/s

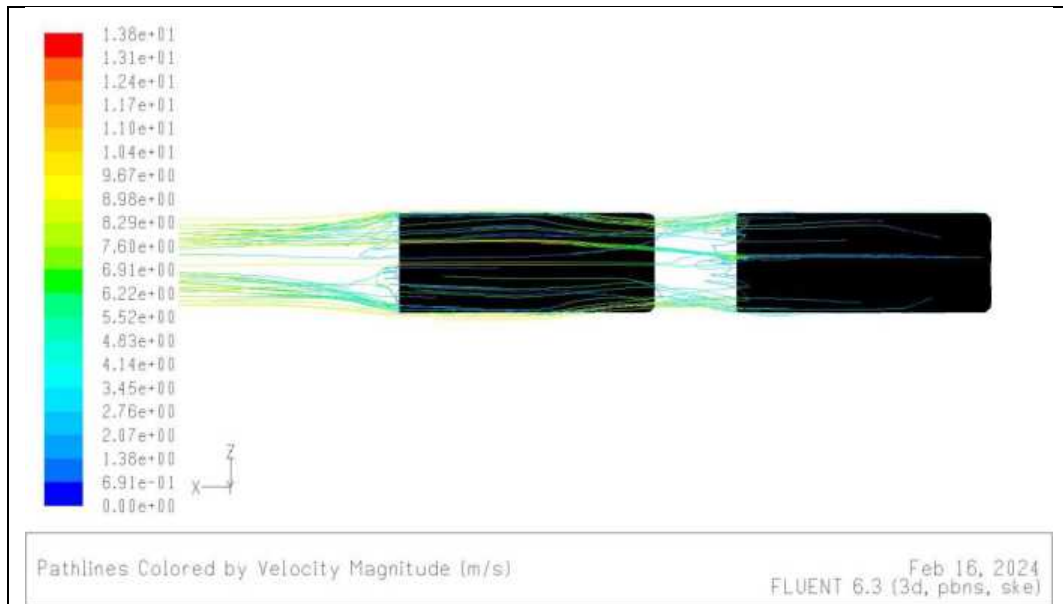
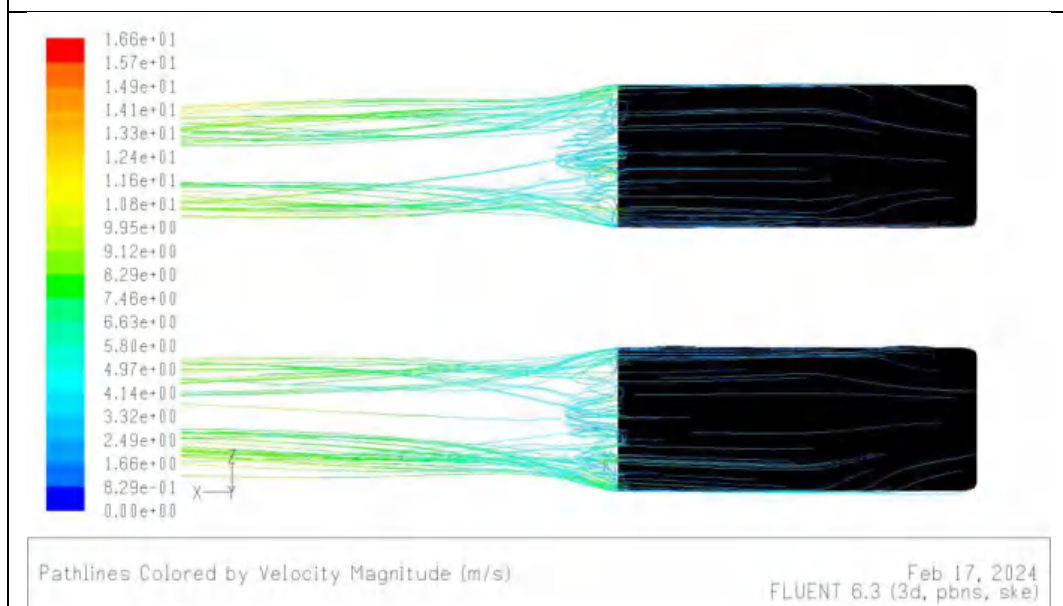


