

Inserter		Belt	Setup		Items/second, all directions [1]				
Type	Stack size	Type	Move type	Belt tile type	Min [2]	[3]	Mean [4]	Max [5]	[6]
		Express	Belt	One lane	22.50		22.50	22.50	
		Express	Belt	Both lanes	45.00		45.00	45.00	
		Fast	Belt	One lane	15.00		15.00	15.00	
		Fast	Belt	Both lanes	30.00		30.00	30.00	
		Basic	Belt	One lane	7.50		7.50	7.50	
		Basic	Belt	Both lanes	15.00		15.00	15.00	
Stack	12		Chest → chest		27.69		27.69	27.69	
Stack	12	Express	Chest → belt		13.84		13.90	14.40	+4%
Stack	12	Express	Running belt items → chest	One lane, side or inner lane turn	10.00	-18%	12.18	13.84	+14%
Stack	12	Express	Running belt items → chest	Both lanes, side, no turn	7.50	-27%	10.29	12.85	+25%
Stack	12	Express	Queued belt items → chest	One lane, side or inner lane turn	13.33	-5%	14.04	16.00	+14%
Stack	12	Express	Queued belt items → chest	Both lanes, side, no turn	10.90	-10%	12.06	14.69	+22%
Stack	12	Fast	Chest → belt		10.90	-1%	10.96	11.42	+4%
Stack	12	Fast	Running belt items → chest	One lane, side or inner lane turn	10.00	-5%	10.55	11.25	+7%
Stack	12	Fast	Running belt items → chest	Both lanes, side, no turn	5.80	-33%	8.64	11.25	+30%
Stack	12	Fast	Queued belt items → chest	One lane, side or inner lane turn	11.07	-4%	11.52	12.85	+12%
Stack	12	Fast	Queued belt items → chest	Both lanes, side, no turn	10.00	-6%	10.61	12.20	+15%
Stack	12	Basic	Chest → belt		6.79	-1%	6.86	7.34	+7%
Stack	12	Basic	Running belt items → chest	One lane, side or inner lane turn	6.42	-7%	6.89	7.50	+9%
Stack	12	Basic	Running belt items → chest	Both lanes, side, no turn	9.00		9.00	9.00	
Stack	12	Basic	Queued belt items → chest	One lane, side or inner lane turn	6.85	-4%	7.13	7.50	+5%
Stack	12	Basic	Queued belt items → chest	Both lanes, side, no turn	9.00	-4%	9.36	9.64	+3%
Fast	3		Chest → chest		6.92		6.92	6.92	
Fast	3	Express	Chest → belt		6.42		6.42	6.42	
Fast	3	Express	Running belt items → chest	One lane, side or inner lane turn	4.50	-17%	5.44	6.13	+13%
Fast	3	Express	Running belt items → chest	Both lanes, side, no turn	4.09	-19%	5.07	5.62	+11%
Fast	3	Express	Queued belt items → chest	One lane, side or inner lane turn	6.00	-6%	6.36	6.66	+5%
Fast	3	Express	Queued belt items → chest	Both lanes, side, no turn	6.20	-1%	6.27	6.42	+2%
Fast	3	Fast	Chest → belt		6.00	-1%	6.04	6.42	+6%
Fast	3	Fast	Running belt items → chest	One lane, side or inner lane turn	5.00	-10%	5.58	6.42	+15%
Fast	3	Fast	Running belt items → chest	Both lanes, side, no turn	4.09	-25%	5.42	6.42	+18%
Fast	3	Fast	Queued belt items → chest	One lane, side or inner lane turn	5.80	-7%	6.24	6.42	+3%
Fast	3	Fast	Queued belt items → chest	Both lanes, side, no turn	6.20		6.20	6.20	
Fast	3	Basic	Chest → belt		5.29	-2%	5.41	6.42	+19%
Fast	3	Basic	Running belt items → chest	One lane, side or inner lane turn	4.50	-14%	5.21	6.13	+18%
Fast	3	Basic	Running belt items → chest	Both lanes, side, no turn	5.00	-10%	5.58	5.65	+1%
Fast	3	Basic	Queued belt items → chest	One lane, side or inner lane turn	5.80	-6%	6.16	6.66	+8%
Fast	3	Basic	Queued belt items → chest	Both lanes, side, no turn	6.20		6.20	6.20	
Long-handed	3		Chest → chest		3.52	-1%	3.56	3.60	+1%
Long-handed	3	Express	Chest → belt		3.39	-1%	3.42	3.46	+1%
Long-handed	3	Express	Running belt items → chest	One lane, side or inner lane turn	2.64	-9%	2.89	3.21	+11%
Long-handed	3	Express	Running belt items → chest	Both lanes, side, no turn	2.64	-11%	2.97	3.21	+8%
Long-handed	3	Express	Queued belt items → chest	One lane, side or inner lane turn	3.15	-6%	3.36	3.46	+3%
Long-handed	3	Express	Queued belt items → chest	Both lanes, side, no turn	3.46		3.46	3.46	
Long-handed	3	Fast	Chest → belt		3.27	-1%	3.31	3.46	+5%
Long-handed	3	Fast	Running belt items → chest	One lane, side or inner lane turn	2.81	-6%	2.98	3.21	+8%
Long-handed	3	Fast	Running belt items → chest	Both lanes, side, no turn	2.36	-17%	2.85	3.00	+5%
Long-handed	3	Fast	Queued belt items → chest	One lane, side or inner lane turn	3.10	-7%	3.32	3.46	+4%
Long-handed	3	Fast	Queued belt items → chest	Both lanes, side, no turn	3.39		3.39	3.39	
Long-handed	3	Basic	Chest → belt		3.05	-2%	3.11	3.46	+11%
Long-handed	3	Basic	Running belt items → chest	One lane, side or inner lane turn	2.64	-10%	2.94	3.21	+9%
Long-handed	3	Basic	Running belt items → chest	Both lanes, side, no turn	2.50	-12%	2.84	3.21	+13%
Long-handed	3	Basic	Queued belt items → chest	One lane, side or inner lane turn	3.10	-5%	3.27	3.46	+6%
Long-handed	3	Basic	Queued belt items → chest	Both lanes, side, no turn	2.90	-9%	3.17	3.33	+5%
Basic	3		Chest → chest		2.50		2.50	2.50	
Basic	3	Express	Chest → belt		2.43		2.43	2.43	

Inserter	Stack size	Belt			Items/second, all directions [1]		
		Type	Move type	Belt tile type	Min [2] [3]	Mean [4]	Max [5] [6]
Basic	3	Express	Running belt items → chest	One lane, side or inner lane turn	1.95 -7%	2.09	2.25 +8%
Basic	3	Express	Running belt items → chest	Both lanes, side, no turn	1.87 -10%	2.07	2.25 +9%
Basic	3	Express	Queued belt items → chest	One lane, side or inner lane turn	2.33 -5%	2.45	2.57 +5%
Basic	3	Express	Queued belt items → chest	Both lanes, side, no turn	2.40 -2%	2.45	2.57 +5%
Basic	3	Fast	Chest → belt		2.36	2.37	2.43 +3%
Basic	3	Fast	Running belt items → chest	One lane, side or inner lane turn	2.04 -8%	2.21	2.36 +7%
Basic	3	Fast	Running belt items → chest	Both lanes, side, no turn	1.87 -11%	2.10	2.25 +7%
Basic	3	Fast	Queued belt items → chest	One lane, side or inner lane turn	2.30 -6%	2.44	2.53 +4%
Basic	3	Fast	Queued belt items → chest	Both lanes, side, no turn	2.43 -1%	2.46	2.53 +3%
Basic	3	Basic	Chest → belt		2.25 -1%	2.27	2.43 +7%
Basic	3	Basic	Running belt items → chest	One lane, side or inner lane turn	2.04 -7%	2.20	2.32 +5%
Basic	3	Basic	Running belt items → chest	Both lanes, side, no turn	1.73 -15%	2.03	2.50 +23%
Basic	3	Basic	Queued belt items → chest	One lane, side or inner lane turn	2.25 -6%	2.39	2.50 +5%
Basic	3	Basic	Queued belt items → chest	Both lanes, side, no turn	2.40	2.40	2.40
Burner	3		Chest → chest		1.78 -1%	1.79	1.80 +1%
Burner	3	Express	Chest → belt		1.74 -1%	1.75	1.76 +1%
Burner	3	Express	Running belt items → chest	One lane, side or inner lane turn	1.32 -8%	1.44	1.60 +11%
Burner	3	Express	Running belt items → chest	Both lanes, side, no turn	1.25 -10%	1.39	1.60 +15%
Burner	3	Express	Queued belt items → chest	One lane, side or inner lane turn	1.66 -7%	1.78	1.87 +5%
Burner	3	Express	Queued belt items → chest	Both lanes, side, no turn	1.74 -3%	1.79	1.87 +4%
Burner	3	Fast	Chest → belt		1.71 -1%	1.72	1.76 +2%
Burner	3	Fast	Running belt items → chest	One lane, side or inner lane turn	1.45 -8%	1.58	1.73 +9%
Burner	3	Fast	Running belt items → chest	Both lanes, side, no turn	1.36 -7%	1.46	1.66 +14%
Burner	3	Fast	Queued belt items → chest	One lane, side or inner lane turn	1.68 -5%	1.77	1.85 +5%
Burner	3	Fast	Queued belt items → chest	Both lanes, side, no turn	1.73 -3%	1.78	1.85 +4%
Burner	3	Basic	Chest → belt		1.65 -1%	1.67	1.76 +5%
Burner	3	Basic	Running belt items → chest	One lane, side or inner lane turn	1.38 -13%	1.58	1.73 +9%
Burner	3	Basic	Running belt items → chest	Both lanes, side, no turn	1.32 -9%	1.45	1.73 +19%
Burner	3	Basic	Queued belt items → chest	One lane, side or inner lane turn	1.65 -6%	1.75	1.81 +3%
Burner	3	Basic	Queued belt items → chest	Both lanes, side, no turn	1.74 -1%	1.76	1.80 +2%
Stack	4		Chest → chest		9.23	9.23	9.23
Stack	4	Express	Chest → belt		7.74 -1%	7.78	8.00 +3%
Stack	4	Express	Running belt items → chest	One lane, side or inner lane turn	6.00 -11%	6.74	7.50 +11%
Stack	4	Express	Running belt items → chest	Both lanes, side, no turn	6.00 -9%	6.60	7.50 +14%
Stack	4	Express	Queued belt items → chest	One lane, side or inner lane turn	7.50 -6%	7.97	8.27 +4%
Stack	4	Express	Queued belt items → chest	Both lanes, side, no turn	8.00	8.00	8.00
Stack	4	Fast	Chest → belt		7.05 -1%	7.12	7.74 +9%
Stack	4	Fast	Running belt items → chest	One lane, side or inner lane turn	6.00 -9%	6.59	7.50 +14%
Stack	4	Fast	Running belt items → chest	Both lanes, side, no turn	5.00 -18%	6.11	6.66 +9%
Stack	4	Fast	Queued belt items → chest	One lane, side or inner lane turn	7.27 -4%	7.58	8.00 +6%
Stack	4	Fast	Queued belt items → chest	Both lanes, side, no turn	6.66 -4%	6.92	7.50 +8%
Stack	4	Basic	Chest → belt		5.71 -2%	5.83	6.66 +14%
Stack	4	Basic	Running belt items → chest	One lane, side or inner lane turn	5.00 -15%	5.90	7.50 +27%
Stack	4	Basic	Running belt items → chest	Both lanes, side, no turn	5.62 -10%	6.27	6.92 +10%
Stack	4	Basic	Queued belt items → chest	One lane, side or inner lane turn	5.85 -9%	6.45	7.50 +16%
Stack	4	Basic	Queued belt items → chest	Both lanes, side, no turn	6.66 -3%	6.85	7.05 +3%
Fast	2		Chest → chest		4.61	4.61	4.61
Fast	2	Express	Chest → belt		4.44	4.44	4.44
Fast	2	Express	Running belt items → chest	One lane, side or inner lane turn	3.46 -13%	3.96	4.50 +14%
Fast	2	Express	Running belt items → chest	Both lanes, side, no turn	4.09 -4%	4.26	4.41 +4%
Fast	2	Express	Queued belt items → chest	One lane, side or inner lane turn	4.28 -4%	4.48	4.80 +7%
Fast	2	Express	Queued belt items → chest	Both lanes, side, no turn	4.28 -3%	4.39	4.61 +5%
Fast	2	Fast	Chest → belt		4.44	4.44	4.44
Fast	2	Fast	Running belt items → chest	One lane, side or inner lane turn	3.75 -8%	4.06	4.61 +14%
Fast	2	Fast	Running belt items → chest	Both lanes, side, no turn	3.75 -8%	4.08	4.61 +13%
Fast	2	Fast	Queued belt items → chest	One lane, side or inner lane turn	4.28 -4%	4.48	4.80 +7%

Inserter		Belt	Setup		Items/second, all directions [1]				
Type	Stack size	Type	Move type	Belt tile type	Min [2]	[3]	Mean [4]	Max [5]	[6]
Fast	2	Fast	Queued belt items → chest	Both lanes, side, no turn	4.28	-3%	4.39	4.61	+5%
Fast	2	Basic	Chest → belt		4.44		4.44	4.44	
Fast	2	Basic	Running belt items → chest	One lane, side or inner lane turn	3.75	-11%	4.20	4.50	+7%
Fast	2	Basic	Running belt items → chest	Both lanes, side, no turn	4.28	-2%	4.35	4.50	+3%
Fast	2	Basic	Queued belt items → chest	One lane, side or inner lane turn	4.28	-4%	4.48	4.80	+7%
Fast	2	Basic	Queued belt items → chest	Both lanes, side, no turn	4.28	-3%	4.39	4.61	+5%
Long-handed	2		Chest → chest		2.35	-1%	2.37	2.40	+1%
Long-handed	2	Express	Chest → belt		2.30	-1%	2.33	2.35	+1%
Long-handed	2	Express	Running belt items → chest	One lane, side or inner lane turn	1.76	-12%	2.00	2.14	+7%
Long-handed	2	Express	Running belt items → chest	Both lanes, side, no turn	2.14		2.14	2.14	
Long-handed	2	Express	Queued belt items → chest	One lane, side or inner lane turn	2.18	-6%	2.31	2.40	+4%
Long-handed	2	Express	Queued belt items → chest	Both lanes, side, no turn	2.30	-1%	2.33	2.40	+3%
Long-handed	2	Fast	Chest → belt		2.30	-1%	2.33	2.35	+1%
Long-handed	2	Fast	Running belt items → chest	One lane, side or inner lane turn	1.87	-11%	2.10	2.22	+6%
Long-handed	2	Fast	Running belt items → chest	Both lanes, side, no turn	2.00	-8%	2.17	2.22	+2%
Long-handed	2	Fast	Queued belt items → chest	One lane, side or inner lane turn	2.18	-5%	2.30	2.40	+4%
Long-handed	2	Fast	Queued belt items → chest	Both lanes, side, no turn	2.26	-3%	2.33	2.40	+3%
Long-handed	2	Basic	Chest → belt		2.30	-1%	2.33	2.35	+1%
Long-handed	2	Basic	Running belt items → chest	One lane, side or inner lane turn	2.14	-2%	2.18	2.34	+7%
Long-handed	2	Basic	Running belt items → chest	Both lanes, side, no turn	2.14	-4%	2.22	2.30	+4%
Long-handed	2	Basic	Queued belt items → chest	One lane, side or inner lane turn	2.18	-6%	2.31	2.40	+4%
Long-handed	2	Basic	Queued belt items → chest	Both lanes, side, no turn	2.30	-1%	2.33	2.40	+3%
Basic	2		Chest → chest		1.66		1.66	1.66	
Basic	2	Express	Chest → belt		1.64		1.64	1.64	
Basic	2	Express	Running belt items → chest	One lane, side or inner lane turn	1.30	-8%	1.42	1.60	+13%
Basic	2	Express	Running belt items → chest	Both lanes, side, no turn	1.30	-10%	1.45	1.60	+10%
Basic	2	Express	Queued belt items → chest	One lane, side or inner lane turn	1.60	-4%	1.67	1.76	+5%
Basic	2	Express	Queued belt items → chest	Both lanes, side, no turn	1.62	-2%	1.66	1.76	+6%
Basic	2	Fast	Chest → belt		1.64		1.64	1.64	
Basic	2	Fast	Running belt items → chest	One lane, side or inner lane turn	1.42	-8%	1.55	1.66	+7%
Basic	2	Fast	Running belt items → chest	Both lanes, side, no turn	1.50	-6%	1.60	1.66	+4%
Basic	2	Fast	Queued belt items → chest	One lane, side or inner lane turn	1.60	-4%	1.67	1.76	+5%
Basic	2	Fast	Queued belt items → chest	Both lanes, side, no turn	1.62	-2%	1.66	1.76	+6%
Basic	2	Basic	Chest → belt		1.64		1.64	1.64	
Basic	2	Basic	Running belt items → chest	One lane, side or inner lane turn	1.50	-7%	1.62	1.66	+2%
Basic	2	Basic	Running belt items → chest	Both lanes, side, no turn	1.57	-4%	1.64	1.66	+1%
Basic	2	Basic	Queued belt items → chest	One lane, side or inner lane turn	1.60	-4%	1.67	1.76	+5%
Basic	2	Basic	Queued belt items → chest	Both lanes, side, no turn	1.62	-2%	1.66	1.76	+6%
Burner	2		Chest → chest		1.18	-1%	1.19	1.20	+1%
Burner	2	Express	Chest → belt		1.17	-1%	1.18	1.18	
Burner	2	Express	Running belt items → chest	One lane, side or inner lane turn	0.88	-13%	1.01	1.15	+14%
Burner	2	Express	Running belt items → chest	Both lanes, side, no turn	0.78	-20%	0.97	1.15	+19%
Burner	2	Express	Queued belt items → chest	One lane, side or inner lane turn	1.15	-5%	1.21	1.29	+7%
Burner	2	Express	Queued belt items → chest	Both lanes, side, no turn	1.17	-3%	1.21	1.29	+7%
Burner	2	Fast	Chest → belt		1.17	-1%	1.18	1.18	
Burner	2	Fast	Running belt items → chest	One lane, side or inner lane turn	0.96	-14%	1.11	1.20	+8%
Burner	2	Fast	Running belt items → chest	Both lanes, side, no turn	0.96	-13%	1.10	1.20	+9%
Burner	2	Fast	Queued belt items → chest	One lane, side or inner lane turn	1.15	-5%	1.21	1.29	+7%
Burner	2	Fast	Queued belt items → chest	Both lanes, side, no turn	1.17	-3%	1.21	1.29	+7%
Burner	2	Basic	Chest → belt		1.17	-1%	1.18	1.18	
Burner	2	Basic	Running belt items → chest	One lane, side or inner lane turn	1.00	-12%	1.14	1.25	+10%
Burner	2	Basic	Running belt items → chest	Both lanes, side, no turn	1.00	-12%	1.13	1.25	+11%
Burner	2	Basic	Queued belt items → chest	One lane, side or inner lane turn	1.15	-5%	1.21	1.29	+7%
Burner	2	Basic	Queued belt items → chest	Both lanes, side, no turn	1.17	-3%	1.21	1.29	+7%
Stack	2		Chest → chest		4.61		4.61	4.61	
Stack	2	Express	Chest → belt		4.44		4.44	4.44	

Inserter	Stack size	Belt			Items/second, all directions [1]		
		Type	Move type	Belt tile type	Min [2] [3]	Mean [4]	Max [5] [6]
Stack	2	Express	Running belt items → chest	One lane, side or inner lane turn	3.46 -13%	3.96	4.50 +14%
Stack	2	Express	Running belt items → chest	Both lanes, side, no turn	4.09 -4%	4.26	4.41 +4%
Stack	2	Express	Queued belt items → chest	One lane, side or inner lane turn	4.28 -4%	4.48	4.80 +7%
Stack	2	Express	Queued belt items → chest	Both lanes, side, no turn	4.28 -3%	4.39	4.61 +5%
Stack	2	Fast	Chest → belt		4.44	4.44	4.44
Stack	2	Fast	Running belt items → chest	One lane, side or inner lane turn	3.75 -8%	4.06	4.61 +14%
Stack	2	Fast	Running belt items → chest	Both lanes, side, no turn	3.75 -8%	4.08	4.61 +13%
Stack	2	Fast	Queued belt items → chest	One lane, side or inner lane turn	4.28 -4%	4.48	4.80 +7%
Stack	2	Fast	Queued belt items → chest	Both lanes, side, no turn	4.28 -3%	4.39	4.61 +5%
Stack	2	Basic	Chest → belt		4.44	4.44	4.44
Stack	2	Basic	Running belt items → chest	One lane, side or inner lane turn	3.75 -11%	4.20	4.50 +7%
Stack	2	Basic	Running belt items → chest	Both lanes, side, no turn	4.28 -2%	4.35	4.50 +3%
Stack	2	Basic	Queued belt items → chest	One lane, side or inner lane turn	4.28 -4%	4.48	4.80 +7%
Stack	2	Basic	Queued belt items → chest	Both lanes, side, no turn	4.28 -3%	4.39	4.61 +5%
Fast	1		Chest → chest		2.30	2.30	2.30
Fast	1	Express	Chest → belt		2.30	2.30	2.30
Fast	1	Express	Running belt items → chest	One lane, side or inner lane turn	1.87 -11%	2.09	2.50 +20%
Fast	1	Express	Running belt items → chest	Both lanes, side, no turn	2.04 -9%	2.25	2.50 +11%
Fast	1	Express	Queued belt items → chest	One lane, side or inner lane turn	2.40	2.41	2.60 +8%
Fast	1	Express	Queued belt items → chest	Both lanes, side, no turn	2.40	2.40	2.40
Fast	1	Fast	Chest → belt		2.30	2.30	2.30
Fast	1	Fast	Running belt items → chest	One lane, side or inner lane turn	2.14 -3%	2.20	2.50 +14%
Fast	1	Fast	Running belt items → chest	Both lanes, side, no turn	2.14 -5%	2.25	2.50 +11%
Fast	1	Fast	Queued belt items → chest	One lane, side or inner lane turn	2.40	2.41	2.60 +8%
Fast	1	Fast	Queued belt items → chest	Both lanes, side, no turn	2.40	2.40	2.40
Fast	1	Basic	Chest → belt		2.30	2.30	2.30
Fast	1	Basic	Running belt items → chest	One lane, side or inner lane turn	2.25 -6%	2.40	2.50 +4%
Fast	1	Basic	Running belt items → chest	Both lanes, side, no turn	2.25 -7%	2.41	2.50 +4%
Fast	1	Basic	Queued belt items → chest	One lane, side or inner lane turn	2.40	2.41	2.60 +8%
Fast	1	Basic	Queued belt items → chest	Both lanes, side, no turn	2.40	2.40	2.40
Long-handed	1		Chest → chest		1.17 -1%	1.18	1.20 +2%
Long-handed	1	Express	Chest → belt		1.17 -1%	1.18	1.20 +2%
Long-handed	1	Express	Running belt items → chest	One lane, side or inner lane turn	0.93 -10%	1.03	1.11 +8%
Long-handed	1	Express	Running belt items → chest	Both lanes, side, no turn	1.07 -2%	1.09	1.11 +2%
Long-handed	1	Express	Queued belt items → chest	One lane, side or inner lane turn	1.17 -3%	1.21	1.22 +1%
Long-handed	1	Express	Queued belt items → chest	Both lanes, side, no turn	1.22	1.22	1.22
Long-handed	1	Fast	Chest → belt		1.17 -1%	1.18	1.20 +2%
Long-handed	1	Fast	Running belt items → chest	One lane, side or inner lane turn	1.00 -8%	1.09	1.15 +6%
Long-handed	1	Fast	Running belt items → chest	Both lanes, side, no turn	1.07 -4%	1.12	1.15 +3%
Long-handed	1	Fast	Queued belt items → chest	One lane, side or inner lane turn	1.17 -3%	1.20	1.22 +2%
Long-handed	1	Fast	Queued belt items → chest	Both lanes, side, no turn	1.22	1.22	1.22
Long-handed	1	Basic	Chest → belt		1.17 -1%	1.18	1.20 +2%
Long-handed	1	Basic	Running belt items → chest	One lane, side or inner lane turn	1.07 -7%	1.15	1.25 +9%
Long-handed	1	Basic	Running belt items → chest	Both lanes, side, no turn	1.07 -8%	1.16	1.25 +8%
Long-handed	1	Basic	Queued belt items → chest	One lane, side or inner lane turn	1.17 -3%	1.21	1.22 +1%
Long-handed	1	Basic	Queued belt items → chest	Both lanes, side, no turn	1.22	1.22	1.22
Basic	1		Chest → chest		0.83	0.83	0.83
Basic	1	Express	Chest → belt		0.83	0.83	0.83
Basic	1	Express	Running belt items → chest	One lane, side or inner lane turn	0.68 -8%	0.74	0.83 +12%
Basic	1	Express	Running belt items → chest	Both lanes, side, no turn	0.72 -6%	0.77	0.83 +8%
Basic	1	Express	Queued belt items → chest	One lane, side or inner lane turn	0.86 -2%	0.88	0.95 +8%
Basic	1	Express	Queued belt items → chest	Both lanes, side, no turn	0.89	0.89	0.89
Basic	1	Fast	Chest → belt		0.83	0.83	0.83
Basic	1	Fast	Running belt items → chest	One lane, side or inner lane turn	0.75 -7%	0.81	0.88 +9%
Basic	1	Fast	Running belt items → chest	Both lanes, side, no turn	0.78 -7%	0.84	0.88 +5%
Basic	1	Fast	Queued belt items → chest	One lane, side or inner lane turn	0.86 -2%	0.88	0.95 +8%

