vonRollhydro

Above ground hydrants

phone +41 62 388 14 00, fax +41 62 388 14 20, www.vonroll-hydro.ch, info@vonroll-hydro.ch

Above ground hydrants

Installation and operation

General
Hydrants are used for fire fighting and as points for obtaining a water supply. They may be used to bleed air and drain off water from the system as well as for temporary water supply.
Equipped with the **leak recognition system Ortomat** an early warning is possible to recognise leaks and potential pipeline damage. The hydrants are available compete with the proven Ortomat leak recognition system already fitted.

The hydrants are completely protected from corrosion and are **maintenance free**.
Maintenance free dose not release those responsible from the execution of functional checks every second year according to DVGW- directives W331, Section. 6.

Above ground hydrants are recognised for their fast operation and easy recognition. They are found in a variety of situations and wherever space allows.

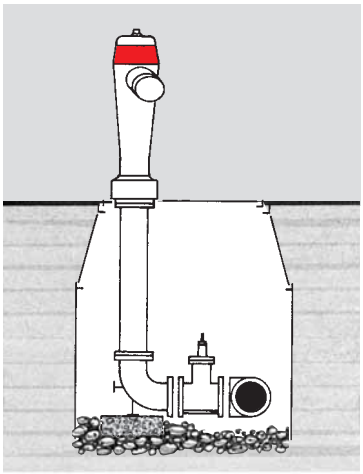
Above ground hydrants from vonRoll offer the maximum performance through reliability and functional safety under all climatic conditions, quick operation and minimum press loss.
Even when the upper part of a hydrant is broken off by collision, the valve remains closed.
Repairs to the pipeline and hydrant can be carried out without shutting off the supply or excavating the column pipe.
The exit pipes are uniformly offset by 129° and lead to angled down pipe connections.
The construction allows the hoses to be easily connected without kinking. There are fixed connections according to DIN or made to order. The hydrants can be delivered according to requirements with a vertical flanged inlet or a 90° elbow with flange, sleeve coupling or PE-100 insert end. Abutting the inlet tube base plate is a holding plate for support against horizontal forces.

The loss of press is minimised through the refined developments to optimise hydrodynamic flow.
This advantage is of particular value when low initial press is a problem.
In both the vertical and 90° inlets is an automatic drain system that opens when the hydrant is closed and facilitates a complete drainage of the hydrant when not in use. To attach a closed pipe for carrying off the drained water there is a special connecting piece available.

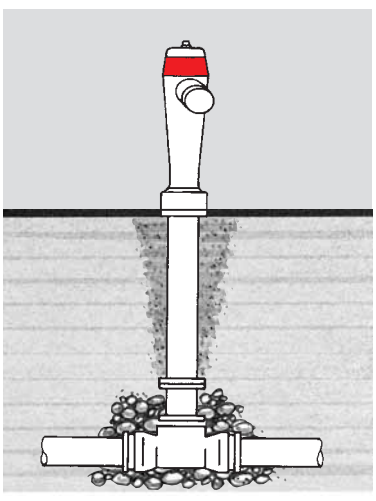
The upper parts of the Classic hydrant, 5000S^{+}, hy^{+} 5700 and Nostalgie are mounted on the lower part vonRoll vario Figure 5347 or fix Figure 5144 to complete the hydrants.
The hydrants parts are coated with a long term corrosion protection or they are made from non rusting materials.
Colour outside: rot RAL 3000, blue RAL 5005, yellow RAL 1003, lemon green or white aluminium RAL 9006.
Other colours on request.

