Results for instances from collection
`Dispersion-QKP with strategy ran`

File dispersion-qkp-ran_0100_005.txt

Property of graph	Value
Nodes (n)	100
Density (Δ)	5.0 %
Edges (m)	234

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	492.0	9.33	2.29	12.33	**0.00**	**0.00**	**0.00**	**0.00**	0.0	0.2	0.2	0.2	1.0
5.0	1,020.0	1.39	1.39	10.99	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.2	0.2	0.1	1.0
10.0	1,944.0	3.40	1.14	4.01	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.2	0.2	0.2	1.0
25.0	4,435.0	0.18	0.82	0.36	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.4	0.3	0.2	1.0
50.0	7,962.0	0.13	0.37	0.15	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.5	0.3	0.1	1.0
75.0	10,909.0	0.06	0.06	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.6	0.2	0.1	1.0
90.0	12,225.0	0.06	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.6	0.2	0.1	**0.0**
95.0	12,575.0	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.4	0.6	0.1	0.0	**0.0**
Avg		1.82	0.76	3.48	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.4	0.2	0.1	0.8
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		9.33	2.29	12.33	**0.00**	**0.00**	**0.00**	**0.00**	0.4	0.6	0.3	0.2	1.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	25
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-ran_0100_010.txt

Property of graph	Value
Nodes (n)	100
Density (Δ)	10.0 %
Edges (m)	508

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	845.0	2.67	4.71	3.17	**0.00**	**0.00**	**0.00**	**0.00**	0.0	0.2	0.2	0.1	**0.0**
5.0	1,820.0	**0.00**	**0.00**	1.28	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.2	0.2	0.1	1.0
10.0	3,440.0	**0.00**	**0.00**	0.94	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.2	0.2	0.1	**0.0**
25.0	7,746.0	**0.00**	0.61	**0.00**	**0.00**	**0.00**	**0.00**	0.00	0.2	0.4	0.3	0.1	**0.0**
50.0	14,324.0	0.67	0.54	0.14	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.5	0.6	0.3	3.0
75.0	20,744.0	**0.00**	**0.00**	0.14	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.6	0.2	0.1	1.0
90.0	23,864.0	0.02	0.26	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.6	0.2	0.1	1.0
95.0	24,724.0	0.09	0.04	0.01	**0.00**	**0.00**	**0.00**	**0.00**	0.4	0.7	0.2	0.1	**0.0**
Avg		0.43	0.77	0.71	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.4	0.2	0.1	0.8
Min		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.0	0.2	0.2	0.1	**0.0**
Max		2.67	4.71	3.17	**0.00**	**0.00**	**0.00**	**0.00**	0.4	0.7	0.6	0.3	3.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	17
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-ran_0100_025.txt

Property of graph	Value
Nodes (n)	100
Density (Δ)	25.0 %
Edges (m)	1,310

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	2,148.0	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.0	0.2	0.2	0.5	2.0
5.0	3,799.0	**0.00**	2.12	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.2	0.2	0.7	1.0
10.0	6,900.0	0.45	0.20	0.20	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.2	0.4	1.0	5.0
25.0	17,570.0	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.4	0.4	0.2	2.0
50.0	34,370.0	0.29	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.5	0.7	0.7	3.0
75.0	51,176.0	0.29	0.10	0.07	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.6	0.2	0.8	3.0
90.0	60,341.0	0.25	0.25	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.6	0.2	1.2	5.0
95.0	63,213.0	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.7	0.1	0.1	**0.0**
Avg		0.16	0.33	0.03	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.4	0.3	0.6	2.6
Min		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.0	0.2	0.1	0.1	**0.0**
Max		0.45	2.12	0.20	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.7	0.7	1.2	5.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	11
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-ran_0100_050.txt

Property of graph	Value
Nodes (n)	100
Density (Δ)	50.0 %
Edges (m)	2,498

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	4,402.0	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.2	0.2	0.4	1.0
5.0	7,797.0	0.44	0.44	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.2	0.2	0.8	4.0
10.0	14,491.0	0.97	0.03	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.2	0.2	1.2	9.0
25.0	32,508.0	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.4	0.3	1.3	5.0
50.0	63,781.0	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.5	0.2	1.9	4.0
75.0	94,950.0	0.92	0.71	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.5	0.3	38.0	120.0
90.0	112,459.0	0.44	0.43	0.01	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.6	0.2	49.1	120.0
95.0	118,787.0	0.19	0.18	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.6	0.2	4.5	17.0
Avg		0.37	0.22	0.00	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.4	0.2	12.2	35.0
Min		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.2	0.2	0.4	1.0
Max		0.97	0.71	0.01	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.6	0.3	49.1	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})	0.4
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-ran_0100_075.txt

Property of graph	Value
Nodes (n)	100
Density (Δ)	75.0 %
Edges (m)	3,654

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	5,968.0	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.0	0.2	0.2	0.8	3.0
5.0	10,848.0	0.28	0.28	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.2	0.2	3.3	35.0
10.0	20,302.0	1.64	0.85	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.2	0.2	1.9	7.0
25.0	48,222.0	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.4	0.2	0.7	7.0
50.0	91,973.0	0.80	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.5	0.3	2.3	10.0
75.0	136,242.0	0.95	0.95	0.15	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.5	0.3	120.7	120.0
90.0	162,561.0	0.80	0.72	0.15	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.6	0.3	120.2	120.0
95.0	172,309.0	0.30	0.30	0.06	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.6	0.2	17.3	52.0
Avg		0.60	0.39	0.04	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.4	0.2	33.4	44.2
Min		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.0	0.2	0.2	0.7	3.0
Max		1.64	0.95	0.15	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.6	0.3	120.7	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-ran_0100_100.txt

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

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	7,664.0	2.58	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.2	0.2	1.3	7.0
5.0	13,971.0	0.84	**0.00**	0.08	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.2	0.2	5.4	75.0
10.0	26,671.0	1.00	0.95	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.3	0.2	3.0	22.0
25.0	66,482.0	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	0.4	0.2	0.5	2.0
50.0	125,701.0	0.33	0.14	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.5	0.2	8.1	76.0
75.0	184,449.0	0.71	0.64	0.03	**0.00**	0.01	**0.00**	**0.00**	0.3	0.6	0.4	120.7	120.0
90.0	219,642.0	0.31	0.25	0.01	**0.00**	**0.00**	**0.00**	**0.00**	0.4	0.6	0.4	120.6	120.0
95.0	233,085.0	0.11	0.07	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.3	0.7	0.2	43.2	120.0
Avg		0.73	0.26	0.01	**0.00**	0.00	**0.00**	**0.00**	0.2	0.4	0.2	37.9	67.8
Min		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.1	0.2	0.2	0.5	2.0
Max		2.58	0.95	0.08	**0.00**	0.01	**0.00**	**0.00**	0.4	0.7	0.4	120.7	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})	0.4
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-ran_0200_005.txt