Inserter	Stack size	Belt Type	Setup	Belt tile type	Items/second, all directions, all belt phases [7]	Dito, north--south direction, all belt phases [8]	Dito, west--east direction, all belt phases [9]	Dito, north--south direction, single belt phase [
Type	Size	Type	Move type	Belt tile type	Min [11] [12] Mean [13] Max [14] [15]	Min [16] [17] Mean [18] Max [19] [20]	Min [21] [22] Mean [23] Max [24] [25]	Min [26] [27] Mean [28] Max [29] [30]
Stack	12	Basic	Queued belt items → chest	Straight, side, near lane	7.50	7.50	7.50	
Stack	12	Basic	Queued belt items → chest	Straight, side, far lane	7.50	7.50	7.50	
Stack	12	Basic	Queued belt items → chest	Straight, side, both lanes	9.64	9.64	9.64	
Stack	12	Basic	Queued belt items → chest	Straight, side, sideloaded onto empty belt	7.50	7.50	7.50	
Stack	12	Basic	Queued belt items → chest	Straight, towards, one lane	7.50	7.50	7.50	
Stack	12	Basic	Queued belt items → chest	Straight, towards, both lanes	7.50	7.50	7.50	
Stack	12	Basic	Queued belt items → chest	Turn, outer lane	7.50	7.50	7.50	
Stack	12	Basic	Queued belt items → chest	Turn, inner lane	6.85 -2%	6.96	7.12 +2%	
Stack	12	Basic	Queued belt items → chest	Turn, both lanes	7.65 -17%	9.17	11.25 +23%	
Stack	12	Basic	Queued belt items → chest	Underground, side, one lane	7.05 -1%	7.09	7.20 -2%	
Stack	12	Basic	Queued belt items → chest	Underground, side, both lanes	9.00 -2%	9.23	9.47 +3%	
Stack	12	Basic	Queued belt items → chest	Underground, front, one lane	7.05 -2%	7.20	7.34 +2%	
Stack	12	Basic	Queued belt items → chest	Underground, behind, one lane	7.20	7.20	7.20	
Stack	12	Basic	Queued belt items → chest	Underground, front/behind, both lanes	11.25 -2%	11.48	12.00 +5%	
Stack	12	Basic	Queued belt items → chest	Underground, sideloaded onto empty belt	6.99 -3%	7.18	7.50 +4%	
Stack	12	Basic	Queued belt items → chest	Splitter, side, one lane, blocked exit	6.99 -2%	7.12	7.27 +2%	
Stack	12	Basic	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	7.02 -1%	7.07	7.12 +1%	
Stack	12	Basic	Queued belt items → chest	Splitter, side, both lanes, blocked exit	9.35	9.35	9.35	
Stack	12	Basic	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	11.25 -2%	11.52	11.80 +2%	
Fast	3	Express	Chest → chest	Non-splitter	6.92	6.92	6.92	
Fast	3	Express	Chest → belt	Splitter	6.42	6.42	6.42	
Fast	3	Express	Running belt items → chest	Straight, side, near lane	6.42	6.42	6.42	
Fast	3	Express	Running belt items → chest	Straight, side, far lane	6.13	6.13	6.13	
Fast	3	Express	Running belt items → chest	Straight, side, both lanes	5.62	5.62	5.62	
Fast	3	Express	Running belt items → chest	Straight, side, sideloaded onto empty belt	4.50 -10%	5.00	5.62 +12%	
Fast	3	Express	Running belt items → chest	Turn, outer lane	5.62	5.62	5.62	
Fast	3	Express	Running belt items → chest	Turn, inner lane	5.00	5.00	5.00	
Fast	3	Express	Running belt items → chest	Turn, both lanes	4.50 -11%	5.05	5.62 +11%	
Fast	3	Express	Running belt items → chest	Underground, side, one lane	5.62 -4%	5.86	6.13 +5%	
Fast	3	Express	Running belt items → chest	Underground, side, both lanes	4.09 -15%	4.84	5.62 +18%	
Fast	3	Express	Running belt items → chest	Underground, front, one lane	5.19	5.19	5.19	
Fast	3	Express	Running belt items → chest	Underground, behind, one lane	5.19	5.19	5.19	
Fast	3	Express	Running belt items → chest	Underground, front/behind, both lanes	4.50 -10%	5.00	5.19 +4%	
Fast	3	Express	Running belt items → chest	Underground, sideloaded onto empty belt	3.75 -10%	4.18	4.50 +8%	
Fast	3	Express	Running belt items → chest	Splitter, side, one lane, nonblocked exit	6.42	6.42	6.42	
Fast	3	Express	Running belt items → chest	Splitter, side, one lane, blocked exit	4.50 -7%	4.82	5.19 +8%	
Fast	3	Express	Running belt items → chest	Splitter, front/behind, one lane, nonblocked exit	5.80 -2%	5.90	6.00 +2%	
Fast	3	Express	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	5.62 -6%	6.00	6.42 +7%	
Fast	3	Express	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	4.73 -9%	5.21	5.62 +8%	
Fast	3	Express	Running belt items → chest	Splitter, side, both lanes, blocked exit	5.80 -2%	5.90	6.00 +2%	
Fast	3	Express	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	6.20	6.20	6.20	
Fast	3	Express	Queued belt items → chest	Straight, side, near lane	6.66	6.66	6.66	
Fast	3	Express	Queued belt items → chest	Straight, side, far lane	6.20	6.20	6.20	
Fast	3	Express	Queued belt items → chest	Straight, side, both lanes	6.20	6.20	6.20	
Fast	3	Express	Queued belt items → chest	Straight, side, sideloaded onto empty belt	6.20 -3%	6.42	6.66 +4%	
Fast	3	Express	Queued belt items → chest	Straight, towards, one lane	5.80	5.80	5.80	
Fast	3	Express	Queued belt items → chest	Straight, towards, both lanes	5.80	5.80	5.80	
Fast	3	Express	Queued belt items → chest	Turn, outer lane	5.80 -7%	6.27	6.92 +10%	
Fast	3	Express	Queued belt items → chest	Turn, inner lane	6.00 -3%	6.20	6.42 +4%	
Fast	3	Express	Queued belt items → chest	Turn, both lanes	5.80 -7%	6.24	6.92 +11%	
Fast	3	Express	Queued belt items → chest	Underground, side, one lane	6.20 -3%	6.42	6.66 +4%	
Fast	3	Express	Queued belt items → chest	Underground, side, both lanes	6.20 -2%	6.31	6.42 +2%	
Fast	3	Express	Queued belt items → chest	Underground, front, one lane	5.80 -2%	5.90	6.00 +2%	
Fast	3	Express	Queued belt items → chest	Underground, behind, one lane	5.80	5.80	5.80	
Fast	3	Express	Queued belt items → chest	Underground, front/behind, both lanes	5.80 -1%	5.86	6.00 +2%	
Fast	3	Express	Queued belt items → chest	Underground, sideloaded onto empty belt	5.62 -7%	6.07	6.66 +10%	
Fast	3	Express	Queued belt items → chest	Splitter, side, one lane, blocked exit	6.42	6.42	6.42	
Fast	3	Express	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	5.80 -2%	5.90	6.00 +2%	
Fast	3	Express	Queued belt items → chest	Splitter, side, both lanes, blocked exit	6.42	6.42	6.42	
Fast	3	Express	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	5.80 -2%	5.90	6.00 +2%	
Fast	3	Fast	Chest → belt	Non-splitter	6.00	6.00	6.00	
Fast	3	Fast	Chest → belt	Splitter	6.00 -4%	6.27	6.42 +2%	
Fast	3	Fast	Running belt items → chest	Straight, side, near lane	5.62	5.62	5.62	
Fast	3	Fast	Running belt items → chest	Straight, side, far lane	5.80 -2%	5.90	6.00 +2%	
Fast	3	Fast	Running belt items → chest	Straight, side, both lanes	5.62	5.62	5.62	
Fast	3	Fast	Running belt items → chest	Straight, side, sideloaded onto empty belt	4.73 -9%	5.21	6.00 +15%	
Fast	3	Fast	Running belt items → chest	Turn, outer lane	5.00 -2%	5.10	5.29 +4%	
Fast	3	Fast	Running belt items → chest	Turn, inner lane	5.00 -7%	5.37	5.62 +5%	
Fast	3	Fast	Running belt items → chest	Turn, both lanes	4.50 -13%	5.19	6.00 +18%	
Fast	3	Fast	Running belt items → chest	Underground, side, one lane	5.00 -13%	5.76	6.42 +11%	
Fast	3	Fast	Running belt items → chest	Underground, side, both lanes	4.09 -23%	5.33	6.42 +20%	
Fast	3	Fast	Running belt items → chest	Underground, front, one lane	5.00	5.00	5.00	
Fast	3	Fast	Running belt items → chest	Underground, behind, one lane	5.00	5.00	5.00	
Fast	3	Fast	Running belt items → chest	Underground, front/behind, both lanes	5.00 -11%	5.64	6.00 +6%	
Fast	3	Fast	Running belt items → chest	Underground, sideloaded onto empty belt	4.50 -5%	4.73	5.00 +6%	
Fast	3	Fast	Running belt items → chest	Splitter, side, one lane, blocked exit	6.42	6.42	6.42	
Fast	3	Fast	Running belt items → chest	Splitter, side, one lane, nonblocked exit	5.00 -5%	5.29	5.62 +6%	
Fast	3	Fast	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	5.62 -7%	6.07	6.42 +6%	
Fast	3	Fast	Running belt items → chest	Splitter, front/behind, one lane, nonblocked exit	5.62 -3%	5.80	6.00 +3%	
Fast	3	Fast	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	4.73 -7%	5.07	5.62 +11%	
Fast	3	Fast	Running belt items → chest	Splitter, side, both lanes, blocked exit	5.62 -7%	6.05	6.42 +6%	
Fast	3	Fast	Queued belt items → chest	Straight, side, near lane	6.20	6.20	6.20	
Fast	3	Fast	Queued belt items → chest	Straight, side, far lane	6.42	6.42	6.42	
Fast	3	Fast	Queued belt items → chest	Straight, side, both lanes	6.20	6.20	6.20	
Fast	3	Fast	Queued belt items → chest	Straight, side, sideloaded onto empty belt	6.20 -3%	6.42	6.66 +4%	
Fast	3	Fast	Queued belt items → chest	Straight, towards, one lane	5.80	5.80	5.80	
Fast	3	Fast	Queued belt items → chest	Straight, towards, both lanes	5.80	5.80	5.80	
Fast	3	Fast	Queued belt items → chest	Turn, outer lane	5.80 -6%	6.20	6.66 +7%	
Fast	3	Fast	Queued belt items → chest	Turn, inner lane	5.80 -4%	6.06	6.20 +2%	
Fast	3	Fast	Queued belt items → chest	Turn, both lanes	5.80 -5%	6.13	6.66 +9%	
Fast	3	Fast	Queued belt items → chest	Underground, side, one lane	6.20 -1%	6.26	6.42 +3%	
Fast	3	Fast	Queued belt items → chest	Underground, side, both lanes	6.20	6.20	6.20	
Fast	3	Fast	Queued belt items → chest	Underground, front, one lane	5.80	5.80	5.80	
Fast	3	Fast	Queued belt items → chest	Underground, behind, one lane	5.80	5.80	5.80	
Fast	3	Fast	Queued belt items → chest	Underground, front/behind, both lanes	5.80	5.80	5.80	
Fast	3	Fast	Queued belt items → chest	Underground, sideloaded onto empty belt	5.62 -6%	5.95	6.66 +12%	
Fast	3	Fast	Queued belt items → chest	Splitter, side, one lane, blocked exit	6.42	6.42	6.42	
Fast	3	Fast	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	5.80	5.80	5.80	
Fast	3	Fast	Queued belt items → chest	Splitter, side, both lanes, blocked exit	6.42	6.42	6.42	
Fast	3	Fast	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	5.80	5.80	5.80	
Fast	3	Basic	Chest → belt	Non-splitter	5.29	5.29	5.29	
Fast	3	Basic	Chest → belt	Splitter	5.62 -8%	6.13	6.42 +5%	
Fast	3	Basic	Running belt items → chest	Straight, side, near lane	5.62	5.62	5.62	
Fast	3	Basic	Running belt items → chest	Straight, side, far lane	6.13	6.13	6.13	
Fast	3	Basic	Running belt items → chest	Straight, side, both lanes	5.62	5.62	5.62	
Fast	3	Basic	Running belt items → chest	Straight, side, sideloaded onto empty belt	4.50 -12%	5.09	6.13 +20%	
Fast	3	Basic	Running belt items → chest	Turn, outer lane	5.62	5.62	5.62	
Fast	3	Basic	Running belt items → chest	Turn, inner lane	4.50 -5%	4.73	5.62 +19%	

Insertor	Stack size	Belt Type	Setup Move type	Belt tile type	Items/second, all directions, all belt phases [7]	Dito, north--south direction, all belt phases [8]	Dito, west--east direction, all belt phases [9]	Dito, north--south direction, single belt phase [
Type					Min [11] [12] Mean [13] Max [14] [15]	Min [16] [17] Mean [18] Max [19] [20]	Min [21] [22] Mean [23] Max [24] [25]	Min [26] [27] Mean [28] Max [29] [30]
Long-handed	3	Fast	Queued belt items → chest	Underground, side, both lanes	3.39	3.39		
Long-handed	3	Fast	Queued belt items → chest	Underground, front, one lane	3.00 -2%	3.05	3.10 +2%	
Long-handed	3	Fast	Queued belt items → chest	Underground, behind, one lane	3.00 -2%	3.05	3.10 +2%	
Long-handed	3	Fast	Queued belt items → chest	Underground, front/behind, both lanes	3.00 -2%	3.05	3.10 +2%	
Long-handed	3	Fast	Queued belt items → chest	Underground, sideloaded onto empty belt	2.90 -10%	3.23	3.39 +5%	
Long-handed	3	Fast	Queued belt items → chest	Splitter, side, one lane, blocked exit	3.46	3.46	3.46	
Long-handed	3	Fast	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	3.00 -2%	3.05	3.10 +2%	
Long-handed	3	Fast	Queued belt items → chest	Splitter, side, both lanes, blocked exit	3.46	3.46	3.46	
Long-handed	3	Fast	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	3.00 -2%	3.05	3.10 +2%	
Long-handed	3	Basic	Chest → belt	Non-splitter	3.05 -1%	3.07	3.10 +1%	3.05
Long-handed	3	Basic	Chest → belt	Splitter	3.15 -6%	3.34	3.46 +4%	3.15 -5%
Long-handed	3	Basic	Running belt items → chest	Straight, side, near lane	3.06 -3%	3.17	3.21 +1%	3.06
Long-handed	3	Basic	Running belt items → chest	Straight, side, far lane	3.21	3.21	3.21	3.06
Long-handed	3	Basic	Running belt items → chest	Straight, side, both lanes	3.21	3.21	3.21	3.06
Long-handed	3	Basic	Running belt items → chest	Straight, side, sideloaded onto empty belt	2.64 -9%	2.90	3.21 +11%	2.64 -9%
Long-handed	3	Basic	Running belt items → chest	Straight, towards, one lane	2.81	2.81	2.81	2.81
Long-handed	3	Basic	Running belt items → chest	Straight, towards, both lanes	2.81	2.81	2.81	2.81
Long-handed	3	Basic	Running belt items → chest	Turn, outer lane	2.81 -1%	2.83	2.90 +2%	2.81 -1%
Long-handed	3	Basic	Running belt items → chest	Turn, inner lane	2.81	2.81	2.81	2.81
Long-handed	3	Basic	Running belt items → chest	Turn, both lanes	2.70 -6%	2.88	3.21 +11%	2.70 -6%
Long-handed	3	Basic	Running belt items → chest	Underground, side, one lane	2.81 -9%	3.10	3.21 +4%	2.81 -9%
Long-handed	3	Basic	Running belt items → chest	Underground, side, both lanes	2.50 -7%	2.69	3.06 +14%	2.50 -7%
Long-handed	3	Basic	Running belt items → chest	Underground, front, one lane	2.50 -8%	2.71	3.10 +14%	2.50 -8%
Long-handed	3	Basic	Running belt items → chest	Underground, behind, one lane	2.50 -15%	2.93	3.00 +2%	2.50 -15%
Long-handed	3	Basic	Running belt items → chest	Underground, front/behind, both lanes	2.64 -3%	2.92	3.21 +10%	2.64 -3%
Long-handed	3	Basic	Running belt items → chest	Underground, sideloaded onto empty belt	2.50 -3%	2.57	2.81 +9%	2.50 -3%
Long-handed	3	Basic	Running belt items → chest	Splitter, side, one lane, blocked exit	3.21	3.21	3.21	3.21
Long-handed	3	Basic	Running belt items → chest	Splitter, side, one lane, nonblocked exit	2.64 -3%	2.72	2.81 +3%	2.64 -3%
Long-handed	3	Basic	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	3.00 -2%	3.06	3.13 +2%	3.00 -2%
Long-handed	3	Basic	Running belt items → chest	Splitter, side, both lanes, blocked exit	3.01 -1%	3.05	3.09 +1%	3.01 -1%
Long-handed	3	Basic	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	2.25 -13%	2.58	2.81 +9%	2.25 -13%
Long-handed	3	Basic	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	2.90 -2%	2.97	3.00 +1%	2.90 -2%
Long-handed	3	Basic	Queued belt items → chest	Straight, side, near lane	3.39	3.39	3.39	3.39
Long-handed	3	Basic	Queued belt items → chest	Straight, side, far lane	3.39	3.39	3.39	3.39
Long-handed	3	Basic	Queued belt items → chest	Straight, side, both lanes	3.33	3.33	3.33	3.33
Long-handed	3	Basic	Queued belt items → chest	Straight, side, sideloaded onto empty belt	3.33 -2%	3.39	3.46 +2%	3.33 -2%
Long-handed	3	Basic	Queued belt items → chest	Straight, towards, one lane	2.90	2.90	2.90	2.90
Long-handed	3	Basic	Queued belt items → chest	Straight, towards, both lanes	2.90	2.90	2.90	2.90
Long-handed	3	Basic	Queued belt items → chest	Turn, outer lane	2.95 -4%	3.07	3.21 +5%	2.95 -4%
Long-handed	3	Basic	Queued belt items → chest	Turn, inner lane	3.10 -1%	3.13	3.15 +1%	3.10 -1%
Long-handed	3	Basic	Queued belt items → chest	Turn, both lanes	2.60 -14%	3.04	3.27 +8%	2.60 -14%
Long-handed	3	Basic	Queued belt items → chest	Underground, side, one lane	3.15 -4%	3.28	3.33 +2%	3.15 -4%
Long-handed	3	Basic	Queued belt items → chest	Underground, side, both lanes	2.90 -6%	3.10	3.33 +7%	2.90 -6%
Long-handed	3	Basic	Queued belt items → chest	Underground, front, one lane	2.90 -2%	2.95	3.00 +2%	2.90 -2%
Long-handed	3	Basic	Queued belt items → chest	Underground, behind, one lane	2.90 -2%	2.95	3.00 +2%	2.90 -2%
Long-handed	3	Basic	Queued belt items → chest	Underground, front/behind, both lanes	2.90 -2%	2.95	3.00 +2%	2.90 -2%
Long-handed	3	Basic	Queued belt items → chest	Underground, sideloaded onto empty belt	2.95 -9%	3.25	3.46 +6%	2.95 -9%
Long-handed	3	Basic	Queued belt items → chest	Splitter, side, one lane, blocked exit	3.39 -1%	3.42	3.46 +1%	3.39 -1%
Long-handed	3	Basic	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	2.95 -2%	3.00	3.05 +2%	2.95 -2%
Long-handed	3	Basic	Queued belt items → chest	Splitter, side, both lanes, blocked exit	3.46	3.46	3.46	3.46
Long-handed	3	Basic	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	2.95 -2%	3.00	3.05 +2%	2.95 -2%
Basic	3	Express	Chest → belt	Non-splitter	2.50	2.50	2.50	2.50
Basic	3	Express	Chest → belt	Splitter	2.43	2.43	2.43	2.43
Basic	3	Express	Running belt items → chest	Straight, side, near lane	2.04	2.04	2.04	2.04
Basic	3	Express	Running belt items → chest	Straight, side, far lane	2.04 -3%	2.11	2.12	2.11
Basic	3	Express	Running belt items → chest	Straight, side, both lanes	2.14	2.14	2.14	2.14
Basic	3	Express	Running belt items → chest	Straight, side, sideloaded onto empty belt	2.04 -5%	2.14	2.25 +5%	2.04 -5%
Basic	3	Express	Running belt items → chest	Turn, outer lane	1.40 [37] -3%	1.45	2.04 +13%	1.40
Basic	3	Express	Running belt items → chest	Turn, inner lane	1.95 -3%	2.00	2.04 +2%	1.95 -3%
Basic	3	Express	Running belt items → chest	Turn, both lanes	1.40 [38] -17%	1.69	2.04 +21%	1.40
Basic	3	Express	Running belt items → chest	Underground, side, one lane	2.04 -6%	2.16	2.25 +4%	2.04 -6%
Basic	3	Express	Running belt items → chest	Underground, side, both lanes	1.87 -8%	2.04	2.25 +10%	1.87 -8%
Basic	3	Express	Running belt items → chest	Underground, front, one lane	1.60 -14%	1.86	2.04 +10%	1.60 -14%
Basic	3	Express	Running belt items → chest	Underground, behind, one lane	2.04	2.04	2.04	2.04
Basic	3	Express	Running belt items → chest	Underground, front/behind, both lanes	1.73 -15%	2.03	2.04	2.04
Basic	3	Express	Running belt items → chest	Underground, sideloaded onto empty belt	1.73 -4%	1.80	2.04 +13%	1.73 -4%
Basic	3	Express	Running belt items → chest	Splitter, side, one lane, blocked exit	2.50 -1%	2.53	2.57 +2%	2.50 -1%
Basic	3	Express	Running belt items → chest	Splitter, side, one lane, nonblocked exit	2.04	2.04	2.04	2.04
Basic	3	Express	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	2.25 -2%	2.30	2.36 +3%	2.25 -2%
Basic	3	Express	Running belt items → chest	Splitter, side, both lanes, blocked exit	2.57	2.57	2.57	2.57
Basic	3	Express	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	1.87 -3%	1.92	2.04 +6%	1.87 -3%
Basic	3	Express	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	2.25 -2%	2.30	2.36 +3%	2.25 -2%
Basic	3	Express	Queued belt items → chest	Straight, side, near lane	2.40	2.40	2.40	2.40
Basic	3	Express	Queued belt items → chest	Straight, side, far lane	2.36	2.36	2.36	2.36
Basic	3	Express	Queued belt items → chest	Straight, side, both lanes	2.40	2.40	2.40	2.40
Basic	3	Express	Queued belt items → chest	Straight, side, sideloaded onto empty belt	2.33 -1%	2.35	2.36	2.36
Basic	3	Express	Queued belt items → chest	Straight, towards, one lane	2.25	2.25	2.25	2.25
Basic	3	Express	Queued belt items → chest	Straight, towards, both lanes	2.25	2.25	2.25	2.25
Basic	3	Express	Queued belt items → chest	Turn, outer lane	2.22 -6%	2.36	2.50 +6%	2.22 -6%
Basic	3	Express	Queued belt items → chest	Turn, inner lane	2.33 -4%	2.43	2.50 +3%	2.33 -4%
Basic	3	Express	Queued belt items → chest	Turn, both lanes	2.22 -7%	2.40	2.50 +4%	2.22 -7%
Basic	3	Express	Queued belt items → chest	Underground, side, one lane	2.36 -4%	2.45	2.57 +5%	2.36 -4%
Basic	3	Express	Queued belt items → chest	Underground, side, both lanes	2.40 -3%	2.48	2.57 +4%	2.40 -3%
Basic	3	Express	Queued belt items → chest	Underground, front, one lane	2.25 -2%	2.30	2.36 +3%	2.25 -2%
Basic	3	Express	Queued belt items → chest	Underground, behind, one lane	2.25	2.25	2.25	2.25
Basic	3	Express	Queued belt items → chest	Underground, front/behind, both lanes	2.25 -1%	2.28	2.36 +4%	2.25 -1%
Basic	3	Express	Queued belt items → chest	Underground, sideloaded onto empty belt	2.14 -8%	2.33	2.46 +6%	2.14 -8%
Basic	3	Express	Queued belt items → chest	Splitter, side, one lane, blocked exit	2.50 -1%	2.53	2.57 +2%	2.50 -1%
Basic	3	Express	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	2.25 -2%	2.30	2.36 +3%	2.25 -2%
Basic	3	Express	Queued belt items → chest	Splitter, side, both lanes, blocked exit	2.57	2.57	2.57	2.57
Basic	3	Express	Queued belt items → chest	Splitter, side, both lanes, nonblocked exit	2.25 -2%	2.30	2.36 +3%	2.25 -2%
Basic	3	Express	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	2.25	2.25	2.25	2.25
Basic	3	Express	Chest → belt	Non-splitter	2.36	2.36	2.36	2.36
Basic	3	Express	Chest → belt	Splitter	2.36 -2%	2.41	2.43 +1%	2.36 -2%
Basic	3	Express	Running belt items → chest	Straight, side, near lane	2.14 -2%	2.19	2.25 +3%	2.14 -2%
Basic	3	Express	Running belt items → chest	Straight, side, far lane	2.14 -4%	2.24	2.25	2.25
Basic	3	Express	Running belt items → chest	Straight, side, both lanes	2.14 -2%	2.19	2.25 +3%	2.14 -2%
Basic	3	Express	Running belt items → chest	Straight, side, sideloaded onto empty belt	2.04 -3%	2.11	2.14 +1%	2.04 -3%
Basic	3	Express	Running belt items → chest	Turn, outer lane	1.83 -10%	2.03	2.25 +11%	1.83 -10%
Basic	3	Express	Running belt items → chest	Turn, inner lane	2.04 -5%	2.14	2.25 +5%	2.04 -5%
Basic	3	Express	Running belt items → chest	Turn, both lanes	1.60 -17%	1.92	2.25 +17%	1.60 -17%
Basic	3	Express	Running belt items → chest	Underground, side, one lane	2.14 -6%	2.27	2.36 +4%	2.14 -6%
Basic	3	Express	Running belt items → chest	Underground, side, both lanes	1.87 -9%	2.05	2.25 +10%	1.87 -9%
Basic	3	Express	Running belt items → chest	Underground, front, one lane	2.14	2.14	2.14	2.14
Basic	3	Express	Running belt items → chest	Underground, behind, one lane	2.14	2.14	2.14	2.14
Basic	3	Express	Running belt items → chest	Underground, front/behind, both lanes	1.87 -1%	1.89	2.04 +8%	1.87 -1%
Basic	3	Express	Running belt items → chest	Underground, sideloaded onto empty belt	1.87 -7%	2.02	2.14 +6%	1.87 -7%
Basic	3	Express	Running belt items → chest	Splitter, side, one lane, blocked exit	2.45 -1%	2.48	2.53 +2%	2.45 -1%