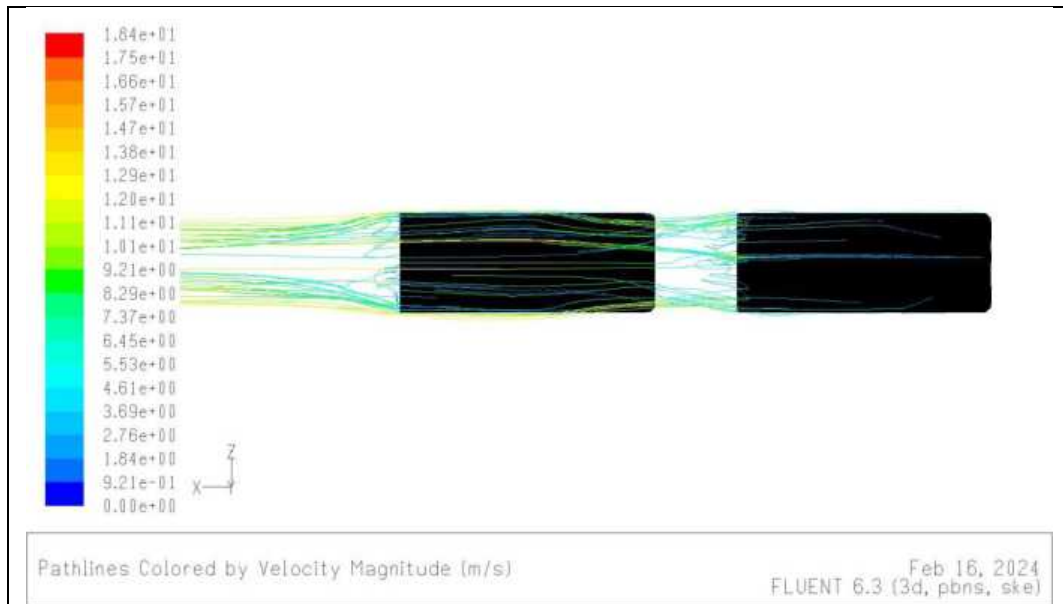
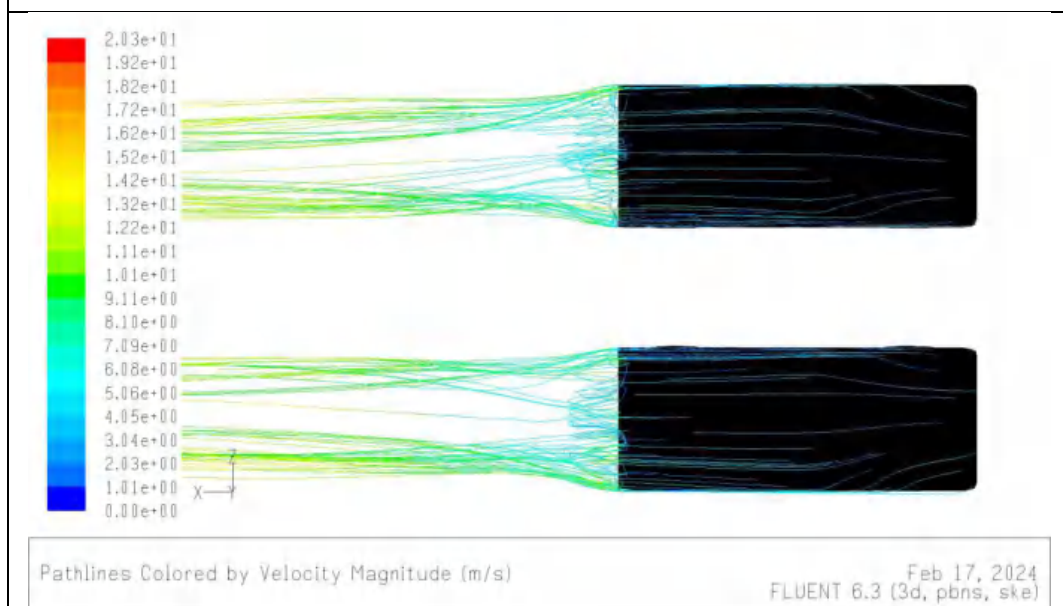
(a) Konfigurasi seri 1<sub>D</sub> ( $L/D=0.909$ ) pada  $U=10$  m/s



