MEASURING INSTRUMENTS

Mitutoyo
DELIVERING PRACTICAL SOLUTIONS FOR YOUR PRECISION MEASUREMENT CHALLENGES

Fowler
QUALITY MEASURING INSTRUMENTS & PRECISION TOOLS

brown & sharpe
SHAPING THE FUTURE OF MEASUREMENT

Vermont Gage
GAGES

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HEXAGON METROLOGY
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GLOBALLY SOURCED TOOLS PROVIDING A BALANCE OF QUALITY & PRICE

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MEASURING INSTRUMENTS

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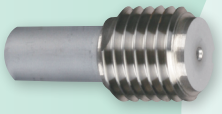
Thread Plug Gages - UNC, UNF, UN & UNEF

Right Hand

Made in USA and Vermont Gage



Set includes one each:
Go & No Go member with handle



Special Threads & Acme Threads Available

SHORT FORM CERTIFICATION - N/C — LONG FORM - CERTIFIED TO ACTUAL DIMENSIONS - ADDITIONAL CHARGE

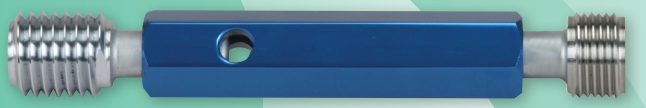
		MEMBERS				HANDLES			SETS		
SIZE	UNC UNF UNEF	GO CLASS 1-2-3 1B-2B-3B	NO GO CLASS 2B	NO GO CLASS 3B	PRICE EACH	TAPER LOCK HANDLE SIZE	HANDLE ORDER NO.	PRICE EACH	CLASS 2B SET W/ HANDLE	CLASS 3B SET W/ HANDLE	PRICE EACH SET
0-80	UNF	4000-519	4000-542	4000-536	$60.15	000	2591-698	$13.00	4060-005	4060-006	$ 136.70
1-64	UNC	4000-629	4000-655	4000-648	60.15	000	2591-698	13.00	4060-010	4060-011	136.70
1-72	UNF	4000-640	4000-665	4000-659	60.15	000	2591-698	13.00	4060-015	4060-016	136.70
2-56	UNC	4000-744	4000-772	4000-765	60.15	000	2591-698	13.00	4060-020	4060-021	136.70
2-64	UNF	4000-759	4000-786	4000-779	60.15	000	2591-698	13.00	4060-025	4060-026	136.70
3-48	UNC	4000-855	4000-885	4000-877	52.50	000	2591-698	13.00	4060-030	4060-031	121.40
3-56	UNF	4000-874	4000-902	4000-895	52.50	000	2591-698	13.00	4060-035	4060-036	121.40
4-40	UNC	4000-958	4000-991	4000-982	52.50	00	2591-699	12.00	4060-040	4060-041	120.30
4-48	UNF	4000-985	4001-016	4001-008	52.50	00	2591-699	12.00	4060-045	4060-046	120.30
5-40	UNC	4001-088	4001-121	4001-113	43.75	00	2591-699	12.00	4060-050	4060-051	102.80
5-44	UNF	4001-102	4001-134	4001-126	43.75	00	2591-699	12.00	4060-055	4060-056	102.80
6-32	UNC	4001-177	4001-214	4001-204	43.75	00	2591-699	12.00	4060-060	4060-061	102.80
6-40	UNF	4001-218	4001-252	4001-243	43.75	00	2591-699	12.00	4060-065	4060-066	102.80
8-32	UNC	4001-437	4001-475	4001-465	43.75	0	2591-700	12.00	4060-070	4060-071	102.80
8-36	UNF	4001-460	4001-496	4001-487	43.75	0	2591-700	12.00	4060-075	4060-076	102.80
10-24	UNC	4001-629	4001-672	4001-661	43.75	0	2591-700	12.00	4060-080	4060-081	102.80
10-32	UNF	4001-697	4001-736	4001-726	43.75	0	2591-700	12.00	4060-085	4060-086	102.80
12-24	UNC	4001-889	4001-933	4001-922	43.75	0	2591-700	12.00	4060-090	4060-091	102.80
12-28	UNF	4001-928	4001-970	4001-959	43.75	0	2591-700	12.00	4060-095	4060-096	102.80
12-32	UNEF	4001-957	4001-998	4001-988	56.85	0	2591-700	12.00	4060-100	4060-101	129.05
1/4-20	UNC	4002-175	4002-224	4002-211	41.55	1	2591-701	12.00	4060-105	4060-106	98.45
1/4-28	UNF	4002-268	4002-311	4002-300	41.55	1	2591-701	12.00	4060-110	4060-111	98.45
1/4-32	UNEF	4002-297	4002-339	4002-328	72.20	1	2591-701	12.00	4060-115	4060-116	159.70
5/16-18	UNC	4002-764	4002-817	4002-803	41.55	1	2591-701	12.00	4060-120	4060-121	98.45
5/16-24	UNF	4002-854	4002-902	4002-890	41.55	1	2591-701	12.00	4060-125	4060-126	98.45
5/16-32	UNEF	4002-922	4002-964	4002-953	72.20	1	2591-701	12.00	4060-130	4060-131	159.70
3/8-16	UNC	4003-344	4003-401	4003-387	42.65	2	2591-702	12.00	4060-135	4060-136	100.60
3/8-24	UNF	4003-479	4003-528	4003-516	42.65	2	2591-702	12.00	4060-140	4060-141	100.60
3/8-32	UNEF	4003-547	4003-591	4003-580	80.95	2	2591-702	12.00	4060-145	4060-146	177.20
7/16-14	UNC	4003-911	4003-972	4003-957	42.65	2	2591-702	12.00	4060-150	4060-151	100.60
7/16-20	UNF	4004-050	4004-104	4004-091	42.65	2	2591-702	12.00	4060-155	4060-156	100.60
7/16-28	UNEF	4004-143	4004-189	4004-178	80.95	2	2591-702	12.00	4060-160	4060-161	177.20
1/2-13	UNC	4004-500	4004-565	4004-548	43.75	2	2591-702	12.00	4060-165	4060-166	102.80
1/2-20	UNF	4004-675	4004-731	4004-717	43.75	2	2591-702	12.00	4060-170	4060-171	102.80
1/2-28	UNEF	4004-768	4004-816	4004-804	86.40	2	2591-702	12.00	4060-175	4060-176	188.10
9/16-12	UNC	4005-084	4005-152	4005-135	57.95	3	2591-703	12.00	4060-180	4060-181	131.25
9/16-18	UNF	4005-264	4005-323	4005-308	57.95	3	2591-703	12.00	4060-185	4060-186	131.25
9/16-24	UNEF	4005-354	4005-405	4005-392	92.95	3	2591-703	12.00	4060-190	4060-191	201.25
5/8-11	UNC	4005-660	4005-732	4005-714	59.05	3	2591-703	12.00	4060-195	4060-196	133.45
5/8-18	UNF	4005-889	4005-949	4005-934	59.05	3	2591-703	12.00	4060-200	4060-201	133.45
5/8-24	UNEF	4005-979	4006-031	4006-018	94.05	3	2591-703	12.00	4060-205	4060-206	203.45
11/16-24	UNEF	4006-604	4006-656	4006-643	97.35	3	2591-703	12.00	4060-210	4060-211	210.00
3/4-10	UNC	4006-850	4006-927	4006-907	63.45	3	2591-703	12.00	4060-215	4060-216	142.20
3/4-16	UNF	4007-094	4007-159	4007-143	63.45	3	2591-703	12.00	4060-220	4060-221	142.20
3/4-20	UNEF	4007-175	4007-232	4007-218	94.05	3	2591-703	12.00	4060-225	4060-226	203.45
13/16-20	UNEF	4007-800	4007-857	4007-843	100.60	3	2591-703	12.00	4060-230	4060-231	216.55
7/8-9	UNC	4008-028	4008-110	4008-089	68.90	4	2591-704	13.00	4060-235	4060-236	154.20
7/8-14	UNF	4008-286	4008-356	4008-339	68.90	4	2591-704	13.00	4060-240	4060-241	154.20
7/8-20	UNEF	4008-425	4008-482	4008-468	105.00	4	2591-704	13.00	4060-245	4060-246	226.40
15/16-20	UNEF	4009-050	4009-109	4009-094	107.20	4	2591-704	13.00	4060-250	4060-251	230.80

"W" TOLERANCE, CHROME PLATED. MULTIPLE LEADS & OTHER CLASSES – P.O.A.

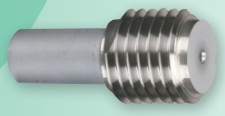
(Continued)

Thread Plug Gages - UNC, UNF, UN & UNEF

Right Hand



Set includes one each:
Go & No Go member with handle



Special Threads &
Acme Threads Available

Made in USA
and
Vermont Gage

SHORT FORM CERTIFICATION - N/C — LONG FORM - CERTIFIED TO ACTUAL DIMENSIONS - ADDITIONAL CHARGE

		MEMBERS				HANDLES			SETS		
SIZE	NC NF NEF	GO CLASS 1-2-3 1B-2B-3B	NO GO CLASS 2B	NO GO CLASS 3B	PRICE EACH	TAPER LOCK HANDLE SIZE	HANDLE ORDER NO.	PRICE EACH	CLASS 2B SET W/ HANDLE	CLASS 3B SET W/ HANDLE	PRICE EACH SET
1-8	UNC	4009-188	4009-276	4009-254	$80.95	4	2591-704	$13.00	4060-255	4060-256	$178.30
1-12	UN	4009-459	4009-535	4009-516	80.95	4	2591-704	13.00	4060-260	4060-261	178.30
1-14	UNS	4009-536	4009-609	4009-590	80.95	4	2591-704	13.00	4060-265	4060-266	178.30
1-20	UNEF	4009-675	4009-734	4009-719	117.05	4	2591-704	13.00	4060-270	4060-271	250.45
11/16-12	UN	4010-084	4010-158	4010-139	140.00	4	2591-704	13.00	4060-275	4060-276	296.40
11/16-18	UNEF	4010-264	4010-326	4010-310	118.10	4	2591-704	13.00	4060-280	4060-281	252.65
1 1/8-7	UNC	4010-322	4010-416	4010-393	99.55	4	2591-704	13.00	4060-285	4060-286	215.45
1 1/8-12	UNF	4010-709	4010-787	4010-768	99.55	4	2591-704	13.00	4060-290	4060-291	215.45
1 1/8-18	UNEF	4010-889	4010-951	4010-935	122.50	4	2591-704	13.00	4060-295	4060-296	261.40
1 3/16-12	UN	4011-334	4011-409	4011-390	140.00	4	2591-704	13.00	4060-300	4060-301	297.50
1 3/16-18	UNEF	4011-514	4011-577	4011-561	122.50	4	2591-704	13.00	4060-305	4060-306	262.50
1 1/4-7	UNC	4011-572	4011-668	4011-644	105.00	5	2591-705	14.00	4060-310	4060-311	227.50
1 1/4-12	UNF	4011-959	4012-039	4012-019	105.00	5	2591-705	14.00	4060-315	4060-316	227.50
1 1/4-18	UNEF	4012-139	4012-202	4012-186	126.85	5	2591-705	14.00	4060-320	4060-321	271.25
1 5/16-12	UN	4012-584	4012-659	4012-640	146.55	5	2591-705	14.00	4060-325	4060-326	310.60
1 5/16-18	UNEF	4012-764	4012-827	4012-811	143.30	5	2591-705	14.00	4060-330	4060-331	304.05
1 3/8-6	UNC	4012-667	4012-771	4012-745	114.85	5	2591-705	14.00	4060-335	4060-336	247.20
1 3/8-12	UNF	4013-209	4013-291	4013-270	114.85	5	2591-705	14.00	4060-340	4060-341	247.20
1 3/8-18	UNEF	4013-389	4013-452	4013-436	149.85	5	2591-705	14.00	4060-345	4060-346	317.20
1 7/16-12	UN	4013-834	4013-910	4013-891	167.35	5	2591-705	14.00	4060-350	4060-351	352.20
1 7/16-18	UNEF	4014-014	4014-079	4014-062	155.30	5	2591-705	14.00	4060-355	4060-356	328.15
1 1/2-6	UNC	4013-917	4014-022	4013-996	133.45	5	2591-705	14.00	4060-360	4060-361	284.40
1 1/2-12	UNF	4014-459	4014-542	4014-522	133.45	5	2591-705	14.00	4060-365	4060-366	284.40
1 1/2-18	UNEF	4014-639	4014-704	4014-687	160.80	5	2591-705	14.00	4060-370	4060-371	339.05

"W" TOLERANCE, CHROME PLATED. MULTIPLE LEADS & OTHER CLASSES – P.O.A.

Call For Immediate Delivery From Stock On:



• High Performance • Standards • Special Thread
• Acme Thread • British Thread • Pipe Thread
• Left Hand

Thread Ring Gages - UNC, UNF, UN & UNEF

Right Hand



Special Threads & Acme Threads Available

Made in USA and Vermont Gage

SHORT FORM CERTIFICATION - N/C — LONG FORM - CERTIFIED TO ACTUAL DIMENSIONS - ADDITIONAL CHARGE

		MEMBERS					HOLDERS			SETS		
SIZE	UNC UNF NEF	GO CLASS 2A	GO CLASS 3A	NO GO CLASS 2A	NO GO CLASS 3A	PRICE EACH	SIZE	ORDER NO.	PRICE EACH	2A SET	3A SET	PRICE EACH SET
0-80	UNF	4100-514	4100-519	4100-496	4100-506	$215.55	1TH	2591-781	$17.50	4070-005	4070-006	$431.05
1-64	UNC	4100-623	4100-629	4100-603	4100-614	198.30	1TH	2591-781	17.50	4070-010	4070-011	396.65
1-72	UNF	4100-634	4100-640	4100-615	4100-626	198.30	1TH	2591-781	17.50	4070-015	4070-016	396.65
2-56	UNC	4100-738	4100-744A	4100-717	4100-728	157.95	1TH	2591-781	17.50	4070-020	4070-021	315.85
2-64	UNF	4100-753	4100-759	4100-733	4100-744	157.95	1TH	2591-781	17.50	4070-025	4070-026	315.85
3-48	UNC	4100-848	4100-855	4100-825	4100-838	159.15	1TH	2591-781	17.50	4070-030	4070-031	318.25
3-56	UNF	4100-867	4100-874	4100-845	4100-858	159.15	1TH	2591-781	17.50	4070-035	4070-036	318.25
4-40	UNC	4100-950	4100-958	4100-925	4100-939	141.30	1TH	2591-781	17.50	4070-040	4070-041	282.65
4-48	UNF	4100-978	4100-985	4100-954	4100-967	141.30	1TH	2591-781	17.50	4070-045	4070-046	282.65
5-40	UNC	4101-080	4101-088	4101-054	4101-069	128.25	1TH	2591-781	17.50	4070-050	4070-051	256.50
5-44	UNF	4101-095	4101-102	4101-070	4101-083	128.25	1TH	2591-781	17.50	4070-055	4070-056	256.50
6-32	UNC	4101-169	4101-177	4101-141	4101-156	128.25	1TH	2591-781	17.50	4070-060	4070-061	256.50
6-40	UNF	4101-210	4101-218	4101-184	4101-198	128.25	1TH	2591-781	17.50	4070-065	4070-066	256.50
8-32	UNC	4101-428	4101-437	4101-399	4101-415	128.25	1TH	2591-781	17.50	4070-070	4070-071	256.50
8-36	UNF	4101-452	4101-460	4101-424	4101-439	128.25	1TH	2591-781	17.50	4070-075	4070-076	256.50
10-24	UNC	4101-619	4101-629	4101-586	4101-604	128.25	1TH	2591-781	17.50	4070-080	4070-081	256.50
10-32	UNF	4101-688	4101-697	4101-658	4101-674	128.25	1TH	2591-781	17.50	4070-085	4070-086	256.50
12-24	UNC	4101-879	4101-889	4101-845	4101-863	128.25	1TH	2591-781	17.50	4070-090	4070-091	256.50
12-28	UNF	4101-918	4101-928	4101-866	4101-904	128.25	1TH	2591-781	17.50	4070-095	4070-096	256.50
12-32	UNEF	4101-948	4101-957	4101-917	4101-933	166.25	1TH	2591-781	17.50	4070-100	4070-101	332.50
1/4-20	UNC	4102-164	4102-175	4102-127	4102-147	124.70	2TH	2591-782	19.00	4070-105	4070-106	249.35
1/4-28	UNF	4102-258	4102-268	4102-225	4102-243	124.70	2TH	2591-782	19.00	4070-110	4070-111	249.35
1/4-32	UNEF	4102-287	4102-297	4102-255	4102-273	169.80	2TH	2591-782	19.00	4070-115	4070-116	339.60
5/16-18	UNC	4102-752	4102-764	4102-712	4102-734	124.70	2TH	2591-782	19.00	4070-120	4070-121	248.20
5/16-24	UNF	4102-843	4102-854	4102-806	4102-827	124.70	2TH	2591-782	19.00	4070-125	4070-126	249.35
5/16-32	UNEF	4102-912	4102-922	4102-880	4102-898	171.00	2TH	2591-782	19.00	4070-130	4070-131	342.00
3/8-16	UNC	4103-331	4103-344	4103-287	4103-311	134.20	3TH	2591-783	21.00	4070-135	4070-136	268.35
3/8-24	UNF	4103-468	4103-479	4103-430	4103-450	134.20	3TH	2591-783	21.00	4070-140	4070-141	268.35
3/8-32	UNEF	4103-537	4103-547	4103-503	4103-522	173.35	3TH	2591-783	21.00	4070-145	4070-146	346.75
7/16-14	UNC	4103-897	4103-911	4103-850	4103-876	134.20	3TH	2591-783	21.00	4070-150	4070-151	268.35
7/16-20	UNF	4104-037	4104-050	4103-995	4104-019	134.20	3TH	2591-783	21.00	4070-155	4070-156	268.35
7/16-28	UNEF	4104-132	4104-143	4104-096	4104-116	173.35	3TH	2591-783	21.00	4070-160	4070-161	346.75
1/2-13	UNC	4104-485	4104-500	4104-435	4104-463	147.25	3TH	2591-783	21.00	4070-165	4070-166	294.50
1/2-20	UNF	4104-662	4104-675	4104-619	4104-643	147.25	3TH	2591-783	21.00	4070-170	4070-171	294.50
1/2-28	UNEF	4104-757	4104-768	4104-720	4104-740	184.05	3TH	2591-783	21.00	4070-175	4070-176	368.15
9/16-12	UNC	4105-068	4105-084	4105-016	4105-045	162.70	4TH	2591-784	25.00	4070-180	4070-181	325.40
9/16-18	UNF	4105-250	4105-264	4105-205	4105-230	162.70	4TH	2591-784	25.00	4070-185	4070-186	325.40
9/16-24	UNEF	4105-342	4105-354	4105-303	4105-325	192.40	4TH	2591-784	25.00	4070-190	4070-191	384.75
5/8-11	UNC	4105-644	4105-660	4105-589	4105-619	163.85	4TH	2591-784	25.00	4070-195	4070-196	327.75
5/8-18	UNF	4105-875	4105-889	4105-828	4105-854	163.85	4TH	2591-784	25.00	4070-200	4070-201	327.75
5/8-24	UNEF	4105-967	4105-979	4105-927	4105-949	199.50	4TH	2591-784	25.00	4070-205	4070-206	399.00
11/16-24	UNEF	4106-592	4106-604	4106-552	4106-574	216.10	4TH	2591-784	25.00	4070-210	4070-211	432.25
3/4-10	UNC	4106-832	4106-850	4106-773	4106-806	207.80	4TH	2591-784	25.00	4070-215	4070-216	415.65
3/4-16	UNF	4107-079	4107-094	4107-029	4107-056	207.80	4TH	2591-784	25.00	4070-220	4070-221	415.65
3/4-20	UNEF	4107-162	4107-175	4107-118	4107-142	249.35	4TH	2591-784	25.00	4070-225	4070-226	498.75
13/16-20	UNEF	4107-787	4107-800	4107-743	4107-767	258.90	5TH	2591-785	34.00	4070-230	4070-231	517.75
7/8-9	UNC	4108-009	4108-028	4107-946	4107-981	223.25	5TH	2591-785	34.00	4070-235	4070-236	446.50
7/8-14	UNF	4108-270	4108-286	4108-216	4108-245	223.25	5TH	2591-785	34.00	4070-240	4070-241	446.50
7/8-20	UNEF	4108-412	4108-425	4108-368	4108-392	263.60	5TH	2591-785	34.00	4070-245	4070-246	527.25
15/16-20	UNEF	4109-036	4109-050	4108-991	4109-016	270.75	5TH	2591-785	34.00	4070-250	4070-251	541.50
1/8	UNC	4109-168	4109-188	4109-100	4109-137	270.75	5TH	2591-785	34.00	4070-255	4070-256	541.50
1-12	UNF	4109-441	4109-459	4109-382	4109-415	270.75	5TH	2591-785	34.00	4070-260	4070-261	541.50
1-14	UNF	4109-519	4109-536	4109-463	4109-494	270.75	5TH	2591-785	34.00	4070-265	4070-266	541.50
1-20	UNEF	4109-661	4109-675	4109-616	4109-641	302.80	5TH	2591-785	34.00	4070-270	4070-271	605.65
1 1/16-12	UN	4110-067	4110-084	4110-010	4110-042	356.25	5TH	2591-785	34.00	4070-275	4070-276	712.50

"W" TOLERANCE, CHROME PLATED MULTIPLE LEADS & OTHER CLASSES – P.O.A.

(Continued)

Thread Ring Gages - UNC, UNF, UN & UNEF

Right Hand

Made in USA and Vermont Gage

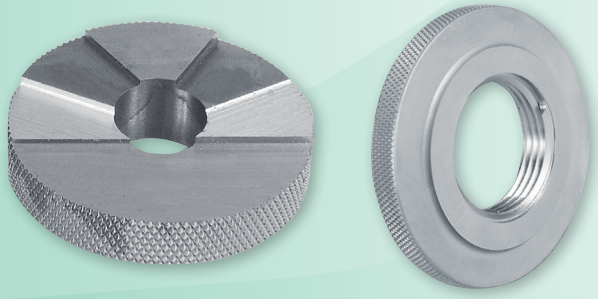
SIZE	UNC UNF NEF	MEMBERS GO CLASS 2A	GO CLASS 3A	NO GO CLASS 2A	NO GO CLASS 3A	PRICE EACH	HOLDERS SIZE	ORDER NO.	PRICE EACH	SETS 2A SET	3A SET	PRICE EACH SET
1 1/16-18	UNEF	4110-250	4110-264	4110-203	4110-228A	$319.45	5TH	2591-785	$34.00	4070-280	4070-281	$638.85
1 1/8-7	UNC	4110-300	4110-322	4110-228	4110-268	317.05	5TH	2591-785	34.00	4070-285	4070-286	634.15
1 1/8-12	UNF	4110-691	4110-709	4110-631	4110-664	317.05	5TH	2591-785	34.00	4070-290	4070-291	634.15
1 1/8-18	UNEF	4110-875	4110-889	4110-828	4110-853	336.05	5TH	2591-785	34.00	4070-295	4070-296	672.15
1 3/16-12		4111-317	4111-334	4111-259	4111-291	381.20	5TH	2591-785	34.00	4070-300	4070-301	762.35
1 3/16-18	UNEF	4111-499	4111-514	4111-450	4111-478	336.05	5TH	2591-785	34.00	4070-305	4070-306	672.15
1 1/4-7	UNC	4111-550A	4111-572	4111-476	4111-517	347.95	6TH	2591-786	45.00	4070-310	4070-311	695.85
1 1/4-12	UNF	4111-941	4111-959	4111-879	4111-913	347.95	6TH	2591-786	45.00	4070-315	4070-316	695.85
1 1/4-18	UNEF	4112-124	4112-139	4112-075	4112-103	355.05	6TH	2591-786	45.00	4070-320	4070-321	710.15
1 5/16-12	UN	4112-567	4112-584	4112-509	4112-541	382.35	6TH	2591-786	45.00	4070-325	4070-326	764.75
1 5/16-18	UNEF	4112-749	4112-764	4112-700	4112-728	362.20	6TH	2591-786	45.00	4070-330	4070-331	724.40
1 3/8-6	UNC	4112-643	4112-667	4112-563	4112-607	362.20	6TH	2591-786	45.00	4070-335	4070-336	724.40
1 3/8-12	UNF	4113-190	4113-209	4113-127	4113-162	362.20	6TH	2591-786	45.00	4070-340	4070-341	724.40
1 3/8-18	UNEF	4113-374	4113-389	4113-325	4113-353	388.30	6TH	2591-786	45.00	4070-345	4070-346	776.60
1 7/16-12	UN	4113-816	4113-834	4113-757	4113-790	412.05	6TH	2591-786	45.00	4070-350	4070-351	824.15
1 7/16-18	UNEF	4113-999	4114-014	4113-949	4113-977	396.65	6TH	2591-786	45.00	4070-355	4070-356	793.25
1 1/2-6	UNC	4113-893	4113-917	4113-812	4113-856	396.65	6TH	2591-786	45.00	4070-360	4070-361	793.25
1 1/2-12	UNF	4114-440	4114-459	4114-376	4114-411	396.65	6TH	2591-786	45.00	4070-365	4070-366	793.25
1 1/2-18	UNEF	4114-624	4114-639	4114-574	4114-602	415.65	6TH	2591-786	45.00	4070-370	4070-371	831.25

Taper Pipe Ring Gages

Made in USA

SIZE	NPT L1 ORDER NO.	NPT L1 PRICE EACH	NPTF L1 ORDER NO.	NPTF L1 PRICE EACH	NPTF L2 ORDER NO.	NPTF L2 PRICE EACH	NPTF 6 STEP ORDER NO.	NPTF 6 STEP PRICE EACH
1/16-27	4130-101	$237.50	4130-201	$251.75	4130-202	$352.70	4130-203	$412.05
1/8-27	4130-106	168.65	4130-206	185.25	4130-207	344.40	4130-208	412.05
1/4-18	4130-111	184.05	4130-211	206.65	4130-212	352.70	4130-213	412.05
3/8-18	4130-116	206.65	4130-216	219.70	4130-217	374.05	4130-218	412.05
1/2-14	4130-121	230.35	4130-221	232.75	4130-222	382.35	4130-223	412.05
3/4-14	4130-126	261.25	4130-226	273.15	4130-227	427.50	4130-228	458.35
1-11 1/2	4130-131	296.90	4130-231	306.40	4130-232	458.35	4130-233	478.55
1 1/4-11 1/2	4130-136	313.50	4130-236	326.55	4130-237	498.75	4130-238	518.95
1 1/2-11 1/2	4130-141	382.35	4130-241	399.00	4130-242	558.10	4130-243	571.20
2-11 1/2	4130-146	458.35	4130-246	478.55	4130-247	641.25	4130-248	659.05
2 1/2-8	4130-151	542.70	4130-251	565.25	4130-252	771.90	4130-253	783.75
3-8	4130-156	659.05	4130-256	712.50	4130-257	897.75	4130-258	950.00
3 1/2	4130-161	926.25						
4-8	4130-166	1,071.15						
5-8	4130-171	1,261.15						
6-8	4130-176	1,514.05						

ANPT ALSO AVAILABLE



Taper Pipe Plug Gages

SIZE	NPT L1 ORDER NO.	NPT L1 PRICE EACH	NPTF L1 ORDER NO.	NPTF L1 PRICE EACH	NPTF L3 ORDER NO.	NPTF L3 PRICE EACH	NPTF 6 STEP ORDER NO.	NPTF 6 STEP PRICE EACH	HANDLE SIZE	HANDLE ORDER NO.	HANDLE PRICE EACH
1/16-27	4120-101	$ 121.10	4120-201	$ 157.95	4120-202	$ 157.95	4120-203	$258.90	1	2591-701	$12.00
1/8-27	4120-106	92.60	4120-206	121.10	4120-207	121.10	4120-208	258.90	2	2591-702	12.00
1/4-18	4120-111	98.55	4120-211	128.25	4120-212	128.25	4120-213	258.90	3	2591-703	12.00
3/8-18	4120-116	105.70	4120-216	157.95	4120-217	157.95	4120-218	258.90	3	2591-703	12.00
1/2-14	4120-121	121.10	4120-221	181.70	4120-222	181.70	4120-223	261.25	4	2591-704	13.00
3/4-14	4120-126	136.55	4120-226	197.10	4120-227	197.10	4120-228	282.65	4	2591-704	13.00
1-11 1/2	4120-131	157.95	4120-231	223.25	4120-232	223.25	4120-233	300.45	5	2591-705	14.00
1 1/4-11 1/2	4120-136	176.95	4120-236	249.35	4120-237	249.35	4120-238	330.10	5	2591-705	14.00
1 1/2-11 1/2	4120-141	197.10	4120-241	276.70	4120-242	276.70	4120-243	362.20	5	2591-705	14.00
2-11 1/2	4120-146	242.25	4120-246	342.00	4120-247	342.00	4120-248	494.00	5	2591-705	14.00
2 1/2-8	4120-151	288.55	4120-251	494.00	4120-252	494.00	4120-253	738.60	6	2591-760	20.00
3-8	4120-156	359.80	4120-256	559.30	4120-257	559.30	4120-258	811.05	6	2591-760	20.00
3 1/2-8	4120-161	542.70							7	2591-770	22.00
4-8	4120-166	594.95							7	2591-770	22.00
5-8	4120-171	803.95							7	2591-770	22.00
6-8	4120-176	999.85							7	2591-770	22.00

ANPT ALSO AVAILABLE



Metric Plug & Ring Gages - Right Hand





Made in USA
and
Vermont Gage

Plugs - 6H Tolerance
Rings - 6G Tolerance

	PLUG MEMBER			HANDLE – TAPER LOCK			RING MEMBER			HOLDERS		
SIZE	GO ORDER NO.	NO GO ORDER NO.	PRICE EACH	SIZE	ORDER NO.	PRICE EACH	GO ORDER NO.	NO GO ORDER NO.	PRICE EACH	SIZE	ORDER NO.	PRICE EACH
M 1.6 x 0.35	4700-541	4700-574	$68.90	000	2591-698	$ 13.00	4600-533	4600-509	$243.45	1 TH	2591-781	$17.50
M 1.8 x 0.35	4700-620	4700-622	68.90	000	2591-698	13.00	4600-611	4600-588	243.45	1 TH	2591-781	17.50
M 2.0 x 0.40	4700-686	4700-720	68.90	000	2591-698	13.00	4600-677	4600-652	200.70	1 TH	2591-781	17.50
M 2.2 x 0.45	4700-752	4700-788	68.90	000	2591-698	13.00	4600-743	4600-716	200.70	1 TH	2591-781	17.50
M 2.5 x 0.45	4700-870	4700-906	63.45	000	2591-698	13.00	4600-861	4600-834	200.70	1 TH	2591-781	17.50
M 3.0 x 0.50	4701-054	4701-092	63.45	00	2591-699	12.00	4601-045	4601-016	173.35	1 TH	2591-781	17.50
M 3.5 x 0.60	4701-225	4701-268	56.85	00	2591-699	12.00	4601-216	4601-183	172.20	1 TH	2591-781	17.50
M 4.0 x 0.70	4701-396	4701-442	56.85	00	2591-699	12.00	4601-387	4601-352	172.20	1 TH	2591-781	17.50
M 4.5 x 0.75	4701-580	4701-626	56.85	00	2591-699	12.00	4601-571	4601-536	172.20	1 TH	2591-781	17.50
M 5.0 x 0.80	4701-764	4701-812	56.85	0	2591-700	12.00	4601-754	4601-717	172.20	1 TH	2591-781	17.50
M 6.0 x 1.00	4702-107	4702-165	43.75	1	2591-701	12.00	4602-096	4602-052	149.65	1 TH	2591-781	17.50
M 7.0 x 1.00	4702-500	4702-559	43.75	1	2591-701	12.00	4602-489	4602-446	149.65	1 TH	2591-781	17.50
M 8.0 x 1.25	4702-830	4702-892	43.75	1	2591-701	12.00	4602-818	4602-773	149.65	2 TH	2591-782	19.00
M 8.0 x 1.00	4702-894	4702-952	43.75	1	2591-701	12.00	4602-883	4602-840	149.65	2 TH	2591-782	19.00
M 10.0 x 1.25	4703-618	4703-680	50.30	2	2591-702	12.00	4603-506	4603-560	163.85	3 TH	2591-783	21.00
M 10.0 x 1.50	4703-554	4703-624	50.30	2	2591-702	12.00	4603-540	4603-489	163.85	3 TH	2591-783	21.00
M 12.0 x 1.75	4704-277	4704-355	52.50	2	2591-702	12.00	4604-263	4604-205	175.75	3 TH	2591-783	21.00
M 12.0 x 1.25	4704-405	4704-475	52.50	2	2591-702	12.00	4604-393	4604-342	175.75	3 TH	2591-783	21.00
M 14.0 x 2.00	4705-001	4705-083	57.95	3	2591-703	12.00	4604-985	4604-923	181.70	3 TH	2591-783	21.00
M 14.0 x 1.50	4705-129	4705-203	57.95	3	2591-703	12.00	4605-115	4605-061	181.70	3 TH	2591-783	21.00
M 16.0 x 2.00	4705-788	4705-871	59.05	3	2591-703	12.00	4605-772	4605-710	181.70	4 TH	2591-784	25.00
M 16.0 x 1.50	4705-916	4705-990	59.05	3	2591-703	12.00	4605-903	4605-849	181.70	4 TH	2591-784	25.00
M 18.0 x 2.50	4706-448	4706-535	66.70	3	2591-703	12.00	4606-430	4605-364	252.95	4 TH	2591-784	25.00
M 18.0 x 1.50	4706-704	4706-777	66.70	3	2591-703	12.00	4606-690	4606-636	252.95	4 TH	2591-784	25.00
M 20.0 x 2.50	4707-235	4707-322	76.55	3	2591-703	12.00	4607-218	4607-152	311.15	4 TH	2591-784	25.00
M 20.0 x 1.50	4707-491	4707-565	76.55	3	2591-703	12.00	4607-477	4607-423	311.15	4 TH	2591-784	25.00
M 22.0 x 2.50	4708-023	4708-110	77.65	4	2591-704	13.00	4608-005	4607-939	320.60	4 TH	2591-784	25.00
M 22.0 x 1.50	4708-278	4708-352	77.65	4	2591-704	13.00	4608-265	4608-211	320.60	4 TH	2591-784	25.00
M 24.0 x 3.00	4708-682	4708-785	83.10	4	2591-704	13.00	4608-662	4608-584	363.35	5 TH	2591-785	34.00
M 24.0 x 2.00	4708-938	4709-025	83.10	4	2591-704	13.00	4608-922	4608-856	363.35	5 TH	2591-785	34.00
M 27.0 x 3.00	4709-863	4709-966	114.85	4	2591-704	13.00	4609-843	4609-765	355.05	5 TH	2591-785	34.00
M 27.0 x 2.00	4710-119	4710-206	114.85	4	2591-704	13.00	4610-103	4610-037	355.05	5 TH	2591-785	34.00
M 30.0 x 3.50	4710-917	4711-026	173.90	5	2591-705	14.00	4610-895	4610-812	454.80	5 TH	2591-785	34.00
M 30.0 x 2.00	4711-300	4711-387	140.00	5	2591-705	14.00	4611-284	4613-218	380.00	5 TH	2591-785	34.00
M 33.0 x 3.50	4712-098	4712-207	146.55	5	2591-705	14.00	4612-076	4611-993	432.25	6 TH	2591-786	45.00
M 33.0 x 2.00	4712-481	4712-508	146.55	5	2591-705	14.00	4612-465	4612-399	397.80	6 TH	2591-786	45.00
M 36.0 x 4.00	4713-151	4713-268	189.20	5	2591-705	14.00	4613-126	4613-039	478.55	6 TH	2591-786	45.00
M 36.0 x3.00	4713-406	4713-510	166.25	5	2591-705	14.00	4613-386	4613-309	432.25	6 TH	2591-786	45.00
M 39.0 x 4.00	4714-332	4714-449	237.35	5-1/2	2591-755	18.00	4614-307	4614-220	489.25	6 TH	2591-786	45.00
M 39.0 x 3.00	4714-587	4714-691	207.80	5-1/2	2591-755	18.00	4614-568	4614-490	466.70	6 TH	2591-786	45.00

"W" TOLERANCE, CHROME PLATED MULTIPLE LEADS & OTHER CLASSES – P.O.A.

IN STOCK!

• Special Threads • NC & NF Left Hand •
• Setting Plugs • All Made In The U.S.A. •

Pin Gages

Class ZZ Pin Sets

NEW ITEM

Vermont Gage [2]

Make quick and accurate measurements with Vermont Gage pin gages. Measure hole sizes. Calculate distances between holes. Gage slot widths. Check locations. Use for Go/No-Go gaging. Size in micrometers and snap gages These economical gages are a must for anyone making frequent and varied measurements.

RANGE	NO. OF GAGES	ORDER NO. (PLUS)	ORDER NO. (MINUS)	PRICE EACH
INCH SETS (.001 INCREMENTS)				
.0060" to .0600"	55	3862-030	3862-031	$125.00
.0065" to .0605"	55	3862-032	3862-033	125.00
.0110" to .0600"	50	3862-000	3862-001	95.00
.0115" to .0605"	50	3862-002	3862-003	95.00
.0110" to .2500"	240	3862-034	3862-035	280.00
.0115" to .2505"	240	3862-036	3862-037	280.00
.0610" to .2500"	190	3862-006	3862-007	200.00
.0615" to .2505"	190	3862-008	3862-009	200.00
.2510" to .5000"	250	3862-012	3862-013	300.00
.2515" to .5005"	250	3862-014	3862-015	300.00
.5010" to .6250"	125	3862-018	3862-019	365.00
.5015" to .6255"	125	3862-038	3862-039	365.00
.6260" to .7500"	125	3862-022	3862-023	385.00
.6265" to .7505"	125	3862-040	3862-041	385.00
.7510" to .8320"	82	3862-024	3862-025	670.00
.7515" to .8325"	82	3862-042	3862-043	670.00
.8330" to .9160"	84	3862-026	3862-027	785.00
.8335" to .9165"	84	3862-044	3862-045	785.00
.9170" to 1.0000"	84	3862-028	3862-029	815.00
.9175" to 1.0005"	84	3862-046	3862-047	815.00

RANGE	NO. OF GAGES	ORDER NO. (PLUS)	ORDER NO. (MINUS)	PRICE EACH
METRIC SETS (.05MM INCREMENTS)				
0.20mm to 1.28mm	55	3862-048	3862-049	$110.00
0.21mm to 1.29mm	55	3862-050	3862-051	110.00
1.30mm to 4.98mm	185	3862-052	3862-053	240.00
1.31mm to 4.99mm	185	3862-054	3862-055	240.00
5.00mm to 9.98mm	250	3862-056	3862-057	375.00
5.01mm to 9.99mm	250	3862-058	3862-059	375.00
10.00mm to 13.98mm	200	3862-060	3862-061	325.00
10.01mm to 13.99mm	200	3862-062	3862-063	325.00
14.00mm to 16.48mm	125	3862-064	3862-065	415.00
14.01mm to 16.49mm	125	3862-066	3862-067	415.00
16.50mm to 18.98mm	125	3862-068	3862-069	535.00
16.51mm to 18.99mm	125	3862-070	3862-071	535.00
19.00mm to 20.98mm	100	3862-072	3862-073	915.00
19.01mm to 20.99mm	100	3862-074	3862-075	915.00
21.00mm to 22.48mm	75	3862-076	3862-077	785.00
21.01mm to 22.49mm	75	3862-078	3862-079	785.00
22.50mm to 23.98mm	75	3862-080	3862-081	815.00
22.51mm to 23.99mm	75	3862-082	3862-083	815.00
24.00mm to 25.48mm	75	3862-084	3862-085	855.00
24.01mm to 25.49mm	75	3862-086	3862-087	855.00



FEATURES:
- Class ZZ (.0002" or .005mm tolerance)
- Go (Plus) or NoGo (Minus)
- NIST traceable
- .0005", or .02mm sizes
- .001" or .02mm set increments
- 52100 tool steel; 60/62 Rc
- 2" long
- 10 microinch finish or better
- within .0001" round
- marked with size and direction of tolerance on gages over .060"
- Certificate of Accuracy included

Black Guard™ Pin Sets

BLACK GUARD™ black oxide treatment typically penetrates .00004" to .00006" deep, which will visually reveal wear patterns allowing the inspector to calibrate or replace gage pins more effectively. BLACK GUARD™ treatment will help prevent rust & corrosion, which will extend the useful life of the gage.