Property of graph	Value
Nodes (n)	200
Density (Δ)	5.0 %
Edges (m)	1,070

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	2,443.0	2.00	0.04	0.33	**0.00**	**0.00**	**0.00**	**0.00**	0.2	1.3	0.5	0.2	4.0
5.0	4,008.0	2.87	1.57	2.64	**0.00**	**0.00**	**0.00**	**0.00**	0.3	1.6	1.4	1.0	4.0
10.0	7,286.0	0.48	0.57	3.32	**0.00**	**0.00**	**0.00**	**0.00**	0.4	2.2	1.7	0.3	4.0
25.0	16,355.0	0.22	0.41	0.10	**0.00**	**0.00**	**0.00**	**0.00**	0.7	3.2	4.0	0.9	16.0
50.0	30,067.0	0.42	0.13	0.27	**0.00**	**0.00**	**0.00**	**0.00**	1.0	4.0	28.4	0.6	10.0
75.0	43,259.0	0.20	0.12	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	1.2	4.8	1.1	0.5	14.0
90.0	50,268.0	0.11	0.11	0.02	**0.00**	**0.00**	**0.00**	**0.00**	1.4	4.5	1.1	0.3	8.0
95.0	52,416.0	0.05	0.05	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	1.4	5.5	0.5	0.1	2.0
Avg		0.79	0.38	0.84	**0.00**	**0.00**	**0.00**	**0.00**	0.8	3.4	4.8	0.5	7.8
Min		0.05	0.04	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	1.3	0.5	0.1	2.0
Max		2.87	1.57	3.32	**0.00**	**0.00**	**0.00**	**0.00**	1.4	5.5	28.4	1.0	16.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	28
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-ran_0200_010.txt

Property of graph	Value
Nodes (n)	200
Density (Δ)	10.0 %
Edges (m)	1,988

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	3,573.0	0.20	0.20	0.88	**0.00**	**0.00**	**0.00**	**0.00**	0.2	1.4	0.7	0.3	3.0
5.0	6,884.0	0.09	0.20	0.25	**0.00**	**0.00**	**0.00**	**0.00**	0.3	1.7	0.6	0.4	8.0
10.0	12,555.0	**0.00**	0.01	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.5	2.5	1.4	0.5	5.0
25.0	28,491.0	0.04	**0.00**	0.52	**0.00**	**0.00**	**0.00**	**0.00**	0.8	3.5	4.0	2.0	11.0
50.0	54,468.0	0.19	**0.00**	0.10	**0.00**	**0.00**	**0.00**	**0.00**	1.1	4.4	2.1	0.5	7.0
75.0	79,406.0	0.08	0.17	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	1.3	4.4	0.9	0.4	11.0
90.0	92,906.0	0.25	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	1.5	5.2	0.7	0.2	3.0
95.0	96,603.0	0.19	0.19	0.02	**0.00**	**0.00**	**0.00**	**0.00**	1.5	4.6	0.6	0.5	42.0
Avg		0.13	0.10	0.22	**0.00**	**0.00**	**0.00**	**0.00**	0.9	3.5	1.4	0.6	11.2
Min		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	1.4	0.6	0.2	3.0
Max		0.25	0.20	0.88	**0.00**	**0.00**	**0.00**	**0.00**	1.5	5.2	4.0	2.0	42.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	21
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-ran_0200_025.txt

Property of graph	Value
Nodes (n)	200
Density (Δ)	25.0 %
Edges (m)	5,102

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	7,341.0	**0.00**	**0.00**	1.52	**0.00**	**0.00**	**0.00**	**0.00**	0.2	1.3	0.5	0.5	3.0
5.0	13,443.0	0.73	0.01	0.01	**0.00**	**0.00**	**0.00**	**0.00**	0.3	1.8	1.1	7.0	36.0
10.0	26,508.0	0.93	0.21	0.21	**0.00**	**0.00**	**0.00**	**0.00**	0.5	2.3	14.5	6.2	35.0
25.0	67,429.0	0.06	0.06	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.8	3.4	3.9	7.2	39.0
50.0	132,122.0	0.01	**0.00**	0.04	**0.00**	**0.00**	0.01	**0.01**	1.1	3.9	3.0	18.1	120.0
75.0	197,301.0	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	1.3	4.9	1.1	2.2	14.0
90.0	235,585.0	0.16	0.04	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	1.4	4.4	0.8	35.9	120.0
95.0	246,829.0	0.30	0.30	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	1.5	5.7	0.7	120.5	120.0
Avg		0.27	0.08	0.22	**0.00**	**0.00**	0.00	**0.00**	0.9	3.5	3.2	24.7	60.9
Min		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	1.3	0.5	0.5	3.0
Max		0.93	0.30	1.52	**0.00**	**0.00**	0.01	**0.01**	1.5	5.7	14.5	120.5	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	11
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-ran_0200_050.txt

Property of graph	Value
Nodes (n)	200
Density (Δ)	50.0 %
Edges (m)	9,766

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	13,867.0	2.60	0.43	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	1.3	0.5	6.3	79.0
5.0	26,253.0	0.72	0.34	0.18	**0.00**	**0.00**	**0.00**	**0.00**	0.3	1.8	0.7	7.1	48.0
10.0	51,516.0	1.58	0.43	**0.00**	**0.00**	**0.00**	0.20	**0.00**	0.5	2.3	1.9	11.1	120.0
25.0	127,256.0	0.12	0.12	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.7	3.2	1.5	18.2	93.0
50.0	249,897.0	0.11	0.01	0.03	**0.00**	**0.00**	0.03	**0.01**	1.0	3.9	1.3	26.6	120.0
75.0	372,686.0	0.21	0.21	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	1.3	4.6	1.3	102.2	120.0
90.0	443,402.0	0.27	0.27	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	1.4	4.4	1.0	120.8	120.0
95.0	465,325.0	0.26	0.22	**0.00**	**0.00**	0.02	**0.00**	**0.00**	1.4	5.5	1.1	120.6	120.0
Avg		0.73	0.25	0.03	**0.00**	0.00	0.03	**0.00**	0.9	3.4	1.2	51.6	102.5
Min		0.11	0.01	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	1.3	0.5	6.3	48.0
Max		2.60	0.43	0.18	**0.00**	0.02	0.20	**0.01**	1.4	5.5	1.9	120.8	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-ran_0200_075.txt

Property of graph	Value
Nodes (n)	200
Density (Δ)	75.0 %
Edges (m)	15,060

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	20,251.0	2.47	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	1.3	0.6	16.4	118.0
5.0	39,935.0	0.29	**0.00**	0.23	**0.00**	**0.00**	**0.00**	**0.00**	0.3	1.8	0.7	9.9	63.0
10.0	78,985.0	0.06	0.04	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.5	2.3	0.7	15.4	117.0
25.0	196,560.0	0.43	0.09	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.7	3.2	0.9	46.6	120.0
50.0	386,053.0	0.30	0.11	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	1.0	3.9	1.4	119.7	120.0
75.0	573,685.0	0.25	0.22	**0.00**	**0.00**	0.02	**0.00**	**0.00**	1.3	4.6	1.5	120.5	120.0
90.0	683,442.0	0.27	0.22	**0.00**	**0.00**	0.04	**0.00**	**0.00**	1.3	4.4	2.9	120.1	120.0
95.0	718,799.0	0.17	0.17	**0.00**	**0.00**	0.02	**0.00**	**0.00**	1.7	5.4	1.8	120.1	120.0
Avg		0.53	0.11	0.03	**0.00**	0.01	**0.00**	**0.00**	0.9	3.4	1.3	71.1	112.2
Min		0.06	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	1.3	0.6	9.9	63.0
Max		2.47	0.22	0.23	**0.00**	0.04	**0.00**	**0.00**	1.7	5.4	2.9	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})	0.8
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-ran_0200_100.txt

