taconova

where comfort begins

Hot Water Management Solution

44 Jansen Road
Unit 56, Corvette Business Park
Jet Park
E-mail:sales@hwst.co.za Tel: 011 568 9393 Web: https://hwst.co.za

RANGE OF PRODUCTS 2019

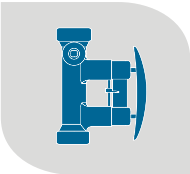
HYDRONIC BALANCING


tn

ALL PRODUCTS AND THEIR APPLICATION AREAS AT A GLANCE

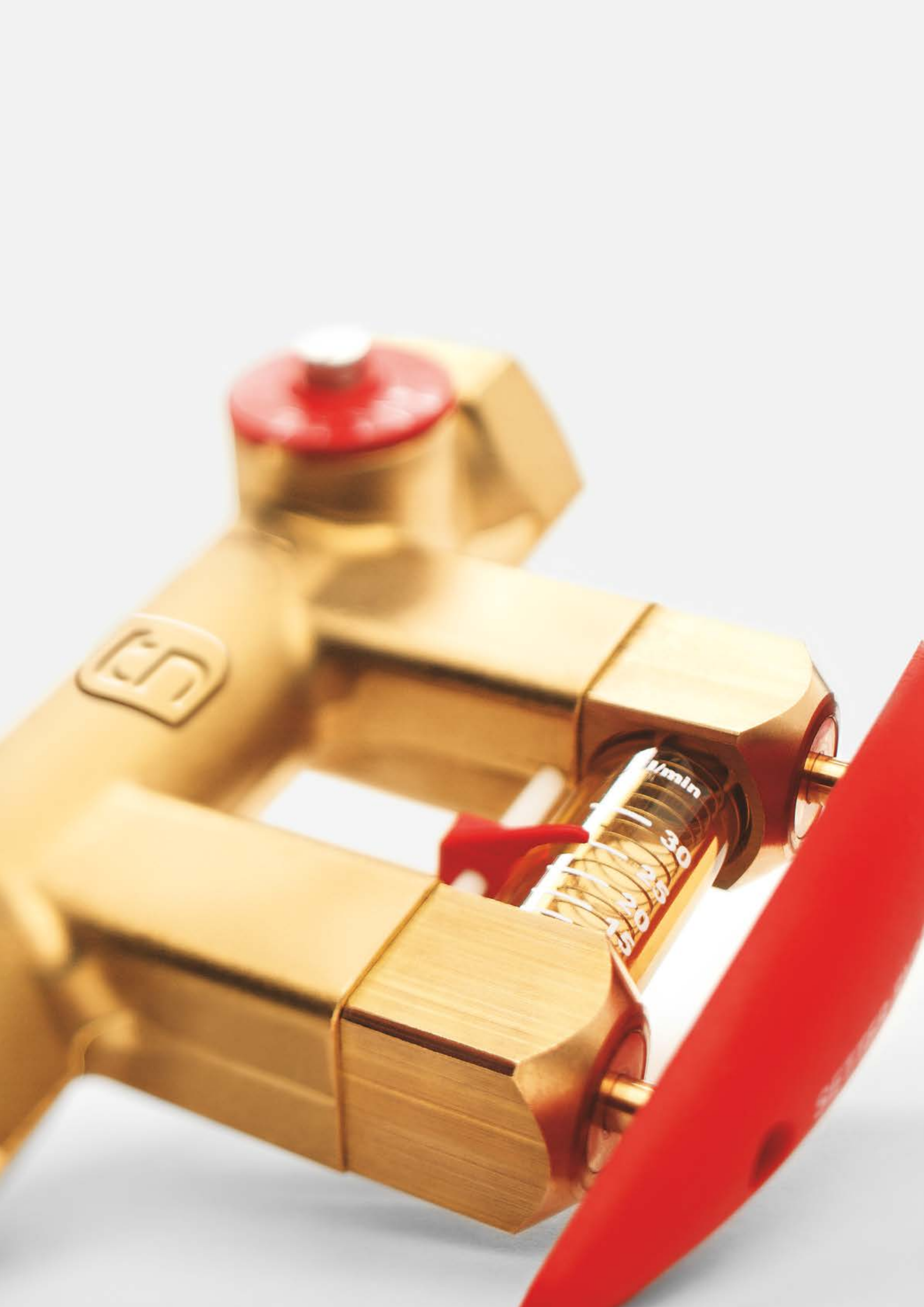
	PRODUCT NAME AS OF 2011	PRODUCT NAME UP TO 2011	Heating & cooling generation				Heating & cooling distribution					Sani-tation	Other	
			Geothermal energy	**Solar thermal energy**	Oil, gas, biomass, electricity	District heating	Radiators	**Underfloor heating**	Concrete core	Chilled and heated ceilings	Fan Coils, Chill Beams	**Fresh water**	Watering (garden, air/water)	Industrial applications
HYDRONIC BALANCING	TacoSetter Bypass 100	AV23 Setter Bypass SD	■		■	■	■	■		■	■	■	■	■
	TacoSetter Bypass Solar 130	AV23 Setter Bypass SD Solar		■										■
	TacoSetter Bypass Solar 185	AV23 Setter Bypass HT Solar		■										■
	TacoSetter Bypass Flange	AV23 Setter Bypass Flange			■	■				■			■	■
	TacoSetter Inline 100	AV23 Setter Inline	■		■		■	■	■	■	■	■	■	■
	TacoSetter Inline 130	AV23 Setter Inline UN	■	■										■
	TacoSetter Rondo	AV23 Setter Rondo					■	■	■	■	■		■	■
	TacoSetter Tronic	AV23 Setter Tronic UN	■	■		■						■	■	■
	AX	e.g. AX96, VF10 (accessories and replacement parts)												
DISTRIBUTION TECHNOLOGY	TacoSys HighEnd	VH86 Tacosys VH 86 High End						■	■					■
	TacoSys Value	VH86 Tacosys VH 86 Low End						■	■					■
	TacoSys Connect	VH86 Tacosys HKA					■		■					■
	TopMeter Supply	A023 Topmeter VL						■	■					■
	TopMeter Return	A023 Topmeter RL						■	■					■
	NovaDrive NC	RA57 Novadrive NC					■	■	■	■	■			
	NovaDrive NO	RA58 Novadrive NO					■	■	■	■	■			
	TopDrive NC	RA57 Topdrive					■	■	■	■	■			
	NovaStat EL Basic	RT06 RT-EL					■	■	■	■	■			
	NovaStat EL Quattro	RT06 RT-ELQ					■	■	■	■	■			
	NovaStat EL Inwall	RT06 RT-UW					■	■	■	■	■			
	NovaStat EL Digital	RT06 RT-D					■	■	■	■	■			
	NovaStat EL Week	RT06 RT-WP					■	■	■	■	■			
	NovaStat EL Public	RT06 RT-P					■	■	■	■	■			
	NovaMaster EL Basic	RX58 Master					■	■	■	■	■			
	NovaMaster EL Logic	RX58 Master PL					■	■	■	■	■			
	NovaMaster EL SlaveBox	RX58 SB					■	■	■	■	■			
	NovaMaster EL Timer	RX58 Timer					■	■	■	■	■			
	NovaStat RF Basic	RT06 RT-RF					■	■	■	■	■			
	NovaStat RF Digital	RT06 RT-RFD					■	■	■	■	■			
	NovaStat RF Week	RT06 RT-RFWP					■	■	■	■	■			
	NovaMaster RF Logic	RX58 Master/Timer-RF					■	■	■	■	■			
	NovaMaster RF SlaveBox	RX58 SB RF					■	■	■	■	■			
	NovaMaster RF Mini	RX58 RT-RFK					■	■	■	■	■			
	AX	e.g. mixing station, RX58 Transformer, TF98, VH86 etc.												