Insertor	Stack size	Belt Type	Setup Move type	Belt tile type	Items/second, all directions, all belt phases [7]	Dito, north-south direction, all belt phases [8]	Dito, west-east direction, all belt phases [9]	Dito, north-south direction, single belt phase [10]
Type					Min [11] [12] Mean [13] Max [14] [15]	Min [16] [17] Mean [18] Max [19] [20]	Min [21] [22] Mean [23] Max [24] [25]	Min [26] [27] Mean [28] Max [29] [30]
Basic	3	Fast	Running belt items → chest	Splitter, side, one lane, nonblocked exit	2.04 -5% 2.12 2.25 +5%	2.04 -5% 2.12 2.25 +5%	2.04 -5% 2.12 2.25 +5%	2.04 -5% 2.12 2.25 +5%
Basic	3	Fast	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	2.22 -2% 2.27 2.33 +3%	2.22 -2% 2.27 2.33 +3%	2.22 -2% 2.27 2.33 +3%	2.22 -2% 2.27 2.33 +3%
Basic	3	Fast	Running belt items → chest	Splitter, side, both lanes, blocked exit	2.50 2.51 2.53 +1%	2.50 2.51 2.53 +1%	2.50 2.51 2.53 +1%	2.50 2.51 2.53 +1%
Basic	3	Fast	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	2.04 -5% 2.12 2.25 +5%	2.04 -5% 2.12 2.25 +5%	2.04 -5% 2.12 2.25 +5%	2.04 -5% 2.12 2.25 +5%
Basic	3	Fast	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	2.22 -2% 2.27 2.33 +3%	2.22 -2% 2.27 2.33 +3%	2.22 -2% 2.27 2.33 +3%	2.22 -2% 2.27 2.33 +3%
Basic	3	Fast	Queued belt items → chest	Straight, side, near lane	2.43 2.43 2.43	2.43 2.43 2.43	2.43 2.43 2.43	2.43 2.43 2.43
Basic	3	Fast	Queued belt items → chest	Straight, side, far lane	2.40 -1% 2.42 2.43	2.40 -1% 2.42 2.43	2.40 -1% 2.42 2.43	2.40 -1% 2.42 2.43
Basic	3	Fast	Queued belt items → chest	Straight, side, both lanes	2.43 2.43 2.43	2.43 2.43 2.43	2.43 2.43 2.43	2.43 2.43 2.43
Basic	3	Fast	Queued belt items → chest	Straight, side, sideloaded onto empty belt	2.33 -1% 2.36 2.40 +2%	2.33 -1% 2.36 2.40 +2%	2.33 -1% 2.36 2.40 +2%	2.33 -1% 2.36 2.40 +2%
Basic	3	Fast	Queued belt items → chest	Straight, towards, one lane	2.22 2.22 2.22	2.22 2.22 2.22	2.22 2.22 2.22	2.22 2.22 2.22
Basic	3	Fast	Queued belt items → chest	Straight, towards, both lanes	2.22 2.22 2.22	2.22 2.22 2.22	2.22 2.22 2.22	2.22 2.22 2.22
Basic	3	Fast	Queued belt items → chest	Turn, outer lane	2.19 -7% 2.35 2.53 +8%	2.19 -7% 2.35 2.53 +8%	2.19 -7% 2.35 2.53 +8%	2.19 -7% 2.35 2.53 +8%
Basic	3	Fast	Queued belt items → chest	Turn, inner lane	2.30 -4% 2.40 2.46 +3%	2.30 -4% 2.40 2.46 +3%	2.30 -4% 2.40 2.46 +3%	2.30 -4% 2.40 2.46 +3%
Basic	3	Fast	Queued belt items → chest	Turn, both lanes	2.19 -8% 2.37 2.53 +7%	2.19 -8% 2.37 2.53 +7%	2.19 -8% 2.37 2.53 +7%	2.19 -8% 2.37 2.53 +7%
Basic	3	Fast	Queued belt items → chest	Underground, side, one lane	2.40 -2% 2.46 2.53 +3%	2.40 -2% 2.46 2.53 +3%	2.40 -2% 2.46 2.53 +3%	2.40 -2% 2.46 2.53 +3%
Basic	3	Fast	Queued belt items → chest	Underground, side, both lanes	2.43 -2% 2.48 2.53 +2%	2.43 -2% 2.48 2.53 +2%	2.43 -2% 2.48 2.53 +2%	2.43 -2% 2.48 2.53 +2%
Basic	3	Fast	Queued belt items → chest	Underground, front, one lane	2.22 -2% 2.27 2.33 +3%	2.22 -2% 2.27 2.33 +3%	2.22 -2% 2.27 2.33 +3%	2.22 -2% 2.27 2.33 +3%
Basic	3	Fast	Queued belt items → chest	Underground, behind, one lane	2.22 2.22 2.22	2.22 2.22 2.22	2.22 2.22 2.22	2.22 2.22 2.22
Basic	3	Fast	Queued belt items → chest	Underground, front/behind, both lanes	2.22 -1% 2.25 2.33 +4%	2.22 -1% 2.25 2.33 +4%	2.22 -1% 2.25 2.33 +4%	2.22 -1% 2.25 2.33 +4%
Basic	3	Fast	Queued belt items → chest	Underground, sideloaded onto empty belt	2.11 -7% 2.28 2.40 +5%	2.11 -7% 2.28 2.40 +5%	2.11 -7% 2.28 2.40 +5%	2.11 -7% 2.28 2.40 +5%
Basic	3	Fast	Queued belt items → chest	Splitter, side, one lane, blocked exit	2.46 -2% 2.50 2.53 +1%	2.46 -2% 2.50 2.53 +1%	2.46 -2% 2.50 2.53 +1%	2.46 -2% 2.50 2.53 +1%
Basic	3	Fast	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	2.22 -2% 2.27 2.33 +3%	2.22 -2% 2.27 2.33 +3%	2.22 -2% 2.27 2.33 +3%	2.22 -2% 2.27 2.33 +3%
Basic	3	Fast	Queued belt items → chest	Splitter, side, both lanes, blocked exit	2.53 2.53 2.53	2.53 2.53 2.53	2.53 2.53 2.53	2.53 2.53 2.53
Basic	3	Fast	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	2.22 -2% 2.27 2.33 +3%	2.22 -2% 2.27 2.33 +3%	2.22 -2% 2.27 2.33 +3%	2.22 -2% 2.27 2.33 +3%
Basic	3	Basic	Chest → belt	Non-splitter	2.25 2.25 2.25	2.25 2.25 2.25	2.25 2.25 2.25	2.25 2.25 2.25
Basic	3	Basic	Chest → belt	Splitter	2.30 -3% 2.38 2.43 +2%	2.30 -3% 2.38 2.43 +2%	2.30 -3% 2.38 2.43 +2%	2.30 -3% 2.38 2.43 +2%
Basic	3	Basic	Running belt items → chest	Straight, side, near lane	2.25 2.25 2.25	2.25 2.25 2.25	2.25 2.25 2.25	2.25 2.25 2.25
Basic	3	Basic	Running belt items → chest	Straight, side, far lane	2.32 2.32 2.32	2.32 2.32 2.32	2.32 2.32 2.32	2.32 2.32 2.32
Basic	3	Basic	Running belt items → chest	Straight, side, both lanes	2.25 -1% 2.27 2.36 +4%	2.25 -1% 2.27 2.36 +4%	2.25 -1% 2.27 2.36 +4%	2.25 -1% 2.27 2.36 +4%
Basic	3	Basic	Running belt items → chest	Straight, side, sideloaded onto empty belt	1.73 -12% 1.97 2.25 +14%	1.73 -12% 1.97 2.25 +14%	1.73 -12% 1.97 2.25 +14%	1.73 -12% 1.97 2.25 +14%
Basic	3	Basic	Running belt items → chest	Turn, outer lane	2.04 2.04 2.04	2.04 2.04 2.04	2.04 2.04 2.04	2.04 2.04 2.04
Basic	3	Basic	Running belt items → chest	Turn, inner lane	2.25 2.25 2.25	2.25 2.25 2.25	2.25 2.25 2.25	2.25 2.25 2.25
Basic	3	Basic	Running belt items → chest	Turn, both lanes	1.87 -6% 1.98 2.04 +3%	1.87 -6% 1.98 2.04 +3%	1.87 -6% 1.98 2.04 +3%	1.87 -6% 1.98 2.04 +3%
Basic	3	Basic	Running belt items → chest	Underground, side, one lane	2.04 -6% 2.16 2.25 +4%	2.04 -6% 2.16 2.25 +4%	2.04 -6% 2.16 2.25 +4%	2.04 -6% 2.16 2.25 +4%
Basic	3	Basic	Running belt items → chest	Underground, side, both lanes	1.73 -10% 1.93 2.50 +30%	1.73 -10% 1.93 2.50 +30%	1.73 -10% 1.93 2.50 +30%	1.73 -10% 1.93 2.50 +30%
Basic	3	Basic	Running belt items → chest	Underground, front, one lane	2.14 2.14 2.14	2.14 2.14 2.14	2.14 2.14 2.14	2.14 2.14 2.14
Basic	3	Basic	Running belt items → chest	Underground, behind, one lane	1.87 1.87 1.87	1.87 1.87 1.87	1.87 1.87 1.87	1.87 1.87 1.87
Basic	3	Basic	Running belt items → chest	Underground, front/behind, both lanes	1.87 -8% 2.04 2.25 +10%	1.87 -8% 2.04 2.25 +10%	1.87 -8% 2.04 2.25 +10%	1.87 -8% 2.04 2.25 +10%
Basic	3	Basic	Running belt items → chest	Underground, sideloaded onto empty belt	1.73 -9% 1.90 2.04 +7%	1.73 -9% 1.90 2.04 +7%	1.73 -9% 1.90 2.04 +7%	1.73 -9% 1.90 2.04 +7%
Basic	3	Basic	Running belt items → chest	Splitter, side, one lane, blocked exit	2.36 -3% 2.43 2.50 +3%	2.36 -3% 2.43 2.50 +3%	2.36 -3% 2.43 2.50 +3%	2.36 -3% 2.43 2.50 +3%
Basic	3	Basic	Running belt items → chest	Splitter, side, one lane, nonblocked exit	2.04 -5% 2.14 2.25 +5%	2.04 -5% 2.14 2.25 +5%	2.04 -5% 2.14 2.25 +5%	2.04 -5% 2.14 2.25 +5%
Basic	3	Basic	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	2.16 -3% 2.23 2.30 +3%	2.16 -3% 2.23 2.30 +3%	2.16 -3% 2.23 2.30 +3%	2.16 -3% 2.23 2.30 +3%
Basic	3	Basic	Running belt items → chest	Splitter, side, both lanes, blocked exit	2.50 2.50 2.50	2.50 2.50 2.50	2.50 2.50 2.50	2.50 2.50 2.50
Basic	3	Basic	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	2.04 -4% 2.13 2.25 +6%	2.04 -4% 2.13 2.25 +6%	2.04 -4% 2.13 2.25 +6%	2.04 -4% 2.13 2.25 +6%
Basic	3	Basic	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	2.16 -3% 2.23 2.29 +3%	2.16 -3% 2.23 2.29 +3%	2.16 -3% 2.23 2.29 +3%	2.16 -3% 2.23 2.29 +3%
Basic	3	Basic	Queued belt items → chest	Straight, side, near lane	2.40 2.40 2.40	2.40 2.40 2.40	2.40 2.40 2.40	2.40 2.40 2.40
Basic	3	Basic	Queued belt items → chest	Straight, side, far lane	2.43 2.43 2.43	2.43 2.43 2.43	2.43 2.43 2.43	2.43 2.43 2.43
Basic	3	Basic	Queued belt items → chest	Straight, side, both lanes	2.40 2.40 2.40	2.40 2.40 2.40	2.40 2.40 2.40	2.40 2.40 2.40
Basic	3	Basic	Queued belt items → chest	Straight, side, sideloaded onto empty belt	2.30 -3% 2.36 2.43 +3%	2.30 -3% 2.36 2.43 +3%	2.30 -3% 2.36 2.43 +3%	2.30 -3% 2.36 2.43 +3%
Basic	3	Basic	Queued belt items → chest	Straight, towards, one lane	2.16 2.17 2.19 +1%	2.16 2.17 2.19 +1%	2.16 2.17 2.19 +1%	2.16 2.17 2.19 +1%
Basic	3	Basic	Queued belt items → chest	Straight, towards, both lanes	2.16 2.17 2.19 +1%	2.16 2.17 2.19 +1%	2.16 2.17 2.19 +1%	2.16 2.17 2.19 +1%
Basic	3	Basic	Queued belt items → chest	Turn, outer lane	2.16 -8% 2.35 2.53 +8%	2.16 -8% 2.35 2.53 +8%	2.16 -8% 2.35 2.53 +8%	2.16 -8% 2.35 2.53 +8%
Basic	3	Basic	Queued belt items → chest	Turn, inner lane	2.25 -3% 2.32 2.36 +2%	2.25 -3% 2.32 2.36 +2%	2.25 -3% 2.32 2.36 +2%	2.25 -3% 2.32 2.36 +2%
Basic	3	Basic	Queued belt items → chest	Turn, both lanes	2.16 -7% 2.33 2.53 +9%	2.16 -7% 2.33 2.53 +9%	2.16 -7% 2.33 2.53 +9%	2.16 -7% 2.33 2.53 +9%
Basic	3	Basic	Queued belt items → chest	Underground, side, one lane	2.36 -2% 2.40 2.43 +1%	2.36 -2% 2.40 2.43 +1%	2.36 -2% 2.40 2.43 +1%	2.36 -2% 2.40 2.43 +1%
Basic	3	Basic	Queued belt items → chest	Underground, side, both lanes	2.40 2.40 2.40	2.40 2.40 2.40	2.40 2.40 2.40	2.40 2.40 2.40
Basic	3	Basic	Queued belt items → chest	Underground, front, one lane	2.16 -3% 2.23 2.30 +3%	2.16 -3% 2.23 2.30 +3%	2.16 -3% 2.23 2.30 +3%	2.16 -3% 2.23 2.30 +3%
Basic	3	Basic	Queued belt items → chest	Underground, behind, one lane	2.16 2.16 2.16	2.16 2.16 2.16	2.16 2.16 2.16	2.16 2.16 2.16
Basic	3	Basic	Queued belt items → chest	Underground, front/behind, both lanes	2.16 -2% 2.21 2.30 +4%	2.16 -2% 2.21 2.30 +4%	2.16 -2% 2.21 2.30 +4%	2.16 -2% 2.21 2.30 +4%
Basic	3	Basic	Queued belt items → chest	Underground, sideloaded onto empty belt	2.09 -8% 2.27 2.43 +7%	2.09 -8% 2.27 2.43 +7%	2.09 -8% 2.27 2.43 +7%	2.09 -8% 2.27 2.43 +7%
Basic	3	Basic	Queued belt items → chest	Splitter, side, one lane, blocked exit	2.46 -1% 2.48 2.50 +1%	2.46 -1% 2.48 2.50 +1%	2.46 -1% 2.48 2.50 +1%	2.46 -1% 2.48 2.50 +1%
Basic	3	Basic	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	2.16 -3% 2.23 2.30 +3%	2.16 -3% 2.23 2.30 +3%	2.16 -3% 2.23 2.30 +3%	2.16 -3% 2.23 2.30 +3%
Basic	3	Basic	Queued belt items → chest	Splitter, side, both lanes, blocked exit	2.50 2.50 2.50	2.50 2.50 2.50	2.50 2.50 2.50	2.50 2.50 2.50
Basic	3	Basic	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	2.16 -3% 2.23 2.30 +3%	2.16 -3% 2.23 2.30 +3%	2.16 -3% 2.23 2.30 +3%	2.16 -3% 2.23 2.30 +3%
Burner	3	Express	Chest → chest	Non-splitter	1.78 -1% 1.79 1.80 +1%	1.78 -1% 1.79 1.80 +1%	1.78 -1% 1.79 1.80 +1%	1.78 -1% 1.79 1.80 +1%
Burner	3	Express	Chest → belt	Non-splitter	1.74 -1% 1.75 1.76 +1%	1.74 -1% 1.75 1.76 +1%	1.74 -1% 1.75 1.76 +1%	1.74 -1% 1.75 1.76 +1%
Burner	3	Express	Chest → belt	Splitter	1.74 -1% 1.75 1.76 +1%	1.74 -1% 1.75 1.76 +1%	1.74 -1% 1.75 1.76 +1%	1.74 -1% 1.75 1.76 +1%
Burner	3	Express	Running belt items → chest	Straight, side, near lane	1.36 1.36 1.36	1.36 1.36 1.36	1.36 1.36 1.36	1.36 1.36 1.36
Burner	3	Express	Running belt items → chest	Straight, side, far lane	1.50 1.50 1.50	1.50 1.50 1.50	1.50 1.50 1.50	1.50 1.50 1.50
Burner	3	Express	Running belt items → chest	Straight, side, both lanes	1.25 1.25 1.25	1.25 1.25 1.25	1.25 1.25 1.25	1.25 1.25 1.25
Burner	3	Express	Running belt items → chest	Straight, side, sideloaded onto empty belt	1.40 -7% 1.50 1.60 +7%	1.40 -7% 1.50 1.60 +7%	1.40 -7% 1.50 1.60 +7%	1.40 -7% 1.50 1.60 +7%
Burner	3	Express	Running belt items → chest	Turn, outer lane	0.83 -8% 0.90 0.97 +8%	0.83 -8% 0.90 0.97 +8%	0.83 -8% 0.90 0.97 +8%	0.83 -8% 0.90 0.97 +8%
Burner	3	Express	Running belt items → chest	Turn, inner lane	1.32 -6% 1.40 1.50 +7%	1.32 -6% 1.40 1.50 +7%	1.32 -6% 1.40 1.50 +7%	1.32 -6% 1.40 1.50 +7%
Burner	3	Express	Running belt items → chest	Turn, both lanes	0.83 [39 -27%] 1.13 1.46 +29%	0.83 [39 -27%] 1.13 1.46 +29%	0.83 [39 -27%] 1.13 1.46 +29%	0.83 [39 -27%] 1.13 1.46 +29%
Burner	3	Express	Running belt items → chest	Underground, side, one lane	1.32 -11% 1.48 1.60 +8%	1.32 -11% 1.48 1.60 +8%	1.32 -11% 1.48 1.60 +8%	1.32 -11% 1.48 1.60 +8%
Burner	3	Express	Running belt items → chest	Underground, side, both lanes	1.36 -8% 1.48 1.60 +8%	1.36 -8% 1.48 1.60 +8%	1.36 -8% 1.48 1.60 +8%	1.36 -8% 1.48 1.60 +8%
Burner	3	Express	Running belt items → chest	Underground, front, one lane	1.07 1.07 1.07	1.07 1.07 1.07	1.07 1.07 1.07	1.07 1.07 1.07
Burner	3	Express	Running belt items → chest	Underground, behind, one lane	1.07 1.07 1.07	1.07 1.07 1.07	1.07 1.07 1.07	1.07 1.07 1.07
Burner	3	Express	Running belt items → chest	Underground, front/behind, both lanes	1.07 1.07 1.07	1.07 1.07 1.07	1.07 1.07 1.07	1.07 1.07 1.07
Burner	3	Express	Running belt items → chest	Underground, sideloaded onto empty belt	1.25 -2% 1.28 1.40 +9%	1.25 -2% 1.28 1.40 +9%	1.25 -2% 1.28 1.40 +9%	1.25 -2% 1.28 1.40 +9%
Burner	3	Express	Running belt items → chest	Splitter, side, one lane, blocked exit	1.81 -2% 1.84 1.87 +2%	1.81 -2% 1.84 1.87 +2%	1.81 -2% 1.84 1.87 +2%	1.81 -2% 1.84 1.87 +2%
Burner	3	Express	Running belt items → chest	Splitter, side, one lane, nonblocked exit	1.40 1.40 1.40	1.40 1.40 1.40	1.40 1.40 1.40	1.40 1.40 1.40
Burner	3	Express						

Inserter	Type	Stack size	Belt Type	Setup	Belt tile type	Items/second, all directions, all belt phases [7]			Dito, north-south direction, all belt phases [8]			Dito, west-east direction, all belt phases [9]			Dito, north-south direction, single belt phase [10]					
						Min [11] [12]	Mean [13]	Max [14] [15]	Min [16] [17]	Mean [18]	Max [19] [20]	Min [21] [22]	Mean [23]	Max [24] [25]	Min [26] [27]	Mean [28]	Max [29] [30]			
Burner	3	Fast	Running belt items → chest	Straight, side, far lane		1.57	-1%	1.59	1.60	+1%	1.57	-1%	1.59	1.60	+1%	1.57	1.57			
Burner	3	Fast	Running belt items → chest	Straight, side, both lanes		1.45		1.45	1.45		1.45		1.45	1.45		1.45	1.45			
Burner	3	Fast	Running belt items → chest	Straight, side, sideloaded onto empty belt		1.50	-2%	1.53	1.55	+1%	1.50	-2%	1.53	1.55	+1%	1.50	-1%	1.52	1.55	+2%
Burner	3	Fast	Running belt items → chest	Turn, outer lane		1.28	-10%	1.42	1.60	+13%	1.28	-10%	1.42	1.60	+13%	1.28	-10%	1.42	1.60	+13%
Burner	3	Fast	Running belt items → chest	Turn, inner lane		1.50	-4%	1.56	1.60	+3%	1.50	-4%	1.56	1.60	+3%	1.50	-4%	1.56	1.60	+3%
Burner	3	Fast	Running belt items → chest	Turn, both lanes		1.25	-12%	1.42	1.60	+13%	1.25	-12%	1.42	1.60	+13%	1.25	-12%	1.42	1.60	+13%
Burner	3	Fast	Running belt items → chest	Underground, side, one lane		1.50	-7%	1.62	1.73	+7%	1.50	-7%	1.62	1.73	+7%	1.50	-7%	1.62	1.73	+7%
Burner	3	Fast	Running belt items → chest	Underground, side, both lanes		1.36	-7%	1.46	1.66	+14%	1.36	-7%	1.46	1.66	+14%	1.45		1.45	1.45	
Burner	3	Fast	Running belt items → chest	Underground, front, one lane		1.55	-1%	1.57	1.60	+2%	1.55	-1%	1.57	1.60	+2%	1.55	-1%	1.57	1.60	+2%
Burner	3	Fast	Running belt items → chest	Underground, behind, one lane		1.60		1.60	1.60		1.60		1.60	1.60		1.60		1.60	1.60	
Burner	3	Fast	Running belt items → chest	Underground, front/behind, both lanes		1.40		1.40	1.40		1.40		1.40	1.40		1.40		1.40	1.40	
Burner	3	Fast	Running belt items → chest	Underground, sideloaded onto empty belt		1.40	-6%	1.49	1.55	+4%	1.40	-6%	1.49	1.55	+4%	1.45	-4%	1.51	1.55	+3%
Burner	3	Fast	Running belt items → chest	Splitter, side, one lane, blocked exit		1.80	-1%	1.82	1.85	+2%	1.80	-1%	1.82	1.85	+2%	1.80	-1%	1.82	1.85	+2%
Burner	3	Fast	Running belt items → chest	Splitter, side, one lane, nonblocked exit		1.60	-1%	1.62	1.66	+2%	1.60	-1%	1.62	1.66	+2%	1.60	-1%	1.62	1.66	+2%
Burner	3	Fast	Running belt items → chest	Splitter, front/behind, one lane, blocked exit		1.62	-2%	1.66	1.71	+3%	1.62	-2%	1.66	1.71	+3%	1.62	-2%	1.66	1.71	+3%
Burner	3	Fast	Running belt items → chest	Splitter, side, both lanes, blocked exit		1.85		1.85	1.85		1.85		1.85	1.85		1.85		1.85	1.85	
Burner	3	Fast	Running belt items → chest	Splitter, side, both lanes, nonblocked exit		1.40	-9%	1.54	1.66	+8%	1.40	-9%	1.54	1.66	+8%	1.60		1.60	1.60	
Burner	3	Fast	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit		1.62	-2%	1.66	1.71	+3%	1.62	-2%	1.66	1.71	+3%	1.62	-2%	1.66	1.71	+3%
Burner	3	Fast	Queued belt items → chest	Straight, side, near lane		1.73	-1%	1.74	1.74		1.73	-1%	1.74	1.74						
Burner	3	Fast	Queued belt items → chest	Straight, side, far lane		1.74		1.74	1.74		1.74		1.74	1.74						
Burner	3	Fast	Queued belt items → chest	Straight, side, both lanes		1.73	-1%	1.74	1.74		1.73	-1%	1.74	1.74						
Burner	3	Fast	Queued belt items → chest	Straight, side, sideloaded onto empty belt		1.65	-3%	1.70	1.74	+2%	1.65	-3%	1.70	1.74	+2%					
Burner	3	Fast	Queued belt items → chest	Straight, towards, one lane		1.63		1.63	1.63		1.63		1.63	1.63						
Burner	3	Fast	Queued belt items → chest	Straight, towards, both lanes		1.63		1.63	1.63		1.63		1.63	1.63						
Burner	3	Fast	Queued belt items → chest	Turn, outer lane		1.60	-6%	1.70	1.80	+6%	1.60	-6%	1.70	1.80	+6%					
Burner	3	Fast	Queued belt items → chest	Turn, inner lane		1.68	-3%	1.74	1.80	+3%	1.68	-3%	1.74	1.80	+3%					
Burner	3	Fast	Queued belt items → chest	Turn, both lanes		1.60	-7%	1.72	1.80	+5%	1.60	-7%	1.72	1.80	+5%					
Burner	3	Fast	Queued belt items → chest	Underground, side, one lane		1.73	-3%	1.78	1.85	+4%	1.73	-3%	1.78	1.85	+4%					
Burner	3	Fast	Queued belt items → chest	Underground, side, both lanes		1.73	-3%	1.79	1.85	+3%	1.73	-3%	1.79	1.85	+3%					
Burner	3	Fast	Queued belt items → chest	Underground, front, one lane		1.62	-2%	1.66	1.71	+3%	1.62	-2%	1.66	1.71	+3%					
Burner	3	Fast	Queued belt items → chest	Underground, behind, one lane		1.62		1.62	1.62		1.62		1.62	1.62						
Burner	3	Fast	Queued belt items → chest	Underground, front/behind, both lanes		1.62	-2%	1.65	1.71	+4%	1.62	-2%	1.65	1.71	+4%					
Burner	3	Fast	Queued belt items → chest	Underground, sideloaded onto empty belt		1.52	-8%	1.65	1.74	+5%	1.52	-8%	1.65	1.74	+5%					
Burner	3	Fast	Queued belt items → chest	Splitter, side, one lane, blocked exit		1.80	-1%	1.82	1.85	+2%	1.80	-1%	1.82	1.85	+2%					
Burner	3	Fast	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit		1.62	-2%	1.66	1.71	+3%	1.62	-2%	1.66	1.71	+3%					
Burner	3	Fast	Queued belt items → chest	Splitter, side, both lanes, blocked exit		1.85		1.85	1.85		1.85		1.85	1.85						
Burner	3	Fast	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit		1.62	-2%	1.66	1.71	+3%	1.62	-2%	1.66	1.71	+3%					
Burner	3	Basic	Chest → belt	Non-splitter		1.65		1.65	1.66	+1%	1.66		1.66	1.66		1.65		1.65	1.65	
Burner	3	Basic	Chest → belt	Splitter		1.68	-3%	1.73	1.76	+2%	1.68	-3%	1.73	1.76	+2%	1.65	-2%	1.72	1.74	+1%
Burner	3	Basic	Running belt items → chest	Straight, side, near lane		1.38	-7%	1.48	1.50	+1%	1.50		1.50	1.50		1.50		1.50	1.50	
Burner	3	Basic	Running belt items → chest	Straight, side, far lane		1.50	-2%	1.53	1.60	+5%	1.50	-2%	1.53	1.60	+5%	1.60		1.60	1.60	
Burner	3	Basic	Running belt items → chest	Straight, side, both lanes		1.37	-1%	1.39	1.50	+8%	1.37	-1%	1.39	1.50	+8%	1.50		1.50	1.50	
Burner	3	Basic	Running belt items → chest	Straight, side, sideloaded onto empty belt		1.50	-3%	1.55	1.60	+3%	1.50	-3%	1.55	1.60	+3%	1.55	-3%	1.55	1.60	+3%
Burner	3	Basic	Running belt items → chest	Turn, outer lane		1.32	-4%	1.37	1.43	+4%	1.32	-4%	1.37	1.43	+4%	1.32	-4%	1.37	1.43	+4%
Burner	3	Basic	Running belt items → chest	Turn, inner lane		1.60		1.60	1.60		1.60		1.60	1.60		1.60		1.60	1.60	
Burner	3	Basic	Running belt items → chest	Turn, both lanes		1.28	-9%	1.40	1.50	+7%	1.28	-9%	1.40	1.50	+7%	1.32	-6%	1.40	1.50	+7%
Burner	3	Basic	Running belt items → chest	Underground, side, one lane		1.60		1.60	1.60		1.60		1.60	1.60		1.60		1.60	1.60	
Burner	3	Basic	Running belt items → chest	Underground, side, both lanes		1.32	-10%	1.47	1.73	+18%	1.32	-10%	1.47	1.73	+18%	1.32	-6%	1.40	1.50	+7%
Burner	3	Basic	Running belt items → chest	Underground, front, one lane		1.60		1.60	1.60		1.60		1.60	1.60		1.60		1.60	1.60	
Burner	3	Basic	Running belt items → chest	Underground, behind, one lane		1.25		1.25	1.25		1.25		1.25	1.25		1.25		1.25	1.25	
Burner	3	Basic	Running belt items → chest	Underground, front/behind, both lanes		1.25	-3%	1.29	1.40	+9%	1.25	-3%	1.29	1.40	+9%	1.25		1.25	1.25	
Burner	3	Basic	Running belt items → chest	Underground, sideloaded onto empty belt		1.45	-2%	1.48	1.50	+1%	1.45	-2%	1.48	1.50	+1%	1.45	-2%	1.48	1.50	+1%
Burner	3	Basic	Running belt items → chest	Splitter, side, one lane, blocked exit		1.73	-2%	1.76	1.80	+2%	1.73	-2%	1.76	1.80	+2%	1.73	-2%	1.76	1.80	+2%
Burner	3	Basic	Running belt items → chest	Splitter, front/behind, one lane, blocked exit		1.50	-7%	1.62	1.73	+7%	1.50	-7%	1.62	1.73	+7%	1.50	-6%	1.60	1.73	+8%
Burner	3	Basic	Running belt items → chest	Splitter, side, both lanes, blocked exit		1.59	-2%	1.63	1.68	+3%	1.59	-2%	1.63	1.68	+3%	1.59	-2%	1.63	1.68	+3%
Burner	3	Basic	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit		1.71	-1%	1.73	1.74	+1%	1.71	-1%	1.73	1.74	+1%	1.71	-1%	1.73	1.74	+1%
Burner	3	Basic	Running belt items → chest	Splitter, side, both lanes, nonblocked exit		1.60	-5%	1.68	1.73	+3%	1.60	-5%	1.68	1.73	+3%	1.73		1.73	1.73	
Burner	3	Basic	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit		1.59	-2%	1.63	1.68	+3%	1.59	-2%	1.63	1.68	+3%	1.59	-2%	1.63	1.68	+3%
Burner	3	Basic	Queued belt items → chest	Straight, side, near lane		1.74		1.74	1.74		1.74		1.74	1.74						
Burner	3	Basic	Queued belt items → chest	Straight, side, far lane		1.74		1.74	1.74		1.74		1.74	1.74						
Burner	3	Basic	Queued belt items → chest	Straight, side, both lanes		1.74		1.74	1.74		1.74		1.74	1.74						
Burner	3	Basic	Queued belt items → chest	Straight, side, sideloaded onto empty belt		1.66	-3%	1.71	1.74	+2%	1.66	-3%	1.71	1.74	+2%					
Burner	3	Basic	Queued belt items → chest	Straight, towards, one lane		1.60		1.60	1.60		1.60		1.60	1.60						
Burner	3	Basic	Queued belt items → chest	Straight, towards, both lanes		1.60		1.60	1.60		1.60		1.60	1.60						
Burner	3	Basic	Queued belt items → chest	Turn, outer lane		1.57	-7%	1.69	1.83	+8%	1.57	-7%	1.69	1.83	+8%					
Burner	3	Basic	Queued belt items → chest	Turn, inner lane		1.65	-3%	1.70	1.76	+4%	1.65	-3%	1.70	1.76	+4%					
Burner	3	Basic	Queued belt items → chest	Turn, both lanes		1.57	-8%	1.70	1.83	+8%	1.57	-8%	1.70	1.83	+8%					