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

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	25,697.0	2.22	0.73	0.01	**0.00**	**0.00**	**0.00**	**0.00**	0.2	1.4	0.6	47.3	120.0
5.0	50,965.0	1.18	0.81	0.07	**0.00**	**0.00**	**0.00**	**0.00**	0.3	1.8	0.6	62.6	120.0
10.0	101,990.0	0.29	**0.00**	**0.00**	**0.00**	**0.00**	2.03	**0.00**	0.5	2.5	0.6	40.2	120.0
25.0	255,580.0	0.52	0.29	0.02	**0.00**	**0.00**	**0.00**	**0.00**	0.8	3.2	0.8	121.8	120.0
50.0	505,384.0	0.49	0.38	**0.00**	**0.00**	0.03	2.23	**0.00**	1.1	4.2	1.7	120.1	120.0
75.0	750,693.0	0.38	0.33	**0.00**	**0.00**	0.12	**0.00**	**0.00**	1.3	4.3	34.7	120.1	120.0
90.0	895,013.0	0.17	0.17	**0.00**	**0.00**	0.10	**0.00**	**0.00**	1.4	5.0	101.7	120.1	120.0
95.0	942,175.0	0.15	0.13	0.01	**0.00**	0.06	**0.00**	**0.00**	1.5	4.6	13.4	123.2	120.0
Avg		0.68	0.35	0.01	**0.00**	0.04	0.53	**0.00**	0.9	3.4	19.2	94.4	120.0
Min		0.15	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.2	1.4	0.6	40.2	120.0
Max		2.22	0.81	0.07	**0.00**	0.12	2.23	**0.00**	1.5	5.0	101.7	123.2	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	4
Running time in seconds for writing input file (t^{write})	0.9
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-ran_0300_005.txt

Property of graph	Value
Nodes (n)	300
Density (Δ)	5.0 %
Edges (m)	2,201

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	3,836.0	0.34	1.80	6.76	**0.00**	**0.00**	**0.00**	**0.00**	0.5	5.7	2.3	0.4	9.0
5.0	7,396.0	0.35	1.48	2.21	**0.00**	**0.00**	**0.00**	**0.00**	0.8	8.0	2.7	0.4	8.0
10.0	14,088.0	0.16	0.54	0.41	**0.00**	**0.00**	**0.00**	**0.00**	1.1	10.5	3.9	0.4	3.0
25.0	32,567.0	0.07	0.07	0.21	**0.00**	**0.00**	**0.00**	**0.00**	1.8	14.0	10.9	0.5	14.0
50.0	61,016.0	0.20	0.11	0.12	—	**0.00**	**0.00**	**0.00**	2.5	18.1	120.0	1.0	14.0
75.0	87,934.0	0.04	0.06	0.02	**0.00**	**0.00**	**0.00**	**0.00**	3.1	16.4	11.4	0.3	20.0
90.0	102,490.0	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	4.0	18.0	2.7	0.1	4.0
95.0	106,582.0	0.26	0.09	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	3.7	15.5	1.4	0.2	7.0
Avg		0.18	0.52	1.22	—	**0.00**	**0.00**	**0.00**	2.2	13.3	19.4	0.4	9.9
Min		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.5	5.7	1.4	0.1	3.0
Max		0.35	1.80	6.76	—	**0.00**	**0.00**	**0.00**	4.0	18.1	120.0	1.0	20.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	30
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-ran_0300_010.txt

Property of graph	Value
Nodes (n)	300
Density (Δ)	10.0 %
Edges (m)	4,528

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	7,186.0	0.87	0.07	1.80	**0.00**	**0.00**	**0.00**	**0.00**	0.5	6.3	2.5	0.7	7.0
5.0	13,916.0	0.77	0.14	1.69	**0.00**	**0.00**	**0.00**	**0.00**	0.8	8.0	3.1	0.5	9.0
10.0	26,913.0	0.20	**0.00**	0.35	**0.00**	**0.00**	**0.00**	**0.00**	1.2	11.3	5.9	1.1	22.0
25.0	63,706.0	0.22	0.11	0.09	**0.00**	**0.00**	**0.00**	**0.01**	1.9	14.1	25.7	5.0	58.0
50.0	123,347.0	0.51	**0.00**	0.02	**0.00**	**0.00**	**0.00**	**0.01**	2.7	18.6	38.8	5.1	120.0
75.0	180,546.0	0.09	0.02	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	3.2	16.2	3.0	0.9	58.0
90.0	211,476.0	0.06	0.02	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	3.5	18.5	2.9	1.5	99.0
95.0	221,043.0	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	3.6	15.5	1.5	0.2	1.0
Avg		0.34	0.04	0.49	**0.00**	**0.00**	**0.00**	**0.00**	2.2	13.6	10.4	1.9	46.8
Min		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.5	6.3	1.5	0.2	1.0
Max		0.87	0.14	1.80	**0.00**	**0.00**	**0.00**	**0.01**	3.6	18.6	38.8	5.1	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})	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-ran_0300_025.txt

Property of graph	Value
Nodes (n)	300
Density (Δ)	25.0 %
Edges (m)	11,187

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	16,668.0	1.71	**0.00**	0.35	**0.00**	**0.00**	**0.00**	**0.01**	0.6	6.7	2.5	4.7	20.0
5.0	32,139.0	**0.00**	**0.00**	0.27	**0.00**	**0.00**	**0.00**	**0.00**	0.9	8.3	2.5	8.2	38.0
10.0	61,174.0	0.02	0.21	**0.00**	**0.00**	**0.00**	0.04	**0.01**	1.2	11.2	48.9	29.6	120.0
25.0	151,655.0	0.01	0.01	0.01	**0.00**	**0.00**	0.01	**0.01**	2.0	14.0	11.7	28.2	120.0
50.0	292,807.0	0.04	0.04	**0.00**	**0.00**	**0.00**	0.05	**0.01**	2.7	18.7	4.4	20.6	120.0
75.0	430,482.0	0.05	0.02	**0.00**	**0.00**	**0.00**	0.29	**0.00**	3.3	15.8	3.0	84.3	120.0
90.0	510,231.0	0.08	0.03	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	3.6	17.7	2.7	119.4	120.0
95.0	536,421.0	0.10	0.07	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	3.6	15.3	1.8	4.3	120.0
Avg		0.25	0.05	0.08	**0.00**	**0.00**	0.05	**0.00**	2.2	13.5	9.7	37.4	97.2
Min		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.6	6.7	1.8	4.3	20.0
Max		1.71	0.21	0.35	**0.00**	**0.00**	0.29	**0.01**	3.6	18.7	48.9	119.4	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-ran_0300_050.txt