- **PREVENTS RUST & CORROSION**
- **BRIGHT CLEAR MARKING**
- **VISIBLE WEAR INDICATION**
- **LONGER GAGE LIFE**

RANGE	NO. OF GAGES	ORDER NO. (PLUS)	ORDER NO. (MINUS)	PRICE EACH
BLACK GUARD SETS				
.0060" to .0600"	55	3865-027	3865-028	$ 125.00
.0065" to .0605"	55	3865-029	3865-030	125.00
.0110" to .0600"	50	3865-005	3865-006	95.00
.0115" to .0605"	50	3865-007	3865-008	95.00
.0110" to .2500"	240	3865-031	3865-032	280.00
.0115" to .2505"	240	3865-033	3865-034	280.00
.0610" to .2500"	190	3865-009	3865-010	200.00
.0615" to .2505"	190	3865-011	3865-012	200.00
.2510" to .5000"	250	3865-013	3865-014	300.00
.5010" to .6250"	125	3865-017	3865-018	365.00



FEATURES:
- Class ZZ (.0002" or .005mm tolerance)
- Go (Plus) or NoGo (Minus)
- NIST traceable
- .0005", or .02mm sizes
- .001" or .02mm set increments
- 52100 tool steel; 60/62 Rc
- 2" long
- 10 microinch finish or better
- within .0001" round
- marked with size and direction of tolerance on gages over .060"
- Certificate of Accuracy included
- Registered ISO 9002

Class ZZ Replacement Pins



Keep old sets in compliance!
Replace missing, damaged, or worn-out Class ZZ gages from your existing sets and libraries. These replacement pins are perfect for updating your old sets, and bringing them back into compliance. Each pin is individually marked with size and direction of tolerance. Packaged with a rust preventative, these pins maintain an indefinite shelf life; so keep several of your most used sizes on hand! Each pin is NIST traceable, and includes a Certificate of Accuracy.

FEATURES:
- Class ZZ (.0002" or .005mm tolerance)
- Go (Plus) or NoGo (Minus)
- NIST traceable
- .0005", or .02mm sizes
- .001" or .02mm set increments
- 52100 tool steel; 60/62 Rc
- 2" long
- 10 microinch finish or better
- Within .0001" round
- Marked with size and direction of tolerance on gages over .060"
- Certificate of Accuracy included
- Registered ISO 9002

RANGE (INCH)	ORDER NO.	TO	ORDER NO.	
PLUS ORDER RANGE				
.0040 to .0105"	3860-004	$ 7.75	3860-0105	$ 7.75
.0110 to .0605"	3860-011	3.75	3860-0605	3.75
.0610 to .5005"	3860-061	3.50	3860-5005	3.50
.5010 to .6255"	3860-501	4.50	3860-6255	4.50
.6260 to .7505"	3860-626	6.75	3860-7505	6.75
.7510 to .8325"	3860-751	9.25	3860-8325	9.25
.8330 to .9165"	3860-833	10.75	3860-9165	10.75
.9170 to 1.0005"	3860-917	11.00	3860-9999	11.00
MINUS ORDER RANGE				
.0040 to .0105"	3861-004	$ 7.75	3861-0105	$ 7.75
.0110 to .0605"	3861-011	3.75	3861-0605	3.75
.0610 to .5005"	3861-061	3.50	3861-5005	3.50
.5010 to .6255"	3861-501	4.50	3861-6255	4.50
.6260 to .7505"	3861-626	6.75	3861-7505	6.75
.7510 to .8325"	3861-751	9.25	3861-8325	9.25
.8330 to .9165"	3861-833	10.75	3861-9165	10.75
.9170 to 1.0005"	3861-917	11.00	3861-9999	11.00

BLACK GUARD™ PINS — ALSO AVAILABLE

Pittsburg® ALLEGHANY Economy Steel Gage Pin Sets [2]



FEATURES:
- .0002 Accuracy – Specify Plus or Minus tolerances
- Centerless lapped with a 10 Micro finish or better
- Size etched on each member
- Comes standard with attractive hardwood case

SIZE	RANGE	MEMBERS IN SET	PLUS .0002 IN	MINUS .0002 IN	PRICE EACH SET
H1	.061 to .250	190	3100-596	3100-595	$ 72.50
H2	.251 to .500	250	3100-598	3100-597	128.00
H3	.501 to .625	125	3100-600	3100-599	130.00
H4	.626 to .750	125	3100-602	3100-601	145.00
H5	.751 to .832	82	3100-604	3100-603	250.00
H6	.833 to .916	84	3100-606	3100-605	300.00
H7	.917 to 1.000	84	3100-608	3100-607	315.00

Plug & Ring Gages

Reversible Gage Handles & Bushings

NEW ITEM

Vermont Gage [1]

*Inch Handles - Light Blue / Metric Handles - Yellow

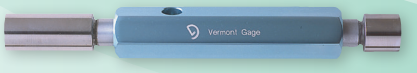
RANGE	SINGLE-END HANDLE HANDLE NO.	ORDER NO.	PRICE EACH	DOUBLE-END HANDLE HANDLE NO.	ORDER NO.	PRICE EACH
INCH						
.0040" to .0750"	1WSE	3865-101	$ 10.63	1WDE	3865-111	$11.50
.0751" to .1800"	2WSE	3865-102	10.63	2WDE	3865-112	11.50
.1801" to .2810"	3WSE	3865-103	12.94	3WDE	3865-113	13.75
.2811" to .4060"	4WSE	3865-104	13.69	4WDE	3865-114	14.38
.4061" to .5100"	5WSE	3865-105	17.25	5WDE	3865-115	18.13
.5101" to .6350"	6WSE	3865-106	20.13	6WDE	3865-116	20.94
.6351" to .7600"	7WSE	3865-107	23.00	7WDE	3865-117	23.75
.7601" to 1.0100"	8WSE	3865-108	31.63	8WDE	3865-118	33.13
METRIC (mm)						
10mm to 1.90mm	1WSE	3865-121	$ 10.63	1WDE	3865-131	$11.50
1.91 to 4.56	2WSE	3865-122	10.63	2WDE	3865-132	11.50
4.57 to 7.14	3WSE	3865-123	12.94	3WDE	3865-133	13.75
7.15 to 10.30	4WSE	3865-124	13.69	4WDE	3865-134	14.38
10.31 to 12.94	5WSE	3865-125	17.25	5WDE	3865-135	18.13
12.95 to 16.12	6WSE	3865-126	20.13	6WDE	3865-136	20.94
16.13 to 19.30	7WSE	3865-127	23.00	7WDE	3865-137	23.75
19.31 to 25.64	8WSE	3865-128	31.63	8WDE	3865-138	33.13

BUSHING PRICES
Up to .5100" — $ 4.06
.5101" and Up — $ 5.63

Bushings for Reversible Handles

RANGE	ORDER NO.	RANGE	ORDER NO.	RANGE	ORDER NO.
.0040" to .0060"	3865-201	.1661" to .1730"	3865-230	.4501" to .4650"	3865-259
.0061" to .0605"	3865-202	.1731" to .1800"	3865-231	.4651" to .4800"	3865-260
.0101" to .0130"	3865-203	.1801" to .1880"	3865-232	.4801" to .4950"	3865-261
.0131" to .0150"	3865-204	.1881" to .1960"	3865-233	.4951" to .5100"	3865-262
.0151" to .0200"	3865-205	.1961" to .2040"	3865-234	.5101" to .5320"	3865-263
.0201" to .0250"	3865-206	.2041" to .2120"	3865-235	.5321" to .5470"	3865-264
.0251" to .0300"	3865-207	.2121" to .2200"	3865-236	.5471" to .5630"	3865-265
.0301" to .0350"	3865-208	.2201" to .2280"	3865-237	.5631" to .5790"	3865-266
.0351" to .0400"	3865-209	.2281" to .2360"	3865-238	.5791" to .5940"	3865-267
.0401" to .0450"	3865-210	.2361" to .2440"	3865-239	.5941" to .6100"	3865-268
.0451" to .0500"	3865-211	.2441" to .2520"	3865-240	.6101" to .6250"	3865-269
.0501" to .0550"	3865-212	.2521" to .2610"	3865-241	.6251" to .6350"	3865-270
.0551" to .0600"	3865-213	.2611" to .2710"	3865-242	.6351" to .6560"	3865-271
.0601" to .0650"	3865-214	.2711" to .2810"	3865-243	.6561" to .6720"	3865-272
.0651" to .0700"	3865-215	.2811" to .2910"	3865-244	.6721" to .6880"	3865-273
.0700" to .0750"	3865-216	.2911" to .3010"	3865-245	.6881" to .7040"	3865-274
.0751" to .0820"	3865-217	.3011" to .3110"	3865-246	.7041" to .7190"	3865-275
.0821" to .0890"	3865-218	.3111" to .3210"	3865-247	.7191" to .7350"	3865-276
.0891" to .0960"	3865-219	.3211" to .3310"	3865-248	.7351" to .7500"	3865-277
.0961" to .1030"	3865-220	.3311" to .3410"	3865-249	.7501" to .7600"	3865-278
.1031" to .1100"	3865-221	.3411" to .3510"	3865-250	.7601" to .7810"	3865-279
.1101" to .1170"	3865-222	.3511" to .3610"	3865-251	.7811" to .8120"	3865-280
.1171" to .1240"	3865-223	.3611" to .3710"	3865-252	.8121" to .8430"	3865-281
.1241" to .1310"	3865-224	.3711" to .3820"	3865-253	.8431" to .8750"	3865-282
.1311" to .1380"	3865-225	.3821" to .3940"	3865-254	.8751" to .9060"	3865-283
.1380" to .1450"	3865-226	.3941" to .4060"	3865-255	.9061" to .9370"	3865-284
.1451" to .1520"	3865-227	.4061" to .4200"	3865-256	.9371" to .9680"	3865-285
.1521" to .1590"	3865-228	.4201" to .4350"	3865-257	.9681" to 1.0000"	3865-286
.1591" to .1660"	3865-229	.4351" to .4500"	3865-258		

Custom Taperlocks



Change gage members quickly. When you need to gage larger diameters, and need to change or replace gage members often, Taperlock plug gages are the perfect choice. To change gage members, simply pop-out existing members and press fit new members in your Taperlock handle. Each Taperlock handle size covers a wide range of gage sizes. Custom plug gage assemblies can be marked with your tool number. Go/NoGo assemblies include one line (up to 15 characters) of custom marking. These Taperlock plug gages are available up to 1.5" in all class tolerances and materials to meet unique requirements.

P.O.A.

SIZE RANGE
.1050 to .1500" (2.67 to 3.81mm)
.1501 to 2300" (3.82 to 5.84mm)
.2301 to 3650" (5.85 to 9.27mm)
.3651 to 5100" (9.28 to 12.95mm)
.5101 to 8250" (12.96 to 20.95mm)
.8251 to 1.1350" (20.96 to 28.83mm)
1.1351 to 1.5100" (28.84 to 38.35mm)

FEATURES:
- Class XX, X, Y, Z, or ZZ
- Go, NoGo tolerances
- NIST traceable
- Tool Steel; 60/62 Rc (Cold Stabilized)
- Chrome Plated Tool Steel; 70.72 Rc
- 2 microinch finish or better on Class XX, X
- Handles custom marked (1 line, up to 15 characters)
- Inch Handles: Light Blue, Metric: Yellow
- Certificate of Accuracy included

Standard Class X-Plus Plug Gages



Sizes up to 1". Use as masters to calibrate measuring equipment or to gage parts directly. Either way, these Class X (+.00004", -.0000") plug gages are accurate, cost effective measurement standards, perfect for both the shop floor and Metrology laboratory. Included with Certificate of Accuracy. Available with Certificate of Calibration traceable to NIST. [5]

FEATURES:
- Class X • 2" long • NIST traceable
- Single (GO) tolerance (+.00004, -.00000)
- .0005", or .02mm sizes
- Sizes available every.0001", to 1.0000"
- Tool Steel; 60/62 Rc (Cold Stabilized)
- 2 microinch finish or better
- Within .00002" round
- Certificate of Accuracy included

RANGE (INCH)	1 PIECE PRICE	2 PIECE PRICE	10 PIECE PRICE
.0040-.0250	$23.00	$22.00	$20.50
.0251-.0750	19.25	18.25	16.75
.0751-.2810	15.00	14.00	12.50
.2811-.4060	15.25	14.25	12.75
.4061-.5100	16.00	15.00	13.50
.5101-.6350	17.50	16.50	15.00
.6351-.7600	22.00	21.00	19.50
.7601-1.0000	24.25	23.25	21.75

Custom Trilocks



For large dimensions. When you need to inspect large diameters, Trilock plug gages are the best solution. Much like Reversible plug gages, when one end wears out, simply turn the member around and continue gaging. This significantly increases the gaging life of your gage. Members are securely attached to your Trilock handle with mounting bolts. Custom plug gage assemblies can be marked with your tool number. Go/NoGo assemblies include one line (up to 15 characters) of custom marking. These Trilock plug gages are available up to 4" in all class tolerances and materials to meet unique requirements.

P.O.A.

SIZE RANGE
.7600 to 9470" (19.30 to 24.05mm)
.9471 to 1.1350" (24.06 to 28.83mm)
1.1351 to 1.5100" (28.84 to 38.35mm)
1.5101 to 2.0100" (38.36 to 51.05mm)
2.0101 to 2.5100" (51.06 to 63.75mm)
2.5101 to 3.0100" (63.76 to 76.45mm)
3.0101 to 3.5100" (76.46 to 89.15mm)
3.5101 to 4.0100" (89.16 to 101.85mm)
4.0101 to 4.5100" (101.86 to 114.55mm)
4.5101 to 5.0100" (114.56 to 127.25mm)
5.0101 to 5.5100" (127.26 to 139.95mm)
5.5101 to 6.0100" (139.96 to 152.65mm)

FEATURES:
- Class XX, X, Y, Z, or ZZ
- Go, NoGo tolerances
- NIST traceable
- Tool Steel; 60/62 Rc (Cold Stabilized)
- Chrome Plated Tool Steel; 70.72 Rc
- 2 microinch finish or better on Class XX, X
- Handles custom marked (1 line, up to 15 characters)
- Inch Handles: Light Blue, Metric: Yellow
- Certificate of Accuracy included

Ring Gages

For Masters and Go/NoGo gaging. Use Vermont Gage ring gages to efficiently inspect external dimensions of manufactured parts. With a Go and NoGo ring, an inspector can quickly pass/fail without taking time-consuming readings from an indicator. These ring gages are also perfect for use as masters for bore gages and internal micrometers. By using the same size master ring gage, you eliminate lead error when making measurements. A Certificate of Accuracy accompanies every gage, assuring size.



P.O.A.

FEATURES:
- Steel or Chrome
- Class XX, X, Y, Z, or ZZ
- Go, NoGo tolerances
- NIST traceable
- Tool Steel; 60/62 Rc (Cold Stabilized)
- Chrome Plated Tool Steel; 70.72 Rc
- 2 microinch finish or better on Class XX, X
- Handles custom marked (1 line, up to 15 characters)
- Inch Handles: Light Blue, Metric: Yellow
- Certificate of Accuracy included

SIZE RANGE
.0150 to .0250" (0.38 to 0.64mm)
.0251 to .0400" (0.65 to 1.02mm)
.0401 to .0700" (1.03 to 1.78mm)
.0701 to .1500" (1.79 to 3.81mm)
.1501 to .2300" (3.82 to 5.84mm)
.2301 to .3650" (5.85 to 9.27mm)
.3651 to .5100" (9.28 to 12.95mm)
.5101 to .8250" (12.96 to 20.95mm)
.8251 to 1.1350" (20.96 to 28.83mm)
1.1351 to 1.5100" (28.84 to 38.35mm)
1.5101 to 2.0100" (38.36 to 51.05mm)
2.0101 to 2.5100" (51.06 to 63.75mm)
2.5101 to 3.0100" (63.76 to 76.45mm)
3.0101 to 3.5100" (76.46 to 89.15mm)
3.5101 to 4.0100" (89.16 to 101.85mm)
4.0101 to 4.7600" (101.86 to 120.90mm)
4.7601 to 5.5100" (120.91 to 139.85mm)
5.5101 to 6.2600" (139.86 to 159.00mm)
6.2601 to 7.0100" (159.01 to 178.05mm)
7.0101 to 7.7600" (178.06 to 197.10mm)
7.7601 to 8.5100" (197.11 to 216.15mm)
8.5101 to 9.2600" (216.16 to 235.20mm)
9.2601 to 10.0100" (235.21 to 254.25mm)
10.0101 to 10.7600" (254.26 to 273.30mm)
10.7601 to 11.5100" (273.31 to 292.35mm)

Measuring Instruments

Pittsburg® ALLEGHANY

Outside Micrometers
Made in China

- Light, smooth operation for convenient single hand operation
- Flatness: .00003" Parallelism: 0.00005" for 1" model
- Carbide tipped with ratchet stop and locking lever
- Spindle and anvil fully hardened and precision ground
- Clear graduations on hard chrome satin finish sleeve and thimble
- Standards included for 1-2" and above, and in sets
- Supplied in specially fitted case, with spanner wrench
- Heat insulated grip up to 4", lightweight tubular frame 5" and above





Inch Sizes

[2]

RANGE	GRAD.	ORDER NO.	PRICE
0-1"	.0001"	3100-330	$25.50
1-2"	.0001"	3100-331	27.50
2-3"	.0001"	3100-332	30.50
3-4"	.0001"	3100-333	32.50
4-5"	.0001"	3100-334	37.50
5-6"	.0001"	3100-335	43.50
6-7"	.0001"	3100-336	58.50
7-8"	.0001"	3100-337	61.00
8-9"	.0001"	3100-338	78.00
9-10"	.0001"	3100-339	87.50
10-11"	.0001"	3100-340	95.00
11-12"	.0001"	3100-341	110.00

Inch Sets

RANGE	GRAD.	ORDER NO.	PRICE
0-3"	.0001"	3100-342	$ 72.00
0-4"	.0001"	3100-343	69.00
0-6"	.0001"	3100-344	195.00
6-12"	.0001"	3100-345	425.00
0-12"	.0001"	3100-346	580.00

Fowler

Outside Micrometers
w/ Insulated Frames

FEATURES:

- Complete in "Shop Hardened" molded case
- Sizes over 1" supplied with standards
- Reading: .0001"
- Carbide tipped measuring faces.
- Ratchet thimble and locking nut.
- Microfine graduations.
- Meets or exceeds federal specs.



[2]

ORDER NUMBER	DESCRIPTION	PRICE
52-229-201-0	0-1" Outside Micrometer	$ 59.42
52-229-213-0	0-3" Outside Micrometer Set	214.25

Mitutoyo

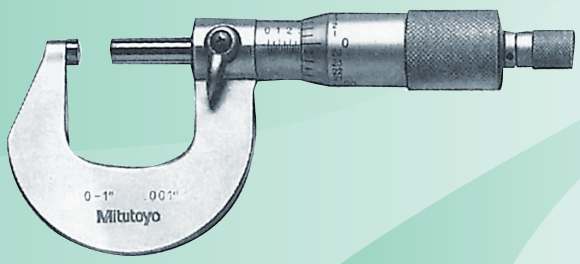
Outside Micrometers - Series 101 & 102

ACCURACY

- Flatness: .000024"/0.6µm.
- Parallelism: .00005" for up to .59"/1.3µm for up to 15mm, .00008" for up to 3"/2µm for up to 75mm .00012" for up to 4"/3µm for up to 100mm.
- Designed to be operated efficiently with one hand.

FEATURES

- Satin-finished chrome frame, tapered (on the anvil side) for hard-to-reach places.
- Carbide-tipped measuring faces.
- Supplied in fitted case



Inch

[12]

ORDER NO.	RANGE	GRADUATION	ACCURACY	REMARKS	LIST PRICE
102-327-10	0–1"	.0001"	±.0001"	Ratchet Stop	$166.00
101-114	1–2"	.0001"	±.0001"	Ratchet Stop with Standard	192.00
101-119	2–3"	.0001"	±.0001"	Ratchet Stop with Standard	220.00
101-120	3–4"	.0001"	±.00015"	Ratchet Stop with Standard	258.00
102-329-10	0–1"	.0001"	±.0001"	Friction Thimble	166.00
101-118	1–2"	.0001"	±.0001"	Friction Thimble w/ Standard	192.00

Metric

ORDER NO.	(MM) RANGE	(MM) GRADUATION	ACCURACY	REMARKS	LIST PRICE
102-301	0–25	0.01	±2µm	Ratchet Stop	$144.00
102-302	25-50	.0001"	±2µm	Ratchet Stop	178.00
102-303	50-75	.0001"	±2µm	Ratchet Stop	192.00
102-304	75-100	.0001"	±3µm	Ratchet Stop	229.00

Quick Micrometers – Series 293



ACCURACY
The Quickmike provides a speedy spindle feed of 10 mm per thimble rotation that enables widely differently sized features to be measured quickly. Also, 1-2”/30 mm of wide measuring range, which is .2”/5 mm longer than the standard type, allows measurement of multiple workpieces.

Inch/Metric

ORDER NO.	RANGE (IN.)	ACCURACY (IN.)	FLATNESS (IN.)	PARALLELISM (IN.)	MASS (g.)	LIST PRICE
293-676-20	0 - 1.2	±0.0001	0.000012	0.00008	275	$700.00
293-677-20	0 - 2.2	±0.0001	0.000012	0.00008	340	764.00
293-678-20	0 - 3.2	±0.00015	0.000012	0.00008	480	832.00
293-679-20	0 - 4.2	±0.00015	0.000012	0.000012	585	908.00

Adjustable Low Force Micrometers – Series 227



Constant and low measuring force mechanism in the thimble. Digimatic micrometer dedicated to applications requiring a constant/low measuring force such as measuring wire, paper, and plastic/rubber parts.

- Speedy spindle feed of 10 mm per thimble rotation that enables widely differently sized features to be measured quickly.
- 20x faster feed rate compared to standard micrometers (0.5 mm per revolution).
- Extended battery life (5 Years). Low-power electronics have extended the battery life to 5 years in normal use.
- Absolute scale - The ABS (absolute) linear scale eliminates the need for setting the origin point every time the micrometer is powered-on and achieves high reliability while being free from overspeed error.
- Function lock enhances usability by preventing the origin from being accidentally changed during measurement.
- Connectable to MeasurLink or spreadsheets, when using optional adapters. Connected to MeasurLink, “visualization of quality”can be achieved by enabling real-time data collection, global control and statistical analysis.

Inch/Metric

ORDER NO.	RANGE	MEASURING FORCE ADJUSTABLE RANGE	RESOLUTION	ACCURACY	MEASURING FORCE	REPEATABILITY	MASS	LIST PRICE
227-211-20	0 - 0.6 in	0.5 - 2.5 N	0.00005 in /0.001 mm	±0.0001 in	0.5, 1.0, 1.5, 2.0, 2.5 N	within 0.1 N	300 g	$1010.00
227-213-20	0.6 - 1.2 in	0.5 - 2.5 N	0.00005 in /0.001 mm	±0.0001 in	0.5, 1.0, 1.5, 2.0, 2.5 N	within 0.1 N	380 g	1060.00
227-215-20	0 - 0.4 in	2 - 10 N	0.00005 in /0.001 mm	±0.0001 in	2, 4, 6, 8, 10 N	within 0.4 N	345 g	957.00
227-216-20	0.4 - 0.8 in	2 - 10 N	0.00005 in /0.001 mm	±0.0001 in	2, 4, 6, 8, 10 N	within 0.4 N	425 g	999.00
227-217-20	0.8 - 1.2 in	2 - 10 N	0.00005 in /0.001 mm	±0.0001 in	2, 4, 6, 8, 10 N	within 0.4 N	415 g	1030.00

Mitutoyo

Outside Micrometers – Series 103

FEATURES

- Carbide faces.
- Positive locking clamp.
- Ratchet stop or Friction Thimble for exact readings.
- Baked-enamel-finished frame.
- Clear graduations on satin-chrome finish.
- Complete with fitted carrying case.
- Inspection certificate provided.



103-135



103-260



103-907-40

Inch

ORDER NO.	RANGE	GRADUATION	ACCURACY	REMARKS	LIST PRICE
103-131	0–1"	.0001"	±.0001"	Ratchet Stop type	$139.00
103-132	1–2"	.0001"	±.0001"	Ratchet Stop with Standard	145.00
103-135	0–1"	.0001"	±.0001"	Friction Thimble type	140.00
103-136	1–2"	.0001"	±.0001"	Friction Thimble type with Standard	165.00
103-259	0–1"	.001"	±.0001"	Ratchet Stop type, tapered frame	129.00
103-177	0–1"	.001"	±.0001"	Ratchet Stop type	129.00
103-178	1–2"	.001"	±.0001"	Ratchet Stop type with Standard	149.00
103-179	2–3"	.001"	±.0001"	Ratchet Stop type with Standard	173.00
103-180	3–4"	.001"	±.00015"	Ratchet Stop type with Standard	200.00
103-181	4–5"	.001"	±.00015"	Ratchet Stop type with Standard	222.00
103-182	5–6"	.001"	±.00015"	Ratchet Stop type with Standard	240.00
103-183	6–7"	.001"	±.0002"	Ratchet Stop type with Standard	272.00
103-184	7–8"	.001"	±.0002"	Ratchet Stop type with Standard	292.00
103-185	8–9"	.001"	±.0002"	Ratchet Stop type with Standard	315.00
103-186	9–10"	.001"	±.00025"	Ratchet Stop type with Standard	332.00
103-187	10–11"	.001"	±.00025"	Ratchet Stop type with Standard	345.00
103-188	11–12"	.001"	±.00025"	Ratchet Stop type with Standard	361.00
103-189	12–13"	.001"	±.0003"	Ratchet Stop type with Standard	433.00
103-190	13–14"	.001"	±.0003"	Ratchet Stop type with Standard	479.00
103-191	14–15"	.001"	±.0003"	Ratchet Stop type with Standard	530.00
103-192	15–16"	.001"	±.00035"	Ratchet Stop type with Standard	576.00
103-193	16–17"	.001"	±.00035"	Ratchet Stop type with Standard	610.00
103-194	17–18"	.001"	±.00035"	Ratchet Stop type with Standard	656.00
103-195	18–19"	.001"	±.0004"	Ratchet Stop type with Standard	699.00
103-196	19–20"	.001"	±.0004"	Ratchet Stop type with Standard	733.00
103-197	20–21"	.001"	±.0004"	Ratchet Stop type with Standard	780.00
103-198	21–22"	.001"	±.00045"	Ratchet Stop type with Standard	824.00
103-199	22–23"	.001"	±.00045"	Ratchet Stop type with Standard	868.00
103-200	23–24"	.001"	±.00045"	Ratchet Stop type with Standard	918.00
103-201	24–25"	.001"	±.0005"	Ratchet Stop type with Standard	968.00
103-202	25–26"	.001"	±.0005"	Ratchet Stop type with Standard	1010.00
103-203	26–27"	.001"	±.0005"	Ratchet Stop type with Standard	1230.00
103-204	27–28"	.001"	±.00055"	Ratchet Stop type with Standard	1160.00
103-205	28–29"	.001"	±.00055"	Ratchet Stop type with Standard	1210.00
103-206	29–30"	.001"	±.00055"	Ratchet Stop type with Standard	1380.00
103-207	30–31"	.001"	±.0006"	Ratchet Stop type with Standard	1330.00
103-208	31–32"	.001"	±.0006"	Ratchet Stop type with Standard	1550.00
103-209	32–33"	.001"	±.0006"	Ratchet Stop type with Standard	1610.00
103-210	33–34"	.001"	±.00065"	Ratchet Stop type with Standard	1660.00
103-211	34–35"	.001"	±.00065"	Ratchet Stop type with Standard	1700.00
103-212	35–36"	.001"	±.00065"	Ratchet Stop type with Standard	1790.00
103-213	36–37"	.001"	±.0007"	Ratchet Stop type with Standard	1900.00
103-214	37–38"	.001"	±.0007"	Ratchet Stop type with Standard	1960.00
103-215	38–39"	.001"	±.0007"	Ratchet Stop type with Standard	2020.00
103-216	39–40"	.001"	±.00075"	Ratchet Stop type with Standard	2120.00
103-260	0–1"	.0001"	±.0001"	Ratchet Stop type, tapered frame	139.00
103-262	1–2"	.0001"	±.0001"	Ratchet Stop type with Standard	163.00
103-217	2–3"	.0001"	±.0001"	Ratchet Stop type with Standard	182.00
103-218	3–4"	.0001"	±.00015"	Ratchet Stop type with Standard	209.00
103-219	4–5"	.0001"	±.00015"	Ratchet Stop type with Standard	227.00
103-220	5–6"	.0001"	±.00015"	Ratchet Stop type with Standard	251.00
103-221	6–7"	.0001"	±.0002"	Ratchet Stop type with Standard	284.00
103-222	7–8"	.0001"	±.0002"	Ratchet Stop type with Standard	301.00
103-223	8–9"	.0001"	±.0002"	Ratchet Stop type with Standard	332.00
103-224	9–10"	.0001"	±.00025"	Ratchet Stop type with Standard	345.00
103-225	10–11"	.0001"	±.00025"	Ratchet Stop type with Standard	361.00
103-226	11–12"	.0001"	±.00025"	Ratchet Stop type with Standard	376.00

ORDER No. 103-929 (0–3" Set) — **List Price $462.00**

ORDER NO.	RANGE	GRADUATION	REMARKS	LIST PRICE
103-177	0–1"	.001"	Ratchet Stop type with Standards	$129.00
103-178	1–2"	.001"		149.00
103-179	2–3"	.001"		173.00

ORDER No. 103-904-10 (0–6" Set) — **List Price $1190.00**

ORDER NO.	RANGE	GRADUATION	REMARKS	LIST PRICE
103-177	0–1"	.001"	Ratchet Stop type with 5 Standards	$129.00
103-178	1–2"	.001"		149.00
103-179	2–3"	.001"		173.00
103-180	3–4"	.001"		200.00
103-181	4–5"	.001"		222.00
103-182	5–6"	.001"		240.00

ORDER No. 103-922 (0–3" Set) — **List Price $509.00**

ORDER NO.	RANGE	GRADUATION	REMARKS	LIST PRICE
103-135	0–1"	.0001"	Friction Thimble type	$140.00
103-136	1–2"	.0001"		165.00
103-217	2–3"	.0001"	Ratchet Stop type with Standards	182.00

ORDER No. 103-907-40 (0–6" Set) — **List Price $1030.00**

ORDER NO.	RANGE	GRADUATION	REMARKS	LIST PRICE
103-135	0–1"	.0001"	Friction Thimble type	$140.00
103-136	1–2"	.0001"		165.00
103-217	2–3"	.0001"		182.00
103-218	3–4"	.0001"	Ratchet Stop type with Standards	209.00
103-219	4–5"	.0001"		227.00
103-220	5–6"	.0001"		251.00

ORDER No. 103-909 (6"–12" Set) — **List Price $2070.00**

ORDER NO.	RANGE	GRADUATION	REMARKS	LIST PRICE
103-221	6–7"	.0001"	Ratchet Stop type with Standards	$284.00
103-222	7–8"	.0001"		301.00
103-223	8–9"	.0001"		332.00
103-224	9–10"	.0001"		345.00
103-225	10–11"	.0001"		361.00
103-226	11–12"	.0001"		376.00

ORDER No. 103-908-40 (0–12" Set) — **List Price $2850.00**

ORDER NO.	RANGE	GRADUATION	REMARKS	LIST PRICE
103-135	0–1"	.0001"	Friction Thimble type	$140.00
103-136	1–2"	.0001"		165.00
103-217	2–3"	.0001"	Ratchet Stop type with Standards	182.00
103-218	3–4"	.0001"		209.00
103-219	4–5"	.0001"		227.00
103-220	5–6"	.0001"		251.00
103-221	6–7"	.0001"		284.00
103-222	7–8"	.0001"		301.00
103-223	8–9"	.0001"		332.00
103-224	9–10"	.0001"		345.00
103-225	10–11"	.0001"		361.00
103-226	11–12"	.0001"		376.00

Measuring Instruments

Mitutoyo
Digimatic Micrometers Series 293 – IP65

FEATURES:
- IP65 protection level, enabling use in environments exposed to cutting oil, etc*. *Anti-corrosion treatment is required after use.
- Measurement data output function is available with a water-resistant connection cable.
- Auto power ON/OFF function.
- A nonslip surface with raised dots is employed for the frame cover and surface panel to achieve stable handheld measurement
- Certificate of inspection* is included. (2" /50mm or less range models) *Not the type used to obtain calibration certificates.
- With a standard bar except for 0-1"/0-25mm model.
- Supplied in fitted case. Plastic case up to 6"/150mm, wooden box over 6"/150mm

FUNCTIONS AVAILABLE:
- Origin setting, Inch/mm selection
- Zero-setting • Error alarm
- Data Hold only with SPC Models
- Auto-sleep • Data output
- Can be linked to the SPC system
- Carbide-tipped measuring faces.



293-348-30 Standard Friction Thimble

Inch/Metric

ORDER NO.	RANGE	LCD RESOLUTION	ACCURACY	REMARKS	LIST PRICE
293-330-30	0–1" 0–25.4mm	.00005" 0.001mm	±.00005"	with SPC output Ratchet Stop	$283.00
293-331-30	1–2" 25.4–50.8mm	.00005" 0.001mm	±.00005"	w/ SPC output and Std. Ratchet Stop	333.00
293-332-30	2–3" 50.8–76.2mm	.00005" 0.001mm	±.00005"	w/ SPC output and Std. Ratchet Stop	412.00
293-333-30	3–4" 76.2–101.6mm	.00005" 0.001mm	±.0001"	w/ SPC output and Std. Ratchet Stop	444.00
293-350-30	4–5" 101.6–127.0mm	0.0001" 0.001mm	±.0001"	w/ SPC output and Std. Ratchet Stop	546.00
293-351-30	5–6" 127.0–152.4mm	0.0001" 0.001mm	±.0001"	w/ SPC output and Std. Ratchet Stop	568.00
293-352-30	6–7" 152.4–177.8mm	0.0001" 0.001mm	±.00015"	w/ SPC output and Std. Ratchet Stop	580.00
293-353-30	7–8" 177.8–203.2mm	0.0001" 0.001mm	±.00015"	w/ SPC output and Std. Ratchet Stop	623.00
293-354-30	8–9" 203.2–228.6mm	0.0001" 0.001mm	±.00015"	w/ SPC output and Std. Ratchet Stop	$645.00
293-355-30	9–10" mm	0.0001" mm	±.0002"	w/ SPC output and Std.	674.00
293-356-30	10–11" mm	0.0001" 0.001mm	±.0002"	w/ SPC output and Std.	679.00
293-357-30	11–12" mm	0.0001" 0.001mm	±.0002"	w/ SPC output and Std.	699.00
293-340-30	0–1" 0–25.4mm	.00005" 0.001mm	±.00005"	without SPC output Ratchet Stop	260.00
293-344-30	0–1" 0–25.4mm	.00005" 0.001mm	±.00005"	without SPC output Ratchet-Friction Thimble	260.00
293-348-30	0–1" 0–25.4mm	.00005" 0.001mm	±.00005"	without SPC output Friction Thimble	260.00
293-349-30	0–1" 0–25.4mm	.0001" 0.001mm	±.00005"	without SPC output Ratchet-Friction Thimble	260.00

Replacement Battery: 938882 (1 pc). SPC Cable: 05CZA662 (1m) or 05CZA663 (2m)

Fowler XTRA-VALUE II Electronic Micrometers

FEATURES:
- Jet black, grey enamel finish
- Large LCD display, 8.5mm
- Resolution: .00005"/.001mm
- Accuracy: ±.00016"/.004mm (up to 2") • Ratchet thimble
- Carbide measuring faces.
- Absolute and incremental modes
- Includes shop hardened case



ORDER NUMBER	RANGE/ DESCRIPTION	PRICE EACH
54-870-001-0	0–1"/0–25mm Elec. Micrometer	$107.28
54-870-002-0	1–2"/0–50mm Elec. Micrometer	115.85
54-870-003-0	2–3"/0–75mm Elec. Micrometer	138.56
54-870-103-0	0-3"/0-75mm Elec. Micrometer Set	346.42

Fowler LIFETIME WARRANTY Rapid-Mic Quick-Displacement Electronic Micrometer



FEATURES:
- Auto On/Off • Position recall • IP67 with or without data cable.
- Delrin quick displacement thimble • Adjustable measuring force, 5N/10N
- Menu customizable with free software • Non-rotating spindle, 12mm/spindle rotation
- USB output • Carbide anvils • Extended Range 0-30mm, 30-66mm and 66-102mm
- Blade anvils and speciality mics are available, contact Fowler Technical Department

ORDER NO.	DESCRIPTION	MAX ERROR	PRICE
54-815-030-0	0-1.18"/0-30mm	0.00012"/.003mm	$625.88

Measuring Instruments

Pittsburg® ALLEGHANY Digital Electronic Outside Micrometer

[2]

RANGE	RESOLUTION	ORDER NO.	PRICE
0-1"/0-25mm	.00005"/.001"mm	3100-590	$89.00

- Large, easy to read LCD display
- Set zero at any point along spindle
- Automatic power off
- Carbide tipped with ratchet stop and locking lever
- Hardened and precision ground anvil and spindle
- Hard chrome satin finish sleeve and thimble
- Supplied in specially fitted case



Fowler IP54 Electronic Micrometers

[6]

ORDER NUMBER	DESCRIPTION	PRICE
54-860-001-1	0—1" Electronic Micrometer	$157.14
54-860-002-1	1—2" Electronic Micrometer	181.88
54-860-003-1	2—3" Electronic Micrometer	190.70
54-860-103-1	0—3" Electronic Micrometer Set	516.68

Water, oil and fluid resistant to IP54

- Protecte to IP54 specification.
- Large LCD display.
- Automatic switch off.
- Resolution: .00005"/.001mm.
- Direct RS232 output.
- Complete with case
- Sizes over 1" supplied with standards.



