Results for instances from collection
Dispersion-QKP with strategy expo

File dispersion-qkp-expo_0100_005.txt

Property of graph	Value
Nodes (n)	100
Density (Δ)	5.0 %
Edges (m)	259

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	751.6	3.58	17.49	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.0	0.2	0.1	0.0	**0.0**
5.0	1,290.4	**0.00**	7.64	6.17	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.2	0.1	0.0	1.0
10.0	2,187.7	3.08	3.71	1.75	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.2	0.2	0.1	**0.0**
25.0	4,424.7	0.80	4.29	2.77	0.01	**0.00**	**0.00**	**0.00**	0.1	0.3	0.4	0.1	2.0
50.0	7,820.2	0.23	3.15	0.28	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.5	0.2	0.1	1.0
75.0	10,582.9	0.17	1.00	0.05	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.6	0.2	0.0	**0.0**
90.0	11,692.9	0.04	0.04	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.6	0.1	0.0	**0.0**
95.0	11,920.9	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.6	0.1	0.0	**0.0**
Avg		0.99	4.66	1.38	0.00	**0.00**	**0.00**	**0.00**	0.2	0.4	0.2	0.1	0.5
Min		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.0	0.2	0.1	0.0	**0.0**
Max		3.58	17.49	6.17	0.01	**0.00**	**0.00**	**0.00**	0.3	0.6	0.4	0.1	2.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	31
Running time in seconds for writing input file (t^{write})	0.3
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_0100_010.txt

Property of graph	Value
Nodes (n)	100
Density (Δ)	10.0 %
Edges (m)	514

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	1,326.6	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.0	0.2	0.1	0.1	1.0
5.0	2,185.3	0.18	0.18	0.18	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.2	0.1	0.1	1.0
10.0	3,827.4	2.16	1.83	2.08	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.2	0.2	0.0	1.0
25.0	8,300.6	1.46	0.60	1.28	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.4	0.4	0.5	2.0
50.0	15,685.6	0.16	0.47	0.16	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.5	0.2	0.1	2.0
75.0	21,604.1	0.43	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.6	0.2	0.0	1.0
90.0	24,615.5	0.10	0.10	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.6	0.2	0.0	**0.0**
95.0	25,510.4	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.6	0.2	0.0	1.0
Avg		0.56	0.40	0.46	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.4	0.2	0.1	1.1
Min		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.0	0.2	0.1	0.0	**0.0**
Max		2.16	1.83	2.08	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.6	0.4	0.5	2.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	23
Running time in seconds for writing input file (t^{write})	0.3
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_0100_025.txt

Property of graph	Value
Nodes (n)	100
Density (Δ)	25.0 %
Edges (m)	1,258

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	2,258.5	0.76	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.0	0.2	0.2	0.2	2.0
5.0	4,075.5	1.02	0.55	0.21	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.2	0.2	0.6	2.0
10.0	7,356.1	0.77	**0.00**	0.76	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.2	0.4	1.6	6.0
25.0	18,405.9	0.16	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.4	0.2	0.4	6.0
50.0	34,513.4	0.17	**0.00**	0.10	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.5	0.3	0.7	3.0
75.0	49,786.3	1.02	0.41	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.5	0.2	0.1	2.0
90.0	57,787.8	0.20	0.20	0.05	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.6	0.2	0.3	4.0
95.0	60,443.0	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.6	0.2	0.1	1.0
Avg		0.51	0.15	0.14	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.4	0.2	0.5	3.2
Min		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.0	0.2	0.2	0.1	1.0
Max		1.02	0.55	0.76	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.6	0.4	1.6	6.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	16
Running time in seconds for writing input file (t^{write})	0.3
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_0100_050.txt

Property of graph	Value
Nodes (n)	100
Density (Δ)	50.0 %
Edges (m)	2,499

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	4,176.8	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.0	0.2	0.2	0.5	1.0
5.0	7,757.6	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.2	0.2	0.2	2.0
10.0	14,833.5	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.2	0.2	0.4	3.0
25.0	34,728.7	0.48	**0.00**	0.05	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.3	0.2	1.4	8.0
50.0	65,610.7	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.4	0.4	2.3	18.0
75.0	97,476.7	0.29	0.06	0.01	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.5	0.2	12.4	72.0
90.0	114,757.1	0.90	0.61	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.6	0.2	19.4	120.0
95.0	120,953.7	0.41	0.40	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.4	0.6	0.2	2.7	11.0
Avg		0.26	0.13	0.01	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.4	0.2	4.9	29.4
Min		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.0	0.2	0.2	0.2	1.0
Max		0.90	0.61	0.05	**0.00**	**0.00**	**0.00**	**0.00**	0.4	0.6	0.4	19.4	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	13
Running time in seconds for writing input file (t^{write})	0.3
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_0100_075.txt

Property of graph	Value
Nodes (n)	100
Density (Δ)	75.0 %
Edges (m)	3,750

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	5,579.2	1.95	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.0	0.2	0.2	1.1	2.0
5.0	11,109.6	5.32	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.2	0.2	0.3	3.0
10.0	20,369.8	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.3	0.2	0.6	5.0
25.0	49,361.2	2.53	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.4	0.2	1.9	7.0
50.0	95,465.2	1.61	0.04	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.5	0.3	6.0	39.0
75.0	141,078.9	1.24	0.75	0.01	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.6	0.2	14.8	120.0
90.0	167,111.5	0.93	0.58	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.4	0.6	0.2	97.6	120.0
95.0	176,304.4	0.19	0.19	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.6	0.2	10.4	27.0
Avg		1.72	0.20	0.00	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.4	0.2	16.6	40.4
Min		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.0	0.2	0.2	0.3	2.0
Max		5.32	0.75	0.01	**0.00**	**0.00**	**0.00**	**0.00**	0.4	0.6	0.3	97.6	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	7
Running time in seconds for writing input file (t^{write})	0.3
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_0100_100.txt

Property of graph	Value
Nodes (n)	100
Density (Δ)	100.0 %
Edges (m)	4,950

γ	Best OFV	Deviation from best OFV (%)						Running time (s)					
		QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	8,702.8	0.86	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.2	0.2	1.2	7.0
5.0	15,368.6	2.28	1.35	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.2	0.2	2.6	18.0
10.0	28,970.9	0.37	0.37	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.3	0.2	1.6	16.0
25.0	69,707.9	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.4	0.2	0.6	7.0
50.0	128,603.1	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.5	0.2	1.4	12.0
75.0	187,856.2	0.91	0.62	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.6	0.2	20.9	120.0
90.0	222,894.8	0.65	0.65	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.6	0.3	120.2	120.0
95.0	235,892.2	0.29	0.25	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.7	0.2	37.5	67.0
Avg		0.67	0.41	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.4	0.2	23.2	45.9
Min		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.2	0.2	0.6	7.0
Max		2.28	1.35	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.7	0.3	120.2	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	8
Running time in seconds for writing input file (t^{write})	0.3
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_0200_005.txt