Installation examples

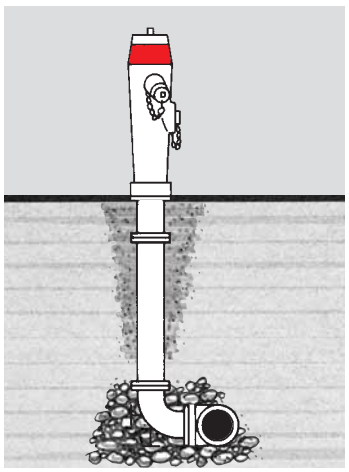
Inlet 90° with flanges



Inlet vertical with flanges



With upper extension



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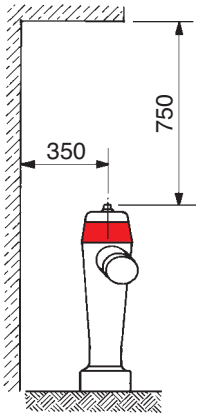
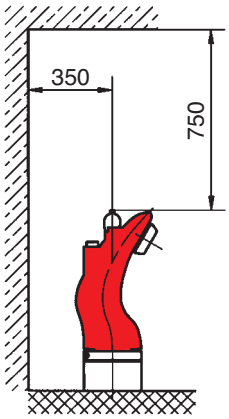
Above ground hydrants

Installation and operation

Thanks to the 120° arrangement of the outlets the hydrant maybe universally positioned even in a wall recess.
Required free space: see sketches



Minimum free space
for hydrant operation



Minimum distance
to connect the hoses

It is advised to install an inspection element (valve or double shut-off) before the hydrant inlet.
- The types 5522, 5532, 1896 and 5530 the extension pipe may be mounted at every 45° from the column pipe.
- The types hy^{+} 5700 and 5416S^{+} the extension pipe may be mounted as required through 360°.

After connection of the hydrant to the mains water supply and before filling in the trench it is necessary to carry out a press leakage inspection test.
It is important to secly anchor the hydrant in the trench before the press test. After the press test of the equipment a test run of all the functions must be carried out.
Remove the protection caps. Through slowly opening the valve some residual installation materials will be flushed out. Thereafter the valve should be properly closed and inspected for leaks. If leakage is apparent it is advised to repeat the flushing proced to remove any further residue materials between the sealing faces.
To check the drainage function the valve must be closed. The hydrant should now drain independently (a suction is noticeable on the breather hole in the top).
After a final control of the pipe work, the filling in of the trench around the hydrant may be completed.
A bed of clean gravel must be filled in until covering the flange connections between inlet and column pipe.
This meas allows an unhindered seepage of the water from the draining process and prevents subsequent blocking of the opening.
According to the type of ground (for example where there are trees nearby) it is advisable to protect the hydrant for example with a reinforced concrete pipe that encloses the flange connections. To guarantee a good bedding in of the hydrant it is important to fill in layers and to compact the fill material by stamping down. For constant supply hydrants it is possible to do without a breather and drainage openings.

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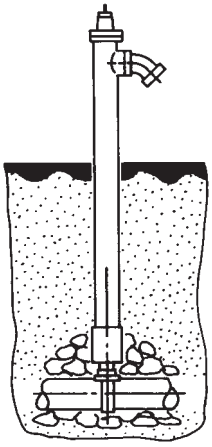
Above ground hydrants

Industrial hydrants

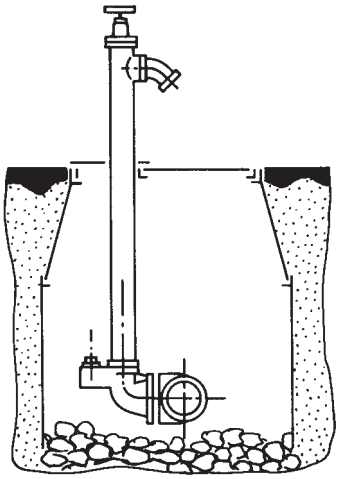
For water hydrants used on industrial areas we recommend industrial above ground hydrants DN 150 with an output of 5600 l/ minute. For low output requirements (reduced water usage such as waste facilities or irrigation) an industrial above or under ground hydrant may be used.
Further information and prospect on request.