Mitutoyo Wide Range Outside Micrometers – Series 104 & 340 – IP65

FEATURES

- Wide measuring range with interchangeable anvils.
- Carbide-tipped spindle.
- Provided with Ratchet Stop for constant force.

DIGIMATIC FUNCTIONS

340 Series - IP65

•Inch/mm •Preset
•Zero/ABS •Data Send/Hold

ACCURACY

- Flatness: within .000024"/0.6µm for up to 12"/300mm within .00004"/1µm for up to 40"/1000mm.
- Parallelism: .00008" + .00004" x (L*/4") / (2 + L/100)µm (*truncated after decimal pt.)
- Measuring Accuracy: ± (.0002" + .00005" x L*/3")" / ± (4 + L/75)µm (*truncated after decimal pt.), L = maximum measuring length.



340-351-10

Digimatic Wide Range Outside Micrometers

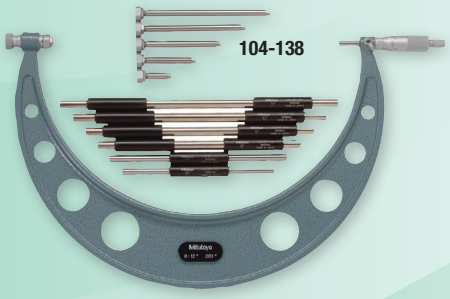
[7]

ORDER NO.	RANGE	LCD RESOLUTION	REMARKS	LIST PRICE
340-351-30	0–6" 0–152.4mm	.00005" 0.001mm	with 6 Anvils & 5 Standards with SPC output	$864.00
340-352-30	6–12" 152.4–304.8mm	.00005" 0.001mm	with 6 Anvils & 6 Standards with SPC output	1060.00

Wide Range Outside Micrometers

[12]

ORDER NO.	RANGE	GRADUATION	REMARKS	LIST PRICE
104-137	0–6"	.001"	with 6 Anvils & 5 Standards	$ 457.00
104-138	6–12"	.001"	with 6 Anvils & 6 Standards	824.00
104-203	24–30"	.001"	with 6 Anvils & 6 Standards	1580.00
104-204	30–36"	.001"	with 6 Anvils & 6 Standards	1740.00
104-205	36–42"	.001"	with 6 Anvils & 6 Standards	1900.00
104-152	12–16"	.001"	with 4 Anvils & 4 Standards	834.00
104-153	16–20"	.001"	with 4 Anvils & 4 Standards	1030.00
104-154	20–24"	.001"	with 4 Anvils & 4 Standards	1230.00



104-138

Mitutoyo Deep Throat Micrometers – Series 118

FEATURES

- Measures thickness of sheet metal, paper, plastic, and rubber parts.
- Carbide-tipped measuring faces.
- Provided with Ratchet Stop for constant force.

Inch

[12]

ORDER NO.	RANGE	RESOLUTION	ACCURACY	REMARKS	LIST PRICE
118-129	0–1"	.0001"	±.0002"	Depth of Throat: 6"	$283.00
118-107	0–1"	.001"	±.00025"	Depth of Throat: 12"	470.00

Special modifications to spindle/anvil tips available upon request.



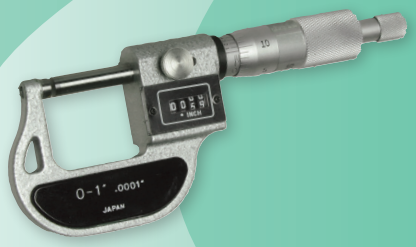
Measuring Instruments

Pittsburg® ALLEGHANY Digital Outside Micrometer

2

RANGE	GRAD.	ORDER NO.	PRICE
0-1"	.0001"	3100-575	$45.00
1-2"	.0001"	3100-576	49.00
2-3"	.0001"	3100-577	55.00
0-3" Set	.0001"	3100-582	129.00

- Rapid and simple reading. Fast zero adjustment
- .0001" graduations on vernier scale, .001" on digital counter
- Flatness: .00003" Parallelism: 0.00005" for 1" model
- Carbide tipped with ratchet stop and locking nut
- Hardened and precision ground anvil and spindle
- Crisp, clear graduations on hard chrome satin finish sleeve and thimble
- Standards included for 1-2" and above, and in sets
- Supplied in specially fitted case, with spanner wrench
- Heat insulated grip plates



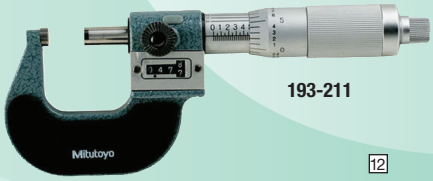
Mitutoyo Digital Outside Micrometers – Series 193

Mechanical Digit Counter Readout

FEATURES

- Mechanical counter for quick and error-free reading.
- Direct readout on the counter to .001"/0.01mm.
- Carbide-tipped measuring faces.

Note: 0–1" and 1–2" models have Friction Thimbles. All others have Ratchet Stop.
Metric available on request.

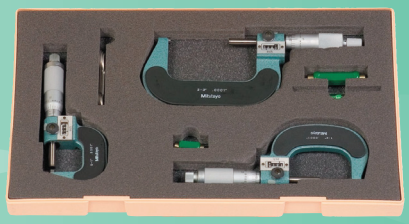


193-211

12

ACCURACY

- Flatness:
  Inch models .000024" for models up to 12".
  Metric models 0.6µm for models up to 300mm.
- Parallelism: Inch models .00008" + .00004" x (L*/4") (*truncated after decimal pt.)
  Metric models (2 + L/100)µm.



Inch

ORDER NO.	RANGE	GRADUATION	ACCURACY	REMARKS	LIST PRICE
193-211	0–1"	.0001"	±.0001"	Friction Thimble	$220.00
193-212	1–2"	.0001"	±.0001"	with standard, Friction Thimble	259.00
193-213	2–3"	.0001"	±.0001"	with standard, Ratchet Stop	288.00
193-214	3–4"	.0001"	±.00015"	with standard, Ratchet Stop	319.00

Digital Micrometer Set

12

ORDER NO.	RANGE	GRADUATION	ACCURACY	REMARKS	LIST PRICE
193-923	0–3"	.0001"	±.0001"	with standard	$769.00

Fowler Digit Counter Micrometers

2

ORDER NUMBER	DESCRIPTION	PRICE
52-224-001-1	0—1" Outside Micrometer	$125.49
52-224-002-0	1—2" Outside Micrometer	71.50
52-224-003-0	2—3" Outside Micrometer	77.20
52-224-103-0	0—3" Outside Micrometer Set	396.05

- Digital counter
- Resolution: .0001",
- Microfine graduations on satin chrome finish
- Carbide tipped measuring faces
- Positive locking nut on spindle
- Sizes over 1" supplied with standards



Mitutoyo Uni-Mike –Series 117 & 317 - IP65

Interchangeable Anvil Type

7

Inch/Metric

ORDER NO.	RANGE	LCD RESOLUTION	ACCURACY	REMARKS	LIST PRICE
317-351-30	0–1" 0–25.4mm	.00005"– 0.001mm	±.0002"	Friction Thimble w/Flat & Rod Anvils	$625.00
317-352-30	1–2" 25.4–50.8mm	.00005"– 0.001mm	±.0002"	Friction Thimble w/Flat & Rod Anvils plus Standard	635.00

* For SPC output order connecting cable **05CZA662** (1m) or **05CZA663** (2m). Replacement Battery: **938882**.

Inch

12

117-107*	0–1"	.0001"	±.0002"	w/Flat & Rod Anvils	$244.00
117-108*	1–2"	.0001"	±.0002" plus Standard	w/Flat & Rod Anvils	287.00

* **117-107** and **117-108** with Friction Thimble. Replacement Anvils: Rod Anvil **201217**; Flat Anvil **201216**; Optional V-Anvil **201218**; Optional 1" Disc Anvil **950758**.



317-351-30



117 Series

FEATURES

- Measures tube thickness, shoulder-edge distance, rivet head height, etc. with interchangeable anvils (flat anvil, rod anvil, V-anvil).
- The 317 series provides digital readout to .00005"/0.001mm and can be linked to the SPC system.

ACCURACY

- Flatness: Measuring face of spindle: .000024"/0.6µm. Bottom of base: .00008"/2µm.
- Parallelism: .00012"/3µm.

Mitutoyo

Screw Thread Micrometers – Series 126 & 326

Digimatic Screw Thread Micrometers

Inch/Metric (No Anvils) [7]

ORDER NO.	RANGE	LCD RESOLUTION	ACCURACY	REMARKS	LIST PRICE
326-351-30	0–1"–0–25.4mm	.00005"–0.001mm	±.0002"	—	$786.00
326-352-30	1–2"–25.4–50.8mm	.00005"–0.001mm	±.0002"	with Standard	832.00

For SPC output order connecting cable **05CZA662** (1m) or **05CZA663** (2m).
Replacement Battery: **938882**.



326-351-30



126-137

Screw Thread Micrometers

Inch (No Anvils) [12]

ORDER NO.	RANGE	GRADUATION	*ACCURACY	REMARKS	LIST PRICE
126-137	0–1"	.001"	±.0002"	—	$530.00
126-138	1–2"	.001"	±.0002"	with Standard	634.00

Inch (With Anvil Set)

126-901	0–1"	.001"	±.0002"	with Anvil Set (126-800)	$1080.00
126-902	1–2"	.001"	±.0002"	with Anvil Set (126-800) with Standard	1200.00

*** Read Screw only. Sizes available up to 7".**

Anvils (Accessories – Must select at least one pair) [1]

ORDER NO.	THREADS (PER INCH)		PITCH (INCH/MM)	REMARKS	LIST PRICE
126-801	64–48	(M1)	.016–.019"/0.4–0.5mm	1 Pair	$78.30
126-802	44–28	(M2)	.024–.035"/0.6–0.9mm	1 Pair	78.30
126-803	24–14	(M3)	.04–.068"/1.0–1.75mm	1 Pair	78.30
126-804	13–9	(M4)	.079–.118"/2.0–3.0mm	1 Pair	78.30
126-805	8–5	(M5)	.138–.196"/3.5–5.0mm	1 Pair	78.30
126-806	4.5–3.5	(M6)	.217–.275"/5.5–7.0mm	1 Pair	78.30
126-800	64–3.5		.016–.275"/0.4–7.0mm	Set	469.00

FEATURES

- Interchangeable tips for measuring various screw threads.
- The 326 series provides digital readout to .00005"/0.001mm and can be linked to the SPC system.
- Provided with a Ratchet Stop for constant force.
- Provided with a standard bar for zero point adjustment.
- Interchangeable tips are optional.

ACCURACY

- Spindle feed error: .00012"/3µm.

Interchangeable V-Anvil Type for Measuring Pitch Diameter

Each anvil can be used for both metric and unified external threads. The correct pair of anvils must be selected and inserted in the hollow micrometer spindle and anvil. The micrometer anvil is fully adjustable by the knurled knob located on the anvil side of the frame. Zero set the micrometer with this knob whenever the anvil is interchanged.

- 60 degree V-Anvil and Conical Spindle are made of high-grade special steel, hardened and precision ground.
- Furnished complete with fitted carrying case.

Pittsburg® ALLEGHANY Screw Thread Micrometers

- Every thousanth is numbered for easy reading
- Deluxe heat-insulator on satin chrome finished forged steel frame, tapered for hard to get at places
- Ratchet stop with positive locking clamp
- Micro-fine graduations on satin chrome finish
- V-Anvil and a conical spindle made of high grade steel, hardened and precision ground
- Includes fitted case, with standard supplied for 1-2"

RANGE	GRAD.	ANVILS	ORDER NO.	PRICE
0-1"	.001"	1-5	3100-180	$130.00
1-2"	.001"	2-6	3100-181	142.00

[2]



Anvils – UST 60 Deg .0001"

ANVIL NO.	RANGE	ORDER NO.	PRICE
1	64-48	3100-184†	$19.05
5	8-5	3100-188†	19.05
6	4.5-3	3100-189†	21.25
Anvil Set		3100-179	167.30

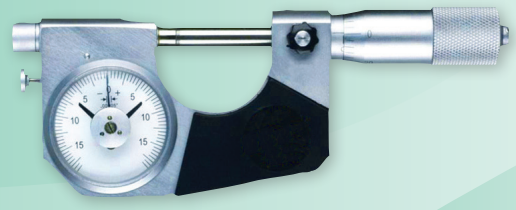
† Limited Quantities

Pittsburg® ALLEGHANY Indicating Micrometers

- Every thousanth is numbered for easy setting
- Quick and easy zero adjustment
- Retracting button convenient to operator's thumb
- Tolerance hands can be set as desired
- Microlapped finish carbide measuring faces
- Jeweled bearings
- Hardened and precision ground anvil and spindle
- Hard chrome satin finish sleeve and thimble
- Supplied in specially fitted case

[2]

RANGE	GRAD.	ORDER NO. CHINA	PRICE
0-1"	.0001"	3100-234	$320.00
1-2"	.0001"	3100-236	350.00



Mitutoyo Indicating Micrometer – Series 510

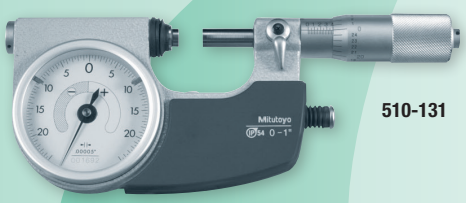
FEATURES

- User-friendly, improved durability, accuracy
- Waterproof structure conforms to IP-54
- Scratch-resistant hard coated crystal
- Easy-to-read large dial graduations
- Zero-adjustment screw on backside

Inch [12]

ORDER NO.	RANGE	GRADUATION OF INDICATOR	RANGE OF INDICATOR	TOTAL ACCURACY	LIST PRICE
510-131*	0–1"	.00005"	± .0023"	± .0001"	$1000.00
510-132	1–2"	.00005"	± .0023"	± .0001"	1080.00
510-133	2–3"	.00005"	± .0023"	± .0001"	1210.00
510-134	3–4"	.00005"	± .0023"	± .0001"	1310.00

***Retractable anvil button on the right side (510-131).**



510-131

Mitutoyo

Blade Micrometers - Series 122 & 422

Non-Rotating Spindle

FEATURES

- The anvil and the spindle have a blade for measuring the groove diameter of shafts, keyways, and other hard-to-reach portions.
- The 422 series provides digital readout to .00005"/0.001mm and can be linked to the SPC system.
- All Digimatic models provide SPC output
- Non-rotating spindle.

ACCURACY

- Parallelism: .00012" for models up to 2", .00012" + .00004" x (L*/4") for over 2", 3µm models for up to 50mm, (3 + L/100)µm for models over 50mm.
  (*truncated after decimal point).
  L = maximum measuring length.

Digimatic Blade Micrometer

Inch/Metric



422-330-30

7

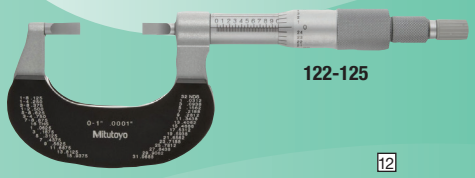
ORDER NO.	RANGE	LCD RESOLUTION	ACCURACY	BLADE DIMENSION	LIST PRICE
422-330-30	0–1" 0–25.4mm	.00005" 0.001mm	±.00015"	.030"	$920.00
422-331-30	1–2" 25.4–50.8mm	.00005" 0.001mm	±.00015"	.030"	986.00

* For SPC output order connecting cable **05CZA662** (1m) or **05CZA663** (2m).

Special Oversized models up to 12" available upon request (Based on models 422-330-30 & 122-125).

Blade Micrometer

Inch



122-125

12

ORDER NO.	RANGE	GRADUATION	ACCURACY	BLADE DIMENSION	LIST PRICE
122-125	0–1"	.0001"	±.00015"	.030"	$310.00
122-126	1–2"	.0001"	±.00015"	.030"	324.00
122-127	2–3"	.0001"	±.00015"	.030"	341.00
122-128	3–4"	.0001"	±.0002"	.030"	364.00

Mitutoyo

Spherical Face Micrometers Series 115 & 395-IP65

Digimatic Spherical Face Micrometers

Inch/Metric

7

ORDER NO.	RANGE	LCD RESOLUTION	ACCURACY	REMARKS	LIST PRICE
395-351-30	0–1" 0–25.4mm	.00005" 0.001mm	±.0001"	Spherical anvil type	$468.00
395-352-30	1–2" 25.4–50.8mm	.00005" 0.001mm	±.0001"	Spherical anvil type w/Standard	502.00
395-371-30	0–1" 0–25.4mm	.00005" 0.001mm	±.0001"	Spherical anvil & spindle type	484.00
395-372-30	1–2" 25.4–50.8mm	.00005" 0.001mm	±.0001"	Spherical anvil & spindle type with Standard	513.00

For SPC output order connecting cable **05CZA662** (1m) or **05CZA663** (2m).
Replacement Battery: **938882**.

Spherical Face Micrometers

12

ORDER NO.	RANGE	GRADUATION	ACCURACY	REMARKS	LIST PRICE
115-153	0–1"	.0001"	±.00015"	Spherical anvil type	$ 158.00
115-253	0–1"	.0001"	±.00015"	Spherical anvil & spindle type	173.00

FEATURES

- Spherical Anvil Micrometers are especially useful in measuring the wall thickness of small parts such as sleeves, collars, tubings and various cylindrical workpieces. They are also used to measure dimensions from the inside of holes to outside edges. The spherical anvil contacts the inside curved surface providing a single point contact and permitting accurate gaging of the wall thickness to .0001".
- Ratchet thimble for constant force.
- Carbide-tipped measuring faces.
- The 395 series can be linked to the SPC system.
- Provided with a constant-force device.
- Digimatic functions same as the Digimatic Outside Micrometers series 293 at the first pages of this section.



395-371-30



115-153

Mitutoyo Point Micrometers – Series 112 & 342-IP65

FEATURES
- Pointed spindle and anvil for measuring the web thickness of drills, small grooves, and other hard-to-reach dimensions.
- Radius of curvature of measuring points: .012" (0.3mm).
- The 342 series provides digital readout to .00005"/0.001mm and can be linked to the SPC system.
- Provided with Ratchet Stop for constant force.

Inch/Metric

7

ORDER NO.	RANGE	LCD RESOLUTION	ACCURACY	REMARKS	LIST PRICE
342-351-30	0–1" 0–25.4mm	.00005" 0.001mm	±.0001"	w/SPC output & Carbide points. A=15°, L=.394"	$546.00
342-352-30	1–2" 25.4–50.8mm	.00005" 0.001mm	±.0001"	w/SPC output & Standard with Carbide points. A=15°, L=.394"	607.00
342-361-30	0–1" 0–25.4mm	.00005" 0.001mm	±.0001"	w/SPC output & Carbide points. A=30°, L=.430"	546.00
342-362-30	1–2" 25.4–50.8mm	.00005" 0.001mm	±.0001"	w/SPC output & Standard with Carbide points. A=30°, L=.430"	595.00

For SPC output, order Connecting Cable **05CZA662** (1m) or **05CZA663** (2m). Replacement Battery: **938882**.


342-361-30

Inch/Metric

12

ORDER NO.	RANGE	LCD RESOLUTION	ACCURACY	REMARKS	LIST PRICE
112-177	0–1"	.001"	±.00015"	without Carbide points A=15°, L=.394"	265.00
112-225	0–1"	.001"	±.00015"	without Carbide points A=30°, L=.430"	200.00


112 Series

Mitutoyo Tubing Micrometers - Series 115 & 395-IP65

7

ORDER NO.	RANGE	LCD RESOLUTION	ACCURACY	REMARKS	LIST PRICE
395-363-30	0–1" 0–25.4mm	.00005" 0.001mm	±.00015"	Anvil type: B	$534.00
395-364-30	0–1" 0–25.4mm	.00005" 0.001mm	±.00015"	Anvil type: A	534.00

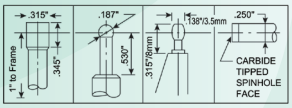
For SPC output order connecting cable **05CZA662** (1m) or **05CZA663** (2m).
Replacement Battery: **938882** (1 pc).

12

ORDER NO.	RANGE	GRADUATION	ACCURACY	ANVIL DIA.	LIST PRICE
115-313	0–1"	.0001"	±.00015"	.187"	$174.00

FEATURES
- The 395 series can be linked to the SPC system.
- Provided with a constant-force device.

ANVIL TYPE




115-313


395-363-30

IP65

Mitutoyo Disc Micrometers– Series 123, 223, 323 -IP65
Rotating Spindle Type


323-350-30

Digital Disc Micrometers – (Mechanical)

Inch

12

ORDER NO.	RANGE	GRAD.	ACCURACY	REMARKS	LIST PRICE
223-125	0–1"	.001"	±.0002"	Disc Diam.: .79"	$370.00

FEATURES
- Measures root tangent length of spur & helical gears
- The 323 series can be linked to the SPC system.
- .03" edge thickness to enter narrow recesses.
- With heat-insulating grip cover on frame.
- Supplied with fitted carrying case.


123-125

Disc Micrometers

Inch

12

ORDER NO.	RANGE	GRADUATION	ACCURACY	REMARKS	LIST PRICE
123-125	0–1"	.001"	±.0002"	Disc Diameter: .79"	$287.00
123-126	1–2"	.001"	±.0002"	Disc Diameter: .79" w/Standard	317.00
123-127	2–3"	.001"	±.0003"	Disc Diameter: .79" w/Standard	337.00
123-128	3–4"	.001"	±.0003"	Disc Diameter: .79" w/Standard	367.00

Inch/Metric

7

ORDER NO.	RANGE	RESOLUTION	ACCURACY	REMARKS	LIST PRICE
323-350-30	0–1" 0–25.4mm	.00005" 0.001mm	±.0002"	Disc diam. .79"	$590.00
323-351-30	1–2" 25.4–50.8mm	.00005" 0.001mm	±.0002"	Disc diam. .79" with Standard	660.00

For SPC output order connecting cable **05CZA662** (1m) or **05CZA663** (2m). Replacement Battery: **938882**.

Measuring Instruments

Mitutoyo V-Anvil Micrometers – Series 114, 314
3 Flutes and 5 Flutes

FEATURES
- Measures the outside diameter of cutting heads (such as taps, reamers, end mills) with an odd number of flutes.
- The 314 series provides digital readout to .00005”/0.001mm and can be linked to the SPC system.
- Provided with a constant-force device.
- Carbide-tipped spindle. • Supplied with Standard.

ACCURACY • Flatness: .000024”/0.6µm.



Digimatic V-Anvil Micrometers
Inch/Metric [7]

ORDER NO.	RANGE	LCD RESOLUTION	ACCURACY	REMARKS	LIST PRICE
314-351-30	.05”–.6” 1.27–15.24mm	.00005” 0.001mm	±.0002”	Anvil has no Groove	$800.00
314-352-30	.4”–1.0” 10.16–25.4mm	.00005” 0.001mm	±.0002”	Anvil has no Groove	829.00

For SPC output order connecting cable **05CZA662** (1m) or **05CZA663** (2m). Replacement Battery: **938882**.

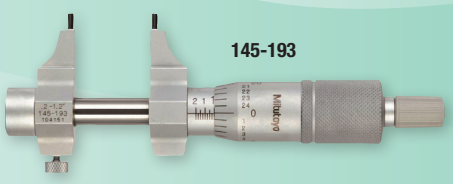


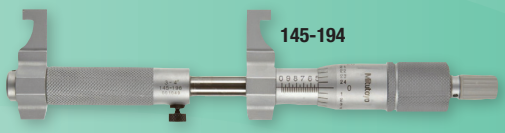
V-Anvil Micrometers
Inch [12]

ORDER NO.	RANGE	GRADUATION	FLUTES	ACCURACY	REMARKS	LIST PRICE
114-135	.093–1.0”	.0001”	5	±.0002”	Carbide Tipped Anvil	$607.00
114-202	.093–1.0”	.0001”	3	±.0002”	Carbide Tipped Anvil	607.00

Mitutoyo Inside Micrometers – Series 145

FEATURES
- Accuracy to .0002” with graduations of .001”.
- Easy zero adjustment.
- Clear graduations on satin-chrome finish.
- Caliper type jaws are made of high-grade, tool steel. They are satin-chrome finished.
- Locking clamp for positive locking of spindle.
- With ratchet thimble for constant force.
- Every thousandth is numbered for easy reading.
- Easily adjusted for slide movement of jaw (Exclusive).
- Supplier wrench is supplied with every micrometer.
- Complete with fitted carrying case.





Inch [12]

ORDER NO.	RANGE	GRADUATION	ACCURACY	REMARKS	LIST PRICE
145-193	.2”–1.18”	.001”	±.0002”	—	$287.00
145-194	1.0”–2.0”	.001”	±.00025”	—	309.00

Mitutoyo Tubular Inside Micrometers – Series 337
Extension Type

FEATURES
- Wide range of ID measurements by combining extension rods with the micrometer head. The rod is accurately finished and incorporated in a pipe for shop-floor use.
- The 337 series provides digital readout to .0001”/0.001mm and can be linked to the SPC System.



Digimatic Inside Micrometers – Inch/Metric [7]

ORDER NO.	RANGE	LCD RESOLUTION	HEAD TRAVEL	HEAD ACCURACY	DIAM. OF RODS	REMARKS	LIST PRICE
337-303	8–40”	.0001” 0.001mm	1.0”	±.0001”	.50”	Includes Micrometer Head and 6 pcs Rods. w/SPC output	$1350.00
337-304	8–60”	.0001” 0.001mm	1.0”	±.0001”	.50”	Includes Micrometer Head and 7 pcs Rods. w/SPC output	1520.00

For SPC output order connecting cable **937387** (1m) or **965013** (2m).

Measuring Instruments

Fowler Electronic Inside Micrometer

- Water Resistant to IP54 specifications.
- True inch/metric conversion. • Resolution: .00005”/.001mm.
- Measuring jaws & faces fully hardened and microlapped for accuracy.
- Each gage includes appropriate setting ring.
- Direct RS232 output. • Supplied in fitted case.

Water, oil and fluid resistant to IP54

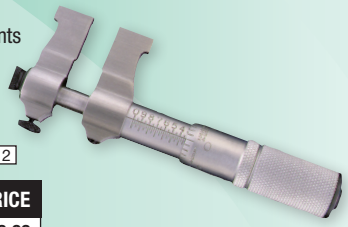


6

ORDER NUMBER	DESCRIPTION	PRICE
54-860-275-0	0.2—1”/25mm	$303.65

Pittsburg® ALLEGHANY Inside Micrometer

- For small internal measurements
- Satin chrome no-glare finish
- Measuring faces fully hardened and ground
- Ratchet stop, locking clamp
- Complete with fitted case



2

RANGE	GRAD.	ORDER NO.	PRICE
.2-1.2”	.001”	3100-920	$40.00
1-2”	.001”	3100-922	51.00

Fowler XTRA-VALUE Depth Gage



6

ORDER NUMBER	DESCRIPTION	PRICE
54-225-555-0	0—22”/550mm	$85.21

- Spring loaded and hold measurement button for ease-of-use
- Resolution: .0005”/.01mm (fractions in 1/64” increments)
- Travel: 0-1”/25mm
- Supplied in shop-hardened case
- Super large display

Fowler Electronic Depth Micrometer

Water, oil and fluid resistant to IP54



6

ORDER NUMBER	DESCRIPTION	PRICE
54-225-456-0	0—6”/150mm	$250.55

- Range: 0-6”/150mm
- 4” Base: Hardened tool steel, precision ground & microlapped
- Protected to IP54 Standards • Resolution: .00005”/.001mm
- Direct RS232 output • Automatic switch off
- Large LCD display

Mitutoyo Digimatic Depth Gages – Series 571 With SPC Output



571-262-10

FEATURES

- No rack, no pinion, no glass scale.
- Linear Scale is safely embedded in the hardened stainless steel blade.
- Sliding LCD unit offers push button control for in/mm selection, absolute zero setting, and turning the display on/off.
- Battery life is approximately two years with normal use.
- LCD unit displays “E-05” for movement error and “B” for battery replacement. Note: sliding unit can be moved as fast as 40” per second.
- **1”, 6”, and 8” models IP67 rated**

Inch/Metric

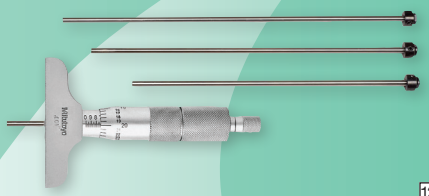
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ORDER NO.	RANGE	LCD RESOLUTION	ACCURACY	REMARKS	LIST PRICE
571-261-20	0–6”/ 0–150mm	.0005”/ 0.01mm	±.001”	Absolute Function Type	$583.00
571-262-20	0–8”/ 0–200mm	.0005”/ 0.01mm	±.001”	Absolute Function Type	646.00
571-213-10	0–12”/ 0–300mm	.0005”/ 0.01mm	±.0015”	Absolute Function Type	507.00
571-214-10	0–18”/ 0–450mm	.0005”/ 0.01mm	±.002”	Absolute Function Type	954.00
571-215-10	0–24”/ 0–600mm	.0005”/ 0.01mm	±.002”	Absolute Function Type	1030.00

For SPC output order connecting cable (for 6” & 8” only) **05CZA624** (1m) or **05CZA625** (2m).

Measuring Instruments

Mitutoyo Depth Micrometers – Series 129
Interchangeable Rod Type



FEATURES
- Ratchet stop for consistent and repetitive measurements.
- .157" DIA. interchangeable rods, with lapped measuring end, are calibrated and tested at the factory. The rod length can be adjusted, to compensate wear on the measuring tip, with two supplied wrenches.
- Satin-chromed finished throughout. • Crisp clear graduations on the thimble.
- Complete with fitted carrying case.

Metric [12]

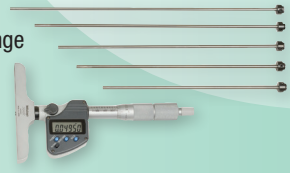
ORDER NO.	RANGE	GRADUATION	REMARKS	LIST PRICE
129-111	0–100mm	0.01mm	with Interchangeable Rods: 4 pcs. Base Length:63.5mm	$222.00
129-112	0–150mm	0.01mm	with Interchangeable Rods: 6 pcs. Base Length: 63.5mm	267.00
129-115	0–100mm	0.01mm	with Interchangeable Rods: 4 pcs. Base Length: 101.6mm	243.00
129-116	0–150mm	0.01mm	with Interchangeable Rods: 6 pcs. Base Length: 101.6mm	285.00

Inch [12]

ORDER NO.	RANGE	GRADUATION	REMARKS	LIST PRICE
129-127	0–4"	.001"	with Interchangeable Rods: 4 pcs. Base Length: 2.5"	$222.00
129-128	0–6"	.001"	with Interchangeable Rods: 6 pcs. Base Length: 2.5"	267.00
129-149	0–12"	.001"	with Interchangeable Rods: 12 pcs. Base Length: 2.5"	470.00
129-131	0–4"	.001"	with Interchangeable Rods: 4 pcs. Base Length: 4.0"	243.00
129-132	0–6"	.001"	with Interchangeable Rods: 6 pcs. Base Length: 4.0"	285.00
129-150	0–12"	.001"	with Interchangeable Rods: 12 pcs. Base Length: 4.0"	491.00

Mitutoyo Digit Depth Micrometers – Series 329,
Interchangeable Rod Type

FEATURES
- ø4mm interchangeable rods, with lappped measuring end, provide a wide measuring range
- The rod length can be adjusted in 1" or 25mm increments
- With ratchet stop for constant force, measuring rod clamp, SPC output
- Supplied in fitted plastic case.



Inch/Metric [7]

ORDER NO.	RANGE	RESOLUTION	REMARKS	LIST PRICE
329-350-30	0–6"/ 0-152.4mm	.00005" 0.001mm	with SPC output with Interchangeable Rods: 6 pcs.	$697.00
329-351-30	0–12"/ 0-304.8mm	.00005" 0.001mm	with SPC output with Interchangeable Rods: 12 pcs.	858.00

Metric available upon request. For SPC output order Connecting Cable **05CZA662** (1m) or **05CZA663** (2m). Replacement Battery: **938882**.

Pittsburg® ALLEGHANY Depth Micrometer



FEATURES
- Precision ground hardened base • Satin chrome no-glare finish
- Ratchet stop for consistent and repetitive measurements
- Complete with fitted case

[2]

RANGE	GRAD.	BASE	NO. RODS	ORDER NO.	LIST PRICE
0-4"	.001"	2-1/2"	4	3100-900	$66.00
0-6"	.001"	2-1/2"	6	3100-902	70.00
0-4"	.001"	4"	4	3100-904	67.00
0-6"	.001"	4"	6	3100-906	86.00

Mitutoyo Digimatic/Dial Depth Gages
For Rapid, Direct Reading Measurements of Hole Depth



547-217S



7217S

DIGIMATIC DEPTH GAGE FEATURES:
- ABSOLUTE Digimatic Depth Gage can keep track of the origin point once set for the entire life of the battery.
- Wide probing range is available with 4 supplied extension rods.
- Bottom surface of the base is hardened, ground and lapped for highest degree of flatness. • With SPC data output.

DIAL DEPTH GAGE FEATURES:
- The Dial Indicator has a precision-ground, hard-chrome-plated stem with standard AGD 3/8" diameter. Contact point is hardened, ground and chrome-plated steel. Spindle rack, pinions and pivots are hardened stainless steel to insure long wear and continuing accuracy. Bezel is cleanly knurled and smoothly adjustable with a clamping screw for positive settings. Accuracy of the Dial Indicator exceeds Federal Specifications.
- Spindle lifting lever for raising and lowering and spindle is maintained under spring pressure.
- Rods are available in 1", 2" and 4" lengths and may be connected for depths up to 8". (1" on Dial Indicator + 1" rod + 2" rod + 4" rod = 8".) 10, 20, 30 and 100mm rods for Metric model.
- Bottom surface of the base is hardened, ground and lapped for highest degree of flatness.
- Complete with fitted carrying case.
- Dial Indicator is attached to the base by a clamping screw & interchangeable with any other standard AGD dial indicator.

Digimatic - Inch/Metric [7]

ORDER NO.	RANGE	RESOLUTION	SPINDLE STROKE	REMARKS	LIST PRICE
547-217S	0–8" 0-200mm	.0005"/ 0.01mm	0.5"	Accuracy: ±.001" Base W x Thk.: 2.5 x .63"	$508.00
547-218S	0–8" 0-200mm	.0005"/ 0.01mm	0.5"	Accuracy: ±.001" Base W x Thk.: 4 x .63"	516.00
547-257S	0–8" 0-200mm	.00005"/ 0.001mm	0.5"	Accuracy: ±.0003" Base W x Thk.: 2.5 x .63"	625.00
547-258S	0–8" 0-200mm	.00005"/ 0.001mm	0.5"	Accuracy: ±.0003" Base W x Thk.: 4 x .63"	634.00

Inch [12]

ORDER NO.	RANGE	GRADUATION	SPINDLE STROKE	REMARKS	LIST PRICE
7217S	0–8"	.001"	1.0"	Accuracy: ±.002" Base Length: 2.5"	$350.00
7218S	0–8"	.001"	1.0"	Accuracy: ±.002" Base Length: 4.0"	378.00

STANDARD ACCESSORIES [5]

Inch

ORDER NO.	DESCRIPTION	LIST PRICE
301655	1" Rod	$8.05
301657	2" Rod	12.55

[5]

ORDER NO.	DESCRIPTION	LIST PRICE
301659	4" Rod	$24.65
21JZA242	Contact Point	10.05

Fowler Digit Reading Depth Micrometer [2]

ORDER NUMBER	DESCRIPTION	PRICE
52-225-226-0	0—6"	$243.57



- Range: 0-6"
- Easy-to-read digit counter
- .001" graduation
- 4" base, hardened and ground
- Satin chrome finish
- Locking Clamp
- Furnished with shop hardened case

Measuring Instruments

Mitutoyo Tool Kits [12]



INCLUDES:	DESCRIPTION
293-340-30	Digimatic micrometer (Ratchet Stop Type) (Range: 0–1", LCD Resolution: .00005")
500-196-30	Digimatic Caliper (Range: 0–6", LCD Resolution: .00005")
64PPP932	Mahogany Case

Order No. 64PKA076B
(Digimatic Tool Kit)
List Price $468.00



INCLUDES:	DESCRIPTION
293-348-30	Digimatic micrometer (Friction Thimble Type) (Range: 0–1", LCD Resolution: .00005")
500-196-30	Digimatic Caliper (Range: 0–6", LCD Resolution: .0005")
64PPP932	Mahogany Case

Order No. 64PKA077B
(Digimatic Tool Kit)
List Price $468.00

Pittsburg® ALLEGHANY Ball Attachment

The most commonly used Micrometer accessory.

- Allows measurement of cylindrical wall thickness and single point contact on round parts
- Fits .235, .250, & .270 diameter spindles.
- Chrome Alloy Ball, 0.200" diameter.
- Comes with attachment boot and 2 balls.
- Made in U.S.A..



[2]

ORDER NO.	PRICE EACH
3100-438	$6.50

Pittsburg® ALLEGHANY Multi-Mike Micrometer Anvil Attachment Kit

Turns your Micrometer into 7 different Tools! Micrometer not included.

- Each Anvil Attachment is held on with its own reinforced Neoprene Boot.
- Fits any 1-12" Micrometer, English or Metric, and all brands too!
- All 7 anvils come packaged in protective hinged case.
- Can be used singly or in pairs.
- Kit includes:
  Spline, knife, super spline, blade, comparator, dics & ball attachments



[2]

ORDER NO.	PRICE EACH
3100-437	$27.10

Pittsburg® ALLEGHANY Micrometer Stand

- A heavy, finely finished stand, made of cast iron that can be adjusted to any position
- Provides desirable measuring position and angle for Inside & Outside Micrometers, plus many other instruments



[2]

ORDER NO.	PRICE
3100-150	$28.00

Mitutoyo Micrometer Stand – Series 156

FEATURES

- These stands are designed to allow bench-top use with hand micrometers or other gages which have frame area sufficient to grab onto.
- Stand only – tool not included.