	PRODUCT NAME AS OF 2011	PRODUCT NAME UP TO 2011	Heading & cooling generation: Geothermal energy	Heating & cooling generation: **Solar thermal energy**	Heating & cooling generation: Oil, gas, biomass, electricity	Heating & cooling generation: District heating	Heating & cooling distribution: Radiators	Heating & cooling distribution: **Underfloor heating**	Heating & cooling distribution: Concrete core	Heating & cooling distribution: Chilled and heated ceilings	Heating & cooling distribution: Fan Coils, Chill Beams	Sani-tation: **Fresh water**	Other: Watering (garden, air/water)	Other: Industrial applications
SYSTEM TECHNOLOGY	TacoSol Circ ER (HE)	FV70 Tacosol ER		■										
	TacoSol Circ ZR (HE)	FV70 Tacosol ZR		■										
	TacoSol Circ ZR PV EU21	FV70 Tacosol Edition EU21		■										
	TacoSol Load Mega (L)	TacoSol Load 25 TacoSol Load 25 light		■										
	TacoSol Load Tera (L)	Innovation		■										
	TacoSol Load Exa L	TacoSol Load 240		■										
	TacoTherm Fresh Femto	Innovation										■		
	TacoTherm Fresh 40 / Mega	FF71 Megafresh										■		
	TacoTherm Fresh Tera	Innovation										■		
	TacoTherm Fresh Exa C	TTF 120										■		
	TacoTherm Dual Piko	Innovation					■	■	■			■		
	AX	e.g. FY98 Spare parts, FX96 DC-Control, FX96 PV-Panel etc.												
VALVES AND ACCESSORIES	NovaMix Value 65 FS	MT53		■	■							■		■
	NovaMix Value 70 FS	MT53		■	■			■				■		■
	NovaMix Standard 40	MT52		■	■			■				■		■
	NovaMix Standard 70	MT52		■	■			■				■		■
	NovaMix Standard 70 FR	MT52		■	■			■				■		■
	NovaMix Standard 70 FS	MT52		■	■			■				■		■
	NovaMix HighCapacity 70	MT52 HC		■	■			■				■		■
	NovaMix Compact 70	MT52 Compact		■	■			■				■		
	NovaZone Ball 2way	RK56 Motor-driven ball valve	■	■	■	■	■	■	■	■	■	■	■	■
	NovaZone Ball 3way	RK57 Motor-driven ball valve	■	■	■	■	■	■	■	■	■	■	■	■
	NovaZone Valve 2way	RM56 Zone valve	■	■	■	■	■	■	■	■	■	■	■	■
	NovaZone Valve 3way	RM56 Zone valve	■	■	■	■	■	■	■	■	■	■	■	■
	TriBloc 2.5	UK32 Tri-Bloc			■									■
	TriBloc 3.0	UK32 Tri-Bloc			■									■
	TacoVent HyVent	ER40 HyVent			■	■	■	■	■	■	■	■		■
	TacoVent Vent	ER40 Vent					■	■	■	■	■	■		■
	TacoVent AirScoop D horizontal	EL43 Airscoop	■	■	■	■								■
	TacoVent AirScoop D vertical	Air separator (vertical)	■	■	■	■				■				■
	TacoVent AirScoop R	Innovation	■		■	■		■	■	■				■
	TacoVent AirScoop Solar	Innovation	■	■	■	■		■	■	■				■
	TacoVent AirScoop Pure	Innovation	■		■	■		■	■	■				■
	TacoVent Twin	Innovation	■		■	■		■	■	■				■
	TacoControl Tronic	VFS direct sensor	■	■	■	■		■					■	■
	TacoControl FlowMeter	AV23 Flometer			■			■	■	■	■		■	■
	AX	e.g. MX96 RV (for MT52), MX78 precision thermometer												