Insertor	Stack size	Belt Type	Setup Move type	Belt tile type	Items/second, all directions, all belt phases [7]	Dito, north--south direction, all belt phases [8]	Dito, west--east direction, all belt phases [9]	Dito, north--south direction, single belt phase [
Type		Type			Min [11] [12] Mean [13] Max [14] [15]	Min [16] [17] Mean [18] Max [19] [20]	Min [21] [22] Mean [23] Max [24] [25]	Min [26] [27] Mean [28] Max [29] [30]
Fast	2	Express	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	4.13 -2% 4.21	4.28 +2%		
Fast	2	Express	Running belt items → chest	Splitter, side, both lanes, blocked exit	4.61	4.61	4.61	
Fast	2	Express	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	3.52 -5% 3.69	3.75 +2%		
Fast	2	Express	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	4.13 -2% 4.21	4.28 +2%		
Fast	2	Express	Queued belt items → chest	Straight, side, near lane	4.28	4.28	4.28	
Fast	2	Express	Queued belt items → chest	Straight, side, far lane	4.44	4.44	4.44	
Fast	2	Express	Queued belt items → chest	Straight, side, both lanes	4.28	4.28	4.28	
Fast	2	Express	Queued belt items → chest	Straight, side, sideloaded onto empty belt	4.44 -2% 4.52	4.61 +2%		
Fast	2	Express	Queued belt items → chest	Straight, towards, one lane	4.13	4.13	4.13	
Fast	2	Express	Queued belt items → chest	Straight, towards, both lanes	4.13	4.13	4.13	
Fast	2	Express	Queued belt items → chest	Turn, outer lane	4.00 -7% 4.28	4.61 +8%		
Fast	2	Express	Queued belt items → chest	Turn, inner lane	4.28 -5% 4.50	4.80 +7%		
Fast	2	Express	Queued belt items → chest	Turn, both lanes	4.00 -9% 4.39	4.80 +9%		
Fast	2	Express	Queued belt items → chest	Underground, side, one lane	4.28 -4% 4.48	4.61 +3%		
Fast	2	Express	Queued belt items → chest	Underground, side, both lanes	4.28 -4% 4.44	4.61 +4%		
Fast	2	Express	Queued belt items → chest	Underground, front, one lane	4.13 -2% 4.21	4.28 +2%		
Fast	2	Express	Queued belt items → chest	Underground, behind, one lane	4.13	4.13	4.13	
Fast	2	Express	Queued belt items → chest	Underground, front/behind, both lanes	4.13 -1% 4.18	4.28 +2%		
Fast	2	Express	Queued belt items → chest	Underground, sideloaded onto empty belt	4.13 -5% 4.36	4.61 +6%		
Fast	2	Express	Queued belt items → chest	Splitter, side, one lane, blocked exit	4.61	4.61	4.61	
Fast	2	Express	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	4.13 -2% 4.21	4.28 +2%		
Fast	2	Express	Queued belt items → chest	Splitter, side, both lanes, blocked exit	4.61	4.61	4.61	
Fast	2	Express	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	4.13 -2% 4.21	4.28 +2%		
Fast	2	Fast	Chest → belt	Non-splitter	4.44	4.44	4.44	
Fast	2	Fast	Chest → belt	Splitter	4.44	4.44	4.44	
Fast	2	Fast	Running belt items → chest	Straight, side, near lane	3.75	3.75	3.75	
Fast	2	Fast	Running belt items → chest	Straight, side, far lane	3.75 -3% 3.87	4.00 +3%		
Fast	2	Fast	Running belt items → chest	Straight, side, both lanes	3.75	3.75	3.75	
Fast	2	Fast	Running belt items → chest	Straight, side, sideloaded onto empty belt	3.75 -6% 4.00	4.28 +7%		
Fast	2	Fast	Running belt items → chest	Turn, outer lane	3.33 -5% 3.52	3.75 +7%		
Fast	2	Fast	Running belt items → chest	Turn, inner lane	3.75 -5% 3.93	4.28 +9%		
Fast	2	Fast	Running belt items → chest	Turn, both lanes	3.33 -11% 3.73	4.28 +15%		
Fast	2	Fast	Running belt items → chest	Underground, side, one lane	3.75 -11% 4.23	4.61 +9%		
Fast	2	Fast	Running belt items → chest	Underground, side, both lanes	3.75 -12% 4.27	4.61 +8%		
Fast	2	Fast	Running belt items → chest	Underground, front, one lane	3.75 -6% 4.00	4.28 +7%		
Fast	2	Fast	Running belt items → chest	Underground, behind, one lane	3.75 -3% 3.87	4.28 +11%		
Fast	2	Fast	Running belt items → chest	Underground, front/behind, both lanes	3.75 -5% 3.93	4.28 +9%		
Fast	2	Fast	Running belt items → chest	Underground, sideloaded onto empty belt	3.33 -7% 3.58	3.75 +5%		
Fast	2	Fast	Running belt items → chest	Splitter, side, one lane, blocked exit	4.61	4.61	4.61	
Fast	2	Fast	Running belt items → chest	Splitter, side, one lane, nonblocked exit	3.75 -9% 4.13	4.28 +4%		
Fast	2	Fast	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	4.13 -2% 4.21	4.28 +2%		
Fast	2	Fast	Running belt items → chest	Splitter, side, both lanes, blocked exit	4.61	4.61	4.61	
Fast	2	Fast	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	3.33 -14% 3.87	4.28 +11%		
Fast	2	Fast	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	4.13 -2% 4.21	4.28 +2%		
Fast	2	Fast	Queued belt items → chest	Straight, side, near lane	4.28	4.28	4.28	
Fast	2	Fast	Queued belt items → chest	Straight, side, far lane	4.44	4.44	4.44	
Fast	2	Fast	Queued belt items → chest	Straight, side, both lanes	4.28	4.28	4.28	
Fast	2	Fast	Queued belt items → chest	Straight, side, sideloaded onto empty belt	4.44	4.44	4.44	
Fast	2	Fast	Queued belt items → chest	Straight, towards, one lane	4.13	4.13	4.13	
Fast	2	Fast	Queued belt items → chest	Straight, towards, both lanes	4.13	4.13	4.13	
Fast	2	Fast	Queued belt items → chest	Turn, outer lane	4.00 -7% 4.28	4.61 +8%		
Fast	2	Fast	Queued belt items → chest	Turn, inner lane	4.28 -5% 4.50	4.80 +7%		
Fast	2	Fast	Queued belt items → chest	Turn, both lanes	4.00 -9% 4.39	4.80 +9%		
Fast	2	Fast	Queued belt items → chest	Underground, side, one lane	4.28 -4% 4.48	4.61 +3%		
Fast	2	Fast	Queued belt items → chest	Underground, side, both lanes	4.28 -4% 4.44	4.61 +4%		
Fast	2	Fast	Queued belt items → chest	Underground, front, one lane	4.13 -2% 4.21	4.28 +2%		
Fast	2	Fast	Queued belt items → chest	Underground, behind, one lane	4.13	4.13	4.13	
Fast	2	Fast	Queued belt items → chest	Underground, front/behind, both lanes	4.13 -1% 4.18	4.28 +2%		
Fast	2	Fast	Queued belt items → chest	Underground, sideloaded onto empty belt	4.21 -3% 4.36	4.61 +6%		
Fast	2	Fast	Queued belt items → chest	Splitter, side, one lane, blocked exit	4.61	4.61	4.61	
Fast	2	Fast	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	4.13 -2% 4.21	4.28 +2%		
Fast	2	Fast	Queued belt items → chest	Splitter, side, both lanes, blocked exit	4.61	4.61	4.61	
Fast	2	Fast	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	4.13 -2% 4.21	4.28 +2%		
Fast	2	Basic	Chest → belt	Non-splitter	4.44	4.44	4.44	
Fast	2	Basic	Chest → belt	Splitter	4.44	4.44	4.44	
Fast	2	Basic	Running belt items → chest	Straight, side, near lane	4.27	4.28	4.28	
Fast	2	Basic	Running belt items → chest	Straight, side, far lane	4.28	4.28	4.29	
Fast	2	Basic	Running belt items → chest	Straight, side, both lanes	4.28	4.28	4.28	
Fast	2	Basic	Running belt items → chest	Straight, side, sideloaded onto empty belt	3.75 -4% 3.91	4.09 +5%		
Fast	2	Basic	Running belt items → chest	Turn, outer lane	3.91 -4% 4.09	4.28 +5%		
Fast	2	Basic	Running belt items → chest	Turn, inner lane	4.28	4.28	4.28	
Fast	2	Basic	Running belt items → chest	Turn, both lanes	3.91 -6% 4.18	4.28 +2%		
Fast	2	Basic	Running belt items → chest	Underground, side, one lane	4.28 -3% 4.39	4.50 +3%		
Fast	2	Basic	Running belt items → chest	Underground, side, both lanes	4.28 -3% 4.39	4.50 +3%		
Fast	2	Basic	Running belt items → chest	Underground, front, one lane	3.75	3.75	3.75	
Fast	2	Basic	Running belt items → chest	Underground, behind, one lane	3.75	3.75	3.75	
Fast	2	Basic	Running belt items → chest	Underground, front/behind, both lanes	3.75	3.75	3.75	
Fast	2	Basic	Running belt items → chest	Underground, sideloaded onto empty belt	3.00 -15% 3.52	3.75 +7%		
Fast	2	Basic	Running belt items → chest	Splitter, side, one lane, blocked exit	3.75	3.75	3.75	
Fast	2	Basic	Running belt items → chest	Splitter, side, one lane, nonblocked exit	3.75	3.75	3.75	
Fast	2	Basic	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	3.75	3.75	3.75	
Fast	2	Basic	Running belt items → chest	Splitter, side, both lanes, blocked exit	4.50	4.50	4.51	
Fast	2	Basic	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	3.00 -17% 3.63	3.75 +3%		
Fast	2	Basic	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	4.23 -2% 4.30	4.37 +2%		
Fast	2	Basic	Queued belt items → chest	Straight, side, near lane	4.28	4.28	4.28	
Fast	2	Basic	Queued belt items → chest	Straight, side, far lane	4.44	4.44	4.44	
Fast	2	Basic	Queued belt items → chest	Straight, side, both lanes	4.28	4.28	4.28	
Fast	2	Basic	Queued belt items → chest	Straight, side, sideloaded onto empty belt	4.44	4.44	4.44	
Fast	2	Basic	Queued belt items → chest	Straight, towards, one lane	4.13	4.13	4.13	
Fast	2	Basic	Queued belt items → chest	Straight, towards, both lanes	4.13	4.13	4.13	
Fast	2	Basic	Queued belt items → chest	Turn, outer lane	4.00 -7% 4.28	4.61 +8%		
Fast	2	Basic	Queued belt items → chest	Turn, inner lane	4.28 -5% 4.50	4.80 +7%		
Fast	2	Basic	Queued belt items → chest	Turn, both lanes	4.00 -9% 4.39	4.80 +9%		
Fast	2	Basic	Queued belt items → chest	Underground, side, one lane	4.28 -4% 4.48	4.61 +3%		
Fast	2	Basic	Queued belt items → chest	Underground, side, both lanes	4.28 -4% 4.44	4.61 +4%		
Fast	2	Basic	Queued belt items → chest	Underground, front, one lane	4.13 -2% 4.21	4.28 +2%		
Fast	2	Basic	Queued belt items → chest	Underground, behind, one lane	4.13	4.13	4.13	
Fast	2	Basic	Queued belt items → chest	Underground, front/behind, both lanes	4.13 -1% 4.18	4.28 +2%		
Fast	2	Basic	Queued belt items → chest	Underground, sideloaded onto empty belt	4.13 -4% 4.32	4.61 +7%		
Fast	2	Basic	Queued belt items → chest	Splitter, side, one lane, blocked exit	4.61	4.61	4.61	
Fast	2	Basic	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	4.13 -2% 4.21	4.28 +2%		
Fast	2	Basic	Queued belt items → chest	Splitter, side, both lanes, blocked exit	4.61	4.61	4.61	
Fast	2	Basic	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	4.13 -2% 4.21	4.28 +2%		
Long-handed	2		Chest → chest		2.35 -1% 2.37	2.40 +1%		
Long-handed	2	Express	Chest → belt	Non-splitter	2.30 -1% 2.33	2.35 +1%		
Long-handed	2	Express	Chest → belt	Splitter	2.30 -1% 2.33	2.35 +1%		
Long-handed	2	Express	Running belt items → chest	Straight, side, near lane	2.14	2.14	2.14	
Long-handed	2	Express	Running belt items → chest	Straight, side, far lane	2.14	2.14	2.14	

Inserter	Stack size	Belt Type	Setup Move type	Belt tile type	Items/second, all directions, all belt phases [7]	Dito, north-south direction, all belt phases [8]			Dito, west-east direction, all belt phases [9]			Dito, north-south direction, single belt phase [10]		
Type					Min [11] [12] Mean [13] Max [14] [15]	Min [16] [17] Mean [18] Max [19] [20]	Min [21] [22] Mean [23] Max [24] [25]	Min [26] [27] Mean [28] Max [29] [30]						
Long-handed	2	Express	Running belt items → chest	Straight, side, both lanes	2.14	2.14	2.14							
Long-handed	2	Express	Running belt items → chest	Straight, side, sideloaded onto empty belt	1.87	-7%	2.00	2.14	+7%					
Long-handed	2	Express	Running belt items → chest	Straight, towards, one lane	2.14		2.14	2.14						
Long-handed	2	Express	Running belt items → chest	Straight, towards, both lanes	2.14		2.14	2.14						
Long-handed	2	Express	Running belt items → chest	Turn, outer lane	1.50	-13%	1.73	2.00	+16%					
Long-handed	2	Express	Running belt items → chest	Turn, inner lane	1.76	-6%	1.88	2.04	+9%					
Long-handed	2	Express	Running belt items → chest	Turn, both lanes	1.76	-5%	1.86	2.04	+10%					
Long-handed	2	Express	Running belt items → chest	Underground, side, one lane	2.14		2.14	2.14						
Long-handed	2	Express	Running belt items → chest	Underground, side, both lanes	2.14		2.14	2.14						
Long-handed	2	Express	Running belt items → chest	Underground, front, one lane	1.87	-7%	2.00	2.14	+7%					
Long-handed	2	Express	Running belt items → chest	Underground, behind, one lane	1.87	-7%	2.00	2.14	+7%					
Long-handed	2	Express	Running belt items → chest	Underground, front/behind, both lanes	1.87	-7%	2.00	2.14	+7%					
Long-handed	2	Express	Running belt items → chest	Underground, sideloaded onto empty belt	1.66	-5%	1.75	1.87	+7%					
Long-handed	2	Express	Running belt items → chest	Splitter, side, one lane, blocked exit	2.35	-1%	2.37	2.40	+1%					
Long-handed	2	Express	Running belt items → chest	Splitter, side, one lane, nonblocked exit	1.87		1.87	1.87						
Long-handed	2	Express	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	2.10	-2%	2.14	2.18	+2%					
Long-handed	2	Express	Running belt items → chest	Splitter, side, both lanes, blocked exit	2.40		2.40	2.40						
Long-handed	2	Express	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	1.87		1.87	1.87						
Long-handed	2	Express	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	2.10	-2%	2.14	2.18	+2%					
Long-handed	2	Express	Queued belt items → chest	Straight, side, near lane	2.26	-1%	2.29	2.30						
Long-handed	2	Express	Queued belt items → chest	Straight, side, far lane	2.26	-1%	2.29	2.30						
Long-handed	2	Express	Queued belt items → chest	Straight, side, both lanes	2.30		2.30	2.30						
Long-handed	2	Express	Queued belt items → chest	Straight, side, sideloaded onto empty belt	2.26	-2%	2.30	2.30						
Long-handed	2	Express	Queued belt items → chest	Straight, towards, one lane	2.10		2.10	2.10						
Long-handed	2	Express	Queued belt items → chest	Straight, towards, both lanes	2.10		2.10	2.10						
Long-handed	2	Express	Queued belt items → chest	Turn, outer lane	2.10	-5%	2.21	2.30	+4%					
Long-handed	2	Express	Queued belt items → chest	Turn, inner lane	2.18	-4%	2.26	2.35	+4%					
Long-handed	2	Express	Queued belt items → chest	Turn, both lanes	2.10	-6%	2.23	2.35	+5%					
Long-handed	2	Express	Queued belt items → chest	Underground, side, one lane	2.30	-2%	2.35	2.40	+2%					
Long-handed	2	Express	Queued belt items → chest	Underground, side, both lanes	2.30	-2%	2.35	2.40	+2%					
Long-handed	2	Express	Queued belt items → chest	Underground, front, one lane	2.10	-2%	2.14	2.18	+2%					
Long-handed	2	Express	Queued belt items → chest	Underground, behind, one lane	2.10	-1%	2.12	2.14	+1%					
Long-handed	2	Express	Queued belt items → chest	Underground, front/behind, both lanes	2.10	-2%	2.14	2.18	+2%					
Long-handed	2	Express	Queued belt items → chest	Underground, sideloaded onto empty belt	2.18	-4%	2.28	2.35	+3%					
Long-handed	2	Express	Queued belt items → chest	Splitter, side, one lane, blocked exit	2.35	-1%	2.37	2.40	+1%					
Long-handed	2	Express	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	2.10	-2%	2.14	2.18	+2%					
Long-handed	2	Express	Queued belt items → chest	Splitter, side, both lanes, blocked exit	2.40		2.40	2.40						
Long-handed	2	Express	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	2.10	-2%	2.14	2.18	+2%					
Long-handed	2	Fast	Chest → belt	Non-splitter	2.30	-1%	2.33	2.35	+1%					
Long-handed	2	Fast	Chest → belt	Splitter	2.30	-1%	2.33	2.35	+1%					
Long-handed	2	Fast	Running belt items → chest	Straight, side, near lane	2.06	-1%	2.08	2.14	+3%					
Long-handed	2	Fast	Running belt items → chest	Straight, side, far lane	2.14		2.14	2.14						
Long-handed	2	Fast	Running belt items → chest	Straight, side, both lanes	2.06	-1%	2.08	2.14	+3%					
Long-handed	2	Fast	Running belt items → chest	Straight, side, sideloaded onto empty belt	2.00	-4%	2.08	2.19	+5%					
Long-handed	2	Fast	Running belt items → chest	Straight, towards, one lane	1.76		1.76	1.76						
Long-handed	2	Fast	Running belt items → chest	Straight, towards, both lanes	1.76		1.76	1.76						
Long-handed	2	Fast	Running belt items → chest	Turn, outer lane	1.66	-10%	1.84	2.06	+12%					
Long-handed	2	Fast	Running belt items → chest	Turn, inner lane	1.87	-8%	2.03	2.14	+5%					
Long-handed	2	Fast	Running belt items → chest	Turn, both lanes	1.66	-14%	1.92	2.14	+11%					
Long-handed	2	Fast	Running belt items → chest	Underground, side, one lane	2.00	-10%	2.21	2.22						
Long-handed	2	Fast	Running belt items → chest	Underground, side, both lanes	2.00	-10%	2.21	2.22						
Long-handed	2	Fast	Running belt items → chest	Underground, front, one lane	1.87	-7%	2.00	2.14	+7%					
Long-handed	2	Fast	Running belt items → chest	Underground, behind, one lane	1.87	-7%	2.00	2.14	+7%					
Long-handed	2	Fast	Running belt items → chest	Underground, front/behind, both lanes	1.87	-7%	2.00	2.14	+7%					
Long-handed	2	Fast	Running belt items → chest	Underground, sideloaded onto empty belt	1.76	-7%	1.89	2.00	+6%					
Long-handed	2	Fast	Running belt items → chest	Splitter, side, one lane, blocked exit	2.35	-1%	2.37	2.40	+1%					
Long-handed	2	Fast	Running belt items → chest	Splitter, side, one lane, nonblocked exit	2.00	-2%	2.05	2.14	+4%					
Long-handed	2	Fast	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	2.10	-2%	2.14	2.18	+2%					
Long-handed	2	Fast	Running belt items → chest	Splitter, side, both lanes, blocked exit	2.40		2.40	2.40						
Long-handed	2	Fast	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	1.87	-8%	2.03	2.14	+5%					
Long-handed	2	Fast	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	2.10	-2%	2.14	2.18	+2%					
Long-handed	2	Fast	Queued belt items → chest	Straight, side, near lane	2.26	-1%	2.29	2.30						
Long-handed	2	Fast	Queued belt items → chest	Straight, side, far lane	2.26	-1%	2.29	2.30						
Long-handed	2	Fast	Queued belt items → chest	Straight, side, both lanes	2.26	-1%	2.29	2.30						
Long-handed	2	Fast	Queued belt items → chest	Straight, side, sideloaded onto empty belt	2.26	-2%	2.31	2.35	+2%					
Long-handed	2	Fast	Queued belt items → chest	Straight, towards, one lane	2.10		2.10	2.10						
Long-handed	2	Fast	Queued belt items → chest	Straight, towards, both lanes	2.10		2.10	2.10						
Long-handed	2	Fast	Queued belt items → chest	Turn, outer lane	2.10	-5%	2.21	2.30	+4%					
Long-handed	2	Fast	Queued belt items → chest	Turn, inner lane	2.18	-2%	2.23	2.30	+3%					
Long-handed	2	Fast	Queued belt items → chest	Turn, both lanes	1.96	-9%	2.15	2.30	+7%					
Long-handed	2	Fast	Queued belt items → chest	Underground, side, one lane	2.26	-3%	2.33	2.40	+3%					
Long-handed	2	Fast	Queued belt items → chest	Underground, side, both lanes	2.30	-2%	2.35	2.40	+2%					
Long-handed	2	Fast	Queued belt items → chest	Underground, front, one lane	2.10	-2%	2.14	2.18	+2%					
Long-handed	2	Fast	Queued belt items → chest	Underground, behind, one lane	2.10	-2%	2.14	2.18	+2%					
Long-handed	2	Fast	Queued belt items → chest	Underground, front/behind, both lanes	2.10	-1%	2.13	2.18	+2%					
Long-handed	2	Fast	Queued belt items → chest	Underground, sideloaded onto empty belt	2.14	-5%	2.26	2.35	+4%					
Long-handed	2	Fast	Queued belt items → chest	Splitter, side, one lane, blocked exit	2.35	-1%	2.37	2.40	+1%					
Long-handed	2	Fast	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	2.10	-2%	2.14	2.18	+2%					
Long-handed	2	Fast	Queued belt items → chest	Splitter, side, both lanes, blocked exit	2.40		2.40	2.40						
Long-handed	2	Fast	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	2.10	-2%	2.14	2.18	+2%					
Long-handed	2	Basic	Chest → belt	Non-splitter	2.30	-1%	2.33	2.35	+1%					
Long-handed	2	Basic	Chest → belt	Splitter	2.30	-1%	2.33	2.35	+1%					
Long-handed	2	Basic	Running belt items → chest	Straight, side, near lane	2.14		2.14	2.14						
Long-handed	2	Basic	Running belt items → chest	Straight, side, far lane	2.14		2.14	2.14						
Long-handed	2	Basic	Running belt items → chest	Straight, side, both lanes	2.14		2.14	2.14						
Long-handed	2	Basic	Running belt items → chest	Straight, side, sideloaded onto empty belt	1.87	-11%	2.10	2.25	+7%					
Long-handed	2	Basic	Running belt items → chest	Straight, towards, one lane	2.00		2.00	2.00						
Long-handed	2	Basic	Running belt items → chest	Straight, towards, both lanes	2.00		2.00	2.00						
Long-handed	2	Basic	Running belt items → chest	Turn, outer lane	1.87	-4%	1.95	2.00	+3%					
Long-handed	2	Basic	Running belt items → chest	Turn, inner lane	2.14		2.15	2.21	+3%					
Long-handed	2	Basic	Running belt items → chest	Turn, both lanes	1.87	-8%	2.04	2.21	+8%					
Long-handed	2	Basic	Running belt items → chest	Underground, side, one lane	2.14	-6%	2.27	2.34	+3%					
Long-handed	2	Basic	Running belt items → chest	Underground, side, both lanes	2.14	-6%	2.27	2.30	+1%					
Long-handed	2	Basic	Running belt items → chest	Underground, front, one lane	2.14	-1%	2.17	2.22	+2%					
Long-handed	2	Basic	Running belt items → chest	Underground, behind, one lane	2.14		2.14	2.14						
Long-handed	2	Basic	Running belt items → chest	Underground, front/behind, both lanes	2.14		2.15	2.22	+3%					
Long-handed	2	Basic	Running belt items → chest	Underground, sideloaded onto empty belt	1.87	-4%	1.94	2.14	+10%					
Long-handed	2	Basic	Running belt items → chest	Splitter, side, one lane, blocked exit	2.35	-1%	2.37	2.40	+1%					
Long-handed	2	Basic	Running belt items → chest	Splitter, side, one lane, nonblocked exit	2.14		2.14	2.14						
Long-handed	2	Basic	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	2.10	-2%	2.14	2.18	+2%					
Long-handed	2	Basic	Running belt items → chest	Splitter, side, both lanes, blocked exit	2.40		2.40	2.40						
Long-handed	2	Basic	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	1.66	-17%	2.01	2.14	+6%					
Long-handed	2	Basic	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	2.10	-2%	2.14	2.18	+2%					
Long-handed	2	Basic	Queued belt items → chest	Straight, side, near lane	2.26	-1%	2.29	2.30						
Long-handed	2	Basic	Queued belt items → chest	Straight, side, far lane	2.26	-1%	2.29	2.30						
Long-handed	2	Basic	Queued belt items → chest	Straight, side, both lanes	2.30		2.30	2.30						
Long-handed	2	Basic	Queued belt items → chest	Straight, side, sideloaded onto empty belt	2.26	-1%	2.29	2.30						
Long-handed	2	Basic	Queued belt items → chest	Straight, towards, one lane	2.10		2.10	2.10						