Property of graph	Value
Nodes (n)	200
Density (Δ)	5.0 %
Edges (m)	1,046

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	2,301.0	4.12	1.01	2.47	**0.00**	**0.00**	**0.00**	**0.00**	0.2	1.2	0.6	0.6	2.0
5.0	4,084.7	0.54	1.35	4.33	**0.00**	**0.00**	**0.00**	**0.00**	0.3	1.4	0.9	0.4	5.0
10.0	7,549.6	0.96	2.18	4.13	**0.00**	**0.00**	**0.00**	**0.00**	0.4	2.2	1.1	0.2	1.0
25.0	17,241.7	0.64	1.27	0.35	**0.00**	**0.00**	**0.00**	**0.00**	0.7	3.2	4.2	0.6	10.0
50.0	32,222.0	0.19	0.19	0.07	**0.00**	**0.00**	**0.00**	**0.00**	1.0	4.1	1.9	0.3	10.0
75.0	44,599.6	0.06	**0.00**	0.02	**0.00**	**0.00**	**0.00**	**0.00**	1.3	4.4	1.1	0.2	14.0
90.0	50,399.1	0.02	0.02	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	1.3	4.8	0.6	0.1	13.0
95.0	52,056.2	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	1.4	4.5	0.5	0.0	2.0
Avg		0.82	0.75	1.42	**0.00**	**0.00**	**0.00**	**0.00**	0.8	3.2	1.4	0.3	7.1
Min		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	1.2	0.5	0.0	1.0
Max		4.12	2.18	4.33	**0.00**	**0.00**	**0.00**	**0.00**	1.4	4.8	4.2	0.6	14.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	31
Running time in seconds for writing input file (t^{write})	0.6
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_0200_010.txt

Property of graph	Value
Nodes (n)	200
Density (Δ)	10.0 %
Edges (m)	2,057

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	3,125.2	**0.00**	1.77	1.53	**0.00**	**0.00**	**0.00**	**0.00**	0.2	1.3	0.7	0.2	1.0
5.0	6,133.1	1.16	1.12	0.75	**0.00**	**0.00**	**0.00**	**0.00**	0.3	1.6	0.7	0.4	3.0
10.0	11,686.9	0.80	0.23	0.62	**0.00**	**0.00**	**0.00**	**0.00**	0.4	2.3	1.9	0.4	11.0
25.0	27,312.6	1.09	0.35	0.24	inf	**0.00**	**0.00**	**0.00**	0.7	3.2	120.0	0.7	6.0
50.0	53,821.8	**0.00**	0.48	0.24	**0.00**	**0.00**	**0.00**	0.01	1.1	4.2	9.9	0.4	3.0
75.0	79,466.4	0.24	0.08	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	1.3	4.4	1.1	1.1	55.0
90.0	93,619.0	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	1.4	5.1	0.8	0.2	5.0
95.0	97,509.9	0.29	0.09	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	1.5	4.6	0.5	0.2	4.0
Avg		0.45	0.52	0.42	inf	**0.00**	**0.00**	**0.00**	0.9	3.3	17.0	0.4	11.0
Min		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	1.3	0.5	0.2	1.0
Max		1.16	1.77	1.53	inf	**0.00**	**0.00**	**0.01**	1.5	5.1	120.0	1.1	55.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	16
Running time in seconds for writing input file (t^{write})	0.7
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_0200_025.txt

Property of graph	Value
Nodes (n)	200
Density (Δ)	25.0 %
Edges (m)	4,968

γ	Best OFV	Deviation from best OFV (%)						Running time (s)					
		QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	7,062.2	1.99	0.07	1.56	**0.00**	**0.00**	**0.00**	**0.00**	0.2	1.2	1.0	1.0	7.0
5.0	14,141.9	1.52	0.98	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.3	1.8	1.6	0.8	7.0
10.0	28,211.1	0.44	**0.00**	0.36	**0.00**	**0.00**	**0.00**	**0.00**	0.5	2.3	2.0	1.2	11.0
25.0	69,094.4	0.11	0.13	0.30	**0.00**	**0.00**	**0.00**	**0.00**	0.8	3.4	1.5	1.5	9.0
50.0	130,892.3	0.06	0.06	0.03	**0.00**	**0.00**	**0.00**	**0.00**	1.1	3.9	2.8	6.0	69.0
75.0	192,356.8	**0.00**	0.09	0.01	**0.00**	**0.00**	**0.00**	**0.00**	1.3	5.0	1.1	3.3	22.0
90.0	229,079.5	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	1.5	4.4	0.9	0.6	5.0
95.0	240,286.3	0.23	0.22	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	1.5	5.8	0.6	10.6	49.0
Avg		0.54	0.19	0.28	**0.00**	**0.00**	**0.00**	**0.00**	0.9	3.5	1.4	3.1	22.4
Min		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	1.2	0.6	0.6	5.0
Max		1.99	0.98	1.56	**0.00**	**0.00**	**0.00**	**0.00**	1.5	5.8	2.8	10.6	69.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	13
Running time in seconds for writing input file (t^{write})	0.7
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_0200_050.txt

Property of graph	Value
Nodes (n)	200
Density (Δ)	50.0 %
Edges (m)	9,903

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	13,859.7	1.31	0.09	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	1.3	0.6	5.4	43.0
5.0	27,103.2	**0.00**	0.72	0.02	**0.00**	**0.00**	**0.00**	**0.00**	0.3	1.8	1.0	4.5	21.0
10.0	53,472.7	0.57	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.5	2.3	1.1	6.4	44.0
25.0	131,247.9	0.80	0.09	0.05	**0.00**	**0.00**	0.04	**0.00**	0.7	3.2	1.4	61.1	120.0
50.0	255,893.4	0.09	0.02	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	1.0	3.9	2.0	5.0	91.0
75.0	377,699.5	0.03	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	1.2	4.6	2.4	12.5	79.0
90.0	450,903.4	0.22	0.20	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	1.4	4.3	0.9	120.7	120.0
95.0	473,890.1	0.27	0.27	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	1.7	5.4	0.8	120.3	120.0
Avg		0.41	0.17	0.01	**0.00**	**0.00**	0.01	**0.00**	0.9	3.4	1.3	42.0	79.8
Min		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	1.3	0.6	4.5	21.0
Max		1.31	0.72	0.05	**0.00**	**0.00**	0.04	**0.00**	1.7	5.4	2.4	120.7	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	10
Running time in seconds for writing input file (t^{write})	0.7
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_0200_075.txt

Property of graph	Value
Nodes (n)	200
Density (Δ)	75.0 %
Edges (m)	14,958

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	21,573.4	3.54	1.15	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	1.3	0.6	8.1	120.0
5.0	41,499.0	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.4	1.8	0.6	3.6	38.0
10.0	80,118.2	1.08	0.91	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.5	2.3	0.9	47.3	120.0
25.0	196,352.9	0.14	0.01	**0.00**	**0.00**	**0.00**	**0.00**	0.01	0.8	3.2	0.8	3.4	120.0
50.0	385,824.0	1.02	0.03	0.04	**0.00**	**0.00**	**0.00**	**0.00**	1.1	3.9	1.7	53.7	120.0
75.0	572,488.0	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	1.4	4.6	1.2	12.3	120.0
90.0	681,756.7	0.37	0.31	0.03	**0.00**	**0.00**	**0.00**	**0.00**	1.5	4.4	0.9	120.5	120.0
95.0	715,769.6	0.32	0.32	**0.00**	**0.00**	0.05	**0.00**	**0.00**	1.5	5.5	1.0	120.1	120.0
Avg		0.81	0.34	0.01	**0.00**	0.01	**0.00**	**0.00**	0.9	3.4	1.0	46.1	109.8
Min		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	1.3	0.6	3.4	38.0
Max		3.54	1.15	0.04	**0.00**	0.05	**0.00**	**0.01**	1.5	5.5	1.7	120.5	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	8
Running time in seconds for writing input file (t^{write})	0.7
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_0200_100.txt

