

Symbol	Typ	Titel
G	Sektion	PHYSICS
G01	Untersektion	INSTRUMENTS
G01	Klasse	MEASURING; TESTING
G01F	Unterkategorie	MEASURING VOLUME, VOLUME FLOW, MASS FLOW, OR LIQUID LEVEL; METERING BY VOLUME [2, 5]
		<u>Measuring volume flow</u>
G01F 1/00	Hauptgruppe	Measuring the volume flow or mass flow of fluid or fluent solid material wherein the fluid passes through the meter in a continuous flow (measuring a proportion of the volume flow G01F 5/00) [1, 2, 2006.01]
G01F 1/05	1-Punkt Untergruppe	. by using mechanical effects [2, 2006.01]
G01F 1/06	2-Punkt Untergruppe	... using rotating vanes with tangential admission [1, 2, 2006.01]
G01F 1/07	3-Punkt Untergruppe	... with mechanical coupling to the indicating device [2, 2006.01]
G01F 1/075	3-Punkt Untergruppe	... with magnetic or electromagnetic coupling to the indicating device [2, 2006.01]
G01F 1/08	3-Punkt Untergruppe	... Adjusting, correcting, or compensating means therefor [1, 2, 2006.01]
G01F 1/10	2-Punkt Untergruppe	... using rotating vanes with axial admission [1, 2, 2006.01]
G01F 1/11	3-Punkt Untergruppe	... with mechanical coupling to the indicating device [2, 2006.01]
G01F 1/115	3-Punkt Untergruppe	... with magnetic or electromagnetic coupling to the indicating device [2, 2006.01]
G01F 1/12	3-Punkt Untergruppe	... Adjusting, correcting, or compensating means therefor [1, 2006.01]
G01F 1/20	2-Punkt Untergruppe	... by detection of dynamic effects of the fluid flow [2, 2006.01]
G01F 1/22	3-Punkt Untergruppe	... by variable-area meters [2, 2006.01]
G01F 1/24	4-Punkt Untergruppe	.... with magnetic or electric coupling to the indicating device [2, 2006.01]
G01F 1/26	4-Punkt Untergruppe	.... of the valve type [2, 2006.01]
G01F 1/28	3-Punkt Untergruppe	... by drag-force, e.g. vane type or impact flowmeter [2, 2006.01]
G01F 1/30	4-Punkt Untergruppe	.... for fluent solid material [2, 2006.01]
G01F 1/32	3-Punkt Untergruppe	... by swirl flowmeter, e.g. using Karman vortices [2, 2006.01]
G01F 1/34	2-Punkt Untergruppe	... by measuring pressure or differential pressure [2, 2006.01]
G01F 1/36	3-Punkt Untergruppe	... the pressure or differential pressure being created by the use of flow constriction [2, 2006.01]
G01F 1/37	4-Punkt Untergruppe	.... the pressure or differential pressure being measured by means of communicating tubes or reservoirs with movable fluid levels, e.g. by U-tubes [2, 2006.01]
G01F 1/38	4-Punkt Untergruppe	.... the pressure or differential pressure being measured by means of a movable element, e.g. diaphragm, piston, Bourdon tube or flexible capsule [2, 2006.01]
G01F 1/40	4-Punkt Untergruppe	.... Details of construction of the flow constriction devices [2, 2006.01]
G01F 1/42	5-Punkt Untergruppe	..... Orifices or nozzles [2, 2006.01]
G01F 1/44	5-Punkt Untergruppe	..... Venturi tubes [2, 2006.01]
G01F 1/46	5-Punkt Untergruppe	..... Pitot tubes [2, 2006.01]

Symbol	Typ	Titel
G01F 1/48	3-Punkt Untergruppe	... the pressure or differential pressure being created by a capillary element [2, 2006.01]
G01F 1/50	3-Punkt Untergruppe	... Correcting or compensating means [2, 2006.01]
G01F 1/52	2-Punkt Untergruppe	... by measuring the height of the fluid level due to the lifting power of the fluid flow [2, 2006.01]
G01F 1/54	2-Punkt Untergruppe	... by means of chains, flexible bands, or wires introduced into, and moved by, the flow [2, 2006.01]
G01F 1/56	1-Punkt Untergruppe	. by using electric or magnetic effects (G01F 1/66 takes precedence) [2, 2006.01]
G01F 1/58	2-Punkt Untergruppe	... by electromagnetic flowmeters [2, 2006.01]
G01F 1/60	3-Punkt Untergruppe	... Circuits therefor [2, 2006.01]