Installation examples

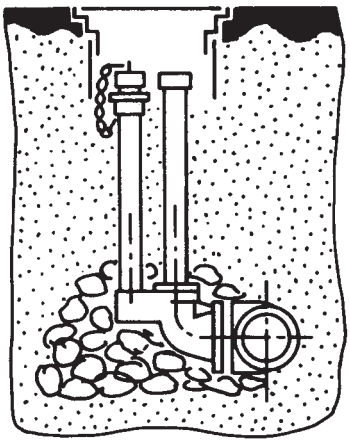
Under ground with vertical inlet



Inlet 90° with flanges



Under ground inlet 90° with flanges



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Portrait	Hydrants		Medium
	**Above ground hydrant upper part Classic DN 100/125, PN 16, outlets of choice 2x75, 2x55 or 55/75 Storz**	**page 5/7** Figure 5522	Water
	**Above ground hydrant upper part Classic DN 100/125, PN 16, outlets of choice 2x75, 2x55 or 55/75 Storz and with central outlet 1x75 Storz**	**page 5/7** Figure 5532	Water
	**Above ground hydrant 5000S⁺ DN 100/125, PN 16, 1 outlet central 1x75 Storz**	**page 5/8** Figure 5416	Water
	**Above ground hydrant hy⁺ 5700 DN 100/125, PN 16, outlets of choice 2x75, 2x55 or 55/75 Storz**	**page 5/9** Figure 5706	Water
	**Above ground hydrant Nostalgie DN 100/125, PN 16, outlets 2x55 Storz**	**page 5/10** Figure 1896	Water

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Portrait	Hydrants		Medium
	**Connection set for hydrant types hy⁺ 5700 and 5000S⁺** to the lower part fix as from the year 1935	**page 5/11** Figure 5708	Water
	**Connection set for hydrant types hy⁺ 5700 and 5000S⁺** to the lower part vonRoll vario®	**page 5/11** Figure 5709	Water
	**Above ground hydrant lower column vonRoll vario®** Single shut-off Optional: double shut-off 	**page 5/12** Figure 5347	Water
	**Belove ground hydrant lower column fix** Single shut-off	**page 5/14** Figure 5144	Water
	**Above ground hydrants DN 150, outlets 2x110 and 1 outlet central 1x75 Storz**	**page 5/15** Figure 5530	Water

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Above ground hydrant upper part Classic

Figure 5522 and 5532

DN100/125, PN16
Outlets of choice 2x75, 2x55 or 55/75 Storz
and with central outlet 1x75 Storz.

Equipped with support for leek localisation Ortomat
Side valves vulcanized with EPDM
Automatic closing security with mounting stem
45° orientation of the hydrant outlets
Predetermined breaking point in flange connection
Delivery value min.190 m3/h (measd at
dp =1bar press drop)
Delivery test acc. to EN 12266 (DIN 3230 part 4)