Property of graph	Value
Nodes (n)	200
Density (Δ)	100.0 %
Edges (m)	19,900

γ	Best OFV	Deviation from best OFV (%)						Running time (s)					
		QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	26,044.1	2.44	1.28	0.63	**0.00**	**0.00**	**0.00**	**0.00**	0.2	1.4	0.6	27.2	120.0
5.0	51,194.1	0.82	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.3	1.7	0.6	41.4	120.0
10.0	102,614.3	0.29	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.5	2.5	0.7	24.0	94.0
25.0	257,461.6	0.47	0.25	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.8	3.2	0.8	120.5	120.0
50.0	510,102.2	0.28	0.13	**0.00**	**0.00**	**0.00**	0.91	**0.00**	1.1	4.2	0.8	51.7	120.0
75.0	750,317.1	0.38	0.27	**0.00**	**0.00**	0.03	**0.00**	**0.00**	1.3	4.3	1.0	120.5	120.0
90.0	892,842.6	0.39	0.34	0.01	**0.00**	0.02	**0.00**	**0.00**	1.4	5.0	2.1	120.1	120.0
95.0	938,260.7	0.22	0.19	0.01	**0.00**	0.07	**0.00**	**0.00**	1.5	4.5	3.6	120.3	120.0
Avg		0.66	0.31	0.08	**0.00**	0.02	0.11	**0.00**	0.9	3.4	1.3	78.2	116.8
Min		0.22	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	1.4	0.6	24.0	94.0
Max		2.44	1.28	0.63	**0.00**	0.07	0.91	**0.00**	1.5	5.0	3.6	120.5	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	6
Running time in seconds for writing input file (t^{write})	0.8
Running time in seconds for executing parametric cut procedure (t^{cut})	0.2
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_0300_005.txt

Property of graph	Value
Nodes (n)	300
Density (Δ)	5.0 %
Edges (m)	2,253

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	3,599.6	1.70	2.43	6.08	**0.00**	**0.00**	**0.00**	**0.00**	0.4	6.1	11.1	0.8	6.0
5.0	6,856.3	0.68	1.31	3.15	inf	**0.00**	**0.00**	**0.00**	0.7	7.4	120.0	1.2	20.0
10.0	13,398.9	0.31	0.68	0.98	**0.00**	**0.00**	**0.00**	**0.00**	1.1	10.8	40.9	1.1	11.0
25.0	32,503.8	0.67	0.47	1.03	inf	**0.00**	**0.00**	**0.00**	1.8	14.1	120.0	0.6	34.0
50.0	62,143.3	0.18	0.16	0.15	inf	**0.00**	**0.00**	**0.00**	2.6	19.1	120.0	0.4	7.0
75.0	88,655.0	0.04	0.11	0.03	**0.00**	**0.00**	**0.00**	**0.00**	3.2	16.4	63.6	0.4	16.0
90.0	102,995.7	0.03	0.07	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	3.5	19.1	5.1	0.3	11.0
95.0	107,414.2	0.14	0.14	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	3.6	15.5	1.7	0.5	66.0
Avg		0.47	0.67	1.43	inf	**0.00**	**0.00**	**0.00**	2.1	13.5	60.3	0.7	21.4
Min		0.03	0.07	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.4	6.1	1.7	0.3	6.0
Max		1.70	2.43	6.08	inf	**0.00**	**0.00**	**0.00**	3.6	19.1	120.0	1.2	66.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	27
Running time in seconds for writing input file (t^{write})	1.0
Running time in seconds for executing parametric cut procedure (t^{cut})	0.2
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_0300_010.txt

Property of graph	Value
Nodes (n)	300
Density (Δ)	10.0 %
Edges (m)	4,393

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	8,208.3	1.31	1.29	1.56	**0.00**	**0.00**	**0.00**	**0.00**	0.5	6.0	1.4	0.3	1.0
5.0	15,165.9	0.11	0.08	0.80	0.01	**0.00**	**0.00**	**0.00**	0.8	7.8	2.0	0.7	58.0
10.0	27,912.6	0.36	0.32	0.84	**0.00**	**0.00**	**0.00**	**0.00**	1.1	10.6	5.3	0.6	11.0
25.0	64,157.0	0.22	0.01	0.02	**0.00**	**0.00**	**0.00**	**0.00**	1.8	14.1	5.9	0.8	44.0
50.0	118,937.7	0.21	0.01	0.14	inf	**0.00**	**0.00**	**0.01**	2.5	16.1	120.0	4.3	120.0
75.0	172,726.1	**0.00**	0.08	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	3.1	17.3	6.9	1.3	120.0
90.0	202,396.4	0.09	0.09	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	3.4	15.6	2.3	0.5	11.0
95.0	210,731.6	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	3.4	16.7	1.3	0.7	34.0
Avg		0.29	0.24	0.42	inf	**0.00**	**0.00**	**0.00**	2.1	13.0	18.1	1.2	49.9
Min		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.5	6.0	1.3	0.3	1.0
Max		1.31	1.29	1.56	inf	**0.00**	**0.00**	**0.01**	3.4	17.3	120.0	4.3	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	35
Running time in seconds for writing input file (t^{write})	0.9
Running time in seconds for executing parametric cut procedure (t^{cut})	0.2
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_0300_025.txt

Property of graph	Value
Nodes (n)	300
Density (Δ)	25.0 %
Edges (m)	11,217

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	17,134.5	0.83	0.20	0.07	**0.00**	**0.00**	**0.00**	**0.00**	0.6	6.7	2.3	5.6	39.0
5.0	33,162.7	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.9	8.2	2.1	3.2	30.0
10.0	62,845.2	0.35	0.09	0.06	**0.00**	**0.00**	**0.00**	**0.00**	1.2	11.1	10.6	14.4	74.0
25.0	152,832.8	0.12	0.05	0.09	**0.00**	**0.00**	**0.00**	**0.00**	1.9	14.0	10.0	7.8	120.0
50.0	296,155.6	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	2.7	18.7	7.3	5.0	120.0
75.0	432,718.0	0.01	0.01	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	3.2	15.9	4.4	17.8	120.0
90.0	513,762.5	0.15	0.05	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	3.5	18.6	4.1	10.5	120.0
95.0	540,249.4	0.12	0.09	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	3.6	15.4	2.0	6.4	66.0
Avg		0.20	0.06	0.03	**0.00**	**0.00**	**0.00**	**0.00**	2.2	13.6	5.3	8.8	86.1
Min		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.6	6.7	2.0	3.2	30.0
Max		0.83	0.20	0.09	**0.00**	**0.00**	**0.00**	**0.01**	3.6	18.7	10.6	17.8	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	18
Running time in seconds for writing input file (t^{write})	1.0
Running time in seconds for executing parametric cut procedure (t^{cut})	0.2
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_0300_050.txt

Property of graph	Value
Nodes (n)	300
Density (Δ)	50.0 %
Edges (m)	22,452

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	32,710.3	0.71	0.53	0.06	**0.00**	**0.00**	0.06	**0.00**	0.6	6.2	1.9	13.2	120.0
5.0	63,512.7	0.89	0.36	**0.00**	**0.00**	**0.00**	0.09	**0.00**	0.9	8.5	2.0	30.1	120.0
10.0	123,545.8	0.47	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	1.2	10.6	5.1	27.4	120.0
25.0	303,435.0	0.59	0.14	**0.00**	**0.00**	**0.00**	0.96	**0.00**	2.0	14.7	3.0	21.2	120.0
50.0	582,308.5	0.52	0.01	**0.00**	**0.00**	**0.00**	0.63	**0.01**	2.8	15.9	8.8	120.8	120.0
75.0	861,851.1	0.14	0.11	**0.00**	**0.00**	**0.00**	0.81	**0.00**	3.3	17.3	3.8	120.6	120.0
90.0	1,021,862.4	0.18	0.17	**0.00**	**0.00**	0.07	**0.00**	**0.00**	3.6	15.8	3.1	120.1	120.0
95.0	1,074,505.6	0.04	0.04	**0.00**	**0.00**	0.03	**0.00**	**0.00**	3.6	16.9	1.7	120.2	120.0
Avg		0.44	0.17	0.01	**0.00**	0.01	0.32	**0.00**	2.2	13.2	3.7	71.7	120.0
Min		0.04	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.6	6.2	1.7	13.2	120.0
Max		0.89	0.53	0.06	**0.00**	0.07	0.96	**0.01**	3.6	17.3	8.8	120.8	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	12
Running time in seconds for writing input file (t^{write})	1.1
Running time in seconds for executing parametric cut procedure (t^{cut})	0.2
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_0300_075.txt