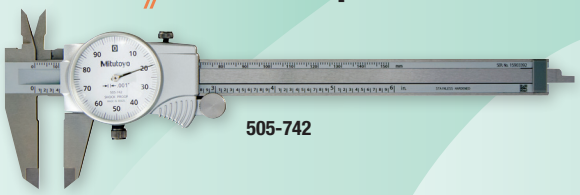


[12]

ORDER NO.	DESCRIPTION	LIST PRICE
156-101-10	For .5" thru 4" micrometers	$130.00

Measuring Instruments

Mitutoyo Dial Calipers – Series 505 [13]



505-742



505-749

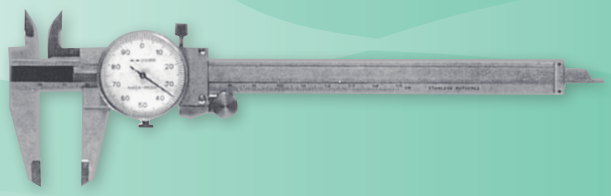
FEATURES
- New designed dial movement for ultra smooth sliding and high shock protection.
- Improved finish on sliding surfaces for longevity.
- New face for easier readibility.
- Removal of TiN coating on sliding surfaces without sacrificing wear life.
- Lock screw for dial bezel and for holding the sliding jaw position.
- Can measure OD, ID, depth, and steps.
- Models available with carbide-tipped OD and ID jaws.
- Supplied in fitted plastic case.

Inch

ORDER NO.	RANGE	GRADUATION	DESC.	ACCURACY	LIST PRICE
DIAL READING - .1" PER ONE REVOLUTION					
505-738	0–6"	.001"	Carbide-Tipped Jaws	±.001"	$ 243.00
505-743J	0-8"	.001"	-	±.001"	217.00
505-746	0–12"	.001"	-	±.002"	331.00
.2" PER ONE REVOLUTION					
505-741J	0–8"	.001"	-	±.002"	174.00
505-749	0–12"	.001"	-	±.002"	309.00

Pittsburg® ALLEGHANY Dial Calipers

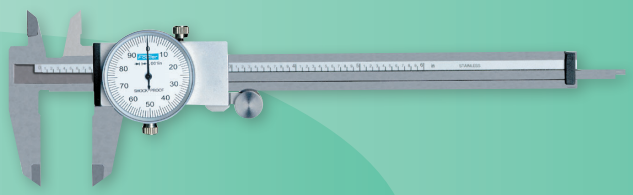
- Outside, inside, depth and step measurement
- Made of hardened stainless steel, with satin chrome finish
- Measuring faces ground and micro-lapped for accuracy
- Covered rack keeps out dust and dirt, for longer caliper life
- Supplied with fitted case [2]





RANGE	RES.	RANGE/REV.	FACE	ORDER NO.	PRICE
0-4"	.001"	.100"	White	3100-550	$31.00
0-4"	.001"	.100"	Black	3100-551	27.50
0-6"	.001"	.100"	White	3100-555	36.00
0-6"	.001"	.100"	Black	3100-556	36.00
0-8"	.001"	.100"	White	3100-557	64.50
0-8"	.001"	.100"	Black	3100-558	64.50
0-12"	.001"	.100"	White	3100-560	97.50
0-12"	.001"	.100"	Black	3100-561	65.00
0-150mm	.02mm	2.0mm	White	3100-553	37.00

Fowler Economy Dial Calipers



- 4-way measuring function
- Covered depth rod.
- .100" range per revolution.
- Dial Graduation: .001"
- Accuracy: .001"
- Hardened stainless steel rack.
- Supplied in molded case.

[2]

ORDER NUMBER	DESCRIPTION	PRICE
52-008-007-1	0—6" White	$99.00
52-008-005-1	0—6" Black	99.00
52-008-008-1	0—8" White	116.00
52-008-012-1	0—12" White	174.00

Fowler Long Range Dial Calipers



- Graduation: .001"
- Satin chrome finish.
- Stainless steel construction.
- Thumblock.
- Depth rod.
- Jaw depth: 3.125".

[2]

ORDER NUMBER	DESCRIPTION	PRICE
52-008-018-0	0—18"	$292.40
52-008-024-0	0—24"	354.33

Measuring Instruments

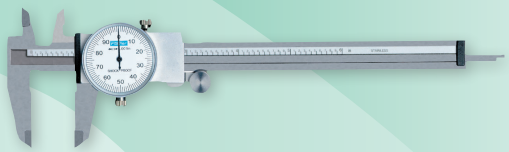
Fowler

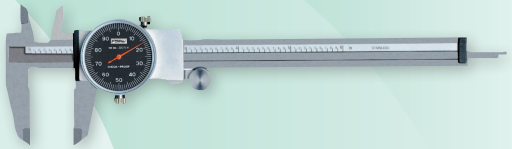
Premium Brand Shockproof Dial Calipers
with Thumbroll

2

ORDER NUMBER	DESCRIPTION	PRICE
52-008-706-0	0—6" White	$102.74
52-008-707-0	0—6" Black	102.74
52-008-708-0	0—8" White	123.37
52-008-712-0	0—12" White	165.88

- 4-way jaws.
- Stainless steel construction.
- Silky smooth movement throughout.
- .100" range per revolution.
- .001" reading dial face.
- Shockproof design.
- Supplied in molded case.





TESA TECHNOLOGY | brown & sharpe

Dial-Cal® Dial Calipers



599-579-4



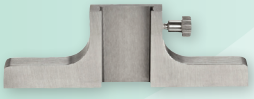
599-579-5

Select Traditional White Dial Face or
New High Visibility "Jet-Console" Black Dial Face

- Tough - Anti-backlash, shock proof design
- Durable - Covered stainless steel rack
- Versatile - Measures inside, outside, depth & step
- Precise - .100"/2mm per revolution
- Reliable - Adjustable zero set and slide lock
- Easy-To-Read - 1.25" diameter rotating dial w/lock

7

ORDER NO.	RANGE	GRAD.	RANGE PER REV.	DESCRIPTION	JAW LENGTH EXTERNAL	B&S NO.	PRICE
7151-774	6"	.001	.100	w/ Silver Face	1.5"	599-579-4	$192.00
7151-879	6"	.001	.100	w/ Jet Console, Blk. Face, Orange Hand	1.5"	599-579-5	192.00
7127-594	8"	.001	.100	w/ Silver Face	1.9"	599-579-8-1	335.00
7127-593	8"	.001	.100	w/ Jet Console, Blk. Face, Orange Hand	1.9"	599-579-8-5-1	335.00
7127-592	12"	.001	.100	w/ Silver Face	2.5"	599-579-12-1	426.00
7127-591	12"	.001	.100	w/ Jet Console, Blk. Face, Orange Hand	2.5"	599-579-12-5-1	426.00
7144-297				Wood Case for 6" Dial Caliper		599-578-9999	32.00



T-Bar Base Attachment
(Fits All B&S Dial-Cals)

Makes depth measurement of large (up to 3" diameter) holes easy and accurate.

7

ORDER NO.	B&S NO.	PRICE
7142-534	05.60013	$50.50

Plastic Direct Reading Inch Dial Caliper

CUSTANITE Precision



- State of art reinforced plastic gives precision capabilities at an economical price.
- Measuring capacity 0 to 6".
- Contrasting color coded dial is graduated in .01 and 64ths with inch and mm on bar scale.
- Measures 4 ways: inside, outside, depth and step readings.
- No-glare easy to read dial with adjustable bezel.
- Free wheeling friction roller for repetitive and accurate readings.
- Fractional conversion table on back.
- Packed in reusable plastic hang-up case.

8

MODEL	ORDER NO.	PRICE
142	6944-145	$43.87

4 Inch Slide Caliper

CUSTANITE Precision



- Stainless steel caliper
- Inside and outside readings in 16ths and 32nds
- Decimal equivalents table on back
- 4" capacity.

8

MODEL	GRADS	ORDER NO.	PRICE
729	16ths and 32nds	6942-581	$15.36

Measuring Instruments

Fowler Poly-Cal™ Electronic Caliper



English/Metric/Fraction • Range 6”/150mm • Polycarbonate Frame. • 4 way measuring.
• Large easy-to-read display. • Resolution .001”/.01mm, fractions by 1/64 increments
• Absolute/Incremental Measurement. • Direct inch/metric conversion.
• Accuracy +/-.008”
• Supplied with vinyl pouch.

6

ORDER NUMBER	DESCRIPTION	PRICE
54-101-175-0	0-6”/150mm Poly-Cal	$34.26

Fowler Euro-Cal™ Electronic Caliper

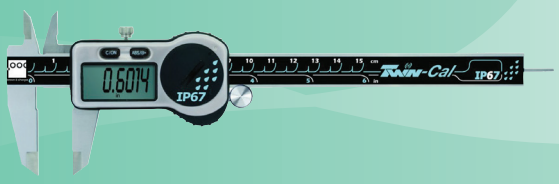


• Range 6”/150mm • Reads in inch, metric, & fractions
• Direct inch/metric conversion. • Absolute/Incremental Measurement.
• Water resistant to IP54 standards.• Resolution: .0005”/.01mm, (fractions in 1/64 increments).

6

ORDER NO.	PRICE EACH
54-100-330-1	$143.05

TESA / brown & sharpe Digital Electronic Calipers - TWIN-CAL IP67

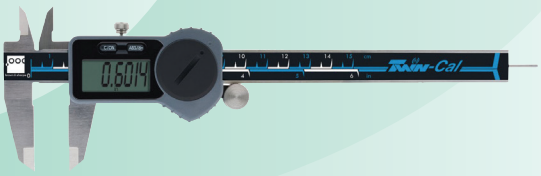


• Upgradeable instrument thanks to integrated modular connection via TLC (TESA Link Connector)
• Highest degree of protection ever offered: IP67.
• Housing w/ metallic protection plate;“soft touch” feel.
• Two patents for a unique caliper.

7

ORDER NO.	B&S NO.	DEPTH ROD	THUMB WHEEL	RANGE	PRICE EACH
7147-237	00590303	Square	Y	6”/150mm	$191.00

TESA / brown & sharpe Digital Electronic Calipers - TWIN-CAL IP40

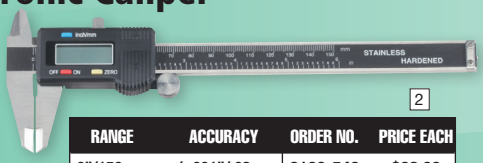


• Upgradeable instrument thanks to integrated modular connection via TLC (TESA Link Connector)
• Highest degree of protection against dust.

7

ORDER NO.	B&S NO.	DEPTH ROD	THUMB WHEEL	RANGE	PRICE EACH
7147-473	00590092	Round	Y	6”/150mm	$129.00

Pittsburg® ALLEGHANY Electronic Caliper



• Resolution to .0005”/.01mm for error-free reading.
• Three-key type: On/Off, Inch/mm & Zero.
• Made of stainless steel and hardened.
• 4-way measurement for outside, inside, depth and step.
• Thumb roller for moving the slider in small and smooth increments.
• Battery life: 18 months under normal use. • Power supply: One button battery SR 44, 1.55v.

2

RANGE	ACCURACY	ORDER NO.	PRICE EACH
6”/150mm	+/-.001”/.02mm	3100-546	$68.00

Fowler Electronic Calipers

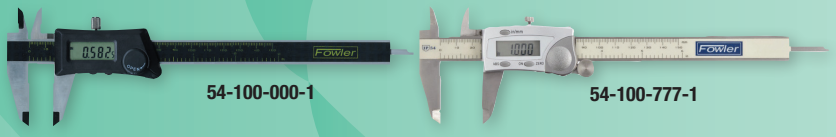


• Resolution: .0005”/.01mm
• Stainless steel frame.
• Large easy-to-read display.
• Absolute/incremental measurement.
• Direct inch/metric conversion.
• 4 way measuring.
• Complete in case.

6

ORDER NUMBER	DESCRIPTION	PRICE
54-101-150-2	0-6”/150mm	$54.93
54-101-300-1	0-12”/300mm	125.48

Fowler Electronic Calipers



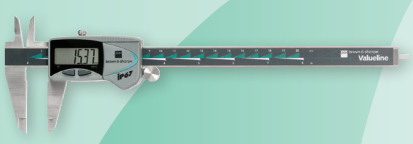
54-100-000-1 54-100-777-1

• Direct inch/metric conversion.
• Resolution: .0005”/.01mm
• Accuracy: 4” & 6” models: .001”/.02mm; 8” & 12” models: .0015”/.03mm
• Large easy-to-read LCD display.
• Includes shop hardened case.

6

ORDER NO.	DESCRIPTION	PRICE
54-100-004-2	0-4”	$143.24
54-100-000-2	0-6”	161.96
54-100-008-2	0-8”	164.57
54-100-112-2	0-12”	226.48

TESA / brown & sharpe Digital Calipers - VALUELINE IP67



• TESA know-how at an affordable price.
• High degree of protection, IP67 for the most demanding users.

7

ORDER NO.	B&S NO.	DEPTH ROD	THUMB WHEEL	RANGE	PRICE EACH
7145-601	00599390	Square	Y	6”/150mm	$154.80
7145-602	00599392	Square	Y	8”/200mm	222.00

Mitutoyo

Digimatic Calipers with Exclusive AOS Sensor Technology – Series 500 – without SPC output

Introducing a new Digimatic Caliper line with exclusive AOS Sensor Technology. This patented Advanced Onsite Sensor (AOS) offers improved measurement dependability by increasing resistance to harsh workshop conditions. The new electromagnetic inductive sensor repels dirt, oil and water that can cause false readings. The Absolute (ABS) sensor eliminates the necessity of setting the reference when the tool is powered. An ergonomic slider design and increased battery life (3.5 years under normal operations) rounds out the new features of this line.



500-196-30

Inch/Metric (Non-SPC Output Models)

ORDER NO.	MEASURING RANGE	ACCURACY (20°C)	REMARKS	LIST PRICE	
500-195-30	0–4", 0-100mm	±.001"	AOS w/.075" Round Depth Bar	$170.00	13
500-196-30	0–6", 0-150mm	±.001"	AOS Technology	184.00	
500-197-30	0–8", 0-200mm	±.001"	AOS Technology	265.00	
500-193-30	0–12", 0-300mm	±.0015"		532.00	
	CARBIDE JAW MODELS				
500-159-30	0–6", 0-150mm	±.001"	AOS w/ OD Carbide Jaw	285.00	12
500-160-30	0–6", 0-150mm	±.001"	AOS w/ OD, ID Carbide Jaw	368.00	
500-163-30	0–8", 0-200mm	±.001"	AOS w/ OD Carbide Jaw	348.00	
500-164-30	0–8", 0-200mm	±.001"	AOS w/ OD, ID Carbide Jaw	460.00	
500-165-30	0–12", 0-300mm	±.0015"	with OD Carbide Jaw	620.00	
500-166-30	0–12", 0-300mm	±.0015"	with OD, ID Carbide Jaw	767.00	

Replacement Battery: **938882** (1 pc.)

FEATURES
- Large and clear LCD readout.
- The ZERO/ABS key allows the display to be Zero-Set at any slider position along the scale for incremental comparison measurements. This switch will also allow return to the absolute (ABS) coordinate and display of the true position from the origin point (usually jaws-closed point).
- Data Hold Unit (959143) is optional.
- Carbide-tipped jaw type calipers are also available.
- With thumb roller.
- Supplied in fitted plastic case. Except 1000mm / 40" supplied in wooden case.

SPECIFICATIONS
Resolution: 0.01mm or .0005"/0.01mm
Repeatability: 0.01mm / .0005"
Display: LCD
Length standard: ABSOLUTE electrostatic capacitance type linear encoder
Max. response speed: Unlimited
Battery: SR44 (1 pc.), 938882
Battery life:
Approx. 3.5 years under normal use

FUNCTION
Origin-set, Zero-setting, Data output, inch/mm conversion
(inch/mm models ONLY)
Alarm: Low voltage,
Counting value composition error

Mitutoyo Digimatic Calipers with Exclusive AOS Sensor Technology – Series 500 – with SPC output



500-171-30

Inch/Metric (SPC Output Models)

7

ORDER NO.	RANGE	LCD RESOLUTION	ACCURACY	REMARKS	LIST PRICE
500-170-30	0–4", 0-100mm	.0005", 0.01mm	±.001"	AOS w/.075" Round Depth Bar	$203.00
500-171-30	0–6", 0-150mm	.0005", 0.01mm	±.001"	AOS Technology	215.00
500-174-30	0–6" 0-150mm	.0005" 0.01mm	±.001"	AOS w/ OD Carbide Jaw, Absolute Function Type	414.00
500-175-30	0–6" 0-150mm	.0005" 0.01mm	±.001"	AOS w/ OD, ID Carbide Jaw, Absolute Function Type	442.00
500-172-30	0–8", 0-200mm	.0005", 0.01mm	±.001"	AOS Technology	284.00
500-176-30	0–8" 0-200mm	.0005" 0.01mm	±.001"	AOS w/ OD Carbide Jaw, Absolute Function Type	460.00
500-177-30	0–8" 0-200mm	.0005" 0.01mm	±.001"	AOS w/ OD, ID Carbide Jaw, Absolute Function Type	486.00
500-167-30	0–12" 0-300mm	.0005" 0.01mm	±.0015"	with OD Carbide Jaw	670.00
500-168-30	0–12", 0-300mm	.0005", 0.01mm	±.0015"	with OD, ID Carbide Jaw	899.00
500-173-30	0–12", 0-300mm	.0005", 0.01mm	±.0015"		621.00
500-505-10	0–18" 0-450mm	.0005" 0.01mm	±.002"	without Depth Bar, Absolute Function Type	967.00
500-506-10	0–24" 0-600mm	.0005" 0.01mm	±.002"	without Depth Bar, Absolute Function Type	1060.00
500-507-10	0–40" 0-1,000mm	.0005" 0.01mm	±.003"	without Depth Bar, Absolute Function Type	2050.00

Mitutoyo's new Digimatic Caliper with exclusive **AOS Sensor Technology** eliminates the necessity of setting the reference when the tool is powered. It also improves measurement dependability by increasing resistance to harsh workshop conditions.

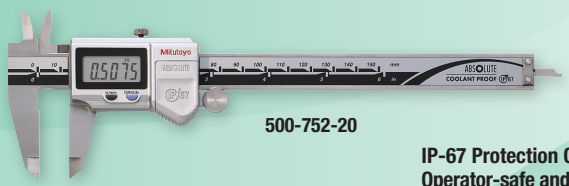
FEATURES
- Large and clear LCD readout.
- The ZERO/ABS key allows the display to be Zero-Set at any slider position along the scale for incremental comparison measure ments. This switch will also allow return to the absolute (ABS) coordinate and display of the true position from the origin point (usually jaws-closed point).
- Data Hold Unit (959143) is optional.
- Carbide-tipped jaw type calipers are also available.
- With thumb roller.
- Supplied in fitted plastic case. Except 1000mm / 40" supplied in wooden case.

SPECIFICATIONS
Resolution: 0.01mm or .0005"/0.01mm
Repeatability: 0.01mm / .0005" Display: LCD
Length standard: ABSOLUTE electrostatic capacitance type linear encoder
Max. response speed: Unlimited
Battery: SR44 (1 pc.), 938882 Battery life:
Approx. 3.5 years under normal use

FUNCTION
Origin-set, Zero-setting, Data output, inch/mm conversion
(inch/mm models ONLY)
Alarm: Low voltage, Counting value composition error

For SPC output order Connecting Cable **959149** (1m) or **959150** (2m).
Replacement Battery: **938882** (1pc), Data Hold Unit: **959143**

Mitutoyo Coolant Proof Digimatic Caliper with Absolute Encoder



500-752-20

Introducing Mitutoyo's coolant-proof caliper, the world's first digital caliper sealed against fluids and contaminants! The toughest digital caliper in the world– the first that's IP-67 rated: coolant-proof, dust-proof, chip-proof. Use it anywhere in the shop. It also includes Mitutoyo's patented absolute encoder technology, the "Set-n-Forget" origin set-up feature. Now you can take digital measurements in places you never could before! Models available with SPC output.

Technical Data:	
Measuring Ranges	0-6"/0-150mm, 0-8"/0-200mm, 0-12"/0-300mm
Resolution	.0005" / 0.01mm
Accuracy	±.001" / ±0.02mm, (12" is ±.0015")
Repeatability	.0005" / 0.01mm
Dust/Water protection level	IP-67 (IEC 60529)
Display	LCD, Character height: .3" (7.5mm)
Functions	Origin setting, inch/mm conversion, automatic power On/Off
Battery	SR44 (1 piece) up to 8" (2 piece) for 12"
Battery life	(0-6") Approx. 3-yr. (0-12") Approx. 1-yr. under normal use
Measuring system	Electromagnetic induction type absolute linear encoder
Response speed	Unlimited

Protection against water
Level 5: Protection against water spray.
Definition: Protect the equipment against water spray* from any direction.

IP-67 Protection Class
Operator-safe and protection against foreign matter
Level 6: Protection against dust.
Definition: Protect the equipment against dust not to penetrate.

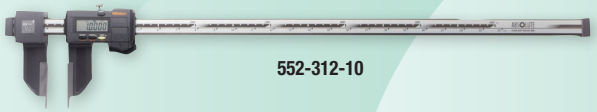
* Condition: Using a nozzle with a 6.3mm ID and splash water with 30Kpa water pressure (approx. 12.5 l/min) on the equipment from a distance of three meters for three minutes or over (1 minute per 1m2 superficial area).

ORDER NO.	RANGE	LCD RESOLUTION	ACCURACY	REMARKS	LIST PRICE	
500-752-20	0–6", 0-150mm	.0005",0.01mm	±.001"	IP-67, no SPC	$246.00	12
500-753-20	0–8"/0-200mm	.0005",0.01mm	±.001"	IP-67, no SPC	330.00	
500-754-20	0–12"/0-300mm	.0005",0.01mm	±.0015"	IP-66, no SPC	571.00	
500-762-20	0–6", 0-150mm	.0005",0.01mm	±.001"	IP-67, w/SPC	292.00	7
500-763-20	0–10"/0-200mm	.0005",0.01mm	±.001"	IP-67, w/SPC	368.00	
500-764-20	0–12", 0-300mm	.0005", 0.01mm	±.0015"	IP-66, w/SPC	634.00	

Measuring Instruments

Mitutoyo

Digimatic Carbon Fiber Calipers - Series 552



552-312-10

These large Digimatic Calipers have a beam constructed of a strong carbon fiber which makes them both durable and easy to handle.

FEATURES
- Lightweight Digimatic caliper that employs CFRP (Carbon Fiber Reinforced Plastics) in the beam & jaws.
- Display: 6-digit LCD with a minus sign (-). • Power supply: One SR44 (938882).
- Functions include: Preset of desired starting point inch/mm conversion, Zero-setting, Data hold, Error alarm, Low battery alarm, Data output.
- Battery life: Approx. two years under normal use (Approx. one year in continuous operation).
- Provided with a data output port for connection with the SPC system.

[7]

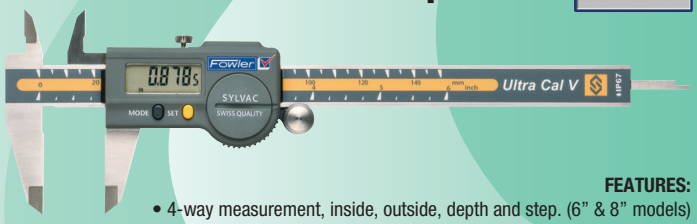
ORDER NO.	RANGE	ACCURACY	LCD RESOLUTION	LIST PRICE
552-312-10	0(.5")-18"	+/-.002"	.0005"/0.01mm	$1110.00
552-313-10	0(.5")-24"	+/-.002"	.0005"/0.01mm	1250.00
552-314-10	0(1")-40"	+/-.002"	.0005"/0.01mm	2240.00
552-315-10	0(1")-60"	+/-.004"	.0005"/0.01mm	2670.00
552-316-10	0(1")-80"	+/-.005"	.0005"/0.01mm	4180.00

For SPC output order Connecting Cable **05CZA624** (1m) or **05CZA625** (2m).
*( ): Minimum dimension in ID measurement.

Fowler LIFETIME WARRANTY

Ultra-Cal V Electronic Calipers

IP67

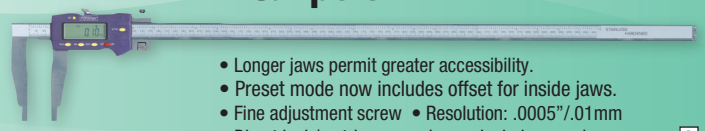


FEATURES:
• 4-way measurement, inside, outside, depth and step. (6" & 8" models)
• Resolution: .0005"/.01mm • Repeatability: .0005"/.01mm • Hold function
• Direct inch/metric conversion • Temperature range 5 to 40C° working; -20to 60C° in storage
• Hardened stainless steel construction • Direct RS-232 output • Thumbroll (6" model only)
• Features Absolute/Relative Measuring Modes • Includes case • Bluetooth models available

ORDER NO.	DESCRIPTION	ACCURACY	RESOLUTION	PRICE EACH	
54-100-067-1	6"/150mm	0.0008"/20µm	0.0005"/.01mm	$145.60	3
54-100-068-1	8"/200mm	0.0012"/30µm	0.0005"/.01mm	480.70	
54-100-069-1	12"/300mm	0.0012"/30µm	0.0005"/.01mm	511.06	14

Fowler Electronic Calipers

XTRA-RANGE®



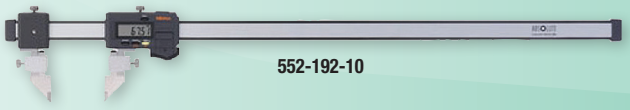
- RS232C Direct output
- Full size .0005" digital display
- Hold feature

- Longer jaws permit greater accessibility.
- Preset mode now includes offset for inside jaws.
- Fine adjustment screw • Resolution: .0005"/.01mm
- Direct inch/metric conversion. • Includes wooden case. [6]

ORDER NUMBER	DESCRIPTION	PRICE
54-100-312-0	0—12"	$309.00
54-100-024-1	0—24"	479.00
54-100-042-1	0—40"	1667.00

Mitutoyo

Digimatic Carbon Fiber Calipers - Series 552 - Interchangeable Jaws



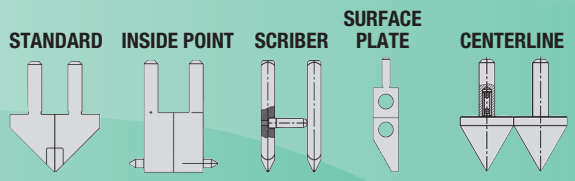
552-192-10

FEATURES
- The range of applications can be expanded by using interchangeable jaws (optional).
- Quick and easy exchanging of jaws due to the unique clamping mechanism. (A pair of clamping wheels is a standard accessory.) • SPC data output.
- Preset function for setting a desired starting point, which allows direct readout of offset measurements.

[7]

ORDER NO.	RANGE	ACCURACY	MASS (g)	LIST PRICE
552-191-10	0-18" / 0-450mm	±.002"	650	$1070.00
552-192-10	0-24" / 0-600mm	±.002"	725	1110.00
552-193-10	0-40" / 0-1000mm	±.002"	1480	1790.00
552-194-10	0-60" / 0-1500mm	±.004"	1880	2880.00
552-195-10	0-80" / 0-2000mm	±.005"	2280	4050.00

For SPC output order Connecting Cable **05CZA624** (1m), **05CZA625** (2m), **02AZD790A**: (160mm). Battery: SR44 (1 pc.) **938882**.
Standard accessory: Jaw clamps (2 pcs.) **05GZA033**



OPTIONAL JAWS (2 pcs.) [1]

ORDER NUMBER	DESCRIPTION	PRICE
07CZA056	Standard Type	$308.00
07CZA058	Inside Point Type (Metric)	317.00
07CZA059	Inside Point Type (Inch)	342.00
07CZA055	Scriber Type (Metric)	335.00
07CZA061	Scriber Type (Inch)	342.00
07CZA044	Surface Plate Type	267.00
07CZA057	Centerline Type (Metric)	342.00
07CZA060	Centerline Type (Inch)	317.00

Measuring Instruments

Mitutoyo Vernier Caliper (with Thumb Clamp)



Metric/Inch Dual Scale

12

ORDER NO.	RANGE LOWER SCALE	RANGE UPPER SCALE	VERNIER GRADUATION LOWER SCALE	VERNIER GRADUATION UPPER SCALE	ACCURACY	LIST PRICE
531-128	0–150mm	0–6”	0.02mm	.001”	±0.03mm	$128.00
531-108	0–200mm	0–8”	0.05mm	1/128”	±0.05mm	158.00
531-129	0–200mm	0–8”	0.02mm	.001”	±0.03mm	158.00

Mitutoyo Vernier Calipers



- Available with a fine-adjustment carriage to fine-feed the slider.
- Long jaws for measuring hard-to-reach portions.
- With a fine-adjustment carriage to fine-feed the slider.

Inch

12

ORDER NO.	RANGE LOWER SCALE	RANGE UPPER SCALE	VERNIER GRADUATION LOWER SCALE	VERNIER GRADUATION UPPER SCALE	ACCURACY	LIST PRICE
530-105	0–6”	0–6”	.001”	1/128”	±.0015”	$124.00
530-116	0–8”	0–8”	.001”	1/128”	±.0015”	147.00

Metric/Inch

530-104	0–150mm	0–6”	0.05mm	1/128”	±0.05mm	$89.75
530-312	0–150mm	0–6”	0.02mm	.001”	±0.03mm	124.00
530-118	0–200mm	0–8”	0.02mm	.001”	±0.03mm	147.00
530-101	0–150mm	—	0.05mm	—	±0.05mm	124.00

Mitutoyo Depth Base Attachment

FEATURES

- For 4”, 6”, 8”, and 12” Mitutoyo Vernier and Dial Calipers.
- Choice of 3” or 4” base length for 6” and 8” models.
- Finely ground base surface and secure locking clamp.



050083-10

1

ORDER NO.	LENGTH	DESCRIPTION	LIST PRICE
050083-10	3”	For 4”, 6” & 8” models	$49.75
050084-10	4”	For 4”, 6” & 8” models	59.65
050085-10	5”	For 12” models only	69.90

Pittsburg® ALLEGHANY Depth Base Attachment



- Fits all brands of 4”, 6”, 8” Calipers.
- Precision Ground Base.
- Screw Locking Clamp.
- Each unit hand inspected.

2

ORDER NO.	DESCRIPTION	PRICE EACH
3100-395	3” Base – Fits 6” Calipers	$26.00
3100-396	4” Base – Fits 8” Calipers	29.70
3100-397	5” Base – Fits 12” Calipers	35.10

Centerline Gages

Quickly measures hole to hole centers

Pittsburg® ALLEGHANY

FEATURES

- Fits 4”, 6”, and 8” Calipers 0.375” Diameter x 2.20” Long.
- Read centerline distances directly without conversions.
- 60 Degree Conical Points. •Made in U.S.A.
- •Hardened Steel with Black Oxide finish.



ORDER NO.	PRICE EACH
3100-465	$12.10

2

Fowler Master Vernier Calipers



- Machine engraved from master. • Slide type fine adjust thumbwheel.
- Nib design measures both inside & outside dimensions. • Satin chrome finish.
- Graduation: .001”/.02mm • Price includes fitted case.

ORDER NUMBER	DESCRIPTION	PRICE
52-085-012-0	0—12”/300mm	$135.40
52-085-024-0	0—24”/600mm	208.85
52-085-040-0	0—40”/1200mm	795.22

2

Pittsburg® ALLEGHANY Heavy Duty Vernier Calipers



- •Longer jaws for greater accessibility and simpler measurement of large work pieces
- •Easy to read Vernier scales with clear, crisp black engraved graduations
- •Fine quality stainless steel construction
- •Satin chrome finish
- •Supplied with fitted case

2

RANGE	GRAD.	ORDER NO.	PRICE
0-12”/300mm	.001”/.02mm	3100-312	$ 60.50
0-18”/450mm	.001”/.02mm	3100-318	95.00
0-24”/600mm	.001”/.02mm	3100-320	149.00
0-40”/1000mm	.001”/.02mm	3100-322	280.00
0-60”/1500mm	.001”/.02mm	3100-324	535.00

Pittsburg® ALLEGHANY Precision Vernier Caliper



- •For outside, inside and depth measurement
- •Made of fully hardened stainless steel
- •Satin chrome finish
- •Supplied with fitted case

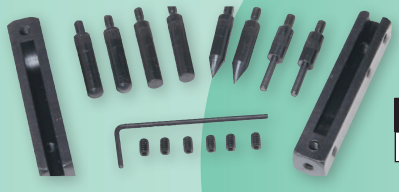
2

RANGE	GRAD.	ORDER NO.	PRICE
0-6”/150mm	.001”/.02mm	3100-305	$23.00
0-8”/200mm	.001”/.02mm	3100-306	32.00
0-12”/300mm	.001”/.02mm	3100-307	51.50

Universal Caliper Accessory Kit

Pittsburg® ALLEGHANY

- Outfits any 4-6-8” Caliper. • Made in U.S.A..
- Measures slots, grooves, webs, shoulders, holes, pockets.



2

ORDER NO.	PRICE EACH
3100-402	$23.80

Measuring Instruments

Pittsburg® ALLEGHANY Vernier Height Gage



- Stainless steel beam and measuring slide
- Supplied with scribers, holder and fitted case
- Adjusting slide scale for fine adjustment
- Dial test indicator (ordered separately) can replace scriber
- Satin chrome finish with micro-fine engraved graduations

RANGE	GRAD.	ORDER NO.	PRICE
12"/300mm	.001"/.02mm	3100-212	$ 94.00
18"/450mm	.001"/.02mm	3100-218	139.00
24"/600mm	.001"/.02mm	3100-224	172.50

[2]

Pittsburg® ALLEGHANY Double-Beam Digital Counter Dial Height Gage



- Carbide tipped scriber
- Chrome plated double beams by depressing zero-reset button
- Large feed wheel for coarse and fine vertical adjustments
- Bottom of base is hardened, grounded and lapped for maximum flatness
- Dual directional counter can be zero set at any height within range
- Easy to read Dial Indicator and Digital Counter: .1" Reading

[2]

RANGE	GRAD.	ORDER NO.	PRICE
12"	.001"	3100-952	$185.00
18"	.001"	3100-954	230.00
24"	.001"	3100-956	300.00

Mitutoyo Digital Counter Type Height Gages - Series 192



FEATURES

- Easy error-free reading with both up and down digital counters as well as a dial.
- The counters and dial can be zero-set at any scriber position.
- Provided with a feed wheel for easy coarse feeding.
- Sandard carbide-tipped scriber.

Inch [12]

ORDER NO.	RANGE	DIAL GRADUATION	DIGITAL COUNTER GRADUATION	ACCURACY	MASS (lbs.)	LIST PRICE
192-150	0–12"	.001"	.1" (Dual Reading)	±.0015"	9.26	$ 1200.00
192-151	0–18"	.001"	.1" (Dual Reading)	±.002"	20.28	1650.00
192-152	0–24"	.001"	.1" (Dual Reading)	±.002"	21.60	2140.00
192-153	0–40"	.001"	.1" (Dual Reading)	±.003"	37.5	4710.00

Standard Accessories: Scriber (**900258**) & Scriber Clamp (**901385**)

Mitutoyo Absolute Digimatic Height Gages - Series 570



570-412

FEATURES

- Larger DATA button with redesigned layout to improve operability.
- Integrated with the "U-WAVE" wireless measurement data communication system, easier to use where measurement data output is essential.
- Slider handle enables smooth vertical movement.
- Highly rigid pillars/large clamp levers provide smooth and reliable workability.
- Supports smooth and reliable measurement operations.
- Larger LCD panel, improved 3-button operation consistent with other devices.
- Contributes to reliable, accurate and repeatable measurements.
- Hardware design with emphasis on operability.

Inch/Metric [7]

ORDER NO.	570-412	570-413	570-414
Max. permissible error EMPE	±0.0015 in/±0.03 mm	±0.0020 in/±0.05 mm	±0.0020 in/±0.05 mm
Measuring Range	0–12" 0–300mm	0–18" 0–450mm	0–24" 0–600mm
Resolution	0.0005 in/0.01 mm		
Functions	ON/OFF, ORIGIN, ZERO/ABS, HOLD/DATA, inch/mm conversion*		
Drive method	Slider-feed wheel (manual)		
Data output	DIGIMATIC d1		
Max. response speed	Unlimited		
LCD character height	12 mm		
Battery life	Approx. 20,000 hours with continuous use, 5 years under normal use		
LIST PRICE	570-412	570-413	570-414

Digimatic Gage/PC Data Input Device, USB Direct Input Tool No. **06AFM380F**

Mitutoyo Digimatic Height Gages - Series 192

Self-contained Electronic Inch/Metric Display



192-630-10

FEATURES

- Easy-to-use standard type. • Carbide-tipped scriber is provided.
- Double-column structure ensures high measuring accuracy.
- Functions include: Coarse/Fine Feed switching, switchable resolution, Two preset reference height, zero setting, ABS/INC switching, two presets, probe tip dia. compensation, -/+ switching, Power ON/OFF, Data Hold, no output, inch/mm conversion, alarm: low voltage, counting value composition error

[12]

ORDER NO.	192-630-10	192-631-10	192-632-10	192-633-10
Measuring Range	0–12" 0–300mm	0–18" 0–450mm	0–24" 0–600mm	0–40" 0–1000mm
Resolution	.0005" (0.01mm), {.0002"(0.005mm) Switchable}			
Accuracy (20° C)	±.001"	±.002"		±.003"
Display	LCD, 7 digit, character height 11mm			
Response Speed	500mm/s			
Battery	SR44 (938882)			
Mass (kg)	4.7	7.5	8.3	15.7
Standard Accessories:	Carbide Tipped Scriber (905258) Scriber Clamp (901385)			
LIST PRICE	$1820.00	$2490.00	$3170.00	$5990.00

Pittsburg® ALLEGHANY Double-Beam Electronic Height Gage



- On.Off switch, Plus/Minus preset button, Metric/Inch conversion button, Zero Preset and Function button
- Switchable rapid/fine adjustment with large feed wheel
- Stainless steel frame
- Carbide tipped scriber

[2]

RANGE	GRAD.	ORDER NO.	PRICE
12"/300mm	.001"/.02mm	3100-960	$295.00
18"/450mm	.001"/.02mm	3100-962	379.00
24"/600mm	.001"/.02mm	3100-964	499.00

Measuring Instruments

Mitutoyo Digimatic Height Gages - Series 192 Heavy Duty Type

FEATURES

- Highly versatile multi-function type. • Carbide tipped long scriber is provided.
- Rigid construction ensures repeatable measurement.
- Switchable resolution. • Coarse/Fine Feed switching.
- Bi-directional touch signal probe is an optional accessory. It can quickly and accurately measure steps, inside width, and outside width.
- With SPC data output. • Two preset reference height.
- Functions: Zero-setting, ABS/INC switching, 2 presets, probe tip diameter compensation, -/+ switching, power ON/OFF, data hold, data output, inch/mm conversion
- Alarm: low voltage, counting value composition error



192-670-10
Probe Optional

SPC

Inch/Metric 7

ORDER NO.	192-670-10	192-671-10	192-672-10	192-673-10
Measuring Range	0–12" 0–300mm	0–18" 0–450mm	0–24" 0–600mm	0–40" 0–1000mm
Resolution	.0005" (0.01mm), {.0002"(0.005mm) Switchable}			
Accuracy	±.001"	±.0015"		±.0025"
Display	LCD, 7 digit, character height 11mm			
Response Speed	500mm/s			
Battery	SR44 (938882)			
Mass (kg)	5.7	7.5	8.3	15.7
Standard Accessories:	Carbide Tipped Scriber (905201) Scriber Clamp (901385)			
Data output	SPC output			
Optional Accessories	Two-directional Touch Probe (192-008) Measuring force 0.4N			
LIST PRICE	$2090.00	$2690.00	$3450.00	$6460.00

For SPC output order Connecting Cable No. **905338** (1m) or **905409** (2m).

