

# Tower Workstations Compared

	<b>Velocity Micro ProMagix HD60 workstation</b> <small>(one 3.2GHz Intel Core i9-12900K 16-core CPU, NVIDIA RTX A4000, 32GB RAM, 2TB SSD)</small>	<b>HP Z2 Tower G8 workstation</b> <small>(one 3.5GHz Intel Core i9-11900K 8-core CPU, NVIDIA RTX A4000, 32GB RAM, 1TB SSD)</small>	<b>Lenovo ThinkStation P620 workstation</b> <small>(one 2.7GHz AMD Ryzen Threadripper Pro 3995WX 64-core CPU, NVIDIA Quadro RTX6000, 32GB RAM, 512GB SSD)</small>	<b>Velocity Micro ProMagix HD60 ATX AMD workstation</b> <small>(one 3.5GHz AMD Ryzen 9 3950X 16-core CPU, NVIDIA Quadro RTX 4000, 32GB RAM, 1TB SSD, 2TB SAT)</small>	<b>Velocity Micro ProMagix HD60</b> <small>(one 3.6GHz Intel Core i9-9900K 8-core CPU over-clocked to 5.1GHz, NVIDIA Quadro RTX6000, 32GB RAM, 512GB SSD, 2TB SATA HD)</small>	<b>@Xi MTower PCIe</b> <small>(one 3.5GHz Intel Core i9-9920X 12-core CPU over-clocked to 4.3GHz, NVIDIA Quadro RTX5000, 32GB RAM, 512GB SSD)</small>
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Price as tested	\$5,428.00	\$2,875.00	\$12,878	\$4,733.00	\$6,328	\$6,400
Date tested	6/21/2022	9/24/21	12/18/20	12/11/19	4/21/19	2/28/19
Operating System	Windows 11 Home	Windows 10 Pro	Windows 10 Pro	Windows 10 Pro	Windows 10 Pro	Windows 10 Pro
SPECviewperf 13 (higher is better)						
3dsmax-05	279.58	233.93	277.80	189.84	290.23	229.42
catia-04	417.71	374.74	375.67	264.39	394.33	325.82
creo-01	368.67	343.23	385.90	246.92	388.38	311.19
energy-01	68.55	66.20	78.48	37.38	76.95	53.76
maya-04	420.88	392.19	387.76	264.91	440.31	347.30
medical-01	147.97	140.78	160.60	81.12	123.16	104.42
showcase-01	155.28	141.19	190.35	114.26	192.20	150.04
snx-03	488.40	454.01	985.51	316.07	497.17	574.11
sw-04	241.56	232.46	195.02	154.34	220.40	179.19
SPECapc SOLIDWORKS 2015 (higher is better)						
Graphics Composite	n/a	n/a	4.63	4.82	6.26	5.09
Shaded Graphics Sub-Composite	n/a	n/a	2.83	2.95	4.09	3.40
Shaded w/Edges Graphics Sub-Composite	n/a	n/a	3.47	3.66	5.03	4.26
Shaded w/ RealView Graphics Sub-Composite	n/a	n/a	3.34	3.48	4.64	3.83
Shaded w/Edges using RealView Sub-Composite	n/a	n/a	4.03	4.23	5.24	4.25
Shaded using RealView and Shadows Sub-Composite	n/a	n/a	3.84	4.01	5.33	4.36
Shaded with Edges using RealView and Shadows Graphics Sub-Composite	n/a	n/a	4.27	4.48	5.56	4.47
Shaded using RealView and Shadows and Ambient Occlusion Graphics Sub-Composite	n/a	n/a	12.86	12.82	17.29	13.58
Shaded with Edges using RealView and Shadows and Ambient Occlusion Graphics Sub-Composite	n/a	n/a	12.60	12.80	15.95	12.57
Wireframe Graphics Sub-Composite	n/a	n/a	3.60	3.85	4.61	3.66
CPU Composite	n/a	n/a	5.46	4.05	4.44	4.50
SPECwpc v3.0 (higher is better)						
Media and Entertainment	4.78	3.18	5.92	3.89	3.55	3.69
Product Development	5.10	3.24	4.78	3.50	3.24	3.37
Life Sciences	5.20	3.05	4.21	3.70	2.92	3.09
Financial Services	4.83	2.59	9.43	5.84	3.12	3.23
Energy	3.29	1.85	5.15	2.72	1.96	2.38
General Operations	3.44	2.31	2.14	2.45	2.51	2.36
Time						
Autodesk Render Test (in seconds, lower is better)	19.4	18.9	25.00	23.9	24.10	23.80

Numbers in blue indicate best recorded results. Numbers in red indicate worst recorded results.