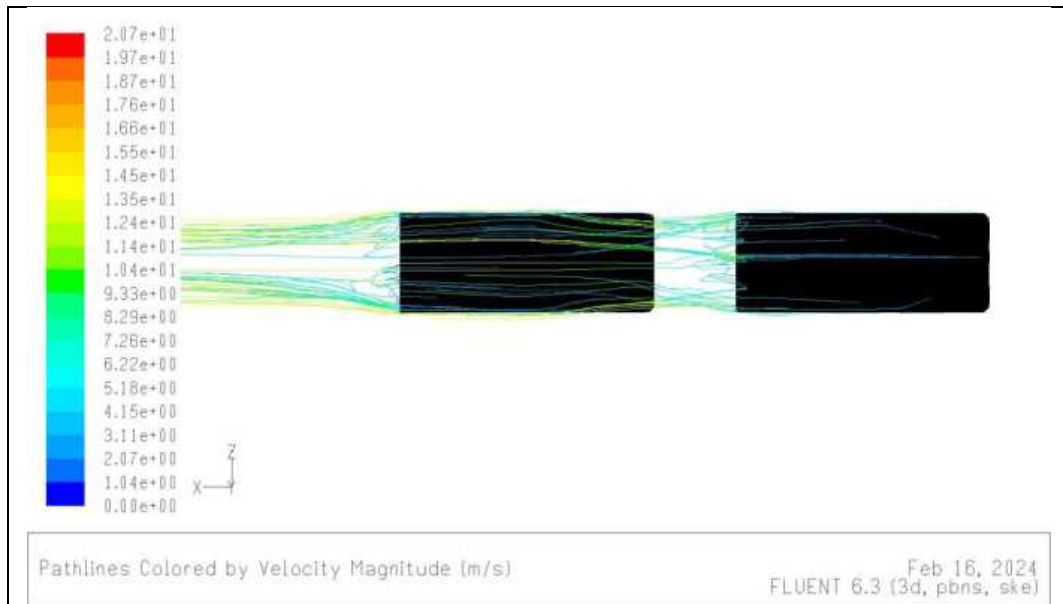
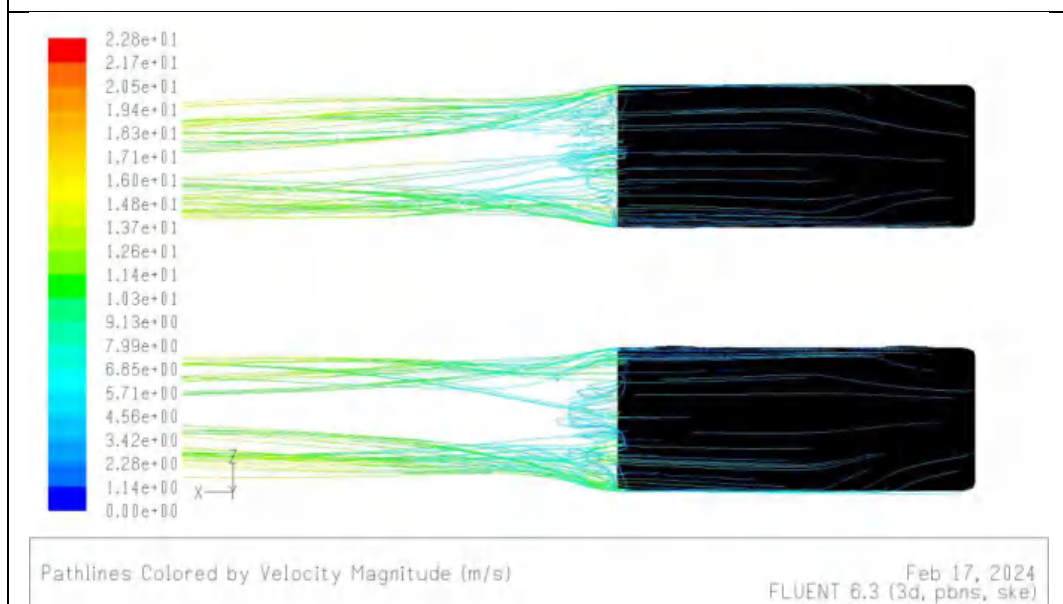
(b) Konfigurasi paralel 2<sub>D</sub> ( $M/D=0.909$ ) pada  $U=10$  m/s

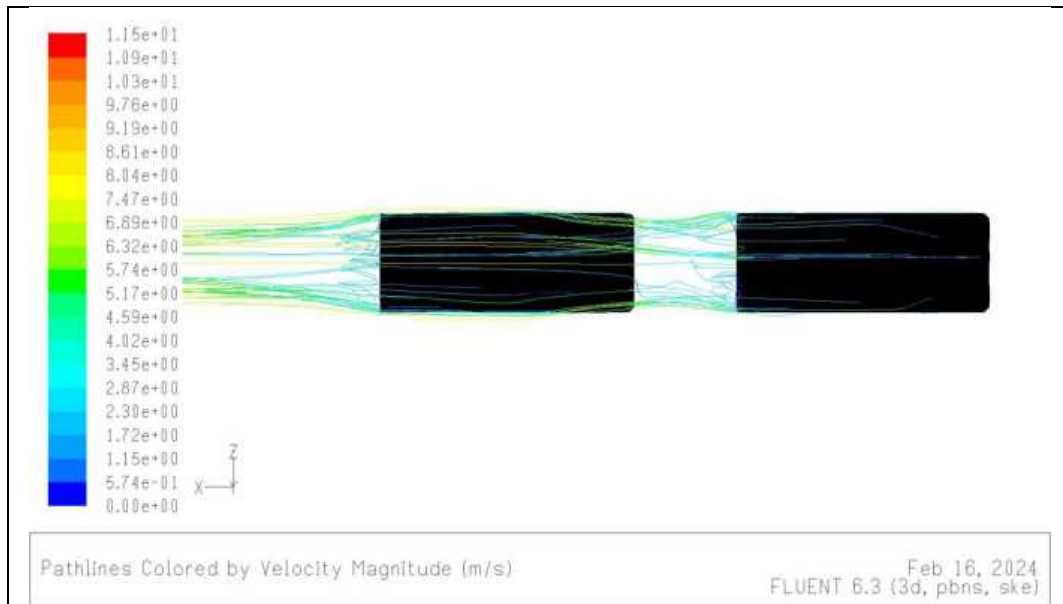
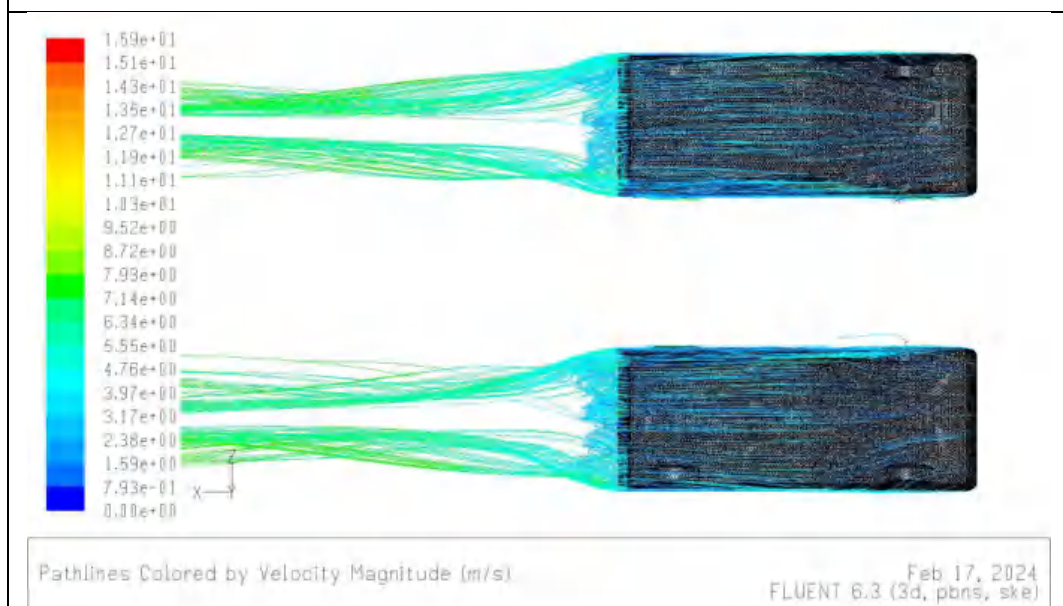