G01F 1/64	2-Punkt Untergruppe	.. by measuring electrical currents passing through the fluid flow; by measuring electrical potential generated by the fluid flow, e.g. by electrochemical, contact, or friction effects (G01F 1/58 takes precedence) [2, 2006.01]
G01F 1/66	1-Punkt Untergruppe	. by measuring frequency, phase shift, or propagation time of electromagnetic or other waves, e.g. ultrasonic flowmeters [2, 2006.01]
G01F 1/68	1-Punkt Untergruppe	. by using thermal effects [2, 2006.01]
G01F 1/684	2-Punkt Untergruppe	.. Structural arrangements; Mounting of elements, e.g. in relation to fluid flow [6, 2006.01]
G01F 1/688	3-Punkt Untergruppe	... using a particular type of heating, cooling or sensing element [6, 2006.01]
G01F 1/69	4-Punkt Untergruppe	.... of resistive type [6, 2006.01]
G01F 1/692	5-Punkt Untergruppe	..... Thin-film arrangements [6, 2006.01]
G01F 1/696	2-Punkt Untergruppe	.. Circuits therefor, e.g. constant-current flow meters [6, 2006.01]
G01F 1/698	3-Punkt Untergruppe	... Feedback or rebalancing circuits, e.g. self heated constant temperature flowmeters [6, 2006.01]
G01F 1/699	4-Punkt Untergruppe	.... by control of a separate heating or cooling element [6, 2006.01]
G01F 1/704	1-Punkt Untergruppe	. using marked regions or existing inhomogeneities within the fluid stream, e.g. statistically occurring variations in a fluid parameter (G01F 1/76, G01F 25/00 take precedence) [4, 2006.01]
G01F 1/708	2-Punkt Untergruppe	.. Measuring the time taken to traverse a fixed distance [4, 2006.01]
G01F 1/712	3-Punkt Untergruppe	... using auto-correlation or cross-correlation detection means [4, 2006.01]
G01F 1/716	3-Punkt Untergruppe	... using electron paramagnetic resonance (EPR) or nuclear magnetic resonance (NMR) [4, 2006.01]
G01F 1/72	1-Punkt Untergruppe	. Devices for measuring pulsing fluid flows [2, 2006.01]
G01F 1/74	1-Punkt Untergruppe	. Devices for measuring flow of a fluid or flow of a fluent solid material in suspension in another fluid [2, 2006.01]
G01F 1/76	1-Punkt Untergruppe	. Devices for measuring mass flow of a fluid or a fluent solid material [2, 2006.01]
G01F 1/78	2-Punkt Untergruppe	.. Direct mass flowmeters [2, 2006.01]
G01F 1/80	3-Punkt Untergruppe	... operating by measuring pressure, force, momentum, or frequency of a fluid flow to which a rotational movement has been imparted [2, 2006.01]
G01F 1/82	4-Punkt Untergruppe	.... using a driven wheel as impeller and one or more other wheels or moving elements which are angularly restrained by a resilient member, e.g. spring member, as the measuring device [2, 2006.01]
G01F 1/84	4-Punkt Untergruppe	.... Coriolis or gyroscopic mass flowmeters [2, 2006.01]

Symbol	Typ	Titel
G01F 1/86	2-Punkt Untergruppe	... Indirect mass flowmeters, e.g. measuring volume flow and density, temperature, or pressure [2, 2006.01]
G01F 1/88	3-Punkt Untergruppe	... with differential-pressure measurement to determine the volume flow [2, 2006.01]
G01F 1/90	3-Punkt Untergruppe	... with positive-displacement meter or turbine meter to determine the volume flow [2, 2006.01]
G01F 3/00	Hauptgruppe	Measuring the volume flow of fluids or fluent solid material wherein the fluid passes through the meter in successive and more or less isolated quantities, the meter being driven by the flow (measuring a proportion of the volume flow G01F 5/00) [1, 2006.01]
G01F 3/02	1-Punkt Untergruppe	. with measuring chambers which expand or contract during measurement [1, 2006.01]
G01F 3/04	2-Punkt Untergruppe	... having rigid movable walls [1, 2006.01]
G01F 3/06	3-Punkt Untergruppe	... comprising members rotating in a fluid-tight or substantially fluid-tight manner in a housing [1, 2006.01]
G01F 3/08	4-Punkt Untergruppe	.... Rotary-piston or ring-piston meters [1, 2006.01]
