



Mark II Turbo-Meters

The Market Leader in Turbine Meter Technology

Mark II 4" - 12"
Turbo-Meters



Mark II Turbo-Meters. The Market Leader!

Selected Mark II Turbo-Meter Features and Benefits:

Features	Benefits
1 30-degree & 45-degree rotor blade angles available	Effectively provides two separate performance envelopes per meter size. (See capacity tables on pages 10-19)
2 One or two pulse outputs via blade tip sensors	High resolution and redundant signals for reliable operation. Easier maintenance and longer life.
3 Top-entry design	Access to the measuring module and all moving parts without removing the meter body from the line.
4 The measuring element is a calibrated, interchangeable module	Repair/upgrade/calibrate modules without removing the meter body from the line.
5 Nose cone with integral straightening vanes	Additional flow conditioning when the upstream configuration is less than ideal.
6 Robust rotor shaft ball bearings	Durability and superior accuracy over a wide flow range.
7 Optional automatic oiler	Trouble-free lubrication, without a site visit.
8 Mark II bodies can be fitted with Auto-Adjust Turbo-Meter modules	Cost-effective upgrade to the Continuous Measurement Certainty™ of Sensus Metering Systems' patented dual-rotor technology.

Mark II

Mark II Upgrades & Exchanges

To help you cost-effectively take advantage of Mark II technology and all the advances available, Sensus Metering Systems offers a complete line of replacement meter modules and upgrades to conveniently enhance your current Sensus Metering Systems turbines. Here's an overview:

Product Enhancement	Advantage	Upgraded Meter Without Body Removal
Slot Sensor to Blade Tip Sensor	• Improved reliability • Reduced maintenance • Easier access to components • Redundant outputs • High pulse resolution	YES
45° Rotor to 30° Rotor	• Up to 64% more capacity • Same body	YES
Mark II to AAT	• Continuous Measurement Certainty™	YES



When exchanging modules, Mark II meters can be upgraded without removing the meter body from the line, so you avoid lengthy service interruptions. Sensus Metering Systems maintains a stock of new and factory rebuilt, calibrated measuring modules for all Mark II's. Each module is shipped with a 5-point calibration curve, plus the appropriate set of change gears. Illustrated instructions for module changeout are also supplied.

High Pressure Calibration Facilities

In parallel with the development of the broad product line of Turbo-Meters, Sensus Metering Systems also engineered and installed one of the most technologically sophisticated and accurate large volume, high pressure meter calibration facilities in the world. Repeated correlation tests with other large volume meter proving facilities, using various flowing media and different reference standards, have verified the accuracy of Sensus Metering Systems Turbo-Meter calibrations.

Each Turbo-Meter produced receives an atmospheric calibration test at five different flow rates.

A computer generated performance curve plus relevant numerical calibration data are furnished with each meter. For elevated pressure installations, at user request, Sensus Metering Systems will provide calibration data at the desired operating pressure and flow rates. Published flow rates are based on $\pm 1\%$ accuracy of measurement.



500 ft³ (14.2m³) Proving Bell



High Pressure Flow Loop; up to 900 psi (62 bar)

SENSUS

Mark II Turbo-Meters, Design Features



Circular Reading (VCR) Index

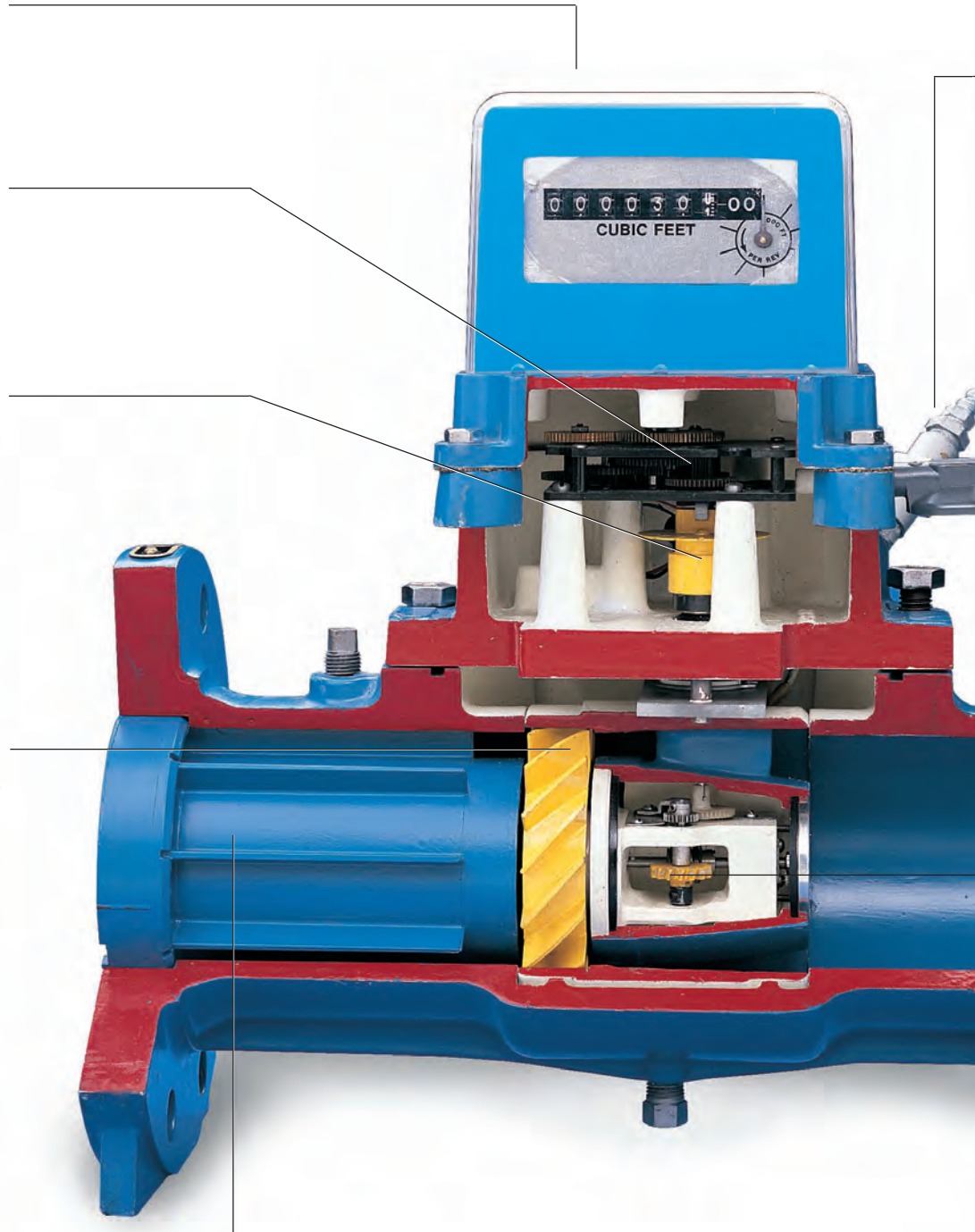


Aluminum Box Direct Reading (VDR) Index

- 1 Any of a wide variety of mechanical, electromechanical or electronic readout devices can be direct-mounted to the meter index plate.
- 2 Calibration of meter output shaft rotations to precise engineering units is effected by change gears that are readily accessible at the top of the intermediate gear assembly.
- 3 A magnetic coupling transmits rotor rotations from the pressurized to the non-pressurized area.
- 4 A calibrated, top-entry measurement module allows for quick removal and interchangeability among other Mark II and Auto-Adjust Turbo-Meter bodies.
- 5 Improved rotor design extracts the maximum kinetic energy from the flowing gas. Dynamic balancing of rotor and the hub assembly assures minimum drag at all flow rates.



- 6 Optimized nose cone with integral straightening vanes minimizes the need for long inlet piping runs.



Mark II Turbo-Meters. The Market Leader.

- 7 An external fitting permits rotor shaft bearing lubrication and flushing while the meter is operating.



Automatic Oiler also available.

- 8 Optional slot-sensors or blade tip sensors provide high-frequency pulse outputs for electronic measuring systems.

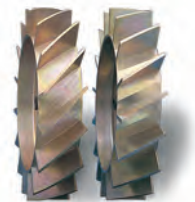
- 9 Advanced meter design achieves thrust load balancing for rotor shaft bearings at all operating conditions.

- 10 Gears and other moving parts are housed in a sealed chamber protected from line contaminants. Pressure equalization is achieved via screened orifices located on the upstream and downstream sides of the chamber.

Sensus Metering Systems is committed to technological growth through continual development of our measurement products and service programs. While the Mark II Turbo-Meter is considered to be the finest single-rotor turbine meter on the market, **we just made it better with a series of improvements and new-product offerings!**

Mark II Product Improvements

30-Degree Rotor Blade Angle! In addition to the standard 45-degree rotor, the Mark II offers a 30-degree rotor that delivers capacity increases of up to 64%. This reasonably priced option allows the customer increased flexibility and the ability to upgrade a 45-degree model to a 30-degree version with a simple module changeout. Meter maintenance, body size, and installation methods do not change, regardless of the chosen blade angle.