Fits to lower column adjustable vonRoll vario and rigid

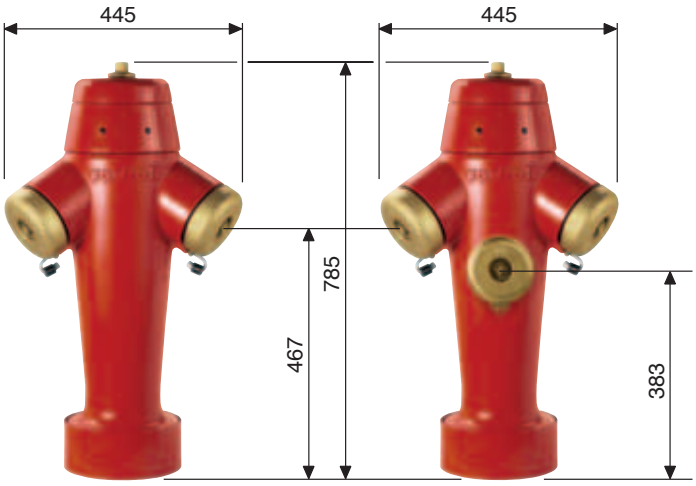


Fig. 5522 Fig. 5532

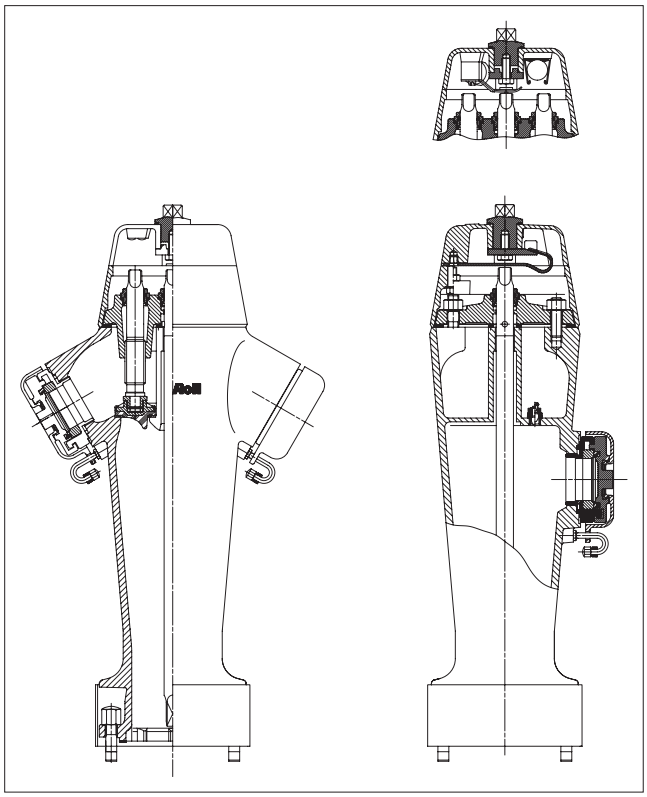
Weight of upper column Figure 5522 = 70 kg / Figure 5532 = 76 kg

Coating

Inside: Epoxy-powder-coating blue RAL 5006, min. 250µm
Outside: Epoxy- and polyester-powder coating, colour red RAL 3000,
blue RAL 5005, yellow RAL 1003, lemon green or white aluminium RAL 9006.
Other colours on request

Material

Upper column of grey cast iron
Side valves of brass vulcanized with EPDM
Valve head und protection covers of ductile cast iron
Spindle of side valves, outlet and cover of brass
Extension stem of stainless steel
Base ring of steel
Elastomeres of rubber



Accessories

License plate Figure 6934
Hydrant key of Aluminium Figure 7598
Hydrant key with reduction of Aluminium Figure 7599
Fastening with tilting rod Figure 6941
Single fixation for indication plate of valves Figure 6942
Double fixation for indication plate of valves Figure 6944

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Above ground hydrant upper column 5000S+

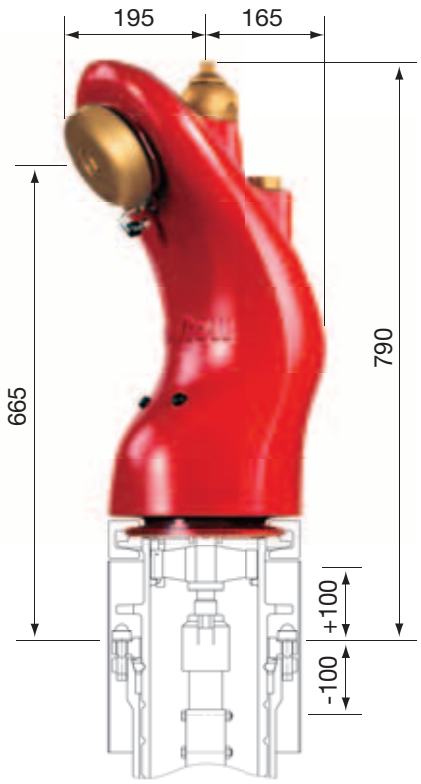
Figure 5416

DN100/125, PN16
Outlet central 1x75 Storz

Equipped with tube for leek localisation Ortomat
Freeorientation 360° of the hydrant outlet due to loose flange connection on the predetermined breaking point
Ground level adaptation of 1/-100mm with height base ring
Predetermined breaking point in loose flange connection
Delivery value min. 135m3/h (measd at dp =1bar press drop)
Delivery test acc. to EN 12266 (DIN 3230 part 4)

Fits with set of connection Figure 5708 / 5709 (see page 5/11) to lower column adjustable vonRoll vario and rigid.