(a) Konfigurasi seri 1<sub>D</sub> ( $L/D=0.909$ ) pada  $U=12$  m/s(b) Konfigurasi paralel 2<sub>D</sub> ( $M/D=0.909$ ) pada  $U=12$  m/s

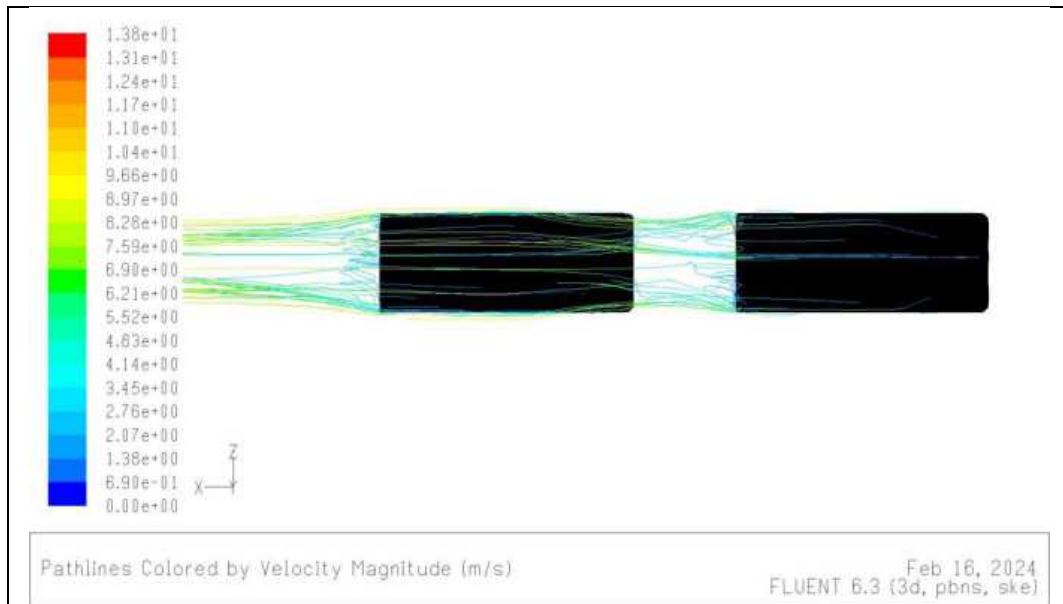
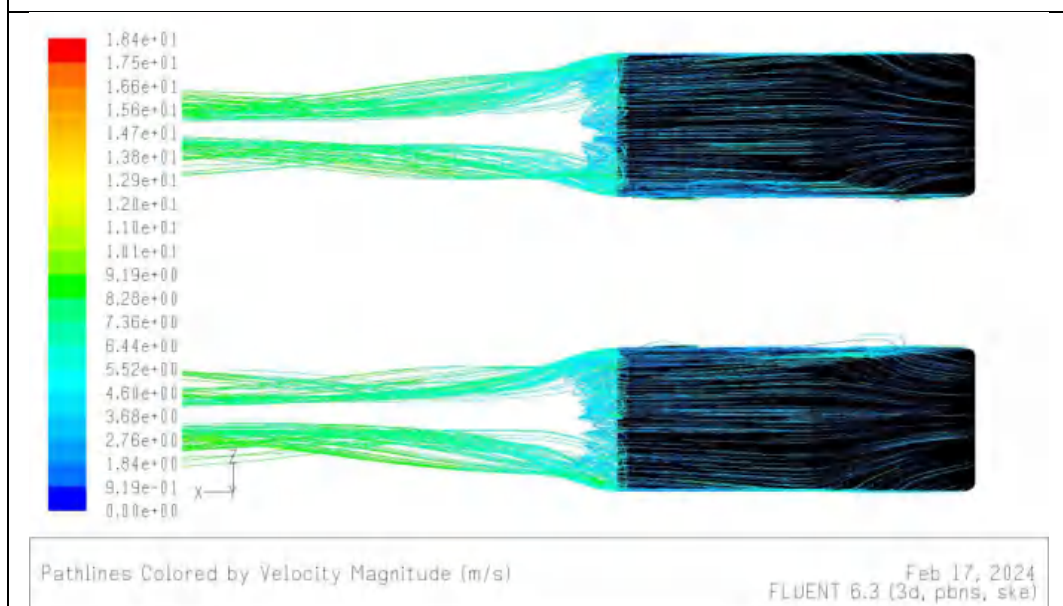
(a) Konfigurasi seri 1<sub>D</sub> ( $L/D=0.909$ ) pada  $U=16$  m/s(b) Konfigurasi paralel 2<sub>D</sub> ( $M/D=0.909$ ) pada  $U=16$  m/s