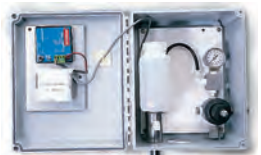
Blade Tip Sensors! Mark II customers have a choice between the traditional slot sensor design and a new blade tip sensor. Blade tip technology provides 2 to 4 times higher pulse resolution than slot sensors, as well as a redundant output. Its sturdy design is not sensitive to pressure changes or contaminants, and field maintenance is easier since the module doesn't need to be disassembled for blade tip sensor repair.



Improved bearings! The heavy-duty bearings that have been standard on our Auto-Adjust Turbo-Meters are standard on Mark IIs. These robust bearings are designed for a minimum of 10 years ABEC L10 bearing life at maximum flow capacity and pressure, allowing for improved long-term accuracy.



Automatic Oiler! Users can avoid regular maintenance trips to their meter sites by using the meter-mounted Automatic Oiler.



4" T-18 MARK II TURBO-METER 45° ROTOR ANGLE (U.S. Units - Cubic Feet)

COMPRESS- IBILITY RATIO	METER PRESSURE	MAXIMUM FLOWRATE	MAXIMUM FLOWRATE	MINIMUM FLOWRATE	MINIMUM FLOWRATE	MIN DIAL RATE	MAX/ MIN FLOW RANGE	APPROX. PRESS. LOSS INCHES W.C. @18000 ACFH
S=(Fpv) ²	PSIG	SCFH	MSCFD	SCFH	MSCFD	ACFH		
1.0000	0.25	18,000	430	1,200	29	1,200	15	1.8
1.0008	5	24,000	580	1,400	34	1,040	17	2.4
1.0016	10	30,000	720	1,500	36	930	20	3.0
1.0024	15	36,000	860	1,700	41	850	21	3.6
1.0032	20	42,000	1,010	1,800	43	780	23	4.2
1.0040	25	48,000	1,150	2,000	48	730	24	4.8
1.0080	50	79,000	1,900	2,500	60	570	32	7.9
1.0121	75	111,000	2,660	3,000	72	480	37	11
1.0162	100	142,000	3,410	3,400	82	430	42	14
1.0203	125	174,000	4,180	3,700	89	390	47	17
1.0330	200	271,000	6,500	4,700	113	310	58	27
1.0502	300	404,000	9,700	5,700	137	250	71	40
1.0680	400	541,000	12,980	6,600	158	220	82	54
1.0863	500	683,000	16,390	7,400	178	190	92	68
1.1050	600	830,000	19,920	8,100	194	180	102	83
1.1241	700	981,000	23,540	8,900	214	160	110	98
1.1435	800	1,138,000	27,310	9,500	228	150	120	114
1.1630	900	1,300,000	31,200	10,200	245	140	127	130
1.1826	1,000	1,466,000	35,180	10,800	259	130	136	147
1.2021	1,100	1,637,000	39,290	11,400	274	130	144	164
1.2212	1,200	1,812,000	43,490	12,000	288	120	151	181
1.2397	1,300	1,991,000	47,780	12,600	302	110	158	199
1.2641	1,440	2,247,000	53,930	13,400	322	110	168	225

4" Model T-18 meters of standard construction register 100 cubic feet per revolution of the mechanical output shaft.

Table is based on base conditions of Pb=14.73 PSIA and Tb=60° F, and average atmospheric pressure Pa=14.48 PSIA.

Table incorporates effect of supercompressibility factor (Fpv) for 0.6 specific gravity natural gas at 60°F and 0° CO₂ and N₂ (per A.G.A. Report No. 8).

Note: Maximum flow rate (dial rate) at flowing conditions is equal to 18,000 ACFH, irrespective of the operating pressure (within the maximum allowable operating pressure of the meter).

Performance ratings in the above tables are based on +/-1% measurement accuracy for all pressures and flowrates shown.

4" T-27 MARK II TURBO-METER 30° ROTOR ANGLE (U.S. Units - Cubic Feet)

COMPRESS- IBILITY RATIO	METER PRESSURE	MAXIMUM FLOWRATE	MAXIMUM FLOWRATE	MINIMUM FLOWRATE	MINIMUM FLOWRATE	MIN DIAL RATE	MAX/ MIN FLOW RANGE	APPROX. PRESS. LOSS INCHES W.C. @27000 ACFH	(1)APPROX. PRESS. LOSS INCHES W.C. @18000 ACFH
S=(Fpv) ²	PSIG	SCFH	MSCFD	SCFH	MSCFD	ACFH			
1.0000	0.25	27,000	650	1,800	43	1,800	15	3.0	1.5
1.0008	5	36,000	860	2,070	50	1,560	17	4.0	1.9
1.0016	10	45,000	1,080	2,320	56	1,400	19	5.1	2.4
1.0024	15	54,000	1,300	2,550	61	1,270	21	6.1	2.9
1.0032	20	63,000	1,510	2,760	66	1,170	23	7.1	3.4
1.0040	25	73,000	1,750	2,950	71	1,100	25	8.2	3.9
1.0080	50	119,000	2,860	3,780	91	860	31	13	6.4
1.0121	75	166,000	3,980	4,460	107	730	37	19	9.0
1.0162	100	213,000	5,110	5,060	121	640	42	24	12
1.0203	125	261,000	6,260	5,590	134	580	47	29	14
1.0330	200	406,000	9,740	6,980	168	460	58	46	22
1.0502	300	605,000	14,520	8,520	204	380	71	68	33
1.0680	400	811,000	19,460	9,870	237	330	82	91	44
1.0863	500	1,024,000	24,580	11,090	266	290	92	115	55
1.1050	600	1,245,000	29,880	12,220	293	270	102	140	67
1.1241	700	1,472,000	35,330	13,290	319	240	111	166	80
1.1435	800	1,707,000	40,970	14,310	343	230	119	192	92
1.1630	900	1,949,000	46,780	15,290	367	210	127	219	105
1.1826	1,000	2,199,000	52,780	16,240	390	200	135	248	119
1.2021	1,100	2,456,000	58,940	17,170	412	190	143	276	133
1.2212	1,200	2,719,000	65,260	18,060	433	180	151	306	147
1.2397	1,300	2,987,000	71,690	18,930	454	170	158	336	162
1.2641	1,440	3,370,000	80,880	20,110	483	160	168	379	182

4" Model T-27 meters of standard construction register 100 cubic feet per revolution of the mechanical output shaft.

Table is based on base conditions of Pb=14.73 PSIA and Tb=60° F, and average atmospheric pressure Pa=14.48 PSIA.

Table incorporates effect of supercompressibility factor (Fpv) for 0.6 specific gravity natural gas at 60°F and 0° CO₂ and N₂ (per A.G.A. Report No. 8).

Note: Maximum flow rate (dial rate) at flowing conditions is equal to 27,000 ACFH, irrespective of the operating pressure (within the maximum allowable operating pressure of the meter).

Performance ratings in the above tables are based on +/-1% measurement accuracy for all pressures and flowrates shown.

(1) There is approximately 20% less pressure loss when compared to our T-18 Turbo-Meter at 18,000 ACFH.

100mm (G250) T-18 MARK II TURBO-METER 45° ROTOR ANGLE (S.I. Units - Cubic Meters)

COMPRESS- IBILITY RATIO	METER PRESSURE	MAXIMUM FLOWRATE	MAXIMUM FLOWRATE	MINIMUM FLOWRATE	MINIMUM FLOWRATE	MIN DIAL RATE	MAX/ MIN FLOW RANGE	APPROX. PRESS LOSS @510 Nm ³ /hr kPa
S=(Fpv) ²	kPa	Nm ³ /hr	Nm ³ /day	Nm ³ /hr	Nm ³ /day	m ³ /hr		
1.0000	1.72	510	12,000	34	820	34	15	0.4
1.0008	34	680	16,000	40	950	29	17	0.6
1.0016	69	850	20,000	42	1,020	26	19	0.7
1.0024	103	1,020	24,000	48	1,160	24	21	0.9
1.0032	138	1,190	29,000	51	1,220	22	23	1.1
1.0040	172	1,360	33,000	57	1,360	21	24	1.2
1.0080	345	2,240	54,000	71	1,700	16	32	2.0
1.0121	517	3,140	75,000	85	2,040	14	37	2.7
1.0162	689	4,020	97,000	96	2,310	12	42	3.5
1.0203	862	4,930	118,000	105	2,520	11	47	4.2
1.0330	1,379	7,680	184,000	133	3,200	9	58	6.7
1.0502	2,068	11,440	275,000	161	3,880	7	71	10
1.0680	2,758	15,330	368,000	187	4,490	6	82	13
1.0863	3,447	19,350	464,000	210	5,030	5	92	17
1.1050	4,137	23,510	564,000	229	5,510	5	102	21
1.1241	4,826	27,790	667,000	252	6,050	5	110	24
1.1435	5,516	32,240	774,000	269	6,460	4	120	28
1.1630	6,205	36,830	884,000	289	6,930	4	127	32
1.1826	6,895	41,530	997,000	306	7,340	4	136	37
1.2021	7,584	46,370	1,113,000	323	7,750	4	144	41
1.2212	8,274	51,330	1,232,000	340	8,160	3	151	45
1.2397	8,963	56,400	1,354,000	357	8,570	3	158	50
1.2641	9,928	63,650	1,528,000	380	9,110	3	168	56

100mm (4") T-18 meters of standard construction register 1 m³ per revolution of the mechanical output shaft.