G01F 3/10	4-Punkt Untergruppe	.... Geared or lobed impeller meters [1, 2006.01]
G01F 3/12	4-Punkt Untergruppe	.... Meters with nutating members, e.g. discs [1, 2006.01]
G01F 3/14	3-Punkt Untergruppe	... comprising reciprocating pistons, e.g. reciprocating in a rotating body [1, 2006.01]
G01F 3/16	4-Punkt Untergruppe	.... in stationary cylinders [1, 2006.01]
G01F 3/18	5-Punkt Untergruppe	..... involving two or more cylinders [1, 2006.01]
G01F 3/20	2-Punkt Untergruppe	... having flexible movable walls, e.g. diaphragms, bellows [1, 2006.01]
G01F 3/22	3-Punkt Untergruppe	... for gases [1, 2006.01]
G01F 3/24	1-Punkt Untergruppe	. with measuring chambers moved during operation (wet gas-meters G01F 3/30) [1, 2006.01]
G01F 3/26	2-Punkt Untergruppe	... Tilting-trap meters [1, 2006.01]
G01F 3/28	2-Punkt Untergruppe	... on carriers rotated by the weight of the liquid in the measuring chambers [1, 2006.01]
G01F 3/30	1-Punkt Untergruppe	. Wet gas-meters [1, 2006.01]
G01F 3/32	2-Punkt Untergruppe	... comprising partitioned drums rotating or nutating in a liquid [1, 2006.01]
G01F 3/34	2-Punkt Untergruppe	... comprising bells reciprocating in a liquid [1, 2006.01]
G01F 3/36	1-Punkt Untergruppe	. with stationary measuring chambers having constant volume during measurement (with measuring chambers which expand or contract during measurement G01F 3/02) [1, 2006.01]
G01F 3/38	2-Punkt Untergruppe	... having only one measuring chamber [1, 2006.01]
G01F 5/00	Hauptgruppe	Measuring a proportion of the volume flow [1, 2006.01]
G01F 7/00	Hauptgruppe	Volume-flow measuring devices with two or more measuring ranges; Compound meters [1, 2006.01]
G01F 9/00	Hauptgruppe	Measuring volume flow relative to another variable, e.g. of liquid fuel for an engine [1, 2006.01]
G01F 9/02	1-Punkt Untergruppe	. wherein the other variable is the speed of a vehicle [1, 2006.01]
		Metering by volume
G01F 11/00	Hauptgruppe	Apparatus requiring external operation adapted at each repeated and identical operation to measure and separate a predetermined volume of fluid or fluent solid material from a supply or container, without regard to weight, and to deliver it [1, 2006.01]
G01F 11/02	1-Punkt Untergruppe	. with measuring chambers which expand or contract during measurement [1, 2006.01]
G01F 11/04	2-Punkt Untergruppe	... of the free-piston type [1, 2006.01]

Symbol	Typ	Titel
G01F 11/06	3-Punkt Untergruppe	... with provision for varying the stroke of the piston [1, 2006.01]
G01F 11/08	2-Punkt Untergruppe	... of the diaphragm or bellows type [1, 2006.01]
G01F 11/10	1-Punkt Untergruppe	. with measuring chambers moved during operation [1, 2006.01]
G01F 11/12	2-Punkt Untergruppe	... of the valve type, i.e. the separating being effected by fluid-tight or powder-tight movements (involving the tilting or inverting of the supply vessel G01F 11/26) [1, 2006.01]
G01F 11/14	3-Punkt Untergruppe	... wherein the measuring chamber reciprocates [1, 2006.01]
G01F 11/16	4-Punkt Untergruppe	.... for liquid or semiliquid [1, 2006.01]
G01F 11/18	4-Punkt Untergruppe	.... for fluent solid material [1, 2006.01]
G01F 11/20	3-Punkt Untergruppe	... wherein the measuring chamber rotates or oscillates [1, 2006.01]
G01F 11/22	4-Punkt Untergruppe	.... for liquid or semiliquid [1, 2006.01]
G01F 11/24	4-Punkt Untergruppe	.... for fluent solid material [1, 2006.01]
G01F 11/26	2-Punkt Untergruppe	... wherein the measuring chamber is filled and emptied by tilting or inverting the supply vessel, e.g. bottle-emptying apparatus [1, 2006.01]
G01F 11/28	1-Punkt Untergruppe	. with stationary measuring chambers having constant volume during measurement [1, 2006.01]
G01F 11/30	2-Punkt Untergruppe	... with supply and discharge valves of the lift or plug-lift type [1, 2006.01]