Inserter	Stack size	Belt Type	Setup Move type	Belt tile type	Items/second, all directions, all belt phases [7]	Dito, north-south direction, all belt phases [8]	Dito, west-east direction, all belt phases [9]	Dito, north-south direction, single belt phase [10]	
Type		Type			Min [11] [12] Mean [13] Max [14] [15]	Min [16] [17] Mean [18] Max [19] [20]	Min [21] [22] Mean [23] Max [24] [25]	Min [26] [27] Mean [28] Max [29] [30]	
Long-handed	2	Basic	Queued belt items → chest	Straight, towards, both lanes	2.10	2.10			
Long-handed	2	Basic	Queued belt items → chest	Turn, outer lane	2.10	-5%	2.21	2.30	+4%
Long-handed	2	Basic	Queued belt items → chest	Turn, inner lane	2.18	-4%	2.26	2.35	+4%
Long-handed	2	Basic	Queued belt items → chest	Turn, both lanes	2.10	-6%	2.23	2.35	+5%
Long-handed	2	Basic	Queued belt items → chest	Underground, side, one lane	2.30	-2%	2.35	2.40	+2%
Long-handed	2	Basic	Queued belt items → chest	Underground, side, both lanes	2.30	-2%	2.35	2.40	+2%
Long-handed	2	Basic	Queued belt items → chest	Underground, front, one lane	2.10	-2%	2.14	2.18	+2%
Long-handed	2	Basic	Queued belt items → chest	Underground, behind, one lane	2.10	-1%	2.12	2.14	+1%
Long-handed	2	Basic	Queued belt items → chest	Underground, front/behind, both lanes	2.10	-2%	2.14	2.18	+2%
Long-handed	2	Basic	Queued belt items → chest	Underground, sideloaded onto empty belt	2.14	-5%	2.26	2.35	+4%
Long-handed	2	Basic	Queued belt items → chest	Splitter, side, one lane, blocked exit	2.35	-1%	2.37	2.40	+1%
Long-handed	2	Basic	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	2.10	-2%	2.14	2.18	+2%
Long-handed	2	Basic	Queued belt items → chest	Splitter, side, both lanes, blocked exit	2.40		2.40	2.40	
Long-handed	2	Basic	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	2.10	-2%	2.14	2.18	+2%
Basic	2		Chest → chest		1.66		1.66	1.66	
Basic	2	Express	Chest → belt	Non-splitter	1.64		1.64	1.64	
Basic	2	Express	Chest → belt	Splitter	1.64		1.64	1.64	
Basic	2	Express	Running belt items → chest	Straight, side, near lane	1.33		1.33	1.33	
Basic	2	Express	Running belt items → chest	Straight, side, far lane	1.43	-1%	1.44	1.45	+1%
Basic	2	Express	Running belt items → chest	Straight, side, both lanes	1.30		1.30	1.30	
Basic	2	Express	Running belt items → chest	Straight, side, sideloaded onto empty belt	1.36	-6%	1.45	1.55	+7%
Basic	2	Express	Running belt items → chest	Turn, outer lane	1.36		1.36	1.36	
Basic	2	Express	Running belt items → chest	Turn, inner lane	1.30	-2%	1.33	1.36	+2%
Basic	2	Express	Running belt items → chest	Turn, both lanes	1.25	-4%	1.30	1.36	+5%
Basic	2	Express	Running belt items → chest	Underground, side, one lane	1.50	-1%	1.52	1.60	+5%
Basic	2	Express	Running belt items → chest	Underground, side, both lanes	1.50	-3%	1.55	1.60	+3%
Basic	2	Express	Running belt items → chest	Underground, front, one lane	1.36		1.36	1.36	
Basic	2	Express	Running belt items → chest	Underground, behind, one lane	1.36		1.36	1.36	
Basic	2	Express	Running belt items → chest	Underground, front/behind, both lanes	1.36		1.36	1.36	
Basic	2	Express	Running belt items → chest	Underground, sideloaded onto empty belt	1.20	-5%	1.26	1.36	+8%
Basic	2	Express	Running belt items → chest	Splitter, side, one lane, blocked exit	1.71	-1%	1.73	1.76	+2%
Basic	2	Express	Running belt items → chest	Splitter, side, one lane, nonblocked exit	1.36		1.36	1.36	
Basic	2	Express	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	1.53	-3%	1.58	1.64	+4%
Basic	2	Express	Running belt items → chest	Splitter, side, both lanes, blocked exit	1.76		1.76	1.76	
Basic	2	Express	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	1.36		1.36	1.36	
Basic	2	Express	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	1.53	-3%	1.58	1.64	+4%
Basic	2	Express	Queued belt items → chest	Straight, side, near lane	1.62		1.62	1.62	
Basic	2	Express	Queued belt items → chest	Straight, side, far lane	1.62		1.62	1.62	
Basic	2	Express	Queued belt items → chest	Straight, side, both lanes	1.62		1.62	1.62	
Basic	2	Express	Queued belt items → chest	Straight, side, sideloaded onto empty belt	1.62	-1%	1.64	1.66	+1%
Basic	2	Express	Queued belt items → chest	Straight, towards, one lane	1.53		1.53	1.53	
Basic	2	Express	Queued belt items → chest	Straight, towards, both lanes	1.53		1.53	1.53	
Basic	2	Express	Queued belt items → chest	Turn, outer lane	1.51	-6%	1.60	1.69	+6%
Basic	2	Express	Queued belt items → chest	Turn, inner lane	1.60	-4%	1.67	1.73	+4%
Basic	2	Express	Queued belt items → chest	Turn, both lanes	1.51	-8%	1.64	1.73	+5%
Basic	2	Express	Queued belt items → chest	Underground, side, one lane	1.62	-3%	1.67	1.76	+5%
Basic	2	Express	Queued belt items → chest	Underground, side, both lanes	1.62	-4%	1.69	1.76	+4%
Basic	2	Express	Queued belt items → chest	Underground, front, one lane	1.53	-3%	1.58	1.64	+4%
Basic	2	Express	Queued belt items → chest	Underground, behind, one lane	1.53		1.53	1.53	
Basic	2	Express	Queued belt items → chest	Underground, front/behind, both lanes	1.53	-3%	1.57	1.64	+4%
Basic	2	Express	Queued belt items → chest	Underground, sideloaded onto empty belt	1.53	-6%	1.62	1.71	+6%
Basic	2	Express	Queued belt items → chest	Splitter, side, one lane, blocked exit	1.71	-1%	1.73	1.76	+2%
Basic	2	Express	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	1.53	-3%	1.58	1.64	+4%
Basic	2	Express	Queued belt items → chest	Splitter, side, both lanes, blocked exit	1.76		1.76	1.76	
Basic	2	Express	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	1.53	-3%	1.58	1.64	+4%
Basic	2	Fast	Chest → belt	Non-splitter	1.64		1.64	1.64	
Basic	2	Fast	Chest → belt	Splitter	1.64		1.64	1.64	
Basic	2	Fast	Running belt items → chest	Straight, side, near lane	1.50	-4%	1.57	1.66	+6%
Basic	2	Fast	Running belt items → chest	Straight, side, far lane	1.50	-3%	1.54	1.66	+8%
Basic	2	Fast	Running belt items → chest	Straight, side, both lanes	1.50	-4%	1.57	1.66	+6%
Basic	2	Fast	Running belt items → chest	Straight, side, sideloaded onto empty belt	1.42	-3%	1.47	1.50	+2%
Basic	2	Fast	Running belt items → chest	Turn, outer lane	1.36	-7%	1.46	1.57	+8%
Basic	2	Fast	Running belt items → chest	Turn, inner lane	1.42	-3%	1.47	1.53	+4%
Basic	2	Fast	Running belt items → chest	Turn, both lanes	1.36	-7%	1.46	1.57	+8%
Basic	2	Fast	Running belt items → chest	Underground, side, one lane	1.50	-6%	1.60	1.66	+4%
Basic	2	Fast	Running belt items → chest	Underground, side, both lanes	1.57	-3%	1.62	1.66	+2%
Basic	2	Fast	Running belt items → chest	Underground, front, one lane	1.50		1.50	1.50	
Basic	2	Fast	Running belt items → chest	Underground, behind, one lane	1.50		1.50	1.50	
Basic	2	Fast	Running belt items → chest	Underground, front/behind, both lanes	1.50		1.50	1.50	
Basic	2	Fast	Running belt items → chest	Underground, sideloaded onto empty belt	1.30	-8%	1.42	1.50	+6%
Basic	2	Fast	Running belt items → chest	Splitter, side, one lane, blocked exit	1.71	-1%	1.73	1.76	+2%
Basic	2	Fast	Running belt items → chest	Splitter, side, one lane, nonblocked exit	1.50	-2%	1.53	1.57	+3%
Basic	2	Fast	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	1.53	-3%	1.58	1.64	+4%
Basic	2	Fast	Running belt items → chest	Splitter, side, both lanes, blocked exit	1.76		1.76	1.76	
Basic	2	Fast	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	1.50	-2%	1.53	1.57	+3%
Basic	2	Fast	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	1.53	-3%	1.58	1.64	+4%
Basic	2	Fast	Queued belt items → chest	Straight, side, near lane	1.62		1.62	1.62	
Basic	2	Fast	Queued belt items → chest	Straight, side, far lane	1.62		1.62	1.62	
Basic	2	Fast	Queued belt items → chest	Straight, side, both lanes	1.62		1.62	1.62	
Basic	2	Fast	Queued belt items → chest	Straight, side, sideloaded onto empty belt	1.62	-1%	1.64	1.66	+1%
Basic	2	Fast	Queued belt items → chest	Straight, towards, one lane	1.53		1.53	1.53	
Basic	2	Fast	Queued belt items → chest	Straight, towards, both lanes	1.53		1.53	1.53	
Basic	2	Fast	Queued belt items → chest	Turn, outer lane	1.51	-6%	1.60	1.69	+6%
Basic	2	Fast	Queued belt items → chest	Turn, inner lane	1.60	-4%	1.67	1.73	+4%
Basic	2	Fast	Queued belt items → chest	Turn, both lanes	1.51	-8%	1.64	1.73	+5%
Basic	2	Fast	Queued belt items → chest	Underground, side, one lane	1.62	-3%	1.67	1.76	+5%
Basic	2	Fast	Queued belt items → chest	Underground, side, both lanes	1.62	-4%	1.69	1.76	+4%
Basic	2	Fast	Queued belt items → chest	Underground, front, one lane	1.53	-3%	1.58	1.64	+4%
Basic	2	Fast	Queued belt items → chest	Underground, behind, one lane	1.53		1.53	1.53	
Basic	2	Fast	Queued belt items → chest	Underground, front/behind, both lanes	1.53	-3%	1.57	1.64	+4%
Basic	2	Fast	Queued belt items → chest	Underground, sideloaded onto empty belt	1.57	-4%	1.63	1.71	+5%
Basic	2	Fast	Queued belt items → chest	Splitter, side, one lane, blocked exit	1.71	-1%	1.73	1.76	+2%
Basic	2	Fast	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	1.53	-3%	1.58	1.64	+4%
Basic	2	Fast	Queued belt items → chest	Splitter, side, both lanes, blocked exit	1.76		1.76	1.76	
Basic	2	Fast	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	1.53	-3%	1.58	1.64	+4%
Basic	2	Basic	Chest → belt	Non-splitter	1.64		1.64	1.64	
Basic	2	Basic	Chest → belt	Splitter	1.64		1.64	1.64	
Basic	2	Basic	Running belt items → chest	Straight, side, near lane	1.66		1.66	1.66	
Basic	2	Basic	Running belt items → chest	Straight, side, far lane	1.66		1.66	1.66	
Basic	2	Basic	Running belt items → chest	Straight, side, both lanes	1.57	-2%	1.61	1.66	+3%
Basic	2	Basic	Running belt items → chest	Straight, side, sideloaded onto empty belt	1.36	-6%	1.45	1.50	+3%
Basic	2	Basic	Running belt items → chest	Turn, outer lane	1.36	-4%	1.42	1.50	+6%
Basic	2	Basic	Running belt items → chest	Turn, inner lane	1.50	-4%	1.57	1.66	+6%
Basic	2	Basic	Running belt items → chest	Turn, both lanes	1.25	-17%	1.50	1.66	+11%
Basic	2	Basic	Running belt items → chest	Underground, side, one lane	1.57	-4%	1.63	1.66	+2%
Basic	2	Basic	Running belt items → chest	Underground, side, both lanes	1.66		1.66	1.66	
Basic	2	Basic	Running belt items → chest	Underground, front, one lane	1.50		1.50	1.50	
Basic	2	Basic	Running belt items → chest	Underground, behind, one lane	1.50		1.50	1.50	

Inserter	Stack size	Belt Type	Setup Move type	Belt tile type	Items/second, all directions, all belt phases [7]	Dito, north-south direction, all belt phases [8]	Dito, west-east direction, all belt phases [9]	Dito, north-south direction, single belt phase [
Type					Min [11] [12] Mean [13] Max [14] [15]	Min [16] [17] Mean [18] Max [19] [20]	Min [21] [22] Mean [23] Max [24] [25]	Min [26] [27] Mean [28] Max [29] [30]
Basic	2	Basic	Running belt items → chest	Underground, front/behind, both lanes	1.50	1.50	1.50	
Basic	2	Basic	Running belt items → chest	Underground, sideloaded onto empty belt	1.36 -4%	1.42	1.50 +6%	
Basic	2	Basic	Running belt items → chest	Splitter, side, one lane, blocked exit	1.71 -1%	1.73	1.76 +2%	
Basic	2	Basic	Running belt items → chest	Splitter, side, one lane, nonblocked exit	1.50 -7%	1.62	1.66 +2%	
Basic	2	Basic	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	1.53 -3%	1.58	1.64 +4%	
Basic	2	Basic	Running belt items → chest	Splitter, side, both lanes, blocked exit	1.76	1.76	1.76	
Basic	2	Basic	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	1.57 -3%	1.62	1.66 +2%	
Basic	2	Basic	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	1.53 -3%	1.58	1.64 +4%	
Basic	2	Basic	Queued belt items → chest	Straight, side, near lane	1.62	1.62	1.62	
Basic	2	Basic	Queued belt items → chest	Straight, side, far lane	1.62	1.62	1.62	
Basic	2	Basic	Queued belt items → chest	Straight, side, both lanes	1.62	1.62	1.62	
Basic	2	Basic	Queued belt items → chest	Straight, side, sideloaded onto empty belt	1.62 -1%	1.64	1.66 +1%	
Basic	2	Basic	Queued belt items → chest	Straight, towards, one lane	1.53	1.53	1.53	
Basic	2	Basic	Queued belt items → chest	Straight, towards, both lanes	1.53	1.53	1.53	
Basic	2	Basic	Queued belt items → chest	Turn, outer lane	1.51 -6%	1.60	1.69 +6%	
Basic	2	Basic	Queued belt items → chest	Turn, inner lane	1.60 -4%	1.67	1.73 +4%	
Basic	2	Basic	Queued belt items → chest	Turn, both lanes	1.51 -8%	1.64	1.73 +5%	
Basic	2	Basic	Queued belt items → chest	Underground, side, one lane	1.62 -3%	1.67	1.76 +5%	
Basic	2	Basic	Queued belt items → chest	Underground, side, both lanes	1.62 -4%	1.69	1.76 +4%	
Basic	2	Basic	Queued belt items → chest	Underground, front, one lane	1.53 -3%	1.58	1.64 +4%	
Basic	2	Basic	Queued belt items → chest	Underground, behind, one lane	1.53	1.53	1.53	
Basic	2	Basic	Queued belt items → chest	Underground, front/behind, both lanes	1.53 -3%	1.57	1.64 +4%	
Basic	2	Basic	Queued belt items → chest	Underground, sideloaded onto empty belt	1.55 -4%	1.61	1.71 +6%	
Basic	2	Basic	Queued belt items → chest	Splitter, side, one lane, blocked exit	1.71 -1%	1.73	1.76 +2%	
Basic	2	Basic	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	1.53 -3%	1.58	1.64 +4%	
Basic	2	Basic	Queued belt items → chest	Splitter, side, both lanes, blocked exit	1.76	1.76	1.76	
Basic	2	Basic	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	1.53 -3%	1.58	1.64 +4%	
Burner	2	Express	Chest → chest	Non-splitter	1.18	1.19	1.20 +1%	
Burner	2	Express	Chest → belt	Non-splitter	1.17 -1%	1.18	1.18	
Burner	2	Express	Chest → belt	Splitter	1.17 -1%	1.18	1.18	
Burner	2	Express	Running belt items → chest	Straight, side, near lane	0.88	0.88	0.90 +2%	
Burner	2	Express	Running belt items → chest	Straight, side, far lane	1.00	1.00	1.00	
Burner	2	Express	Running belt items → chest	Straight, side, both lanes	0.78 -1%	0.79	0.88 +11%	
Burner	2	Express	Running belt items → chest	Straight, side, sideloaded onto empty belt	1.00	1.00	1.00	
Burner	2	Express	Running belt items → chest	Turn, outer lane	0.71 -9%	0.78	0.88 +13%	
Burner	2	Express	Running belt items → chest	Turn, inner lane	0.88 -5%	0.93	1.00 +8%	
Burner	2	Express	Running belt items → chest	Turn, both lanes	0.71 -17%	0.86	1.00 +16%	
Burner	2	Express	Running belt items → chest	Underground, side, one lane	1.05 -5%	1.10	1.15 +5%	
Burner	2	Express	Running belt items → chest	Underground, side, both lanes	1.07 -4%	1.11	1.15 +4%	
Burner	2	Express	Running belt items → chest	Underground, front, one lane	0.83	0.83	0.83	
Burner	2	Express	Running belt items → chest	Underground, behind, one lane	0.83	0.83	0.83	
Burner	2	Express	Running belt items → chest	Underground, front/behind, both lanes	0.83	0.83	0.83	
Burner	2	Express	Running belt items → chest	Underground, sideloaded onto empty belt	0.88 -2%	0.90	1.00 +11%	
Burner	2	Express	Running belt items → chest	Splitter, side, one lane, blocked exit	1.25 -1%	1.26	1.29 +2%	
Burner	2	Express	Running belt items → chest	Splitter, side, one lane, nonblocked exit	1.00	1.00	1.00	
Burner	2	Express	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	1.11 -3%	1.14	1.18 +4%	
Burner	2	Express	Running belt items → chest	Splitter, side, both lanes, blocked exit	1.29	1.29	1.29	
Burner	2	Express	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	0.93 -6%	0.99	1.00 +1%	
Burner	2	Express	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	1.11 -3%	1.14	1.18 +4%	
Burner	2	Express	Queued belt items → chest	Straight, side, near lane	1.17 -1%	1.18	1.18	
Burner	2	Express	Queued belt items → chest	Straight, side, far lane	1.16 -1%	1.17	1.17	
Burner	2	Express	Queued belt items → chest	Straight, side, both lanes	1.17 -1%	1.18	1.18	
Burner	2	Express	Queued belt items → chest	Straight, side, sideloaded onto empty belt	1.16 -3%	1.19	1.21 +2%	
Burner	2	Express	Queued belt items → chest	Straight, towards, one lane	1.12	1.12	1.12	
Burner	2	Express	Queued belt items → chest	Straight, towards, both lanes	1.12	1.12	1.12	
Burner	2	Express	Queued belt items → chest	Turn, outer lane	1.09 -5%	1.15	1.22 +6%	
Burner	2	Express	Queued belt items → chest	Turn, inner lane	1.15 -4%	1.20	1.26 +5%	
Burner	2	Express	Queued belt items → chest	Turn, both lanes	1.09 -8%	1.18	1.26 +7%	
Burner	2	Express	Queued belt items → chest	Underground, side, one lane	1.16 -5%	1.22	1.29 +6%	
Burner	2	Express	Queued belt items → chest	Underground, side, both lanes	1.17 -5%	1.23	1.29 +5%	
Burner	2	Express	Queued belt items → chest	Underground, front, one lane	1.12 -3%	1.15	1.18 +3%	
Burner	2	Express	Queued belt items → chest	Underground, behind, one lane	1.11	1.11	1.11	
Burner	2	Express	Queued belt items → chest	Underground, front/behind, both lanes	1.11 -2%	1.13	1.18 +4%	
Burner	2	Express	Queued belt items → chest	Underground, sideloaded onto empty belt	1.11 -5%	1.17	1.25 +7%	
Burner	2	Express	Queued belt items → chest	Splitter, side, one lane, blocked exit	1.25 -1%	1.26	1.29 +2%	
Burner	2	Express	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	1.11 -3%	1.14	1.18 +4%	
Burner	2	Express	Queued belt items → chest	Splitter, side, both lanes, blocked exit	1.29	1.29	1.29	
Burner	2	Express	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	1.11 -3%	1.14	1.18 +4%	
Burner	2	Fast	Chest → belt	Non-splitter	1.17 -1%	1.18	1.18	
Burner	2	Fast	Chest → belt	Splitter	1.17 -1%	1.18	1.18	
Burner	2	Fast	Running belt items → chest	Straight, side, near lane	0.96 -5%	1.01	1.07 +6%	
Burner	2	Fast	Running belt items → chest	Straight, side, far lane	1.09 -4%	1.14	1.20 +5%	
Burner	2	Fast	Running belt items → chest	Straight, side, both lanes	0.96 -5%	1.01	1.07 +6%	
Burner	2	Fast	Running belt items → chest	Straight, side, sideloaded onto empty belt	1.03 -5%	1.08	1.13 +5%	
Burner	2	Fast	Running belt items → chest	Turn, outer lane	1.07	1.07	1.07	
Burner	2	Fast	Running belt items → chest	Turn, inner lane	1.03 -4%	1.07	1.11 +4%	
Burner	2	Fast	Running belt items → chest	Turn, both lanes	1.03 -4%	1.07	1.11 +4%	
Burner	2	Fast	Running belt items → chest	Underground, side, one lane	1.11 -3%	1.14	1.20 +5%	
Burner	2	Fast	Running belt items → chest	Underground, side, both lanes	1.11 -3%	1.15	1.20 +4%	
Burner	2	Fast	Running belt items → chest	Underground, front, one lane	1.07 -1%	1.08	1.11 +3%	
Burner	2	Fast	Running belt items → chest	Underground, behind, one lane	1.07 -3%	1.10	1.11 +1%	
Burner	2	Fast	Running belt items → chest	Underground, front/behind, both lanes	1.07 -2%	1.09	1.11 +2%	
Burner	2	Fast	Running belt items → chest	Underground, sideloaded onto empty belt	0.96 -6%	1.02	1.11 +9%	
Burner	2	Fast	Running belt items → chest	Splitter, side, one lane, blocked exit	1.25 -1%	1.26	1.29 +2%	
Burner	2	Fast	Running belt items → chest	Splitter, side, one lane, nonblocked exit	1.11 -1%	1.12	1.15 +3%	
Burner	2	Fast	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	1.11 -3%	1.14	1.18 +4%	
Burner	2	Fast	Running belt items → chest	Splitter, side, both lanes, blocked exit	1.29	1.29	1.29	
Burner	2	Fast	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	1.03 -6%	1.09	1.15 +6%	
Burner	2	Fast	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	1.11 -3%	1.14	1.18 +4%	
Burner	2	Fast	Queued belt items → chest	Straight, side, near lane	1.17 -1%	1.18	1.18	
Burner	2	Fast	Queued belt items → chest	Straight, side, far lane	1.16 -1%	1.17	1.17	
Burner	2	Fast	Queued belt items → chest	Straight, side, both lanes	1.17 -1%	1.18	1.18	
Burner	2	Fast	Queued belt items → chest	Straight, side, sideloaded onto empty belt	1.16 -2%	1.18	1.20 +2%	
Burner	2	Fast	Queued belt items → chest	Straight, towards, one lane	1.12	1.12	1.12	
Burner	2	Fast	Queued belt items → chest	Straight, towards, both lanes	1.12	1.12	1.12	
Burner	2	Fast	Queued belt items → chest	Turn, outer lane	1.09 -5%	1.15	1.22 +6%	
Burner	2	Fast	Queued belt items → chest	Turn, inner lane	1.15 -4%	1.20	1.26 +5%	
Burner	2	Fast	Queued belt items → chest	Turn, both lanes	1.09 -8%	1.18	1.26 +7%	
Burner	2	Fast	Queued belt items → chest	Underground, side, one lane	1.16 -5%	1.22	1.29 +6%	
Burner	2	Fast	Queued belt items → chest	Underground, side, both lanes	1.17 -5%	1.23	1.29 +5%	
Burner	2	Fast	Queued belt items → chest	Underground, front, one lane	1.11 -3%	1.14	1.18 +4%	
Burner	2	Fast	Queued belt items → chest	Underground, behind, one lane	1.11	1.11	1.11	
Burner	2	Fast	Queued belt items → chest	Underground, front/behind, both lanes	1.11 -2%	1.13	1.18 +4%	
Burner	2	Fast	Queued belt items → chest	Underground, sideloaded onto empty belt	1.14 -3%	1.18	1.25 +6%	
Burner	2	Fast	Queued belt items → chest	Splitter, side, one lane, blocked exit	1.25 -1%	1.26	1.29 +2%	
Burner	2	Fast	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	1.11 -3%	1.14	1.18 +4%	
Burner	2	Fast	Queued belt items → chest	Splitter, side, both lanes, blocked exit	1.29	1.29	1.29	
Burner	2	Fast	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	1.11 -3%	1.14	1.18 +4%	