Table is based on base conditions of 101.325 kPa and Tb=15° C, and average atmospheric pressure Pa=99.8 kPa.

Table incorporates effect of supercompressibility factor (Fpv) for 0.6 specific gravity natural gas at 15.6° C and 0% CO₂ and N₂ (per A.G.A. Report No. 8).

Note: Maximum flow rate (dial rate) at flowing conditions is equal to 510 Nm³/hr, irrespective of the operating pressure (within the maximum allowable operating pressure of the meter).

Performance ratings in the above tables are based on +/-1% measurement accuracy for all pressures and flowrates shown.

100mm (G400) T-27 MARK II TURBO-METER 30° ROTOR ANGLE (S.I. Units - Cubic Meters)

COMPRESS- IBILITY RATIO	METER PRESSURE	MAXIMUM FLOWRATE	MAXIMUM FLOWRATE	MINIMUM FLOWRATE	MINIMUM FLOWRATE	MIN DIAL RATE	MAX/ MIN FLOW RANGE	APPROX. PRESS LOSS @760 Nm ³ /hr kPa	(1)APPROX. PRESS LOSS @510 Nm ³ /hr kPa
S=(Fpv) ²	kPa	Nm ³ /hr	Nm ³ /day	Nm ³ /hr	Nm ³ /day	m ³ /hr			
1.0000	1.72	760	18,000	51	1,220	51	15	0.76	0.36
1.0008	34	1,020	24,000	59	1,410	44	17	1.0	0.48
1.0016	69	1,270	31,000	66	1,580	40	19	1.3	0.60
1.0024	103	1,530	37,000	72	1,730	36	21	1.5	0.73
1.0032	138	1,780	43,000	78	1,880	33	23	1.8	0.85
1.0040	172	2,070	50,000	84	2,010	31	25	2.0	1.0
1.0080	345	3,370	81,000	107	2,570	24	31	3.3	1.6
1.0121	517	4,700	113,000	126	3,030	21	37	5.0	2.2
1.0162	689	6,030	145,000	143	3,440	18	42	6.0	2.9
1.0203	862	7,390	177,000	158	3,800	16	47	7.0	3.5
1.0330	1,379	11,500	276,000	198	4,750	13	58	11	5.5
1.0502	2,068	17,140	411,000	241	5,790	11	71	17	8.1
1.0680	2,758	22,970	551,000	280	6,710	9	82	23	11
1.0863	3,447	29,010	696,000	314	7,540	8	92	29	14
1.1050	4,137	35,270	846,000	346	8,310	8	102	35	17
1.1241	4,826	41,700	1,001,000	376	9,040	7	111	41	20
1.1435	5,516	48,360	1,161,000	405	9,730	7	119	48	23
1.1630	6,205	55,210	1,325,000	433	10,400	6	127	55	26
1.1826	6,895	62,290	1,495,000	460	11,040	6	135	62	30
1.2021	7,584	69,570	1,670,000	486	11,670	5	143	69	33
1.2212	8,274	77,020	1,849,000	512	12,280	5	151	76	37
1.2397	8,963	84,620	2,031,000	536	12,870	5	158	84	40
1.2641	9,928	95,470	2,291,000	570	13,670	5	168	94	45

100mm (4") T-27 meters of standard construction register 1 m³ per revolution of the mechanical output shaft

Table is based on base conditions of 101.325 kPa and Tb=15° C, and average atmospheric pressure Pa=99.8 kPa.

Table incorporates effect of supercompressibility factor (Fpv) for 0.6 specific gravity natural gas at 15.6° C and 0% CO₂ and N₂ (per A.G.A. Report No. 8).

Note: Maximum flow rate (dial rate) at flowing conditions is equal to 760 Nm³/hr, irrespective of the operating pressure (within the maximum allowable operating pressure of the meter).

Performance ratings in the above tables are based on +/-1% measurement accuracy for all pressures and flowrates shown.

(1) There is approximately 20% less pressure loss when compared to our T-18 Turbo-Meter at 510 Nm³/hr.

6" T-35 MARK II TURBO-METER 45° ROTOR ANGLE (U.S. Units - Cubic Feet)

COMPRESS- IBILITY RATIO	METER PRESSURE	MAXIMUM FLOWRATE	MAXIMUM FLOWRATE	MINIMUM FLOWRATE	MINIMUM FLOWRATE	MIN DIAL RATE	MAX/ MIN FLOW RANGE	APPROX. PRESS LOSS INCHES W.C. @35000 ACFH
$S=(Fpv)^2$	PSIG	SCFH	MSCFD	SCFH	MSCFD	ACFH		
1.0000	0.25	35,000	840	1,750	42	1,750	20	2.4
1.0008	5	46,000	1,100	2,010	48	1,520	23	3.2
1.0016	10	58,000	1,390	2,260	54	1,360	26	4.0
1.0024	15	70,000	1,680	2,480	60	1,240	28	5.0
1.0032	20	82,000	1,970	2,680	64	1,140	31	6.0
1.0040	25	94,000	2,260	2,870	69	1,070	33	6
1.0080	50	154,000	3,700	3,680	88	830	42	11
1.0121	75	215,000	5,160	4,340	104	710	50	15
1.0162	100	276,000	6,620	4,920	118	620	56	19
1.0203	125	338,000	8,110	5,440	131	560	62	23
1.0330	200	526,000	12,620	6,790	163	450	77	36
1.0502	300	785,000	18,840	8,290	199	370	95	54
1.0680	400	1,052,000	25,250	9,590	230	320	110	72
1.0863	500	1,328,000	31,870	10,780	259	280	123	91
1.1050	600	1,613,000	38,710	11,880	285	260	136	111
1.1241	700	1,908,000	45,790	12,920	310	240	148	131
1.1435	800	2,213,000	53,110	13,920	334	220	159	152
1.1630	900	2,527,000	60,650	14,870	357	210	170	173
1.1826	1,000	2,851,000	68,420	15,790	379	190	181	195
1.2021	1,100	3,183,000	76,390	16,690	401	180	191	218
1.2212	1,200	3,524,000	84,580	17,560	421	170	201	242
1.2397	1,300	3,872,000	92,930	18,410	442	170	210	266
1.2641	1,440	4,369,000	104,860	19,550	469	160	223	300

6" Model T-35 meters of standard construction register 100 cubic feet per revolution of the mechanical output shaft.

Table is based on base conditions of $P_b=14.73$ PSIA and $T_b=60^\circ$ F, and average atmospheric pressure $P_a=14.48$ PSIA.

Table incorporates effect of supercompressibility factor (Fpv) for 0.6 specific gravity natural gas at 60° F and 0% CO_2 and N_2 (per A.G.A. Report No. 8).

Note: Maximum flow rate (dial rate) at flowing conditions is equal to 35,000 ACFH, irrespective of the operating pressure (within the maximum allowable operating pressure of the meter).

Performance ratings in the above tables are based on +/-1% measurement accuracy for all pressures and flowrates shown.

6" T-57 MARK II TURBO-METER 30° ROTOR ANGLE (U.S. Units - Cubic Feet)

COMPRESS- IBILITY RATIO	METER PRESSURE	MAXIMUM FLOWRATE	MAXIMUM FLOWRATE	MINIMUM FLOWRATE	MINIMUM FLOWRATE	MIN DIAL RATE	MAX/ MIN FLOW RANGE	APPROX. PRESS LOSS INCHES W.C. @57000 ACFH	(1) APPROX. PRESS LOSS INCHES W.C. @35000 ACFH
$S=(Fpv)^2$	PSIG	SCFH	MSCFD	SCFH	MSCFD	ACFH			
1.0000	0.25	57,000	1,370	2,850	68	2,850	20	5.1	2.1
1.0008	5	75,000	1,800	3,280	79	2,480	23	6.7	2.7
1.0016	10	95,000	2,280	3,680	88	2,210	26	8.5	3.4
1.0024	15	114,000	2,740	4,040	97	2,010	28	10	4.1
1.0032	20	134,000	3,220	4,370	105	1,860	31	12	4.8
1.0040	25	153,000	3,670	4,680	112	1,740	33	14	5.5
1.0080	50	252,000	6,050	5,990	144	1,360	42	23	9.0
1.0121	75	350,000	8,400	7,070	170	1,150	50	31	13
1.0162	100	450,000	10,800	8,010	192	1,010	56	40	16
1.0203	125	551,000	13,220	8,860	213	920	62	49	20
1.0330	200	857,000	20,570	11,050	265	730	78	77	31
1.0502	300	1,278,000	30,670	13,500	324	600	95	114	46
1.0680	400	1,713,000	41,110	15,620	375	520	110	153	62
1.0863	500	2,163,000	51,910	17,560	421	460	123	194	78
1.1050	600	2,627,000	63,050	19,350	464	420	136	235	94
1.1241	700	3,108,000	74,590	21,040	505	390	148	278	112
1.1435	800	3,604,000	86,500	22,660	544	360	159	322	130
1.1630	900	4,116,000	98,780	24,220	581	340	170	368	148
1.1826	1,000	4,643,000	111,430	25,720	617	320	181	415	167
1.2021	1,100	5,184,000	124,420	27,180	652	300	191	464	186
1.2212	1,200	5,739,000	137,740	28,600	686	280	201	514	206
1.2397	1,300	6,306,000	151,340	29,980	720	270	210	564	227
1.2641	1,440	7,115,000	170,760	31,840	764	260	223	637	256

6" Model T-57 meters of standard construction register 100 cubic feet per revolution of the mechanical output shaft.