G01F 11/32	3-Punkt Untergruppe	... for liquid or semiliquid [1, 2006.01]
G01F 11/34	3-Punkt Untergruppe	... for fluent solid material [1, 2006.01]
G01F 11/36	2-Punkt Untergruppe	... with supply or discharge valves of the rectilinearly-moved slide type [1, 2006.01]
G01F 11/38	3-Punkt Untergruppe	... for liquid or semiliquid [1, 2006.01]
G01F 11/40	3-Punkt Untergruppe	... for fluent or solid material [1, 2006.01]
G01F 11/42	2-Punkt Untergruppe	... with supply or discharge valves of the rotary or oscillatory type [1, 2006.01]
G01F 11/44	3-Punkt Untergruppe	... for liquid or semiliquid [1, 2006.01]
G01F 11/46	3-Punkt Untergruppe	... for fluent solid material [1, 2006.01]
G01F 13/00	Hauptgruppe	Apparatus for measuring by volume and delivering fluids or fluent solid materials, not provided for in the preceding groups [1, 2006.01]
G01F 15/00	Hauptgruppe	Details of, or accessories for, apparatus of groups G01F 1/00-G01F 13/00 insofar as such details or appliances are not adapted to particular types of such apparatus [1, 2006.01]
G01F 15/02	1-Punkt Untergruppe	. Compensating or correcting for variations in pressure, density, or temperature [1, 2006.01]
G01F 15/04	2-Punkt Untergruppe	... of gases to be measured [1, 2006.01]
G01F 15/06	1-Punkt Untergruppe	. Indicating or recording devices, e.g. for remote indication [1, 2006.01]
G01F 15/07	1-Punkt Untergruppe	. Integration to give total flow, e.g. using mechanically-operated integrating mechanism [2, 2006.01]
G01F 15/075	2-Punkt Untergruppe	... using electrically-operated integrating means [2, 2006.01]
G01F 15/08	1-Punkt Untergruppe	. Air or gas separators in combination with liquid meters; Liquid separators in combination with gas-meters [1, 2006.01]
G01F 15/10	1-Punkt Untergruppe	. Preventing damage by freezing or excess pressure or insufficient pressure [1, 2006.01]

Symbol	Typ	Titel
G01F 15/12	1-Punkt Untergruppe	. Cleaning arrangements; Filters [1, 2006.01]
G01F 15/14	1-Punkt Untergruppe	. Casings, e.g. of special material [1, 2006.01]
G01F 15/16	1-Punkt Untergruppe	. Diaphragms; Bellows; Mountings therefor [1, 2006.01]
G01F 15/18	1-Punkt Untergruppe	. Supports or connecting means for meters [1, 2006.01]
		<u>Measuring volume</u>
G01F 17/00	Hauptgruppe	Methods or apparatus for determining the capacity of containers or cavities, or the volume of solid bodies (measuring linear dimensions to determine volume G01B) [1, 2006.01]
G01F 19/00	Hauptgruppe	Calibrated capacity measures for fluids or fluent solid material, e.g. measuring cups [1, 2006.01]
G01F 22/00	Hauptgruppe	Methods or apparatus for measuring volume of fluids or fluent solid material, not otherwise provided for [5, 2006.01]
G01F 22/02	1-Punkt Untergruppe	. involving measurement of pressure [5, 2006.01]
		<u>Level indicators</u>
G01F 23/00	Hauptgruppe	Indicating or measuring liquid level, or level of fluent solid material, e.g. indicating in terms of volume, indicating by means of an alarm [1, 2006.01]
G01F 23/02	1-Punkt Untergruppe	. by gauge glasses or other apparatus involving a window or transparent tube for directly observing the level to be measured or the level of a liquid column in free communication with the main body of the liquid [1, 2006.01]
G01F 23/04	1-Punkt Untergruppe	. by dip members, e.g. dip-sticks [1, 2006.01]
G01F 23/14	1-Punkt Untergruppe	. by measurement of pressure [1, 2006.01]
G01F 23/16	2-Punkt Untergruppe	.. Indicating, recording, or alarm devices being actuated by mechanical or fluid means, e.g. using gas, mercury, or a diaphragm as transmitting element, or by a column of liquid [1, 2006.01]
G01F 23/18	2-Punkt Untergruppe	.. Indicating, recording, or alarm devices actuated electrically [1, 2006.01]