Weight of upper column 40 kg

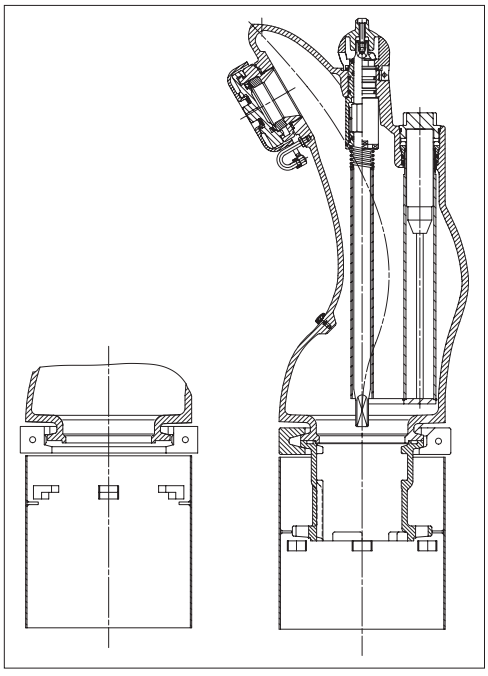


Coating

Inside: Epoxy-powder-coating blue RAL 5006, min 250 µm.
Outside: Epoxy- and polyester-powder coating, colour red RAL 3000, blue RAL 5005, yellow RAL 1003, lemon green or white aluminium RAL 9006.
Other colours available on request.

Material

Upper column made from ductile cast iron.
Outlet and cover made from brass.
Extension stem and course limiter made from stainless steel.
Support tube for Ortomat made from stainless steel
Elastomeres made from rubber.



Accessories

License plate Figure 6934
Hydrant key made from Aluminium Figure 7598
Hydrant key with reduction made from Aluminium Figure 7599
Fastening with tilting rod Figure 6941
Single fixation for indication plate of valves Figure 6942

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Above ground hydrant upper column hy+ 5700

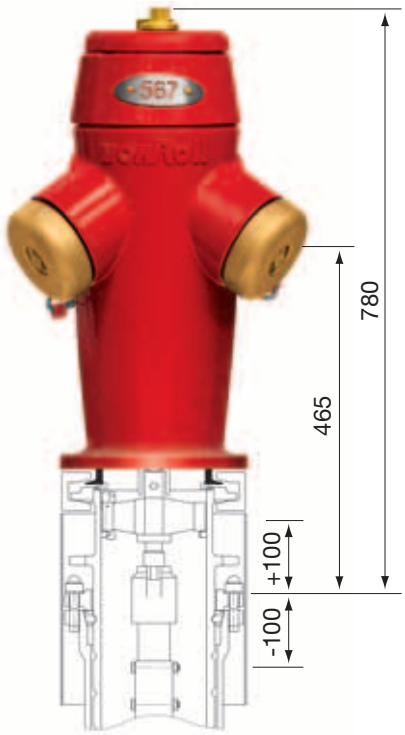
Figure 5706

DN100/125, PN16
Outlets of choice 2x75, 2x55, or 55/75 Storz

Equipped with tube for leek localisation Ortomat
Side closing similar to valve technology
Automatic closing security with mounting stem
Free orientation 360° of the hydrant outlets due to loose flange connection on the predetermined breaking point
Ground level adaptation of 1/-100mm with height base ring
Predetermined breaking point in loose flange connection
Delivery value min. 235m3/h (measd at dp =1bar press drop)
Delivery test acc. To EN 12266 (DIN 3230 part 4)

With connection set Figure 5708 / 5709 (see page 5/11)
to lower column adjustable vonRoll vario and rigid