Table is based on base conditions of $P_b=14.73$ PSIA and $T_b=60^\circ$ F, and average atmospheric pressure $P_a=14.48$ PSIA.

Table incorporates effect of supercompressibility factor (Fpv) for 0.6 specific gravity natural gas at 60° F and 0% CO_2 and N_2 (per A.G.A. Report No. 8).

Note: Maximum flow rate (dial rate) at flowing conditions is equal to 57,000 ACFH, irrespective of the operating pressure (within the maximum allowable operating pressure of the meter).

Performance ratings in the above tables are based on +/-1% measurement accuracy for all pressures and flowrates shown.

(1) There is approximately 15% less pressure loss when compared to our T-35 Turbo-Meter @990 Nm³/hr.

150mm (G650) T-35 MARK II TURBO-METER 45° ROTOR ANGLE (S.I. Units - Cubic Meters)

COMPRESS- IBILITY RATIO	METER PRESSURE	MAXIMUM FLOWRATE	MAXIMUM FLOWRATE	MINIMUM FLOWRATE	MINIMUM FLOWRATE	MIN DIAL RATE	MAX/ MIN FLOW RANGE	APPROX. PRESS. LOSS @1000 Nm ³ /hr kPa
$S=(Fpv)^2$	kPa	Nm ³ /hr	Nm ³ /day	Nm ³ /hr	Nm ³ /day	m ³ /hr		
1.0000	1.72	1,000	24,000	50	1,190	50	20	0.6
1.0008	34	1,300	31,000	57	1,370	43	23	0.8
1.0016	69	1,640	39,000	64	1,540	39	26	1.0
1.0024	103	1,980	48,000	70	1,690	34	28	1.2
1.0032	138	2,320	56,000	76	1,820	32	31	1.5
1.0040	172	2,660	64,000	81	1,950	30	33	1.5
1.0080	345	4,360	105,000	104	2,500	24	42	2.7
1.0121	517	6,090	146,000	123	2,950	20	50	4.0
1.0162	689	7,820	188,000	139	3,390	18	56	5.0
1.0203	862	9,570	230,000	154	3,700	16	62	6.0
1.0330	1,379	14,900	357,000	192	4,620	13	70	9
1.0502	2,068	22,240	534,000	235	5,640	10	95	13
1.0680	2,758	29,800	715,000	272	6,520	9	110	18
1.0863	3,447	37,620	903,000	305	7,330	8	123	23
1.1050	4,137	45,690	1,097,000	337	8,080	7	136	28
1.1241	4,826	54,050	1,297,000	366	8,780	7	148	33
1.1435	5,516	62,690	1,505,000	394	9,460	6	159	38
1.1630	6,205	71,580	1,718,000	421	10,110	6	170	43
1.1826	6,895	80,760	1,938,000	447	10,740	5	181	49
1.2021	7,584	90,170	2,164,000	473	11,350	5	191	54
1.2212	8,274	99,830	2,396,000	497	11,940	5	201	60
1.2397	8,963	109,690	2,633,000	522	12,520	5	210	66
1.2641	9,928	123,770	2,970,000	554	13,290	5	223	75

150mm (6") T-35 meters of standard construction register 1 m³ per revolution of the mechanical output shaft.

Table is based on IGU standard reference conditions of Pb=101.325 kPa and Tb=15° C, and average atmospheric pressure Pa=99.8 kPa.

Table incorporates effect of supercompressibility factor (Fpv) for 0.6 specific gravity natural gas at 15.6°C and 0% CO₂ and N₂ (per A.G.A. Report No. 8).

Note: Maximum flow rate (dial rate) at flowing conditions is equal to 1000 Nm³/hr, irrespective of the operating pressure (within the maximum allowable operating pressure of the meter).

Performance ratings in the above tables are based on +/- 1% measurement accuracy for all pressures and flowrates shown.

150mm (G1000) T-57 MARK II TURBO-METER 30° ROTOR ANGLE (S.I. Units - Cubic Meters)

COMPRESS- IBILITY RATIO	METER PRESSURE	MAXIMUM FLOWRATE	MAXIMUM FLOWRATE	MINIMUM FLOWRATE	MINIMUM FLOWRATE	MIN DIAL RATE	MAX/ MIN FLOW RANGE	APPROX. PRESS. LOSS @1620 Nm ³ /hr kPa	(1) APPROX. PRESS. LOSS @1000 Nm ³ /hr kPa
$S=(Fpv)^2$	kPa	Nm ³ /hr	Nm ³ /day	Nm ³ /hr	Nm ³ /day	m ³ /hr			
1.0000	1.72	1,620	39,000	81	1,940	81	20	1.3	0.51
1.0008	34	2,120	51,000	93	2,230	70	23	1.7	0.68
1.0016	69	2,690	65,000	104	2,500	63	26	2.1	0.85
1.0024	103	3,230	78,000	114	2,750	57	28	2.5	1.0
1.0032	138	3,800	91,000	124	2,970	53	31	3.0	1.2
1.0040	172	4,330	104,000	133	3,180	49	33	3.5	1.4
1.0080	345	7,140	171,000	170	4,070	39	42	5.7	2.3
1.0121	517	9,910	238,000	200	4,810	33	50	8.0	3.2
1.0162	689	12,750	306,000	227	5,450	29	56	10	4.0
1.0203	862	15,610	374,000	251	6,020	26	62	12	5.0
1.0330	1,379	24,280	583,000	313	7,510	21	78	19	7.7
1.0502	2,068	36,200	869,000	382	9,180	17	95	28	11
1.0680	2,758	48,530	1,165,000	442	10,620	15	110	38	15
1.0863	3,447	61,270	1,471,000	497	11,940	13	123	48	19
1.1050	4,137	74,420	1,786,000	548	13,160	12	136	59	23
1.1241	4,826	88,040	2,113,000	596	14,300	11	148	69	28
1.1435	5,516	102,090	2,450,000	642	15,410	10	159	80	32
1.1630	6,205	116,600	2,798,000	686	16,470	10	170	92	37
1.1826	6,895	131,530	3,157,000	729	17,490	9	181	103	42
1.2021	7,584	146,850	3,525,000	770	18,480	8	191	115	46
1.2212	8,274	162,570	3,902,000	810	19,440	8	201	128	51
1.2397	8,963	178,640	4,287,000	849	20,380	8	210	140	56
1.2641	9,928	201,550	4,837,000	902	21,650	7	223	158	64

150mm (6") T-57 meters of standard construction register 1 m³ per revolution of the mechanical output shaft.

Table is based on IGU standard reference conditions of Pb=101.325 kPa and Tb=15° C, and average atmospheric pressure Pa=99.8 kPa.

Table incorporates effect of supercompressibility factor (Fpv) for 0.6 specific gravity natural gas at 15.6°C and 0% CO₂ and N₂ (per A.G.A. Report No. 8).

Note: Maximum flow rate (dial rate) at flowing conditions is equal to 1620 Nm³/hr, irrespective of the operating pressure (within the maximum allowable operating pressure of the meter).

Performance ratings in the above tables are based on +/- 1% measurement accuracy for all pressures and flowrates shown.

(1) There is approximately 15% less pressure loss when compared to our T-35 Turbo-Meter @1000 Nm³/hr.