Property of graph	Value
Nodes (n)	300
Density (Δ)	75.0 %
Edges (m)	33,699

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	48,498.2	1.68	0.44	0.04	**0.00**	**0.00**	**0.00**	**0.00**	0.7	6.6	1.5	14.8	120.0
5.0	93,699.7	1.02	0.22	0.22	**0.00**	**0.00**	**0.00**	**0.00**	1.0	8.3	1.7	36.5	120.0
10.0	180,778.4	1.08	0.57	0.05	**0.00**	**0.00**	**0.00**	**0.01**	1.3	11.3	2.3	120.8	120.0
25.0	444,553.4	0.95	0.81	**0.00**	**0.00**	**0.00**	1.06	**0.01**	2.0	14.0	6.0	120.5	120.0
50.0	862,831.5	0.36	0.19	0.03	**0.00**	0.01	1.58	**0.01**	2.8	18.6	7.5	120.2	120.0
75.0	1,272,782.8	0.28	0.16	0.01	**0.00**	0.01	1.34	**0.00**	3.7	15.7	6.0	120.6	120.0
90.0	1,516,600.7	0.35	0.23	**0.00**	**0.00**	0.14	0.46	**0.00**	3.5	18.6	30.7	120.1	120.0
95.0	1,599,479.4	0.14	0.14	**0.00**	**0.00**	0.06	**0.00**	**0.00**	3.6	15.3	2.4	120.1	120.0
Avg		0.73	0.34	0.04	**0.00**	0.03	0.55	**0.00**	2.3	13.5	7.3	96.7	120.0
Min		0.14	0.14	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.7	6.6	1.5	14.8	120.0
Max		1.68	0.81	0.22	**0.00**	0.14	1.58	**0.01**	3.7	18.6	30.7	120.8	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	9
Running time in seconds for writing input file (t^{write})	1.2
Running time in seconds for executing parametric cut procedure (t^{cut})	0.2
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_0300_100.txt

Property of graph	Value
Nodes (n)	300
Density (Δ)	100.0 %
Edges (m)	44,850

γ	Best OFV	Deviation from best OFV (%)						Running time (s)					
		QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	64,826.2	0.02	**0.00**	**0.00**	**0.00**	**0.00**	1.41	**0.00**	0.6	6.4	1.5	20.1	120.0
5.0	126,524.0	0.90	0.62	0.02	**0.00**	**0.00**	**0.00**	**0.00**	0.9	8.9	1.6	120.3	120.0
10.0	242,237.3	1.11	0.85	**0.00**	**0.00**	0.12	1.36	**0.00**	1.2	10.6	2.0	121.5	120.0
25.0	594,796.2	0.81	0.56	**0.00**	**0.00**	**0.00**	0.99	**0.01**	1.9	15.0	2.4	120.3	120.0
50.0	1,158,456.9	0.42	0.32	0.01	**0.00**	0.13	1.34	**0.01**	2.6	15.9	17.9	120.3	120.0
75.0	1,708,410.9	0.62	0.54	**0.00**	**0.00**	**0.00**	1.43	**0.00**	3.1	17.6	2.5	120.6	120.0
90.0	2,028,387.3	0.26	0.26	0.01	inf	0.28	**0.00**	**0.00**	3.3	15.7	120.0	120.1	120.0
95.0	2,140,021.7	0.08	0.08	**0.00**	**0.00**	0.09	**0.00**	**0.00**	3.4	17.3	3.1	120.1	120.0
Avg		0.53	0.40	**0.01**	inf	0.08	0.82	**0.00**	2.1	13.4	18.9	107.9	120.0
Min		0.02	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.6	6.4	1.5	20.1	120.0
Max		1.11	0.85	**0.02**	inf	0.28	1.43	**0.01**	3.4	17.6	120.0	121.5	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	8
Running time in seconds for writing input file (t^{write})	1.3
Running time in seconds for executing parametric cut procedure (t^{cut})	0.2
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_0500_005.txt

Property of graph	Value
Nodes (n)	500
Density (Δ)	5.0 %
Edges (m)	6,170

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	10,159.9	0.63	1.39	3.44	inf	**0.00**	**0.00**	**0.00**	1.4	41.1	120.0	0.7	25.0
5.0	18,914.5	0.40	0.82	1.39	inf	**0.00**	**0.00**	**0.00**	2.2	54.8	120.0	1.2	66.0
10.0	35,470.9	0.25	0.25	1.00	inf	**0.00**	0.02	**0.01**	3.4	72.9	120.0	1.4	120.0
25.0	84,045.8	0.31	0.33	0.24	inf	**0.00**	**0.00**	**0.01**	5.6	104.0	120.0	8.9	120.0
50.0	164,879.9	0.06	0.02	0.01	inf	**0.00**	0.02	**0.01**	8.0	116.0	120.0	1.7	120.0
75.0	243,131.0	0.02	0.04	0.01	inf	**0.00**	**0.00**	**0.00**	10.3	108.4	120.0	0.9	31.0
90.0	286,772.7	0.08	**0.00**	**0.00**	inf	**0.00**	**0.00**	**0.00**	10.8	103.6	120.0	0.9	61.0
95.0	300,030.2	0.16	**0.00**	**0.00**	inf	**0.00**	**0.00**	**0.00**	10.9	89.5	120.0	0.8	70.0
Avg		0.24	0.36	0.76	inf	**0.00**	0.01	**0.01**	6.6	86.3	120.0	2.1	76.6
Min		0.02	**0.00**	**0.00**	inf	**0.00**	**0.00**	**0.00**	1.4	41.1	120.0	0.7	25.0
Max		0.63	1.39	3.44	inf	**0.00**	0.02	**0.01**	10.9	116.0	120.0	8.9	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	23
Running time in seconds for writing input file (t^{write})	1.5
Running time in seconds for executing parametric cut procedure (t^{cut})	0.2
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_0500_010.txt

Property of graph	Value
Nodes (n)	500
Density (Δ)	10.0 %
Edges (m)	12,674

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	18,278.8	0.30	**0.00**	0.17	inf	**0.00**	**0.00**	**0.00**	1.8	43.7	120.0	1.6	59.0
5.0	34,763.8	0.34	0.13	1.13	inf	**0.00**	**0.00**	**0.01**	2.6	56.5	120.0	3.2	78.0
10.0	67,528.0	0.71	0.15	0.28	inf	**0.00**	0.02	**0.01**	3.8	78.7	120.0	7.4	120.0
25.0	163,212.9	0.10	0.08	0.17	inf	**0.00**	0.04	**0.01**	6.2	110.8	120.0	30.3	120.0
50.0	322,049.6	0.15	0.10	0.12	inf	**0.00**	0.12	**0.01**	8.8	113.9	120.0	113.9	120.0
75.0	484,446.9	0.06	0.01	0.02	inf	**0.00**	0.01	**0.01**	10.7	105.8	120.0	18.6	120.0
90.0	579,466.7	0.03	**0.00**	**0.00**	inf	**0.00**	**0.00**	**0.00**	11.3	96.6	120.0	3.5	120.0
95.0	608,724.9	0.15	0.13	**0.00**	inf	**0.00**	0.03	**0.00**	11.7	90.5	120.0	90.7	120.0
Avg		0.23	0.07	0.24	inf	**0.00**	0.03	**0.01**	7.1	87.1	120.0	33.6	107.1
Min		0.03	**0.00**	**0.00**	inf	**0.00**	**0.00**	**0.00**	1.8	43.7	120.0	1.6	59.0
Max		0.71	0.15	1.13	inf	**0.00**	0.12	**0.01**	11.7	113.9	113.9	120.0	113.9	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	18
Running time in seconds for writing input file (t^{write})	1.7
Running time in seconds for executing parametric cut procedure (t^{cut})	0.2
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_0500_025.txt

