

Swiveling-Sine-Plate-Carrier



With the swiveling sine plate carrier, magnet clamping plates can be swiveled along the longitudinal axis. Setting any angle from -6° to $+90^\circ$ is possible using a scale. The precision depends on the how the scale is set up and read. When making settings according to the sine function, calculations can be made within the angular range from -6° to $+45^\circ$ with an angular precision of $\pm 1'$. The measurement point is 100 mm from the center of the longitudinal axis. A hardened steel plate on the cast base housing and a hardened steel shaft as positioning line create the fixed points for the end dimensions. The angular axis is fixed using two clamping points and cannot change during operation under normal conditions. The contact surface is ground down at the 0° position when using a 12 mm end dimension.

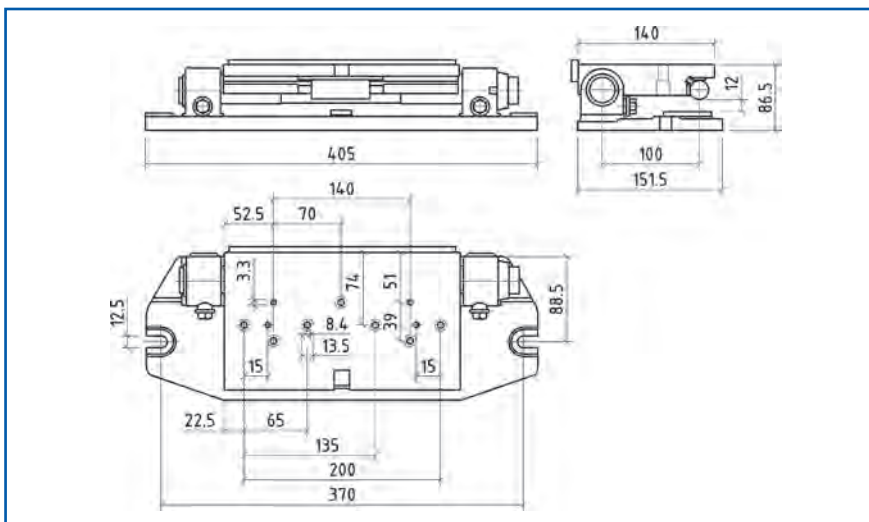
Instructions for use:

The distance from the measurement point to the middle of the swivel axis is exactly 100 mm. The sine values for the required angle times 100 is equal to the end dimension height H1. $H1 = 100 \times \sin a$. (a sine table is provided with the device)

To achieve the desired angular setting, the base end dimension on the plate carrier of 12 mm must be taken into consideration.

Technical data:

- Settings according to scale from -6° to $+90^\circ$
- Settings according sine function from -6° to $+45^\circ$
- Weight of the plate carrier: approx. 20 kg
- Max. dimensions of the magnet clamping plate: 175 x 450 mm
- Notches in the base housing for fastening bolts or screws are provided to fasten the device to the machine table.



Calculated end dimension height H1, calculate intermediate values with the formula [H1 = 100 x sin a]
 Total end dimension = H1 + 12 mm