8" T-60 MARK II TURBO-METER 45° ROTOR ANGLE (U.S. Units - Cubic Feet)

COMPRESS- IBILITY RATIO	METER PRESSURE	MAXIMUM FLOWRATE	MAXIMUM FLOWRATE	MINIMUM FLOWRATE	MINIMUM FLOWRATE	MIN DIAL RATE	MAX/ MIN FLOW RANGE	APPROX. PRESS LOSS INCHES W.C. @60000 ACFH
$S=(Fpv)^2$	PSIG	SCFH	MSCFD	SCFH	MSCFD	ACFH		
1.0000	0.25	60,000	1,440	3,000	72	3,000	20	2.0
1.0008	5	79,000	1,900	3,500	84	2,610	23	2.6
1.0016	10	100,000	2,400	3,900	94	2,330	26	3.3
1.0024	15	120,000	2,880	4,200	101	2,120	29	4.0
1.0032	20	141,000	3,380	4,600	110	1,960	31	4.7
1.0040	25	161,000	3,860	4,900	118	1,830	33	5.4
1.0080	50	265,000	6,360	6,300	151	1,430	42	8.8
1.0121	75	369,000	8,860	7,400	178	1,210	50	12
1.0162	100	474,000	11,380	8,400	202	1,070	56	16
1.0203	125	580,000	13,920	9,300	223	970	62	19
1.0330	200	902,000	21,650	11,600	278	770	78	30
1.0502	300	1,345,000	32,280	14,200	341	630	95	45
1.0680	400	1,803,000	43,270	16,400	394	550	110	60
1.0863	500	2,276,000	54,620	18,500	444	490	123	76
1.1050	600	2,766,000	66,380	20,400	490	440	136	92
1.1241	700	3,271,000	78,500	22,200	533	410	147	109
1.1435	800	3,794,000	91,060	23,900	574	380	159	129
1.1630	900	4,332,000	103,970	25,500	612	350	170	144
1.1826	1,000	4,887,000	117,290	27,100	650	330	180	163
1.2021	1,100	5,457,000	130,970	28,600	686	310	191	182
1.2212	1,200	6,041,000	144,980	30,100	722	300	211	201
1.2397	1,300	6,683,000	159,310	31,600	758	290	210	229
1.2641	1,440	7,489,000	179,740	33,500	804	270	224	250

8" Model T-60 meters of standard construction register 1000 cubic feet per revolution of the mechanical output shaft.

Table is based on base conditions of $P_b=14.73$ PSIA and $T_b=60^\circ$ F, and average atmospheric pressure $P_a=14.48$ PSIA.

Table incorporates effect of supercompressibility factor (Fpv) for 0.6 specific gravity natural gas at 60° F and 0% CO_2 and N_2 (per A.G.A. Report No. 8).

Note: Maximum flow rate (dial rate) at flowing conditions is equal to 60,000 ACFH, irrespective of the operating pressure (within the maximum allowable operating pressure of the meter).

Performance ratings in the above table are based on +/-1% measurement accuracy for all pressures and flowrates shown.

8" T-90 MARK II TURBO-METER 30° ROTOR ANGLE (U.S. Units - Cubic Feet)

COMPRESS- IBILITY RATIO	METER PRESSURE	MAXIMUM FLOWRATE	MAXIMUM FLOWRATE	MINIMUM FLOWRATE	MINIMUM FLOWRATE	MIN DIAL RATE	MAX/ MIN FLOW RANGE	APPROX. PRESS LOSS INCHES W.C. @90000 ACFH	(1) APPROX. PRESS LOSS INCHES W.C. @60000 ACFH
$S=(Fpv)^2$	PSIG	SCFH	MSCFD	SCFH	MSCFD	ACFH			
1.0000	0.25	90,000	2,160	4,500	108	4,500	20	3.9	1.9
1.0008	5	119,000	2,860	5,180	124	3,910	23	5.1	2.4
1.0016	10	150,000	3,600	5,810	139	3,490	26	6.5	3.1
1.0024	15	181,000	4,340	6,370	153	3,180	28	7.8	3.7
1.0032	20	211,000	5,060	6,900	166	2,940	31	9.1	4.3
1.0040	25	242,000	5,810	7,380	177	2,740	33	10	5.0
1.0080	50	397,000	9,530	9,450	227	2,140	42	17	8.2
1.0121	75	553,000	13,270	11,160	268	1,810	50	24	11
1.0162	100	711,000	17,060	12,650	304	1,600	56	31	15
1.0203	125	870,000	20,880	13,990	336	1,450	62	38	18
1.0330	200	1,354,000	32,500	17,450	419	1,160	78	59	28
1.0502	300	2,018,000	48,430	21,310	511	950	95	87	41
1.0680	400	2,705,000	64,920	24,670	592	820	110	117	56
1.0863	500	3,415,000	81,960	27,720	665	730	123	148	70
1.1050	600	4,149,000	99,580	30,550	733	660	136	179	85
1.1241	700	4,907,000	117,770	33,230	798	610	148	212	101
1.1435	800	5,691,000	136,580	35,780	859	570	159	246	117
1.1630	900	6,498,000	155,950	38,240	918	530	170	281	134
1.1826	1,000	7,330,000	175,920	40,610	975	500	180	317	151
1.2021	1,100	8,186,000	196,460	42,920	1,030	470	191	354	168
1.2212	1,200	9,062,000	217,490	45,150	1,084	450	201	392	186
1.2397	1,300	9,957,000	238,970	47,330	1,136	430	210	430	205
1.2641	1,440	11,234,000	269,620	50,280	1,207	400	223	486	231

8" Model T-90 meters of standard construction register 1000 cubic feet per revolution of the mechanical output shaft.

Table is based on base conditions of $P_b=14.73$ PSIA and $T_b=60^\circ$ F, and average atmospheric pressure $P_a=14.48$ PSIA.

Table incorporates effect of supercompressibility factor (Fpv) for 0.6 specific gravity natural gas at 60° F and 0% CO_2 and N_2 (per A.G.A. Report No. 8).

Note: Maximum flow rate (dial rate) at flowing conditions is equal to 90,000 ACFH, irrespective of the operating pressure (within the maximum allowable operating pressure of the meter).

Performance ratings in the above table are based on +/-1% measurement accuracy for all pressures and flowrates shown.

(1) There is approximately 7% less pressure loss when compared to our T-60 Turbo-Meter at 60,000 ACFH.

200mm (G1000) T-60 MARK II TURBO-METER 45° ROTOR ANGLE (S.I. Units - Cubic Meters)

COMPRESS- IBILITY RATIO	METER PRESSURE	MAXIMUM FLOWRATE	MAXIMUM FLOWRATE	MINIMUM FLOWRATE	MINIMUM FLOWRATE	MIN DIAL RATE	MAX/ MIN FLOW RANGE	APPROX. PRESS LOSS @1700 Nm ³ /hr kPa
$S=[Fpv]^2$	kPa	Nm ³ /hr	Nm ³ /day	Nm ³ /hr	Nm ³ /day	m ³ /hr		
1.0000	1.72	1,700	41,000	85	2,040	85	20	0.5
1.0008	34	2,240	54,000	99	2,380	74	23	0.7
1.0016	69	2,830	68,000	110	2,650	68	26	0.8
1.0024	103	3,400	82,000	119	2,860	60	29	1.0
1.0032	138	3,990	96,000	130	3,130	56	31	1.2
1.0040	172	4,560	109,000	139	3,330	52	33	1.3
1.0080	345	7,510	180,000	178	4,280	40	42	2.2
1.0121	517	10,450	251,000	210	5,030	34	50	3.0
1.0162	689	13,430	322,000	238	5,710	30	56	4.0
1.0203	862	16,430	394,000	263	6,320	27	62	4.7
1.0330	1,379	25,550	613,000	329	7,890	22	78	7.5
1.0502	2,068	38,100	914,000	402	9,650	18	95	11
1.0680	2,758	51,080	1,226,000	465	11,150	16	110	15
1.0863	3,447	64,470	1,547,000	524	12,580	14	123	19
1.1050	4,137	78,360	1,880,000	578	13,870	12	136	23
1.1241	4,826	92,660	2,224,000	629	15,090	12	147	27
1.1435	5,516	107,480	2,580,000	677	16,250	11	159	31
1.1630	6,205	122,720	2,945,000	722	17,340	10	170	36
1.1826	6,895	138,440	3,323,000	768	18,420	9	180	41
1.2021	7,584	154,590	3,710,000	810	19,440	9	191	45
1.2212	8,274	171,130	4,107,000	853	20,460	8	201	50
1.2397	8,963	188,040	4,513,000	895	21,480	8	210	55
1.2641	9,928	212,150	5,092,000	949	22,780	8	224	62

200mm (8") T-60 meters of standard construction register 10 m³ per revolution of the mechanical output shaft.

Table is based on IGU standard reference conditions of Pb=101.325 kPa and Tb=15° C, and average atmospheric pressure Pa=99.8 kPa. Table incorporates effect of supercompressibility factor (Fpv) for 0.6 specific gravity natural gas at 15.6°C and 0% CO₂ and N₂ (per A.G.A. Report No. 8).

Note: Maximum flow rate (dial rate) at flowing conditions is equal to 1,700 Nm³/hr, irrespective of the operating pressure (within the maximum allowable operating pressure of the meter).

Performance ratings in the above tables are based on +/-1% measurement accuracy for all pressures and flowrates shown.