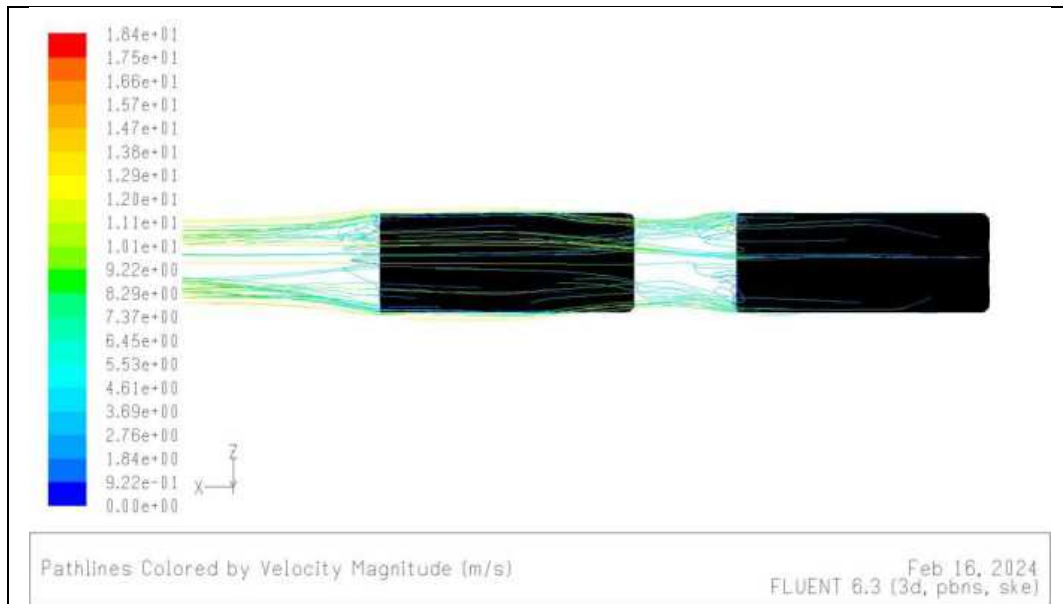
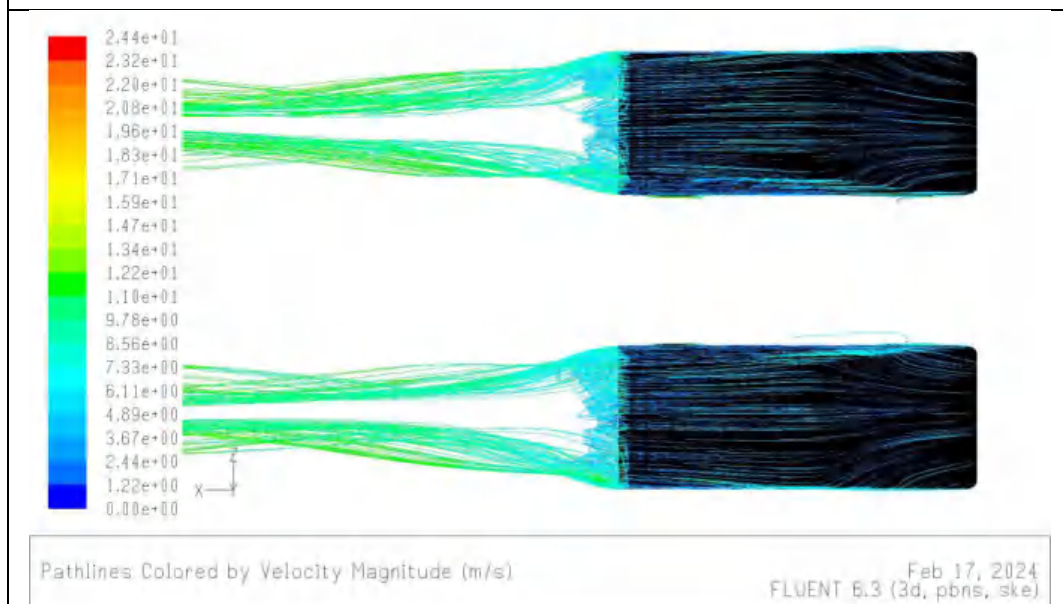


