

Options: queue, random restart, no recentering

Pr. No.	Objective Value					Time				% Deviation			
	BK	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
G100p5E	94	98	98	98	98	16.59	16.47	25.23	25.04	4.26	4.26	4.26	4.26
G100p5D	94	98	99	98	97	17.08	17.01	26.56	25.72	4.26	5.32	4.26	3.19
G100p10E	83	92	92	92	93	20.46	25.03	38.53	39.40	10.84	10.84	10.84	12.05
G100p10D	84	92	93	94	95	22.32	29.08	42.85	46.24	9.52	10.71	11.90	13.10
G150p10E*	97	102	105	105	109	65.88	72.75	121.41	129.85	5.15	8.25	8.25	12.37
G150p10D*	97	110	104	104	105	73.91	79.44	141.04	149.84	13.40	7.22	7.22	8.25
G150p15E*	90	99	100	99	100	64.33	77.08	126.89	128.93	10.00	11.11	10.00	11.11
G150p15D*	90	99	100	99	101	74.95	87.79	163.90	171.06	10.00	11.11	10.00	12.22
Avg.						44.19	50.83	86.05	89.51	8.43	8.85	8.59	9.57

Options: queue, random restart, approximate recentering

Pr. No.	Objective Value					Time				% Deviation			
	BK	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
G100p5E	94	98	97	97	97	12.58	17.45	21.63	23.83	4.26	3.19	3.19	3.19
G100p5D	94	97	98	96	97	12.99	18.88	23.24	26.88	3.19	4.26	2.13	3.19
G100p10E	83	92	92	92	91	14.65	31.13	35.79	41.80	10.84	10.84	10.84	9.64
G100p10D	84	91	92	91	92	18.06	36.77	40.53	50.63	8.33	9.52	8.33	9.52
G150p10E*	97	101	102	101	104	42.13	75.80	98.50	120.70	4.12	5.15	4.12	7.22
G150p10D*	97	103	104	102	104	46.91	91.50	114.85	157.71	6.19	7.22	5.15	7.22
G150p15E*	90	99	98	99	99	40.98	83.57	102.72	128.79	10.00	8.89	10.00	10.00
G150p15D*	90	98	99	99	100	50.60	103.65	119.81	188.65	8.89	10.00	10.00	11.11
Avg.						29.61	57.60	69.89	92.37	6.98	7.64	6.97	7.64

Options: queue, random restart, exact recentering

Pr. No.	Objective Value					Time				% Deviation			
	BK	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
G100p5E	94	96	98	98	97	27.39	37.34	41.70	43.43	2.13	4.26	4.26	3.19
G100p5D	94	97	96	98	98	27.84	36.36	42.91	46.92	3.19	2.13	4.26	4.26
G100p10E	83	92	92	89	89	38.14	77.28	77.12	92.25	10.84	10.84	7.23	7.23
G100p10D	84	90	92	91	92	45.03	103.35	83.86	116.80	7.14	9.52	8.33	9.52
G150p10E*	97	101	102	102	100	108.03	182.51	201.75	248.20	4.12	5.15	5.15	3.09
G150p10D*	97	102	103	101	102	116.84	215.15	229.62	312.02	5.15	6.19	4.12	5.15
G150p15E*	90	97	98	98	97	118.23	316.13	268.18	359.27	7.78	8.89	8.89	7.78
G150p15D*	90	96	96	97	97	153.39	372.59	291.87	462.95	6.67	6.67	7.78	7.78
Avg.						79.11	167.84	154.88	210.23	5.88	6.96	6.50	6.00

Options: queue, perturbation restart, no recentering

Pr. No.	Objective Value					Time				% Deviation			
	BK	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
G100p5E	94	97	98	98	98	16.74	16.86	24.13	25.13	3.19	4.26	4.26	4.26
G100p5D	94	97	96	98	98	16.66	16.20	25.99	25.71	3.19	4.26	3.19	3.19
G100p10E	83	92	92	92	92	18.98	24.65	36.62	38.23	10.84	10.84	10.84	10.84
G100p10D	84	91	92	93	94	20.80	27.42	41.53	40.99	8.33	9.52	10.71	11.90
G150p10E*	97	102	103	102	101	57.56	63.92	119.16	115.51	5.15	6.19	5.15	4.12
G150p10D*	97	101	105	105	108	65.81	71.33	131.30	129.53	4.12	8.25	8.25	11.34
G150p15E*	90	100	97	99	98	57.84	68.25	118.85	122.41	11.11	7.78	10.00	8.89
G150p15D*	90	99	99	100	101	62.88	70.11	136.25	144.79	10.00	10.00	11.11	12.22
Avg.						39.41	45.09	79.48	80.29	6.99	7.89	8.19	8.35