200mm (G1600) T-90 MARK II TURBO-METER 30° ROTOR ANGLE (S.I. Units - Cubic Meters)

COMPRESS- IBILITY RATIO	METER PRESSURE	MAXIMUM FLOWRATE	MAXIMUM FLOWRATE	MINIMUM FLOWRATE	MINIMUM FLOWRATE	MIN DIAL RATE	MAX/ MIN FLOW RANGE	APPROX. PRESS LOSS @2550 Nm ³ /hr kPa	(1) APPROX. PRESS LOSS @1700 Nm ³ /hr kPa
$S=[Fpv]^2$	kPa	Nm ³ /hr	Nm ³ /day	Nm ³ /hr	Nm ³ /day	m ³ /hr			
1.0000	1.72	2,550	61,000	127	3,060	127	20	1.0	0.46
1.0008	34	3,370	81,000	147	3,520	111	23	1.3	0.61
1.0016	69	4,250	102,000	165	3,950	99	26	1.6	0.77
1.0024	103	5,130	123,000	180	4,330	90	28	1.9	0.92
1.0032	138	5,980	143,000	195	4,690	83	31	2.3	1.1
1.0040	172	6,860	165,000	209	5,020	78	33	2.6	1.2
1.0080	345	11,250	270,000	268	6,420	61	42	4.3	2.0
1.0121	517	15,670	376,000	316	7,590	51	50	6.0	2.8
1.0162	689	20,140	483,000	358	8,600	45	56	7.6	3.6
1.0203	862	24,650	591,000	396	9,510	41	62	9.4	4.4
1.0330	1,379	38,360	921,000	494	11,860	33	78	15	6.9
1.0502	2,068	57,170	1,372,000	604	14,490	27	95	22	10
1.0680	2,758	76,630	1,839,000	699	16,770	23	110	29	14
1.0863	3,447	96,740	2,322,000	785	18,850	21	123	37	17
1.1050	4,137	117,530	2,821,000	865	20,770	19	136	45	21
1.1241	4,826	139,010	3,336,000	941	22,590	17	148	53	25
1.1435	5,516	161,210	3,869,000	1,014	24,330	16	159	61	29
1.1630	6,205	184,080	4,418,000	1,083	26,000	15	170	70	33
1.1826	6,895	207,640	4,983,000	1,150	27,610	14	180	79	37
1.2021	7,584	231,890	5,565,000	1,216	29,180	13	191	88	42
1.2212	8,274	256,710	6,161,000	1,279	30,700	13	201	97	46
1.2397	8,963	282,060	6,770,000	1,341	32,180	12	210	107	51
1.2641	9,928	318,240	7,638,000	1,424	34,180	11	223	121	57

200mm (8") T-90 meters of standard construction register 10 m³ per revolution of the mechanical output shaft.

Table is based on IGU standard reference conditions of Pb=101.325 kPa and Tb=15° C, and average atmospheric pressure Pa=99.8 kPa.

Table incorporates effect of supercompressibility factor (Fpv) for 0.6 specific gravity natural gas at 15.6°C and 0% CO₂ and N₂ (per A.G.A. Report No. 8).

Note: Maximum flow rate (dial rate) at flowing conditions is equal to 2,550 Nm³/hr, irrespective of the operating pressure (within the maximum allowable operating pressure of the meter).

Performance ratings in the above tables are based on +/-1% measurement accuracy for all pressures and flowrates shown.

(1) There is approximately 7% less pressure loss when compared to our T-60 Turbo-Meter at 1,700 Nm³/hr.

12" T-140 MARK II TURBO-METER 45° ROTOR ANGLE (U.S. Units - Cubic Feet)

COMPRESS- IBILITY RATIO	METER PRESSURE	MAXIMUM FLOW/RATE	MAXIMUM FLOW/RATE	MINIMUM FLOW/RATE	MINIMUM FLOW/RATE	MIN DIAL RATE	MAX/ MIN FLOW RANGE	APPROX. PRESS LOSS INCHES W.C. @140000 ACFH
$S=(Fpv)^2$	PSIG	SCFH	MSCFD	SCFH	MSCFD	ACFH		
1.0000	0.25	140,000	3,360	5,600	134	5,600	25	1.4
1.0008	5	185,000	4,400	6,400	154	4,870	29	1.9
1.0016	10	233,000	5,590	7,200	173	4,340	32	2.3
1.0024	15	281,000	6,740	7,900	190	3,950	36	2.8
1.0032	20	329,000	7,900	8,600	206	3,650	38	3.3
1.0040	25	377,000	9,050	9,200	221	3,410	41	3.8
1.0080	50	618,000	14,830	11,800	283	2,670	52	6.2
1.0121	75	861,000	20,660	13,900	334	2,260	62	9
1.0162	100	1,106,000	26,540	15,700	377	1,990	70	11
1.0203	125	1,353,000	32,470	17,400	418	1,800	78	14
1.0330	200	2,106,000	50,540	21,700	521	1,440	97	21
1.0502	300	3,139,000	75,340	26,500	636	1,180	118	31
1.0680	400	4,207,000	100,970	30,700	737	1,020	137	42
1.0863	500	5,312,000	127,490	34,500	828	910	154	53
1.1050	600	6,454,000	154,900	38,000	912	820	170	65
1.1241	700	7,633,000	183,190	41,400	994	760	184	76
1.1435	800	8,852,000	212,450	44,500	1,068	700	199	89
1.1630	900	10,108,000	242,590	47,600	1,142	660	212	101
1.1826	1,000	11,403,000	273,670	50,500	1,212	620	226	114
1.2021	1,100	12,733,000	305,590	53,400	1,282	590	238	127
1.2212	1,200	14,096,000	338,300	56,200	1,349	560	251	141
1.2397	1,300	15,488,000	371,710	58,900	1,414	530	263	155
1.2641	1,440	17,475,000	419,400	62,600	1,502	500	279	175

12" Model T-140 meters of standard construction register 1000 cubic feet per revolution of the mechanical output shaft.

Table is based on base conditions of Pb=14.73 PSIA and Tb=60° F, and average atmospheric pressure Pa=14.48 PSIA.

Table incorporates effect of supercompressibility factor (Fpv) for 0.6 specific gravity natural gas at 60°F and 0% CO₂ and N₂ (per A.G.A. Report No. 8).

Note: Maximum flow rate (dial rate) at flowing conditions is equal to 140,000 ACFH, irrespective of the operating pressure (within the maximum allowable operating pressure of the meter).

Performance ratings in the above tables are based on +/-1% measurement accuracy for all pressures and flowrates shown.

12" T-230 MARK II TURBO-METER 30° ROTOR ANGLE (U.S. Units - Cubic Feet)

COMPRESS- IBILITY RATIO	METER PRESSURE	MAXIMUM FLOW/RATE	MAXIMUM FLOW/RATE	MINIMUM FLOW/RATE	MINIMUM FLOW/RATE	MIN DIAL RATE	MAX/ MIN FLOW RANGE	APPROX. PRESS LOSS INCHES W.C. @230000 ACFH	(1) APPROX. PRESS LOSS INCHES W.C. @140000 ACFH
$S=(Fpv)^2$	PSIG	SCFH	MSCFD	SCFH	MSCFD	ACFH			
1.0000	0.25	230,000	5,520	9,200	221	9,200	25	2.7	1.1
1.0008	5	304,000	7,300	10,580	254	8,000	29	3.5	1.5
1.0016	10	383,000	9,190	11,870	285	7,130	32	4.4	1.8
1.0024	15	461,000	11,060	13,030	313	6,500	35	5.4	2.2
1.0032	20	540,000	12,960	14,100	338	6,000	38	6.3	2.6
1.0040	25	619,000	14,860	15,090	362	5,610	41	7.2	3.0
1.0080	50	1,015,000	24,360	19,330	464	4,380	53	12	4.9
1.0121	75	1,414,000	33,940	22,810	547	3,710	62	16	6.8
1.0162	100	1,816,000	43,580	25,850	620	3,270	70	21	8.7
1.0203	125	2,222,000	53,330	28,600	686	2,960	78	26	11
1.0330	200	3,459,000	83,020	35,680	856	2,370	97	40	17
1.0502	300	5,157,000	123,770	43,560	1,045	1,940	118	60	25
1.0680	400	6,912,000	165,890	50,430	1,210	1,680	137	80	33
1.0863	500	8,727,000	209,450	56,670	1,360	1,490	154	101	42
1.1050	600	10,602,000	254,450	62,460	1,499	1,360	170	123	51
1.1241	700	12,541,000	300,980	67,930	1,630	1,250	185	146	60
1.1435	800	14,543,000	349,030	73,160	1,756	1,160	199	169	70
1.1630	900	16,607,000	398,570	78,170	1,876	1,080	212	193	79
1.1826	1,000	18,733,000	449,590	83,030	1,993	1,020	226	217	90
1.2021	1,100	20,919,000	502,060	87,740	2,106	960	238	243	100
1.2212	1,200	23,158,000	555,790	92,320	2,216	920	251	269	111
1.2397	1,300	25,445,000	610,680	96,770	2,322	870	263	295	122
1.2641	1,440	28,709,000	689,020	102,790	2,467	820	279	333	137

12" Model T-230 meters of standard construction register 1000 cubic feet per revolution of the mechanical output shaft.

