

High Quality Valves Since 1920

Commercial & Industrial

Valves

Berluto



Pressure Regulators

Safety Valves

Float Valves

Dirt Traps & Filter



Water
Potable Water
Sea Water



Any
Other
Fluids



Compressed
Air & Gases
Steam

Made in Germany

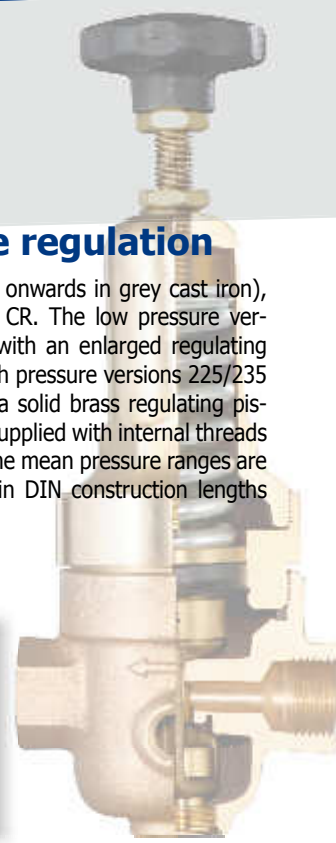
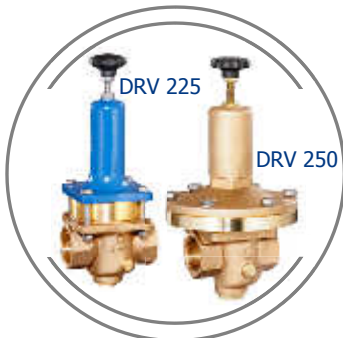
Pressure Reducing Valves

For compressed air and gases...

Series DRV 200: sensitive & precise pressure regulation

The DRV 200 series valves are regulating the outlet pressure extremely sensitive. Due to the low friction of the few moving internal parts this type shows a high setting accuracy and an extremely good response to flow fluctuations. DRV 200 are preferably used for pressure reduction of compressed air, nitrogen and other neutral, non-combustible gases. Provided that the required flow rates are relatively low this type is also suitable for water and other non-viscous liquids. Valve seats and bodies are made of corrosion-resistant red bronze, spring

bonnets are in brass (DN32 onwards in grey cast iron), seals are in SBR, NBR and CR. The low pressure version DRV 250 is equipped with an enlarged regulating diaphragm, whereas the high pressure versions 225/235 and 226 are provided with a solid brass regulating piston. All DRV series 200 are supplied with internal threads according to DIN ISO 228, the mean pressure ranges are also available with flanges in DIN construction lengths (DRV 230/235).



PN bar	p ₂ bar	Nominal Size	kvs m ³ /h	Internal Thread DRV - Typ	Flange DRV - Typ
25	0,2 - 2,0	DN8 - DN50	0,5 - 7,2	DRV 250	
25	1,5 - 8,0 ^{*)}	DN8 - DN50	0,5 - 7,2	DRV 200	DRV 230
40	1,5 - 20	DN8 - DN50	0,5 - 7,2	DRV 225	DRV 235
60	20 - 45	DN8 - DN20	0,5 - 1,3	DRV 226	

*) also available with outlet pressure range 0.8 - 8.0 bar (Option G)

For potable water...

Berluto pressure reducing valves for potable water are of highest quality and are standing the test day by day on every occasion. A brand quality product made in Germany, manufactured from red bronze: you shouldn't be satisfied with less. After all, potable water is a precious good.



DRV 402-6 / DRV 403-6: proven brand quality

DRV 403-6 pressure reducing valves for potable water are corresponding in full detail to the regulations of DVGW (German Gas and Water Control Board), bodies are made of high quality red bronze. As a result, they are not only outperforming the requirements of DIN 50930-6 but also exceeding the quality of pressure reducers made of brass with regard to corrosion and stability. All integ-

rated plastic parts meet the KTW recommendations for potable water, the pressure reducing valves themselves are being tested according to DIN EN1567, are DVGW-certified, noise insulation-tested and have a maintenance-friendly exchangeable valve insert.

DRV 403-6 are primarily used for lower flow rates. For larger applications series DRV 402-6 is recommended.