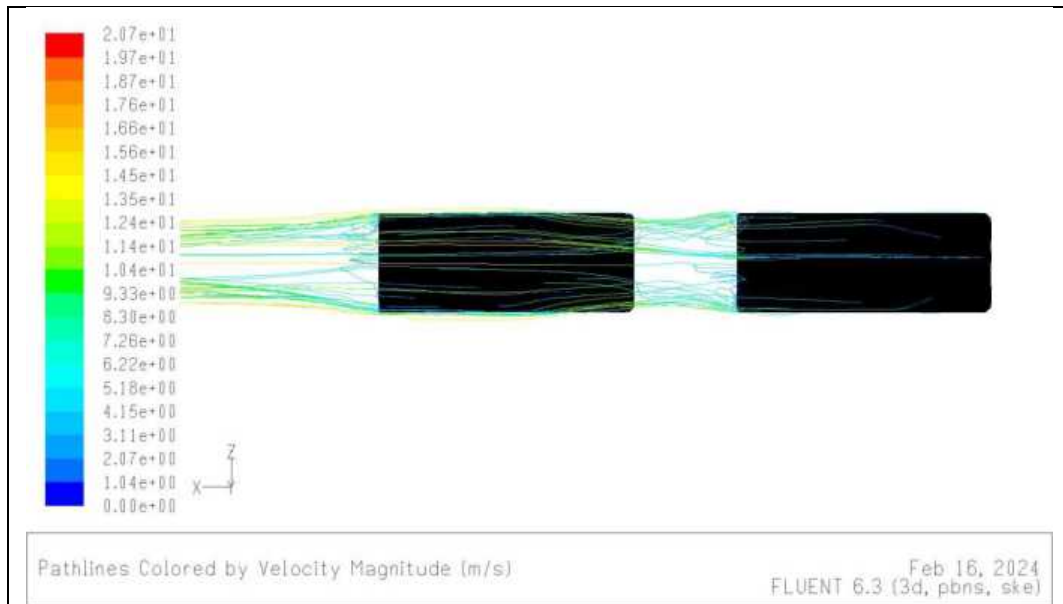
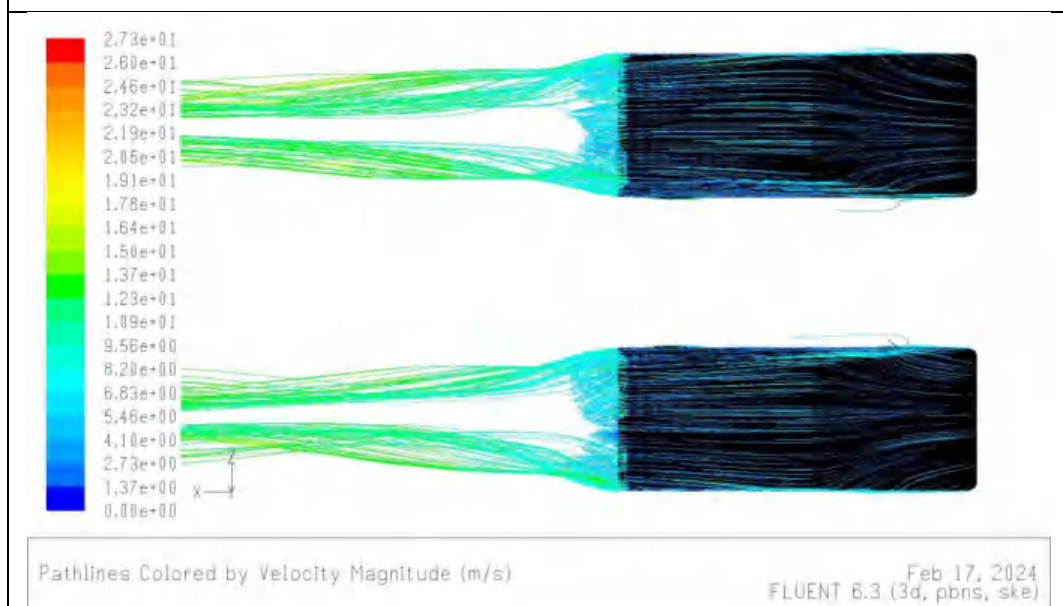
(a) Konfigurasi seri 1<sub>D</sub> ( $L/D=0.909$ ) pada  $U=18$  m/s(b) Konfigurasi paralel 2<sub>D</sub> ( $M/D=0.909$ ) pada  $U=18$  m/s