Table is based on base conditions of Pb=14.73 PSIA and Tb=60° F, and average atmospheric pressure Pa=14.48 PSIA.

Table incorporates effect of supercompressibility factor (Fpv) for 0.6 specific gravity natural gas at 60°F and 0% CO₂ and N₂ (per A.G.A. Report No. 8).

Note: Maximum flow rate (dial rate) at flowing conditions is equal to 230,000 ACFH, irrespective of the operating pressure (within the maximum allowable operating pressure of the meter).

Performance ratings in the above tables are based on +/-1% measurement accuracy for all pressures and flowrates shown.

(1) There is approximately 20% less pressure loss when compared to our T-140 Turbo-Meter at 140,000 ACFH

300mm (G2500) T-140 MARK II TURBO-METER 45° ROTOR ANGLE (S.I. Units - Cubic Meters)

COMPRESS- IBILITY RATIO	METER PRESSURE	MAXIMUM FLOWRATE	MAXIMUM FLOWRATE	MINIMUM FLOWRATE	MINIMUM FLOWRATE	MIN DIAL RATE	MAX/ MIN FLOW RANGE	APPROX. PRESS LOSS @3970 Nm ³ /hr kPa
$S=(Fpv)^2$	kPa	Nm ³ /hr	Nm ³ /day	Nm ³ /hr	Nm ³ /day	m ³ /hr		
1.0000	1.72	3,970	95,000	159	3,810	159	25	0.3
1.0008	34	5,240	126,000	181	4,350	138	29	0.5
1.0016	69	6,600	158,000	204	4,900	123	32	0.6
1.0024	103	7,960	191,000	224	5,370	112	36	0.7
1.0032	138	9,320	224,000	244	5,850	103	38	0.8
1.0040	172	10,680	256,000	261	6,250	97	41	0.9
1.0080	345	17,510	420,000	334	8,020	76	52	1.5
1.0121	517	24,390	585,000	394	9,450	64	62	2.2
1.0162	689	31,330	752,000	445	10,670	56	70	2.7
1.0203	862	38,330	920,000	493	11,830	51	78	3.5
1.0330	1,379	59,660	1,432,000	615	14,750	41	97	5.2
1.0502	2,068	88,920	2,134,000	751	18,020	33	118	8
1.0680	2,758	119,180	2,860,000	870	20,870	29	137	10
1.0863	3,447	150,480	3,612,000	977	23,460	26	154	13
1.1050	4,137	182,830	4,388,000	1,076	25,840	23	170	16
1.1241	4,826	216,230	5,189,000	1,173	28,150	22	184	19
1.1435	5,516	250,760	6,018,000	1,261	30,250	20	199	22
1.1630	6,205	286,340	6,872,000	1,348	32,360	19	212	25
1.1826	6,895	323,020	7,753,000	1,431	34,330	18	226	28
1.2021	7,584	360,700	8,657,000	1,513	36,310	17	238	32
1.2212	8,274	399,310	9,583,000	1,592	38,210	16	251	35
1.2397	8,963	438,740	10,530,000	1,669	40,040	15	263	39
1.2641	9,928	495,030	11,881,000	1,773	42,560	14	279	44

300mm (12") T-140 meters of standard construction register 10 m³ per revolution of the mechanical output shaft.

Table is based on IGU standard reference conditions of Pb=101.325 kPa and Tb=15° C, and average atmospheric pressure Pa=99.8 kPa.

Table incorporates effect of supercompressibility factor (Fpv) for 0.6 specific gravity natural gas at 15.6°C and 0% CO₂ and N₂ (per A.G.A. Report No. 8).

Note: Maximum flow rate (dial rate) at flowing conditions is equal to 3970 Nm³/hr, irrespective of the operating pressure (within the maximum allowable operating pressure of the meter).

Performance ratings in the above tables are based on +/-1% measurement accuracy for all pressures and flowrates shown.

300mm (G4000) T-230 MARK II TURBO-METER 30° ROTOR ANGLE (S.I. Units - Cubic Meters)

COMPRESS- IBILITY RATIO	METER PRESSURE	MAXIMUM FLOWRATE	MAXIMUM FLOWRATE	MINIMUM FLOWRATE	MINIMUM FLOWRATE	MIN DIAL RATE	MAX/ MIN FLOW RANGE	APPROX. PRESS LOSS @6520 Nm ³ /hr kPa	(1) APPROX. PRESS LOSS @3970 Nm ³ /hr kPa
$S=(Fpv)^2$	kPa	Nm ³ /hr	Nm ³ /day	Nm ³ /hr	Nm ³ /day	m ³ /hr			
1.0000	1.72	6,520	156,000	261	6,250	261	25	0.66	0.27
1.0008	34	8,610	207,000	300	7,190	227	29	0.88	0.36
1.0016	69	10,850	260,000	336	8,070	202	32	1.1	0.46
1.0024	103	13,060	313,000	369	8,860	184	35	1.3	0.55
1.0032	138	15,300	367,000	399	9,590	170	38	1.6	0.64
1.0040	172	17,540	421,000	427	10,260	159	41	1.8	0.74
1.0080	345	28,750	690,000	548	13,140	124	53	2.9	1.2
1.0121	517	40,060	961,000	646	15,510	105	62	4.0	1.7
1.0162	689	51,440	1,235,000	732	17,570	93	70	5.0	2.2
1.0203	862	62,940	1,511,000	810	19,440	84	78	6.0	2.7
1.0330	1,379	97,990	2,352,000	1,011	24,260	67	97	10	4.2
1.0502	2,068	146,090	3,506,000	1,234	29,620	55	118	15	6.2
1.0680	2,758	195,800	4,699,000	1,429	34,290	48	137	20	8.2
1.0863	3,447	247,220	5,933,000	1,605	38,530	42	154	25	10
1.1050	4,137	300,330	7,208,000	1,769	42,460	39	170	31	13
1.1241	4,826	355,260	8,526,000	1,924	46,180	35	185	36	15
1.1435	5,516	411,970	9,887,000	2,072	49,740	33	199	42	17
1.1630	6,205	470,440	11,291,000	2,214	53,150	31	212	48	20
1.1826	6,895	530,670	12,736,000	2,352	56,450	29	226	54	22
1.2021	7,584	592,590	14,222,000	2,485	59,650	27	238	60	25
1.2212	8,274	656,020	15,744,000	2,615	62,770	26	251	67	28
1.2397	8,963	720,810	17,299,000	2,741	65,790	25	263	74	30
1.2641	9,928	813,270	19,519,000	2,912	69,880	23	279	83	34

300mm (12") T-230 meters of standard construction register 10 m³ per revolution of the mechanical output shaft.

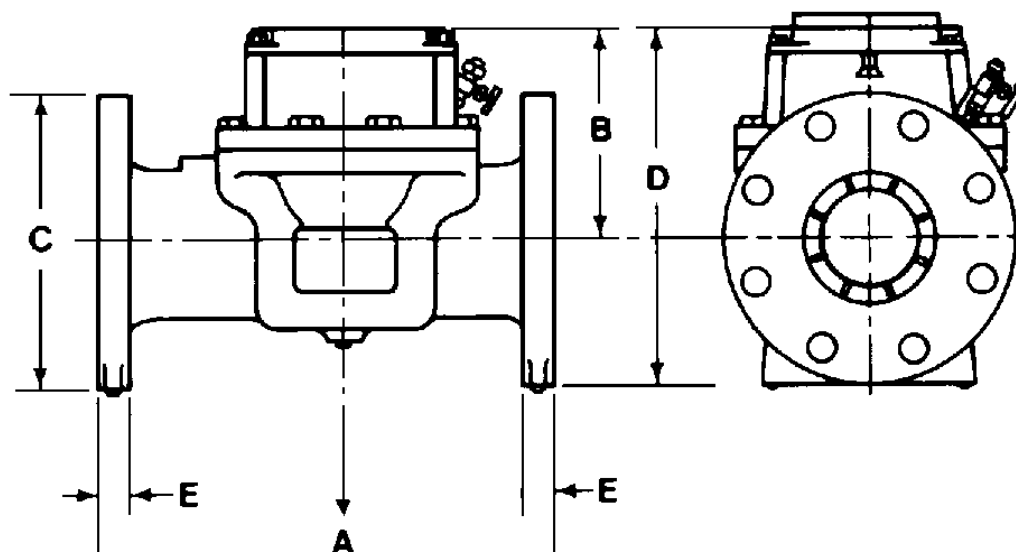
Table is based on IGU standard reference conditions of Pb=101.325 kPa and Tb=15° C, and average atmospheric pressure Pa=99.8 kPa.

Table incorporates effect of supercompressibility factor (Fpv) for 0.6 specific gravity natural gas at 15.6°C and 0% CO₂ and N₂ (per A.G.A. Report No. 8).