HYDRONIC BALANCING

In hydraulic heating and cooling systems, the energy carrier is transported over piping sections of different lengths. On the path from the energy generator to the consumer, pipe lengths and turns, branches, valves and heat exchangers present their own resistance that inhibits flow through their cross-sections and surface roughness. Energy in buildings must be distributed in such a way that all building sections, rooms and consumers are optimally supplied according to their needs. A balanced system avoids excess and wasteful supply of consumer circuits and prevents irritating flow noises in the pipes and valves. The gain in comfort due to pleasant room temperatures and significantly increased energy efficiency are the perceptible and measurable results of hydronically balanced flow systems.


l/min
30

ESSENTIAL FOR MODERN BUILDING SERVICES

Hydronic balancing – the core area of expertise of Taconova – is part of the modern standard and is indispensable in the building service solutions of today. Hydronic balancing is promoted in different countries with subsidies. It is often legally prescribed for new buildings and refurbishment.

QUALITY VALVES

Taconova offers all the valves that are needed for optimal implementation of a hydraulic balance system. Allowing complete line balancing of high-pressure circuits which provides quick and easy planning, and thus the economic operation of the plant.

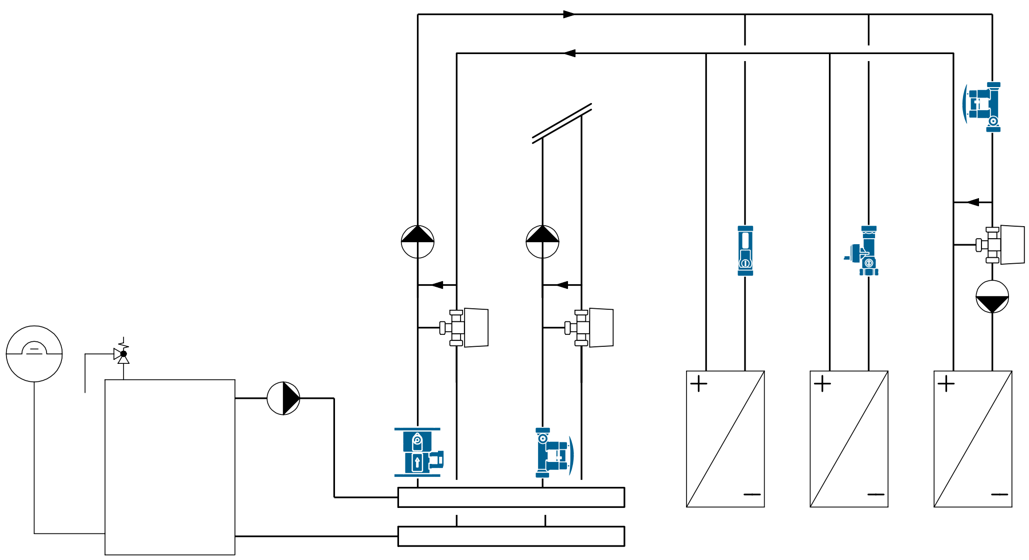
Balancing Valves	
The classic models in the TacoSetter and TopMeter family guarantee the desired flow rates in heating systems, as well as in cooling, solar energy and saline water distribution systems. The flow volume can be directly checked at a glance at any time with these balancing valves – with one exception: the TacoSetter Tronic, which measures the flow rate electronically.	▪ TacoSetter Bypass 100 ▪ TacoSetter Bypass Solar 130/185 ▪ TacoSetter Bypass Flange ▪ TacoSetter Inline 100/130 ▪ TacoSetter Rondo ▪ TacoSetter Tronic