Property of graph	Value
Nodes (n)	300
Density (Δ)	50.0 %
Edges (m)	22,322

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	33,849.0	0.53	0.44	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.6	6.3	1.5	3.8	55.0
5.0	63,941.0	1.03	0.13	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.8	8.3	1.4	26.1	120.0
10.0	120,417.0	0.06	0.06	0.06	**0.00**	**0.00**	0.61	**0.00**	1.2	10.6	4.3	120.8	120.0
25.0	294,808.0	0.55	0.29	**0.00**	**0.00**	**0.00**	1.08	**0.00**	2.0	14.2	6.5	122.0	120.0
50.0	577,776.0	0.22	0.05	0.02	**0.00**	**0.00**	0.93	**0.00**	2.7	15.8	6.4	120.4	120.0
75.0	855,682.0	0.40	0.18	**0.00**	**0.00**	**0.00**	0.84	**0.01**	3.2	17.1	4.1	120.2	120.0
90.0	1,018,454.0	0.18	0.09	**0.00**	**0.00**	0.01	**0.00**	**0.00**	3.5	16.0	2.4	120.6	120.0
95.0	1,072,070.0	0.19	0.19	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	3.6	16.7	1.7	70.1	120.0
Avg		0.40	0.18	0.01	**0.00**	0.00	0.43	**0.00**	2.2	13.1	3.5	88.0	111.9
Min		0.06	0.05	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.6	6.3	1.4	3.8	55.0
Max		1.03	0.44	0.06	**0.00**	0.01	1.08	**0.01**	3.6	17.1	6.5	122.0	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-ran_0300_075.txt

Property of graph	Value
Nodes (n)	300
Density (Δ)	75.0 %
Edges (m)	33,514

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	47,288.0	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.6	6.4	1.3	8.2	78.0
5.0	91,363.0	0.40	**0.00**	**0.00**	**0.00**	0.01	**0.00**	**0.00**	0.9	8.8	1.6	120.3	120.0
10.0	176,858.0	1.43	0.81	**0.00**	**0.00**	**0.00**	1.36	**0.01**	1.2	10.7	2.5	120.3	120.0
25.0	440,392.0	0.72	0.38	**0.00**	**0.00**	**0.00**	1.85	**0.01**	2.0	14.0	2.9	121.9	120.0
50.0	855,143.0	0.24	0.11	**0.00**	**0.00**	**0.00**	2.56	**0.01**	2.7	18.3	8.1	120.3	120.0
75.0	1,269,346.0	0.03	**0.00**	**0.00**	**0.00**	**0.00**	1.99	**0.01**	3.2	15.8	3.2	63.9	120.0
90.0	1,508,487.0	0.21	0.19	**0.00**	—	0.14	0.53	**0.00**	3.4	18.2	120.0	120.1	120.0
95.0	1,591,585.0	0.06	0.05	**0.00**	**0.00**	0.02	**0.00**	**0.00**	3.5	15.4	2.6	122.3	120.0
Avg		0.39	0.19	**0.00**	—	0.02	1.04	**0.00**	2.2	13.5	17.8	99.6	114.8
Min		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.6	6.4	1.3	8.2	78.0
Max		1.43	0.81	**0.00**	—	0.14	2.56	**0.01**	3.5	18.3	120.0	122.3	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})	1.2
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-ran_0300_100.txt

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

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	65,033.0	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	0.6	6.4	1.4	11.9	89.0
5.0	124,204.0	0.85	0.58	**0.00**	**0.00**	0.14	**0.00**	**0.00**	0.9	8.8	1.6	120.6	120.0
10.0	241,306.0	1.47	1.34	**0.00**	**0.00**	**0.00**	0.90	**0.01**	1.2	10.7	2.1	121.0	120.0
25.0	597,277.0	0.04	**0.00**	**0.00**	**0.00**	**0.00**	2.03	**0.00**	2.0	15.0	1.8	33.3	120.0
50.0	1,151,426.0	0.44	0.33	**0.00**	—	0.30	1.46	**0.01**	2.7	18.6	120.0	120.0	120.0
75.0	1,706,068.0	0.11	0.04	**0.00**	**0.00**	0.02	1.76	**0.00**	3.2	15.7	2.1	120.2	120.0
90.0	2,022,601.0	0.24	0.21	**0.00**	—	0.15	0.63	**0.00**	3.5	18.6	120.0	120.1	120.0
95.0	2,135,230.0	0.11	0.11	**0.00**	**0.00**	0.05	**0.00**	**0.00**	3.6	15.4	8.4	120.1	120.0
Avg		0.41	0.33	**0.00**	—	0.08	0.85	**0.00**	2.2	13.7	32.2	95.9	116.1
Min		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.6	6.4	1.4	11.9	89.0
Max		1.47	1.34	**0.00**	—	0.30	2.03	**0.01**	3.6	18.6	120.0	121.0	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})	1.4
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-ran_0500_005.txt

Property of graph	Value
Nodes (n)	500
Density (Δ)	5.0 %
Edges (m)	6,096

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	9,486.0	2.03	1.25	0.78	—	**0.00**	**0.00**	**0.01**	1.6	43.5	120.0	1.2	30.0
5.0	17,823.0	0.32	0.34	0.41	—	**0.00**	**0.00**	**0.01**	2.4	54.8	120.0	2.4	26.0
10.0	34,386.0	0.41	**0.00**	0.55	—	**0.00**	**0.00**	**0.01**	4.2	73.6	120.0	4.0	57.0
25.0	82,600.0	0.23	0.12	0.06	—	**0.00**	**0.00**	**0.01**	6.9	112.0	120.0	13.1	120.0
50.0	161,341.0	0.23	0.05	0.14	—	**0.00**	**0.00**	**0.01**	9.9	116.4	120.0	4.0	86.0
75.0	239,016.0	0.02	0.04	0.02	—	**0.00**	**0.00**	**0.00**	12.1	108.0	120.0	0.7	22.0
90.0	281,790.0	0.02	**0.00**	**0.00**	—	**0.00**	**0.00**	**0.00**	13.2	104.5	120.0	1.9	120.0
95.0	294,514.0	0.12	0.04	**0.00**	—	**0.00**	**0.00**	**0.00**	13.8	89.7	120.0	1.4	120.0
Avg		0.42	0.23	0.24	—	**0.00**	**0.00**	**0.01**	8.0	87.8	120.0	3.6	72.6
Min		0.02	**0.00**	**0.00**	—	**0.00**	**0.00**	**0.00**	1.6	43.5	120.0	0.7	22.0
Max		2.03	1.25	0.78	—	**0.00**	**0.00**	**0.01**	13.8	116.4	120.0	13.1	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	22
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-ran_0500_010.txt