	DRV 403-6 ^{*)}				DRV 402-6 ^{*)}			
	Nominal Size	DN15	DN20	DN25	DN32	DN40	DN50	DN65
Connection R	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	
kvs [m ³ /h]	2,9	3,9	5,4	6,1	9,0	13,0	20,0	

*) As standard, all potable water pressure reducing valves are designed for a max. nominal pressure of 16 bar, an outlet pressure of 1.5 to 6 bar and a max. media temperature of 75 °C. But of course we also offer custom made solutions on request.

DRV 403-6: fits perfectly, always!

With a simple reduction of the supply pressure you will achieve significant water savings without any loss of comfort. Needless to say that all valves have to be replaced on time, latest as soon as the installation is no longer up to date. And especially today it is all the more important to have a reliable top-quality pressure reducing valve at home.

The valve exchange is very simple and economic provided that both valves have identical dimensions; for this

reason we offer our valves with adjusted mounting dimensions (version A + B) so that outdated or defective valves can easily be replaced by a high-quality Berluto DRV 403-6.

Installation Length DRV 403-6 [mm]			
Nominal Size	DN15	DN20	DN25
Form A	78	78	90
Form B	80	90	100

Pressure Reducing Valves



DRV 502-6 / DRV 602-6: potable water professionals with flange

Our flanged pressure reducing valve series DRV 602-6 is especially designed for large potable water supply systems. Also the bodies of these large-volume valves are entirely made of red bronze so that delicate coatings are not required. The potable water protection is guaranteed and corrosion is off the cards.

Nominal Size	DRV 502-6 ¹⁾		DRV 602-6 ¹⁾		
	DN65	DN80	DN80	DN100	DN125
Flange-Ø [mm]	185	200	200	220	270
Length [mm]	290	310	310	350	400
kvs [m³/h]	20	24	60	80	130

For aggressive media... in stainless steel

Our brand new valve types are entirely made of stainless steel (1.4408) and are equipped as standard with FPM seals (alternative seal materials are available on request). These versions are thus ideal for critical media like aggressive gases and liquids or fully desalinated water; temperature resistance is ensured up to 190°C.

NEW



The new series DRV 700/ 800: our answer to problem media

For optimum adjustment to the individual purpose we offer various regulators for the different pressure ranges (low pressure, high pressure, normal pressure). Moreover, due to the integrated inlet pressure relief a consistent outlet pressure is always granted, even with strongly fluctuating inlet pressure. All regulator components as well as the integrated dirt trap are put together in a cartridge which is easy to clean or to exchange without disassembling the entire valve. In this way, maintenance effort and expenditure is reduced to a minimum.

incidentally, with its electropolished surfaces this valve will set a visual highlight on every installation.

In the standard versions, type DRV 700 is equipped with internal threads (ISO 228), type DRV 800 is provided with flanges (DIN EN 1092). Of course, special versions like NPT-threads, ANSI-flanges, steel welded ends or dairy couplings are available on request.

The series DRV 700 and 800 will be deliverable from the second half of 2014.

The advanced, flow optimised construction allows high flow rates combined with a compact design and also the non-rising valve stem requires just a reduced space. And

NEW

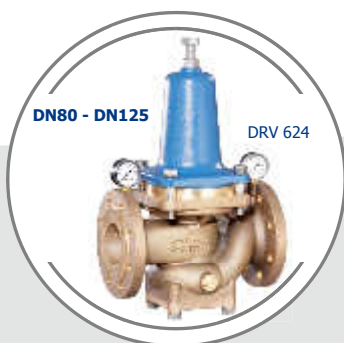
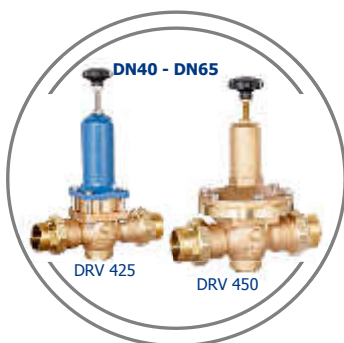
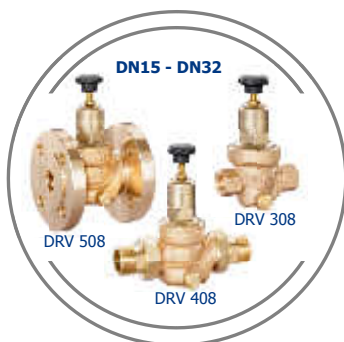