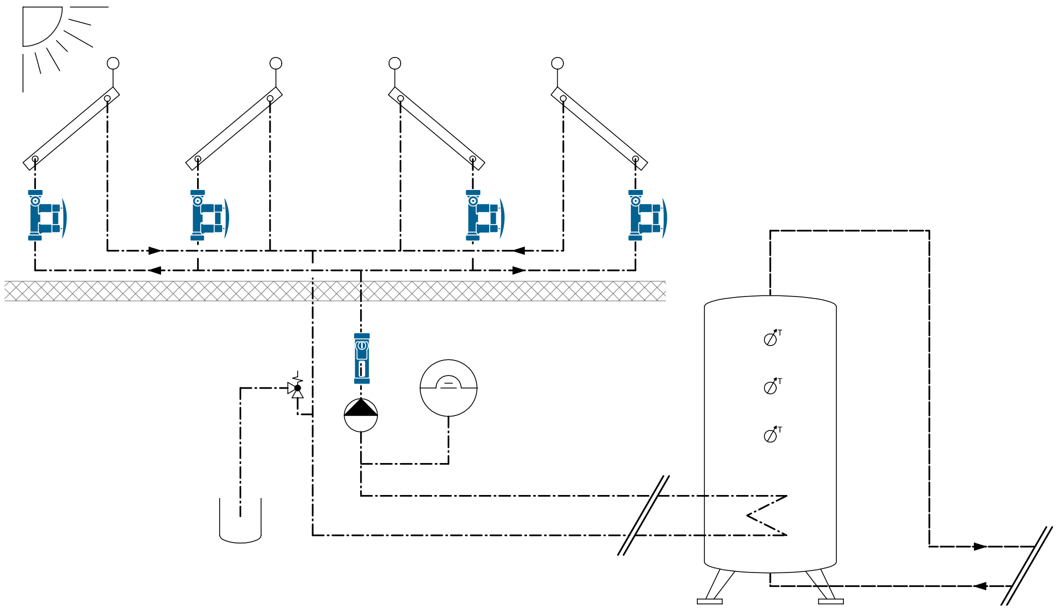
APPLICATIONS

Taconova offers a seamless portfolio of high-quality balancing and measurement valves for a wide range of diverse applications.

Heating and cooling energy generation	Heating and cooling energy distribution (indoor temperature control)	Sanitary systems
▪ Solar thermal energy ▪ Geothermal energy ▪ Oil, gas, electricity, biomass ▪ District heating	▪ Underfloor heating ▪ Radiators ▪ Chilled and heated ceilings ▪ Fan coils and chill beams ▪ Concrete cores	▪ Fresh water

APPLICATION OF THE BALANCING AND MEASURING VALVES IN HEATING SYSTEMS





3-way motor-driven ball valve

Pump

Temperature indication

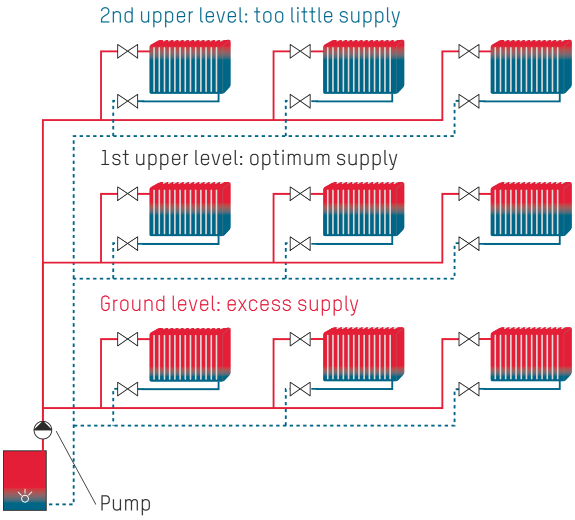
Expansion vessel

Safety valve

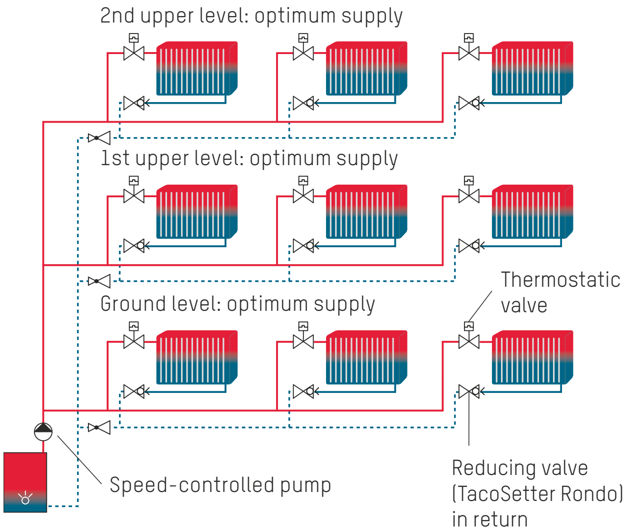
OPTIMUM SUPPLY IS THE TARGET

In order to achieve equally distributed heat appropriate to the surrounding conditions, the calculated volume flows are limited to the flow values that correspond to the relevant rated heat requirement. As a result, radiators, surface heating systems and other consumers in the building can be supplied as required.