Pittsburg® ALLEGHANY Electronic Digital Height Gage

- Switchable Inch/Metric high contrast LCD with fine adjustment device
- Non-contact measuring system keeps out chips, oil, dust and dirt
- Ground and hardened stainless steel frame
- Carbide tipped scriber
- Base precision ground and micro-lapped for maximum flatness



2

RANGE	GRAD.	ORDER NO.	PRICE
12"/300mm	.0005"/.01mm	3100-970	$238.00
18"/450mm	.0005"/.01mm	3100-972	285.00
24"/600mm	.0005"/.01mm	3100-974	340.00

Fowler Z-HEIGHT Electronic Digital Height Gage

- Direct Inch/Metric Conversion
- Accuracy: 0-12"model: ±.0015" 0-24" model: ± .002"
- Resolution .0005" (.01mm)
- Large, high contrast LCD display
- ABS/INC Measurement
- Hold feature • Positive lock, carbide scriber
- Direct RS232 output • Floating zero
- Includes molded case



6

ORDER NO.	DESCRIPTION	PRICE
54-175-012-0	0-12"/300mm	$882.00
54-175-024-0	0-24"/600mm	1351.00

Mitutoyo Linear Height - LH-600E High Performance 2D Measurement System

- Excellent accuracy of (1.1+0.6L/600)µm with 0.1µm/0.5µm resolution/repeatability.
- Data entry from a Digimatic tool.
- Guaranteed perpendicularity (frontal) of 5µm and straightness of 4µm.
- Pneumatic full/semi-floating system allows adjustment of air-cushion height.
- Basic statistical functions are provided and, additionally, RS-232C / USB data output provides the option of evaluating measurement data externally with SPC software on a PC.
- One-key operation for running a semi-automatic measurement.



Power Grip model also available.

6

ORDER NO.	518-351A-21	PRICE
Range:	0-38"/0-972mm	$8690.00
Resolution:	.000001/.00001/.0001/.001" 0.0001/0.001/0.01/0.1mm	
Accuracy:	.000043 + (.000024 x L*/24)" (1.1+0.6L**/600)µm	

Mitutoyo QM Height - High Precision Digital Height Gage

- Newly developed high accuracy and high resolution ABSOLUTE linear encoder for position detection.
- Built-in pneumatic flotation system enables smooth movement along surface plate.
- Possible to measure inside/outside diameter via unique process (detect the circle apex an.d process by tracing measurement).
- Various optional probes available.
- With SPC and USB output.
- Easy reference icon keys.
- Large size LCD with back light.
- GO/±NG judgment is performed by setting the upper and lower tolerances. If a judgment result is out of tolerance, the display backlighting changes from green to red, so tolerance judgment can be made at a glance.
- Slider elevation knob (for travel) / wheel (for measurement).
- Resolution: .00005" / .0001" 0.001 / 0.0005mm
- Accuracy: ±(2.4+2.1L/600)µm L = Measuring length (mm)



64PKA095A

6

ORDER NO.	RANGE	PERPENDICULARITY	MASS (LBS.)	LIST PRICE
64PKA094B	0-14"/0-350mm	7µm	55.16	$4400.00
64PKA095B	0-24"/0-600mm	12µm	63.93	4950.00
PNEUMATIC FLOTATION				
64PKA129B	0-14"/0-350mm	7µm	57.32	4950.00
64PKA130B	0-24"/0-600mm	12µm	66.14	5490.00

Measuring Instruments

Fowler Xtender Dial Bore Gage Sets

- Carbide anvils
- Graduation: .0005" or .01mm
- Easily adjustable
- Self-centering
- Insulated grip
- Chrome plated handle.
- Includes extension holder and fitted case.



2

ORDER NUMBER	DESCRIPTION	PRICE
52-646-400-0	1.4–6" Xtender Set	$212.85
52-646-220-0	35–60mm Metric Xtender Set	277.40

Fowler Bore Gage Setting Master Kit

Includes: Bore Gage Setting Master & 36 Gage Block Set All in a high quality aluminum case!



Each Set Includes:
- Base anvil 2.750" x .80"
- Adjustable anvil: 2.375" x .375"
- Internal capacity: 6" • Depth capacity: 1"
- Centralizer capacity width: 2.625"
- Quick release holder for fast adjustment.

Economy Gage Block Set:
- 36 piece • Tolerances to .00005"
- Certified calibration to N.I.S.T.

High quality aluminum case!
Bore Gage sold separately.

6

ORDER NUMBER	DESCRIPTION	PRICE
53-646-000-1	Bore Gage Setting Master Set	$400.72

Pittsburg® (Alleghany) Dial Bore Gages

- Sets supplied complete with anvils & necessary accessories to perform close tolerance I.D. measurements
- Top quality AGD Series 2 Dial Indicator included
- Self-centering • Fitted case

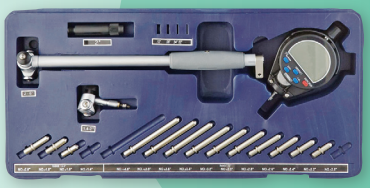


2

RANGE	GRAD.	BORE DEPTH	ANVILS	ORDER NO.	PRICE
0.24-0.4"	.0005"	1.56"	4	3100-980	$120.00
0.4-0.7"	.0005"	2.4"	9	3100-981	84.50
0.7-1.5"	.0005"	4"	8	3100-982	120.00
1.4-2.4"	.0005"	6"	6	3100-983	120.00
2.0-6.0"	.0005"	6"	11	3100-985	120.00
6.4-10.0"	.0005"	16"	6	3100-987	96.00

Fowler Xtender-E 1.4" to 6" Electronic Bore Gage Set

Includes FREE Instructional CD!



Bore Gage Features:
- Range: 1.4"-6"/35mm-150mm • Easily adjustable.
- Self-centering. • Includes extension holder.
- Shop hardened case. • Carbide anvils.

All the same benefits included in the X-Tender Dial Bore Gage are now available with an electronic indicator providing inch/metric reading capability, preset size of master for absolute reading and minimum hold feature to lock on the bore size as the gage is rocked through the bore.

6

ORDER NUMBER	DESCRIPTION	PRICE
54-646-401-1	Xtender-E Bore Gage Set	$420.79

Indicator Features:
- Dual reading inch/metric electronic indicator.
- Bar graph and numeric digital display.
- Resolution: .00005"/.001mm
- Preset with recall. • Min/Max/Tir
- ABS/INC measurement.

Mitutoyo Dial Bore Gages - Series 511



511-751

MITUTOYO offers a complete selection of Dial Bore Gages, all with interchangeable anvils and necessary accessories to perform close tolerance I.D. measurements. The smallest range measurement is .24", the largest one is 16". Some of the larger 511 Series Bore Gages are equipped with a unique guiding device which facilitates accurate measurement of the bore because it is self-centering. The supplied AGD Series 2 dial Indicator is fully protected by a rugged cover. The smallest graduation on the dial face is either .0001"/0.001mm or .0005"/0.005mm.



Optional Bore Gage Stand
Order No.: 215-120-10
Price Each: $1630.00



Optional Bore Gage Zero Setter
Order No.: 515-590
Price Each: $2240.00

12

RANGE	PROBE DEPTH	NUMBER OF ANVILS	NUMBER OF SPACERS	PROBE TYPE	ORDER NO. (WITH INDICATOR) .0005" W/2922AB	LIST PRICE	.0001" W/2923AB-10	LIST PRICE
.24–.4"	2"	9	—	A	511-213-20	$716.00	511-212-20	$743.00
.7–1.4"	4"	8	3	D	511-741-20	420.00	511-751-20	486.00
1.4–2.5"	6"	6	4	D	511-742-20	420.00	511-752-20	473.00
2.0–6.0"	6"	11+1*	4	D	511-743-20	465.00	511-753-20	517.00
4.0–6.5"	6"	13	4	D	511-744-20	616.00	511-754-20	683.00
6.5–10.0"	10"	6	6	D	511-745-20	698.00	511-755-20	771.00

Mitutoyo Center Master

FEATURES
- Allows quick measurement of center-to-center distance between holes.
- Measurable hole diameters: .04"–1.49".



1

ORDER NO.	DESCRIPTION	REMARKS	LIST PRICE
900581	For Inch Model Height Gages	.25" x .50" Shank	$169.00

Measuring Instruments

Fowler Dial Bore Gage Sets

- Easy-to-read.
- Economical
- Graduation: .0005”
- Insulated grip.
- Chrome plated handle.
- Includes extension holder and fitted case.
- Complete in shop hardened case.



MODEL NUMBER	DESCRIPTION	PRICE
52-646-100-0	.7”–1.5” Dial Bore Gage Set	$169.38
52-646-300-0	2–6” Dial Bore Gage Set	160.27

[2]

Mitutoyo Borematic – Series 568



FEATURES

- LCD Readout .00005”/0.001/mm.
- Carbide tipped contact points ensure long life.
- Efficient measurement using two measurement modes – ABS (absolute) and INC (incremental) modes.
- Can be linked to the M-SPC (Mitutoyo Statistical Process Control) system.
- Rotatable display unit for easy reading at any angle.
- Functions include: Origin setting, Origin restoration, Zero-setting, Presetting, Data hold, Error alarm, Low-battery alarm, Data output.
- Power supply: SR44 (button-type silver oxide cell), 2 pcs.

MEASURING FORCE (per Anvil)

Range	.275–.5”	4-10N
Range	.5–4.4”	10–30N

ACCURACY

Range	.275–.8”	.0002”
Range	.8–4.4”	.00024”

* Quantizing error ± 1 count.

Boremat ic Interchangeable-Head Sets

Each set includes one display unit with contact heads of the sizes specified.



568-936

Inch/Metric [7]

SET ORDER NO.	SET RANGE	INDIVIDUAL RANGE	LIST PRICE
568-928	.275”–.5” 6.985–12.7mm	.275”–.35”/6.985–8.89mm .35”–.425”/8.89–10.795mm .425”–.5”/10.795–12.7mm	$2560.00
568-929	.5”–1.0” 12.7–25.4mm	.5”–.65”/12.7–16.51mm .65”–.8”/16.51–20.32mm .8”–1.0”/20.32–25.4mm	2890.00
568-930	1.0”–2.0” 25.4–50.8mm	1.0”–1.2”/25.4–30.48mm 1.2”–1.6”/30.48–40.64mm 1.6”–2.0”/40.64–50.8mm	3540.00
568-936	2.0”–4.0” 50.8–101.6mm	2.0”–2.5”/50.8–63.5mm 2.5”–3.0”/63.5–76.2mm 3.0”–3.5”/76.2–88.9mm 3.5”–4.0”/88.9–101.6mm	5090.00

*Extra anvils supplied to allow added range.
For SPC output order connecting cable **937387** (40”/1m) or **965013** (80”/2m).

Mitutoyo [7] Digimatic Holtests Interchangeable-Head Sets



568-978

Inch/Metric

Thimble Graduation	.0002”
LCD Readout Up to 4”	.0005”/0.001mm
Over 4”	.0001”/0.001mm

Range .8–2”/20.32–50.8mm Set No. 468-978 $4720.00
Includes:

04AZB113	Display & Thimble Unit
04AZA730	Interchangeable Head .8–1”/20.32–25.4mm
04AZA731	Interchangeable Head 1–1.2”/25.4–30.48mm
04AZA739	Interchangeable Head 1.2–1.6”/30.48–40.64mm
04AZA740	Interchangeable Head 1.6–2.0”/40.64–50.8mm
177-184	Setting Ring 1.000” DIA.
177-291	Setting Ring 1.600” DIA.
952622	Extension Rod 5.9” (150mm)
04GAA858	Spanners (one pair)
202863	Hex Wrench
938882	SR44 Battery

For SPC output order connecting cable **05CZA662** (40”/1m) or **05CZA663** (80”/2m).

Range .275–.5”/6.985–12.7mm Set No. 468-976 $2330.00
Includes:

04AZB111	Display & Thimble Unit
04AZB139	Interchangeable Head .275–.35”/6.985–8.89mm
04AZB140	Interchangeable Head .35–.425”/8.89–10.795mm
04AZB141	Interchangeable Head .425–.5”/10.795–12.7mm
177-179	Setting Ring .350” DIA.
177-283	Setting Ring .425” DIA.
952322	Extension Rod 3.94” (100mm)
04GAA857	Spanners (one pair)
202863	Hex Wrench
938882	SR44 Battery

Range .5–.8”/12.7–20.32mm Set No. 468-977 $1890.00
Includes:

04AZB112	Display & Thimble Unit
04AZA721	Interchangeable Head .5–.65”/12.7–16.51mm
04AZA722	Interchangeable Head .65–.8”/16.51–20.32mm
177-182	Setting Ring .650” DIA.
952621	Extension Rod 5.9” (150mm)
04GAA857	Spanners (one pair)
202863	Hex Wrench
938882	SR44 Battery

Range 2–4”/50.8–101.6mm Set No. 468-979 $5410.00
Includes:

04AZB114	Display & Thimble Unit
04AZA754	Interchangeable Head 2–2.5”/50.8–63.5mm
04AZA755	Interchangeable Head 2.5–3.0”/63.5–76.2mm
04AZA756	Interchangeable Head 3.0–3.5”/76.2–88.9mm
04AZA757	Interchangeable Head 3.5–4.0”/88.9–101.6mm
177-315	Setting Ring 2.5” DIA.
177-319	Setting Ring 3.5” DIA.
952623	Extension Rod 5.9” (150mm)
04GAA858	Spanners (one pair)
202863	Hex Wrench
938882	SR44 Battery

Range 4–8”/101.6–203.2mm Set No. 468-980 $6350.00
Includes:

04AZB115	Display & Thimble Unit
04AZA783	Interchangeable Head 4–5”/101.6–127mm
04AZA784	Interchangeable Head 5–6”/127–152.4mm
04AZA785	Interchangeable Head 6–7”/152.4–177.8mm
04AZA786	Interchangeable Head 7–8”/177.8–203.2mm
177-299	Setting Ring 5” DIA.
177-303	Setting Ring 7” DIA.
952623	Extension Rod 5.9” (150mm)
04GAA858	Spanners (one pair)
202863	Hex Wrench
938882	SR44 Battery

Mitutoyo Digimatic Holtests - Series 468 [7]

The Digimatic Holtest is a three-point internal micrometer with digital display(LCD). Functions include: Zero-setting,Preset, Data Hold, Inch/mm conversion, Error alarm, Data output.





Optional Stand
(See page 532)

FEATURES

- Efficient measurement using two measurement modes – ABS (absolute) and INC (incremental) modes.
- The 468 series provides digital readout to .0001”/0.001mm and can be linked to the M-SPC (Mitutoyo Statistical Process Control) system.
- Battery: SR44 x 1 (938882).
- Measurement can be taken nearly up to the bottom of the bore.
- The display automatically turns off idle for 20 minutes.
- Can measure deep holes with extension rod attachment (optional).
- Carbide tipped contact points.
- All TiN coated



Optional Mounting Plate For Stand
Order No. 04AZB157
Price Each: $46.30

ACCURACY

RANGE	
.275–.8”/6–20mm	.00008”/0.002mm
.8–4”/20–100mm	.00012”/0.003mm
4–12”/100–300mm	.0002”/0.005mm

MEASURING FORCE (per Anvil)

RANGE	
.275–.5”/6–20mm	4–20N
.5–4”/12–100mm	15–45N
4–12”/100–300mm	30–75N

*Quantizing error ± 1 count.

Measuring Instruments

Pittsburg® ALLEGHANY Dial Indicators

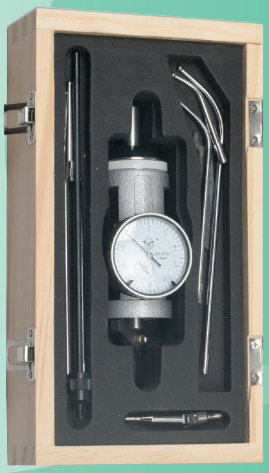


- AGD 2
- Accurate, rugged and production tested
- Hard chrome satin finish
- Interchangeable hardened chrome point (4-48 thread)
- Revolution counter
- Lug back
- Easy to read crisp graduations

2

RANGE	GRAD.	READING	ORDER NO.	PRICE
1/4"	.001"	0-50-100	3100-563	$17.80
1/2"	.001"	0-50-100	3100-564	18.20
1"	.001"	0-50-100	3100-565	21.80
1"	.001"	0-50-100 BLK	3100-566	21.80
2"	.001"	0-50-100	3100-568	62.40

Pittsburg® ALLEGHANY Dial Centering Indicator



- Designed for centering a workpiece or fixture
- Operates at any angle
- Use vertical or horizontal
- Use internal or external
- While spindle rotates, the centering indicator always faces the operator
- Supplied complete with restraining rod and feelers, in fitted case

2

ORDER NO.	PRICE
3101-010	$95.00

SPECIFICATIONS:

Length:	6-7/8"
Shank:	3/8" diam. x 7/8" long
Weight:	9-1/2 oz. Net
Feeler Ball:	1/8" Diameter
Meas. Range:	250 axis offset
Capacity:	Internal-5/32 to 4-1/4" dia.
	External- 0 to 4-1/4" dia.
Speed:	Not to exceed 800 RPM
Locating accuracy:	To within 0.0002" of true center
Graduation:	0.0005

Mitutoyo Dial Indicators

FEATURES
- 1. Revolution Counter
- 2. Shockproof
- 3. Jeweled Bearings
- 4. Waterproof
- 5. Flat Back
- 6. Lug-On-Center Back
- 7. Reverse Reading



Lug-On-Center Back Models (All Except 2804AB-10)

12

ORDER NO.	TOTAL RANGE	DIAL FACE	GRAD.	RANGE/ REVOLUTION	DIAL *DIA.*	AGD	*FEATURES	LIST PRICE
1803A-10	.025"	0-5-0	.0001"	.01"	1-5/8"	1	3,6	$200.00
3803A-10	.025	0-5-0	.0001	.01	3	3	3,6	251.00
2804A-10	.050	0-10	.0001	.01	2-1/4	2	3,6	194.00
2804AB-10	.050	0-10	.0001	.01	2-1/4	2	3,5	194.00
1506A	.125	0-50	.0005	.05	1-5/8	1	6	119.00
1410A	.250	0-100	.001	.100	1-5/8	1	6	137.00
1411A	.250	0-50-0	.001	.100	1-5/8	1	6	137.00
2414A	.500	0-100	.001	.100	2-1/4	2	6	130.00
2776A	1.000	0-50	.0005	.05	2-1/4	2	6	167.00
2416A	1.000	0-100	.001	.100	2-1/4	2	6	140.00
2416A-10	1.000	0-100	.001	.100	2-1/4	2	3,6	166.00
2417A	1.000	0-50-0	.001	.100	2-1/4	2	6	140.00
2904A	1.000	100-0	.001	.100	2-1/4	2	7	147.00
3416A	1.000	0-100	.001	.100	3	3	6	202.00
2424A-19	2.000	0-100	.001	.100	2-1/4	2	1,3,6	286.00
4887A-19	3.000	0-100	.001	.100	3-9/16	4	6	539.00

Fowler AGD Indicators

- 1" Travel.
- Continuous reading: 0-100
- AGD group 2 dial diameter.
- Revolution counter.
- Tolerance markers.
- Lug back mount

2

MODEL NUMBER	READING	FACE COLOR	PRICE
52-520-110-0	.001	White	$34.05
52-520-109-0	.001"	Black	34.67
52-520-129-0	.0005"	White	105.88



52-520-110



52-520-109



52-520-129

Pittsburg® ALLEGHANY Dial Indicator Depth Base



- Precision ground and hardened.
- Made in U.S.A.

2

DESCRIPTION	ORDER NO.	PRICE EACH
2-1/2" Long Base	3100-392	$71.50
4" Long Base	3100-394	83.00

Fowler Electronic Indicator

INDI-X blue



- Direct Inch/Metric Conversion
- 1"/25mm travel
- Auto Off feature
- 2 1/4" dial face
- Lugback and 3/8" stem diameter
- Resolution .0005"/.01mm
- Tolerance indicators
- Absolute/incremental reading
- Floating zero
- Carbide tipped point

A Low Cost, High Quality, Multi-Function Indicator

6

MODEL NUMBER	DESCRIPTION	PRICE
54-520-250-0	Indi-X Blue Electronic Indicator	$133.36

Mitutoyo IDU Digimatic Indicator with Absolute Encoder Series 575

FUNCTIONS
- ON/OFF
- Origin Setting
- Data output
- Inch/mm conversion (for Inch/Metric models)
- +/- Direct Changeover
- Error alarm
- Low battery alarm

575-123



FEATURES
- Compact and economical design.
- Provided with a data output port for connection with the SPC system.
- Power supply: One SR-44 battery (938882).
- Operating temperature: 0°C–40°C.
- Membrane sealed face helps keep out contaminants.

5

Optional Accessories

5

ORDER NO.	DESCRIPTION	PRICE
905338	Digimatic Cable (1m)	$40.05
905409	Digimatic Cable (2m)	47.75

ORDER NO.	DESCRIPTION	PRICE
21JZA295	Spindle Lifting cable	$51.65+

7

ORDER NO.	575-123 (INCH/METRIC MODEL)	575-121 (METRIC MODEL)
Measuring Range	0–1"/0–25.4mm	0–25.4mm
LCD Resolution	.0005"/0.01mm	0.01mm
Accuracy	.0008"	0.02mm
Measuring Force (Downward)	1.8N or less	
Stem Diameter	.375 +0/–.0012"	8.0mm +0/–.009mm
Data output	Digimatic output	
Standard Accessories	Silver-oxide cell SR-44 (1 pc.) (938882)	
Protection Level	IP-42	
Battery Life	20,000 hrs.	
PRICE EACH	$230.00	$230.00

Measuring Instruments

IP54 Shockproof Indicator



Protection Includes:
- Rubber bellows on stem
- O-ring seal on safety cap
- O-ring protection for bezel and rotating dial
- Sealed back plate

Specifications:
- Robust, shockproof design
- Travel: 1" • Reading: .001"
- Continuous reading: 0-100 • Tolerance markers
- AGD Group 2, 2-1/4" dia. • Lugback and carbide point

2

ORDER NUMBER	DESCRIPTION	PRICE
52-520-450-0	IP54 Shockproof Indicator	$87.21

Electronic Indicator

Now available in inch, metric, and fraction!



- Direct Inch/Metric/Fraction Conversion
- Auto Off feature
- 2 1/4" dial face
- Lugback and 3/8" stem diameter
- Resolution .0005"/.01mm/64ths
- Tolerance indicators
- Absolute/incremental reading
- Floating zero
- Carbide tipped point

A Low Cost, High Quality, Multi-Function Indicator

6

ORDER NUMBER	DESCRIPTION	PRICE
54-520-260-0	Indi-X Blue Electronic Indicator	$135.38

Water Resistant Indicator Set

Magnetic Base (52-585-010-0):
- Fine adjustment
- Base dimensions: 2" x 2-11/32" x 1-13/16"
- Mounts test indicators with 1/4" post
- 85 lb. pull • On-Off lever release magnet
- V-base for placing on round surfaces
- Best Value IP54 Shockproof indicator available!



X -Proof Indicator (52-520-450-0):
- Travel: 1" • Reading: .001"
- Continuous reading: 0-100
- Tolerance markers • AGD Group 2, 2-1/4" dia.
- Lugback and carbide point
- Robust, shockproof design
- Rubber bellows on stem • Sealed back plate
- O-ring seal on safety cap, protection for bezel and rotating dial

2

ORDER NUMBER	DESCRIPTION	PRICE
52-585-155-0	Water Resistant Indicator Set	$112.84

Fine Adjust Mag Base Set

With INDI-X blue Electronic Indicator

Indi-X Blue Indicator features:
- Direct Inch/Metric Conversion
- 1"/25mm travel • Auto Off feature
- 2 1/4" dial face
- Lugback and 3/8" stem diameter
- Resolution .0005"/.01mm
- Tolerance indicators
- Absolute/incremental reading
- Floating zero • Carbide tipped point

Magnetic Base features:
- 85 lb. pull • Fine adjustment.
- V-bottom base.

Magnetic Indicator Back features:
- Use for positioning the indicator on most metal surfaces.
- Protective coating



All in a shop-hardened case.

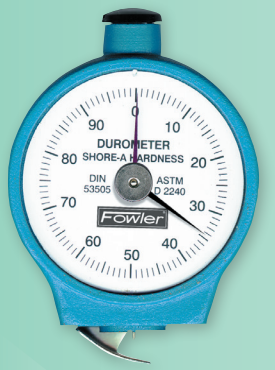
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ORDER NUMBER	DESCRIPTION	PRICE
54-585-075-0	Fine Adjust Mag Base Set	$231.86

Portable Durometers

Fowler's Portable Durometers are just right for testing the hardness of flexible materials such as rubber and plastics. These gages conform to shore scales.

- Manufactured in accordance with DIN, ASTM, ISO and JIS specifications.
- Includes reference test block, operating instructions and fitted case.
- Optional bench stand available.



Applications:
35° blunt taper Durometers are suitable for testing soft and natural rubber products, neoprene, polyesters, soft PVC, leather, thiokol, nitril rubbers, wax, felt and more.

Sharp 30° point Durometers are ideal for testing hard rubber, hard synthetic materials, e.g. acrylics, glass, polystyrol, thermoplastics, printing rolls, vinyl sheets, cellulose acetates, densified wood, etc.

6

ORDER NUMBER	PENETRATOR	SHORE SCALE	GRADUATIONS	PRICE
53-762-101-0	Blunt taper 35°	A	1 Shore	$358.65
53-762-102-0	Sharp 30°	D	1 Shore	360.61

Measuring Instruments

Mitutoyo Absolute Digimatic Indicator ID-C Series 543 - Standard Type

FEATURES:
- As compact as standard Series 2 dial indicators.
- Large, easy-to-read LCD.
- GO/±NG judgment is performed by setting upper and lower tolerance limits. The judgement result (GO/±NG) can be displayed in full size characters.
- The positive/negative count resulting from the spindle's up/down movement can be toggled.
- Internal calculations using the simple formula of [F(x) = Ax)] are available.
- Employing the ABSOLUTE linear encoder, the Signal ID-C always displays the spindle "Absolute Position" from the origin at power-on.
- The ID-C indicator face can be rotated 330º to an appropriate angle for easy reading.
- With SPC data output. Battery: SR44 (1 pc.), **938882**

Function:
Origin-set/Preset, Zeroset, GO/±NG judgment, Max/Min/Runout value holding, Counting direction switching, Power ON/OFF, Data output, inch/mm conversion (on inch/metric models only)
Alarm: Low voltage, Counting value composition error, Over-flow error, Tolerance limit setting error



543-701B



543-722B



543-731B

Inch/Metric [7]

Stem dia. 3/8", 4-48 Thread

RESOLUTION	RANGE	ORDER NO. (W/LUG, FLAT-BACK)		PRICE EACH	MODEL	ACCURACY	MEASURING FORCE
.00005"/ 0.001mm*	.5" / 12.7mm	543-701	543-701B	$501.00	ID-C0512NX	.0001"	1.5N or less
.00005"/ 0.001mm*	.5" / 12.7mm	543-706	543-706B	783.00	ID-C0512ENXB	.0001"	0.4N - 0.7N (Low force)
.00005"/ 0.001mm*	1" / 25.4mm	543-721B	543-722B	671.00	ID-C0525ENXB	.0001"	1.8N or less
.00005"/ 0.001mm*	2" / 50.8mm	543-731B	543-732B	840.00		0.002"	2.3N or less
.0005"/ 0.01mm	.5" / 12.7mm	543-711B	543-712B	366.00	ID-C1012EX	.001"	0.9N or less
.0005"/ 0.01mm	.5" / 12.7mm	543-716B	543-717B	501.00	ID-C1012CENX	.001"	0.2N - 0.5N (Low force)
.0005"/ 0.01mm	1" / 25.4mm	543-726B	543-727B	537.00	ID-C1025EXB	.001"	1.8N or less
.0005"/ 0.01mm	2" / 50.8mm	543-736B	543-737B	704.00	ID-C1050ENXB	.0016"	2.3N or less

* Switchable Resolution Type

Optional Accessories:
905338: SPC cable (40" / 1m), **905409**: SPC cable (80" / 2m)
21EZA198: Spindle lifting lever (ISO/JIS type)*, **21EZA199**: Spindle lifting lever (ANSI/AGD type)*
21EZA105: Spindle lifting knob (12.7mm/.5"ISO/JIS type)**
21EZA150: Spindle lifting knob(12.7mm/.5"ANSI/AGD type)**
21EZA197: Spindle lifting knob (25.4mm/1", 50.8mm/2" models)
21EZA200: Spindle lifting knob (50.8mm/2"), **540774**: Spindle lifting cable (stroke: (1"/ 25.4mm)
02ACA571: Auxiliary spindle spring for 25mm/1" models***
02ACA773: Auxiliary spindle spring for 50mm/2" models***
*Can be used on 12mm/.5" models only. **Not available for low measuring force models.
***Required when orienting gage upside down.

Fowler LIFETIME WARRANTY IP67 Mark VI Electronic Indicators



14

FEATURES: • Robust construction • Water and coolant resistant
- Protection class IP-67 • Repeatability: 2µm
- Output: Proximity/Power - USB/RS232/digimatic/Wireless
- Battery life: 10,000 hours of operation • Menus customizable with free software • Wide range of functions (MIN/MAX/DELTA, TOL, Factor, Preset. Auto Off, etc)
- Aluminum housing • Bezel rotates 270° • Includes lug back
- Large display with LED tolerance indicators

ORDER NO.	DESCRIPTION	MAX ERROR	RESOLUTION	PRICE EACH
54-530-125-0	0-.500"/12.5mm	0.0004"/.01mm	0.0005"/.01mm	$576.32
54-530-135-0	0-.500"/12.5mm	0.00012"/.003mm	0.00005"/.001mm	713.10
54-530-145-0	0-1"/25mm	0.0004"/.01mm	0.0005"/.01mm	657.81
54-530-155-0	0-1"/25mm	0.00016"/.004mm	0.00005"/.01mm	681.61
54-530-175-0	0-2"/50mm	0.00019"/.005mm	0.00005"/.001mm	1368.02
		BLUETOOTH		
54-530-335-0	0-.500"/12.5mm	0.00012"/0.003mm	0.00005"/.001mm	902.32
54-530-355-0	0-1"/25mm	0.00016"/.004mm	0.00005"/.001mm	841.84

Mitutoyo ID-S Digimatic Indicators with Absolute Encoder

Series 543 – Simple and Economical Design with Absolute Encoder

These IDS Type Digimatic Indicators incorporate Mitutoyo's Absolute Encoder Technology so all settings are maintained for the life of the battery. The IDS provides clear digital readings in a convenient and compact package which conforms generally to Series 2 dial indicator dimensions.



543-793

Inch/Metric [7]

ORDER NO.	543-783 (LUG-BACK) / 543-783B (FLAT-BACK)		543-793 (LUG-BACK) / 543-793B (FLAT-BACK)	
Measuring Range	0–.5"/0–12.7mm		0–.5"/0–12.7mm	
LCD Resolution	.0005"/0.01mm		.0001"/0.001mm	
Accuracy (20°C)	.0008"/0.02mm		.00012"	
Measuring Force	2.0N (200gf) or less		2.0N (200gf) or less	
Battery	SR-44 (1 pc.) No. 938882		SR-44 (1 pc.) No. 938882	
Battery Life	Approx: 20,000 hours		Approx: 20,000 hours	
Protection Level	Conforming to IP-42		Conforming to IP-42	
Functions	ORIGIN, ON/OFF, in/mm, +/-		ORIGIN, ON/OFF, in/mm, +/-	
Data output*	SPC Digimatic output		SPC Digimatic output	
Stem Diameter	.375" +0/-.0012"		.375" +0/-.0012"	
Contact Point	.16"dia. carbide-tipped ball (4-48UNF)		.16"dia. carbide-tipped ball (4-48UNF)	
Mass	0.27 lbs.		0.27 lbs.	
PRICE EACH	543-783 $187.00	543-783B $187.00	543-793 $288.00	543-793B $288.00

* For SPC output order Connecting Cable **905338** (1m) or **905409** (2m)

OPTIONAL ACCESSORIES [5]

ORDER NO.	DESCRIPTION	PRICE
21EZA199	Spindle Lifting Lever (ANSI/AGD Type)	$5.40
540774	Spindle Lifting Cable	32.95
21EZA150	Lifting Knob	22.90

[5]

ORDER NO.	DESCRIPTION	PRICE
101306	Lug-on-Center Back (ANSI/AGD Type)	11.10
101039	Flat Back	5.80

Pittsburg® ALLEGHANY Electronic Digital Indicators



Type A



Type B

Type A
- Error-free digital readings in basic & economical package
- Easy to read LCD
- Battery Powered
- Zero set, Inch/Metric, Auto On/Off
- Reverse readings indicator (-sign)

Type B
- Trim design gets into tight spaces. Only 1-1/2" wide and less than 1" thick
- Easy to read LCD
- Flat back
- Battery powered
- Zero set, Inch/Metric
- Includes lifting lever

[2]

RANGE	GRAD.	TYPE	ORDER NO.	PRICE
0-5"/13mm	.0005"/.01mm	A	3100-992	$122.50
1.0"/25mm	.0005"/.01mm	B	3101-000	150.00

Measuring Instruments

Mitutoyo

Absolute Digimatic Indicator ID-H

Series 543 – High Accuracy and Functional Type

FEATURES

- This new-generation digital indicator offers the excellent accuracy and functionality expected from this class of indicator. Take advantage of its high accuracy backed up by 0.5µm / .00002" resolution, remote control functionality via a handheld controller (or an RS-232C interface) and easy runout measurements with the well-established analog bar display.
- The maximum, minimum, or runout valuecan be displayed during measurement.
- GO/±NG judgement is performed by setting the upper and lower tolerances. If a judgment result is out of tolerance, the display backlighting changes from green to red, so tolerance judgment can be made at a glance.
- With SPC data output • With RS-232C input/output

Standard Accessories

06AGZ369JA: AC Adapter 120v **137693**: Lifting Lever

Optional Accessories:

936937: SPC cable (40" / 1m), **965014**: SPC cable (80" / 2m), **21EAA131**: RS-232C cable (80" / 2m)
21EZA099: Remote controller, **540774**: Spindle lifting cable (stroke: .4" / 10mm)
21EZA101: Spindle lifting knob, **264-505A**: Digimatic Min-processor DP-1VA
543-004A: Digimatic presetter, **21EZA152A**: FREE PARAMETER SETTING SOFTWARE
*Required when orienting the indicator upside down.

Technical Data

Accuracy: Refer to the list of specifications
Resolution: 0.0005mm/0.001mm or .00002"/.00005"/.0001"/0.0005mm/0.001mm
Display: LCD Length standard: Linear encoder
Max. response speed: 1000mm/s
Measuring force: 2.0N/2.5N* or less (*60mm range models)
Power supply: 6V DC (via AC adaptor)

Function

Origin-set/Preset, Zeroset, GO/±NG judgement, Max/Min value hold, Runout measurement, Resolution switching, Counting direction switching, Power ON/OFF, Data output, inch/mm conversion (on inch/metric models only) Alarm: Low voltage, Counting value composition error, Over-flow error, Tolerance limit setting error



Inch/Metric [7]

MODEL NO.	RESOLUTION	RANGE	MODEL	ACCURACY	PRICE
543-562A 543-564A (INCH)	.00002", .00005" .0001", 0.0005mm, 0.001mm	1.2" / 30.4mm 2.4" / 60.9mm	ID-H530E ID-H560E	0.0015mm 0.0025mm	$1040.00 1240.00
543-561A 543-563A (METRIC)	0.0005mm, 0.001mm	30.4mm 60.9mm	ID-H530 ID-H560	0.0015mm 0.0025mm	1040.00 1240.00

Fowler XTEST

Test Indicators

Twice the Test for Less!

[2]

MODEL NUMBER	GRADUATION	DIAL DIAM.	PRICE
52-562-001-0	.0005"	1.5"	$143.15
52-562-002-0	.0005"	1"	143.15
52-562-003-0	.001"	1"	159.05
	Kit		
52-562-100-0	.0005"	1.5"	196.98
52-562-110-0	.0005"	1"	196.98



X-Test Indicator:

- Range: .060" Graduation: .0005"
- Dial reading: 0—15—0
- Dial diameter: 1-1/2"
- Jewelled movement
- Revolution counter
- Auto-reverse
- 210° Swivel arc
- Tungsten carbide .080" point

Kit includes:

- Dial test indicator
- Axial support
- Height gage bar w/ clamp
- Adaptor sleeve
- Contact point case
- Contact point wrench
- Shop-hardened case.

Mitutoyo "Quick-Set" Test Indicators

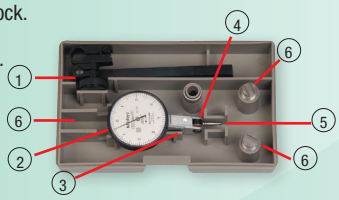
Series 513 w/ Jeweled Bearings



513-412-10E

FEATURES

1. "O" ring incorporated in new bezel design seals instrument from dust and oil mist.
2. Enlarged pitch of teeth on crown gear improves ability of indicator to withstand shock.
3. Rubber bumpers limit travel of sector gear and prevent damage due to excessive travel.
4. Special alloy of sector gear provides greater resistance to wear, and longer distance between pivot points for better protection against shock.
5. Carbide point, .078" DIA., is standard.
6. Dovetails, integral with housing, give broad flexibility for mounting of instruments.



Inch/Metric [12]

ORDER NO. BASIC	LIST PRICE	GRADUATION	RANGE	DIAL READING	ACCURACY	TYPE	REMARKS	ORDER NO. COMPLETE	LIST PRICE
513-406-10E	$180.00	.0005" 0.7mm	.03" 0.01mm	0-15-0 0-35-0	±.0005"	Horizontal	Combitest Anti- Magnetic	513-406-10T	$199.00

Inch [12] [12]

ORDER NO. BASIC	LIST PRICE	GRADUATION	RANGE	DIAL READING	ACCURACY	TYPE	REMARKS	ORDER NO. COMPLETE	LIST PRICE
513-403-10E	$199.00	.0001"	.008"	0-4-0	±.0001"	Horizontal	Anti- Magnetic	513-403-10T	$234.00
513-402-10E	153.00	.0005"	.03"	0-15-0	±.0005"	Horizontal	Anti- Magnetic	513-402-10T	182.00
513-452-10E	199.00	.0005"	.03"	0-15-0	±.0005"	Vertical	—	513-452-10T	220.00
513-482-10A	212.00	.0005"	.03"	0-15-0	±.0005"	Parallel	—	513-482-10T	220.00
513-412-10E	220.00	.0005"	.03"	0-15-0	±.0005"	Horizontal	Long Point Anti- Magnetic	513-412-10T	254.00

The most direct gear train design ever applied to Test Indicators means – higher level of sensitivity, reliability, repeatability and accuracy throughout tool life.