PN bar	p ₂ bar	Nominal Size	kvs m³/h	Internal Thread DRV - Typ	Flange DRV - Typ
25	0,2 - 2	DN15 - DN50	2,9 - 13	DRV 750	DRV 850
25	1,5 - 6	DN15 - DN50	2,9 - 13	DRV 702	DRV 802
25	0,5 - 4	DN15 - DN50	2,9 - 13	DRV 772	DRV 872
25	1,5 - 10	DN15 - DN50	2,9 - 13	DRV 708	DRV 808
25	0,5 - 9	DN15 - DN50	2,9 - 13	DRV 778	DRV 878
40	1,5 - 12	DN15 - DN50	2,9 - 13	DRV 724	DRV 824
40	2,0 - 20	DN15 - DN50	2,9 - 13	DRV 725	DRV 825

Pressure Reducing Valves

For any media ... in red bronze

Whenever liquid media are used (as well compressed air and neutral gases requiring high flow rates) the time has come for our industrial pressure reducing valve series DRV 300, DRV 400, DRV 500 and DRV 600



High temperatures?

As standard, our valves are designed for a max. media temperature of 75 °C. However, optionally the max. temperature scope can be extended to 190 °C by adding special seals and internal parts.

The advantage of red bronze

The valve bodies, completely made of red bronze, are extremely solid, non-corrosive and can therefore be used not just for precious potable water but for almost any other media. Pressure reducing valves of inferior quality are requiring expensive coatings. Due to our high-quality bodies we can leave out such coatings – and a coating which does not exist cannot get damaged.

Difficult media?

The standard versions are suitable for water and neutral, non-viscous liquids, for air and neutral, non-combustible gases. Nevertheless, we are supplying whatever type of pressure reducing valves specially equipped for potable water, cold, warm and hot water, sea water, diluted acids and alkalis, oils, fuels, liquid foodstuff, adhesives, foams, gases, compressed air, etc.

The agony of choice

No problem – we will gladly assist you in selecting the right Pressure Reducing Valve – let us know the requested flow rate, inlet and outlet pressure, temperature, the kind of media and we will shortly deliver the appropriate DRV valve in well-known high quality made by Berluto.

Series DRV 300, 400 and 500

Two different types (form A and B) are covering nominal size diameters from DN 15 to DN 65 and flow rates from 2.9 to 20 m³/h (kvs-value, see below). Designed for maximum inlet pressures (nominal pressure PN) of 16 and 25 bar, these valve types offer a wide scale of adjustable outlet pressure ranges p_2 , starting with 0.2 - 2.0 bar up to the high pressure area with 2.0 - 20 bar.

In view of the connection types there are hardly any restrictions: almost all valve types are also available with (ISO) internal threads, threaded male or flange connections. Moreover, regarding the threaded male connections you can choose between threaded or solder connection sets (even press-fittings of all leading manufacturers can be used).

PN bar	p_2 bar	Nominal Size	kvs m ³ /h	Internal Thread DRV - Typ	Male Thread DRV - Typ	Flange DRV - Typ
16	0,2 - 2	DN15 - DN80	2,9 - 24	DRV 350 ¹⁾	DRV 450 ²⁾	DRV 550
25	1,5 - 6	DN15 - DN80	2,9 - 24	DRV 302 ¹⁾ / 303 ³⁾	DRV 402 ²⁾ / 403 ³⁾	DRV 502
25	0,5 - 4	DN15 - DN80	2,9 - 24	DRV 372 ¹⁾ / 373 ³⁾	DRV 472 ²⁾ / 473 ³⁾	DRV 572
25	1,5 - 10	DN15 - DN80	2,9 - 24	DRV 308 ¹⁾	DRV 408 ²⁾	DRV 508
25	0,5 - 9	DN15 - DN80	2,9 - 24	DRV 378 ¹⁾	DRV 478 ²⁾	DRV 578
25	1,5 - 12	DN15 - DN80	2,9 - 24	DRV 324 ¹⁾	DRV 424 ²⁾	DRV 524
25	2,0 - 20	DN15 - DN80	2,9 - 24	DRV 325 ¹⁾	DRV 425 ²⁾	DRV 525

1) internal thread types (DRV 3xx) up to DN50 only (kvs up to 13 m³/h)

2) Male threaded types (DRV 4xx) only up to DN 65 (kvs up to 20 m³/h)

3) types DRV 303, 373, 403 and 473 up to DN32 PN 16 only (kvs up to 6.0 m³/h)

Series DRV 600

In case that flow volumes of previously mentioned DRV types will be exceeded, our large flange pressure reducing valves will be of service. The construction lengths are corresponding to DIN 3202 and are thus ensuring an

easy replaceability. It is important to mention that also the bodies of our big Form C pressure reducing valves are completely made of red bronze!