Non-balanced system



Hydronically balanced system



NON-BALANCED SYSTEM

The example of a water heating system with radiators shows that a non-balanced heating system can be directly felt due to the indoor temperatures: while radiators closer to the central heating system are overly supplied, the radiators located further away receive inadequate flow volumes.
This means that the radiators on higher floor levels are not supplied enough hot water: they are too cool or respond only slowly.
This deficiency is often compensated in practise with greater pump power, but this leads to flow noises in the system and inefficiently operated energy generators. The result is increased energy consumption for pumps and energy generation.

HYDRONICALLY-BALANCED SYSTEM

Balanced hydraulics are necessary to optimally use energy to obtain the specified flow and return temperatures. As a consequence of the static hydronic balancing, the required flow volumes are adjusted in such a way that all consumers in the building are supplied as desired. In this way, the heat is equally distributed and the lower activity of the burner saves energy.
The interaction between a hydronically balanced system and the requirement-based configuration of the consumers enables economic operation of the heat generator, particularly in regard to condensing heating technology and heat pumps.

BALANCING OF EXISTING HEATING SYSTEMS

The optimised distribution of heat in existing heating systems can save a large amount of energy. And that is an ecological and economic demand of our time. National specifications apply to the hydronic balancing of existing heating systems. In some cases there are also financial incentives.

STRAND BALANCING OF HEATING SYSTEMS WITH RADIATORS OR UNDERFLOOR HEATING

To perform hydronic balancing, the corresponding rated volume flows of the system and the individual piping sections must be known. While the calculation results of pipe dimensioning for new systems provide this data for adjustment, this information is usually unavailable for existing systems. For this reason, the rated volume flows must first be calculated on the basis of the rated heat requirement or thermal output of the available heating surfaces and on the temperature difference (between the flow and return water) of the heating system.

The required rated volume flows can be determined by means of a heating requirement calculation (DIN EN 12831).

DETERMINING VOLUME FLOWS ON THE BASIS OF THE CALCULATION OF HEATING REQUIREMENTS (DIN EN 12831)

The rated heating requirements of the individual rooms is obtained from the precise calculation of heat requirement. If this data is not available, the available heating surfaces (radiators or underfloor heating) can be included with the formulae from Taconova (download from taconova.com). The exact thermal output of the heating surfaces included in this way can be determined using manufacturers' documentation. The required volume flows are calculated on the basis of the temperature difference, the calculated specific heating requirement and the specific heating capacity of the carrier medium (typically water).

Formulae for radiator and underfloor heating systems are available, along with empirical values, for the specific heating requirement at **taconova.com**

THE RIGHT PRODUCT FOR EVERY VOLUME FLOW

Setter	Order number	0,3	0,6	1	1,5	2	4	6	8	10	15	20	30	40	50	60	70	80	90	100	200	300	400	500	600	700
TacoSetter Bypass 100																										
	223.22X2.XXX 223.23X1.000					2 – 8 l/min																				
	223.23X0.XXX						4 – 15 l/min																			
	223.23X2.XXX								8 – 30 l/min																	
	223.24X0.XXX							6 – 20 l/min																		
	223.24X1.XXX									10 – 40 l/min																
	223.25X1.XXX											20 – 70 l/min														
	223.26X1.XXX												30 – 120 l/min													
	223.28X1.XXX														50 – 200 l/min											
TacoSetter Bypass Solar 130/185																										
	223.238X.XXX					2 – 12 l/min																				
	223.238X.XXX								8 – 20 l/min																	
	223.248X.XXX									10 – 40 l/min																
	223.2580.000											20 – 70 l/min														
TacoSetter Bypass Flange																										
	223.2151.000															60 – 325 l/min										
	223.2251.000																75 – 450 l/min									
	223.2351.000																			100 – 650 l/min						
TacoSetter Inline 100																										
	223.1202.000	0,3 – 1,5 l/min																								
	223.12X3.XXX		0,6 – 2,4 l/min																							
	223.12X4.XXX			1 – 3,5 l/min																						
	223.12X8.XXX					2 – 8 l/min																				
	223.12X9.XXX						3 – 12 l/min																			
	223.1300.000						4 – 15 l/min																			
	223.1302.000								8 – 30 l/min																	
	223.1305.000									10 – 40 l/min																
TacoSetter Inline 130																										
	223.7556.334				1,5 – 6 l/min																					
	223.7566.334						4 – 16 l/min																			
	223.7576.334								8 – 28 l/min																	
	223.7586.000									10 – 40 l/min																
TacoSetter Rondo																										
	223.3206.XXX		0,6 – 8 l/min																							
TacoSetter Tronic																										
	223.7702.000			1 – 12 l/min																						
	223.7704.000					2 – 40 l/min																				

OPTIMIZING THE ENTIRE SYSTEM THROUGH HYDRONIC BALANCING

A perfectly adjusted heating system ensures an even level of heat at all locations. This increases comfort, reduces CO^2 emissions and cuts energy consumption.