Property of graph	Value
Nodes (n)	500
Density (Δ)	10.0 %
Edges (m)	12,209

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	16,261.0	1.09	0.48	0.99	—	**0.00**	**0.00**	**0.01**	1.7	45.1	120.0	2.7	55.0
5.0	32,331.0	**0.00**	0.20	0.46	—	**0.00**	**0.00**	**0.00**	2.5	56.4	120.0	7.2	120.0
10.0	63,785.0	0.15	0.02	0.05	—	**0.00**	**0.00**	**0.01**	3.9	79.2	120.0	16.0	120.0
25.0	158,584.0	0.17	0.03	0.06	—	**0.00**	0.11	**0.01**	6.3	103.5	120.0	20.5	120.0
50.0	315,622.0	0.01	0.01	0.03	—	**0.00**	0.13	**0.01**	8.8	105.5	120.0	23.9	120.0
75.0	472,153.0	0.17	0.08	0.01	—	**0.00**	**0.00**	**0.01**	10.8	106.0	120.0	6.5	120.0
90.0	561,043.0	0.27	0.05	0.01	—	**0.00**	**0.00**	**0.00**	11.8	102.4	120.0	4.6	58.0
95.0	588,857.0	0.14	0.10	**0.00**	—	**0.00**	0.06	**0.00**	13.2	87.9	120.0	10.2	120.0
Avg		0.25	0.12	0.20	—	**0.00**	0.04	**0.01**	7.4	85.8	120.0	11.4	104.1
Min		**0.00**	0.01	**0.00**	—	**0.00**	**0.00**	**0.00**	1.7	45.1	120.0	2.7	55.0
Max		1.09	0.48	0.99	—	**0.00**	0.13	**0.01**	13.2	106.0	120.0	23.9	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})	2.0
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-ran_0500_025.txt

Property of graph	Value
Nodes (n)	500
Density (Δ)	25.0 %
Edges (m)	31,106

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	39,184.0	0.88	0.05	0.06	—	**0.00**	**0.00**	**0.01**	1.7	43.4	120.0	80.9	120.0
5.0	78,151.0	0.29	0.14	**0.00**	—	**0.00**	0.05	**0.01**	2.5	58.5	120.0	120.1	120.0
10.0	155,455.0	0.61	0.03	**0.00**	—	0.23	0.10	**0.01**	3.6	75.3	120.0	123.6	120.0
25.0	398,633.0	**0.00**	**0.00**	0.04	—	0.21	0.54	**0.01**	5.8	103.3	120.0	120.2	120.0
50.0	793,730.0	0.02	**0.00**	**0.00**	—	**0.00**	1.22	**0.01**	8.3	104.8	120.0	120.2	120.0
75.0	1,186,711.0	0.22	0.17	**0.00**	—	**0.00**	1.18	**0.01**	9.8	111.8	120.0	120.1	120.0
90.0	1,417,342.0	0.22	**0.00**	**0.00**	—	**0.00**	0.47	**0.00**	10.5	96.4	120.0	120.7	120.0
95.0	1,491,603.0	0.04	0.01	**0.00**	—	**0.00**	0.13	**0.00**	10.7	94.5	120.0	7.7	120.0
Avg		0.28	0.05	**0.01**	—	0.06	0.46	**0.01**	6.6	86.0	120.0	101.7	120.0
Min		**0.00**	**0.00**	**0.00**	—	**0.00**	**0.00**	**0.00**	1.7	43.4	120.0	7.7	120.0
Max		0.88	0.17	**0.06**	—	0.23	1.22	**0.01**	10.7	111.8	120.0	123.6	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})	1.9
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-ran_0500_050.txt

Property of graph	Value
Nodes (n)	500
Density (Δ)	50.0 %
Edges (m)	62,245

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	77,779.0	0.23	0.11	**0.00**	—	**0.00**	0.72	**0.01**	1.8	46.0	120.0	120.1	120.0
5.0	156,364.0	0.36	0.10	**0.00**	—	2.14	0.97	**0.01**	2.6	57.5	120.0	120.2	120.0
10.0	311,998.0	0.55	0.30	**0.00**	—	**0.00**	2.07	**0.01**	3.8	79.9	120.0	120.1	120.0
25.0	786,402.0	0.09	**0.00**	**0.00**	—	0.34	1.50	**0.01**	6.2	108.3	120.0	120.1	120.0
50.0	1,573,273.0	0.01	**0.00**	**0.00**	—	0.53	1.85	**0.01**	8.5	104.8	120.0	120.1	120.0
75.0	2,356,872.0	0.08	0.03	**0.00**	—	0.54	1.31	**0.01**	10.3	105.5	120.0	120.2	120.0
90.0	2,817,772.0	0.11	0.11	**0.00**	—	0.09	0.84	**0.01**	11.4	102.7	120.0	120.1	120.0
95.0	2,969,150.0	0.04	0.04	**0.00**	—	0.05	0.27	**0.00**	11.5	89.5	120.0	120.1	120.0
Avg		0.18	0.09	**0.00**	—	0.46	1.19	**0.01**	7.0	86.8	120.0	120.1	120.0
Min		0.01	**0.00**	**0.00**	—	**0.00**	0.27	**0.00**	1.8	46.0	120.0	120.1	120.0
Max		0.55	0.30	**0.00**	—	2.14	2.07	**0.01**	11.5	108.3	120.0	120.2	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-ran_0500_075.txt

Property of graph	Value
Nodes (n)	500
Density (Δ)	75.0 %
Edges (m)	93,766

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	116,084.0	0.59	0.23	**0.00**	—	1,695.58	1.57	**0.01**	1.8	43.5	120.0	120.0	120.0
5.0	230,759.0	0.81	0.46	**0.00**	—	941.90	2.54	**0.01**	2.7	61.3	120.0	120.1	120.0
10.0	463,541.0	**0.00**	**0.00**	**0.00**	—	595.38	3.19	**0.01**	3.9	75.2	120.0	120.1	120.0
25.0	1,176,518.0	0.27	0.16	**0.00**	—	297.48	2.22	**0.01**	6.2	103.6	120.0	120.2	120.0
50.0	2,362,127.0	0.07	0.03	**0.00**	—	96.56	1.86	**0.01**	8.8	114.1	120.0	120.1	120.0
75.0	3,550,258.0	0.18	0.16	**0.00**	—	32.09	2.02	**0.01**	10.6	104.4	120.0	120.1	120.0
90.0	4,252,886.0	0.09	0.08	**0.00**	—	6.73	0.94	**0.01**	11.3	96.1	120.0	120.1	120.0
95.0	4,486,520.0	0.06	0.05	**0.00**	—	4.39	0.29	**0.00**	11.4	88.0	120.0	120.1	120.0
Avg		0.26	0.15	**0.00**	—	458.76	1.83	**0.01**	7.1	85.8	120.0	120.1	120.0
Min		**0.00**	**0.00**	**0.00**	—	4.39	0.29	**0.00**	1.8	43.5	120.0	120.0	120.0
Max		0.81	0.46	**0.00**	—	1,695.58	3.19	**0.01**	11.4	114.1	120.0	120.2	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})	2.4
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-ran_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*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	150,817.0	0.78	0.39	**0.00**	—	2,721.65	2.07	**0.01**	1.9	43.7	120.0	120.1	120.0
5.0	300,321.0	0.41	0.31	**0.00**	—	1,282.25	3.03	**0.01**	2.7	57.4	120.0	120.1	120.0
10.0	610,941.0	0.10	0.02	**0.00**	—	619.77	4.14	**0.01**	3.9	74.9	120.0	120.1	120.0
25.0	1,554,549.0	0.24	0.17	**0.00**	—	264.18	4.08	**0.01**	6.3	103.4	120.0	120.1	120.0
50.0	3,126,720.0	0.14	0.09	**0.00**	—	98.41	3.35	**0.01**	8.7	104.1	120.0	120.1	120.0
75.0	4,711,040.0	0.12	0.10	**0.00**	—	27.96	2.87	**0.01**	10.5	107.8	120.0	120.1	120.0
90.0	5,642,856.0	0.10	0.08	**0.00**	—	8.60	1.10	**0.01**	11.3	95.9	120.0	120.1	120.0
95.0	5,953,885.0	0.07	0.06	**0.00**	—	5.21	0.36	**0.00**	11.4	87.8	120.0	120.1	120.0
Avg		0.24	0.15	**0.00**	—	628.50	2.62	**0.01**	7.1	84.4	120.0	120.1	120.0
Min		0.07	0.02	**0.00**	—	5.21	0.36	**0.00**	1.9	43.7	120.0	120.1	120.0
Max		0.78	0.39	**0.00**	—	2,721.65	4.14	**0.01**	11.4	107.8	120.0	120.1	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})	2.7
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-ran_1000_005.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	5.0 %
Edges (m)	25,021