PN bar	p_2 bar	Nominal Size	kvs m ³ /h	Flange DRV - Typ
16	1,5 - 6	DN80 - DN125	60 - 130	DRV 602
16	0,5 - 4	DN80 - DN125	60 - 130	DRV 672
16	3,0 - 10	DN80 - DN125	60 - 130	DRV 608
16	0,5 - 9	DN80 - DN125	60 - 130	DRV 678
25	4,0 - 12	DN80 - DN100	60 - 80	DRV 624

The kvs Value

The kvs-value expresses the flow rate of water (at 5 - 30°C) at a fully open valve position (H100) and a pressure drop of 1 bar. The flow rate Q at a pressure drop Δp (bar) for a fluid with density ρ (kg/l) is calculated as follows:

$$Q [\text{m}^3/\text{h}] = \text{kvs} [\text{m}^3/\text{h}] \cdot \sqrt{\Delta p / \rho}$$

read more: <http://www.berluto.de>

Level control...

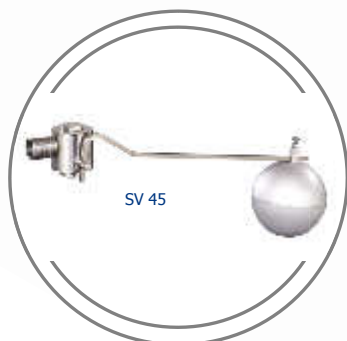
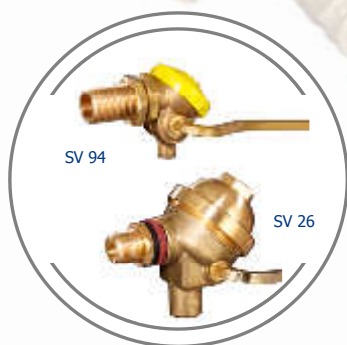
Ultra-solid and reliable float valves are the root of our current wide-ranging valve program: in 1917, the plumber Jean Bergner got the German Patent for his invention of a robust and reliable float valve; in 1920 he established his company named Berluto.

Initially designed for the use as toilet flushing, in these days our float valves are used worldwide in agriculture and industry, implemented for the filling of separation or storage systems respectively its level regulation, such as poultry drinking troughs, humidifiers, car washers, booster stations, pool or pond constructions, etc. And still to this day our technology is so highly developed and up-to-date that it is even applied in train and air craft industry.

Our float valves are regulating inflow and level reliably without any auxiliary power or sensitive sensors, just along the lines: simply install it and it's done! And moreover: if extremely aggressive

or abrasive media are being used, the only genuine wearing parts nozzle and seal can be replaced easily. This cannot always be assumed for competing float valves.

No matter what kind of media should be used or which flow is required – in our range you will always find the adequate float valve made of brass, red bronze or stainless steel, with seals of NBR or FPM and floats of Hostalen (PE), copper or V4A-steel.



Series SV: for small storage tanks

The small SV-series starts with type SV 94 made of brass (optionally with plastic or brass cap) for reduced flow rates or pressures (up to 6 bar). For higher working pressures (up to 12 bar) we recommend our SV 26 valve, entirely made of brass. The latest type of this series is the

SV 45, completely produced of stainless steel (1.4571) and applicable for working pressures up to 10 bar. For all valves of our SV-series we offer matching floats of either Hostalen (PE), copper or stainless steel (V4A).

Typ	p_{max} / bar	Nominal Size	kvs / m ³ /h	Valve Body	Seal	Floats
SV 94	6	DN 10 - DN 15	0,2 - 0,3	Brass	NBR	PE, Copper, V4A
SV 26	12	DN 10 - DN 15	0,3 - 0,4	Brass	NBR	PE, Copper, V4A
SV 45	10	DN 10 - DN 20	0,3 - 0,4	Stainless Steel (1.4571)	FPM	PE, Copper, V4A

Series KSV: allrounder made of red bronze or stainless steel

The KSV-series is our allrounder in the middle range whenever SV-valves might be too small or RSV-valves are too big. The KSV-series valves are working with a regulating piston, bodies are made of red bronze, nozzles and seals are easily replaceable. Furthermore, these

valves are very cost-effective and their dimensions are compatible with numerous industrial float valves. Matching floats out of copper, HDPE or stainless steel (V4A) are available.