BENEFITS AT THE PLANNING STAGE

- Simplest system design and installation control
- Planning certainty and compliance with the relevant regulations and standards in heating and sanitary planning
- Product safety thanks to durable European valves and accessories

BENEFITS AT THE INSTALLATION STAGE

- Time-saving regulation of flow rates without any need for conversion
- Simple control of flow rates during maintenance and testing without requiring measurement devices
- Simple implementation of static hydronic balancing for existing systems
- Compact regulation in pipe installations

THE ORIGINAL

The TacoSetter Bypass, referred to in the branch as just «TacoSetter», is the classic model of balancing valves. The popular and reliable original for static hydronic balancing indicates the flow volume by means of a scale directly in a bypass test object or in the valve/ accessories.
The TacoSetter Bypass has been part of the Taconova portfolio since 1985. While retaining its trusted attributes, it has been continuously developed even further. Along with the standard version, there are also solar versions with greater temperature resistance (up to 185 °C).

TACOSETTER BYPASS 100

DESCRIPTION
- Balancing and shut-off valve
- Hydronic balancing, volume flow measurement and inspection at the consumer or in a subsystem

VERSIONS
- Inner thread (with and without insulation box)
- Outer thread (with and without insulation box)
- Accessories and spare parts can be referenced in the data sheet and price list

ADVANTAGES
- Direct visual volume flow control (viewing glass)
- Required water flows are precisely, quickly, easily and continuously variably adjusted
- No expensive auxiliary devices (measuring devices, charts, tables) required
- No additional shut-off valve needed
- Can be replaced or serviced under full system pressure
- Minimal pressure loss
- Can be readjusted at any time

FUNCTIONS
- Automatic shut-off bypass operating in parallel to the main volume flow with measuring and indication elements (viewing glass with a scale in l/min)
- Displacement principle of an impact element held in a measuring tube with a counterspring
- The index mark is the lower edge of the float element
- The test object is in a bypass to the main volume flow and is therefore not constantly exposed to flow; it is activated as required by opening self-locking shut-off valves by pressing and holding in place the handles; activation and release of the test object have no effect on the main volume flow

TECHNICAL DATA
- Operating temperature $T_{0\,max}$: 100 °C
- T_0 insulation box: -30 – 130 °C
- Operating pressure $P_{0\,max}$: 10 bar
- Measuring accuracy:
  - Measurement range 20 – 80 % = ± 5 % of the final value
  - Measurement range to 20 % and above 80 % = ± 10 % of the final value
- Female thread Rp (cylindrical) as per DIN 2999/1SO 7 or
- Male thread, cylindrical (G) as per ISO 228
- Installation position: in the flow direction in any position (360°)
- DN 15 – 50
- Rp × Rp ½" × ½" – 2" × 2" | G × G: 1" × 1" – 1½" × 1½"
- k_{VS}-value: 1,95 – 54 m^3/h
- Measurement range: 2 – 8 l/min – 50 – 200 l/min

MATERIALS
- Housing: brass
- Test object: plastic
- Inner parts: stainless steel, brass and plastic
- Viewing glass: heat-resistant, shock-resistant plastic
- Seals: EPDM

FLOW MEDIA
- Water mixtures with typical corrosion and glycol additives
- Hot water
- Cooling water
- Drinking water (SVGW, ACS-certified)

TACOSETTER BYPASS SOLAR 130/185

DESCRIPTION
- Balancing and shut-off valve
- Hydronic balancing and flow control in solar systems
- Solar 185 version: specially suited for balancing roof collectors, even under difficult external conditions

VERSIONS
- TacoSetter Bypass Solar 130:
  Inner thread and outer thread
- TacoSetter Bypass Solar 185:
  Inner thread and outer thread
- Accessories and spare parts can be referenced in the data sheet and price list

ADVANTAGES
- Direct visual volume flow control (viewing glass)
- For high temperatures (up to 185 °C)
- Required water flows are precisely, quickly, easily and continuously variably adjusted
- No expensive auxiliary devices (measuring devices, charts, tables) required
- No additional shut-off valve needed
- Bypass can be replaced under full system pressure by sealing plugs
- Minimal pressure loss

FUNCTIONS
- See TacoSetter Bypass 100
- With the high-temperature model (185) the bypass is replaced after completed adjustment by sealing plugs so that full operation remains guaranteed up to 195 °C (temporarily)

TECHNICAL DATA
- Operating temperature $T_{0\,max}$:
  - Bypass Solar 130: 130 °C
  - Bypass Solar 185 with sealing plugs: 185 °C (temporarily 195 °C)
- Operating pressure $P_{0\,max}$:
  - Bypass Solar 130: 8 bar
  - Bypass Solar 185 with sealing plugs: 16 bar
- Measuring accuracy: ± 10 % of the final value
- Female thread Rp (cylindrical) as per DIN 2999/ISO 7
- Male thread, cylindrical (G) as per ISO 228
- Installation position: in flow direction in any position (360 °)
- DN 20 – 25
- Rp × Rp: ¾" × ¾" – 1¼" × 1¼" | G × G: 1" × 1" – 1¼" × 1¼"
- k_{VS}-value: 2,2 – 17 m³/h
- Measurement range: 2 – 12 l/min – 20 – 70 l/min