Options: queue, perturbation restart, approximate recentering

Pr. No.	Objective Value					Time				% Deviation			
	BK	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
G100p5E	94	96	98	95	96	11.80	17.23	20.42	22.84	2.13	4.26	1.06	2.13
G100p5D	94	96	98	96	97	12.26	17.53	21.67	25.42	2.13	4.26	2.13	3.19
G100p10E	83	90	92	92	92	13.59	25.99	30.97	37.57	8.43	10.84	10.84	10.84
G100p10D	84	91	92	92	91	14.32	29.11	33.21	43.22	8.33	9.52	9.52	8.33
G150p10E*	97	103	101	100	101	37.23	67.42	88.40	113.51	6.19	4.12	3.09	4.12
G150p10D*	97	101	102	100	103	36.12	63.39	94.71	127.68	4.12	5.15	3.09	6.19
G150p15E*	90	97	97	96	97	35.29	63.52	84.86	108.74	7.78	7.78	6.67	7.78
G150p15D*	90	97	99	98	98	33.91	70.29	94.68	136.23	7.78	10.00	8.89	8.89
Avg.						24.07	44.56	58.87	76.90	5.86	7.24	5.92	6.43

Options: queue, perturbation restart, exact recentering

Pr. No.	Objective Value					Time				% Deviation			
	BK	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
G100p5E	94	96	96	97	96	27.24	34.49	40.53	42.03	2.13	2.13	3.19	2.13
G100p5D	94	97	97	97	97	28.08	35.01	41.86	45.67	3.19	3.19	3.19	3.19
G100p10E	83	90	89	91	89	34.87	67.23	67.37	86.62	8.43	7.23	9.64	7.23
G100p10D	84	90	92	90	90	36.73	75.56	75.29	98.30	7.14	9.52	7.14	7.14
G150p10E*	97	98	100	99	99	100.73	153.74	186.60	231.71	1.03	3.09	2.06	2.06
G150p10D*	97	100	98	100	100	104.93	168.91	205.46	255.34	3.09	1.03	3.09	3.09
G150p15E*	90	96	96	97	97	113.41	273.80	236.90	318.51	6.67	6.67	7.78	7.78
G150p15D*	90	97	97	97	97	123.84	256.49	266.13	362.03	7.78	7.78	7.78	7.78
Avg.						70.98	133.41	140.27	180.03	4.93	5.33	5.74	5.05

Options: stack, random restart, no recentering

Pr. No.	Objective Value					Time				% Deviation			
	BK	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
G100p5E	94	98	97	98	98	16.97	16.86	28.09	26.70	4.26	3.19	4.26	4.26
G100p5D	94	98	98	98	97	18.19	17.57	29.81	30.57	4.26	4.26	4.26	3.19
G100p10E	83	93	91	91	92	23.73	27.39	51.82	48.34	12.05	9.64	9.64	10.84
G100p10D	84	92	95	93	95	27.30	32.97	56.91	60.59	9.52	13.10	10.71	13.10
G150p10E*	97	104	103	105	104	74.89	79.38	161.24	170.72	7.22	6.19	8.25	7.22
G150p10D*	97	101	104	103	104	80.24	93.22	207.61	193.61	4.12	7.22	6.19	7.22
G150p15E*	90	98	100	99	100	74.61	83.95	188.32	184.19	8.89	11.11	10.00	11.11
G150p15D*	90	100	100	100	101	93.28	99.98	240.81	230.75	11.11	11.11	11.11	12.22
Avg.						50.90	56.67	120.83	118.18	7.68	8.48	8.30	8.64