TESA TECHNOLOGY | brown & sharpe

White Face Indicator Sets

Large diameter dials make reading fast and easy. Comes with three carbide contact points: .040", .080" and .120" diameter; two extensions with .0001" to .0005" or (0.01 or 0.002mm on -14 models) dovetails; one point wrench; certificate of accuracy and traceability; all in a durable molded case.

[7]

ORDERING NUMBER	RANGE	MARKING	SMALLEST DIVISION	DIAL DIA.	POINT LENGTH	TIP DIA.	B&S NUMBER	PRICE EACH
INCH READING								
7125-925	.030"	0-15-0	.0005"	1"	1/2"	Three	599-7030-6	$326.00
7125-926	.030"	0-15-0	.0005"	1-1/2"	1/2"	Tips	599-7031-6	335.00
7125-929	.008"	0-4-0	.0001"	1"	1/2"	With	599-7032-6	365.00
7125-923	.008"	0-4-0	.0001"	1-1/2"	1/2"	Each	599-7023-6	402.00
METRIC READING								
7125-927	0.8mm	0-0.4-0	0.01mm	.28mm	12.5mm	Three	599-7030-14	$335.00
7125-928	0.8mm	0-0.4-0	0.01mm	.38mm	12.5mm	Tips	599-7031-14	340.00
7125-930	0.2mm	0-100-0	0.002mm	.28mm	12.5mm	Each	599-7032-14	368.00



Measuring Instruments

TESA TECHNOLOGY | brown & sharpe

Bestest Indicators

Bestest® Indicators meet or exceed federal or DIN specifications. All Bestest Indicators are furnished with a furnished with a certificate of accuracy and traceability. And Bestest Indicators provide all of the following high quality features to ensure fast, accurate and continuously reliable measurement.

- Constant Clockwise Rotation
- Universal Mounting • Automatic Reversal
- Monoblock (Precision Watch) Body Design
- Swivelling Point • Carbide Tip Point
- Anti-Magnetic & Corrosion Resistant
- Price Includes Fitted Case

White Face Indicators

Each BesTest® Indicator set comes complete accessories. End mounted Indicator set comes with one carbide tip contact point: .080" dia., with one 3/8" dia. x 2 1/2" long universal One rectangular bar; One swivel clamp; One mounting attachment in place of rectangular contact point wrench; One fitted wooden case that accommodates additional accessories. End mounted Indicator set comes with one 3/8" dia. x 2 1/2" long universal mounting attachment in place of rectangular bar and swivel clamp.



7

ORDERING NUMBER	RANGE	MARKING	SMALLEST DIVISION	DIAL DIA.	POINT LENGTH	TIP DIA.	B&S NUMBER	PRICE EACH
INCH READING								
7145-977	.030"	0-15-0	.001"	1"	1/2"	.080"	599-7029-3	$304.00
7145-978	.030"	0-15-0	.0005"	1"	1/2"	.080"	599-7030-3	314.00
7145-979	.030"	0-15-0	.0005"	1-1/2"	1/2"	.080"	599-7031-3	326.00
7145-980	.008"	0-4-0	.0001"	1"	1/2"	.080"	599-7032-3	341.00
7146-400	.008"	0-4-0	.0001"	1-1/2"	1/2"	.080"	599-7023-3	389.00
7145-981	.008"	0-4-0	.00005"	1-1/2"	1/2"	.080"	599-7033-3	394.00
7145-982	.020"	0-10-0	.0005"	1"	1-7/16"	.080"	599-7034-3	406.00
7145-983	.020"	0-10-0	.0005"	1-1/2"	1-7/16"	.080"	599-7035-3	414.00
END MOUNTED								
7150-437	.030"	0-15-0	.0005"	1"	1/2"	.080"	599-7037-3	417.00
7146-406	.008"	0-4-0	.0001"	1-1/2"	1/2"	.080"	599-7024-3	467.00
7150-436	.008"	0-4-0	.00005"	1-1/2"	1/2"	.080"	599-7038-3	467.00
METRIC READING								
7145-984	0.8mm	0-0.4-0	0.01mm	.28mm	12.5mm	2mm	599-7030-13	326.00
7145-985	0.8mm	0-0.4-0	0.01mm	.38mm	12.5mm	2mm	599-7031-13	329.00
7145-986	0.2mm	0-100-0	0.002mm	.28mm	12.5mm	2mm	599-7032-13	356.00
7145-987	0.2mm	0-100-0	0.002mm	.38mm	12.5mm	2mm	599-7033-13	406.00

Fowler XTEST Vertical X-Test Indicators

Twice the range of most indicators!

X-Test Indicator:

- Range: .060" • Dial reading: 0—15—0
- Jeweled movement • Revolution counter
- Easy-to-read tilted dial • Automatic Reversal
- 210° Swivel arc • Tungsten carbide .080" point



2

MODEL NUMBER	GRADUATION	DIAL DIAM.	PRICE
52-562-004-0	.0005"	1.5"	$156.75
52-562-005-0	.0005"	1"	174.16

Pittsburg® ALLEGHANY Dial Test Indicator

FEATURES:

- Adjustable bezel and dial
- Fully jeweled movement
- Wide face for easy reading
- 3 way Dovetail mounting
- Trigger response to lightest pressure
- Contact point adjustable through 230 Deg.
- Includes 5/32" and 3/8" mounting shanks



2

RANGE	GRAD.	DIAL DIAM.	READING	ORDER NO.	PRICE
0-.030"	.0005"	1.25"	0-15-0	3100-570	$49.25

Mitutoyo Pocket Test Indicator – Series 513

FEATURES

- Jeweled bearings assure higher sensitivity and accuracy.
- Reversible Measuring Direction. •Two Holding Bars are supplied: One (1/2 x 1/4") is used with lathe tool posts and height gages, the other (.315" DIA.) with drill chucks. (Complete sets only.)
- Fully adjustable bezel/dial face. • Contact point is adjustable within 220°.
- Complete with accessories and compact carrying case.



513-504-10E

12

Inch

ORDER NO. BASIC	LIST PRICE	GRAD.	RANGE	DIAL READING	ACCURACY	REMARKS	ORDER NO. COMPLETE	LIST PRICE
513-504-10E	$188.00	.0001"	.01"	0-5-0	±.0002"	—	513-504-10T	$186.00
513-512-10E	179.00	.0005"	.02"	0-10-0	±.0005"	Long point	513-512-10T	192.00
513-518-10E	160.00	.001"	.04"	0-20-0	±.001"	—	513-518-10T	146.00

Mitutoyo Truetest™ Test Indicators Series 513

Mitutoyo introduces three new Series 513 dial indicators, each available in white or black dial face colors. Each indicator features:

- Smooth spindle movement for increased measuring accuracy.
- Water and dust resistant one-piece black bezel and hard coated crystal for improved durability.
- 20° tilted dial face for easy reading.
- Anti-magnetic characteristics.



513-443



513-443-06

Accessories
Swivel Clamp **900322**
Square arm **900306**
21CAB106 (Stem .157 dia.)
21CAB106 (Stem 3/8 dia.)
.039 Carbide contact point
.079 Carbide contact point
190322 (Nut)

Inch 12 12

ORDER NO. BASIC	LIST PRICE	GRAD.	RANGE PER REV.	RANGE	DIAL READING	WIDE RANGE ACCURACY	DIMENSION L	REMARKS	ORDER NO. COMPLETE	LIST PRICE
513-442-10A	$208.00	.0005"	.03"	.06"	0-15-0	±.0005"	.78"	White Dial Face	513-442-10T	$235.00
513-442-16A	208.00	.0005"	.03"	.06"	0-15-0	±.0005"	.78"	Black Dial Face	513-442-16T	235.00
513-446-10A	278.00	.0005"	.03"	.06"	0-15-0	±.0005"	1.33"	White Face Longpoint	513-446-10T	313.00
513-446-16A	278.00	.0005"	.03"	.06"	0-15-0	±.0005"	1.33"	Black Face Longpoint	513-446-16T	313.00
513-443-10A	262.00	.0001"	.008"	.016"	0-4-0	±.0002"	.59"	White Dial Face	513-443-10T	296.00
513-443-16A	262.00	.0001"	.008"	.016"	0-4-0	±.0002"	.59"	Black Dial Face	513-443-16T	296.00

Measuring Instruments

Interapid SWITZERLAND Test Indicators



Double The Range Of Other Test Indicators

FEATURES:
- Magnetic resistant • Extremely low measuring pressure
- Two-way action - no reversing lever • Dovetail & adjustable stem adaptation
- Precise repetitive readings • Ball bearing and jewelled movement
- Carbide contact point swivels 210° • Easy to read tilted dial

Vertical Models

7

MODEL NO. 312B-1V INTERAPID NO. 74.111377		MODEL NO. 312B-3V INTERAPID NO. 74.111957		MODEL NO. 312B-15V INTERAPID NO. 74.111958	
Ordering No.	7141-685	Ordering No.	7141-714	Ordering No.	7141-715
Range	.060"	Range	.016"	Range	.060"
Graduations	.0005"	Graduations	.0001"	Graduations	.0005"
Dial Diameter	1.5"	Dial Diameter	1.5"	Dial Diameter	1.5"
Dial Reads	0-15-0	Dial Reads	0-4-0	Dial Reads	0-15-0
Price	$369.00	Price	$468.00	Price	$496.00



Horizontal Models

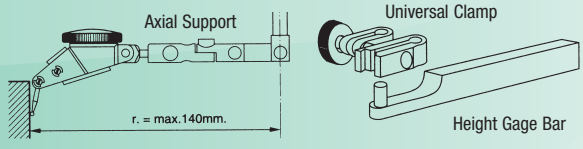
MODEL NO. 312B-1 INTERAPID NO. 74.111370		MODEL NO. 312B-2 INTERAPID NO. 74.111371		MODEL NO. 312B-3 INTERAPID NO. 74.111372		MODEL NO. 312B-4V INTERAPID NO. 74.111373		MODEL NO. 312B-15 INTERAPID NO. 74.111965		MODEL NO. 312B-20 INTERAPID NO. 74.111374	
Ordering No.	7142-775	Ordering No.	7186-150	Ordering No.	7141-680	Ordering No.	7141-681	Ordering No.	7141-716	Ordering No.	7141-682
Range	.060"	Range	.060"	Range	.016"	Range	.016"	Range	.060"	Range	.060"
Graduations	.0005"	Graduations	.0005"	Graduations	.0001"	Graduations	.0001"	Graduations	.0005"	Graduations	.001"
Dial Diameter	1.5"	Dial Diameter	1.0"	Dial Diameter	1.5"	Dial Diameter	1.5"	Dial Diameter	1.5"	Dial Diameter	1.0"
Dial Reads	0-15-0	Dial Reads	0-15-0	Dial Reads	0-4-0	Dial Reads	0-4-0	Dial Reads	0-15-0	Dial Reads	0-15-0
Price	$345.00	Price	$345.00	Price	$425.00	Price	$437.00	Price	$496.00	Price	$355.00

Carbide Contact Points for Interapid Indicators



TIP DIAMETER	LENGTH	INTERAPID NUMBER	ORDERING NUMBER	PRICE EACH
.031"	11/16	74.105998	7141-649	$27.00
.060"	11/16	74.105997	7141-648	27.00
.080"	11/16	74.105996	7141-647	27.00
.080"	1-3/4	74.111492	7141-698	41.00
.031"	1-3/4	74.111493	7141-699	41.00
.080"	2-3/4	74.111913	7141-713	33.00
.100"	2-3/4	74.111912	7141-712	51.00

Interapid Accessories



DESCRIPTION	INTERAPID NUMBER	ORDERING NUMBER	PRICE EACH
Height Gage Bar w/Clamp	74.106331	7141-651	$82.00
Universal Clamp	74.108603	7141-663	53.00
Axial Support (Inch)	74.106931	7141-656	110.00

TESA TECHNOLOGY | brown & sharpe Black Face Indicators

Easy to read, satin black, "jet-console" face. BesTest® Indicators with high visibility orange hand. Each BesTest® Indicator set comes complete with one carbide tip contact point, .080" diameter; One 1/2" long x .250" diameter extension with dovetail; One contact point wrench; One durable molded case; certificate of accuracy and traceability.

7



ORDERING NUMBER	RANGE	MARKING	SMALLEST DIVISION	DIAL DIA.	POINT LENGTH	TIP DIA.	B&S NUMBER	PRICE EACH
7151-732	.030"	0-15-0	.001"	1"	1/2"	.080"	599-7029-5	$246.00
7151-733	.030"	0-15-0	.0005"	1"	1/2"	.080"	599-7030-5	252.00
7151-734	.030"	0-15-0	.0005"	1-1/2"	1/2"	.080"	599-7031-5	267.00
7151-737	.008"	0-4-0	.0001"	1"	1/2"	.080"	599-7032-5	318.00
7151-738	.008"	0-4-0	.00005"	1-1/2"	1/2"	.080"	599-7033-5	326.00
7151-735	.020"	0-10-0	.0005"	1"	1-7/16"	.080"	599-7034-5	300.00
7151-736	.020"	0-10-0	.0005"	1-1/2"	1-7/16"	.080"	599-7035-5	314.00

Measuring Instruments

Fowler Dial Test Indicators



- Jeweled movement.
- Bi-directional constant clockwise rotation.
- Automatic reversal.
- 3 dovetail mountings.
- 2 dovetail extensions.
- Includes molded case.



Extra Points



2

MODEL NUMBER	FACE COLOR	DIAL READING	GRAD-UATION	DIAL DIA.	POINT LENGTH	PRICE EACH
52-562-778-0	black	0-15-0	.0005"	1"	1/2"	$143.05
52-563-771-0	black	0-4-0	.0001"	1"	1/2"	158.94
52-563-772-0	black	0-4-0	.0001"	1-1/2"	1/2"	158.94
52-562-782-0	black	0-10-0	.0005"	1"	1-7/16"	163.70
52-562-784-0	black	0-10-0	.0005"	1-1/2"	1-7/16"	163.70

TESA / brown & sharpe Miti-Mite Magnet Base and Bestest® Indicator



This BesTest® Indicator set comes complete with one carbide tip contact point: .080" dia.; One contact point wrench; One 3/8" dia. x 2-1/2" long universal mounting attachment. The Miti-Mite has a ball and socket action and joined post to simplify positioning. Compact base has Vee for holding on round or flat iron or steel surfaces. Base dimensions approx. 1-1/4" sq. 1-1/4" high. Height to top of post is approx. 5". Supplied with one each: 7/32" diameter x 1-1/2" long post; 7/32" diameter x 4-3/8" long post; 5/16" diameter x 1-1/2" long post. The kit includes a fitted wooden case that accommodates additional accessories.

Includes:
- **599-7030-3** Indicator
- **599-7761** MITI-MITE Base
- Universal Mount • Wood Case
- Three Separate Posts

7

ORDERING NUMBER	DESCRIPTION	B&S NUMBER	PRICE EACH
7151-083	MITI-MITE Indicator Set	599-849	$611.00

Fowler FLEX MAG SET® Chrome

Included Magnetic Indicator Back for mounting to most metal surfaces! All packed in a Shop-Hardened case!





AGD Indicator features:
- AGD Group 2
- Dial diameter: 2-1/4"
- Travel: 1"
- Reading: .001"
- Continuous reading: .100"
- Carbide tipped point

Flex Arm Mag Base features:
- Corrosion resistant chrome plated flex arm.
- 85 lb. pull magnet
- Holds rigidly in almost any position.
- V-base for mounting on rounded surfaces.

Magnetic Indicator Back features:
- Use for positioning the indicator on most metal surfaces.
- Protective coating

2

MODEL NO.	DESCRIPTION	PRICE
52-585-500-0	Chrome Flex Mag Set	$197.68

TESA / brown & sharpe Bestest® Universal Test Indicator Kit

Back Plunger Indicator - 1-1/2" Dia.

Extremely valuable in the workshop, where many awkward machining situations arise, the back plunger indicator has been designed to ensure that the face of the dial can be seen by the operator. The 1/4" holding rod can be unscrewed if required. Supplied with a ball contact tip.

7

ORDERING NUMBER	DESCRIPTION	B&S NUMBER	PRICE EACH
7144-892	Universal Indicator Set	599-7739	$376.00

Inch Indicator Set Includes:

Universal Test Indicator	599-7039
Swivel	599-7739-1
Clamp	599-7739-2
Hole Attachment w/Indicator Mounting Hole	599-7739-3
Bar	599-7739-4
Rod	599-7739-5
Fitted Case for Indicator and Accessories	599-7739-9999



Fowler XTRA MAG® Combos

.030" Range Test Indicator Features:
- Reading: 0-15-0
- Graduation: .0005"
- Auto-reversing
- .080" diameter point

.060" Range X-Test Indicator:
- Range: .060"
- Graduation: .0005"
- Dial reading: 0—15—0
- Dial Diameter: 1-1/2"
- Jewelled movement
- Revolution counter
- Automatic reversal
- 210° Swivel arc
- Tungsten carbide points: 040", 080" and .120"

Virtually unlimited positioning as a Universal Base!

Xtra Mag Base:
- 2 universal ball sockets
- Microfine adjustment screw
- 3-9/16" extension arm
- Dovetail mounting



2

MODEL NO.	DESCRIPTION	PRICE
52-585-105-0	Xtra Mag Only	$68.30
52-585-100-0	.030" Range Test Indicator	177.12
52-562-105-0	.060" Range X-Test & Xtra Mag Combo	187.04

Measuring Instruments

TESA TECHNOLOGY | brown & sharpe

Accessories For Bestest Indicators [7]



Swivel Clamp
3/8" and 7/32" dia. mounting holes. Dovetail opposite 3/8" hole.

ORDERING NUMBER	B&S NUMBER	PRICE EACH
7151-853	599-7045-1	$40.00



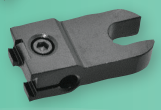
Universal Clamp
For mounting on dovetail or stud. 7/32" hole on swivel. Dovetail end has 7/32" hole and 5/32" hole adjacent to the dovetail.

ORDERING NUMBER	B&S NUMBER	PRICE EACH
7141-663	74-108603	$53.00



Universal Dovetail Attachment
Chrome plated. 1/4" dia. x 2-1/2" long.

ORDERING NUMBER	B&S NUMBER	PRICE EACH
7144-869	599-7054	$46.00



Lug-Back Bracket
Slot to 1/4".

[6]

ORDERING NUMBER	B&S NUMBER	PRICE EACH
7144-740	599-980-10	$124.00



Combination BesTest Indicator Axial Support
For mounting indicator on dovetail or rod. Hinges allow indicator to be positioned for best to work. Stem is 3/8" (8mm) dia. Tool length is 5-1/4" (133mm).

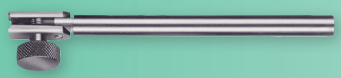
ORDERING NUMBER	B&S NUMBER	PRICE EACH
7141-656	74-106931	$110.00



Universal Swivel Clamp
Dovetail opposite 3/8" hole and V-side hole. Clamp screw range: 1/8" to 1/4".

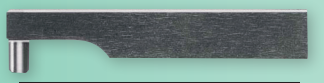
ORDERING NUMBER	B&S NUMBER	PRICE EACH
7144-870	599-7055	$135.00

Swivel Support (Long)
3/8" dia. x 3-5/8"



ORDERING NUMBER	B&S NUMBER	PRICE EACH
7144-859	599-7044	$72.00

Rectangular Bar
Comes with all front-mounted Indicators. 1/4" thick x 1/2" high x 3" long with .220"



ORDERING NUMBER	B&S NUMBER	PRICE EACH
7144-862	599-7047	$30.00

Pittsburg® ALLEGHANY Universal Dovetail Indicator Holder



- 1/4" body diameter with 3" reach. • Stainless steel
- Spring loaded holder locks in any of (4) 90 degree quadrants, and allows many variable angles of holding.
- Brass contact will not scar Indicator.

ORDER NO.	PRICE EACH
3100-430	$29.70

[2]



Universal Dovetail Clamp

Mounts indicators equipped with either dovetails or rods

- 1/4" and 1/8" mounting holes, adjustable hole up to 1/4", plus dovetail.

ORDER NO.	PRICE EACH
3100-400	$26.00

Axial Support Bracket

Used for mounting indicators with dovetails or rods.

- 3/8" diameter body for secure clamping, with 5-1/4" overall reach.
- Made in U.S.A.

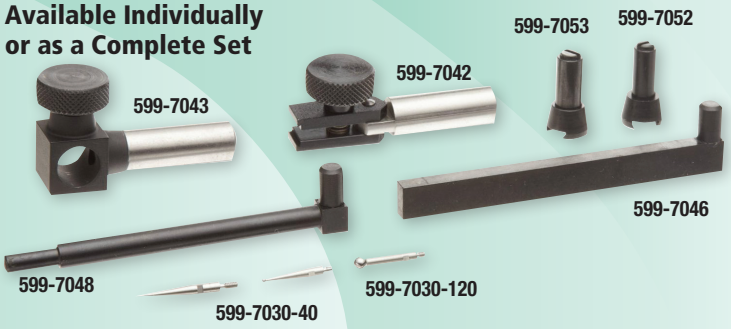
ORDER NO.	PRICE EACH
3100-405	$58.30



TESA TECHNOLOGY | brown & sharpe

For Bestest Indicators

Available Individually or as a Complete Set



[7]

ORDERING NUMBER	DESCRIPTION	B&S NUMBER	PRICE EACH
7144-861	Rectangular Bar 3/16" thick x 5/16" high x 3" long with .220" dia. stud	599-7046	$72.00
7144-863	Round Bar 7/32" dia. with .163 stepped end; .220" dia. stud; 2-7/8" long	599-7048	26.00
7144-857	Swivel Support (Short) 3/8" dia. x 1" long	599-7042	72.00
7144-858	Angle Att. 3/8" hole with 3/8"dia. x 1" long	599-7043	106.00
7144-867	Extension with Dovetail .220" dia. x 1/2" long	599-7052	25.50
7144-868	Extension with Dovetail .250" dia. x 1/2" long	599-7053	25.50
7144-827	Carbide Ball Point .040" dia. x 1/2" long	599-7030-40	58.00
7144-829	Carbide Ball Point .120" dia. x 1/2" long	599-7030-120	58.00
	COMPLETE SET		
7144-856	Complete Set of All Items Listed Above	599-7041	314.00

Pittsburg® ALLEGHANY ACCESSORIES [2]



Universal Clamp

An all purpose Clamp designed for use with all dovetail equipped indicators.
• Fits 5/32" and 7/32" shanks. • Made in U.S.A.

ORDER NO.	PRICE EACH
3100-401	$40.30

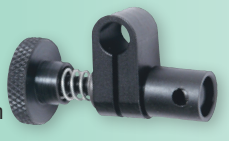
Single Jointed Holder

Single Jointed: 1/4" Diameter Body w/ 2-3/4" overall reach.
- Fits all dovetail equipped Indicators.
- Secure clamping. • Made in U.S.A.

ORDER NO.	PRICE EACH
3100-403	$52.00



Indicator Swivel Joints



- Available with clamping ranges from 5/32" to 1/2".
- Overall length for all sizes is 1-3/4".

ORDER NO.	CLAMP HOLE	END HOLE	PRICE EACH
3100-414	5/16"	5/32"	$7.00
3100-410	5/16"	1/4"	7.00
3100-416	3/8"	1/4"	7.00
3100-412	1/4"	1/4"	7.00
3100-418	5/16"	5/16"	7.00
3100-420	3/8"	5/16"	7.00
3100-422	3/8"	3/8"	10.00
3100-424	1/2"	3/8"	11.50

Button Contacts



- AGD 4-48 Threads.
- Made in U.S.A.

ORDER NO.	DIA.	PRICE EACH
3100-750	3/8"	$7.10
3100-751	1/2"	7.40
3100-752	3/4"	11.20

Flat Contacts

- AGD 4-48 Threads.
- Made in U.S.A.



ORDER NO.	DIA.	PRICE EA.
3100-760	1/4"	$8.90
3100-761	3/8"	8.40
3100-762	1/2"	9.90
3100-763	5/8"	10.30
3100-764	3/4"	13.50
3100-765	1"	22.40
3100-766	1-1/2"	29.50

Tapered Contacts

Button style contact fits all AGD Group 1, 2, 3, 4 Dial Indicators
• AGD 4-48 Threads. • Made in U.S.A.



ORDER NO.	DIA.	PRICE EA.
3100-745	13/32"	$6.40
3100-746	1"	6.40
3100-747	1-1/2"	6.60
3100-748	2"	7.60

Measuring Instruments

Individual Extension Points

- Made in U.S.A.



ORDER NO.	LENGTH	PRICE EACH
3100-352	0.500”	$5.00
3100-353	0.750”	7.60
3100-354	1.000”	7.60
3100-355	1.250”	8.40
3100-356	1.500”	8.40
3100-357	1.750”	9.60
3100-358	2.000”	8.70
3100-360	2.500”	9.00
3100-362	3.000”	9.20
3100-366	4.000”	12.20
3100-374	6.000”	15.10

Extension Point Kit

3 Piece Set

- Includes 1” , 2”, and 3” indicator.
- Extension Points.
- Has 4-48 Internal and External threads.
- Made in U.S.A.

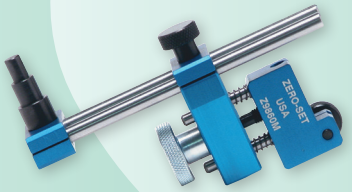


ORDER NO.	PRICE EACH
3100-385	$22.40

Zeroset Indicator Set Up Attachment

Checks the alignment of round materials in relation to the cutting head.

- Equipped with a spindle post with 1/4”, 3/8”, and 1/2” diameters, and has an effective measuring range of 3/8” thru 9”.
- Quick adjustments and fine adjustments.
- Made in U.S.A.



ORDER NO.	PRICE EACH
3100-406	$83.25

Select-A-Point Kit

The most useful accessory for all dial indicators — a complete set of 22 different points.

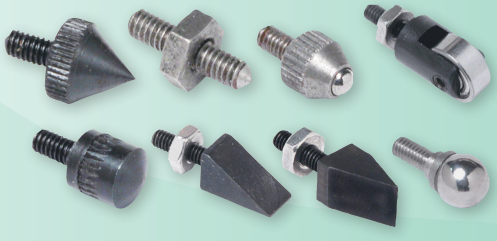
- Fits all AGD 1, 2, 3. 4 drop style indicators.
- Made in U.S.A.



ORDER NO.	DESCRIPTION	PRICE EACH
3100-440	22 pc. Point Kit	$7.60

Special Contacts

Popular specialized Contacts for Dial Indicators. Has 4-48 threads to fit all AGD Groups 1, 2, 3, 4 Indicators. Made in U.S.A.



DESCRIPTION	ORDER NO.	PRICE EACH	DESCRIPTION	ORDER NO.	PRICE EACH
Radius Contact	3100-770	$ 11.70	1/4” Steel Ball	3100-775	$20.20
Chisel Contact	3100-771	44.80	5/16” Cone Point	3100-776	16.40
Offset Chisel	3100-772	44.80	1/16” Needle Stud	3100-777	16.40
1/8” Steel Ball	3100-773	20.20	Roller Anvil	3100-778	37.80
1/8” Carbide Ball	3100-774	20.20			

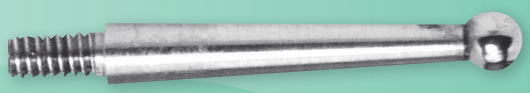
Drop Dial Indicator Contact Tips

Available with Grade 25 Tungsten Carbide or Grade 25 Ruby Ball tips. Made in U.S.A.



TIP LENGTH	BELL SIZE	MATERIAL	THREADS	ORDER NO.	PRICE EACH
1/4”	3MM	Carbide	4-48	3100-780	$21.60
1/4”	3MM	Carbide	M2.5	3100-781	22.80
1/2”	3MM	Carbide	4-48	3100-782	22.80
3/4”	3MM	Carbide	4-48	3100-783	22.80
1/4”	4MM	Carbide	4-48	3100-784	22.80
1/4”	4MM	Carbide	M2.5	3100-785	22.80
1/2”	4MM	Carbide	4-48	3100-786	24.00
3/4”	4MM	Carbide	4-48	3100-787	24.00
1/4”	3MM	Ruby	4-48	3100-790	24.00
1/4”	3MM	Ruby	M2.5	3100-791	24.00
1/2”	3MM	Ruby	4-48	3100-792	24.00
3/4”	3MM	Ruby	4-48	3100-793	25.20
1/4”	4MM	Ruby	4-48	3100-794	25.20
1/4”	4MM	Ruby	M2.5	3100-795	25.20
1/2”	4MM	Ruby	4-48	3100-796	25.20
3/4”	4MM	Ruby	4-48	3100-797	25.20

Replacement Points For Test Indicators



Mitutoyo (M1.7 x 0.35)

BALL	MATERIAL	TIP LENGTH	CATALOG NO.	PRICE
.040	Carbide	1/2”	3100-857	$19.20
Fits Mitutoyo Indicator Models: 513-528, 513-504.				
.040	Steel	.700”	3100-847	$15.60
.080	Steel	.700”	3100-846	15.60
.080	Carbide	.700”	3100-848	19.20
.120	Steel	.700”	3100-849	15.60
Fits Mitutoyo Indicator Models: 513-518.				
.040	Steel	1”	3100-850	$ 15.60
.080	Steel	1”	3100-851	15.60
.080	Carbide	1”	3100-852	19.20
.120	Steel	1”	3100-853	15.60
Fits Mitutoyo Indicator Models: 513-512.				
.040	Steel	1-1/2”	3100-854	$15.60
.080	Steel	1-1/2”	3100-855	15.60
.120	Steel	1-1/2”	3100-856	15.60

Fred V. Fowler (M1.6 x 0.35)

BALL	MATERIAL	TIP LENGTH	CATALOG NO.	PRICE
Fits Fowler Indicator Models: 52-560-005, 52-562-252, 52-562-452, 54-568-000				
.080	Steel	.780”	3100-817	$ 15.60
.040	Carbide	.780”	3100-818	19.20
.080	Carbide	.780”	3100-819	19.20
.120	Carbide	.780”	3100-820	19.20
Fits Fowler Indicator Models: 52-562-253, 52-562-272, 52-562-273, 52-562-453 52-562-473, 52-563-252, 52-563-253, 52-563-272 52-563-273, 52-563-452, 52-563-453, 52-563-573				
.040	Carbide	1/2”	3100-821	$19.20
.080	Carbide	1/2”	3100-822	19.20
.120	Carbide	1/2”	3100-823	32.60
Fits Fowler Indicator Models: 52-562-474, 52-563-474				
.040	Carbide	1-1/2”	3100-824	$19.20
.080	Carbide	1-1/2”	3100-825	19.20
.120	Carbide	1-1/2”	3100-826	19.20
Fits Fowler Indicator Model: 52-555-022				
.080	Steel	3.077”	3100-827	$19.20
Fits Fowler Indicator Models: 52-560-010, 52-560-015				
.080	Steel	.416”	3100-829	$15.60

(Continued)

Replacement Points For Test Indicators (Continued)



2

TESA TECHNOLOGY | brown & sharpe

Brown & Sharpe (M1.4 x 0.30)

BALL	MATERIAL	TIP LENGTH	CATALOG NO.	PRICE
Fits BesTest Indicator Model: 599-7021-3; 599-7022-3; 599-7023-6; 599-7024-3; 599-7029-3 and -5; 599-7030-3 and -5 and -6 and -13 and -14; 599-7031-3 and -5 and -6 and -13 and -14; 599-7032-3 and -5 and -6 and -13 and -14; 599-7033-3 and -5 and -13; 599-7037-3; 599-7038-3.				
.040	Carbide	1/2"	3100-800	$19.20
.080	Carbide	1/2"	3100-801	19.20
.080	Steel	1/2"	3100-802	15.60
.120	Carbide	1/2"	3100-803	19.20
.120	Steel	1/2"	3100-804	15.60
Fits BesTest Indicator Model: 599-7034-3 and -5; 599-7035-3 and -5				
.040	Carbide	1-7/16"	3100-805	$19.20
.080	Carbide	1-7/16"	3100-806	19.20
.080	Steel	1-7/16"	3100-807	15.60
.120	Carbide	1-7/16"	3100-808	19.20

Interapid SWITZERLAND

Interapid (M1.7 x 0.35)

BALL	MATERIAL	TIP LENGTH	CATALOG NO.	PRICE
Fits Interapid Indicator Models: 599-7025-4, 599-7026-4, 599-7027-4, 599-7028-4, 312B-1 and -1V; 312B-2 and -2V; 312B-3 and -3V; 312B-4; 312B-20 and -20V 74.111373, 74.111377, 74.111378, 74.111379, 74.111957				
.031	Carbide	11/16"	3100-841	$19.20
.060	Carbide	11/16"	3100-842	19.20
.080	Carbide	11/16"	3100-843	19.20
Fits Interapid Indicator Models: 74-111958, 74-111965; 312B-15 and -15V				
.080	Carbide	2-3/4"	3100-844	$19.20
.100	Carbide	2-3/4"	3100-845	19.20

Mitutoyo

Dial Thickness Gages – Series 7

The Dial Thickness Gages offer a quick and efficient means of inspection with their convenient grip handle, thumb trigger and spring-loaded spindle. The various models cover a wide range of applications.



7326S

Inch

12

ORDER NO.	RANGE	RESOLUTION	DIAL INDICATOR ACCURACY	MEASURING FORCE	LIST PRICE
7304S	0–1.0"	.001"	±.002"	Measuring Force: Less than 2.0N	$160.00
7322S*	0–1.0"	.001"	±.002"	Measuring Force: Less than 2.0N	188.00
7326S	0–.05"	.0001"	±.0002"	Measuring Force: Less than 1.5N	220.00
7300S	0–.5"	.001"	±.001"	Less than 1.4N	133.00

*Deep Throat

Pittsburg® ALLEGHANY

Thickness Gages

- Ideal for measuring thickness of thin gauge material, such as sheet metal
- Spindle of hardened stainless steel
- Measuring faces are hardened, ground and lapped for accuracy
- Easily held in natural grip
- Can be easily adjusted to zero by adjustment screw on frame
- Lightweight



Dial Thickness Gage

2

RANGE	GRAD.	READING	THROAT	ORDER NO.	PRICE
.4"	.0001"	0-10	1.22"	3101-034	$57.00
.5"	.001"	0-100	1.02"	3101-036	60.00

Mitutoyo

Digimatic Thickness Gages with Absolute Encoder – Series 547

The Digimatic Thickness Gages incorporate Mitutoyo's new Absolute IDC or IDS Digimatic Indicators to provide error-free LCD readings as well as data output for SPC analysis.



547-300S IDC TYPE

FEATURES: IDC Types

- Zero/ABS • Inch/mm Conversion • +/- Direction Changeover
- Preset • SPC Output • Provide GO/±NG judgment function and the indication of the judgment result • Face Rotates 330°
- Battery life: 5000 Hrs. • Power supply: silver oxide cell (SR-44 1 pc.).

FEATURES: IDS Types

- Origin • ± Direction Changeover • Inch/mm Conversion
- ON/OFF • SPC Output • Battery Life: Approx. 20,000 Hrs.
- Power Supply: Silver oxide cell (SR-44 1 pc.).

For SPC output: order Connecting Cable **905338** (1m) or **905409** (2m). Replacement Battery: **938882** (1 pc.)

Inch/Metric

7

ORDER NO.	TYPE	RANGE	LCD RESOLUTION	ACCURACY	REMARKS	LIST PRICE
Absolute IDS-Type						
547-500S	Flat	0–.47" 0–11.93mm	.0005" 0.01mm	.001"	Measuring Force: Less than 1.5N with SPC output	$332.00
547-512S	Flat/Spherical Anvil (reversible)	0–.47" 0–11.93mm	.0005" 0.01mm	.001"	Measuring Force: Less than 1.5N with SPC output	306.00
Absolute IDC-Type						
547-300S	Flat	0–.4" 0–10.16mm	.0005" 0.01mm	.001"	Measuring Force: Less than 1.5N with SPC output	474.00
547-312S	Flat/Spherical Anvil (reversible)	0–.4" 0–10.16mm	.0005" 0.01mm	.001"	Measuring Force: Less than 1.5N with SPC output	477.00

Measuring Instruments

Mitutoyo Digital Hand Tachometers - Series 982





Contact Tachometer Order No. 982-551
Detection: Optical Coupler 20 pulses/rev.
Accessories Furnished:
- Four 1.5V AA Batteries.
- Two Cone Adapters.
- One Funnel Adapter.
- One FPM Measuring Wheel (6").

Non-Contact Tachometer Order No. 982-552
Detection Distance: 2–12".
Accessories Furnished:
- Four 1.5V AA Batteries.
- Thirty-five Reflective Tabs.

6

ORDER NO.	RANGE	ACCURACY	MASS	DETECTION	LIST PRICE
982-551	*1-25,000 rpm	±1, Range 1–599.9 rpm ±2, Range 600.0–25,000 rpm: ±0.006% and ±0.5 digit	.37 lb.	Optical coupler, 20 pulses per revolution	$324.00
982-552	–	6–599.9 rpm: ±1rpm, 600.0-99,999 rpm ±0.006% and ±0.5 digit	.35 lb. adapter (.11 lb.)	Laser diode	404.00

* Equivalent surface speeds (FPM, YPM, MPM) obtained with proper adapters.
+ Overscale is indicated by all LCD digits showing decimal points.

Fowler Internal & External Electronic Caliper Gages



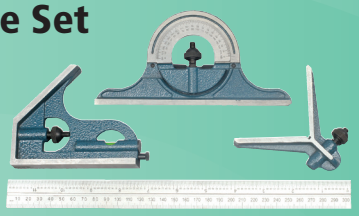
Features:
- Robust housing
- Large LCD display
- Reading: .01"/.1mm/1/64ths
- Accuracy: .01"/.3mm/1/64ths
- Battery: CR2032
- Spring loaded with locking nut

6

ORDER NUMBER	DESCRIPTION	RANGE	PRICE EACH
54-554-630-0	Outside Caliper Gage	0-6"/150mm	$59.79
54-554-730-0	Inside Caliper Gage	.5-6"/150mm	59.79

Pittsburg® ALLEGHANY Combination Square Set

- Blades are fully hardened & tempered
- 4 piece Combination Set includes Square Head, Center Head, and Protractor Head. 3-piece Combination Set includes Square Head and Center Head
- Easy-to-read satin chrome finish blade, with micro-fine gradations
- Double-indexed Protractor is graduated180° in both directions
- Square Head has level & scriber point



2

NO.PIECES	SIZE	GRAD.	ORDER NO.	PRICE
3	6"	4R	3101-260	$55.00
4	12"	4R	3101-270	48.00

Mitutoyo Dial Snap Gages - Series 201
(Without Dial Indicator)



FEATURES
- Designed for quick inspection of diameters of cylinders and shafts in machining processes.
- Available without Dial Indicator.
- Wide (.53" x .47"), flat carbide anvils.
- Both front edges of the anvil are chamfered for easy insertion.
- Accepts all Dial Indicators and Electronic Gages with 375" diameter mounting stem.