MATERIALS
- Housing: brass
- Test object: plastic
- Inner parts: stainless steel, brass and plastic
- Viewing glass: borosilicate
- Seals: EPDM

FLOW MEDIA
- Water mixtures with typical corrosion and glycol additives (see «Correction Curves» document at taconova.com)
- Hot water (see also standard version)

TACOSETTER BYPASS FLANGE

DESCRIPTION
- Balancing and shut-off valve
- Hydronic balancing, volume flow measurement and inspection at the consumer or in a subsystem

VERSIONS
- Accessories and spare parts can be referenced in the data sheet and price list

ADVANTAGES
- Direct visual flow control (viewing glass)
- For large volume flows up to 650 l/min
- Required water flows are precisely, quickly, easily and continuously variably adjusted
- No expensive auxiliary devices (measuring devices, charts, tables) required
- High measuring precision
- Maintenance possible under full operating pressure
- Installation of a filling or drain valve possible
- No additional shut-off valve needed
- Minimal pressure loss

FUNCTIONS
- Automatic shut-off bypass operating in parallel to the main volume flow with measuring and indication elements (viewing glass with a scale in l/min)
- Displacement principle of an impact element held in a measuring tube with a counterspring
- Flow sensor (bypass) flange-mounted on the side of the housing
- Two shut-off valves separate the flow sensor in regular operation from the valve housing
- The flow rate is only indicated once both valves are open
- The flow measurement indicated by the flow sensor does not change if the shut-off valves for the bypass are then closed during operation
- The index mark is the lower edge of the float element

TECHNICAL DATA
- Operating temperature $T_{0\,max}$: 100 °C
- Operating pressure $P_{0\,max}$: 10 bar
- Measuring accuracy: ± 5 % of the final value
- Installation position: in the flow direction in any position (360°)
- DN 65 – 100
- k_{VS}-value: 85 – 208 m^3/h
- Measurement range: 60 – 325 l/min – 100 – 650 l/min
- Weight: 13,9 – 19,7 kg

MATERIALS
- Housing: gray iron
- Test object: brass
- Inner parts: stainless steel and plastic
- Viewing glass: heat-resistant, shock-resistant plastic
- Seals: EPDM

FLOW MEDIA
- Water mixtures with typical corrosion and glycol additives
- Hot water
- Cooling water

THE MULTITALENTED MODEL

TacoSetter Inline is the multitalented model of the balancing valves. It can be used to directly adjust, indicate and shut off the flow. The valve is used for underfloor heating, heating circuit distributors, sanitary systems, cooling circuits, heat pumps and solar systems.

TACOSETTER INLINE 100/130

DESCRIPTION
- Balancing and shut-off valve
- Hydronic balancing and volume flow control directly at the consumer or in a subsystem
- TacoSetter Inline 130 can be connected directly to the suction nozzles of a pump

VERSIONS
- TacoSetter Inline 100: Inner thread, outer thread, dezincing-resistant
- TacoSetter Inline 130: glycol scale, water scale
- Accessories and spare parts can be referenced in the data sheet and price list

ADVANTAGES
- Direct visual flow control (viewing glass)
- For flow volumes from 0.3 – 40 l/min
- Required water flows are precisely, quickly, easily and continuously variably adjusted
- No expensive auxiliary devices (measuring devices, charts, tables) required
- TacoSetter Inline 100 is certified for drinking water usage
- TacoSetter Inline 130 is available for high temperatures (up to 130 °C) in solar circuits with or without a glycol scale

FUNCTIONS
- Flow meter with viewing glass (l/min) integrated into the housing
- Displacement principle of an impact element held in a measuring tube with a counterspring
- The index mark is the lower edge of the float element
- Adjustment with a screwdriver used on the adjusting screw

TECHNICAL DATA
- Operating temperature $T_{0\,max}$:
  - Inline 100: 100 °C
  - Inline 130: 130 °C (temporarily 160 °C)
- Operating pressure $P_{0\,max}$:
  - Inline 100: 10 bar
  - Inline 130: 8 bar
- Measuring accuracy: ± 10 % of the final value
- Connection thread: compliant with DIN 2999/ISO 7 or ISO 228
- Installation position: in the flow direction in any position (360 °)
- DN 15 – 20
- G × Rp: ¾" × ½" | G × G: ¾" × ¾" – 1" × 1"
- k_{VS}-value: 0,25 – 5 m^3/h
- Measurement range: 0,3 – 1,5 l/min – 10 – 40 l/min

MATERIALS
- Housing: brass or dezincification-resistant brass
- Test object: plastic
- Inner parts: stainless steel and plastic
- Viewing glass: heat-resistant, shock-resistant plastic or borosilicate
- Seals: EPDM

FLOW MEDIA
- Water mixtures with typical corrosion and glycol additives (see «Correction Curves» document at taconova.com)
- Hot water
- Cold water
- TacoSetter Inline 100: drinking water (SVGW, ACS and KTW-certified)

THE COMPACT MODEL

TacoSetter Rondo saves on space and impresses with its functional design. It is suitable for direct installation in the flow or return directions of radiators or manifold bars, and enables uncomplicated adjustment of the volume flow without valve tables.
With a measuring and control range of 0.6 – 8 l/min it has been designed for systems with small pipe dimensions. No tools are required for the adjustment and subsequent securing of the valves and accessories with a cover.