Typ	p_{max} / bar	Nominal Size	kvs / m ³ /h	Valve Body	Seal	Floats
KSV 10	6, 8, 12	DN 15 - DN 25	2,3 - 6,0	Brass	NBR	Copper, HDPE, V4A
KSV 80	6, 8, 12	DN 10 - DN 25	2,6 - 6,7	Stainless Steel (1.4408)	FPM	Copper, HDPE, V4A

Float Valves



RSV G



RSV VA



ESV 80 F/F

Series RSV: highly robust reservoir valves

Whenever robust valves for high inlet pressures and/or large flows are required the float valves of our RSV-series are brought into action. RSV-series valves are available in open (RSV O) or closed (RSV G) design for working pressures up to 12 bar and kvs-values from 1.2 m³/h up to 72 m³/h. Due to the special leverage all RSV-valves get along with a relatively short float arm. Seals can be inspected and replaced without dismantling the entire

valve. RSV-valves are made of brass or stainless steel (RSV VA). The RSV VA is equipped with FPM seals and allows media temperatures up to 190 °C. For all RSV-valves we offer matching floats, either of copper or stainless steel (V4A).

Typ	p _{max} / bar	Nominal Size	kvs / m ³ /h	Valve Body	Seal	Floats
RSV O	6, 8, 12	DN 10 - DN 80	1,2 - 72	Brass	NBR	Copper, V4A
RSV G	6, 8, 12	DN 10 - DN 80	1,9 - 48	Brass	NBR	Copper, V4A
RSV VA	6, 8	DN 15 - DN 65	2,1 - 48	Stainless Steel (1.4571)	FPM	V4A

Series ESV: High performance valves made of stainless steel

The high performance valves of our new series ESV are a further development of our long proven series RSV. The exclusive use of stainless steel (V4A) permits the best possible media resistance; with the pressure-proof sealing these valves are applicable not only for tank installations but also for pipeline systems.

The ESV-valves are extremely robust and durable and, due to the special design, highly insensitive to soiling. The specific leverage allows relatively short float arms. The sealing is easy to inspect or to replace without removing the valve.

Once operating, high flow rates with flow coefficients

(kvs) from 3.7m³/h (DN15) up to 60m³/h (DN80) will be achieved. Applicable max. supply pressure is 12 bar, max. media temperature up is 190 °C .

The valves are available with various port configurations:
ESV 80 G/G: inlet and outlet with threaded connection
ESV 80 F/G: inlet flange connection, outlet threaded connection

ESV 80 F/F: inlet and outlet with flange connection
For all ESV-valves we offer matching floats, preferably from stainless steel.

Typ	p _{max} / bar	Nominal Size	kvs / m ³ /h	Valve body	Seal	Floats
ESV 80 G/G	6, 8, 12	DN 15 - DN 80	3,7 - 60	Stainless Steel (1.4571)	FPM	V4A
ESV 80 F/G	6, 8, 12	DN 40 - DN 80	14 - 60	Stainless Steel (1.4571)	FPM	V4A
ESV 80 F/F	6, 8, 12	DN 40 - DN 80	14 - 60	Stainless Steel (1.4571)	FPM	V4A

Filtration...

SF: high quality dirt traps in red bronze or stainless steel

Dirt traps are used for the filtration of neutral, non-viscous liquids and neutral, non-combustible gases. Dirt traps protect against damage caused by weld spatters, sealing material, boiler scale, rust or other dirt partic-

les. Even on these simple armatures we are demanding highest standards: with the unique Berluto series F dirt traps with double strainer you will amplify the protection of your devices considerably.



SF VA F

SF 01 F

Typ	Max. Press. / Temp.	Nominal Sizes	Strainer (Mesh Size)	Material (Body, Seal)
SF 01 N	16 bar / 90 °C	DN 10 - DN 65	Single (0,6)	Red Bronze, NBR/FPM
SF 01 F	16 bar / 90 °C	DN 10 - DN 65	Double (0,25/0,6)	Red Bronze, NBR/FPM
SF VA F	40 bar / 90 °C	DN 15 - DN 50	Double (0,25/0,6)	V4A (1.4408), EPDM
SF 01 F-6*)	16 bar / 90 °C	DN 10 - DN 65	Double (0,25/0,6)	Red Bronze, NBR

*) Materials according to the current version of the european drinking water regulations valid from 01.12.2013



Over-pressure protection...