Technical Data: Accuracy: Refer to the list of specifications
Anvil retracting stroke: .078" / 2mm Anvil positioning range: 1" / 25mm
Anvil flatness: .00004" / 1µm

Inch

12

ORDER NO.	RANGE	LIST PRICE
201-151	0–1"	$510.00
201-152	1–2"	535.00
201-153	2–3"	580.00
201-154	3–4"	591.00
201-155	4–5"	645.00
201-156	5–6"	696.00

12

ORDER NO.	RANGE	LIST PRICE
201-157	6–7"	$734.00
201-158	7–8"	761.00
201-159	8–9"	808.00
201-160	9–10"	850.00
201-161	10–11"	894.00
201-162	11–12"	928.00

TESA TECHNOLOGY | brown & sharpe Combination Squares
with Hardened Heads



- Square Heads and Protractors are supplied with levels.
- Square Heads also include a hardened steel scriber.
- Sets listed below include hardened Square Heads and Center Heads.
- Sets include a Satin Chrome Blade.
- All blades are graduated in 8ths, 16ths, 32ths and 64ths, inch, metric, or inch/metric reading.
- Combination Squares are also available in complete sets or components.

7

LENGTH OF BLADE	PIECES IN SET	B&S NUMBER	ORDERING NUMBER	PRICE EACH
12	Sq. Head	599-401-1204-1	7144-169	$ 142.00
12	Sq. Head, Ctr. Head	599-400-1204-1	7144-159	204.00
12	Sq. Head, Ctr. Head,	599-438-1204-1	7144-193	324.00

Measuring Instruments

Mitutoyo Stereo Microscope - Series 377

Order no. 377-990A is a high-accuracy four-step magnification stereo microscope. With a horizontal changer allowing 6X, 12X, 25X, and 50X magnifications with standard 1X objective and 10X eyepieces, the MSM-465L model has limitless capabilities for electrical small part inspection.

- Superior quality optics provide high-resolution
- Crystal sharp, high color contrast image with excellent depth of field
- Always in sharp focus at all magnifications
- The Parfocal Optical System allows relaxed strain-free viewing
- Long working distance
- Extreme large field of view (23mm diameter)



6

ORDER NO.	DESCRIPTION	PRICE
377-990A	Binocular Stereo Microscope	$1940.00

Optional Accessories 2

ORDER NO.	DESCRIPTION	PRICE
64AAB431	Moticam 5, 5.0 Megapixel -1/2.5", CM05 USB	$1250.00
377-488	Video Attachment Set (For K400)	340.00
64AAB214	LED Variable Ring Light For TM Series	190.00

Fowler Deluxe Stereo Microscope

- 20—40x magnification
- Includes 2x and 4x objectives, 10x eyepieces, eyecups and dust cover.
- Sharp image definition
- Rack and pinion focusing.
- Two 3.5" (95mm) stage plates provided: Clear and reversible white/black.
- Top and bottom illumination.
- 15x and 20x eyepieces available



6

MODEL NUMBER	DESCRIPTION	PRICE
53-640-902-0	Deluxe Stereo Microscope	$627.07

Fowler 9" Electronic Level

Fowler's 9" Laser Level provides instant 4 x 90° digital inclination display. With embedded magnets on its measuring surface, a beamsplitter projects a 90° laser cross hair for leveling at-a- distance. It also includes a 1/4-20 mount for tripod use.

- Measuring range: 4 x 90° • Resolution: .05° • Accuracy: ±.2° • Repeatability: ±.05
- Standard 9 volt battery (250 hours life) • Dimensions: 9"L x 1"W x 2-1/4"H
- Includes two-way level and plumb vials. • Reversible reading for inverted use



6

MODEL NUMBER	DESCRIPTION	PRICE
54-440-600-0	9" Electronic Level	$88.54

Fowler Electronic Protractor

The Digi-Pro 12"/300mm electronic protractor includes embedded magnets for unique measurement areas.

- Magnetic blade edges.
- Measuring range: ± 180° • Accuracy: ± 0.1°
- Repeatability: ± 0.1° • Resolution: .01°
- On/Off, Zero, and Hold features
- Voltage: Standard 3V lithium battery



6

MODEL NUMBER	DESCRIPTION	PRICE
54-440-775-1	Digi-Pro Electronic Protractor	$123.07

Fowler Portable Roughness Tester

- Small, compact size • Large LCD display
- 2 selectable parameters: Ra and Rz
- Meets ISO and DIN standards.
- N.I.S.T. traceable specimen included.
- Uses 9V battery (approx. 3000 measurements).
- Includes fitted case.

* Specialty probes and RS232 output available.



5

MODEL NUMBER	DESCRIPTION	PRICE
54-410-500-0	.0004" Probe	$2039.35
54-410-600-0	.0002" Probe	2039.35

Fowler X-Tread Tire Gage

For tire tread thickness measurement. Reads in inch, metric and fractions.

- Spring-loaded and hold measurement button for ease-of-use.
- Super-large display
- Range: 1"/25mm
- Resolution: .0005"/.01mm, fractions in 1/64" increments.
- Supplied in vinyl holster.
- 2.1" base
- .95" diameter rod



6

MODEL NUMBER	DESCRIPTION	PRICE
54-225-500-0	X-tread Tire Gage	$32.74

Fowler Mini-Mag Protractor

The NEW mini-MAG Protractor provides instant 360° digital inclination display of any angle with the additional unique feature of embedded magnets on both sides and the bottom which make it ideal for a variety of measurements.

- Embedded magnets with 35lb. pull.
- Uses standard 9V battery (250 hrs.)
- Measuring range: 360° (4 x 90°)
- Display inverts. • Resolution: .05°
- Accuracy: ±.2° • Repeatability: .05°
- Hold feature.



6

MODEL NUMBER	DESCRIPTION	PRICE
54-422-450-1	Mini-Mag Protractor	$108.05

Measuring Instruments

Fowler Bevel Protractor

- Magnifier for vernier.
- Includes 6" & 12" blades and an angle attachment.
- Satin chrome finish for easy readings.
- Graduation: 360°
- Reading to 5 minutes.
- Includes fitted case.



[2]

MODEL NUMBER	DESCRIPTION	PRICE
52-440-612-0	Bevel Protractor	$236.26

Pittsburg® Economy Universal Bevel Protractor w/Fine Adjustment



- 12" and 6" blades
- Protractor graduated 0-90 full 360°
- Optical magnifier
- Blade and protractor have independent locking provisions to allow maximum control

[2]

SIZE	ORDER NO.	PRICE
6",12" Blade	3101-310	$75.00

Pittsburg® Dial Reading Universal Bevel Protractor



ORDER NO.	PRICE
3101-312	$99.00

[2]

- Advanced design displays digital read-out of ten degrees in dial window
- Indicator pointer shows each degree and five minutes of angle
- Tempered stainless steel
- Accurate ± 5 arc minutes, or 1/12 of a degree

CUSTANITE Precision Steel Protractors



- Preferred by machinists, draftspeople, and mechanics for setting bevels, measuring, and transferring angles.
- Made of ground stainless steel for optimum accuracy.
- Permanently etched graduations from 0 to 180° in opposite directions.
- 3-3/8" x 2" head.
- 6" adjustable protractor arm locks into desired position with knurled thumb nut.
- Also available with satin chrome finish No. CF17.

[8]

MODEL	STYLE	ORDER NO.	PRICE
17	Square head	6922-018	$17.89

Pittsburg® Planer and Shaper Gage

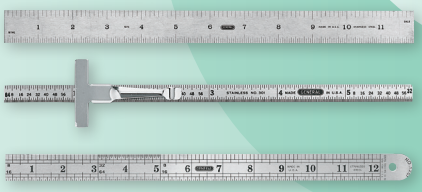


- Makes setting of planer and shaper tools easy
- Set gage with Micrometer, Surface Gage, or caliper and bring cutting tool in contact with it. Also, use in conjunction with Dial Indicator to level large plates for planing, etc.
- Max range 1/4" to 6-1/4" with extension rod

[2]

RANGE	ORDER NO.	PRICE
1/4-6-1/4"	3101-315	

CUSTANITE Precision Steel Rules



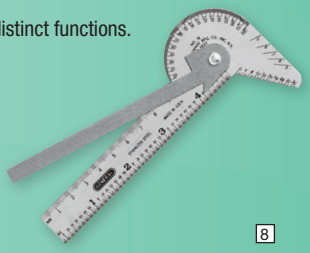
General industrial quality rules are precision made, with etched fine black graduations, on stainless steel or satin chrome finish.

[8]

MODEL	SIZE	GRAD TYPE	GRADUATION SIDE 1	GRADUATION SIDE 2	† WIDTH	ORDER NO.	PRICE
INDUSTRIAL – 6" PRECISION STAINLESS STEEL RULES							
616 676 678med	6" Flex 6" Rigid 6" Rigid	5R 4R –	10, 100 8, 16 mm, .5mm	32, 64 32, 64 10, 20, 50, 100, 16, 32, 64	15/32" 3/4" 3/4"	6932-096 6932-111 6932-114	$6.87 8.20 8.11
INDUSTRIAL – 12" PRECISION STAINLESS STEEL RULES							
1201me 1216	12" Flex 12" Flex	– 5R	16, 32, 64 10, 100	8, 16 32, 64	7/8" 15/32"	6932-162 6932-174	$9.51 11.67
ECONOMY – 6" PRECISION STAINLESS STEEL RULES							
300/1*	6" Flex	–	32, 64	Dec. Equiv.	15/32"	6932-036	$3.18
300me*	6" Flex 150mm	–	mm, 64	Metric Equiv.	15/32"	6932-042	3.40
301/1*	6" Flex	–	32, 64	–	1/4"	6932-046	2.42
305me	6" Flex	–	mm, 16	–	15/32"	6932-060	3.00

* Furnished with pocket clip. † Dimensions are approximate.

CUSTANITE Precision Multi Use Rule and Gages

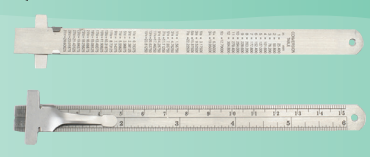


- One of our most popular pocket tools performs five separate and distinct functions.
- Drill point gage is used for checking 59° angle drill points.
- Bevel protractor is used for measuring and laying out angles.
- Center finder locates centers of shafts or circles.
- Circle divider (up to nine equal parts) is used for dividing circles into sectors, regular polygons, and polygrams.
- Tap and drill table shows popular tap sizes with correct drill sizes for National form of thread.
- Made of long-wearing stainless steel.
- 4" rule has etched graduations in 64ths and millimeters.

[8]

MODEL	ORDER NO.	PRICE
16me	6922-015	$14.07

Pittsburg® 6" Stainless Steel Rules



3100-280



3100-281



3100-285

DESCRIPTION	ORDER NO.	PRICE
6" Flexible Steel Rule w/Clip Front: 32nd, 64th Back: Decimal Equivalent Chart	3100-281	$2.80
6"/150mm Flexible Steel Rule w/Clip Front: 32nd, 1.0mm Back: Metric Equivalent Chart	3100-280	1.35
6"/150mm Rigid Steel Rule Front: 16th, 32nd, 64th / 10th, 20th, 50th Back: 0.5mm, 1.0mm	3100-285	1.70

Measuring Instruments

Mitutoyo Steel Rules – Series 182



FEATURES
• Clear Graduations On Satin Chrome Finish. • Tempered Stainless.

Full-Flexible Rules (Thickness 1/64")

ORDER NO.	SIZE	GRADUATIONS				WIDTH	ACCURACY (LENGTH)	LIST PRICE
182-201	6" (4R)	1/8	1/16	1/32	1/64th	1/2"		$16.40
182-202	6" (16R)	1/32	1/64	1/50	1/100th	1/2"		16.40
182-203	6" (5R)	1/32	1/64	1/10	1/100th	1/2"		16.40
182-204	6" (3R)	1/32	1/64	1/10	1/50th	1/2"	+.004"/-.0002" (+0.1mm/-0.05mm)	16.40
182-205	6" x 150mm	1/32	1/64	1mm	1/2mm	1/2"		16.40
182-206	6" x 150mm	1/50	1/100	1mm	1/2mm	1/2"		16.40
182-207	6" x 150mm	1/10	1/100	1mm	1/2mm	1/2"		16.40
182-211	150mm	1mm	1/2mm	1mm	1/2mm	12mm		25.50
182-221	12" (4R)	1/8	1/16	1/32	1/64th	1/2"		32.35
182-222	12" (16R)	1/32	1/64	1/50	1/100th	1/2"		32.35
182-223	12" (5R)	1/32	1/64	1/10	1/100th	1/2"		32.35
182-224	12" (3R)	1/32	1/64	1/10	1/50th	1/2"		32.35
182-225	12" x 300mm	1/32	1/64	1mm	1/2mm	1/2"	+.005"/-.002"	32.35
182-231	300mm	1mm	1/2mm	1mm	1/2mm	12mm	(+0.13mm/-0.05mm)	32.35
182-141	18" (4R)	1/8	1/16	1/32	1/64	3/4"		52.65
182-242	18" (16R)	1/32	1/64	1/50	1/100th	3/4"		52.65
182-243	18" (5R)	1/32	1/64	1/10	1/100th	3/4"		78.65
182-245	18" x 450mm	1/32	1/64	1mm	1/2mm	3/4"		78.65
182-251	450mm	1mm	1/2mm	1mm	1/2mm	18mm		82.40
182-261	24" (4R)	1/8	1/16	1/32	1/64	3/4"		110.00
182-262	24" (16R)	1/32	1/64	1/50	1/100th	3/4"		110.00
182-263	24" (5R)	1/32	1/64	1/10	1/100th	3/4"	+.006"/-.003"	110.00
182-264	24" (3R)	1/32	1/64	1/10	1/50th	3/4"	(+0.18mm/-0.08mm)	POA
182-265	24" x 600mm	1/32	1/64	1mm	1/2mm	3/4"		110.00
182-271	600mm	1mm	1/2mm	1mm	1/2mm	18mm		113.00

Pocket Steel Rule – Series 950

With Pocket Clip (thickness 1/64")



FEATURES
• Engraved on frontside only. • Backside: Inch/Metric equivalents.

12

ORDER NO.	SIZE	GRADUATION		WIDTH	ACCURACY (LENGTH)	LIST PRICE
950-300	6" x 150mm	1mm	1/64ths	1/2"	+.004"/-.002" (+0.1mm/-0.05mm)	$10.45

Wide Rigid Rules (Thickness 3/64")

12

ORDER NO.	SIZE	GRADUATIONS				WIDTH	ACCURACY (LENGTH)	LIST PRICE
182-101	6" (4R)	1/8	1/16	1/32	1/64th	3/4"		$17.30
182-102	6" (16R)	1/32	1/64	1/50	1/100th	3/4"		17.30
182-103	6" (5R)	1/32	1/64	1/10	1/100th	3/4"		17.30
182-104	6" (3R)	1/32	1/64	1/10	1/50th	3/4"	+.004"/-.002" (+0.1mm/-0.05mm)	17.30
182-105	6" x 150mm	1/32	1/64	1mm	1/2mm	3/4"		17.30
182-107	6" x 150mm	1/10	1/100	1mm	1/2mm	3/4"		17.30
182-111	150mm	1mm	1/2mm	1mm	1/2mm	19mm		17.30
182-121	12" (4R)	1/8	1/16	1/32	1/64th	1"		36.80
182-122	12" (16R)	1/32	1/64	1/50	1/100th	1"	+.005"/-.002"	36.80
182-123	12" (5R)	1/32	1/64	1/10	1/100th	1"	(+0.13mm/-0.05mm)	36.80
182-124	12" (3R)	1/32	1/64	1/10	1/50th	1"		36.80
182-125	12" x 300mm	1/32	1/64	1mm	1/2mm	1"		36.80
182-131	300mm	1mm	1/2mm	1mm	1/2mm	25mm		36.80
182-241	18" (4R)	1/8	1/16	1/32	1/64	1-3/16"		45.15
182-142	18" (16R)	1/32	1/64	1/50	1/100th	1-3/16"	+.005"/-.002"	45.15
182-143	18" (5R)	1/32	1/64	1/10	1/100th	1-3/16"	(+0.15mm/-0.05mm)	45.15
182-145	8" x 450mm	1/32	1/64	1mm	1/2mm	1-3/16"		45.15
182-151	450mm	1mm	1/2mm	1mm	1/2mm	30mm		45.15
182-161	24" (4R)	1/8	1/16	1/32	1/64	1-3/16"		73.25
182-162	24" (16R)	1/32	1/64	1/50	1/100th	1-3/16"		73.25
182-163	24" (5R)	1/32	1/64	1/10	1/100th	1-3/16"	+.006"/-.002"	73.25
182-165	24" x 600mm	1/32	1/64	1mm	1/2mm	1-3/16"	(+0.18mm/-0.05mm)	73.25
182-171	600mm	1mm	1/2mm	1mm	1/2mm	30mm		73.25

brown & sharpe

Inch Chrome Finish Tempered Flexible Steel Rules

7

DIMENSIONS L	W*	T*	GRADUATIONS/EDGE 1ST	2ND	3RD	4TH	B&S NUMBER	ORDERING NUMBER	PRICE EACH
6"	1/2"	1/64"	1/10††	1/50††	1/32†	1/64†	599-323-603	7144-139	$22.00
6"	1/2"	1/64"	1/8††	1/16	1/32†	1/64†	599-323-604	7144-140	22.00
6"	1/2"	1/64"	1/10††	1/100††	1/32†	1/64†	599-323-605	7144-141	19.00
6"	1/2"	1/64"	1/50	1/100	1/32	1/64	599-323-616	7150-133	22.00
12"	1/2"	1/64"	1/8	1/16	1/32	1/64	599-323-1204	7145-990	38.00
12"	1/2"	1/64"	1/10††	1/100††	1/32	1/64	599-323-1205	7145-380	38.00
18"	3/4"	1/64"	1/8	1/16	1/32	1/64	599-323-1804	7151-068	63.00
18"	3/4"	1/64"	110††	1/100††	1/32	1/64	599-323-1805	7146-483	63.00
24"	3/4"	1/64"	1/8	1/16	1/32	1/64	599-323-2404	7145-992	82.00
24"	3/4"	1/64"	110††	1/100††	1/32	1/64	599-323-2405	7145-991	82.00

Values for W (width) and T (thickness) are approximate. = Indicates Bull's Eye and numbered graduations.



No. 599-323-603



No. 599-323-604



No. 599-323-605

brown & sharpe

Inch Chrome Finish Tempered Hook Rules

7

DIMENSIONS L	W*	T*	GRADUATIONS/EDGE 1ST	2ND	3RD	4TH	B&S NUMBER	ORDERING NUMBER	PRICE EACH
6"	3/4"	3/64"	1/8	1/16	1/32†	1/64†	599-314-604-1	7150-134	$45.00
6"	3/4"	3/64"	1/10	1/100	1/32†	1/64†	599-314-605-1	7146-485	42.00
12"	1"	3/64"	1/8	1/16	1/32†	1/64†	599-314-1204-1	7145-378	59.00
18"	1"	3/64"	1/8	1/16	1/32†	1/64†	599-314-1804-1	7151-072	80.00
24"	1"	3/64"	1/8	1/16	1/32†	1/64†	599-314-2404-1	7151-071	100.00

Values for W (width) and T (thickness) are approximate. = Indicates Bull's Eye and numbered graduations.



No. 599-314-604-1

Measuring Instruments

CUSTANITE Precision Screw Pitch Gages



- These finely crafted measuring devices are used for gaging V, American National, or U.S. standard 60° threads.
- Gages are notched for measuring inside threads of small holes and nuts as well as external threads.
- Set of 51 screw pitches combines all sizes from 4 to 84, including 11-1/2 and 27 pipe thread sizes.
- Knurled thumb nuts lock the case in an open or closed position.
- Also available in 22 pitch set No. 252

8

MODEL	NO. OF PITCHES	SIZES	ORDER NO.	PRICE
251	51	4 to 84	6931-321	$60.56

Pittsburg® ALLEGHANY Screw Pitch Gages



- Use for internal and external screw threads
- Locking device at each end to secure blades for storage or to position individual blades when in use
- Determine correct pitch by matching blade teeth with threads
- Each blade clearly marked with correct thread size

2

THREADS	NO. LEAVES	ORDER NO.	PRICE
4-42	30	3100-191	$ 7.20
4-84	51	3100-190	14.90
4-42/0.25-6mm	55	3100-195	11.00

Economy Feeler (Thickness) Gages

CUSTANITE Precision

- All of our economy feeler gages have fine quality tempered steel leaves made to exacting tolerances.
- Each leaf is etched with both decimals of an inch and corresponding millimeter sizes.
- Nickel plated case has knurled locking nut for precise positioning.

26 Leaf Economy Gage

- General's best selling feeler gage provides precision accuracy at a reasonable price.
- 26 leaves include the following sizes: .0015, .002, .0025, .003, .004, .005, .006, .007, .008, .009, .010, .011, .012, .013, .014, .015, .016, .017, .018, .019, .020, .021, .022, .023, .024, and .025".
- Metric range from .037 to .635mm.
- 3" x 1/2" leaves.



8

MODEL	ORDER NO.	PRICE
230	6931-311	$10.84

Mitutoyo Pitch Gages - Series 188, 950



FEATURES

- Pitch size is stamped on each gage.

12

ORDER NO.	RANGE	DESCRIPTION	LIST PRICE
188-121	0.4, 0.5, 0.75, 1.0, 1.25, 2.0, 2.5, 3.0, 4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0mm	Metric 60° (18 leaves)	$30.30
188-151	4–42 TPI inch 0.4–7mm	Unified 60° (30 leaves) Metric 60° (21 leaves)	64.30

Pittsburg® ALLEGHANY Thickness Gages



- 26 leaves from .0015" to .025". Each leaf size clearly marked. Overall size: 1/2 x 3"
- Made to close tolerances with high grade tempered steel.
- Edge of each leaf is rounded.

Order No. 3101-320 Price Each…$10.45 2

Pittsburg® ALLEGHANY Radius Gage Set



- Rust and wear resistant satin chrome finish
- Each gage has five measuring surfaces with both convex and concave radii
- Each gage clearly marked
- A must for machinists, tool & die makers, inspectors, etc.
- Complete with fitted case

2

NO. PIECES	SIZES	ORDER NO.	PRICE
25	1/64-17/64" by 64ths 9/32-1/2" by 32nds	3101-325	$79.00

CUSTANITE Precision Feeler (Thickness) Gages



- Made of the finest high grade precision gage steel.
- Each leaf is etched w/ size numbers in thousandths for quick identification.
- Knurled lock nut holds the leaves in desired position.
- Gages conform to government specifications GGG-G-17b.

Straight Leaf • 3" leaves are 1/2" wide.

8

MODEL	LEAVES	SIZES	ORDER NO.	PRICE
226	26	.0015" to .025"	6931-306	$27.60

Pittsburg® ALLEGHANY Thread Measuring Triangles



Checks for Class of Thread on all 60° threads. Made in U.S.A.

2

ORDER NO.	PRICE EACH
3100-436	$69.20

Pittsburg® ALLEGHANY Thread Measuring Wire Set

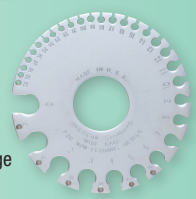


- Kit contains 48 wires, 16 different sizes
- Measures all 60° threads from 3 to 48 threads per inch
- Metric threads from 0.5mm - 6.0mm
- Thread chart included

2

ORDER NO.	PRICE
3100-435	$13.90

CUSTANITE Precision Wire Gage



- American Standard wire gage 0 to 36 used for gaging non ferrous wire and metals such as copper, brass, and aluminum.
- Chrome finished, heavy gage hardened and tempered tool steel.
- Decimal equivalents of each size are stamped on reverse side.
- 3-1/4" diameter, 3/32" thick.

8

MODEL	ORDER NO.	PRICE
20	6922-036	$32.07

CUSTANITE Precision Sheet Metal Gage



- For gaging uncoated sheet metal, plate iron, and steel.
- Gage numbers are U.S. Standard 0 to 36, based on weights in ounces per square inch.
- Decimal equivalents of each size are stamped on reverse side.
- Chrome finished, heavy gage tool steel is hardened and tempered.
- 3-1/4" diameter, 3/32" thick.
- Conforms to government specifications GG-G-86b.

8

MODEL	ORDER NO.	PRICE
21	6922-041	$31.02

Measuring Instruments

Huot Drill Gages [2]

- Economical gauge made from prime steel and finished.
- For measuring 1/16" to 1/2" by 64ths drill bits. Dimensions: 6" W x 3" D. **ORDER NO. 1919-000…$8.50**• For measuring #1 to 60 wire gauge drill bits. Dimensions: 5-1/4" W x 2" D. **ORDER NO. 1919-001… $12.00**• For measuring tools 1/2" to 1" by 64ths. Dimensions: 13" W x 5" D. **ORDER NO. 1919-002…$22.00**



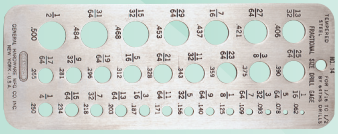
CUSTANITE Precision Hobby Drill Gage



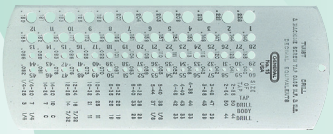
- Heavy gage stainless steel gage conveniently identifies drill bit sizes.
- Etched graduations are filled in black to give high contrast and will not wear off.
- Gage measures 2-3/8" x 6-3/4" overall.
- Stainless steel will not rust. [8]

MODEL	SPECIFICATIONS	ORDER NO.	PRICE
24	Fractional size drills 1/16" to 1/2" x 64ths	6922-011	$8.89

CUSTANITE Precision Drill Gages



No. 14



No. 15

- General's drill gages are used to quickly and conveniently identify drill bit sizes.
- Made of heavy gage steel, machined and ground to close tolerances.
- Hole sizes and decimal equivalents are permanently etched on the face.
- Nos. 14 & 15 are 6-1/2" x 2-1/2" wide.
- Conforms to government specifications GG-G-86b. [8]

MODEL	SPECIFICATIONS	ORDER NO.	PRICE
14	Fractional size drills 1/16 to 1/2 x 64ths	6922-009	$16.78
15	Number size drills 1 to 60	6922-012	17.22

CUSTANITE Precision Reference Table



[3]

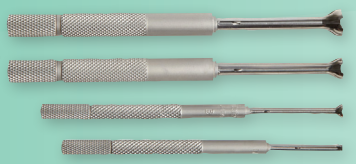
MODEL	ORDER NO.	PRICE
715	6935-015	$9.36

- Essential tap drill and decimal equivalents reference table for toolmakers, machinists, and mechanics.
- Front has machine screw size tap drill chart for recommended 75% depth thread.
- Back has decimal equivalents table in 64ths from 1/64" to 63/64".
- For National Fine and National Special series of machine screws.
- Convenient 6" rule is graduated in 64ths.

Mitutoyo Small Hole Gages - Series 154

FEATURES

- Extra long for gaging deep and shallow holes, slots and similar work.
- Gaging surface is full-round with a flat bottom, and fully hardened to ensure long tool life.
- Supplied set of 4 gages in a fitted case.



154-901

[12]

ORDER NO.	RANGE	DIMENSIONS B	C	D	REMARKS	LIST PRICE
154-105	.125–.2"	.88"	3.54"	.21"	—	$30.15
154-106	.2–.3"	1.18"	3.84"	.21"	—	27.50
154-107	.3–.4"	1.37"	4.04"	.33"	—	32.95
154-108	.4–.5"	1.57"	4.25"	.33"	—	38.70

Mitutoyo Telescoping Gages Series 155

(5/16"~6")



[12]

ORDER NO.	RANGE	DIMENSIONS A	B	C	D	REMARKS	LIST PRICE
155-121	.315–.50"	.12"	.16"	4.33"	.20"	—	$32.95
155-122	.50–.748"	.14"	.20"	4.33"	.22"	—	36.70
155-123	.748–1.26"	.14"	.20"	4.33"	.22"	—	38.70
155-124	1.26–2.126"	.23"	.29"	5.90"	.31"	—	40.90
155-125	2.126–3.54"	.23"	.29"	5.90"	.31"	—	47.50
155-126	3.54–5.90"	.23"	.29"	5.90"	.31"	—	53.35
155-903	.315–5.90"					Set of 6 Gages	241.00
155-904	.50–5.90"					Set of 5 Gages	212.00
155-907	.315–2.126"					Set of 4 Gages	144.00

Pittsburg® ALLEGHANY Telescoping Gages

6 Piece Set

- Plunger or gage expands in hole to be measured, locks in place and gage is removed from hole. Final hole size is obtained by measuring over contacts with a micrometer.
- Rigid handle with self-centering feature
- Constant spring tension for uniform feel
- Uniform contact pressures
- Contact points are of hardened tool steel and precision ground on the end
- Satin chrome finished
- Supplied in fitted carrying case



[2]

RANGE	ORDER NO.	PRICE
5/16-6"	3100-936	$21.60

TESA TECHNOLOGY | brown & sharpe

Telescoping Hole Gages

- Satin-chrome finish. Completely assembled with handle. Knurled lock maintains the setting of the measuring arms to permit sizing with a micrometer or caliper.
- The 4 Piece Set covers the range 5/16" diameter to 2-1/8" diameter.
- The 6 Piece Set covers the range 5/16" diameter to 6" diameter



[7]

DESCRIPTION	B&S NUMBER	ORDERING NUMBER	PRICE EACH
4 Piece Set	599-591-10	7145-368	$ 199.00
6 Piece Set	599-591-20	7145-369	248.00

Pittsburg® ALLEGHANY Small Hole Gages - 4 Piece Set

- Knurled knob at end of handle adjusts gage to hole size. Reading is obtained by measuring over contact points with a micrometer.
- Full Ball style constructed with a flat bottom, permitting use in smallest of holes, slots, grooves, etc.
- Half Ball construction allows use in shallower applications, not accessible with Full Ball gage
- Gaging surface fully hardened for long life • Supplied in fitted carrying case



[2]

RANGE	DESC.	ORDER NO.	PRICE
.125"-.500"	Half Ball	3100-940	$19.50
.125"-.500"	Full Ball	3100-941	19.50

Measuring Instruments

Small Hole Gage Set

Use like a telescoping gage for measuring small diameter holes, slots and grooves. The flat bottom of half-ball gaging surface permits using the gage in even the shallowest recesses. Sensitive knurled knob setting. The entire tool is finished in satin chrome to prevent corrosion. Range .125" to .500" (3.18 to 12.7mm).



7

DESCRIPTION	B&S NUMBER	ORDERING NUMBER	PRICE EACH
Small Hole Gage Set	599-596	7151-885	$143.00

Wiggler Set

Four interchangeable attachments accurately indicate tool-spindle positions relative to ground surfaces, gage blocks, buttons, holes, slots or crossed layout lines. A great convenience in making precise setups. Chrome plated.



7

DESCRIPTION	B&S NUMBER	ORDERING NUMBER	PRICE EACH
Wiggler Set With Case	599-795	7144-597	$131.00
COMPONENT PARTS DESCRIPTION	**B&S NUMBER**	**ORDERING NUMBER**	**ORDERING NUMBER**
Ball Contact Attachment (.250" dia.)	599-795-11	7144-598	$ 25.00
Disc Contact Attachment (.100" dia.)	599-795-12	7144-599	22.00
Off-Set Indicator Holder	599-795-13	7144-600	22.00
Needle Point Attachment	599-795-14	7144-601	30.00
Shank	599-795-15	7144-602	30.00

Edge Finders



7

DESCRIPTION	DIAMETER	B&S NUMBER	ORDERING NUMBER	PRICE EACH
Single End	.500" dia.	599-792	7144-595	$22.00
Double End	.200/.500" dia.	599-792-1	7144-596	31.00
Double End	5/10mm dia.	599-792-10	7145-701	40.00

Locate round or flat work easily within .0005". To use, just place in a standard 1/2" diameter collet or chuck. As the collet or chuck rotates and approaches the edge of the work, the head moves sideways about 1/32", and the center of the finder is exactly one half of the head diameter away from the edge of the work.

Edge Finders







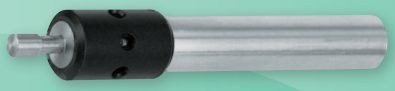
2

- Used to locate work surfaces and edges quickly, easily and accurately: shoulders, grooves, center points and scribed lines
- Time-saving positioning tool for Jig Borers, Milling and other machines
- All parts are hardened and centerless ground to precise tolerances

END	TIP	BODY DIAM.	ORDER NO.	PRICE
Single	.500	1/2	3131-755	$7.50
Double	.200 & .500	1/2	3131-760	4.05
Single	.200	3/8	3131-765	7.10
Double	.200 & .500 w/Center Pt.	1/2	3131-770	7.90
Double	.200 & .375 w/Center Pt.	3/8	3131-775	4.65
Single	.200	1/2	3131-780	7.50
Single	.375 w/Center Pt.	3/8	3131-785	3.85
Single	.500 w/Center Pt.	1/2	3131-790	4.65

Electronic Edge Finder

- Six equally spaced light ports provide visibility at any angle.
- Edge finder lights instantly when stylus touches work edge.
- Made in the USA
- Read off any electrically conductive metal.
- Repeatability: .0002", .200" point dia.
- Furnished complete with bulb and AAA alkaline battery.



6

MODEL NUMBER	DESCRIPTION	PRICE
54-575-600-0	Electronic Edge Finder	$45.42

Flat Leg Pattern Dividers and Calipers

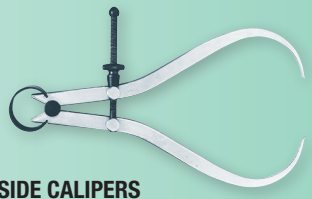
8

- Flat leg dividers and caliper legs are forged of special caliper steel.
- Hardened and tempered bow springs and fulcrum spools assure uniform tension without side play.
- Adjusting screw has a self seating washer and nut to permit quick and positive adjustment.
- Dividers have hardened points. • Calipers have hardened measurement faces.
- Meet government specifications GGG-C-95.



DIVIDERS

MODEL	SIZE	ORDER NO.	PRICE
450-6	6"	6931-601	$20.20



OUTSIDE CALIPERS

MODEL	SIZE	ORDER NO.	PRICE
452-6	6"	6931-618	$19.47



INSIDE CALIPERS

MODEL	SIZE	ORDER NO.	PRICE
454-6	6"	6931-639	$21.09

Measuring Instruments

Pittsburg® ALLEGHANY Precision Parallel Sets

3/16" & 1/2" 4 Pair Parallel Sets



- Ideal for layout work, standards and set-ups, these matched pair parallels make machine shop work easier and quicker. The holes are designed for easier handling and set-ups.
- The sides with the holes are ground and matched in pairs
- Accuracy: +/- 0.0003" parallelism on two sides, top and bottom +/- 0.001" on dimensions
- Hardness: 55 to 62 RC on two sides, top and bottom only
- Heights: 1", 1-1/4", 1-1/2", 1-3/4"

# PAIRS	WIDTH(S)	LENGTH	ORDER NO.	PRICE
4	3/16 & 1/2"	6"	3100-200	$49.50
4	3/16"	6"	3100-201	49.00
4	1/2"	6"	3100-202	59.00

1/4" 9 Pair Parallel Set

1/4" thick – in custom fitted plastic box.



- 9 Pairs in Set.
- Hardened Steel. 6" Length x 1/8" Thick.
- Heights: 3/4", 7/8", 1", 1-1/8", 1-1/4".1-3/8", 1-1/2", 1-5/8", 1-3/4".
- Parallel within +/- 0.0003" each pair.
- Heights matched within +/- 0.001 each pair.

2

# PAIRS	WIDTH	LENGTH	ORDER NO.	PRICE
9	1/4"	6"	3100-206	$95.00

1/2" 8 Pair Parallel Set

1/2" thick – in custom fitted plastic box.



- Made from high quality alloy steel, hardened and ground
- All pairs are precision marched
- Heights: 7/8", 1", 1-1/8", 1-1/4", 1-3/8", 1-3/8", 1-1/2", 1-5/8", 1-3/4"
- Accuracy: +/- 0.0003" parallelism +/- 0.001" to size in height

# PAIRS	WIDTH	LENGTH	ORDER NO.	PRICE
8	1/2"	6"	3100-207	$130.00

Pittsburg® ALLEGHANY Precision Thin Parallel Set

1/8" 10 matched pair

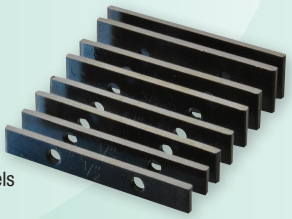


- Made from high quality alloy steel, hardened and ground from 1/8" stock
- 10 pairs with the following heights: 1/2", 5/8", 3/4", 7/8", 1", 1-1/8", 1-1/4", 1-3/8", 1-1/2", 1-5/8"
- Accuracy: +/- 0.0002" parallelism in height +/- 0.001" to size in height

2

# PAIRS	WIDTH	LENGTH	ORDER NO.	PRICE
10	1/8"	6"	3100-203	$69.50

Economy Thin Parallel Set



- Precision ground and hardened
- Gun-blued on non-working surfaces
- Set work pieces to needed height in vise jaws in seconds. Two 1/4" holes are provided for mounting.
- Complete set of 4 pairs of parallels 5/32" thick by 3-1/2" long in 1/2", 5/8", 3/4",and 7/8" widths allows drilling through work near edges without hitting parallels
- Packaged in plastic container

2

# PAIRS	WIDTH	LENGTH	ORDER NO.	PRICE
4	5/32"	3-1/2"	3101-200	$14.70

Pittsburg® ALLEGHANY Adjustable Parallel Sets

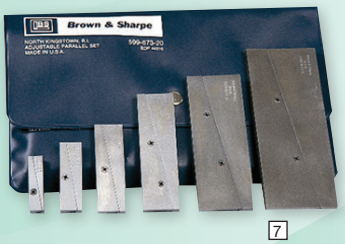


- Precision steel machined to very close tolerances
- Each parallel consists of two ground pieces which slide smoothly on each other and can be locked in position for micrometer measurement
- Ideal for layout work, for gauging and in various set-ups for milling machines and grinders

2

PCS PER SET	RANGE	ORDER NO.	PRICE
4	3/8" to 1-5/16"	3101-210	$29.50
6	3/8" to 2-1/4"	3101-212	63.70

TESA TECHNOLOGY | brown & sharpe Adjustable Parallel Sets



- Quickly adjusted to size using just a micrometer.
- Clamp screws lock parallels to size.
- Each parallel has a generous range, eliminating the need for stocking many solid parallels.