Inserter	Stack size	Belt Type	Setup Move type	Belt tile type	Items/second, all directions, all belt phases [7]				Dito, north-south direction, all belt phases [8]				Dito, west-east direction, all belt phases [9]				Dito, north-south direction, single belt phase [10]							
Type					Min [11]	[12]	Mean [13]	Max [14]	[15]	Min [16]	[17]	Mean [18]	Max [19]	[20]	Min [21]	[22]	Mean [23]	Max [24]	[25]	Min [26]	[27]	Mean [28]	Max [29]	[30]
Burner	2	Basic	Chest → belt	Non-splitter	1.17	-1%	1.18																	
Burner	2	Basic	Chest → belt	Splitter	1.17	-1%	1.18																	
Burner	2	Basic	Running belt items → chest	Straight, side, near lane	1.00	-1%	1.01	1.03	+2%															
Burner	2	Basic	Running belt items → chest	Straight, side, far lane	1.07		1.07																	
Burner	2	Basic	Running belt items → chest	Straight, side, both lanes	1.00		1.00	1.02	+2%															
Burner	2	Basic	Running belt items → chest	Straight, side, sideloaded onto empty belt	1.07	-4%	1.11	1.15	+4%															
Burner	2	Basic	Running belt items → chest	Turn, outer lane	0.88	-8%	0.96	1.07	+11%															
Burner	2	Basic	Running belt items → chest	Turn, inner lane	1.07	-4%	1.11	1.15	+4%															
Burner	2	Basic	Running belt items → chest	Turn, both lanes	0.88	-15%	1.04	1.15	+11%															
Burner	2	Basic	Running belt items → chest	Underground, side, one lane	1.15	-3%	1.18	1.25	+6%															
Burner	2	Basic	Running belt items → chest	Underground, side, both lanes	1.15	-5%	1.21	1.25	+3%															
Burner	2	Basic	Running belt items → chest	Underground, front, one lane	1.15		1.15	1.15																
Burner	2	Basic	Running belt items → chest	Underground, behind, one lane	1.15		1.15	1.15																
Burner	2	Basic	Running belt items → chest	Underground, front/behind, both lanes	1.15		1.15	1.15																
Burner	2	Basic	Running belt items → chest	Underground, sideloaded onto empty belt	1.00	-7%	1.08	1.15	+6%															
Burner	2	Basic	Running belt items → chest	Splitter, side, one lane, blocked exit	1.25	-1%	1.26	1.29	+2%															
Burner	2	Basic	Running belt items → chest	Splitter, side, one lane, nonblocked exit	1.15	-4%	1.20	1.25	+4%															
Burner	2	Basic	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	1.11	-3%	1.14	1.18	+4%															
Burner	2	Basic	Running belt items → chest	Splitter, side, both lanes, blocked exit	1.29		1.29	1.29																
Burner	2	Basic	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	1.25		1.25	1.25																
Burner	2	Basic	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	1.11	-3%	1.14	1.18	+4%															
Burner	2	Basic	Queued belt items → chest	Straight, side, near lane	1.17	-1%	1.18	1.18																
Burner	2	Basic	Queued belt items → chest	Straight, side, far lane	1.16	-1%	1.17	1.17																
Burner	2	Basic	Queued belt items → chest	Straight, side, both lanes	1.17	-1%	1.18	1.18																
Burner	2	Basic	Queued belt items → chest	Straight, side, sideloaded onto empty belt	1.16	-3%	1.19	1.21	+2%															
Burner	2	Basic	Queued belt items → chest	Straight, towards, one lane	1.12		1.12	1.12																
Burner	2	Basic	Queued belt items → chest	Straight, towards, both lanes	1.12		1.12	1.12																
Burner	2	Basic	Queued belt items → chest	Turn, outer lane	1.09	-5%	1.15	1.22	+6%															
Burner	2	Basic	Queued belt items → chest	Turn, inner lane	1.15	-4%	1.20	1.26	+5%															
Burner	2	Basic	Queued belt items → chest	Turn, both lanes	1.09	-8%	1.18	1.26	+7%															
Burner	2	Basic	Queued belt items → chest	Underground, side, one lane	1.16	-5%	1.22	1.29	+6%															
Burner	2	Basic	Queued belt items → chest	Underground, side, both lanes	1.17	-5%	1.23	1.29	+5%															
Burner	2	Basic	Queued belt items → chest	Underground, front, one lane	1.12	-3%	1.15	1.18	+3%															
Burner	2	Basic	Queued belt items → chest	Underground, behind, one lane	1.11		1.11	1.11																
Burner	2	Basic	Queued belt items → chest	Underground, front/behind, both lanes	1.11	-2%	1.13	1.18	+4%															
Burner	2	Basic	Queued belt items → chest	Underground, sideloaded onto empty belt	1.13	-3%	1.17	1.25	+7%															
Burner	2	Basic	Queued belt items → chest	Splitter, side, one lane, blocked exit	1.25	-1%	1.26	1.29	+2%															
Burner	2	Basic	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	1.11	-3%	1.14	1.18	+4%															
Burner	2	Basic	Queued belt items → chest	Splitter, side, both lanes, blocked exit	1.29		1.29	1.29																
Burner	2	Basic	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	1.11	-3%	1.14	1.18	+4%															
Stack	2		Chest → chest		4.61		4.61	4.61																
Stack	2	Express	Chest → belt	Non-splitter	4.44		4.44	4.44																
Stack	2	Express	Chest → belt	Splitter	4.44		4.44	4.44																
Stack	2	Express	Running belt items → chest	Straight, side, near lane	4.28		4.28	4.28																
Stack	2	Express	Running belt items → chest	Straight, side, far lane	4.28		4.28	4.29																
Stack	2	Express	Running belt items → chest	Straight, side, both lanes	4.28		4.28	4.28																
Stack	2	Express	Running belt items → chest	Straight, side, sideloaded onto empty belt	3.75		3.75	3.75																
Stack	2	Express	Running belt items → chest	Turn, outer lane	3.75		3.75	3.75																
Stack	2	Express	Running belt items → chest	Turn, inner lane	3.46	-4%	3.60	3.75	+4%															
Stack	2	Express	Running belt items → chest	Turn, both lanes	3.75		3.75	3.75																
Stack	2	Express	Running belt items → chest	Underground, side, one lane	3.75	-9%	4.13	4.50	+9%															
Stack	2	Express	Running belt items → chest	Underground, side, both lanes	4.09	-4%	4.25	4.41	+4%															
Stack	2	Express	Running belt items → chest	Underground, front, one lane	3.75		3.75	3.75																
Stack	2	Express	Running belt items → chest	Underground, behind, one lane	3.75		3.75	3.75																
Stack	2	Express	Running belt items → chest	Underground, front/behind, both lanes	3.75		3.75	3.75																
Stack	2	Express	Running belt items → chest	Underground, sideloaded onto empty belt	3.00	-9%	3.28	3.75	+14%															
Stack	2	Express	Running belt items → chest	Splitter, side, one lane, blocked exit	4.61		4.61	4.61																
Stack	2	Express	Running belt items → chest	Splitter, side, one lane, nonblocked exit	3.75		3.75	3.75																
Stack	2	Express	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	4.13	-2%	4.21	4.28	+2%															
Stack	2	Express	Running belt items → chest	Splitter, side, both lanes, blocked exit	4.61		4.61	4.61																
Stack	2	Express	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	3.52	-5%	3.69	3.75	+2%															
Stack	2	Express	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	4.13	-2%	4.21	4.28	+2%															
Stack	2	Express	Queued belt items → chest	Straight, side, near lane	4.28		4.28	4.28																
Stack	2	Express	Queued belt items → chest	Straight, side, far lane	4.44		4.44	4.44																
Stack	2	Express	Queued belt items → chest	Straight, side, both lanes	4.28		4.28	4.28																
Stack	2	Express	Queued belt items → chest	Straight, side, sideloaded onto empty belt	4.44	-2%	4.52	4.61	+2%															
Stack	2	Express	Queued belt items → chest	Straight, towards, one lane	4.13		4.13	4.13																
Stack	2	Express	Queued belt items → chest	Straight, towards, both lanes	4.13		4.13	4.13																
Stack	2	Express	Queued belt items → chest	Turn, outer lane	4.00	-7%	4.28	4.61	+8%															
Stack	2	Express	Queued belt items → chest	Turn, inner lane	4.28	-5%	4.50	4.80	+7%															
Stack	2	Express	Queued belt items → chest	Turn, both lanes	4.00	-9%	4.39	4.80	+9%															
Stack	2	Express	Queued belt items → chest	Underground, side, one lane	4.28	-4%	4.48	4.61	+3%															
Stack	2	Express	Queued belt items → chest	Underground, side, both lanes	4.28	-4%	4.44	4.61	+4%															
Stack	2	Express	Queued belt items → chest	Underground, front, one lane	4.13	-2%	4.21	4.28	+2%															
Stack	2	Express	Queued belt items → chest	Underground, behind, one lane	4.13		4.13	4.13																
Stack	2	Express	Queued belt items → chest	Underground, front/behind, both lanes	4.13	-1%	4.18	4.28	+2%															
Stack	2	Express	Queued belt items → chest	Underground, sideloaded onto empty belt	4.13	-5%	4.36	4.61	+6%															
Stack	2	Express	Queued belt items → chest	Splitter, side, one lane, blocked exit	4.61		4.61	4.61																
Stack	2	Express	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	4.13	-2%	4.21	4.28	+2%															
Stack	2	Express	Queued belt items → chest	Splitter, side, both lanes, blocked exit	4.61		4.61	4.61																
Stack	2	Express	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	4.13	-2%	4.21	4.28	+2%															
Stack	2	Fast	Chest → belt	Non-splitter	4.44		4.44	4.44																
Stack	2	Fast	Chest → belt	Splitter	4.44		4.44	4.44																
Stack	2	Fast	Running belt items → chest	Straight, side, near lane	3.75		3.75	3.75																

Insertor	Stack size	Belt Type	Setup Move type	Belt tile type	Items/second, all directions, all belt phases [7]	Dito, north-south direction, all belt phases [8]	Dito, west-east direction, all belt phases [9]	Dito, north-south direction, single belt phase [
Type		Type			Min [11] [12] Mean [13] Max [14] [15]	Min [16] [17] Mean [18] Max [19] [20]	Min [21] [22] Mean [23] Max [24] [25]	Min [26] [27] Mean [28] Max [29] [30]
Fast	1	Fast	Running belt items → chest	Underground, sideloaded onto empty belt	1.87 -8% 2.03 2.14 +5%			
Fast	1	Fast	Running belt items → chest	Splitter, side, one lane, blocked exit	2.40 2.40 2.40			
Fast	1	Fast	Running belt items → chest	Splitter, side, one lane, nonblocked exit	2.14 -4% 2.22 2.30 +4%			
Fast	1	Fast	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	2.40 2.40 2.40			
Fast	1	Fast	Running belt items → chest	Splitter, side, both lanes, blocked exit	2.40 2.40 2.40			
Fast	1	Fast	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	2.30 2.30 2.30			
Fast	1	Fast	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	2.40 2.40 2.40			
Fast	1	Fast	Queued belt items → chest	Straight, side, near lane	2.40 2.40 2.40			
Fast	1	Fast	Queued belt items → chest	Straight, side, far lane	2.40 2.40 2.40			
Fast	1	Fast	Queued belt items → chest	Straight, side, both lanes	2.40 2.40 2.40			
Fast	1	Fast	Queued belt items → chest	Straight, side, sideloaded onto empty belt	2.22 -3% 2.30 2.40 +4%			
Fast	1	Fast	Queued belt items → chest	Straight, towards, one lane	2.40 2.40 2.40			
Fast	1	Fast	Queued belt items → chest	Straight, towards, both lanes	2.40 2.40 2.40			
Fast	1	Fast	Queued belt items → chest	Turn, outer lane	2.40 -2% 2.46 2.60 +6%			
Fast	1	Fast	Queued belt items → chest	Turn, inner lane	2.40 -2% 2.46 2.60 +6%			
Fast	1	Fast	Queued belt items → chest	Turn, both lanes	2.40 -2% 2.46 2.60 +6%			
Fast	1	Fast	Queued belt items → chest	Underground, side, one lane	2.40 2.40 2.40			
Fast	1	Fast	Queued belt items → chest	Underground, side, both lanes	2.40 2.40 2.40			
Fast	1	Fast	Queued belt items → chest	Underground, front, one lane	2.40 2.40 2.40			
Fast	1	Fast	Queued belt items → chest	Underground, behind, one lane	2.40 2.40 2.40			
Fast	1	Fast	Queued belt items → chest	Underground, front/behind, both lanes	2.40 2.40 2.40			
Fast	1	Fast	Queued belt items → chest	Underground, sideloaded onto empty belt	2.30 -3% 2.37 2.40 +1%			
Fast	1	Fast	Queued belt items → chest	Splitter, side, one lane, blocked exit	2.40 2.40 2.40			
Fast	1	Fast	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	2.40 2.40 2.40			
Fast	1	Fast	Queued belt items → chest	Splitter, side, both lanes, blocked exit	2.40 2.40 2.40			
Fast	1	Fast	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	2.40 2.40 2.40			
Fast	1	Basic	Chest → belt	Non-splitter	2.30 2.30 2.30			
Fast	1	Basic	Chest → belt	Splitter	2.30 2.30 2.30			
Fast	1	Basic	Running belt items → chest	Straight, side, near lane	2.25 2.25 2.25			
Fast	1	Basic	Running belt items → chest	Straight, side, far lane	2.25 2.25 2.25			
Fast	1	Basic	Running belt items → chest	Straight, side, both lanes	2.25 2.25 2.25			
Fast	1	Basic	Running belt items → chest	Straight, side, sideloaded onto empty belt	2.25 -5% 2.38 2.50 +5%			
Fast	1	Basic	Running belt items → chest	Turn, outer lane	2.22 2.23 2.25 +1%			
Fast	1	Basic	Running belt items → chest	Turn, inner lane	2.30 -4% 2.40 2.50 +4%			
Fast	1	Basic	Running belt items → chest	Turn, both lanes	2.22 -2% 2.27 2.30 +1%			
Fast	1	Basic	Running belt items → chest	Underground, side, one lane	2.25 -7% 2.43 2.50 +3%			
Fast	1	Basic	Running belt items → chest	Underground, side, both lanes	2.50 2.50 2.50			
Fast	1	Basic	Running belt items → chest	Underground, front, one lane	2.25 2.25 2.25			
Fast	1	Basic	Running belt items → chest	Underground, behind, one lane	2.25 2.25 2.25			
Fast	1	Basic	Running belt items → chest	Underground, front/behind, both lanes	2.25 2.25 2.25			
Fast	1	Basic	Running belt items → chest	Underground, sideloaded onto empty belt	2.04 -7% 2.20 2.50 +14%			
Fast	1	Basic	Running belt items → chest	Splitter, side, one lane, blocked exit	2.40 2.40 2.40			
Fast	1	Basic	Running belt items → chest	Splitter, side, one lane, nonblocked exit	2.50 2.50 2.50			
Fast	1	Basic	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	2.40 2.40 2.40			
Fast	1	Basic	Running belt items → chest	Splitter, side, both lanes, blocked exit	2.40 2.40 2.40			
Fast	1	Basic	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	2.50 2.50 2.50			
Fast	1	Basic	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	2.40 2.40 2.40			
Fast	1	Basic	Queued belt items → chest	Straight, side, near lane	2.40 2.40 2.40			
Fast	1	Basic	Queued belt items → chest	Straight, side, far lane	2.40 2.40 2.40			
Fast	1	Basic	Queued belt items → chest	Straight, side, both lanes	2.40 2.40 2.40			
Fast	1	Basic	Queued belt items → chest	Straight, side, sideloaded onto empty belt	2.22 -3% 2.30 2.40 +4%			
Fast	1	Basic	Queued belt items → chest	Straight, towards, one lane	2.40 2.40 2.40			
Fast	1	Basic	Queued belt items → chest	Straight, towards, both lanes	2.40 2.40 2.40			
Fast	1	Basic	Queued belt items → chest	Turn, outer lane	2.40 -2% 2.46 2.60 +6%			
Fast	1	Basic	Queued belt items → chest	Turn, inner lane	2.40 -2% 2.46 2.60 +6%			
Fast	1	Basic	Queued belt items → chest	Turn, both lanes	2.40 -2% 2.46 2.60 +6%			
Fast	1	Basic	Queued belt items → chest	Underground, side, one lane	2.40 2.40 2.40			
Fast	1	Basic	Queued belt items → chest	Underground, side, both lanes	2.40 2.40 2.40			
Fast	1	Basic	Queued belt items → chest	Underground, front, one lane	2.40 2.40 2.40			
Fast	1	Basic	Queued belt items → chest	Underground, behind, one lane	2.40 2.40 2.40			
Fast	1	Basic	Queued belt items → chest	Underground, front/behind, both lanes	2.40 2.40 2.40			
Fast	1	Basic	Queued belt items → chest	Underground, sideloaded onto empty belt	2.30 -3% 2.37 2.40 +1%			
Fast	1	Basic	Queued belt items → chest	Splitter, side, one lane, blocked exit	2.40 2.40 2.40			
Fast	1	Basic	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	2.40 2.40 2.40			
Fast	1	Basic	Queued belt items → chest	Splitter, side, both lanes, blocked exit	2.40 2.40 2.40			
Fast	1	Basic	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	2.40 2.40 2.40			
Long-handed	1	Express	Chest → chest	Non-splitter	1.17 -1% 1.18 1.20 +2%			
Long-handed	1	Express	Chest → chest	Splitter	1.17 -1% 1.18 1.20 +2%			
Long-handed	1	Express	Running belt items → chest	Straight, side, near lane	1.09 1.09 1.11 +2%			
Long-handed	1	Express	Running belt items → chest	Straight, side, far lane	1.11 1.11 1.11			
Long-handed	1	Express	Running belt items → chest	Straight, side, both lanes	1.11 1.11 1.11			
Long-handed	1	Express	Running belt items → chest	Straight, side, sideloaded onto empty belt	0.93 -9% 1.02 1.12 +10%			
Long-handed	1	Express	Running belt items → chest	Straight, towards, one lane	0.83 0.83 0.83			
Long-handed	1	Express	Running belt items → chest	Straight, towards, both lanes	0.83 0.83 0.83			
Long-handed	1	Express	Running belt items → chest	Turn, outer lane	0.93 -8% 1.01 1.12 +11%			
Long-handed	1	Express	Running belt items → chest	Turn, inner lane	0.93 -4% 0.97 1.07 +10%			
Long-handed	1	Express	Running belt items → chest	Turn, both lanes	0.93 -4% 0.97 1.12 +15%			
Long-handed	1	Express	Running belt items → chest	Underground, side, one lane	1.07 -2% 1.09 1.11 +2%			
Long-handed	1	Express	Running belt items → chest	Underground, side, both lanes	1.07 -2% 1.09 1.11 +2%			
Long-handed	1	Express	Running belt items → chest	Underground, front, one lane	0.93 -7% 1.00 1.07 +7%			
Long-handed	1	Express	Running belt items → chest	Underground, behind, one lane	0.93 -7% 1.00 1.07 +7%			
Long-handed	1	Express	Running belt items → chest	Underground, front/behind, both lanes	0.93 -7% 1.00 1.07 +7%			
Long-handed	1	Express	Running belt items → chest	Underground, sideloaded onto empty belt	0.88 -3% 0.91 0.93 +2%			
Long-handed	1	Express	Running belt items → chest	Splitter, side, one lane, blocked exit	1.17 -3% 1.20 1.22 +2%			
Long-handed	1	Express	Running belt items → chest	Splitter, side, one lane, nonblocked exit	0.96 -2% 0.98 1.00 +2%			
Long-handed	1	Express	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	1.17 -3% 1.20 1.22 +2%			
Long-handed	1	Express	Running belt items → chest	Splitter, side, both lanes, blocked exit	1.22 1.22 1.22			
Long-handed	1	Express	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	0.97 -2% 0.99 1.00 +1%			
Long-handed	1	Express	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	1.17 -3% 1.20 1.22 +2%			
Long-handed	1	Express	Queued belt items → chest	Straight, side, near lane	1.22 1.22 1.22			
Long-handed	1	Express	Queued belt items → chest	Straight, side, far lane	1.17 1.17 1.17			
Long-handed	1	Express	Queued belt items → chest	Straight, side, both lanes	1.22 1.22 1.22			
Long-handed	1	Express	Queued belt items → chest	Straight, side, sideloaded onto empty belt	1.15 -3% 1.18 1.22 +3%			
Long-handed	1	Express	Queued belt items → chest	Straight, towards, one lane	1.17 1.17 1.17			
Long-handed	1	Express	Queued belt items → chest	Straight, towards, both lanes	1.17 1.17 1.17			
Long-handed	1	Express	Queued belt items → chest	Turn, outer lane	1.17 -3% 1.21 1.22 +1%			
Long-handed	1	Express	Queued belt items → chest	Turn, inner lane	1.20 -2% 1.22 1.22			
Long-handed	1	Express	Queued belt items → chest	Turn, both lanes	1.17 -3% 1.21 1.22 +1%			
Long-handed	1	Express	Queued belt items → chest	Underground, side, one lane	1.17 -3% 1.21 1.22 +1%			
Long-handed	1	Express	Queued belt items → chest	Underground, side, both lanes	1.22 1.22 1.22			
Long-handed	1	Express	Queued belt items → chest	Underground, front, one lane	1.17 -3% 1.20 1.22 +2%			
Long-handed	1	Express	Queued belt items → chest	Underground, behind, one lane	1.17 -3% 1.20 1.22 +2%			
Long-handed	1	Express	Queued belt items → chest	Underground, front/behind, both lanes	1.17 -3% 1.20 1.22 +2%			
Long-handed	1	Express	Queued belt items → chest	Underground, sideloaded onto empty belt	1.17 -2% 1.19 1.22 +3%			
Long-handed	1	Express	Queued belt items → chest	Splitter, side, one lane, blocked exit	1.17 -3% 1.20 1.22 +2%			
Long-handed	1	Express	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	1.17 -3% 1.20 1.22 +2%			
Long-handed	1	Express	Queued belt items → chest	Splitter, side, both lanes, blocked exit	1.22 1.22 1.22			

Inserter	Stack size	Belt Type	Setup Move type	Belt tile type	Items/second, all directions, all belt phases [7]	Dito, north-south direction, all belt phases [8]	Dito, west-east direction, all belt phases [9]	Dito, north-south direction, single belt phase [
Type		Type			Min [11] [12] Mean [13] Max [14] [15]	Min [16] [17] Mean [18] Max [19] [20]	Min [21] [22] Mean [23] Max [24] [25]	Min [26] [27] Mean [28] Max [29] [30]
Long-handed	1	Express	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	1.17 -3% 1.20 1.22 +2%			
Long-handed	1	Fast	Chest → belt	Non-splitter	1.17 -1% 1.18 1.20 +2%			
Long-handed	1	Fast	Chest → belt	Splitter	1.17 -1% 1.18 1.20 +2%			
Long-handed	1	Fast	Running belt items → chest	Straight, side, near lane	1.07 -1% 1.08 1.15 +6%			
Long-handed	1	Fast	Running belt items → chest	Straight, side, far lane	1.13 -1% 1.14 1.15 +1%			
Long-handed	1	Fast	Running belt items → chest	Straight, side, both lanes	1.07 -1% 1.08 1.15 +6%			
Long-handed	1	Fast	Running belt items → chest	Straight, side, sideloaded onto empty belt	1.07 -2% 1.09 1.12 +3%			
Long-handed	1	Fast	Running belt items → chest	Straight, towards, one lane	0.93 0.93 0.93			
Long-handed	1	Fast	Running belt items → chest	Straight, towards, both lanes	0.93 0.93 0.93			
Long-handed	1	Fast	Running belt items → chest	Turn, outer lane	0.88 -11% 0.99 1.15 +16%			
Long-handed	1	Fast	Running belt items → chest	Turn, inner lane	1.00 -5% 1.05 1.07 +2%			
Long-handed	1	Fast	Running belt items → chest	Turn, both lanes	0.88 -14% 1.02 1.15 +13%			
Long-handed	1	Fast	Running belt items → chest	Underground, side, one lane	1.07 -5% 1.13 1.15 +2%			
Long-handed	1	Fast	Running belt items → chest	Underground, side, both lanes	1.07 -6% 1.14 1.15 +1%			
Long-handed	1	Fast	Running belt items → chest	Underground, front, one lane	1.00 -7% 1.07 1.15 +7%			
Long-handed	1	Fast	Running belt items → chest	Underground, behind, one lane	1.00 -7% 1.07 1.15 +7%			
Long-handed	1	Fast	Running belt items → chest	Underground, front/behind, both lanes	1.00 -7% 1.07 1.15 +7%			
Long-handed	1	Fast	Running belt items → chest	Underground, sideloaded onto empty belt	1.00 -2% 1.02 1.07 +5%			
Long-handed	1	Fast	Running belt items → chest	Splitter, side, one lane, blocked exit	1.17 -3% 1.20 1.22 +2%			
Long-handed	1	Fast	Running belt items → chest	Splitter, side, one lane, nonblocked exit	1.07 1.07 1.07			
Long-handed	1	Fast	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	1.17 -3% 1.20 1.22 +2%			
Long-handed	1	Fast	Running belt items → chest	Splitter, side, both lanes, blocked exit	1.22 1.22 1.22			
Long-handed	1	Fast	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	1.07 1.07 1.07			
Long-handed	1	Fast	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	1.17 -3% 1.20 1.22 +2%			
Long-handed	1	Fast	Queued belt items → chest	Straight, side, near lane	1.22 1.22 1.22			
Long-handed	1	Fast	Queued belt items → chest	Straight, side, far lane	1.17 1.17 1.17			
Long-handed	1	Fast	Queued belt items → chest	Straight, side, both lanes	1.22 1.22 1.22			
Long-handed	1	Fast	Queued belt items → chest	Straight, side, sideloaded onto empty belt	1.17 -1% 1.18 1.22 +3%			
Long-handed	1	Fast	Queued belt items → chest	Straight, towards, one lane	1.17 1.17 1.17			
Long-handed	1	Fast	Queued belt items → chest	Straight, towards, both lanes	1.17 1.17 1.17			
Long-handed	1	Fast	Queued belt items → chest	Turn, outer lane	1.17 -3% 1.21 1.22 +1%			
Long-handed	1	Fast	Queued belt items → chest	Turn, inner lane	1.17 -3% 1.21 1.22 +1%			
Long-handed	1	Fast	Queued belt items → chest	Turn, both lanes	1.17 -3% 1.21 1.22 +1%			
Long-handed	1	Fast	Queued belt items → chest	Underground, side, one lane	1.17 -3% 1.20 1.22 +2%			
Long-handed	1	Fast	Queued belt items → chest	Underground, side, both lanes	1.22 1.22 1.22			
Long-handed	1	Fast	Queued belt items → chest	Underground, front, one lane	1.17 -3% 1.20 1.22 +2%			
Long-handed	1	Fast	Queued belt items → chest	Underground, behind, one lane	1.17 -3% 1.20 1.22 +2%			
Long-handed	1	Fast	Queued belt items → chest	Underground, front/behind, both lanes	1.17 -3% 1.20 1.22 +2%			
Long-handed	1	Fast	Queued belt items → chest	Underground, sideloaded onto empty belt	1.17 -2% 1.19 1.22 +3%			
Long-handed	1	Fast	Queued belt items → chest	Splitter, side, one lane, blocked exit	1.17 -3% 1.20 1.22 +2%			
Long-handed	1	Fast	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	1.17 -3% 1.20 1.22 +2%			
Long-handed	1	Fast	Queued belt items → chest	Splitter, side, both lanes, blocked exit	1.22 1.22 1.22			
Long-handed	1	Fast	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	1.17 -3% 1.20 1.22 +2%			
Long-handed	1	Basic	Chest → belt	Non-splitter	1.17 -1% 1.18 1.20 +2%			
Long-handed	1	Basic	Chest → belt	Splitter	1.17 -1% 1.18 1.20 +2%			
Long-handed	1	Basic	Running belt items → chest	Straight, side, near lane	1.07 -4% 1.11 1.15 +4%			
Long-handed	1	Basic	Running belt items → chest	Straight, side, far lane	1.15 1.15 1.15			
Long-handed	1	Basic	Running belt items → chest	Straight, side, both lanes	1.07 -2% 1.09 1.15 +6%			
Long-handed	1	Basic	Running belt items → chest	Straight, side, sideloaded onto empty belt	1.15 1.15 1.15			
Long-handed	1	Basic	Running belt items → chest	Straight, towards, one lane	1.22 1.22 1.22			
Long-handed	1	Basic	Running belt items → chest	Straight, towards, both lanes	1.22 1.22 1.22			
Long-handed	1	Basic	Running belt items → chest	Turn, outer lane	1.15 1.15 1.15			
Long-handed	1	Basic	Running belt items → chest	Turn, inner lane	1.07 -5% 1.13 1.18 +4%			
Long-handed	1	Basic	Running belt items → chest	Turn, both lanes	1.07 -6% 1.14 1.18 +4%			
Long-handed	1	Basic	Running belt items → chest	Underground, side, one lane	1.15 -3% 1.18 1.25 +6%			
Long-handed	1	Basic	Running belt items → chest	Underground, side, both lanes	1.15 -4% 1.20 1.25 +4%			
Long-handed	1	Basic	Running belt items → chest	Underground, front, one lane	1.15 -2% 1.17 1.20 +3%			
Long-handed	1	Basic	Running belt items → chest	Underground, behind, one lane	1.15 1.15 1.18 +3%			
Long-handed	1	Basic	Running belt items → chest	Underground, front/behind, both lanes	1.15 -1% 1.16 1.20 +3%			
Long-handed	1	Basic	Running belt items → chest	Underground, sideloaded onto empty belt	1.07 -3% 1.10 1.15 +5%			
Long-handed	1	Basic	Running belt items → chest	Splitter, side, one lane, blocked exit	1.17 -3% 1.20 1.22 +2%			
Long-handed	1	Basic	Running belt items → chest	Splitter, side, one lane, nonblocked exit	1.15 -1% 1.16 1.18 +2%			
Long-handed	1	Basic	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	1.17 -3% 1.20 1.22 +2%			
Long-handed	1	Basic	Running belt items → chest	Splitter, side, both lanes, blocked exit	1.22 1.22 1.22			
Long-handed	1	Basic	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	1.15 -3% 1.18 1.18			
Long-handed	1	Basic	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	1.17 -3% 1.20 1.22 +2%			
Long-handed	1	Basic	Queued belt items → chest	Straight, side, near lane	1.22 1.22 1.22			
Long-handed	1	Basic	Queued belt items → chest	Straight, side, far lane	1.17 1.17 1.17			
Long-handed	1	Basic	Queued belt items → chest	Straight, side, both lanes	1.22 1.22 1.22			
Long-handed	1	Basic	Queued belt items → chest	Straight, side, sideloaded onto empty belt	1.15 -3% 1.18 1.22 +3%			
Long-handed	1	Basic	Queued belt items → chest	Straight, towards, one lane	1.17 1.17 1.17			
Long-handed	1	Basic	Queued belt items → chest	Straight, towards, both lanes	1.17 1.17 1.17			
Long-handed	1	Basic	Queued belt items → chest	Turn, outer lane	1.17 -3% 1.21 1.22 +1%			
Long-handed	1	Basic	Queued belt items → chest	Turn, inner lane	1.20 -2% 1.22 1.22			
Long-handed	1	Basic	Queued belt items → chest	Turn, both lanes	1.17 -3% 1.21 1.22 +1%			
Long-handed	1	Basic	Queued belt items → chest	Underground, side, one lane	1.17 -3% 1.21 1.22 +1%			
Long-handed	1	Basic	Queued belt items → chest	Underground, side, both lanes	1.22 1.22 1.22			
Long-handed	1	Basic	Queued belt items → chest	Underground, front, one lane	1.17 -3% 1.20 1.22 +2%			
Long-handed	1	Basic	Queued belt items → chest	Underground, behind, one lane	1.17 -3% 1.20 1.22 +2%			
Long-handed	1	Basic	Queued belt items → chest	Underground, front/behind, both lanes	1.17 -3% 1.20 1.22 +2%			
Long-handed	1	Basic	Queued belt items → chest	Underground, sideloaded onto empty belt	1.17 -2% 1.19 1.22 +3%			
Long-handed	1	Basic	Queued belt items → chest	Splitter, side, one lane, blocked exit	1.17 -3% 1.20 1.22 +2%			
Long-handed	1	Basic	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	1.17 -3% 1.20 1.22 +2%			
Long-handed	1	Basic	Queued belt items → chest	Splitter, side, both lanes, blocked exit	1.22 1.22 1.22			
Long-handed	1	Basic	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	1.17 -3% 1.20 1.22 +2%			
Basic	1		Chest → chest		0.83 0.83 0.83			
Basic	1	Express	Chest → belt	Non-splitter	0.83 0.83 0.83			
Basic	1	Express	Chest → belt	Splitter	0.83 0.83 0.83			
Basic	1	Express	Running belt items → chest	Straight, side, near lane	0.68 0.68 0.68			
Basic	1	Express	Running belt items → chest	Straight, side, far lane	0.73 -1% 0.74 0.75 +1%			
Basic	1	Express	Running belt items → chest	Straight, side, both lanes	0.72 0.72 0.72			
Basic	1	Express	Running belt items → chest	Straight, side, sideloaded onto empty belt	0.71 -5% 0.75 0.80 +7%			
Basic	1	Express	Running belt items → chest	Turn, outer lane	0.62 0.62 0.62			
Basic	1	Express	Running belt items → chest	Turn, inner lane	0.68 -1% 0.69 0.71 +3%			
Basic	1	Express	Running belt items → chest	Turn, both lanes	0.62 -7% 0.67 0.71 +6%			
Basic	1	Express	Running belt items → chest	Underground, side, one lane	0.75 -4% 0.78 0.83 +6%			
Basic	1	Express	Running belt items → chest	Underground, side, both lanes	0.77 -4% 0.80 0.83 +4%			
Basic	1	Express	Running belt items → chest	Underground, front, one lane	0.75 0.75 0.75			
Basic	1	Express	Running belt items → chest	Underground, behind, one lane	0.75 0.75 0.75			
Basic	1	Express	Running belt items → chest	Underground, front/behind, both lanes	0.75 0.75 0.75			
Basic	1	Express	Running belt items → chest	Underground, sideloaded onto empty belt	0.62 -7% 0.67 0.71 +6%			
Basic	1	Express	Running belt items → chest	Splitter, side, one lane, blocked exit	0.86 -2% 0.88 0.89 +1%			
Basic	1	Express	Running belt items → chest	Splitter, side, one lane, nonblocked exit	0.71 -3% 0.73 0.75 +3%			
Basic	1	Express	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	0.86 -2% 0.88 0.89 +1%			
Basic	1	Express	Running belt items → chest	Splitter, side, both lanes, blocked exit	0.89 0.89 0.89			
Basic	1	Express	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	0.75 0.75 0.75			
Basic	1	Express	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	0.86 -2% 0.88 0.89 +1%			
Basic	1	Express	Queued belt items → chest	Straight, side, near lane	0.89 0.89 0.89			