Options: stack, random restart, approximate recentering

Pr. No.	Objective Value					Time				% Deviation			
	BK	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
G100p5E	94	96	97	98	98	12.79	18.46	27.13	27.67	2.13	3.19	4.26	4.26
G100p5D	94	96	97	95	95	13.12	19.08	26.85	31.11	2.13	3.19	1.06	1.06
G100p10E	83	92	90	92	93	17.78	31.97	44.23	53.03	10.84	8.43	10.84	12.05
G100p10D	84	92	92	92	92	19.92	39.30	47.60	58.57	9.52	9.52	9.52	9.52
G150p10E*	97	104	103	101	102	47.72	82.70	138.85	162.20	7.22	6.19	4.12	5.15
G150p10D*	97	101	103	102	101	57.29	108.47	152.21	204.71	4.12	6.19	5.15	4.12
G150p15E*	90	98	99	98	98	51.33	92.88	151.01	183.80	8.89	10.00	8.89	8.89
G150p15D*	90	97	100	99	99	54.27	111.35	150.12	213.18	7.78	11.11	10.00	10.00
Avg.						34.03	63.28	92.50	116.78	6.58	7.48	6.98	6.88

Options: stack, random restart, exact recentering

Pr. No.	Objective Value					Time				% Deviation			
	BK	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
G100p5E	94	96	96	96	97	28.31	35.03	45.38	50.13	2.13	2.13	2.13	3.19
G100p5D	94	96	96	96	98	31.02	38.89	49.62	52.12	2.13	2.13	2.13	4.26
G100p10E	83	90	92	90	91	43.39	80.85	86.70	102.95	8.43	10.84	8.43	9.64
G100p10D	84	91	91	90	93	50.28	96.82	96.63	122.29	8.33	8.33	7.14	10.71
G150p10E*	97	102	102	101	103	117.50	191.83	256.44	312.90	5.15	5.15	4.12	6.19
G150p10D*	97	101	101	99	102	145.73	249.70	301.12	384.76	4.12	4.12	2.06	5.15
G150p15E*	90	97	97	97	97	155.50	313.88	367.42	460.84	7.78	7.78	7.78	7.78
G150p15D*	90	97	96	97	97	169.44	356.40	365.35	504.01	7.78	6.67	7.78	7.78
Avg.						92.40	170.68	196.34	248.75	5.73	6.15	5.45	6.84

Options: stack, perturbation restart, no recentering

Pr. No.	Objective Value					Time				% Deviation			
	BK	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
G100p5E	94	98	97	98	98	17.33	16.89	28.28	27.40	4.26	3.19	4.26	4.26
G100p5D	94	96	96	96	98	16.71	17.08	28.10	28.02	4.26	4.26	4.26	4.26
G100p10E	83	91	92	92	93	22.72	27.77	50.56	47.31	9.64	10.84	10.84	12.05
G100p10D	84	91	92	94	95	24.92	27.84	54.20	52.21	8.33	9.52	11.90	13.10
G150p10E*	97	103	103	103	101	67.77	70.94	140.59	147.68	6.19	6.19	6.19	4.12
G150p10D*	97	103	105	103	102	72.86	78.49	179.80	180.19	6.19	8.25	6.19	5.15
G150p15E*	90	97	98	97	99	69.84	75.99	170.84	166.36	7.78	8.89	7.78	10.00
G150p15D*	90	100	100	99	100	75.47	79.84	210.34	189.39	11.11	11.11	10.00	11.11
Avg.						45.70	49.61	108.09	104.82	7.22	8.03	7.93	8.01

Options: stack, perturbation restart, approximate recentering

Pr. No.	Objective Value					Time				% Deviation			
	BK	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
G100p5E	94	97	98	98	98	12.45	17.02	24.68	26.84	3.19	4.26	4.26	4.26
G100p5D	94	98	97	97	98	12.58	17.55	25.22	28.61	4.26	3.19	3.19	4.26
G100p10E	83	89	91	91	90	16.23	27.99	39.50	42.74	7.23	9.64	9.64	8.43
G100p10D	84	90	92	90	92	16.35	30.20	38.54	52.67	7.14	9.52	7.14	9.52
G150p10E*	97	101	102	101	100	42.25	68.32	111.18	145.68	4.12	5.15	4.12	3.09
G150p10D*	97	101	101	101	102	40.05	73.22	113.50	166.06	4.12	4.12	4.12	5.15
G150p15E*	90	97	97	97	97	41.95	78.28	129.69	153.45	7.78	7.78	7.78	7.78
G150p15D*	90	98	96	97	97	43.40	80.78	123.72	179.85	8.89	6.67	7.78	7.78
Avg.						27.91	49.42	76.01	99.49	5.84	6.54	6.26	6.28