Note: Maximum flow rate (dial rate) at flowing conditions is equal to 6520 Nm³/hr, irrespective of the operating pressure (within the maximum allowable operating pressure of the meter)

Performance ratings in the above tables are based on +/-1% measurement accuracy for all pressures and flowrates shown.

(1) There is approximately 20% less pressure loss when compared to our T-140 Turbo-Meter at 3970 Nm³/hr.



4" T-18/27 MARK II (Dimension in inches)

BODY MATERIAL	MAXIMUM RATED WORKING PRESSURE (PSIG)	A	B	C	D	E	METER SHIPPING WEIGHT (LBS.)	MINIMUM ACCEPT SPIN TIME (SEC.)
Aluminum	175	14	6½	9	11⅜	1⅝	36	70*
Steel/ANSI 150	275	15½	7⅞	9	11¼	1⅝	105	70*
Steel/ANSI 300	720	15½	7⅞	10	12⅝	1¼	140	70*
Steel/ANSI 600	1440	15½	7⅞	10¼	12⅞	1¼	175	70*

Meter mounted instruments and indexes mount directly on the index plate of Mark II Turbo-Meters. Turbo-Meters of standard construction register 100 cubic feet per revolution of the mechanical output shaft.

* 50 seconds for plastic rotor T-18

8" T-60/90 MARK II (Dimension in inches)

BODY MATERIAL	MAXIMUM RATED WORKING PRESSURE (PSIG)	A	B	C	D	E	METER SHIPPING WEIGHT (LBS.)	MINIMUM ACCEPT SPIN TIME (SEC.)
Aluminum	175	21	9⅜	13½	16⅞	1⅝	134	170
Steel/ANSI 150	275	27¼	9⅜	13½	16⅞	1⅝	284	180
Steel/ANSI 300	720	27¼	10⅝	15	17⅜	1⅝	430	180
Steel/ANSI 600	1440	27¼	10⅝	16½	18⅝	2⅞	596	180

Meter mounted instruments and indexes mount directly on the index plate of Mark II Turbo-Meters. Turbo-Meters of standard construction register 1000 cubic feet per revolution of the mechanical output shaft.

6" T-35/57 MARK II (Dimension in inches)

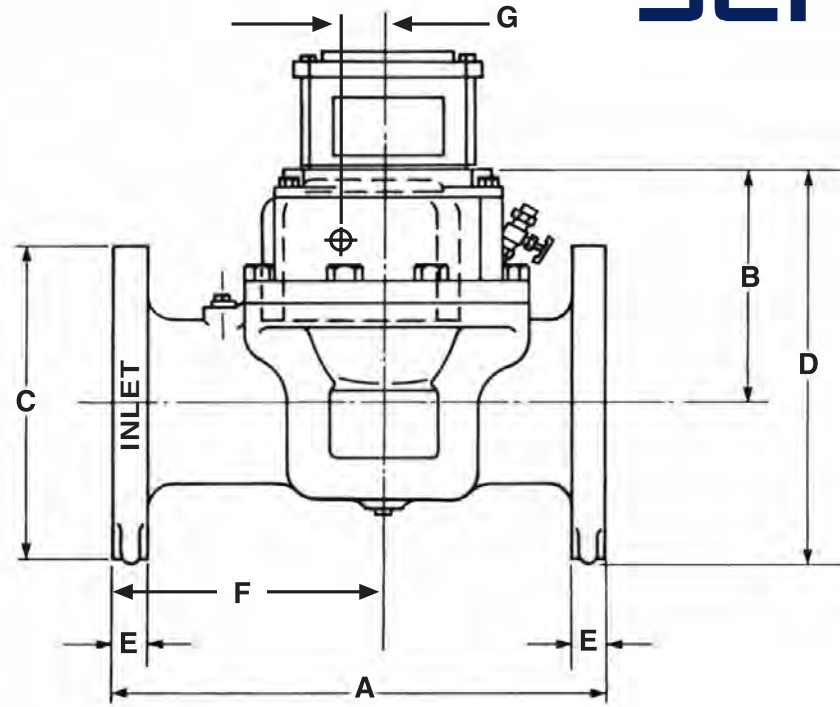
BODY MATERIAL	MAXIMUM RATED WORKING PRESSURE (PSIG)	A	B	C	D	E	METER SHIPPING WEIGHT (LBS.)	MINIMUM ACCEPT SPIN TIME (SEC.)
Aluminum	175	16	8⅞	11	14⅜	1⅝	75	140
Steel/ANSI 150	275	22½	8⅞	11	14⅜	1	174	140
Steel/ANSI 300	720	22½	8⅞	12½	15⅝	1⅞	280	140
Steel/ANSI 600	1440	22½	8⅞	14	15⅞	2⅞	336	140

Meter mounted instruments and indexes mount directly on the index plate of Mark II Turbo-Meters. Turbo-Meters of standard construction register 100 cubic feet per revolution of the mechanical output shaft.

12" T-140/230 MARK II (Dimension in inches)

BODY MATERIAL	MAXIMUM RATED WORKING PRESSURE (PSIG)	A	B	C	D	E	METER SHIPPING WEIGHT (LBS.)	MINIMUM ACCEPT SPIN TIME (SEC.)
Ductile Iron	220	30	12⅞	19	22⅜	1¼	510	300
Steel/ANSI 300	720	32½	12⅞	20½	23⅜	2	790	300
Steel/ANSI 600	1440	32½	12⅞	22	23⅜	2⅞	1032	300

Meter mounted instruments and indexes mount directly on the index plate of Mark II Turbo-Meters. Turbo-Meters of standard construction register 1000 cubic feet per revolution of the mechanical output shaft.



100mm T-18/27 MARK II (Dimension in millimeters)

BODY MATERIAL	MAXIMUM RATED WORKING PRESSURE (bar)	A	B	C	D	E	METER SHIPPING WEIGHT (Kg.)	MINIMUM ACCEPT SPIN TIME (SEC.)
Aluminum	12	355	165	229	284	24	16.3	70*
Steel/ANSI 150	19	394	179	229	298	24	47.6	70*
Steel/ANSI 300	50	394	186	254	313	32	63.5	70*
Steel/ANSI 600	100	394	186	273	322	44	79.4	70*

Meter mounted instruments and indexes mount directly on the index plate of Mark II Turbo-Meter. Turbo-Meters of standard construction register 1 cubic meters per revolution of the mechanical output shaft. Optional construction with one cubic meter per revolution is available.

* 50 seconds for plastic rotor T-18

200mm T-60/90 MARK II (Dimension in millimeters)

BODY MATERIAL	MAXIMUM RATED WORKING PRESSURE (bar)	A	B	C	D	E	METER SHIPPING WEIGHT (Kg.)	MINIMUM ACCEPT SPIN TIME (SEC.)
Aluminum	12	533	249	343	434	33	61	170
Steel/ANSI 150	19	692	249	343	424	29	129	180
Steel/ANSI 300	50	692	262	381	452	41	195	180
Steel/ANSI 600	100	692	262	419	471	62	270	180

Meter mounted instruments and indexes mount directly on the index plate of Mark II Turbo-Meter. Turbo-Meters of standard construction register 1 cubic meters per revolution of the mechanical output shaft.

150mm T-35/57 MARK II (Dimension in millimeters)

BODY MATERIAL	MAXIMUM RATED WORKING PRESSURE (bar)	A	B	C	D	E	METER SHIPPING WEIGHT (Kg.)	MINIMUM ACCEPT SPIN TIME (SEC.)
Aluminum	12	406	217	279	360	29	33	140
Steel/ANSI 150	19	572	217	279	360	25	79	140
Steel/ANSI 300	50	572	225	318	384	37	127	140
Steel/ANSI 600	100	572	225	356	403	54	152	140

Meter mounted instruments and indexes mount directly on the index plate of Mark II Turbo-Meter. Turbo-Meters of standard construction register 1 cubic meters per revolution of the mechanical output shaft. Optional construction with one cubic meter per revolution is available.

300mm T-140/230 MARK II (Dimension in millimeters)

BODY MATERIAL	MAXIMUM RATED WORKING PRESSURE (bar)	A	B	C	D	E	METER SHIPPING WEIGHT (Kg.)	MINIMUM ACCEPT SPIN TIME (SEC.)
Ductile Iron	16	762	319	483	563	32	231	300
Steel/ANSI 300	50	826	329	521	589	51	358	300
Steel/ANSI 600	100	826	329	559	608	73	467	300

Meter mounted instruments and indexes mount directly on the index plate of Mark II Turbo-Meter. Turbo-Meters of standard construction register 1 cubic meters per revolution of the mechanical output shaft.

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Sensus Metering Systems has been a leading supplier of gas meters, metering systems, instrumentation for gas meters, and pressure regulation equipment since 1886. The company's technological contributions to gas measurement advancement trace over 110 years. Today, millions of Sensus Metering Systems gas meters are in service on all types of gas measurement applications, ranging from high-pressure off-shore producing platforms to multi-tenant dwellings. A wide range of Sensus Metering Systems electronic instruments perform pressure and temperature correction, as well as data acquisition with many of these measurement systems.

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