Property of graph	Value
Nodes (n)	500
Density (Δ)	25.0 %
Edges (m)	31,231

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	38,857.9	**0.00**	**0.00**	**0.00**	inf	**0.00**	**0.00**	**0.01**	1.7	42.3	120.0	84.2	120.0
5.0	77,845.3	0.05	0.05	0.04	inf	**0.00**	0.06	**0.01**	2.5	57.5	120.0	120.2	120.0
10.0	157,256.5	0.20	**0.00**	0.04	inf	2.68	0.47	**0.01**	3.6	74.6	120.0	121.3	120.0
25.0	397,599.5	0.03	0.03	**0.00**	inf	2.37	0.54	**0.01**	5.9	106.0	120.0	120.1	120.0
50.0	802,459.4	0.18	0.05	**0.00**	inf	0.07	0.44	**0.01**	8.1	104.5	120.0	120.1	120.0
75.0	1,200,332.5	0.26	0.18	**0.00**	inf	**0.00**	0.70	**0.01**	9.7	104.9	120.0	120.8	120.0
90.0	1,431,524.4	0.31	0.28	**0.00**	inf	**0.00**	0.35	**0.00**	10.8	98.0	120.0	9.0	120.0
95.0	1,504,604.8	0.02	0.01	**0.00**	inf	**0.00**	0.21	**0.00**	11.8	87.8	120.0	9.6	120.0
Avg		0.13	0.07	**0.01**	inf	0.64	0.35	**0.01**	6.8	84.5	120.0	88.2	120.0
Min		**0.00**	**0.00**	**0.00**	inf	**0.00**	**0.00**	**0.00**	1.7	42.3	120.0	9.0	120.0
Max		0.31	0.28	**0.04**	inf	2.68	0.70	**0.01**	11.8	106.0	120.0	121.3	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	10
Running time in seconds for writing input file (t^{write})	1.8
Running time in seconds for executing parametric cut procedure (t^{cut})	0.3
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_0500_050.txt

Property of graph	Value
Nodes (n)	500
Density (Δ)	50.0 %
Edges (m)	62,315

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	75,360.7	0.01	0.01	**0.00**	inf	1,923.32	**0.00**	**0.01**	1.8	46.5	120.0	120.2	120.0
5.0	152,070.8	1.00	0.28	**0.00**	inf	3.83	0.79	**0.01**	2.7	58.2	120.0	120.1	120.0
10.0	305,947.5	0.44	0.11	**0.00**	inf	0.97	0.69	**0.01**	3.9	79.7	120.0	120.1	120.0
25.0	779,904.6	**0.00**	**0.00**	**0.00**	inf	0.95	1.63	**0.01**	6.2	111.1	120.0	120.1	120.0
50.0	1,556,736.3	0.28	0.11	**0.00**	inf	0.86	1.46	**0.01**	8.6	104.6	120.0	120.1	120.0
75.0	2,347,281.2	0.17	0.12	**0.00**	inf	4.30	1.18	**0.01**	10.4	112.7	120.0	120.2	120.0
90.0	2,814,236.9	0.02	0.02	**0.00**	inf	0.01	0.48	**0.01**	11.3	95.7	120.0	120.1	120.0
95.0	2,965,983.7	0.07	0.04	**0.00**	inf	**0.00**	0.24	**0.00**	11.6	95.1	120.0	77.1	120.0
Avg		0.25	0.09	**0.00**	inf	241.78	0.81	**0.01**	7.0	88.0	120.0	114.7	120.0
Min		**0.00**	**0.00**	**0.00**	inf	**0.00**	**0.00**	**0.00**	1.8	46.5	120.0	77.1	120.0
Max		1.00	0.28	**0.00**	inf	1,923.32	1.63	**0.01**	11.6	112.7	120.0	120.2	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	5
Running time in seconds for writing input file (t^{write})	2.1
Running time in seconds for executing parametric cut procedure (t^{cut})	0.3
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_0500_075.txt

Property of graph	Value
Nodes (n)	500
Density (Δ)	75.0 %
Edges (m)	93,522

γ	Best OFV	Deviation from best OFV (%)						Running time (s)					
		QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	113,413.7	**0.00**	**0.00**	**0.00**	inf	1,566.87	0.99	**0.01**	1.7	43.4	120.0	120.1	120.0
5.0	227,644.1	0.66	0.18	**0.00**	inf	1,125.70	1.05	**0.01**	2.5	58.0	120.0	120.1	120.0
10.0	457,198.8	0.48	0.31	**0.00**	inf	625.61	1.33	**0.01**	3.6	75.8	120.0	120.1	120.0
25.0	1,171,167.5	0.13	**0.00**	**0.00**	inf	296.69	1.61	**0.01**	5.8	103.3	120.0	120.1	120.0
50.0	2,341,380.7	0.39	**0.00**	**0.00**	inf	86.59	1.70	**0.01**	8.2	104.2	120.0	120.1	120.0
75.0	3,524,336.7	0.09	0.02	**0.00**	inf	34.55	1.34	**0.01**	9.9	104.2	120.0	120.1	120.0
90.0	4,217,052.8	0.08	0.05	**0.00**	inf	10.16	0.88	**0.00**	10.6	96.2	120.0	120.1	120.0
95.0	4,445,627.8	0.07	0.07	**0.00**	inf	4.00	0.28	**0.00**	10.9	88.0	120.0	120.1	120.0
Avg		0.24	0.08	**0.00**	inf	468.77	1.15	**0.01**	6.7	84.1	120.0	120.1	120.0
Min		**0.00**	**0.00**	**0.00**	inf	4.00	0.28	**0.00**	1.7	43.4	120.0	120.1	120.0
Max		0.66	0.31	**0.00**	inf	1,566.87	1.70	**0.01**	10.9	104.2	120.0	120.1	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	3
Running time in seconds for writing input file (t^{write})	2.2
Running time in seconds for executing parametric cut procedure (t^{cut})	0.3
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_0500_100.txt

Property of graph	Value
Nodes (n)	500
Density (Δ)	100.0 %
Edges (m)	124,750

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	148,569.4	0.96	0.63	**0.00**	inf	2,577.40	1.28	**0.01**	1.8	43.7	120.0	120.1	120.0
5.0	301,221.4	0.51	0.09	**0.00**	inf	1,321.50	2.19	**0.01**	2.6	57.8	120.0	120.1	120.0
10.0	608,617.1	0.91	**0.00**	**0.00**	inf	609.82	1.97	**0.01**	3.7	75.0	120.0	120.1	120.0
25.0	1,548,169.7	0.25	0.13	**0.00**	inf	264.01	3.27	**0.01**	6.0	106.0	120.0	120.1	120.0
50.0	3,118,862.2	0.11	0.01	**0.00**	inf	99.80	1.52	**0.01**	8.4	109.0	120.0	120.1	120.0
75.0	4,693,962.0	0.13	0.08	**0.00**	inf	28.64	1.65	**0.01**	10.2	107.8	120.0	120.1	120.0
90.0	5,621,223.4	0.07	0.05	**0.00**	inf	9.02	0.97	**0.01**	10.7	98.7	120.0	120.1	120.0
95.0	5,929,249.8	0.07	0.06	**0.00**	inf	5.45	0.30	**0.00**	10.9	90.5	120.0	120.1	120.0
Avg		0.38	0.13	**0.00**	inf	614.46	1.64	**0.01**	6.8	86.1	120.0	120.1	120.0
Min		0.07	**0.00**	**0.00**	inf	5.45	0.30	**0.00**	1.8	43.7	120.0	120.1	120.0
Max		0.96	0.63	**0.00**	inf	2,577.40	3.27	**0.01**	10.9	109.0	120.0	120.1	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	3
Running time in seconds for writing input file (t^{write})	2.5
Running time in seconds for executing parametric cut procedure (t^{cut})	0.4
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_1000_005.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	5.0 %
Edges (m)	24,843