Insertor	Stack size	Belt Type	Setup Move type	Belt tile type	Items/second, all directions, all belt phases [7]	Dito, north-south direction, all belt phases [8]	Dito, west-east direction, all belt phases [9]	Dito, north-south direction, single belt phase [
Type		Type			Min [11] [12] Mean [13] Max [14] [15]	Min [16] [17] Mean [18] Max [19] [20]	Min [21] [22] Mean [23] Max [24] [25]	Min [26] [27] Mean [28] Max [29] [30]
Basic	1	Express	Queued belt items → chest	Straight, side, far lane	0.86	0.86	0.86	
Basic	1	Express	Queued belt items → chest	Straight, side, both lanes	0.89	0.89	0.89	
Basic	1	Express	Queued belt items → chest	Straight, side, sideloaded onto empty belt	0.82	-2% 0.84	0.86	+2%
Basic	1	Express	Queued belt items → chest	Straight, towards, one lane	0.86	0.86	0.86	
Basic	1	Express	Queued belt items → chest	Straight, towards, both lanes	0.86	0.86	0.86	
Basic	1	Express	Queued belt items → chest	Turn, outer lane	0.86	-4% 0.90	0.95	+6%
Basic	1	Express	Queued belt items → chest	Turn, inner lane	0.86	-4% 0.90	0.95	+6%
Basic	1	Express	Queued belt items → chest	Turn, both lanes	0.86	-4% 0.90	0.95	+6%
Basic	1	Express	Queued belt items → chest	Underground, side, one lane	0.86	-2% 0.88	0.89	+1%
Basic	1	Express	Queued belt items → chest	Underground, side, both lanes	0.89	0.89	0.89	
Basic	1	Express	Queued belt items → chest	Underground, front, one lane	0.86	-2% 0.88	0.89	+1%
Basic	1	Express	Queued belt items → chest	Underground, behind, one lane	0.86	0.86	0.86	
Basic	1	Express	Queued belt items → chest	Underground, front/behind, both lanes	0.86	-1% 0.87	0.89	+2%
Basic	1	Express	Queued belt items → chest	Underground, sideloaded onto empty belt	0.85	-2% 0.87	0.89	+2%
Basic	1	Express	Queued belt items → chest	Splitter, side, one lane, blocked exit	0.86	-2% 0.88	0.89	+1%
Basic	1	Express	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	0.86	-2% 0.88	0.89	+1%
Basic	1	Express	Queued belt items → chest	Splitter, side, both lanes, blocked exit	0.89	0.89	0.89	
Basic	1	Express	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	0.86	-2% 0.88	0.89	+1%
Basic	1	Fast	Chest → belt	Non-splitter	0.83	0.83	0.83	
Basic	1	Fast	Chest → belt	Splitter	0.83	0.83	0.83	
Basic	1	Fast	Running belt items → chest	Straight, side, near lane	0.83	-1% 0.84	0.85	+1%
Basic	1	Fast	Running belt items → chest	Straight, side, far lane	0.81	0.81	0.83	+2%
Basic	1	Fast	Running belt items → chest	Straight, side, both lanes	0.83	-1% 0.84	0.85	+1%
Basic	1	Fast	Running belt items → chest	Straight, side, sideloaded onto empty belt	0.75	-3% 0.77	0.78	+1%
Basic	1	Fast	Running belt items → chest	Turn, outer lane	0.78	0.78	0.78	
Basic	1	Fast	Running belt items → chest	Turn, inner lane	0.75	-1% 0.76	0.78	+3%
Basic	1	Fast	Running belt items → chest	Turn, both lanes	0.75	-3% 0.77	0.78	+1%
Basic	1	Fast	Running belt items → chest	Underground, side, one lane	0.78	-6% 0.83	0.88	+6%
Basic	1	Fast	Running belt items → chest	Underground, side, both lanes	0.78	-7% 0.84	0.88	+5%
Basic	1	Fast	Running belt items → chest	Underground, front, one lane	0.78	0.78	0.78	
Basic	1	Fast	Running belt items → chest	Underground, behind, one lane	0.78	0.78	0.78	
Basic	1	Fast	Running belt items → chest	Underground, front/behind, both lanes	0.78	0.78	0.78	
Basic	1	Fast	Running belt items → chest	Underground, sideloaded onto empty belt	0.68	-8% 0.74	0.78	+5%
Basic	1	Fast	Running belt items → chest	Splitter, side, one lane, blocked exit	0.86	-2% 0.88	0.89	+1%
Basic	1	Fast	Running belt items → chest	Splitter, side, one lane, nonblocked exit	0.78	-4% 0.81	0.83	+2%
Basic	1	Fast	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	0.86	-2% 0.88	0.89	+1%
Basic	1	Fast	Running belt items → chest	Splitter, side, both lanes, blocked exit	0.89	0.89	0.89	
Basic	1	Fast	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	0.83	0.83	0.83	
Basic	1	Fast	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	0.86	-2% 0.88	0.89	+1%
Basic	1	Fast	Queued belt items → chest	Straight, side, near lane	0.89	0.89	0.89	
Basic	1	Fast	Queued belt items → chest	Straight, side, far lane	0.86	0.86	0.86	
Basic	1	Fast	Queued belt items → chest	Straight, side, both lanes	0.89	0.89	0.89	
Basic	1	Fast	Queued belt items → chest	Straight, side, sideloaded onto empty belt	0.82	-2% 0.84	0.86	+2%
Basic	1	Fast	Queued belt items → chest	Straight, towards, one lane	0.86	0.86	0.86	
Basic	1	Fast	Queued belt items → chest	Straight, towards, both lanes	0.86	0.86	0.86	
Basic	1	Fast	Queued belt items → chest	Turn, outer lane	0.86	-4% 0.90	0.95	+6%
Basic	1	Fast	Queued belt items → chest	Turn, inner lane	0.86	-4% 0.90	0.95	+6%
Basic	1	Fast	Queued belt items → chest	Turn, both lanes	0.86	-4% 0.90	0.95	+6%
Basic	1	Fast	Queued belt items → chest	Underground, side, one lane	0.86	-2% 0.88	0.89	+1%
Basic	1	Fast	Queued belt items → chest	Underground, side, both lanes	0.89	0.89	0.89	
Basic	1	Fast	Queued belt items → chest	Underground, front, one lane	0.86	-2% 0.88	0.89	+1%
Basic	1	Fast	Queued belt items → chest	Underground, behind, one lane	0.86	0.86	0.86	
Basic	1	Fast	Queued belt items → chest	Underground, front/behind, both lanes	0.86	-1% 0.87	0.89	+2%
Basic	1	Fast	Queued belt items → chest	Underground, sideloaded onto empty belt	0.84	-3% 0.87	0.92	+6%
Basic	1	Fast	Queued belt items → chest	Splitter, side, one lane, blocked exit	0.86	-2% 0.88	0.89	+1%
Basic	1	Fast	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	0.86	-2% 0.88	0.89	+1%
Basic	1	Fast	Queued belt items → chest	Splitter, side, both lanes, blocked exit	0.89	0.89	0.89	
Basic	1	Fast	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	0.86	-2% 0.88	0.89	+1%
Basic	1	Basic	Chest → belt	Non-splitter	0.83	0.83	0.83	
Basic	1	Basic	Chest → belt	Splitter	0.83	0.83	0.83	
Basic	1	Basic	Running belt items → chest	Straight, side, near lane	0.93	0.93	0.93	
Basic	1	Basic	Running belt items → chest	Straight, side, far lane	0.83	-2% 0.85	0.86	+1%
Basic	1	Basic	Running belt items → chest	Straight, side, both lanes	0.93	0.93	0.93	
Basic	1	Basic	Running belt items → chest	Straight, side, sideloaded onto empty belt	0.80	-1% 0.81	0.83	+2%
Basic	1	Basic	Running belt items → chest	Turn, outer lane	0.68	-4% 0.71	0.75	+6%
Basic	1	Basic	Running belt items → chest	Turn, inner lane	0.81	-2% 0.83	0.85	+2%
Basic	1	Basic	Running belt items → chest	Turn, both lanes	0.68	-11% 0.76	0.85	+12%
Basic	1	Basic	Running belt items → chest	Underground, side, one lane	0.83	-3% 0.86	0.88	+2%
Basic	1	Basic	Running belt items → chest	Underground, side, both lanes	0.88	-1% 0.89	0.90	+1%
Basic	1	Basic	Running belt items → chest	Underground, front, one lane	0.83	0.83	0.83	
Basic	1	Basic	Running belt items → chest	Underground, behind, one lane	0.83	0.83	0.83	
Basic	1	Basic	Running belt items → chest	Underground, front/behind, both lanes	0.83	0.83	0.83	
Basic	1	Basic	Running belt items → chest	Underground, sideloaded onto empty belt	0.75	-5% 0.79	0.83	+5%
Basic	1	Basic	Running belt items → chest	Splitter, side, one lane, blocked exit	0.86	-2% 0.88	0.89	+1%
Basic	1	Basic	Running belt items → chest	Splitter, side, one lane, nonblocked exit	0.83	-6% 0.88	0.93	+6%
Basic	1	Basic	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	0.86	-2% 0.88	0.89	+1%
Basic	1	Basic	Running belt items → chest	Splitter, side, both lanes, blocked exit	0.89	0.89	0.89	
Basic	1	Basic	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	0.93	0.93	0.93	
Basic	1	Basic	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	0.86	-2% 0.88	0.89	+1%
Basic	1	Basic	Queued belt items → chest	Straight, side, near lane	0.89	0.89	0.89	
Basic	1	Basic	Queued belt items → chest	Straight, side, far lane	0.86	0.86	0.86	
Basic	1	Basic	Queued belt items → chest	Straight, side, both lanes	0.89	0.89	0.89	
Basic	1	Basic	Queued belt items → chest	Straight, side, sideloaded onto empty belt	0.82	-2% 0.84	0.86	+2%
Basic	1	Basic	Queued belt items → chest	Straight, towards, one lane	0.86	0.86	0.86	
Basic	1	Basic	Queued belt items → chest	Straight, towards, both lanes	0.86	0.86	0.86	
Basic	1	Basic	Queued belt items → chest	Turn, outer lane	0.86	-4% 0.90	0.95	+6%
Basic	1	Basic	Queued belt items → chest	Turn, inner lane	0.86	-4% 0.90	0.95	+6%
Basic	1	Basic	Queued belt items → chest	Turn, both lanes	0.86	-4% 0.90	0.95	+6%
Basic	1	Basic	Queued belt items → chest	Underground, side, one lane	0.86	-2% 0.88	0.89	+1%
Basic	1	Basic	Queued belt items → chest	Underground, side, both lanes	0.89	0.89	0.89	
Basic	1	Basic	Queued belt items → chest	Underground, front, one lane	0.86	-2% 0.88	0.89	+1%
Basic	1	Basic	Queued belt items → chest	Underground, behind, one lane	0.86	0.86	0.86	
Basic	1	Basic	Queued belt items → chest	Underground, front/behind, both lanes	0.86	-1% 0.87	0.89	+2%
Basic	1	Basic	Queued belt items → chest	Underground, sideloaded onto empty belt	0.84	-2% 0.86	0.89	+3%
Basic	1	Basic	Queued belt items → chest	Splitter, side, one lane, blocked exit	0.86	-2% 0.88	0.89	+1%
Basic	1	Basic	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	0.86	-2% 0.88	0.89	+1%
Basic	1	Basic	Queued belt items → chest	Splitter, side, both lanes, blocked exit	0.89	0.89	0.89	
Basic	1	Basic	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	0.86	-2% 0.88	0.89	+1%
Burner	1	Express	Chest → chest		0.59	0.59	0.60	+2%
Burner	1	Express	Chest → belt	Non-splitter	0.59	0.59	0.60	+2%
Burner	1	Express	Chest → belt	Splitter	0.59	0.59	0.60	+2%
Burner	1	Express	Running belt items → chest	Straight, side, near lane	0.45	-6% 0.48	0.50	+4%
Burner	1	Express	Running belt items → chest	Straight, side, far lane	0.50	0.50	0.50	
Burner	1	Express	Running belt items → chest	Straight, side, both lanes	0.42	-2% 0.43	0.44	+2%
Burner	1	Express	Running belt items → chest	Straight, side, sideloaded onto empty belt	0.50	-2% 0.51	0.53	+4%
Burner	1	Express	Running belt items → chest	Turn, outer lane	0.50	0.50	0.50	
Burner	1	Express	Running belt items → chest	Turn, inner lane	0.46	-6% 0.49	0.51	+4%
Burner	1	Express	Running belt items → chest	Turn, both lanes	0.46	-6% 0.49	0.51	+4%

Insertor	Stack size	Belt Type	Setup Move type	Belt tile type	Items/second, all directions, all belt phases [7]	Dito, north-south direction, all belt phases [8]	Dito, west-east direction, all belt phases [9]	Dito, north-south direction, single belt phase [
Type		Type			Min [11] [12] Mean [13] Max [14] [15]	Min [16] [17] Mean [18] Max [19] [20]	Min [21] [22] Mean [23] Max [24] [25]	Min [26] [27] Mean [28] Max [29] [30]
Burner	1	Express	Running belt items → chest	Underground, side, one lane	0.53 -4% 0.55 0.57 +4%			
Burner	1	Express	Running belt items → chest	Underground, side, both lanes	0.53 -4% 0.55 0.57 +4%			
Burner	1	Express	Running belt items → chest	Underground, front, one lane	0.50 0.50 0.50 0.50			
Burner	1	Express	Running belt items → chest	Underground, behind, one lane	0.50 0.50 0.50 0.50			
Burner	1	Express	Running belt items → chest	Underground, front/behind, both lanes	0.50 0.50 0.50 0.50			
Burner	1	Express	Running belt items → chest	Underground, sideloaded onto empty belt	0.46 -2% 0.47 0.50 +6%			
Burner	1	Express	Running belt items → chest	Splitter, side, one lane, blocked exit	0.63 -2% 0.64 0.65 +2%			
Burner	1	Express	Running belt items → chest	Splitter, side, one lane, nonblocked exit	0.50 -2% 0.51 0.53 +4%			
Burner	1	Express	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	0.62 -2% 0.63 0.64 +2%			
Burner	1	Express	Running belt items → chest	Splitter, side, both lanes, blocked exit	0.65 0.65 0.65 0.65			
Burner	1	Express	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	0.53 0.53 0.53 0.53			
Burner	1	Express	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	0.63 0.63 0.64 +2%			
Burner	1	Express	Queued belt items → chest	Straight, side, near lane	0.65 0.65 0.65 0.65			
Burner	1	Express	Queued belt items → chest	Straight, side, far lane	0.63 0.63 0.63 0.63			
Burner	1	Express	Queued belt items → chest	Straight, side, both lanes	0.65 0.65 0.65 0.65			
Burner	1	Express	Queued belt items → chest	Straight, side, sideloaded onto empty belt	0.58 -5% 0.61 0.63 +3%			
Burner	1	Express	Queued belt items → chest	Straight, towards, one lane	0.62 -2% 0.63 0.63			
Burner	1	Express	Queued belt items → chest	Straight, towards, both lanes	0.62 0.62 0.63 +2%			
Burner	1	Express	Queued belt items → chest	Turn, outer lane	0.61 -5% 0.64 0.67 +5%			
Burner	1	Express	Queued belt items → chest	Turn, inner lane	0.63 -3% 0.65 0.68 +5%			
Burner	1	Express	Queued belt items → chest	Turn, both lanes	0.61 -5% 0.64 0.68 +6%			
Burner	1	Express	Queued belt items → chest	Underground, side, one lane	0.63 -2% 0.64 0.65 +2%			
Burner	1	Express	Queued belt items → chest	Underground, side, both lanes	0.65 0.65 0.65 0.65			
Burner	1	Express	Queued belt items → chest	Underground, front, one lane	0.62 -2% 0.63 0.64 +2%			
Burner	1	Express	Queued belt items → chest	Underground, behind, one lane	0.62 -2% 0.63 0.63			
Burner	1	Express	Queued belt items → chest	Underground, front/behind, both lanes	0.61 -3% 0.63 0.64 +2%			
Burner	1	Express	Queued belt items → chest	Underground, sideloaded onto empty belt	0.61 -2% 0.62 0.64 +3%			
Burner	1	Express	Queued belt items → chest	Splitter, side, one lane, blocked exit	0.63 -2% 0.64 0.65 +2%			
Burner	1	Express	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	0.62 -2% 0.63 0.64 +2%			
Burner	1	Express	Queued belt items → chest	Splitter, side, both lanes, blocked exit	0.65 0.65 0.65 0.65			
Burner	1	Express	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	0.63 0.63 0.64 +2%			
Burner	1	Fast	Chest → belt	Non-splitter	0.59 0.59 0.60 +2%			
Burner	1	Fast	Chest → belt	Splitter	0.59 0.59 0.60 +2%			
Burner	1	Fast	Running belt items → chest	Straight, side, near lane	0.50 -6% 0.53 0.56 +6%			
Burner	1	Fast	Running belt items → chest	Straight, side, far lane	0.57 -2% 0.58 0.60 +3%			
Burner	1	Fast	Running belt items → chest	Straight, side, both lanes	0.50 -6% 0.53 0.56 +6%			
Burner	1	Fast	Running belt items → chest	Straight, side, sideloaded onto empty belt	0.55 -5% 0.58 0.60 +3%			
Burner	1	Fast	Running belt items → chest	Turn, outer lane	0.55 -2% 0.56 0.57 +2%			
Burner	1	Fast	Running belt items → chest	Turn, inner lane	0.53 -4% 0.55 0.57 +4%			
Burner	1	Fast	Running belt items → chest	Turn, both lanes	0.53 -4% 0.55 0.57 +4%			
Burner	1	Fast	Running belt items → chest	Underground, side, one lane	0.55 -5% 0.58 0.62 +7%			
Burner	1	Fast	Running belt items → chest	Underground, side, both lanes	0.55 -5% 0.58 0.62 +7%			
Burner	1	Fast	Running belt items → chest	Underground, front, one lane	0.55 0.55 0.55 0.55			
Burner	1	Fast	Running belt items → chest	Underground, behind, one lane	0.55 0.55 0.55 0.55			
Burner	1	Fast	Running belt items → chest	Underground, front/behind, both lanes	0.55 0.55 0.55 0.55			
Burner	1	Fast	Running belt items → chest	Underground, sideloaded onto empty belt	0.50 -6% 0.53 0.57 +8%			
Burner	1	Fast	Running belt items → chest	Splitter, side, one lane, blocked exit	0.63 -2% 0.64 0.65 +2%			
Burner	1	Fast	Running belt items → chest	Splitter, side, one lane, nonblocked exit	0.56 -2% 0.57 0.60 +5%			
Burner	1	Fast	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	0.62 -2% 0.63 0.64 +2%			
Burner	1	Fast	Running belt items → chest	Splitter, side, both lanes, blocked exit	0.65 0.65 0.65 0.65			
Burner	1	Fast	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	0.57 -2% 0.58 0.60 +3%			
Burner	1	Fast	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	0.63 0.63 0.64 +2%			
Burner	1	Fast	Queued belt items → chest	Straight, side, near lane	0.65 0.65 0.65 0.65			
Burner	1	Fast	Queued belt items → chest	Straight, side, far lane	0.63 0.63 0.63 0.63			
Burner	1	Fast	Queued belt items → chest	Straight, side, both lanes	0.65 0.65 0.65 0.65			
Burner	1	Fast	Queued belt items → chest	Straight, side, sideloaded onto empty belt	0.58 -5% 0.61 0.63 +3%			
Burner	1	Fast	Queued belt items → chest	Straight, towards, one lane	0.62 -2% 0.63 0.63			
Burner	1	Fast	Queued belt items → chest	Straight, towards, both lanes	0.62 0.62 0.63 +2%			
Burner	1	Fast	Queued belt items → chest	Turn, outer lane	0.61 -5% 0.64 0.67 +5%			
Burner	1	Fast	Queued belt items → chest	Turn, inner lane	0.63 -3% 0.65 0.68 +5%			
Burner	1	Fast	Queued belt items → chest	Turn, both lanes	0.61 -5% 0.64 0.68 +6%			
Burner	1	Fast	Queued belt items → chest	Underground, side, one lane	0.63 -2% 0.64 0.65 +2%			
Burner	1	Fast	Queued belt items → chest	Underground, side, both lanes	0.65 0.65 0.65 0.65			
Burner	1	Fast	Queued belt items → chest	Underground, front, one lane	0.61 -3% 0.63 0.64 +2%			
Burner	1	Fast	Queued belt items → chest	Underground, behind, one lane	0.63 0.63 0.63 0.63			
Burner	1	Fast	Queued belt items → chest	Underground, front/behind, both lanes	0.61 -3% 0.63 0.64 +2%			
Burner	1	Fast	Queued belt items → chest	Underground, sideloaded onto empty belt	0.61 -2% 0.62 0.65 +5%			
Burner	1	Fast	Queued belt items → chest	Splitter, side, one lane, blocked exit	0.63 -2% 0.64 0.65 +2%			
Burner	1	Fast	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	0.62 -2% 0.63 0.64 +2%			
Burner	1	Fast	Queued belt items → chest	Splitter, side, both lanes, blocked exit	0.65 0.65 0.65 0.65			
Burner	1	Fast	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	0.63 0.63 0.64 +2%			
Burner	1	Basic	Chest → belt	Non-splitter	0.59 0.59 0.60 +2%			
Burner	1	Basic	Chest → belt	Splitter	0.59 0.59 0.60 +2%			
Burner	1	Basic	Running belt items → chest	Straight, side, near lane	0.50 -4% 0.52 0.56 +8%			
Burner	1	Basic	Running belt items → chest	Straight, side, far lane	0.56 0.56 0.56 0.56			
Burner	1	Basic	Running belt items → chest	Straight, side, both lanes	0.50 -7% 0.54 0.56 +4%			
Burner	1	Basic	Running belt items → chest	Straight, side, sideloaded onto empty belt	0.59 -2% 0.60 0.62 +3%			
Burner	1	Basic	Running belt items → chest	Turn, outer lane	0.46 -10% 0.51 0.57 +12%			
Burner	1	Basic	Running belt items → chest	Turn, inner lane	0.57 -5% 0.60 0.62 +3%			
Burner	1	Basic	Running belt items → chest	Turn, both lanes	0.46 -16% 0.55 0.62 +13%			
Burner	1	Basic	Running belt items → chest	Underground, side, one lane	0.62 0.62 0.68 +10%			
Burner	1	Basic	Running belt items → chest	Underground, side, both lanes	0.62 -2% 0.63 0.68 +8%			
Burner	1	Basic	Running belt items → chest	Underground, front, one lane	0.57 0.57 0.57 0.57			
Burner	1	Basic	Running belt items → chest	Underground, behind, one lane	0.57 0.57 0.57 0.57			
Burner	1	Basic	Running belt items → chest	Underground, front/behind, both lanes	0.57 0.57 0.57 0.57			
Burner	1	Basic	Running belt items → chest	Underground, sideloaded onto empty belt	0.55 -5% 0.58 0.62 +7%			
Burner	1	Basic	Running belt items → chest	Splitter, side, one lane, blocked exit	0.63 -2% 0.64 0.65 +2%			
Burner	1	Basic	Running belt items → chest	Splitter, side, one lane, nonblocked exit	0.62 -5% 0.65 0.68 +5%			
Burner	1	Basic	Running belt items → chest	Splitter, front/behind, one lane, blocked exit	0.62 -2% 0.63 0.64 +2%			
Burner	1	Basic	Running belt items → chest	Splitter, side, both lanes, blocked exit	0.65 0.65 0.65 0.65			
Burner	1	Basic	Running belt items → chest	Splitter, side, both lanes, nonblocked exit	0.65 -3% 0.67 0.68 +1%			
Burner	1	Basic	Running belt items → chest	Splitter, front/behind, both lanes, blocked exit	0.63 0.63 0.64 +2%			
Burner	1	Basic	Queued belt items → chest	Straight, side, near lane	0.65 0.65 0.65 0.65			
Burner	1	Basic	Queued belt items → chest	Straight, side, far lane	0.63 0.63 0.63 0.63			
Burner	1	Basic	Queued belt items → chest	Straight, side, both lanes	0.65 0.65 0.65 0.65			
Burner	1	Basic	Queued belt items → chest	Straight, side, sideloaded onto empty belt	0.58 -5% 0.61 0.63 +3%			
Burner	1	Basic	Queued belt items → chest	Straight, towards, one lane	0.62 -2% 0.63 0.63			
Burner	1	Basic	Queued belt items → chest	Straight, towards, both lanes	0.62 0.62 0.63 +2%			
Burner	1	Basic	Queued belt items → chest	Turn, outer lane	0.61 -5% 0.64 0.67 +5%			
Burner	1	Basic	Queued belt items → chest	Turn, inner lane	0.63 -3% 0.65 0.68 +5%			
Burner	1	Basic	Queued belt items → chest	Turn, both lanes	0.61 -5% 0.64 0.68 +6%			
Burner	1	Basic	Queued belt items → chest	Underground, side, one lane	0.63 -2% 0.64 0.65 +2%			
Burner	1	Basic	Queued belt items → chest	Underground, side, both lanes	0.65 0.65 0.65 0.65			
Burner	1	Basic	Queued belt items → chest	Underground, front, one lane	0.62 -2% 0.63 0.64 +2%			
Burner	1	Basic	Queued belt items → chest	Underground, behind, one lane	0.62 -2% 0.63 0.63			
Burner	1	Basic	Queued belt items → chest	Underground, front/behind, both lanes	0.61 -3% 0.63 0.64 +2%			
Burner	1	Basic	Queued belt items → chest	Underground, sideloaded onto empty belt	0.61 -2% 0.62 0.64 +3%			
Burner	1	Basic	Queued belt items → chest	Splitter, side, one lane, blocked exit	0.63 -2% 0.64 0.65 +2%			