7

SET TOOL RANGE INCH	SET TOOL RANGE METRIC	TOOLS IN SET	B&S NUMBER	ORDERING NUMBER	PRICE EACH
3/8" to 1-5/16"	(10 - 33mm)	4	599-673-10	7144-515	$ 207.00
3/8" to 2-1/4"	(13 - 57mm)	6	599-673-20	7144-516	258.00

Fowler Premium Brand 1/32" Parallel Set



- Made from high-grade alloy steel, hardened and ground from 1/32" stock with 2 holes in each parallel.
- 10 pairs, 6" length, 1/32" width.
- 1/2", 5/8", 3/4", 7/8", 1", 1-1/18", 1-1/4", 1-3/8", 1-1/2" & 1-5/8"
- Height specifications relate to consistency within each pair. Absolute heights are nominal.
- Parallelism: +/- .0001"

2

MODEL NUMBER	DESCRIPTION	PRICE
52-437-031-0	Parallel Set	$291.81

Measuring Instruments

Pittsburg® ALLEGHANY Thin Angle Sets



1/2 Degree through 5 Degrees Set – Bar Size 5/32" x 3-1/2"

Precision ground on working surface. Gun-blued on non-working surfaces. Two 1/4" holes are provided for mounting. By using two angles, this set will span 1/2° through 5-1/2° in half-degree increments, and up to 9 degree in 1 degree increments

6 Degree through 10 Degree Set – Bar Size 5/32" x 3-1/2"

Combine this set with the above set to obtain 1/2 degree through 10-1/2 degree in 1/2 degree increments, or 1 degree through 19 degree can be obtained.

[2]

DESCRIPTION	ORDER NO.	PRICE
1/2 Deg – 5 Deg	3101-201	$15.80
6 Deg – 10 Deg	3101-202	15.80

Pittsburg® ALLEGHANY Universal Angle Block 8-Piece Sets



- No sine vise, sine plate, angle vise, angle vise, angle chart or block gage needed
- The combination of 10, 15 and 30 degree V-Blocks and 5 Angle Plates, 1 to 5 degree, provide fast and easy set-ups at various angles in 1 degree increments
- V-Block Dimensions: 3" L x 1-3/16" W x 1-3/16" H
- Angle Plate Dimensions: 2-3/4" L x 1-3/16" W x 5/64" H at narrow end
- Hardness: 45-50 RC
- Tolerance: +/- 10 Seconds

[2]

LENGTH	WIDTH	HEIGHT	ORDER NO.	PRICE
3"	1-3/16	1-3/16	3101-225	$103.50

Pittsburg® ALLEGHANY Angle Block Sets



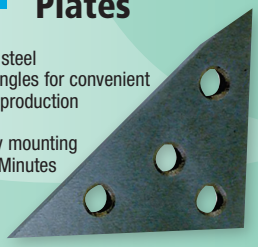
- Simple, quick angle set-ups
- Eliminate calculations/errors
- Oil hardened steel, precision ground
- Lightly magnetized for better hold
- 3" long x 1/4" thick; Accuracy: +/- .0001" per inch

Furnished in 1 degree increments to 5°, and in 5 degree increments to 30 degrees. With the addition of the optional 1/4 degree and 1/2 degree blocks, virtually any conceivable angle to these increments can be obtained.

[2]

DESCRIPTION	ORDER NO.	PRICE
10 Piece Set	3101-220	$89.70
1/4 Deg Block	3101-221	6.95
1/2 Deg Block	3101-222	6.95

Pittsburg® ALLEGHANY Solid Angle Plates

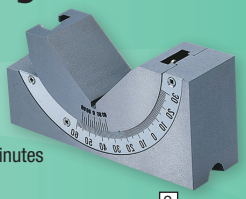


- Made of hardened steel
- Precision ground angles for convenient set-ups in tooling, production and inspection
- Four holes for easy mounting
- Tolerance: +/- 10 Minutes

[2]

SIZE	ANGLE	ORDER NO.	PRICE
3 x 3 x 5/16	45/45/90	3101-230	$25.00
3 x 3 x 5/16	30/60/90	3101-232	25.00
2 Piece Set		3101-235	48.00

Pittsburg® ALLEGHANY 0-60° Precision Angle Block

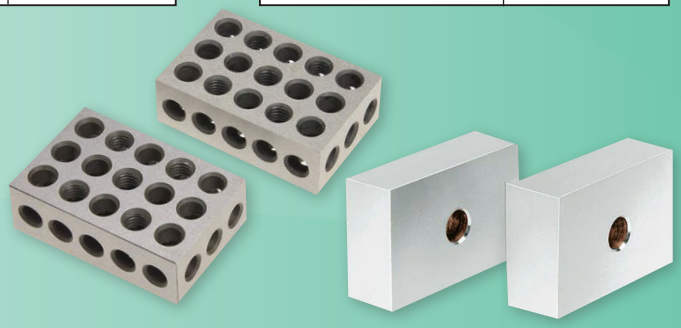


- 0-60 degree Adjustable angle by locking the hex screw on the bottom
- Squareness: 0.0002"
- Angle accuracy: +/- 10 Minutes
- HRC: 50-55

[2]

DIMENSIONS	V-WIDTH	ORDER NO.	PRICE
7/8 x 1-1/4 x 3	7/8"	3101-240	$70.00
1-3/16 x 1-7/8 x 4	1-1/8"	3101-242	74.00
1-13/16 x 1-7/8 x 4	1-13/16"	3101-244	82.00

Pittsburg® ALLEGHANY 1-2-3 and 2-4-6 Blocks



- Ideal for mounting work for precision grinding, lay-out work, etc.
- Precision ground and hardened to 56-60 RC on all six sides
- 23 Hole blocks have 5 tapped holes for clamping operations and 18 untapped holes
- The cross-drilling design gives minimum weight and maximum strength
- Supplied in matching pairs

[2]

SIZE	DESCRIPTION	ORDER NO.	PRICE
1-2-3	One Hole	3101-250	$45.00
1-2-3	23 Hole	3101-251	29.50
2-4-6	23 Hole	3101-252	149.00

Fowler V-Block Set

2 each @:
- Dimensions: 1-1/2" L x 1-1/4" W x 1-1/4" H.
- Work capacity: Approx. 1"
- 2 clamps

2 each @:
- Dimensions: 2" L x 1-1/2" W x 1-1/2" H.
- Work capacity: 1-1/2"
- 2 clamps

All feature:
- Surfaces are square and parallel within .0005".
- V-grooves are square and parallel with all surfaces within .0005".
- Corresponding dimensions for each pair are alike within .0005".
- All enclosed in shop-hardened case.

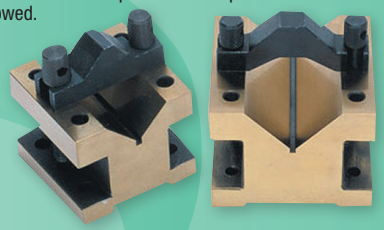


[2]

MODEL NUMBER	DESCRIPTION	PRICE
52-475-500-0	X-Blox V-Block Set	$144.98

Pittsburg® ALLEGHANY Precision V-Block Sets w/ swing away clamp

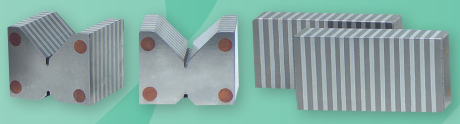
- Quick accurate and positive means of holding workpieces for layout, machining, grinding or inspection
- One reversible swing-away clamp provided with each V-Block. Combined with unique offset hole pattern in the top of the V-Block, a variety of clamping possibilities are allowed.
- All V-Blocks are parallel, square and centered within 0.0002"



[2]

CAPACITY	HEIGHT	WIDTH	LENGTH	ORDER NO.	PRICE/PR
19/32"	1-3/16"	1-3/8"	1-3/8"	3100-157	$42.00
1-3/16"	2"	2-3/8"	2-3/8"	3100-158	69.50
2-9/16"	3-1/16"	4-1/8"	4-1/8"	3100-159	165.50

Pittsburg® ALLEGHANY Magnetic Chuck V-Blocks & Parallels



- Holds work in any direction on magnetic chucks
- Selected steel is integrally aluminum cast for highest magnetic transfer
- Precision ground on all surfaces
- Serial numbered in pairs
- V-Blocks have two 90° V's

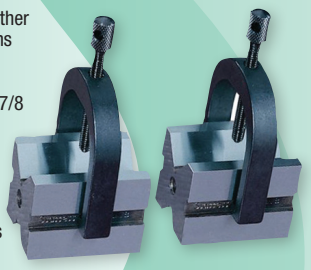
[2]

SIZE	DESCRIPTION	LARGE V	SMALL V	ORDER NO.	PRICE
1-7/8 x 2-3/8 x 2	V-Blk Pair	2" Cap	1/2" Cap	3131-725	$49.75
1-7/8 x 2-3/8 x 4-3/8	One V-Blk	2" Cap	1/2" Cap	3131-730	49.75
1 x 2 x 4	Paral Pair	—	—	3131-720	39.75
Comb Set - Small V-Block Pair & Parallel Pair				3131-732	79.75

Measuring Instruments

Pittsburg® ALLEGHANY V-Blocks & Clamps

- All sides are ground square and parallel to each other
- Sturdy enough to be used in Machining Operations
- Accurate enough to be used in layouts and surface plate work
- The 1-3/4 x 2-1/2 x 2-3/4 and 2-3/4 x 3-1/2 x 4-7/8 models are designed so that the clamps do not protrude over the sides; thus the tool can be used on its sides
- 90° V's are ground central, parallel, and square to the ends
- Precision ground; matched and numbered in pairs
- Matched accuracy 0.0002"



CAPACITY	HEIGHT	WIDTH	LENGTH	ORDER NO.	PRICE/PR
1"	1-1/4"	1-1/4"	1-5/8"	3100-175	$ 27.50
1"	1-3/8"	1-5/8"	1-3/4"	3100-170	36.45
1-1/2"	1-5/8"	1-3/4"	2-3/4"	3100-160	54.95
1-1/2"	1-3/4"	2-1/2"	2-3/4"	3100-165*	74.80
2-1/8"	2-3/4"	3-1/2"	4-7/8"	3100-176*	170.45

*Designed so clamps do not protrude over the sides

Pittsburg® ALLEGHANY Hardened Steel Wide Beam Straight Edge Square

- Length of blade is measured from inner edge of beam to end of tables
- Beams and blades are ground and accurately lapped for straightness and parallelism.
- All squares are fully hardened (55RC) • Accuracy Class N. • Packed in individual cartons
- Beam is grooved at inner corner for clearance of burrs and dirt



BLADE	BEAM	ORDER NO.	PRICE
1-3/8"	1"	3100-060†	$14.05
2-3/8"	1-3/8"	3100-062	22.89
3-1/8"	2"	3100-064	26.17
5"	3"	3100-066	32.00
6-3/4"	4"	3100-068	19.70
8-1/2"	5-1/8"	3100-070	53.25
10-1/2"	6-3/8"	3100-072	67.20

† Limited Quantity

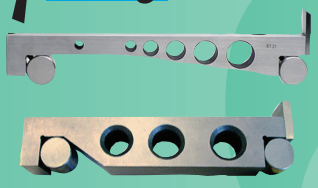
Pittsburg® ALLEGHANY Master Precision Level

- This is a Master Precision level for accurately checking the work of machinists and toolmakers, the setting up of machinery and other work that requires extreme leveling accuracy
- The main level vial is graduated to 10 Second accuracy (1 division equals .0005" per foot)
- An auxiliary level enables the user to check side declinations
- The body of the level is of cast iron and the base is hand scraped for extreme accuracy
- There are plastic knobs on the frame to insulate the instrument from the heat of the hand
- Includes fitted case



SIZE	ORDER NO.	PRICE
8"	3100-008	$122.67
12"	3100-012	202.67

Pittsburg® ALLEGHANY Precision Sine Bars



- Both Sine Bar and Rolls are hardened and ground for extreme accuracy
- Top surface is accurate to .0003" per inch of length
- Parallelism 0.004"
- Center to center distance between center of rolls is accurate within .0002"
- There is a flange on the end for resting work
- Tapped holes allowing hold down

DISTANCE BTWN. CENTER OF ROLLS	DESCRIPTION	WIDTH	ORDER NO.	PRICE
5"	Sine Bar	15/16"	3100-135	$76.90
10"	Sine Bar	1"	3100-136	152.60
5"	Sine Plate	2"	3100-137	83.50

Pittsburg® ALLEGHANY Demagnetizer

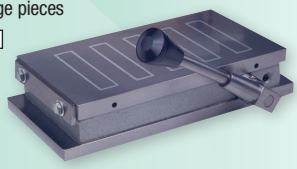
- Use to remove residual magnetism from dies, punches, cutters or any other tools that have become magnetized
- Operates on 115V AC with on-off switch



ORDER NO.	PRICE
3101-060	$56.00

Pittsburg® ALLEGHANY Magnetic Chucks

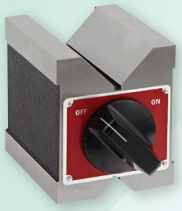
- High powered Permanent Magnetic Chucks hold work pieces for machining, grinding, etc.
- Solid top and bottom plates assure retained accuracy
- Full loading power over entire plates • Can be switched off to remove work piece
- Pole divisions are arranged for holding small, thin or large pieces



DESCRIPTION	DIMENSIONS	ORDER NO.	PRICE
Rect.	6" x 12"	3131-700	$280.80
Rect.	6 x 18"	3131-705	381.40
Round	10"	3131-710	184.85
Round	10"	3131-715	358.15

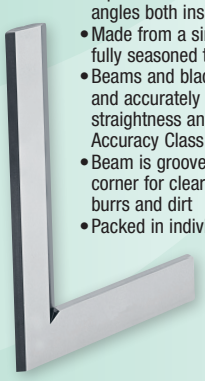
Pittsburg® ALLEGHANY Magnetic V-Block

- Ideal for holding cylindrical workpieces for scribing, grinding, measuring and machining
- Powerful holding force with fixed On/Off switch
- Precision ground finish for use as an inspection device



SIZE	LARGE V	SMALL V	ORDER NO.	PRICE
2-3/4 x 3-3/4 x 4	2" Cap	3/4" Cap	3100-155	$102.55

Pittsburg® ALLEGHANY Hardened Steel Bevel Edge Square



- Squares have accurate right angles both inside and outside
- Made from a single piece of fully seasoned tool steel
- Beams and blades are ground and accurately lapped for straightness and parallelism. Accuracy Class H.
- Beam is grooved at inner corner for clearance of burrs and dirt
- Packed in individual cartons

BLADE	BEAM	ORDER NO.	PRICE
1-3/8"	1"	3100-040†	$15.50
2-3/8"	1-3/8"	3100-042†	16.50
3-1/8"	2"	3100-044	19.75
5"	3"	3100-046	29.00
6-3/4"	4"	3100-048	32.50
8-1/2"	5-1/8"	3100-050	40.00
10-1/2"	6-3/8"	3100-052	68.00

† Limited Quantity

Pittsburg® ALLEGHANY Cylinder Squares



- Used on surface plates as a 90° reference angle. Used for checking squares, height gauges and many other instruments
- The squares are hardened and the ends are lapped to 90° angular accuracy withthe cylinders as follows: 6" square to ± .00010, 12" square to ± .00015
- Includes fitted case

DIAM. SQUARE	HEIGHT	WEIGHT	ORDER NO.	PRICE
3"	6"	15 lbs	3100-130	$149.00
4"	12"	44 lbs	3100-132	240.00

Fowler Jack Stand Set

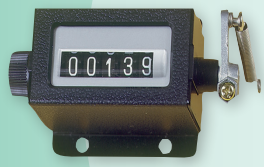
- Up to 1000 lbs. • Range: 2.25" to 3.375"
- Jack base diameter: 1.25" • 1" and 2" extension bases
- Extension may be combined



MODEL NO.	DESCRIPTION	PRICE
52-104-000-0	Jack Stand Set	$46.11

Pittsburg® ALLEGHANY Ratchet Counter

- The counter is incremented by 1 when spring fitted ratchet type lever passes 45 degree threshold
- Reset knob



ORDER NO.	PRICE
3101-065	$4.75

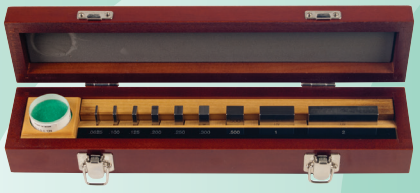
Measuring Instruments

Mitutoyo [12]

Rectangular Gage Block Sets – Series 516



516-902-26



516-930-26

Inch

ORDER NO. STEEL	BLOCKS PER SET	BLOCKS INCLUDED IN SET			GRADE	LIST PRICE
516-901-26	81	9 pcs.	.1001–.1009"	Step of .0001"	ASME 00	$4780.00
516-902-26		49 pcs.	.101–.149"	Step of .001"	ASME 0	2380.00
516-903-26		19 pcs.	.05–.95"	Step of .05"	AS-1	2070.00
516-904-26		4 pcs.	1–4"	Step of 1"	AS-2	1880.00
516-913-26	35	1 pcs.	.10005"		ASME 00	2100.00
516-914-26		9 pcs.	.1001–.1009"	Step of .0001"	ASME 0	1250.00
516-915-26		9 pcs.	.101–.109"	Step of .001"	AS-1	1100.00
516-916-26		10 pcs.	.10–.19"	Step of .01"	AS-2	938.00
		6 pcs.	.20, .30, .50, 1.0, 2.0 & 4.0"			

Thin Block Set: Steel

BLOCKS PER SET	BLOCKS INCLUDED IN SET	GRADE	ORDER NO.	LIST PRICE
10	.005–.050" Step of .005"	ASME 0	516-926-26	$653.00

Set for Micrometer Inspection: Steel

9	.0625, .100, .125, .200, .250, .300, .500, 1, 2"	ASME 0	516-930-26	$436.00
	1 pc. Optical parallel	AS-1	516-931-26	379.00

Square Gage Block Sets – Series 516

Inch

BLOCKS PER SET	BLOCKS INCLUDED IN SET			GRADE	ORDER NO.	LIST PRICE
81	1 pc.	.050"		ASME 00	516-401-26	$6130.00
	10 pcs.	.1000–.1009"	Step of .0001"	ASME 0	516-402-26	3410.00
	49 pcs.	.101–.149"	Step of .001"	AS-1	516-403-26	3050.00
	17 pcs.	.15–.95"	Step of .05"	AS-2	516-404-26	2000.00
	4 pcs.	1–4"	Step of 1"			
36	1 pc.	.050"		ASME 0	516-422-26	1610.00
	10 pcs.	.1000–.1009"	Step of .0001"	AS-1	516-423-26	1450.00
	9 pcs.	.101–.109"	Step of .001"	AS-2	516-424-26	837.00
	9 pcs.	.11–.19"	Step of .01"			
	4 pcs.	.2–.5"	Step of .1"			
	3 pcs.	1, 2 and 4"				

Pittsburg® ALLEGHANY Gage Block Sets

Steel Sets

Steel sets are produced from a special steel of high carbon and chrome content with a hardness of 65RC which insures hard wear resistance and stability



Premium Series Sets

- These blocks are manufactured in a temperature controlled environment to ensure precise and reliable accuracy. They are made to special standards to resist corrosion and defacement.
- Mirror-polished surface finish provides exceptional wringing characteristics
- All inch blocks meet or exceed Federal Specification GGG-G-15C for flatness, parallelism, and size, and conform to MIL-STD-45662A and US Government spec. ASME B89.1.9.2002.
- **All blocks are certified in the U.S. by an ISO 17025 Certified Lab.**
- Each block is serialized for easy identification
- A complete certificate of calibration traceable to the National Institute of Standards and Technology (NIST), showing the deviation in millionths of each block. (This is provided with all grades – including Grade B.)
- Deluxe fitted wood case.
- A full one year guarantee against any defects in workmanship.

BLOCKS INCLUDED IN SETS:

81 pc. Sets come with:

9 Blocks .1001-.1009 in .0001 steps
49 Blocks .101-.149 in .001 steps
19 Blocks .050-.950 in .050 steps
4 Blocks 1"-4" in 1" steps

36 pc. Sets come with:

9 Blocks .1001-.1009 in .0001 steps
9 Blocks .101-.109 in .001 steps
9 Blocks .110-.190 in .010 steps
4 Blocks .200, .300, .400, .500
5 Blocks .050, .100, 1", 2", 4"

TOLERANCES:
Inch (U.S. Federal Standards), Millionths

	Grade Ø (A+)	Grade 1 (A & B)	Grade B (Shop)
<1"	+4/-2	+8/-4	+/-50
2"	+8/-4	+16/-8	+/-50
3"	+10/-5	+20/-10	+/-50
4"	+12/-6	+24/-12	+/-50

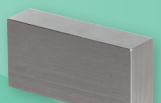
Steel Sets [2]

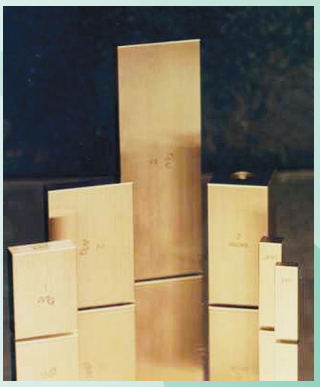
NO. PCS.	GRADE	TYPE	ORDER NO.	PRICE
81	0*	Rect.	3100-112	$661.90
81	1	Rect.	3100-113	477.50
81	B	Rect.	3100-114	182.80
36	0*	Rect.	3100-115	403.50
81	1	Rect.	3100-116	279.60
36	B	Rect.	3100-117	136.00
81	0*	Square	3100-118	2036.20
81	1	Square	3100-119	1503.60
81	B	Square	3100-122	1032.10
TUNGSTEN CARBIDE				
81	0	Rect.	3100-126	$3777.80

* Grade 0 (formerly Grade 2)

Pittsburg® ALLEGHANY Individual Gage Blocks

- All individual blocks are rectangular grade Ø (+.000004/-.000002)
- Each block is supplied with a certificate showing the deviation in millionths


[2]



SIZE	ORDER NO.	PRICE	SIZE	ORDER NO.	PRICE	SIZE	ORDER NO.	PRICE	SIZE	ORDER NO.	PRICE
.050	3101-089	$18.15	.112	3101-112	$15.05	.134	3101-134	$15.05	.450	3101-160	$19.70
.100	3101-090	15.05	.113	3101-113	15.05	.135	3101-135	15.05	.500	3101-161	19.70
.1001	3101-091	15.05	.114	3101-114	15.05	.136	3101-136	15.05	.550	3101-162	19.70
.1002	3101-092	15.05	.115	3101-115	15.05	.137	3101-137	15.05	.600	3101-163	19.70
.1003	3101-093	15.05	.116	3101-116	15.05	.138	3101-138	15.05	.650	3101-164	19.70
.1004	3101-094	15.05	.117	3101-117	15.05	.139	3101-139	15.05	.700	3101-165	19.70
.1005	3101-095	15.05	.118	3101-118	15.05	.140	3101-140	15.05	.750	3101-166	21.80
.1006	3101-096	15.05	.119	3101-119	15.05	.141	3101-141	15.05	.800	3101-167	21.80
.1007	3101-097	15.05	.120	3101-120	15.05	.142	3101-142	15.05	.850	3101-168	21.80
.1008	3101-098	15.05	.121	3101-121	15.05	.143	3101-143	15.05	.900	3101-169	21.80
.1009	3101-099	15.05	.122	3101-122	15.05	.144	3101-144	15.05	.950	3101-170	21.80
.101	3101-101	15.05	.123	3101-123	15.05	.145	3101-145	15.05	1.000	3101-171	28.00
.102	3101-102	15.05	.124	3101-124	15.05	.146	3101-146	15.05	2.000	3101-172	31.65
.103	3101-103	15.05	.125	3101-125	15.05	.147	3101-147	15.05	3.000	3101-173	37.35
.104	3101-104	15.05	.126	3101-126	15.05	.148	3101-148	15.05	4.000	3101-174	52.90
.105	3101-105	15.05	.127	3101-127	15.05	.149	3101-149	15.05			
.106	3101-106	15.05	.128	3101-128	15.05	.150	3101-150	15.05			
.107	3101-107	15.05	.129	3101-129	15.05	.200	3101-155	18.15			
.108	3101-108	15.05	.130	3101-130	15.05	.250	3101-156	18.15			
.109	3101-109	15.05	.131	3101-131	15.05	.300	3101-157	18.15			
.110	3101-110	15.05	.132	3101-132	15.05	.350	3101-158	18.15			
.111	3101-111	15.05	.133	3101-133	15.05	.400	3101-159	18.15			

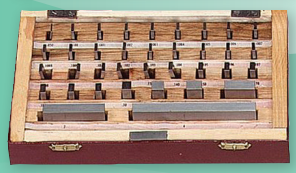
Measuring Instruments

Pittsburg® ALLEGHANY Economy Sets

- Competitively priced B grade set
- Each set is supplied with a certificate guaranteeing that each block is manufactured to meet or exceed Federal Specification GGG-G-15C, and is within the grade B tolerance of ±.000050. This certificate does not show the individual deviation of each block.
- Each set is provided in a fitted wood case



81 pc.



36 pc.

2

NO. PCS.	GRADE	TYPE	ORDER NO.	PRICE
81	B	Rect.	3100-125	$133.35
36	B	Rect.	3100-120	139.00

Fowler Economy Rectangular Steel Gage Block Sets

- Economy Grade.
- Each block certified to N.I.S.T.
- Tolerances to .00005"
- Complete with fitted wooden case.

6

MODEL NO.	DESCRIPTION	PRICE
53-672-036-0	36 piece	$358.63
53-672-081-0	81 piece	613.39



53-672-081



53-672-036

Fowler Surface Gage with Built-In Switchable Magnetic Base

- Set Includes 3-1/8" x 2-1/16" per manent manetic base with on/off switch, fine adjustment on base and a 5/16" x 9" upright.
- .0005" test indicator (FOW# 52-562-778) with .040", .080" & .120" contact points.
- Swivel Clamp to mount indicator.
- Two dovetail stems: 5/32" & 3/8"
- 4" hardened scriber.
- Form fitted shop-hardened case for easy accessibility and storage.

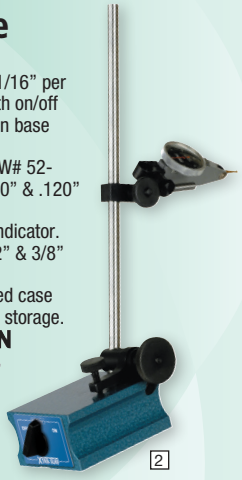
OFF ON



Surface Gage



Magnetic Base



2

MODEL NUMBER	DESCRIPTION	PRICE
52-155-747-0	Surface Gage w/ Base	$262.66

Mitutoyo Dial Gage Stands – 7003 (with Serrated Anvil) 7004 (with Flat Anvil)

The compact and versatile Dial Gage Stands are commonly use general-purpose stands for comparison measurements, 5" maximum-height capacity. Featuring a wide fine-adjusting range for zero-setting gage heads. The stands are designed for AGD type probes with 3/8" DIA. stems, and accommodate all AGD type Dial Indicators.

Accessories and Parts



101461



101463



101462



7001-10

12

Dial Gage Stands

ORDER NO.	MAX. HEIGHT CAPACITY	FINE ADJUSTMENT	REMARKS	LIST PRICE
7001-10	4.0"	.04"	with Serrated Anvil (No. 101462)	$654.00
7002-10	4.0"	.04"	with Flat Anvil (No. 101461)	654.00

Pittsburg® ALLEGHANY Toolmaker's Surface Gages

- Hardened and ground base with V-groove for scribing cylindrical work
- Adjustable spindle arm and scribers can be rigidly locked into any position at any angle
- Recessed front allows for depressing spindle below base level



2

SPINDLES	ORDER NO.	PRICE
4" & 7"	3100-140	$15.80
9" & 12"	3100-145	23.90

Mitutoyo Granite Comparator Stands - Series 215

FEATURES

- Basic building-blocks for the assembly of special-purpose, precision measuring equipment.
- By mounting precision measuring instruments such as Digimatic indicators, Mu-Checker Cartridge Heads, and Linear Gages onto the stands, it is possible to handle all manner of measuring applications.
- The rigid granite base is free from burrs, pileups, rust, and deterioration over time.

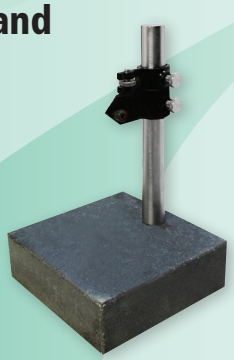


12

ORDER NO.	BASE SIZE	COLUMN TRAVEL	STEM HOLE	REMARKS	LIST PRICE
215-151-10	150 x 200 x 50mm	250mm	ø8mm, ø9.53mm	w/ fine adj. of 1mm range	$1080.00
215-153-10	200 x 250 x 80mm	260mm	ø8mm, ø9.53mm	w/fine adj. of 1mm range	1190.00
215-156-10	300 x 250 x 80mm	275mm	ø8mm, ø9.53mm, ø20mm	w/fine adj. over the entire travel -	1470.00

Pittsburg® ALLEGHANY Granite Check Stand

- Top quality ebony granite base
- Extremely stable and durable
- Accepts all AGD indicators
- Fine adjustment knuckle on clamp
- Full 6" Square x 2" Thick Base
- 8" x .990" diam. column
- .00005" flatness



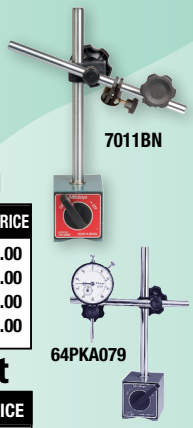
2

ORDER NO.	PRICE
3100-149	$58.50

Measuring Instruments

Mitutoyo Magnetic Stands – Series 7

Accepts all AGD-type Dial Indicators, Test Indicators and Probes having 3/8" DIA. shank and/or Lug Back within 1/4" DIA. mounting hole. The On-Off Switch offers instant mounting and dismounting without any adverse effect to the indicators or work surface. [12]



ORDER NO.	DESCRIPTION	CLAMPING FORCE	LIST PRICE
7010S	Magnetic Stand	600N	$131.00
7012-10	Mag. Flexi-Stand for Dial Test Ind.	600N	238.00
7014E-10	Mini Mag. Stand w/o Magnet ON/OFF	-	103.00
7033B	Universal Mag. Stand w/Mech. Lock Sys.	600N	194.00

Magnetic Stand With Indicator Set

ORDER NO.	MODEL	DIAL INDICATOR	RANGE	GRADUATION	LIST PRICE
64PKA079	7010S	2416S	0–1"	.001"	$227.00

Pittsburg® Magnetic Bases



- Powerful 110 lb. vibration free magnetic pull on Standard and Fine Adjustment models. Holding power for Heavy Duty model is 175 lbs!
- Centered "V" magnet for a strong hold on round or flat surfaces
- On and Off lever control for easy surface removal. Prevents marring or scratching.
- Accepts all AGD Dial Indicators with lug backs
- Quick adjustment clamping [2]

DESCRIPTION	ORDER NO.	PRICE
Standard	3100-020	$18.15
W/ Fine Adj	3100-022	19.50
Heavy Duty	3100-024	39.95

Pittsburg® Flexible Arm Magnetic Base



- Stem flexes nearly 360 degrees
- Locks into exact position with a cam lever-operated cable and tension adjustment.
- Stable rigidity will not diminish with constant use.
- On-Off lever control for magnetic base

DESCRIPTION	ORDER NO.	PRICE
Standard	3100-026	$39.95
W/ Fine Adj	3100-028	42.95

[2] w/Fine Adjustment

Pittsburg® Universal Dial Test Indicator Holder



- For Bridgeport type machines, milling machines, and jig borers
- Clamping diameter 1-7/8"
- Length from clamping bracket to indicator 4-1/2"
- Suitable for all popular indicators with 5/32" shank or dovetail
- Does not disturb the working tool
- Mounts with single pressure screw directly on the machine quill, bypassing the working tool
- A quicker way of indicating; guaranteed accurate readings

[2]

ORDER NO.	PRICE
3100-520	$18.45

Pittsburg® Mini Magnetic Stand



- Compact and small universal Permanent Magnetic Stand. Ideal for tight work areas.
- Clamps indicators with stems as well as dovetails
- Includes disc for neutralizing magnet when not in use
- Base dimensions: 1" Diameter x 1" High
- Overall Height: 5" with fine adjustment, 3" without fine adjustment

[2]

DESC.	ORDER NO.	PRICE
Standard	3100-030	$12.70
w/ Fine Adj	3100-032	13.50

Pittsburg® Flexible Indicator Holder



- Ideal for use in tight areas
- Solderless cable is self-adjustable
- Swivels and rotates – locks in any position
- Has fine adjustment 25 lb. pull
- Height with column 9-3/4"
- Base: 1-3/8" x 1-1/8" high pot magnet
- Stem: 13/64" x 3-1/8"

[2]

ORDER NO.	PRICE
3100-524	$26.00

Pittsburg® Universal Magnetic Indicator Holder



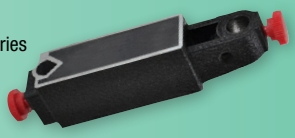
- Two universal ball sockets permit adjustment to any angle or position, with full 360 degree movement.
- Fine adjustment clamp.
- Dovetail clamp for test indicator.
- 1/4" hole for 1/4" stem indicator.
- All knurled knobs and lock screws.

Indicator not included

[2]

ORDER NO.	PRICE
3100-522	$23.65

Pittsburg® Magnetic Base



- Five locations for mounting accessories
- 45 lbs holding power
- Zinc die cast housing
- Approximate size: 4-1/2" x 1-1/4"

[2]

ORDER NO.	PRICE
3100-034	$7.20

Pittsburg® Magnetic Base Indicator Holder

Standard Holder:

- Full magnetic base
- 6" long x 1/4" diameter non-magnetic stainless steel holding rod, set in hardened universal ball socket, allowing universal positioning of the indicator
- Base dimensions: 3-1/2" x 1-1/8" x 1"

Universal Type Magnetic Base Indicator Holder:

- With attachments, this base can accommodate practically all types of dial and test indicators
- Unit has fine precision adjustment controlled by thumb screw allowing minor adjustments without touching work or indicator
- 6" long x 1/4" diameter non-magnetic stainless steel holding rod, set in hardened universal ball socket, allowing universal positioning of the indicator
- Base dimensions: 3-1/2" x 1-1/8" x 1"



	ORDER NO.	PRICE
Magnetic Base Indicator Holder Universal Type	3100-036	$23.15
	3100-038	28.00

[2]

Pittsburg® Anyform Magnetic Base

CLOSEOUT ITEM!



STANDARD ANYFORM FEATURES:

- Powerful, permanent magnet always stays on
- Cam Lock Mechanism easily loosens the segments for contour adjustment
- Available with standard, fine adjust, or flexible arms and clamps
- Made in USA under strict quality control
- One year warranty

ON/OFF ANYFORM FEATURES:

- Rotary knob turns power on or off • Permanent, powerful magnet
- Cam Lock Mechanism easily loosens the segments for contour adjustment
- Available with standard, fine adjust, or flexible arms and clamps
- Made in USA under strict quality control
- One year warranty

[1]

STANDARD ANYFORM	ORDER NO.	PRICE
ANYFORM magnetic base with standard arms and clamps	3100-535	$36.50
ANYFORM magnetic base with fine adjust arms and clamps	3100-536	45.00
ANYFORM magnetic base with flexible arm	3100-537	64.20

ON-OFF ANYFORM	ORDER NO.	PRICE
ON/OFF ANYFORM magnetic base with flexible arm	3100-540	$77.15

Mitutoyo

Digital Readout/DRO Packages
2-Axis/3-Axis Travels



2 Axis, KA Counter Milling System

Package Includes: • KA Counter • Brackets for Linear Scales • AT715 Electro-Magnetic Linear Scales • Display Arm Kit

3

X AXIS TRAVEL	Y AXIS TRAVEL			
	12" (539-805)	14" (539-806)	16" (539-806)	18" (539-808)
30" (539-814)	64PKA058A $POA	64PKA060A $1710.00		
36" (539-816)	64PKA059A $1530.00		64PKA062A $1710.00	
40" (539-817)		64PKA061A $1710.00	64PKA063A $1710.00	64PKA064A $1710.00

3 Axis Milling Package

ORDER NO.	DESCRIPTION - 3 AXIS MILLING PACKAGE	LIST PRICE
64PKA065A	ABS Scales, 12' x 30" x 6", w/3 Axis KA Counter (174-175A)	$2550.00
64PKA066A	ABS Scales, 12' x 36" x 6", w/3 Axis KA Counter (174-175A)	2550.00
64PKA067A	ABS Scales, 16' x 36" x 6", w/3 Axis KA Counter (174-175A)	2550.00

Mitutoyo

Quill Kit
Easy Installation — Fits Most Vertical Knee Mills



3

FEATURES
- Easy to read LCD with resolution of .0005"/0.01mm.
- Push button controls for inch/mm, Zero-Set and On/Off.
- Powered by a single SR-44 Battery which lasts about 1 year with normal use.
- SPC output for data transmission to Data Processors or LED Remote Display Box.

DESCRIPTION	ORDER NO.	LIST PRICE
Digimatic Quill Kit complete with brackets & scale for Bridgeport Type machines.	053906B	$356.00

2 Axis Lathe Package

Package Includes: • KA Counter • Mounting Bracket Kit • Counter Tray • AT116 & AT715 Linear Scale combinations (w/cables) • Addtional 2M Extention Cable (60", 72" pkgs.)

Z AXIS TRAVEL	X AXIS TRAVEL (AT 116 SLIM GLASS SCALE)					
	6" (539-272-30)	8" (539-273-30)	10" (539-274-30)	12" (539-275-30)	14" (539-276-30)	16" (539-276-30)
28" (539-813)	64PKA035A $1660.00					
30" (539-814)	64PKA036A $1490.00					
36" (539-816)	64PKA037A $1660.00					
40" (539-817)	64PKA038A $1660.00	64PKA039A $1660.00	64PKA042A $1660.00	64PKA046A $1660.00	64PKA052A $1660.00	
44" (539-818)		64PKA040A $1660.00	64PKA043A $1660.00	64PKA047A $1660.00	64PKA053A $1660.00	
48" (539-819)		64PKA041A $1660.00	64PKA044A $1660.00	64PKA048A $1660.00	64PKA054A $1660.00	
52" (539-820)				64PKA049A $1660.00	64PKA055A $1660.00	
60" (539-822)			64PKA045A $1890.00	64PKA050A $1890.00	64PKA056A $1890.00	64PKA057A $1890.00
72" (539-825)				64PKA051A $1890.00		

2 Axis, KA Counter Grinder System

Package Includes: • KA Counter • Mounting Bracket Kit • AT116 Glass Linear Scales • Display Arm Kit

VERTICAL	CROSS SIDE (AT116 SLIM GLASS SCALE)			
	6" (539-272-30)	8" (539-273-30)	10" (539-274-30)	12" (539-275-30)
12" (539-275-30)	64PKA026A $1850.00	64PKA028A $1850.00		
14" (539-276-30)	64PKA027A $1850.00	64PKA029A $1850.00		
16" (539-277-30)		64PKA030A $1660.00		
18" (539-278-30)			64PKA031A $1850.00	64PKA033A $1850.00
20" (539-279-30)				64PKA034A $1850.00
24" (539-281-30)			64PKA032A $1850.00	