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	33,256.0	0.01	0.01	—	—	**0.00**	0.10	**0.01**	10.7	120.0	120.0	43.6	120.0
5.0	65,442.0	0.27	0.18	—	—	**0.00**	0.08	**0.01**	16.4	120.0	120.0	53.7	120.0
10.0	129,928.0	0.10	0.11	—	—	**0.00**	0.05	**0.02**	23.6	120.0	120.0	68.7	120.0
25.0	325,211.0	0.07	0.02	—	—	**0.00**	0.15	**0.03**	38.3	120.0	120.0	55.7	120.0
50.0	649,512.0	0.06	0.03	—	—	**0.00**	0.27	**0.03**	53.9	120.0	120.0	12.1	120.0
75.0	965,463.0	0.09	**0.00**	—	—	**0.00**	0.24	**0.02**	62.5	120.0	120.0	7.4	120.0
90.0	1,149,675.0	0.02	**0.00**	—	—	**0.00**	0.18	**0.01**	64.8	120.0	120.0	12.9	120.0
95.0	1,207,594.0	0.03	**0.00**	—	—	**0.00**	0.04	**0.01**	70.0	120.0	120.0	5.3	120.0
Avg		0.08	0.04	—	—	**0.00**	0.14	**0.02**	42.5	120.0	120.0	32.4	120.0
Min		0.01	**0.00**	—	—	**0.00**	0.04	**0.01**	10.7	120.0	120.0	5.3	120.0
Max		0.27	0.18	—	—	**0.00**	0.27	**0.03**	70.0	120.0	120.0	68.7	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	16
Running time in seconds for writing input file (t^{write})	3.4
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-ran_1000_010.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	10.0 %
Edges (m)	50,076

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	63,961.0	0.10	0.03	—	—	**0.00**	0.07	**0.03**	10.2	120.0	120.0	104.8	120.0
5.0	129,640.0	0.15	0.05	—	—	**0.00**	0.17	**0.01**	15.4	120.0	120.0	84.0	120.0
10.0	260,427.0	0.05	0.10	—	—	**0.00**	0.35	**0.01**	22.0	120.0	120.0	73.0	120.0
25.0	646,350.0	0.04	0.01	—	—	**0.00**	0.62	**0.03**	36.4	120.0	120.0	97.6	120.0
50.0	1,283,405.0	0.02	**0.00**	—	—	**0.00**	1.03	**0.03**	51.1	120.0	120.0	54.2	120.0
75.0	1,916,478.0	0.06	0.03	—	—	**0.00**	0.78	**0.02**	60.2	120.0	120.0	122.2	120.0
90.0	2,288,573.0	**0.00**	**0.00**	—	—	**0.00**	0.37	**0.01**	64.2	120.0	120.0	12.9	120.0
95.0	2,408,762.0	0.06	0.06	—	—	**0.00**	0.19	**0.01**	66.7	120.0	120.0	95.3	120.0
Avg		0.06	0.04	—	—	**0.00**	0.45	**0.02**	40.8	120.0	120.0	80.5	120.0
Min		**0.00**	**0.00**	—	—	**0.00**	0.07	**0.01**	10.2	120.0	120.0	12.9	120.0
Max		0.15	0.10	—	—	**0.00**	1.03	**0.03**	66.7	120.0	120.0	122.2	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})	3.4
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-ran_1000_025.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	25.0 %
Edges (m)	124,511

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	150,039.0	0.01	**0.00**	—	—	3,023.21	0.28	**0.03**	10.9	120.0	120.0	120.1	120.0
5.0	306,196.0	**0.00**	0.02	—	—	1,708.49	0.88	**0.01**	16.0	120.0	120.0	120.1	120.0
10.0	620,091.0	0.16	**0.00**	—	—	867.03	1.22	**0.02**	23.2	120.0	120.0	120.1	120.0
25.0	1,563,242.0	0.10	**0.00**	—	—	282.97	1.45	**0.03**	37.0	120.0	120.0	120.1	120.0
50.0	3,125,767.0	**0.00**	**0.00**	—	—	99.85	1.72	**0.03**	51.5	120.0	120.0	120.1	120.0
75.0	4,720,097.0	0.14	**0.00**	—	—	31.59	1.46	**0.02**	61.6	120.0	120.0	120.1	120.0
90.0	5,653,352.0	0.01	**0.00**	—	—	10.86	0.58	**0.01**	64.8	120.0	120.0	120.1	120.0
95.0	5,966,566.0	0.03	**0.00**	—	—	0.02	0.20	**0.01**	67.0	120.0	120.0	120.1	120.0
Avg		0.06	**0.00**	—	—	753.00	0.97	**0.02**	41.5	120.0	120.0	120.1	120.0
Min		**0.00**	**0.00**	—	—	0.02	0.20	**0.01**	10.9	120.0	120.0	120.1	120.0
Max		0.16	**0.02**	—	—	3,023.21	1.72	**0.03**	67.0	120.0	120.0	120.1	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})	4.1
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-ran_1000_050.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	50.0 %
Edges (m)	249,725

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	297,495.0	0.15	**0.00**	—	—	1,624.71	2.58	**0.03**	11.4	120.0	120.0	120.3	120.0
5.0	602,050.0	0.13	**0.00**	—	—	1,057.50	1.82	**0.01**	16.9	120.0	120.0	120.3	120.0
10.0	1,225,298.0	0.09	**0.00**	—	—	629.54	2.71	**0.02**	24.7	120.0	120.0	120.5	120.0
25.0	3,124,126.0	0.36	**0.00**	—	—	256.23	2.73	**0.03**	39.9	120.0	120.0	120.3	120.0
50.0	6,260,333.0	0.03	**0.00**	—	—	84.98	2.87	**0.03**	55.0	120.0	120.0	120.3	120.0
75.0	9,404,648.0	**0.00**	**0.00**	—	—	29.26	2.20	**0.02**	65.6	120.0	120.0	120.3	120.0
90.0	11,285,276.0	0.02	**0.00**	—	—	7.86	0.67	**0.01**	69.6	120.0	120.0	120.3	120.0
95.0	11,913,581.0	0.01	0.01	—	—	**0.00**	0.27	**0.01**	70.0	120.0	120.0	120.4	120.0
Avg		0.10	**0.00**	—	—	461.26	1.98	**0.02**	44.1	120.0	120.0	120.3	120.0
Min		**0.00**	**0.00**	—	—	**0.00**	0.27	**0.01**	11.4	120.0	120.0	120.3	120.0
Max		0.36	**0.01**	—	—	1,624.71	2.87	**0.03**	70.0	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})	5.5
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-ran_1000_075.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	75.0 %
Edges (m)	374,743