(a) Konfigurasi seri  $1_E$  ( $L/D=1.136$ ) pada  $U=10$  m/s(b) Konfigurasi paralel  $2_E$  ( $M/D=1.136$ ) pada  $U=10$  m/s



(a) Konfigurasi seri 1<sub>E</sub> ( $L/D=1.136$ ) pada  $U=12$  m/s(b) Konfigurasi paralel 2<sub>E</sub> ( $M/D=1.136$ ) pada  $U=12$  m/s

(a) Konfigurasi seri 1<sub>E</sub> ( $L/D=1.136$ ) pada  $U=16$  m/s(b) Konfigurasi paralel 2<sub>E</sub> ( $M/D=1.136$ ) pada  $U=16$  m/s

(a) Konfigurasi seri 1<sub>E</sub> ( $L/D=1.136$ ) pada  $U=18$  m/s(b) Konfigurasi paralel 2<sub>E</sub> ( $M/D=1.136$ ) pada  $U=18$  m/s

Tabel A 59 Sifat fisis udara

Temp. $T$ , °C	Density $\rho$ , kg/m <sup>3</sup>	Specific Heat $c_p$ J/kg · K	Thermal Conductivity $k$ , W/m · K	Thermal Diffusivity $\alpha$ , m <sup>2</sup> /s	Dynamic Viscosity $\mu$ , kg/m · s	Kinematic Viscosity $\nu$ , m <sup>2</sup> /s	Prandtl Number Pr
-150	2.866	983	0.01171	$4.158 \times 10^{-6}$	$8.636 \times 10^{-6}$	$3.013 \times 10^{-6}$	0.7246
-100	2.038	966	0.01582	$8.036 \times 10^{-6}$	$1.189 \times 10^{-5}$	$5.837 \times 10^{-6}$	0.7263
-50	1.582	999	0.01979	$1.252 \times 10^{-5}$	$1.474 \times 10^{-5}$	$9.319 \times 10^{-6}$	0.7440
-40	1.514	1002	0.02057	$1.356 \times 10^{-5}$	$1.527 \times 10^{-5}$	$1.008 \times 10^{-5}$	0.7436
-30	1.451	1004	0.02134	$1.465 \times 10^{-5}$	$1.579 \times 10^{-5}$	$1.087 \times 10^{-5}$	0.7425
-20	1.394	1005	0.02211	$1.578 \times 10^{-5}$	$1.630 \times 10^{-5}$	$1.169 \times 10^{-5}$	0.7408
-10	1.341	1006	0.02288	$1.696 \times 10^{-5}$	$1.680 \times 10^{-5}$	$1.252 \times 10^{-5}$	0.7387
0	1.292	1006	0.02364	$1.818 \times 10^{-5}$	$1.729 \times 10^{-5}$	$1.338 \times 10^{-5}$	0.7362
5	1.269	1006	0.02401	$1.880 \times 10^{-5}$	$1.754 \times 10^{-5}$	$1.382 \times 10^{-5}$	0.7350
10	1.246	1006	0.02439	$1.944 \times 10^{-5}$	$1.778 \times 10^{-5}$	$1.426 \times 10^{-5}$	0.7336
15	1.225	1007	0.02476	$2.009 \times 10^{-5}$	$1.802 \times 10^{-5}$	$1.470 \times 10^{-5}$	0.7323
20	1.204	1007	0.02514	$2.074 \times 10^{-5}$	$1.825 \times 10^{-5}$	$1.516 \times 10^{-5}$	0.7309
25	1.184	1007	0.02551	$2.141 \times 10^{-5}$	$1.849 \times 10^{-5}$	$1.562 \times 10^{-5}$	0.7296
30	1.164	1007	0.02588	$2.208 \times 10^{-5}$	$1.872 \times 10^{-5}$	$1.608 \times 10^{-5}$	0.7282
35	1.145	1007	0.02625	$2.277 \times 10^{-5}$	$1.895 \times 10^{-5}$	$1.655 \times 10^{-5}$	0.7268
40	1.127	1007	0.02662	$2.346 \times 10^{-5}$	$1.918 \times 10^{-5}$	$1.702 \times 10^{-5}$	0.7255
45	1.109	1007	0.02699	$2.416 \times 10^{-5}$	$1.941 \times 10^{-5}$	$1.750 \times 10^{-5}$	0.7241
50	1.092	1007	0.02735	$2.487 \times 10^{-5}$	$1.963 \times 10^{-5}$	$1.798 \times 10^{-5}$	0.7228
60	1.059	1007	0.02808	$2.632 \times 10^{-5}$	$2.008 \times 10^{-5}$	$1.896 \times 10^{-5}$	0.7202
70	1.028	1007	0.02881	$2.780 \times 10^{-5}$	$2.052 \times 10^{-5}$	$1.995 \times 10^{-5}$	0.7177
80	0.9994	1008	0.02953	$2.931 \times 10^{-5}$	$2.096 \times 10^{-5}$	$2.097 \times 10^{-5}$	0.7154