Options: stack, perturbation restart, exact recentering

Pr. No.	Objective Value					Time				% Deviation			
	BK	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
G100p5E	94	97	98	96	96	27.68	34.29	44.18	48.64	3.19	4.26	2.13	2.13
G100p5D	94	96	97	96	97	27.98	35.21	45.73	48.60	2.13	3.19	2.13	3.19
G100p10E	83	90	90	89	89	41.61	70.05	75.83	97.77	8.43	8.43	7.23	7.23
G100p10D	84	91	91	90	92	43.36	76.47	80.03	98.00	8.33	8.33	7.14	9.52
G150p10E*	97	100	100	101	102	108.08	164.81	236.38	290.23	3.09	3.09	4.12	5.15
G150p10D*	97	100	100	101	101	128.37	178.27	265.81	318.95	3.09	3.09	4.12	4.12
G150p15E*	90	97	97	96	96	143.20	273.24	308.92	404.59	7.78	7.78	6.67	6.67
G150p15D*	90	97	97	97	97	151.28	309.45	321.35	448.73	7.78	7.78	7.78	7.78
Avg.						83.70	142.98	172.53	219.44	5.48	6.00	5.42	5.72

Options: priority queue, random restart, no recentering

Pr. No.	Objective Value					Time				% Deviation			
	BK	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
G100p5E	94	98	98	98	98	21.63	20.40	26.74	26.38	4.26	4.26	4.26	4.26
G100p5D	94	98	98	97	100	21.56	20.12	27.84	27.50	4.26	4.26	3.19	6.38
G100p10E	83	93	93	92	92	26.01	26.80	42.81	44.05	12.05	12.05	10.84	10.84
G100p10D	84	92	94	94	95	29.91	31.50	49.09	51.10	9.52	11.90	11.90	13.10
G150p10E*	97	103	103	103	107	91.67	88.54	141.60	153.24	6.19	6.19	6.19	10.31
G150p10D*	97	108	112	102	106	94.32	100.04	151.82	176.66	11.34	15.46	5.15	9.28
G150p15E*	90	99	97	100	101	88.29	93.88	150.45	154.24	10.00	7.78	11.11	12.22
G150p15D*	90	98	99	98	100	97.49	100.23	187.64	202.45	8.89	10.00	8.89	11.11
Avg.						58.61	60.44	97.50	104.45	8.31	9.24	7.94	9.69

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Pr. No.	Objective Value					Time				% Deviation			
	BK	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
G100p5E	94	98	98	98	97	17.04	21.65	24.27	26.29	4.26	4.26	4.26	3.19
G100p5D	94	96	98	98	96	17.02	23.03	25.45	27.79	2.13	4.26	4.26	2.13
G100p10E	83	93	92	92	92	22.36	33.37	38.75	48.04	12.05	10.84	10.84	10.84
G100p10D	84	92	92	92	93	25.00	38.81	43.97	58.20	9.52	9.52	9.52	10.71
G150p10E*	97	101	105	104	103	67.18	98.65	109.38	137.77	4.12	8.25	7.22	6.19
G150p10D*	97	102	104	101	103	72.74	109.25	138.87	186.08	5.15	7.22	4.12	6.19
G150p15E*	90	98	97	99	99	64.07	93.57	121.41	158.67	8.89	7.78	10.00	10.00
G150p15D*	90	99	99	97	100	77.58	118.99	144.24	210.12	10.00	10.00	7.78	11.11
Avg.						45.12	67.42	81.05	106.62	7.02	8.02	7.50	7.54

