

## GLKH results for GTSP+ instances

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In the paper “[GLNS: An Effective Large Neighborhood Search Heuristic for the Generalized Traveling Salesman Problem](#)” (2017), Smith and Imeson created a library of GTSP instances by adding constraints to some GTSPLIB instances.

The table below shows the current best costs found by GLKH together with the best costs obtained by GLNS. In those cases where GLKH found a better tour than GLNS, the cost is printed in boldface.

Name	GLKH	GLNS	Name	GLKH	GLNS
35si175_x05	5574	5574	64lin318_x05	21061	21061
35si175_x10	5574	5574	64lin318_x10	<b>21114</b>	21228
35si175_x15	5574	5574	64lin318_x15	<b>21114</b>	21447
35si175_x20	5574	5574	64lin318_x20	<b>21127</b>	21826
35si175_x25	5574	5574	64lin318_x25	<b>21208</b>	22284
35si175_x30	<b>5581</b>	5586	64lin318_x30	<b>21323</b>	22423
35si175_x35	<b>5610</b>	5633	64lin318_x35	<b>21323</b>	22718
35si175_x40	<b>5610</b>	5635	64lin318_x40	<b>21453</b>	22874
35si175_x45	<b>5610</b>	5710	64lin318_x45	<b>21689</b>	22954
35si175_x50	<b>5610</b>	5626	64lin318_x50	<b>21689</b>	23217
35si175_x55	<b>5638</b>	5764	64lin318_x55	<b>21689</b>	23176
35si175_x60	<b>5638</b>	5781	99d493_x05	<b>20040</b>	20042
35si175_x65	<b>5642</b>	5712	99d493_x10	<b>20094</b>	20318
35si175_x70	<b>5646</b>	5787	99d493_x15	<b>20203</b>	20413
35si175_x75	<b>5712</b>	5784	99d493_x20	<b>20269</b>	20677
53gil262_x05	1013	1013	99d493_x25	<b>20335</b>	20800
53gil262_x10	1013	1013	99d493_x30	<b>20343</b>	20873
53gil262_x15	<b>1013</b>	1015	157rat783_x05	<b>3286</b>	3297
53gil262_x20	<b>1014</b>	1017	157rat783_x10	<b>3318</b>	3357
53gil262_x25	<b>1015</b>	1018	157rat783_x15	<b>3339</b>	3413
53gil262_x30	<b>1021</b>	1022	157rat783_x20	<b>3341</b>	3482
53gil262_x35	<b>1021</b>	1027			
53gil262_x40	1021	1021			
53gil262_x45	<b>1021</b>	1026			
53gil262_x50	<b>1021</b>	1028			
53gil262_x55	<b>1021</b>	1026			
53gil262_x60	<b>1023</b>	1027			
53gil262_x65	<b>1023</b>	1032			
53gil262_x70	<b>1029</b>	1041			