90	0.9718	1008	0.03024	$3.086 \times 10^{-5}$	$2.139 \times 10^{-5}$	$2.201 \times 10^{-5}$	0.7132
100	0.9458	1009	0.03095	$3.243 \times 10^{-5}$	$2.181 \times 10^{-5}$	$2.306 \times 10^{-5}$	0.7111
120	0.8977	1011	0.03235	$3.565 \times 10^{-5}$	$2.264 \times 10^{-5}$	$2.522 \times 10^{-5}$	0.7073
140	0.8542	1013	0.03374	$3.898 \times 10^{-5}$	$2.345 \times 10^{-5}$	$2.745 \times 10^{-5}$	0.7041
160	0.8148	1016	0.03511	$4.241 \times 10^{-5}$	$2.420 \times 10^{-5}$	$2.975 \times 10^{-5}$	0.7014
180	0.7788	1019	0.03646	$4.593 \times 10^{-5}$	$2.504 \times 10^{-5}$	$3.212 \times 10^{-5}$	0.6992
200	0.7459	1023	0.03779	$4.954 \times 10^{-5}$	$2.577 \times 10^{-5}$	$3.455 \times 10^{-5}$	0.6974
250	0.6746	1033	0.04104	$5.890 \times 10^{-5}$	$2.760 \times 10^{-5}$	$4.091 \times 10^{-5}$	0.6946
300	0.6158	1044	0.04418	$6.871 \times 10^{-5}$	$2.934 \times 10^{-5}$	$4.765 \times 10^{-5}$	0.6935
350	0.5664	1056	0.04721	$7.892 \times 10^{-5}$	$3.101 \times 10^{-5}$	$5.475 \times 10^{-5}$	0.6937
400	0.5243	1069	0.05015	$8.951 \times 10^{-5}$	$3.261 \times 10^{-5}$	$6.219 \times 10^{-5}$	0.6948
450	0.4880	1081	0.05298	$1.004 \times 10^{-4}$	$3.415 \times 10^{-5}$	$6.997 \times 10^{-5}$	0.6965
500	0.4565	1093	0.05572	$1.117 \times 10^{-4}$	$3.563 \times 10^{-5}$	$7.806 \times 10^{-5}$	0.6986
600	0.4042	1115	0.06093	$1.352 \times 10^{-4}$	$3.846 \times 10^{-5}$	$9.515 \times 10^{-5}$	0.7037
700	0.3627	1135	0.06581	$1.598 \times 10^{-4}$	$4.111 \times 10^{-5}$	$1.133 \times 10^{-4}$	0.7092
800	0.3289	1153	0.07037	$1.855 \times 10^{-4}$	$4.362 \times 10^{-5}$	$1.326 \times 10^{-4}$	0.7149
900	0.3008	1169	0.07465	$2.122 \times 10^{-4}$	$4.600 \times 10^{-5}$	$1.529 \times 10^{-4}$	0.7206
1000	0.2772	1184	0.07868	$2.398 \times 10^{-4}$	$4.826 \times 10^{-5}$	$1.741 \times 10^{-4}$	0.7260
1500	0.1990	1234	0.09599	$3.908 \times 10^{-4}$	$5.817 \times 10^{-5}$	$2.922 \times 10^{-4}$	0.7478
2000	0.1553	1264	0.11113	$5.664 \times 10^{-4}$	$6.630 \times 10^{-5}$	$4.270 \times 10^{-4}$	0.7539

Note: For ideal gases, the properties  $c_p$ ,  $k$ ,  $\mu$ , and Pr are independent of pressure. The properties  $\rho$ ,  $\nu$ , and  $\alpha$  at a pressure  $P$  (in atm) other than 1 atm are determined by multiplying the values of  $\rho$  at the given temperature by  $P$  and by dividing  $\nu$  and  $\alpha$  by  $P$ .

Source: Data generated from the EES software developed by S. A. Klein and F. L. Alvarado. Original sources: Keenan, Chao, Keyes, Gas Tables, Wiley, 198; and Thermophysical Properties of Matter, Vol. 3: Thermal Conductivity, Y. S. Touloukian, P. E. Liley, S. C. Saxena, Vol. 11: Viscosity, Y. S. Touloukian, S. C. Saxena, and P. Hestermanns, IFI/Plenum, NY, 1970. ISBN 0-306057020-8.





Lampiran B



Proses desain model uji dan pengambilan data komputasi



Proses pemasangan model uji pada *wind tunnel*



Proses pengambilan data eksperimental





Proses pengolahan data