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Pr. No.	Objective Value					Time				% Deviation			
	BK	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
G100p5E	94	96	97	97	96	33.19	38.03	38.34	42.31	2.13	3.19	3.19	2.13
G100p5D	94	94	96	97	96	32.92	40.10	40.19	44.46	0.00	2.13	3.19	2.13
G100p10E	83	89	92	91	91	44.97	74.66	70.91	87.45	7.23	10.84	9.64	9.64
G100p10D	84	89	92	92	91	51.61	84.93	84.31	115.06	5.95	9.52	9.52	8.33
G150p10E*	97	100	103	100	101	125.56	183.37	192.70	254.56	3.09	6.19	3.09	4.12
G150p10D*	97	100	103	101	103	142.41	211.09	227.39	321.72	3.09	6.19	4.12	6.19
G150p15E*	90	97	97	97	97	147.11	257.33	252.67	355.76	7.78	7.78	7.78	7.78
G150p15D*	90	99	97	96	98	173.85	332.05	288.65	463.05	10.00	7.78	6.67	8.89
Avg.						93.70	152.95	149.65	210.55	4.91	6.95	6.15	6.15

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Pr. No.	Objective Value					Time				% Deviation			
	BK	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
G100p5E	94	97	97	98	98	20.65	20.11	26.17	26.69	3.19	3.19	4.26	4.26
G100p5D	94	97	99	96	99	21.06	20.22	27.00	29.30	3.19	5.32	2.13	5.32
G100p10E	83	91	92	92	92	25.44	26.03	41.37	40.07	9.64	10.84	10.84	10.84
G100p10D	84	94	92	92	92	26.72	29.87	48.33	47.29	11.90	9.52	9.52	9.52
G150p10E*	97	101	102	100	102	81.50	80.15	122.39	127.45	4.12	5.15	3.09	5.15
G150p10D*	97	105	103	104	103	83.58	86.47	143.06	150.29	8.25	6.19	7.22	6.19
G150p15E*	90	97	97	98	98	82.86	80.34	137.29	141.71	7.78	7.78	8.89	8.89
G150p15D*	90	100	99	99	100	87.21	85.56	165.38	171.85	11.11	10.00	10.00	11.11
Avg.						53.38	53.85	89.13	91.83	7.40	7.50	7.25	7.66

Options: priority queue, perturbation restart, approximate recentering

Pr. No.	Objective Value					Time				% Deviation			
	BK	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
G100p5E	94	97	96	96	98	16.75	20.78	22.72	25.14	3.19	2.13	2.13	4.26
G100p5D	94	95	98	97	97	16.56	20.99	23.58	25.95	1.06	4.26	3.19	3.19
G100p10E	83	90	92	91	91	20.35	29.23	35.72	38.18	8.43	10.84	9.64	9.64
G100p10D	84	92	93	91	92	20.99	30.35	36.73	45.00	9.52	10.71	8.33	9.52
G150p10E*	97	103	102	102	100	59.99	80.01	94.23	116.07	6.19	5.15	5.15	3.09
G150p10D*	97	101	100	102	101	60.33	84.68	108.08	138.75	4.12	3.09	5.15	4.12
G150p15E*	90	97	97	97	97	55.10	80.80	104.45	120.20	7.78	7.78	7.78	7.78
G150p15D*	90	98	98	97	97	57.85	79.68	104.80	168.21	8.89	8.89	7.78	7.78
Avg.						38.24	53.57	66.54	84.69	6.15	6.86	6.40	6.17

Options: priority queue, perturbation restart, exact recentering

Pr. No.	Objective Value					Time				% Deviation			
	BK	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
G100p5E	94	96	97	96	96	31.44	37.81	36.84	41.36	2.13	3.19	2.13	2.13
G100p5D	94	96	95	95	96	33.81	38.95	38.02	42.70	2.13	1.06	1.06	2.13
G100p10E	83	90	90	91	89	41.16	63.50	66.08	82.47	8.43	8.43	9.64	7.23
G100p10D	84	90	90	90	90	43.12	69.89	72.68	90.50	7.14	7.14	7.14	7.14
G150p10E*	97	100	100	101	101	114.01	157.37	171.14	222.60	3.09	3.09	4.12	4.12
G150p10D*	97	99	99	100	100	125.34	172.61	199.64	257.40	2.06	2.06	3.09	3.09
G150p15E*	90	96	96	97	97	129.76	219.79	230.67	342.02	6.67	6.67	7.78	7.78
G150p15D*	90	97	97	97	97	139.74	226.94	257.88	393.07	7.78	7.78	7.78	7.78
Avg.						82.05	123.61	134.37	184.02	4.93	5.18	5.60	5.17