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	34,451.6	0.32	0.17	inf	inf	**0.00**	0.19	**0.01**	10.2	120.0	120.0	9.9	120.0
5.0	67,534.9	0.13	0.13	inf	inf	**0.00**	0.07	**0.01**	15.4	120.0	120.0	23.4	120.0
10.0	134,033.9	0.37	0.18	inf	inf	**0.00**	0.25	**0.02**	22.8	120.0	120.0	11.2	120.0
25.0	328,732.9	0.04	0.10	inf	inf	**0.00**	0.10	**0.01**	38.6	120.0	120.0	8.3	120.0
50.0	648,119.5	0.04	0.05	inf	inf	**0.00**	0.19	**0.03**	54.3	120.0	120.0	14.2	120.0
75.0	963,603.7	0.03	0.01	inf	inf	**0.00**	0.17	**0.02**	63.6	120.0	120.0	6.2	120.0
90.0	1,144,258.5	0.09	0.06	inf	inf	**0.00**	0.16	**0.01**	67.8	120.0	120.0	7.8	120.0
95.0	1,200,556.5	0.06	0.06	inf	inf	**0.00**	0.07	**0.01**	70.1	120.0	120.0	9.3	120.0
Avg		0.14	0.10	inf	inf	**0.00**	0.15	**0.02**	42.8	120.0	120.0	11.3	120.0
Min		0.03	0.01	inf	inf	**0.00**	0.07	**0.01**	10.2	120.0	120.0	6.2	120.0
Max		0.37	0.18	inf	inf	**0.00**	0.25	**0.03**	70.1	120.0	120.0	23.4	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	20
Running time in seconds for writing input file (t^{write})	3.1
Running time in seconds for executing parametric cut procedure (t^{cut})	0.4
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_1000_010.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	10.0 %
Edges (m)	49,946

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	62,045.7	0.31	0.20	inf	inf	**0.00**	0.14	**0.02**	10.7	120.0	120.0	120.1	120.0
5.0	126,277.1	0.22	0.20	inf	inf	**0.00**	0.18	**0.01**	16.2	120.0	120.0	115.3	120.0
10.0	251,084.4	0.09	**0.00**	inf	inf	0.07	0.29	**0.02**	23.1	120.0	120.0	120.9	120.0
25.0	636,814.2	0.05	0.01	inf	inf	**0.00**	0.39	**0.03**	37.3	120.0	120.0	91.6	120.0
50.0	1,267,913.2	0.19	**0.00**	inf	inf	0.24	0.46	**0.03**	52.0	120.0	120.0	120.3	120.0
75.0	1,901,791.8	0.05	**0.00**	inf	inf	**0.00**	0.53	**0.02**	60.7	120.0	120.0	46.8	120.0
90.0	2,276,091.1	0.05	0.05	inf	inf	**0.00**	0.27	**0.01**	65.9	120.0	120.0	46.1	120.0
95.0	2,392,820.3	0.09	0.01	inf	inf	**0.00**	0.05	**0.01**	71.3	120.0	120.0	19.2	120.0
Avg		0.13	0.06	inf	inf	**0.04**	0.29	**0.02**	42.2	120.0	120.0	85.0	120.0
Min		0.05	**0.00**	inf	inf	**0.00**	0.05	**0.01**	10.7	120.0	120.0	19.2	120.0
Max		0.31	**0.20**	inf	inf	0.24	0.53	**0.03**	71.3	120.0	120.0	120.9	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	12
Running time in seconds for writing input file (t^{write})	3.3
Running time in seconds for executing parametric cut procedure (t^{cut})	0.5
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_1000_025.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	25.0 %
Edges (m)	124,788

γ	Best OFV	Deviation from best OFV (%)						Running time (s)					
		QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	155,296.9	**0.00**	**0.00**	inf	inf	0.77	0.12	**0.02**	10.8	120.0	120.0	120.3	120.0
5.0	312,811.1	0.37	**0.00**	inf	inf	0.09	0.44	**0.01**	15.6	120.0	120.0	120.3	120.0
10.0	630,664.7	0.23	**0.00**	inf	inf	1.85	0.58	**0.02**	23.0	120.0	120.0	120.3	120.0
25.0	1,581,746.6	**0.00**	0.01	inf	inf	**0.00**	1.01	**0.03**	37.5	120.0	120.0	41.8	120.0
50.0	3,133,492.4	0.21	**0.00**	inf	inf	0.93	1.59	**0.03**	52.4	120.0	120.0	120.3	120.0
75.0	4,706,281.0	**0.00**	**0.00**	inf	inf	4.30	1.17	**0.02**	62.7	120.0	120.0	120.5	120.0
90.0	5,636,165.5	0.09	0.07	inf	inf	**0.00**	0.40	**0.01**	66.4	120.0	120.0	120.6	120.0
95.0	5,939,893.3	0.01	**0.00**	inf	inf	**0.00**	0.19	**0.01**	67.0	120.0	120.0	25.1	120.0
Avg		0.11	**0.01**	inf	inf	0.99	0.69	**0.02**	41.9	120.0	120.0	98.6	120.0
Min		**0.00**	**0.00**	inf	inf	**0.00**	0.12	**0.01**	10.8	120.0	120.0	25.1	120.0
Max		0.37	**0.07**	inf	inf	4.30	1.59	**0.03**	67.0	120.0	120.0	120.6	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	6
Running time in seconds for writing input file (t^{write})	3.9
Running time in seconds for executing parametric cut procedure (t^{cut})	0.5
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_1000_050.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	50.0 %
Edges (m)	249,853

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	297,259.3	0.19	**0.00**	inf	inf	1,540.45	2.04	**0.03**	10.9	120.0	120.0	120.5	120.0
5.0	601,837.6	0.08	**0.00**	inf	inf	1,092.04	1.91	**0.01**	16.1	120.0	120.0	120.4	120.0
10.0	1,224,737.5	0.04	**0.00**	inf	inf	714.56	2.40	**0.02**	23.6	120.0	120.0	120.3	120.0
25.0	3,115,598.4	0.13	**0.00**	inf	inf	276.08	2.47	**0.05**	39.4	120.0	120.0	120.3	120.0
50.0	6,256,745.9	**0.00**	**0.00**	inf	inf	98.96	2.25	**0.03**	52.2	120.0	120.0	120.3	120.0
75.0	9,398,856.3	0.04	**0.00**	inf	inf	31.36	1.81	**0.02**	61.5	120.0	120.0	120.3	120.0
90.0	11,274,908.2	0.09	0.06	inf	inf	**0.00**	0.81	**0.01**	65.5	120.0	120.0	120.3	120.0
95.0	11,885,465.6	0.01	**0.00**	inf	inf	0.01	0.19	**0.01**	67.5	120.0	120.0	120.3	120.0
Avg		0.07	**0.01**	inf	inf	469.18	1.74	**0.02**	42.1	120.0	120.0	120.3	120.0
Min		**0.00**	**0.00**	inf	inf	**0.00**	0.19	**0.01**	10.9	120.0	120.0	120.3	120.0
Max		0.19	**0.06**	inf	inf	1,540.45	2.47	**0.05**	67.5	120.0	120.0	120.5	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	3
Running time in seconds for writing input file (t^{write})	4.8
Running time in seconds for executing parametric cut procedure (t^{cut})	0.7
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_1000_075.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	75.0 %
Edges (m)	374,291