	Minutes											
	0	5	10	15	20	25	30	35	40	45	50	55
0	0,0000	0,1454	0,2909	0,4363	0,5818	0,7272	0,8727	1,0181	1,1635	1,3090	1,4544	1,5998
1	1,7452	1,8907	2,0361	2,1815	2,3269	2,4723	2,6177	2,7631	2,9085	3,0539	3,1992	3,3446
2	3,4899	3,6353	3,7806	3,9260	4,0713	4,2166	4,3619	4,5072	4,6525	4,7978	4,9431	5,0883
3	5,2336	5,3788	5,5241	5,6693	5,8145	5,9597	6,1049	6,2500	6,3952	6,5403	6,6854	6,8306
4	6,9756	7,1207	7,2658	7,4108	7,5559	7,7009	7,8459	7,9909	8,1359	8,2808	8,4258	8,5707
5	8,7156	8,8605	9,0053	9,1502	9,2950	9,4398	9,5846	9,7293	9,8741	10,0188	10,1635	10,3082
6	10,4528	10,5975	10,7421	10,8867	11,0313	11,1758	11,3203	11,4648	11,6093	11,7537	11,8982	12,0426
7	12,1869	12,3313	12,4756	12,6199	12,7642	12,9084	13,0526	13,1968	13,3410	13,4851	13,6292	13,7733
8	13,9173	14,0613	14,2053	14,3493	14,4932	14,6371	14,7809	14,9248	15,0686	15,2123	15,3561	15,4998
9	15,6434	15,7871	15,9307	16,0743	16,2178	16,3613	16,5048	16,6482	16,7916	16,9350	17,0783	17,2216
10	17,3648	17,5080	17,6512	17,7944	17,9375	18,0805	18,2236	18,3665	18,5095	18,6524	18,7953	18,9381
11	19,0809	19,2237	19,3664	19,5090	19,6517	19,7942	19,9368	20,0793	20,2218	20,3642	20,5065	20,6489
12	20,7912	20,9334	21,0756	21,2178	21,3599	21,5019	21,6440	21,7859	21,9279	22,0697	22,2116	22,3534
13	22,4951	22,6368	22,7784	22,9200	23,0616	23,2031	23,3445	23,4859	23,6273	23,7686	23,9098	24,0510
14	24,1922	24,3333	24,4743	24,6153	24,7563	24,8972	25,0380	25,1788	25,3195	25,4602	25,6008	25,7414
15	25,8819	26,0224	26,1628	26,3031	26,4434	26,5837	26,7238	26,8640	27,0040	27,1440	27,2840	27,4239
16	27,5637	27,7035	27,8432	27,9829	28,1225	28,2620	28,4015	28,5410	28,6803	28,8196	28,9589	29,0981
17	29,2372	29,3762	29,5152	29,6542	29,7930	29,9318	30,0706	30,2093	30,3479	30,4864	30,6249	30,7633
18	30,9017	31,0400	31,1782	31,3164	31,4545	31,5925	31,7305	31,8684	32,0062	32,1439	32,2816	32,4193
19	32,5568	32,6943	32,8317	32,9691	33,1063	33,2435	33,3807	33,5178	33,6547	33,7917	33,9285	34,0653
20	34,2020	34,3387	34,4752	34,6117	34,7481	34,8845	35,0207	35,1569	35,2931	35,4291	35,5651	35,7010
21	35,8368	35,9725	36,1082	36,2438	36,3793	36,5148	36,6501	36,7854	36,9206	37,0557	37,1908	37,3258
22	37,4607	37,5955	37,7302	37,8649	37,9994	38,1339	38,2683	38,4027	38,5369	38,6711	38,8052	38,9392
23	39,0731	39,2070	39,3407	39,4744	39,6080	39,7415	39,8749	40,0082	40,1415	40,2747	40,4078	40,5408
24	40,6737	40,8065	40,9392	41,0719	41,2045	41,3369	41,4693	41,6016	41,7338	41,8660	41,9980	42,1300
25	42,2618	42,3936	42,5253	42,6569	42,7884	42,9198	43,0511	43,1823	43,3135	43,4445	43,5755	43,7063
26	43,8371	43,9678	44,0984	44,2289	44,3593	44,4896	44,6198	44,7499	44,8799	45,0098	45,1397	45,2694
27	45,3990	45,5286	45,6580	45,7874	45,9166	46,0458	46,1749	46,3038	46,4327	46,5615	46,6901	46,8187
28	46,9472	47,0755	47,2038	47,3320	47,4600	47,5880	47,7159	47,8436	47,9713	48,0989	48,2263	48,3537
29	48,4810	48,6081	48,7352	48,8621	48,9890	49,1157	49,2424	49,3689	49,4953	49,6217	49,7479	49,8740
30	50,0000	50,1259	50,2517	50,3774	50,5030	50,6285	50,7538	50,8791	51,0043	51,1293	51,2543	51,3791
31	51,5038	51,6284	51,7529	51,8773	52,0016	52,1258	52,2499	52,3738	52,4977	52,6214	52,7450	52,8685
32	52,9919	53,1152	53,2384	53,3615	53,4844	53,6072	53,7300	53,8526	53,9751	54,0974	54,2197	54,3419
33	54,4639	54,5858	54,7076	54,8293	54,9509	55,0724	55,1937	55,3149	55,4360	55,5570	55,6779	55,7987
34	55,9193	56,0398	56,1602	56,2805	56,4007	56,5207	56,6406	56,7604	56,8801	56,9997	57,1191	57,2384
35	57,3576	57,4767	57,5957	57,7145	57,8332	57,9518	58,0703	58,1886	58,3069	58,4250	58,5429	58,6608
36	58,7785	58,8961	59,0136	59,1310	59,2482	59,3653	59,4823	59,5991	59,7159	59,8325	59,9489	60,0653
37	60,1815	60,2976	60,4136	60,5294	60,6451	60,7607	60,8761	60,9915	61,1067	61,2217	61,3367	61,4515
38	61,5661	61,6807	61,7951	61,9094	62,0235	62,1376	62,2515	62,3652	62,4789	62,5923	62,7057	62,8189
39	62,9320	63,0450	63,1578	63,2705	63,3831	63,4955	63,6078	63,7200	63,8320	63,9439	64,0557	64,1673
40	64,2788	64,3901	64,5013	64,6124	64,7233	64,8341	64,9448	65,0553	65,1657	65,2760	65,3861	65,4961
41	65,6059	65,7156	65,8252	65,9346	66,0439	66,1530	66,2620	66,3709	66,4796	66,5882	66,6966	66,8049
42	66,9131	67,0211	67,1289	67,2367	67,3443	67,4517	67,5590	67,6662	67,7732	67,8801	67,9868	68,0934
43	68,1998	68,3061	68,4123	68,5183	68,6242	68,7299	68,8355	68,9409	69,0462	69,1513	69,2563	69,3611
44	69,4658	69,5704	69,6748	69,7790	69,8832	69,9871	70,0909	70,1946	70,2981	70,4015	70,5047	70,6078
45	70,7107	70,8134	70,9161	71,0185	71,1209	71,2230	71,3250	71,4269	71,5286	71,6302	71,7316	71,8329