G01F 23/20	1-Punkt Untergruppe	. by measurement of weight, e.g. to determine the level of stored liquefied gas [1, 2006.01]
G01F 23/22	1-Punkt Untergruppe	. by measurement of physical variables, other than linear dimensions, pressure, or weight, dependent on the level to be measured, e.g. by difference of heat transfer of steam or water (involving the use of floats G01F 23/30) [1, 2006.01]
G01F 23/24	2-Punkt Untergruppe	.. by measuring variations of resistance of resistors due to contact with conductor fluid [1, 2006.01]
G01F 23/26	2-Punkt Untergruppe	.. by measuring variations of capacity or inductance of capacitors or inductors arising from the presence of liquid or fluent solid material in the electric or electromagnetic fields [1, 2006.01]
G01F 23/28	2-Punkt Untergruppe	.. by measuring the variations of parameters of electromagnetic or acoustic waves applied directly to the liquid or fluent solid material [1, 6, 2006.01]
G01F 23/284	3-Punkt Untergruppe	... Electromagnetic waves [6, 2006.01]
G01F 23/288	4-Punkt Untergruppe	.... X-rays; Gamma rays [6, 2006.01]
G01F 23/292	4-Punkt Untergruppe	.... Light [6, 2006.01]
G01F 23/296	3-Punkt Untergruppe	... Acoustic waves [6, 2006.01]
G01F 23/30	1-Punkt Untergruppe	. by floats [4, 2006.01]
G01F 23/32	2-Punkt Untergruppe	.. using rotatable arms or other pivotable transmission elements [4, 2006.01]
G01F 23/34	3-Punkt Untergruppe	... using mechanically actuated indicating means [4, 2006.01]
G01F 23/36	3-Punkt Untergruppe	... using electrically actuated indicating means [4, 2006.01]

Symbol	Typ	Titel
G01F 23/38	3-Punkt Untergruppe	... using magnetically actuated indicating means [4, 2006.01]
G01F 23/40	2-Punkt Untergruppe	... using bands or wires as transmission elements [4, 2006.01]
G01F 23/42	3-Punkt Untergruppe	... using mechanically actuated indicating means [4, 2006.01]
G01F 23/44	3-Punkt Untergruppe	... using electrically actuated indicating means [4, 2006.01]
G01F 23/46	3-Punkt Untergruppe	... using magnetically actuated indicating means [4, 2006.01]
G01F 23/48	2-Punkt Untergruppe	... using twisted spindles as transmission elements [4, 2006.01]
G01F 23/50	3-Punkt Untergruppe	... using mechanically actuated indicating means [4, 2006.01]
G01F 23/52	3-Punkt Untergruppe	... using electrically actuated indicating means [4, 2006.01]
G01F 23/54	3-Punkt Untergruppe	... using magnetically actuated indicating means [4, 2006.01]
G01F 23/56	2-Punkt Untergruppe	... using elements rigidly fixed to, and rectilinearly moving with, the floats as transmission elements [4, 2006.01]
G01F 23/58	3-Punkt Untergruppe	... using mechanically actuated indicating means [4, 2006.01]
G01F 23/60	3-Punkt Untergruppe	... using electrically actuated indicating means [4, 2006.01]
G01F 23/62	3-Punkt Untergruppe	... using magnetically actuated indicating means [4, 2006.01]
G01F 23/64	2-Punkt Untergruppe	... of the free float type [4, 2006.01]
G01F 23/66	3-Punkt Untergruppe	... using mechanically actuated indicating means [4, 2006.01]
G01F 23/68	3-Punkt Untergruppe	... using electrically actuated indicating means [4, 2006.01]
G01F 23/70	4-Punkt Untergruppe	.... for sensing changes in level only at discrete points [4, 2006.01]
G01F 23/72	3-Punkt Untergruppe	... using magnetically actuated indicating means [4, 2006.01]
G01F 23/74	4-Punkt Untergruppe	.... for sensing changes in level only at discrete points [4, 2006.01]
G01F 23/76	2-Punkt Untergruppe	... characterised by the construction of the float [4, 2006.01]
G01F 25/00	Hauptgruppe	Testing or calibrating of apparatus for measuring volume, volume flow, or liquid level, or for metering by volume [1, 2006.01]