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	440,613.8	0.11	**0.00**	inf	inf	2,167.41	2.86	**0.03**	10.6	120.0	120.0	120.3	120.0
5.0	903,642.5	**0.00**	**0.00**	inf	inf	1,390.41	2.70	**0.01**	16.5	120.0	120.0	120.4	120.0
10.0	1,838,710.0	0.05	**0.00**	inf	inf	747.67	3.87	**0.02**	25.0	120.0	120.0	120.4	120.0
25.0	4,695,997.2	**0.00**	**0.00**	inf	inf	267.88	3.77	**0.03**	40.2	120.0	120.0	120.4	120.0
50.0	9,347,994.6	0.01	**0.00**	inf	inf	93.69	3.59	**0.03**	56.4	120.0	120.0	120.4	120.0
75.0	14,068,954.5	**0.00**	**0.00**	inf	inf	29.58	2.01	**0.02**	66.4	120.0	120.0	120.3	120.0
90.0	16,897,141.5	0.01	**0.00**	inf	inf	0.04	0.73	**0.01**	70.9	120.0	120.0	120.4	120.0
95.0	17,799,789.4	0.01	**0.00**	inf	inf	0.10	0.13	**0.01**	72.3	120.0	120.0	120.4	120.0
Avg		0.02	**0.00**	inf	inf	587.10	2.46	**0.02**	44.8	120.0	120.0	120.4	120.0
Min		**0.00**	**0.00**	inf	inf	0.04	0.13	**0.01**	10.6	120.0	120.0	120.3	120.0
Max		0.11	**0.00**	inf	inf	2,167.41	3.87	**0.03**	72.3	120.0	120.0	120.4	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	3
Running time in seconds for writing input file (t^{write})	5.8
Running time in seconds for executing parametric cut procedure (t^{cut})	0.8
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_1000_100.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	100.0 %
Edges (m)	499,500

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	592,191.9	**0.00**	**0.00**	inf	inf	2,148.68	3.22	**0.03**	11.4	120.0	120.0	120.6	121.0
5.0	1,204,218.9	**0.00**	**0.00**	inf	inf	1,371.08	3.74	**0.01**	17.5	120.0	120.0	120.7	120.0
10.0	2,453,846.7	0.53	**0.00**	inf	inf	841.60	4.21	**0.02**	24.3	120.0	120.0	120.8	120.0
25.0	6,261,060.4	0.05	**0.00**	inf	inf	295.81	3.81	**0.03**	39.4	120.0	120.0	120.5	120.0
50.0	12,481,235.4	0.02	**0.00**	inf	inf	99.97	4.24	**0.03**	53.9	120.0	120.0	122.9	121.0
75.0	18,775,329.3	0.01	**0.00**	inf	inf	36.21	3.11	**0.02**	64.1	120.0	120.0	123.2	120.0
90.0	22,540,787.0	0.01	**0.00**	inf	inf	13.38	0.81	**0.01**	68.8	120.0	120.0	120.5	120.0
95.0	23,742,260.7	0.01	**0.00**	inf	inf	5.71	0.30	**0.01**	70.6	120.0	120.0	120.5	121.0
Avg		0.08	**0.00**	inf	inf	601.56	2.93	**0.02**	43.8	120.0	120.0	121.2	120.4
Min		**0.00**	**0.00**	inf	inf	5.71	0.30	**0.01**	11.4	120.0	120.0	120.5	120.0
Max		0.53	**0.00**	inf	inf	2,148.68	4.24	**0.03**	70.6	120.0	120.0	123.2	121.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	3
Running time in seconds for writing input file (t^{write})	7.2
Running time in seconds for executing parametric cut procedure (t^{cut})	1.0
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_2000_005.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	5.0 %
Edges (m)	99,532

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	132,260.1	0.11	**0.00**	inf	inf	2,381.11	0.18	**0.06**	71.3	120.0	120.0	120.1	120.0
5.0	263,179.2	0.05	**0.00**	inf	inf	1,520.97	0.26	**0.03**	106.2	120.0	120.0	120.3	120.0
10.0	524,482.4	0.03	0.03	inf	inf	**0.00**	0.16	**0.03**	120.1	120.0	120.0	91.8	120.0
25.0	1,278,179.7	0.02	**0.00**	inf	inf	2.76	0.43	**0.13**	120.1	120.0	120.0	120.1	120.0
50.0	2,528,664.3	0.01	**0.00**	inf	inf	13.60	0.74	**0.13**	120.1	120.0	120.0	120.1	120.0
75.0	3,785,052.3	0.03	**0.00**	inf	inf	0.52	0.56	**0.09**	120.0	120.0	120.0	120.1	120.0
90.0	4,526,909.6	0.02	0.01	inf	inf	**0.00**	0.26	**0.08**	120.1	120.0	120.0	44.4	120.0
95.0	4,762,737.3	**0.00**	0.00	inf	inf	**0.00**	0.14	**0.07**	120.1	120.0	120.0	53.1	120.0
Avg		0.03	**0.01**	inf	inf	489.87	0.34	**0.08**	112.2	120.0	120.0	98.8	120.0
Min		**0.00**	0.00	inf	inf	**0.00**	0.14	**0.03**	71.3	120.0	120.0	44.4	120.0
Max		0.11	**0.03**	inf	inf	2,381.11	0.74	**0.13**	120.1	120.0	120.0	120.3	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	10
Running time in seconds for writing input file (t^{write})	7.1
Running time in seconds for executing parametric cut procedure (t^{cut})	0.8
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_2000_010.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	10.0 %
Edges (m)	200,204

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	248,175.8	0.13	**0.00**	inf	inf	2,765.71	0.61	**0.07**	70.9	120.0	120.0	120.8	120.0
5.0	500,091.8	0.09	**0.00**	inf	inf	1,501.29	0.51	**0.03**	105.6	120.0	120.0	120.7	120.0
10.0	1,002,794.9	0.01	**0.00**	inf	inf	725.82	0.70	**0.06**	120.0	120.0	120.0	120.7	120.0
25.0	2,508,917.4	0.02	**0.00**	inf	inf	269.51	1.41	**0.11**	120.1	120.0	120.0	120.8	120.0
50.0	5,038,504.5	0.02	**0.00**	inf	inf	99.75	1.18	**0.12**	120.2	120.0	120.0	120.5	120.0
75.0	7,555,731.6	0.01	**0.00**	inf	inf	32.61	0.98	**0.09**	120.2	120.0	120.0	120.9	120.0
90.0	9,059,927.2	0.01	**0.00**	inf	inf	10.50	0.53	**0.08**	120.1	120.0	120.0	120.4	120.0
95.0	9,546,454.7	**0.00**	**0.00**	inf	inf	4.95	0.26	**0.07**	120.1	120.0	120.0	120.6	120.0
Avg		0.04	**0.00**	inf	inf	676.27	0.77	**0.08**	112.2	120.0	120.0	120.7	120.0
Min		**0.00**	**0.00**	inf	inf	4.95	0.26	**0.03**	70.9	120.0	120.0	120.4	120.0
Max		0.13	**0.00**	inf	inf	2,765.71	1.41	**0.12**	120.2	120.0	120.0	120.9	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	6
Running time in seconds for writing input file (t^{write})	7.4
Running time in seconds for executing parametric cut procedure (t^{cut})	1.0
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_2000_025.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	25.0 %
Edges (m)	500,018