TACOSETTER RONDO

DESCRIPTION

- Balancing and shut-off valve
- Hydronic balancing and flow control directly on the consumer

VERSIONS

- With/without screw connection
- Accessories and spare parts can be referenced in the data sheet and price list

ADVANTAGES

- Compact design saves space
- Required water flows are precisely, quickly, easily and continuously variably adjusted with the cover
- Directly visible flow control (viewing glass, not directly surrounded by fluid)
- No expensive auxiliary devices (measuring devices, charts, tables) required
- Minimal pressure loss

FUNCTIONS

- A scale printed on the viewing glass allows the flow volume to be easily read in l/min
- Turning the viewing glass changes the cross-section of the opening of the valve, thereby adjusting to the required flow volume
- The flow measurement is based on the principle of displacement of an impact disk that is guided in a test pipe
- The movement of the impact disk is mechanically transferred to the viewing glass

TECHNICAL DATA

- k_{VS} value: 1 m³/h
- Operating temperature $T_{0\,max}$: 100 °C
- Operating pressure $P_{0\,max}$: 6 bar
- Measurement range: 0.6 – 8 l/min
- Measuring accuracy: < 2 l/min ± 20 % of the final value
- Measuring accuracy: > 2 l/min ± 10 % of the final value
- Female thread Rp as per DIN 2999/ISO 7
- Male thread (G) as per ISO 228
- Installation position: in the flow direction in any position (360 °)
- DN 15
- G × Rp: ½" × ½" / ¾" × ½" | G × G: ¾" × ¾"
- k_{VS}-value: 1 m³/h
- Measurement range: 0,6 – 8 l/min

MATERIALS

- Housing: nickel-plated brass
- Test object: plastic
- Inner parts: plastic
- Viewing glass: heat-resistant, shock-resistant plastic
- Seals: EPDM

FLOW MEDIA

- Water mixtures with typical corrosion and glycol additives
- Hot water
- Cooling water

THE HYBRID MODEL

TacoSetter Tronic is a balancing valve with a shut-off function. The valve also enables digital volume flow and temperature measurements. It monitors drinking water, solar and heating systems and supplies accurate data to the electronic system controller. It is suitable for volume flows of 1 – 40 l/min.

TACOSETTER TRONIC

DESCRIPTION

- Balancing and shut-off valve with electronic measurement function
- Digital volume flow and temperature measurement for monitoring and provision of data for the control of pumps and valves or for heat quantity metering
- Provides information to the electronic system controller

VERSIONS

- Accessories and spare parts can be referenced in the data sheet and price list

ADVANTAGES

- Very accurate measurements
- Flow volume measurements from 1 – 40 l/min
- Resistant to glycol
- Can be manually adjusted and locked
- No moving parts
- Minimal pressure loss

FUNCTIONS

- Flow measurement based on the vortex principle
- Swirls occur at the baffle element in the flow in proportion to the flow speed
- The generated swirls are detected by a piezoelectric paddle and evaluated by the integrated electronics

TECHNICAL DATA

- k_{VS} value and measurement range: see table across the page
- Operating temperature $T_{0\,max}$: 120 °C
- Operating pressure $P_{0\,max}$: 8 bar
- Measurement accuracy: 1 – 12 l/min < 3 % of the final value
- Measurement accuracy: 2 – 40 l/min ± 1.5 % of the final value
- Temperature measurement range: 0 – 100 °C
- Measurement parts approved for drinking water
- Viscosity of medium: see overview of types
- 1" flat-sealed connections
- Protective class: IP44a
- Electrical signals for sensors:
  - Temperature: 0.5 – 3.5 V
  - Volume flow: 0.5 – 3.5 V
  - Ground: 0 V (PE)
  - Power supply: (+5 V DC), PELV
- Male thread cylindrical (G) and female thread (cap nut) G 1" according to ISO 228
- Installation position: in the flow direction (note information given in the technical data sheet)
- DN 20
- G × G: 1" × 1"
- k_{VS}-value: 1,05 / 3,03 m^3/h
- Measurement range: 1 – 12 / 2 – 40 l/min
- Viscosity: ≤ 4 mm / ≤ 2 mm^2/s

MATERIALS

- Housing: brass
- Inner parts: stainless steel, brass and plastic
- Sensors: PPS, PPA, PA
- Seals: EPDM

FLOW MEDIA

- Water mixtures with typical corrosion and glycol additives
- Hot water
- Cold water
- Drinking water