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	438,976.0	0.29	**0.00**	—	—	2,336.45	3.21	**0.03**	10.9	120.0	120.0	120.4	120.0
5.0	902,260.0	0.59	**0.00**	—	—	1,419.93	2.12	**0.01**	16.0	120.0	120.0	120.3	120.0
10.0	1,848,201.0	0.55	**0.00**	—	—	726.49	4.16	**0.02**	23.7	120.0	120.0	120.4	120.0
25.0	4,709,201.0	0.03	**0.00**	—	—	288.67	3.71	**0.03**	37.1	120.0	120.0	120.5	120.0
50.0	9,396,612.0	0.02	**0.00**	—	—	113.83	3.37	**0.03**	51.4	120.0	120.0	120.4	120.0
75.0	14,141,901.0	0.02	**0.00**	—	—	40.58	3.07	**0.02**	60.7	120.0	120.0	120.4	120.0
90.0	16,968,778.0	**0.00**	**0.00**	—	—	12.14	1.12	**0.01**	64.9	120.0	120.0	120.6	120.0
95.0	17,877,409.0	**0.00**	**0.00**	—	—	6.06	0.44	**0.01**	66.2	120.0	120.0	120.4	120.0
Avg		0.19	**0.00**	—	—	618.02	2.65	**0.02**	41.4	120.0	120.0	120.4	120.0
Min		**0.00**	**0.00**	—	—	6.06	0.44	**0.01**	10.9	120.0	120.0	120.3	120.0
Max		0.59	**0.00**	—	—	2,336.45	4.16	**0.03**	66.2	120.0	120.0	120.6	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})	6.0
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-ran_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*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	594,758.0	**0.00**	**0.00**	—	—	1,997.47	4.24	**0.03**	11.5	120.0	120.0	120.6	121.0
5.0	1,201,257.0	0.07	**0.00**	—	—	1,338.67	4.56	**0.01**	16.7	120.0	120.0	120.6	120.0
10.0	2,447,454.0	0.02	**0.00**	—	—	843.21	4.29	**0.02**	24.5	120.0	120.0	125.8	121.0
25.0	6,265,032.0	0.03	**0.00**	—	—	297.30	4.71	**0.03**	39.9	120.0	120.0	121.1	120.0
50.0	12,502,438.0	0.02	**0.00**	—	—	99.21	4.47	**0.03**	55.1	120.0	120.0	120.7	121.0
75.0	18,821,953.0	0.01	**0.00**	—	—	35.87	3.16	**0.02**	65.3	120.0	120.0	120.7	121.0
90.0	22,596,046.0	**0.00**	**0.00**	—	—	13.23	1.29	**0.01**	69.4	120.0	120.0	120.6	121.0
95.0	23,803,371.0	**0.00**	**0.00**	—	—	5.58	0.32	**0.01**	71.0	120.0	120.0	120.6	120.0
Avg		0.02	**0.00**	—	—	578.82	3.38	**0.02**	44.2	120.0	120.0	121.3	120.6
Min		**0.00**	**0.00**	—	—	5.58	0.32	**0.01**	11.5	120.0	120.0	120.6	120.0
Max		0.07	**0.00**	—	—	1,997.47	4.71	**0.03**	71.0	120.0	120.0	125.8	121.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	2
Running time in seconds for writing input file (t^{write})	7.6
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-ran_2000_005.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	5.0 %
Edges (m)	99,945

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	127,881.0	**0.00**	**0.00**	—	—	2,254.65	0.49	**0.05**	73.6	120.0	120.0	120.1	120.0
5.0	256,231.0	0.06	**0.00**	—	—	3.51	0.32	**0.03**	108.6	120.0	120.0	120.3	120.0
10.0	514,445.0	0.02	**0.00**	—	—	48.14	0.41	**0.06**	120.0	120.0	120.0	120.1	120.0
25.0	1,271,608.0	0.03	**0.00**	—	—	67.52	0.33	**0.11**	120.0	120.0	120.0	120.3	120.0
50.0	2,542,113.0	**0.00**	**0.00**	—	—	44.09	0.66	**0.12**	120.0	120.0	120.0	120.1	120.0
75.0	3,799,882.0	**0.00**	**0.00**	—	—	0.75	0.81	**0.10**	120.2	120.0	120.0	120.2	120.0
90.0	4,553,558.0	0.02	**0.00**	—	—	0.02	0.46	**0.07**	120.0	120.0	120.0	120.1	120.0
95.0	4,796,423.0	**0.00**	**0.00**	—	—	**0.00**	0.15	**0.07**	120.0	120.0	120.0	120.1	120.0
Avg		0.02	**0.00**	—	—	302.34	0.45	**0.08**	112.8	120.0	120.0	120.1	120.0
Min		**0.00**	**0.00**	—	—	**0.00**	0.15	**0.03**	73.6	120.0	120.0	120.1	120.0
Max		0.06	**0.00**	—	—	2,254.65	0.81	**0.12**	120.2	120.0	120.0	120.3	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})	7.6
Running time in seconds for executing parametric cut procedure (t^{cut})	0.9
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-ran_2000_010.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	10.0 %
Edges (m)	199,950

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	252,269.0	0.08	**0.00**	—	—	2,724.33	0.46	**0.13**	72.0	120.0	120.0	120.7	120.0
5.0	505,947.0	0.17	**0.00**	—	—	1,636.08	0.96	**0.03**	105.0	120.0	120.0	120.6	120.0
10.0	1,013,728.0	0.04	**0.00**	—	—	802.13	1.00	**0.06**	120.0	120.0	120.0	120.4	120.0
25.0	2,525,011.0	0.03	**0.00**	—	—	312.60	1.33	**0.11**	120.1	120.0	120.0	120.4	120.0
50.0	5,054,093.0	0.09	**0.00**	—	—	93.78	1.71	**0.12**	120.1	120.0	120.0	120.4	120.0
75.0	7,584,175.0	0.06	**0.00**	—	—	0.01	1.20	**0.10**	120.2	120.0	120.0	120.3	120.0
90.0	9,086,125.0	0.01	**0.00**	—	—	0.02	0.50	**0.08**	120.0	120.0	120.0	120.3	120.0
95.0	9,570,809.0	**0.00**	**0.00**	—	—	0.10	0.22	**0.07**	120.2	120.0	120.0	120.7	120.0
Avg		0.06	**0.00**	—	—	696.13	0.92	**0.09**	112.2	120.0	120.0	120.5	120.0
Min		**0.00**	**0.00**	—	—	0.01	0.22	**0.03**	72.0	120.0	120.0	120.3	120.0
Max		0.17	**0.00**	—	—	2,724.33	1.71	**0.13**	120.2	120.0	120.0	120.7	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})	8.0
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-ran_2000_025.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	25.0 %
Edges (m)	499,746