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	612,257.2	0.06	**0.00**	inf	inf	2,474.71	2.99	**0.13**	71.9	120.0	120.0	124.3	121.0
5.0	1,234,357.4	0.13	**0.00**	inf	inf	1,561.34	2.43	**0.03**	105.3	120.0	120.0	121.1	121.0
10.0	2,492,561.7	0.01	**0.00**	inf	inf	873.35	2.66	**0.06**	120.1	120.0	120.0	125.5	121.0
25.0	6,239,405.4	0.05	**0.00**	inf	inf	294.02	3.49	**0.10**	120.0	120.0	120.0	121.5	121.0
50.0	12,475,438.6	0.01	**0.00**	inf	inf	95.32	3.97	**0.12**	120.1	120.0	120.0	121.1	121.0
75.0	18,778,993.5	0.02	**0.00**	inf	inf	34.78	2.12	**0.10**	120.2	120.0	120.0	124.1	121.0
90.0	22,575,818.9	0.09	**0.00**	inf	inf	12.02	0.63	**0.08**	120.0	120.0	120.0	121.1	121.0
95.0	23,803,549.8	0.01	**0.00**	inf	inf	4.75	0.22	**0.07**	120.2	120.0	120.0	120.4	121.0
Avg		0.05	**0.00**	inf	inf	668.79	2.31	**0.09**	112.2	120.0	120.0	122.4	121.0
Min		0.01	**0.00**	inf	inf	4.75	0.22	**0.03**	71.9	120.0	120.0	120.4	121.0
Max		0.13	**0.00**	inf	inf	2,474.71	3.97	**0.13**	120.2	120.0	120.0	125.5	121.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	4
Running time in seconds for writing input file (t^{write})	10.2
Running time in seconds for executing parametric cut procedure (t^{cut})	1.4
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_2000_050.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	50.0 %
Edges (m)	999,583

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	1,204,589.6	0.36	**0.00**	inf	inf	3,407.54	4.93	**0.13**	73.4	120.0	120.0	120.6	122.0
5.0	2,452,727.0	0.04	**0.00**	inf	inf	1,562.03	4.43	**0.03**	106.9	120.0	120.0	121.2	122.0
10.0	4,970,628.0	0.06	**0.00**	inf	inf	835.66	4.66	**0.06**	120.0	120.0	120.0	120.7	122.0
25.0	12,443,217.7	0.04	**0.00**	inf	inf	275.07	6.27	**0.10**	120.1	120.0	120.0	126.4	122.0
50.0	24,942,677.7	**0.00**	**0.00**	inf	inf	96.52	6.14	**0.12**	120.0	120.0	120.0	123.7	122.0
75.0	37,492,874.7	**0.00**	**0.00**	inf	inf	32.56	2.85	**0.10**	120.2	120.0	120.0	122.1	122.0
90.0	44,998,502.8	0.01	**0.00**	inf	inf	10.28	1.10	**0.08**	120.2	120.0	120.0	122.1	122.0
95.0	47,477,239.0	**0.00**	**0.00**	inf	inf	4.60	0.35	**0.07**	120.1	120.0	120.0	122.2	122.0
Avg		0.06	**0.00**	inf	inf	778.03	3.84	**0.09**	112.6	120.0	120.0	122.4	122.0
Min		**0.00**	**0.00**	inf	inf	4.60	0.35	**0.03**	73.4	120.0	120.0	120.6	122.0
Max		0.36	**0.00**	inf	inf	3,407.54	6.27	**0.13**	120.2	120.0	120.0	126.4	122.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	3
Running time in seconds for writing input file (t^{write})	14.1
Running time in seconds for executing parametric cut procedure (t^{cut})	1.9
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_2000_075.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	75.0 %
Edges (m)	1,499,290

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	1,808,508.8	0.03	**0.00**	inf	inf	2,758.29	6.26	**0.13**	72.3	120.0	120.0	121.9	120.0
5.0	3,654,303.2	0.09	**0.00**	inf	inf	1,490.68	6.47	**0.03**	107.9	120.0	120.0	121.6	120.0
10.0	7,405,266.7	0.04	**0.00**	inf	inf	818.11	7.39	**0.06**	120.1	120.0	120.0	122.8	120.0
25.0	18,581,985.4	0.02	**0.00**	inf	inf	294.30	8.14	**0.10**	120.1	120.0	120.0	121.8	120.0
50.0	37,368,063.9	0.01	**0.00**	inf	inf	96.21	7.17	**0.12**	120.1	120.0	120.0	122.9	120.0
75.0	56,191,297.7	0.01	**0.00**	inf	inf	30.04	3.50	**0.10**	120.2	120.0	120.0	121.7	120.0
90.0	67,538,078.7	0.01	**0.00**	inf	inf	10.69	1.20	**0.08**	120.2	120.0	120.0	122.7	120.0
95.0	71,274,315.0	**0.00**	**0.00**	inf	inf	5.30	0.48	**0.07**	120.1	120.0	120.0	121.5	120.0
Avg		0.03	**0.00**	inf	inf	687.95	5.08	**0.09**	112.6	120.0	120.0	122.1	120.0
Min		**0.00**	**0.00**	inf	inf	5.30	0.48	**0.03**	72.3	120.0	120.0	121.5	120.0
Max		0.09	**0.00**	inf	inf	2,758.29	8.14	**0.13**	120.2	120.0	120.0	122.9	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	3
Running time in seconds for writing input file (t^{write})	18.0
Running time in seconds for executing parametric cut procedure (t^{cut})	2.5
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-expo_2000_100.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	100.0 %
Edges (m)	1,999,000

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	GR	DP	QK	Gurobi	Hexaly	QKBP*	GR	DP	QK	Gurobi	Hexaly
2.5	2,397,736.1	0.07	**0.00**	inf	inf	2,872.04	8.95	**0.12**	72.5	120.0	120.0	121.8	120.0
5.0	4,857,547.4	0.06	**0.00**	inf	inf	1,864.69	5.83	**0.03**	106.0	120.0	120.0	122.2	120.0
10.0	9,849,244.9	0.02	**0.00**	inf	inf	864.46	9.46	**0.06**	120.0	120.0	120.0	122.5	120.0
25.0	24,802,222.7	**0.00**	**0.00**	inf	inf	297.74	8.42	**0.10**	120.0	120.0	120.0	122.9	120.0
50.0	49,784,658.9	0.01	**0.00**	inf	inf	95.66	7.86	**0.11**	120.2	120.0	120.0	122.0	120.0
75.0	74,831,588.1	0.01	**0.00**	inf	inf	31.51	4.23	**0.10**	120.1	120.0	120.0	122.8	120.0
90.0	89,970,984.0	**0.00**	**0.00**	inf	inf	10.27	1.49	**0.08**	120.2	120.0	120.0	121.2	120.0
95.0	94,964,809.9	**0.00**	**0.00**	inf	inf	4.93	0.71	**0.07**	120.2	120.0	120.0	121.1	120.0
Avg		0.02	**0.00**	inf	inf	755.16	5.87	**0.09**	112.4	120.0	120.0	122.1	120.0
Min		**0.00**	**0.00**	inf	inf	4.93	0.71	**0.03**	72.5	120.0	120.0	121.1	120.0
Max		0.07	**0.00**	inf	inf	2,872.04	9.46	**0.12**	120.2	120.0	120.0	122.9	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	2
Running time in seconds for writing input file (t^{write})	22.1
Running time in seconds for executing parametric cut procedure (t^{cut})	3.1
Running time in seconds for reading result file (t^{read})	0.0