Inserter		Belt	Setup		Items/second, all directions, all belt phases [7]	Dito, north--south direction, all belt phases [8]	Dito, west--east direction, all belt phases [9]	Dito, north--south direction, single belt phase [
Type	Stack size	Type	Move type	Belt tile type	Min [11] [12] Mean [13] Max [14] [15]	Min [16] [17] Mean [18] Max [19] [20]	Min [21] [22] Mean [23] Max [24] [25]	Min [26] [27] Mean [28] Max [29] [30]
Burner	1	Basic	Queued belt items → chest	Splitter, front/behind, one lane, blocked exit	0.62 -2% 0.63 0.64 +2%			
Burner	1	Basic	Queued belt items → chest	Splitter, side, both lanes, blocked exit	0.65 0.65 0.65			
Burner	1	Basic	Queued belt items → chest	Splitter, front/behind, both lanes, blocked exit	0.63 0.63 0.64 +2%			

Setup	Tile type	Tile direction	Left lane	Right lane	Lanes drained (splitter)		
Chest → belt	Straight	Right	n/a	n/a	n/a	5x4=	20
	Right turn	Left					
	Left turn	Towards					
	UG entrance	Away					
	Splitter [111]						
Belt → chest	Straight	Right	Empty	Full	n/a	5x4x3=	60
	Right turn	Left	Full	Empty			
	Left turn	Towards	Full	Full			
	UG entrance	Away					
	UG exit						
Straight, sideload	Right	Right	Empty	Fed from side, early	n/a	4x12=	48
	Left	Left	Empty	Fed from side, late			
	Towards	Towards	Fed from back	Fed from side, early			
	Away	Away	Fed from back	Fed from side, late			
			Fed from side, early	Empty			
			Fed from side, early	Fed from back			
			Fed from side, early	Fed from side, early			
			Fed from side, early	Fed from side, late			
			Fed from side, late	Empty			
			Fed from side, late	Fed from back			
			Fed from side, late	Fed from side, early			
			Fed from side, late	Fed from side, late			
	UG entrance, side	Right	Right	Empty	Fed from side, early	n/a	4x5=
Left		Left	Fed from back	Fed from side, early			
Towards		Towards	Fed from side, early	Empty			
Away		Away	Fed from side, early	Fed from back			
			Fed from side, early	Fed from side, early			
UG exit, sideload	Right	Right	Empty	Fed from side, late	n/a	4x5=	20
	Left	Left	Fed from back	Fed from side, late			
	Towards	Towards	Fed from side, late	Empty			
	Away	Away	Fed from side, late	Fed from back			
			Fed from side, late	Fed from side, late			
Splitter [112]	Right	Right	Empty	Full	Close	4x2x2=	16
	Left	Left	Full	Empty	Other		
	Towards	Towards					
	Away	Away					
Splitter [113]	Right	Right	Full	Full	Close/Close	4x4=	16
	Left	Left			Close/Other		
	Towards	Towards			Other/Close		
	Away	Away			Other/Other		
Belt → chest total:							180

[Test savegame](#)

[Supporting mod, mainly for exporting test results to this spreadsheet](#)

General

Test rigs are created by enumerating all possible source and target tile setups. In the "all belt tiles" sheet they are measured individually, but in the "detailed" and "summary" sheets they are grouped so that similar setups (e.g. belt moving left → right and right → left past an inserter) contribute to a single min/mean/max measurement.

To determine throughput we measure how long it takes to do a certain number of inserter hand turns, and then divide the number of moved items by that. Due to interactions with the environment, one hand turn can be slightly different from the next, but eventually the inserter will repeat itself; we call the sequence from a hand turn to the next identical one the "natural cycle" of the inserter. Testing shows the natural cycles commonly are 1-3 hand turns, but they can also be 4 or 5 or possibly even longer. The goal is to measure the time over a whole number of natural cycles, but to avoid overly long test times we compromise to 12 hand turns. There is also a "warmup" period of 6 hand turns before measurement starts to let the inserter settle into its natural cycle; testing shows longer warmups very rarely improves accuracy.

Since Factorio is fully deterministic measurements are very precise: If the natural cycle divides 12 there is no measurement error at all, otherwise there might be ± 1 tick error. That means the spans between min and max for many measurements are due to other factors, discussed below.

Burner inserters are affected by refueling. Their speed often increase by a few ticks when they are refueled, but it can also decrease slightly. Here that source of error is eliminated by refueling only between test runs.

Filter and stack filter inserters only differ from their non-filter brethren by functionality. They should have exactly the same performance in every way and are hence not measured.

Chest → chest

Testing belt and chest → chest throughput is straightforward since they only depend in the belt/inserter type.

With "chest" we mean any non-belt item container, like machine inputs or outputs, cargo wagons, and chests. Infinite chests are used in all test rigs.

Chest → belt

Chest → belt are tested for every different type of belt tile, but only for output onto empty belts that don't get backed up. There aren't that many, since inserters always put items on the far or right side.

Tests are also done for three different stack sizes, corresponding to the inserter capacity bonus tech levels when non-stack inserters gain capacity.

Belt → chest

There is a total of 180 different belt tile setups if we consider items on one or both lanes (see the "belt tile type enumeration" sheet). Only long-handed inserters can use all of them - for other inserters many are invalid since the inserter itself gets in the way (it is e.g. not possible to have a straight belt tile full of moving items going away from the inserter). The "all belt tile types" sheet lists them all and groups them for the "detailed" sheet (also leaving out many setups that aren't considered important enough). They are grouped further for the "summary" sheet through a table in "lookup tables".

The following factors are taken into consideration:

- Belt item phase: Since the inserter hand homes in on the items on the belt, the exact positions of the items when the hand is ready to pick matters. On a fully compressed belt, items in a lane can be in any of $256/4=64$ positions, aka phase shift, before they repeat. Since it is impractical to time inserters and belt phase in real gameplay, we aim to test all different phase shifts to get a reliable minimum throughput. For an exhaustive test, we should therefore test all 64 phase shifts per lane (i.e. $64*64=4096$ test runs for tests using both lanes).

Here phase shifts are accomplished by releasing the belt items on a specific game tick relative to the inserter activation. Since items are moved a multiple of 8 positions per tick on belts of any type, that means we can only test $64/\text{gcd}(64,8)=8$ different phase shifts per lane. For tests with items in both lanes it becomes $8*8=64$ runs. (Releasing items with higher precision than this is possible but difficult.)

Basic and express belts have speeds 8 and 24 positions/tick respectively. $\gcd(64,8)=\gcd(64,24)=8$, so for those belt types we get the 8 phase shifts through timing only. However, fast belts have speed 16, and since $\gcd(64,16)=16$ we need two different release mechanisms per lane to get all 8 phase shifts. That is done by alternating between "early" and "late" sideloading of a belt tile.

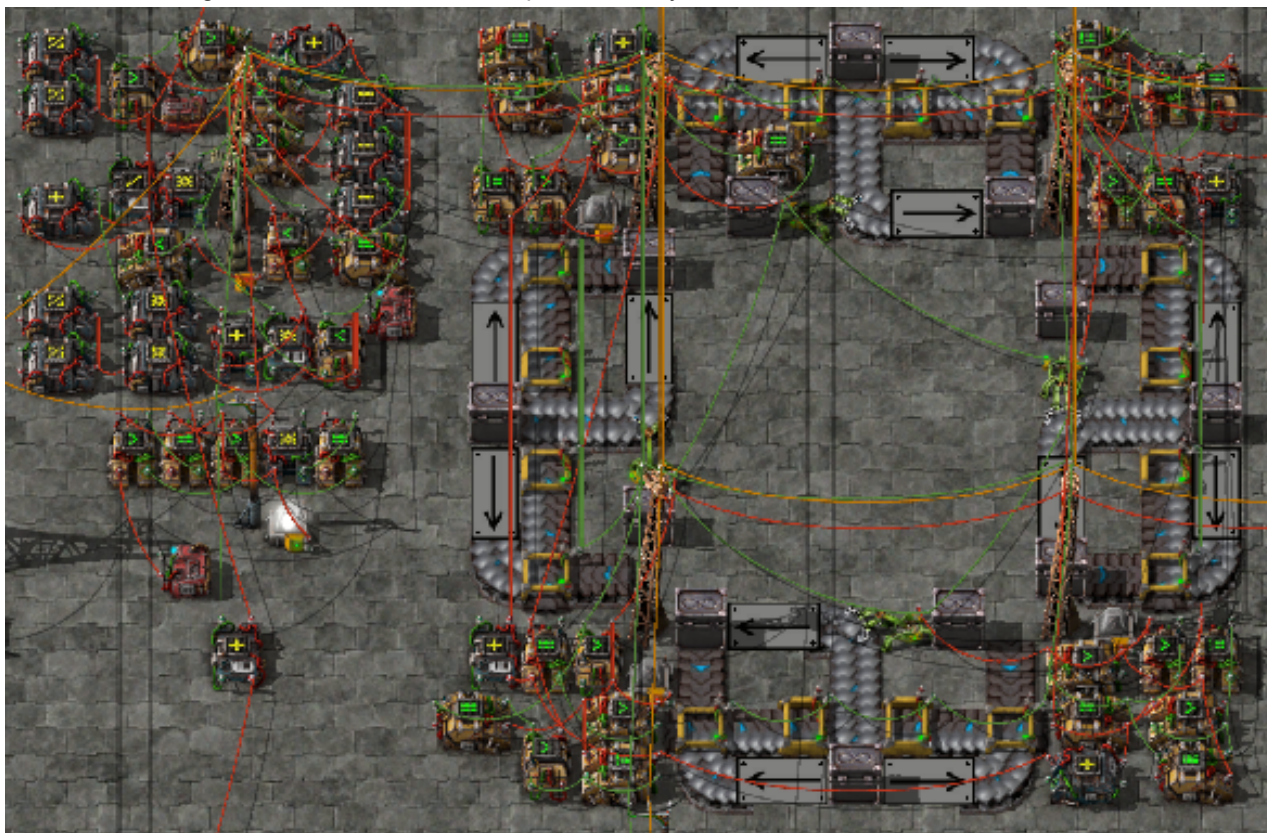
- Inserter directions: Factorio has had bugs that causes the orientation of an inserter to affect its hand movement in subtle ways, which can affect the throughput. These issues have been addressed over time, but some still remain. The test rigs are rotated in all four cardinal directions to cover this, and some tests are repeated in specific directions to tell if the variance is due to direction or something else.
- Belt compression: Measurements are made with belt lanes either empty or fully compressed. Partial compression will affect throughput, but this is not measured.
- Running vs queued belts: The items can either pass by or stop on the belt tile if it gets backed up. We only test the two extremes; either a belt where items never back up or one where they always do. Belt item phase is only taken into consideration for running belts.
- Stack size: Like for chest \rightarrow belt, we test three different stack sizes.
- Mirror symmetries etc: Whether items e.g. pass by the inserter left \rightarrow right or right \rightarrow left ought not matter. Still no assumptions are made regarding that, and all those different cases are treated separately in the belt tile type enumeration.

Belt \rightarrow belt

Measuring this requires building every combination of the belt \rightarrow chest test rigs (for the source tile) and chest \rightarrow belt (for the target tile), i.e. an order of magnitude more test rigs than all of the above combined. It is also very rarely a useful setup. Hence it is left out completely.

The test savegame

One of 1600+ test rigs with the measurement capture circuitry:



Tests are grouped into "testsuites", where each one generally tests a single type of inserter with a single belt. There is an "experimental" testsuite that tests miscellaneous things which is used for the "all belt tile types" sheet.

A test rig tests all four cardinal directions. In all testsuites except the "experimental" one, test rigs are grouped and the min, max, sum and count are collected for the whole group.

Global test settings:

I: Stack size in inserter hand.

W: Number of "warmup" inserter hand turns.

A: Number of hand turns to measure over.

B: Number of times to repeat the A cycle. This is usually 1 but can be set higher to check how well A works.

"1", "2", "3", "4": Controls which test rig directions to enable in the test runs: "1" enables all the inserters that move items north → south, "2" for east → west, "3" for south → north, "4" for west → east.

O: Test run to start at.

V: Test run to end at.

Control signals:

E: Enable tests for a new run.

S: Saves the test results for later comparison.

A: Enable alerts when saved and latest test results are different.

Full test run for "detailed" sheet:

1. Set the constant combinator at "Main test settings" to I=3, W=6, A=12, B=1, O=0, V=64, and "1", "2", "3", "4" to 1.
2. Enter `/activate-input-loaders` in the Lua console to measure running belt items.
3. Enable the E=1 combinator and wait for all testsuites to finish by watching for the "E" programmable speaker alerts. This runs 64 test cycles to go through all belt item phases and takes ~1½h.
4. Enter `/export-results`. This writes out a results-tick-xxx.csv file to the script-output directory that can be imported into the "detailed" sheet.
5. Repeat steps 2-4 for I=2 and I=1 to cover the different stack sizes.
6. Optionally repeat some of the tests above with different test settings, e.g. for specific inserter directions by setting some of "1", "2", "3", "4" to zero.
7. Set I=3, O=64, V=65, and "1", "2", "3", "4" to 1.
8. Enter `/deactivate-input-loaders`. This stops all loaders from belt to chest, so that queued belt items→chest can be measured.
9. Repeat steps 2-6. There is only one test cycle each since belt item phase doesn't matter for queued belts.

Test runs for the "all belt tile types" sheet are similar but use the "experimental" testsuite, which is exported to csv with `/export-results-experimental`. This testsuite also measures belt speeds.

Chest → chest		Blocked belt	FALSE	Test group id	-1	
Stack size	Belt type	burner-inserter	inserter	big-handed-inserter	fast-inserter	stack-inserter
1		0.5940594059	0.8333333333	1.176470588	2.307692308	
2		1.188118812	1.666666667	2.352941176	4.615384615	4.615384615
3		1.782178218	2.5	3.529411765	6.923076923	
4						9.230769231
5						
6						
8						
10						
12						27.69230769
Chest → belt		Blocked belt	FALSE	Test group id	0	
Stack size	Belt type	burner-inserter	inserter	big-handed-inserter	fast-inserter	stack-inserter
1	transport-belt	0.5940594059	0.8333333333	1.176470588	2.307692308	
1	fast-transport-belt	0.5940594059	0.8333333333	1.176470588	2.307692308	
1	express-transport-belt	0.5940594059	0.8333333333	1.176470588	2.307692308	
2	transport-belt	1.176470588	1.643835616	2.307692308	4.444444444	4.444444444
2	fast-transport-belt	1.176470588	1.643835616	2.307692308	4.444444444	4.444444444
2	express-transport-belt	1.176470588	1.643835616	2.307692308	4.444444444	4.444444444
3	transport-belt	1.651376147	2.25	3.050847458	5.294117647	
3	fast-transport-belt	1.714285714	2.368421053	3.272727273	6	
3	express-transport-belt	1.747572816	2.432432432	3.396226415	6.428571429	
4	transport-belt					5.714285714
4	fast-transport-belt					7.058823529
4	express-transport-belt					7.741935484
5	transport-belt					
5	fast-transport-belt					
5	express-transport-belt					
6	transport-belt					
6	fast-transport-belt					
6	express-transport-belt					
8	transport-belt					
8	fast-transport-belt					
8	express-transport-belt					
10	transport-belt					
10	fast-transport-belt					
10	express-transport-belt					
12	transport-belt					6.79245283
12	fast-transport-belt					10.90909091
12	express-transport-belt					13.84615385
Running belt items → chest		Blocked belt	FALSE	Test group id	2	
Stack size	Belt type	burner-inserter	inserter	big-handed-inserter	fast-inserter	stack-inserter

1	transport-belt	0.5	0.8108108108	1.071428571	2.25	
1	fast-transport-bel	0.5	0.75	1	2.142857143	
1	express-transport	0.45	0.6818181818	0.9375	1.875	
2	transport-belt	1	1.5	2.142857143	3.75	3.75
2	fast-transport-bel	0.9677419355	1.428571429	1.875	3.75	3.75
2	express-transport	0.8823529412	1.304347826	1.764705882	3.461538462	3.461538462
3	transport-belt	1.384615385	2.045454545	2.647058824	4.5	
3	fast-transport-bel	1.451612903	2.045454545	2.8125	5	
3	express-transport	1.323529412	1.956521739	2.647058824	4.5	
4	transport-belt					5
4	fast-transport-belt					6
4	express-transport-belt					6
5	transport-belt					
5	fast-transport-belt					
5	express-transport-belt					
6	transport-belt					
6	fast-transport-belt					
6	express-transport-belt					
8	transport-belt					
8	fast-transport-belt					
8	express-transport-belt					
10	transport-belt					
10	fast-transport-belt					
10	express-transport-belt					
12	transport-belt					6.428571429
12	fast-transport-belt					10
12	express-transport-belt					10

[1] Rounded down to 2 decimal places

[2] The background is red when a minority of the samples are slower than the rest, i.e. the mean is significantly closer to the maximum.

Bold red text means the inserter is known to get stuck and not progress at all. I.e. the real minimum is zero, but this then shows the minimum for the cases when it doesn't get stuck.

[3] Percent below the mean

[4] The background is blue when the variance, i.e. the difference between min and max, is high.

[5] The background is green when a minority of the samples are faster than the rest, i.e. the mean is significantly closer to the minimum.

[6] Percent above the mean

[7] Rounded down to 2 decimal places

[8] Text is light grey where equal to the all directions, all belt phases measurements.

[9] Text is light grey where equal to the all directions, all belt phases measurements.

[10] Text is light grey where equal to the all directions measurements.

Since this only measures a single direction and belt phase, it shows the variance due to test grouping.

[11] The background is red when a minority of the samples are slower than the rest, i.e. the mean is significantly closer to the maximum.

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[12] Percent below the mean

[13] The background is blue when the variance, i.e. the difference between min and max, is high.

[14] The background is green when a minority of the samples are faster than the rest, i.e. the mean is significantly closer to the minimum.

[15] Percent above the mean

[16] The background is red when a minority of the samples are slower than the rest, i.e. the mean is significantly closer to the maximum.

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[17] Percent below the mean

[18] The background is blue when the variance, i.e. the difference between min and max, is high.

[19] The background is green when a minority of the samples are faster than the rest, i.e. the mean is significantly closer to the minimum.

[20] Percent above the mean

[21] The background is red when a minority of the samples are slower than the rest, i.e. the mean is significantly closer to the maximum.

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[22] Percent below the mean

[23] The background is blue when the variance, i.e. the difference between min and max, is high.

[24] The background is green when a minority of the samples are faster than the rest, i.e. the mean is significantly closer to the minimum.

[25] Percent above the mean

[26] The background is red when a minority of the samples are slower than the rest, i.e. the mean is significantly closer to the maximum.

[27] Percent below the mean

[28] The background is blue when the variance, i.e. the difference between min and max, is high.

[29] The background is green when a minority of the samples are faster than the rest, i.e. the mean is significantly closer to the minimum.

[30] Percent above the mean

[31] Sideload early consistently faster than sideloading late.

[32] Variance mostly due to different turn directions.

[33] Variance mostly due to belt item phase.

[34] Variance due to belt item phase.

[35] UG exit significantly faster than UG entrance.

[36] Variance due to belt item phase.

[37] Inserters stuck most of the time when items are coming in from straight ahead.

[38] Inserters stuck when items are coming in from straight ahead and leaving to the left.

[39] Inserters stuck when items are coming in from straight ahead and leaving to the left.

[40] Rounded down to 2 decimal places

[41] Text is light grey where equal to the all directions measurements.

[42] Text is light grey where equal to the all directions measurements.

[43] Text is light grey where equal to the all directions measurements.

[44] Text is light grey where equal to the all directions measurements.

[45] The lanes filled with items. "Near" means the lane closest to the inserter, "far" the other one, and "both" for both lanes.

For sideloaded setups, "early" and "late" indicates where the sideloaded items enter the lane. "Early" means towards the back in the belt move direction, "late" towards the front.

E.g. if a belt is sideloaded on the right side in the move direction, "early" would mean the belt coming in from the right got the items in its left lane, and "late" that it got them in its right lane.

When both lanes are active, there is one "early" or "late" for each lane, listed as <left>/<right> where the sides refer to the lanes as seen in the belt move direction. "Back" means that lane is loaded normally from the back end.

Splitters have two input/output positions for each lane as well. They are listed similarly, where "close" means that the input/output closest to the inserter are in use, and "other" for the other input/output.

[46] The direction in which the belt moves items, as seen from the inserter.

[47] The background is red when a minority of the samples are slower than the rest, i.e. the mean is significantly closer to the maximum.

Red text means the inserter is known to get stuck and not progress at all. I.e. the real minimum is zero, but this then shows the minimum for the cases when it doesn't get stuck.

[48] Percent below the mean

[49] The background is blue when the variance, i.e. the difference between min and max, is high.

[50] The background is green when a minority of the samples are faster than the rest, i.e. the mean is significantly closer to the minimum.

[51] Percent above the mean

[52] The background is red when a minority of the samples are slower than the rest, i.e. the mean is significantly closer to the maximum.

Red text means the inserter is known to get stuck and not progress at all. I.e. the real minimum is zero, but this then shows the minimum for the cases when it doesn't get stuck.

[53] Percent below the mean

[54] The background is blue when the variance, i.e. the difference between min and max, is high.

[55] The background is green when a minority of the samples are faster than the rest, i.e. the mean is significantly closer to the minimum.

[56] Percent above the mean

[57] The background is red when a minority of the samples are slower than the rest, i.e. the mean is significantly closer to the maximum.

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[58] Percent below the mean

[59] The background is blue when the variance, i.e. the difference between min and max, is high.

[60] The background is green when a minority of the samples are faster than the rest, i.e. the mean is significantly closer to the minimum.

[61] Percent above the mean

[62] The background is red when a minority of the samples are slower than the rest, i.e. the mean is significantly closer to the maximum.

Bold red text means the inserter is known to get stuck and not progress at all. I.e. the real minimum is zero, but this then shows the minimum for the cases when it doesn't get stuck.

[63] Percent below the mean

[64] The background is blue when the variance, i.e. the difference between min and max, is high.

[65] The background is green when a minority of the samples are faster than the rest, i.e. the mean is significantly closer to the minimum.

[66] Percent above the mean

[67] The background is red when a minority of the samples are slower than the rest, i.e. the mean is significantly closer to the maximum.

Bold red text means the inserter is known to get stuck and not progress at all. I.e. the real minimum is zero, but this then shows the minimum for the cases when it doesn't get stuck.

[68] Percent below the mean

[69] The background is blue when the variance, i.e. the difference between min and max, is high.

[70] The background is green when a minority of the samples are faster than the rest, i.e. the mean is significantly closer to the minimum.

[71] Percent above the mean

[72] Inserters put items on the input side in all orientations except when the splitter is facing away. In that case they put items on the output side.

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[75] Inserters put items on the input side in all orientations except when the splitter is facing away. In that case they put items on the output side.

[76] Since items are placed on the output side and won't go through the splitter in this case, it effectively behaves as a plain belt (which measurements confirm).

[77] Inserters in all directions get stuck for a few belt item phases.

[78] TODO: Before 0.17.44 these were excluded because they lowered the minimum throughput of the group a lot (it was 11.25), and they are uncommon. Now the throughput is even lower elsewhere, so they should be included.

[79] Inserters always pick from the exit side, regardless of orientation.

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[106] Inserters always pick from the exit side, regardless of orientation.

[107] Inserters always pick from the exit side, regardless of orientation.

[108] Inserters always pick from the exit side, regardless of orientation.

[109] Inserters always pick from the exit side, regardless of orientation.

[110] Inserters always pick from the exit side, regardless of orientation.

[111] Inserters put items on the input side in all orientations except when the splitter is facing away. In that case they put items on the output side.

Hence items must be drained opposite the inserter when facing away, and assuming items pass through the splitter just as quickly when crossing sides as when not, it doesn't matter which side it is drained on in the other orientations.

[112] Inserters always pick from the exit side, regardless of orientation.

[113] Inserters always pick from the exit side, regardless of orientation.