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	613,798.0	0.28	**0.00**	—	—	3,416.46	2.45	**0.13**	72.9	120.0	120.0	124.2	121.0
5.0	1,229,629.0	0.13	**0.00**	—	—	1,752.46	2.63	**0.03**	106.3	120.0	120.0	124.8	121.0
10.0	2,489,364.0	**0.00**	**0.00**	—	—	920.82	2.99	**0.06**	120.0	120.0	120.0	120.4	121.0
25.0	6,241,975.0	**0.00**	**0.00**	—	—	296.32	4.08	**0.11**	120.1	120.0	120.0	120.6	121.0
50.0	12,530,837.0	0.12	**0.00**	—	—	95.74	3.66	**0.12**	120.0	120.0	120.0	121.0	121.0
75.0	18,861,358.0	0.01	**0.00**	—	—	36.14	2.32	**0.10**	120.1	120.0	120.0	120.5	121.0
90.0	22,633,471.0	0.01	**0.00**	—	—	**0.00**	0.87	**0.08**	120.2	120.0	120.0	120.6	121.0
95.0	23,875,666.0	**0.00**	**0.00**	—	—	0.08	0.39	**0.07**	120.2	120.0	120.0	120.5	121.0
Avg		0.07	**0.00**	—	—	814.75	2.42	**0.09**	112.5	120.0	120.0	121.6	121.0
Min		**0.00**	**0.00**	—	—	**0.00**	0.39	**0.03**	72.9	120.0	120.0	120.4	121.0
Max		0.28	**0.00**	—	—	3,416.46	4.08	**0.13**	120.2	120.0	120.0	124.8	121.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	5
Running time in seconds for writing input file (t^{write})	10.6
Running time in seconds for executing parametric cut procedure (t^{cut})	1.3
Running time in seconds for reading result file (t^{read})	0.0

File dispersion-qkp-ran_2000_050.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	50.0 %
Edges (m)	999,153

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	1,208,365.0	0.18	**0.00**	—	—	3,460.72	4.07	**0.14**	73.4	120.0	120.0	120.7	122.0
5.0	2,453,162.0	**0.00**	**0.00**	—	—	1,734.03	4.26	**0.03**	109.4	120.0	120.0	124.5	122.0
10.0	4,966,484.0	0.04	**0.00**	—	—	807.95	5.44	**0.06**	120.0	120.0	120.0	120.7	122.0
25.0	12,451,195.0	0.02	**0.00**	—	—	288.17	6.39	**0.11**	120.1	120.0	120.0	120.6	124.0
50.0	25,021,352.0	**0.00**	**0.00**	—	—	98.72	6.24	**0.12**	120.1	120.0	120.0	120.8	122.0
75.0	37,642,485.0	**0.00**	**0.00**	—	—	33.35	2.95	**0.10**	120.1	120.0	120.0	120.7	122.0
90.0	45,225,347.0	0.01	**0.00**	—	—	9.89	1.05	**0.08**	120.2	120.0	120.0	123.0	122.0
95.0	47,734,089.0	**0.00**	**0.00**	—	—	4.36	0.47	**0.08**	120.1	120.0	120.0	120.7	122.0
Avg		0.03	**0.00**	—	—	804.65	3.86	**0.09**	112.9	120.0	120.0	121.5	122.2
Min		**0.00**	**0.00**	—	—	4.36	0.47	**0.03**	73.4	120.0	120.0	120.6	122.0
Max		0.18	**0.00**	—	—	3,460.72	6.39	**0.14**	120.2	120.0	120.0	124.5	124.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	3
Running time in seconds for writing input file (t^{write})	14.6
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-ran_2000_075.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	75.0 %
Edges (m)	1,498,911

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	1,803,073.0	0.03	**0.00**	—	—	2,995.99	7.52	**0.13**	73.3	120.0	120.0	121.7	120.0
5.0	3,663,306.0	0.07	**0.00**	—	—	1,559.79	5.27	**0.03**	106.9	120.0	120.0	121.6	120.0
10.0	7,433,529.0	0.02	**0.00**	—	—	858.19	6.76	**0.06**	120.1	120.0	120.0	120.8	120.0
25.0	18,651,257.0	0.01	**0.00**	—	—	289.76	7.64	**0.11**	120.1	120.0	120.0	122.2	120.0
50.0	37,524,347.0	0.01	**0.00**	—	—	96.98	7.34	**0.12**	120.1	120.0	120.0	122.8	120.0
75.0	56,431,262.0	**0.00**	**0.00**	—	—	32.49	3.72	**0.10**	120.1	120.0	120.0	121.9	120.0
90.0	67,786,207.0	0.01	**0.00**	—	—	11.05	1.34	**0.08**	120.1	120.0	120.0	121.8	120.0
95.0	71,558,718.0	**0.00**	**0.00**	—	—	4.74	0.50	**0.07**	120.1	120.0	120.0	122.2	120.0
Avg		0.02	**0.00**	—	—	731.12	5.01	**0.09**	112.6	120.0	120.0	121.9	120.0
Min		**0.00**	**0.00**	—	—	4.74	0.50	**0.03**	73.3	120.0	120.0	120.8	120.0
Max		0.07	**0.00**	—	—	2,995.99	7.64	**0.13**	120.1	120.0	120.0	122.8	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})	18.5
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-ran_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*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	2,406,522.0	0.05	**0.00**	—	—	2,900.43	8.47	**0.14**	77.9	120.0	120.0	121.3	120.0
5.0	4,870,973.0	0.03	**0.00**	—	—	1,847.49	11.53	**0.03**	111.1	120.0	120.0	121.9	120.0
10.0	9,882,869.0	0.01	**0.00**	—	—	859.77	8.95	**0.06**	120.1	120.0	120.0	121.4	120.0
25.0	24,893,053.0	**0.00**	**0.00**	—	—	295.85	9.87	**0.11**	120.1	120.0	120.0	122.8	120.0
50.0	49,984,164.0	0.01	**0.00**	—	—	95.67	8.03	**0.12**	120.2	120.0	120.0	122.0	120.0
75.0	75,260,969.0	**0.00**	**0.00**	—	—	31.63	4.32	**0.10**	120.0	120.0	120.0	121.4	120.0
90.0	90,383,036.0	**0.00**	**0.00**	—	—	10.23	1.66	**0.08**	120.0	120.0	120.0	121.5	120.0
95.0	95,406,256.0	**0.00**	**0.00**	—	—	4.91	0.64	**0.08**	120.2	120.0	120.0	121.2	120.0
Avg		0.01	**0.00**	—	—	755.75	6.68	**0.09**	113.7	120.0	120.0	121.7	120.0
Min		**0.00**	**0.00**	—	—	4.91	0.64	**0.03**	77.9	120.0	120.0	121.2	120.0
Max		0.05	**0.00**	—	—	2,900.43	11.53	**0.14**	120.2	120.0	120.0	122.8	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	1
Running time in seconds for writing input file (t^{write})	23.8
Running time in seconds for executing parametric cut procedure (t^{cut})	3.3
Running time in seconds for reading result file (t^{read})	0.0