Series MSV: full-metal top quality out of red bronze (F)

Whenever full-metal valves are required, whether due to high temperatures or for optical reasons, as well as for general industrial applications our solid high quality MSV-series safety valves, entirely made of brass or red bronze,

are applied. The valves are temperature resistant up to 140 °C and are available with set pressures from 3 to 10 bar.



Series SP: pressure relief and safety valves in red bronze (D/G/F)

The bodies of the SP80 pressure relief valves and the SP82/SP83 safety valves are made of red bronze, bonnets and internal parts are in brass or stainless steel. Depending on the seals (EPDM, FPM or PTFE), the valves are applicable for temperatures up to 225 °C (SP80) re-

spectively 185 °C (SP82/SP83), can be used for liquids, gases and steam and are resistant to oil, unleaded fuel and benzene. SP82C and SP83C components are TUEV-approved and CE-tested. The SP80 can be used as pressure relief valve for industrial applications.



NHS: safety valves of brass (D/G)

All valves of the series NHS are direct acting, spring loaded and blow-off safety valves according to recommendation AD2000/ A2. Valve body, spring bonnet and all other inner parts are made of brass. This valve type is used as a safety device in order to blow off air or other

neutral, non-toxic and non-flammable gases from pressure vessels (not suitable for liquid or dust-like media or goods). The set pressure varies from 0.3 to 42 bar and will be factory set.



VHS: high performance safety valves (F/K/S)

The VHS 90 valves are direct acting, spring loaded high performance safety valves (according to recommendation AD2000/ A2). This component tested valve type is used to blow off liquid, grainy or dust-like media from pressure vessels with temperatures up to 200°C. Valve

body, spring bonnet and all other inner parts are made of brass. This blow off valve has a protective hood, FPM seals and the closed spring bonnet is provided with a silicone diaphragm.

Valve Type	Set Pressure	Nominal Sizes	Applications	Certificates
MSV	3 - 10 bar	DN 15 - DN 40	Liquids, Air, Gases	TUEV, CE
SP 80	0,2 - 20 bar	DN 10 - DN 50	Liquids, Air, Gases, Steam	CE
SP 82 C	0,2 - 20 bar	DN 15 - DN 50	Air, Gases, Steam	TUEV, CE
SP 83 C	1,0 - 16 bar	DN 15 - DN 50	Liquids	TUEV, CE
NHS 10	0,3 - 42 bar	DN 8 - DN 20	Air, Gases, Steam	DEKRA, CE
NHS 11	0,2 - 30 bar	DN 15 - DN 20	Air, Gases, Steam	DEKRA, CE
NHS 12	0,5 - 6 bar	DN 25 - DN 50	Air, Gases, Steam	DEKRA, CE
VHS 90	0,5 - 6 bar	DN 25 - DN 50	Liquids, Grainy, Dust-like Media	DEKRA, CE

High Quality Valves Since 1920



On 31th July 1917, the plumber Jean Bergner received the German Patent for his invention of an extraordinary robust and reliable float valve. In 1920, Bergner founded - in cooperation with the merchant Ludwig and the plumber Toeller - the company "Berluto".

4 years later, in 1924, the "Berluto Armaturen AG" was established under the chairmanship of August Bender with numerous plumbers of the German Rhineland area as shareholders. In 1953, the company was transformed into today's "Berluto Armaturen-GmbH". This day the business is conducted already in the third generation by descendants of the company's founder.

Today Berluto is situated in an up-to-date development and production site located in Tönisvorst, Germany. A flexible production with high and constant precision and short processing times is guaranteed due to computer-aided development processes with direct CAD/CAM connection to CNC-machining centers. This allows a production of large valve series as well as custom-made valves in well-known Berluto-Quality. Commencing the production, all utilized and certified materials (red bronze, brass, stainless steel, sealings) are subject to a rigid quality control. On the other hand, computer-aided test benches finalize the completion of the production chain by a one-hundred-percent checkout and quality assurance.

In spite of modern development and production methods all our employees hold on a crucial Berluto-feature: the passion for detail and first-class workmanship, just like Jean Bergner did in 1917.

Still today, all Berluto valves benefit from a centenary know-how in development, construction and production of special and custom-made valves, pressure reducing valves, safety valves, float valves, dirt traps and filters.



Berluto® Armaturen-Gesellschaft mbH

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