Weight of upper column 55 kg



Coating

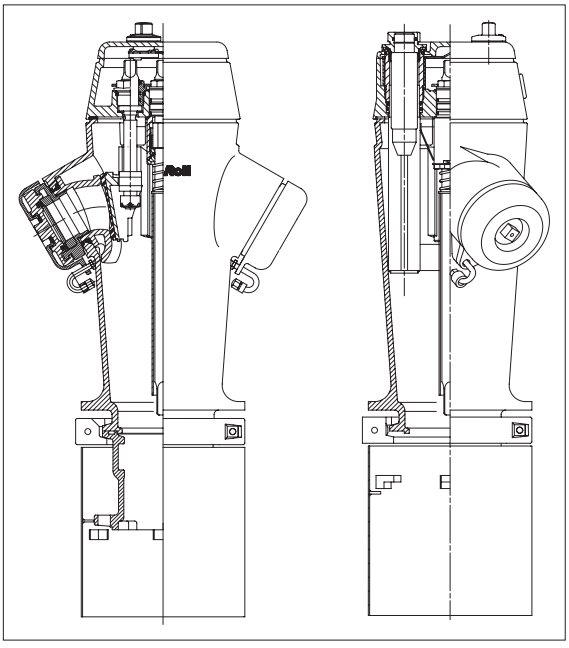
Inside: Epoxy-powder-coating blue RAL 5006, min 250 µm.
Outside: Epoxy- and polyester-powder coating, colour red RAL 3000, blue RAL 5005, yellow RAL 1003, lemon green or white aluminium RAL 9006.
Other colours available on request.

Material

Upper column, valve head und protection covers made from ductile cast iron
Side valves made from grey cast iron vulcanized with EPDM.
Outlets and covers made frombrass
Spindles of side valves, extension stem and support tube for Ortomat made from stainless steel
Elastomeres made from rubber

Accessories

License plate Figure 6934
Hydrant key made from Aluminium Figure 7598
Hydrant key with reduction made from Aluminium Figure 7599
Fastening with tilting rod Figure 6941
Single fixation for indication plate of valves Figure 6942
Double fixation for indication plate of valves Figure 6944
Press gauge Figure 6945



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Above ground hydrant upper column Nostalgie

Figure 1896

DN100/125, PN16
Outlet 2x55 Storz

Soft sealed side valves vulcanized with EPDM
45° orientation of the hydrant outlets
Predetermined breaking point in flange connection
Delivery value min. 150 m^3/h (measd at dp =1bar press drop)
Delivery test according to EN 12266 (DIN 3230 part 4)

Fits with to lower column adjustable vonRoll vario and rigid.

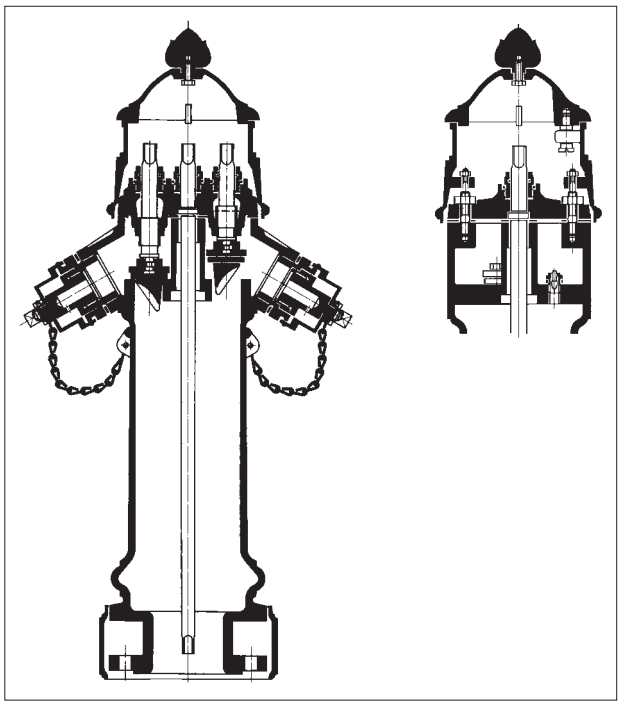
Weight of upper column 84 kg

Coating

Zinc sprayed, Eclon coated in mouse grey RAL 7005

Material

Upper column, valve head, protection covers, base ring and outlet cover made from grey cast iron
Hose connection, spindle of side valves and seal bush made from brass
Side valves made from brass vulcanized with EPDM
extension stem made from stainless steel
Elastomeres made from rubber



Accessories

Hydrant key made from Aluminium Figure 7598
Hydrant key with reduction made from Aluminium Figure 7599

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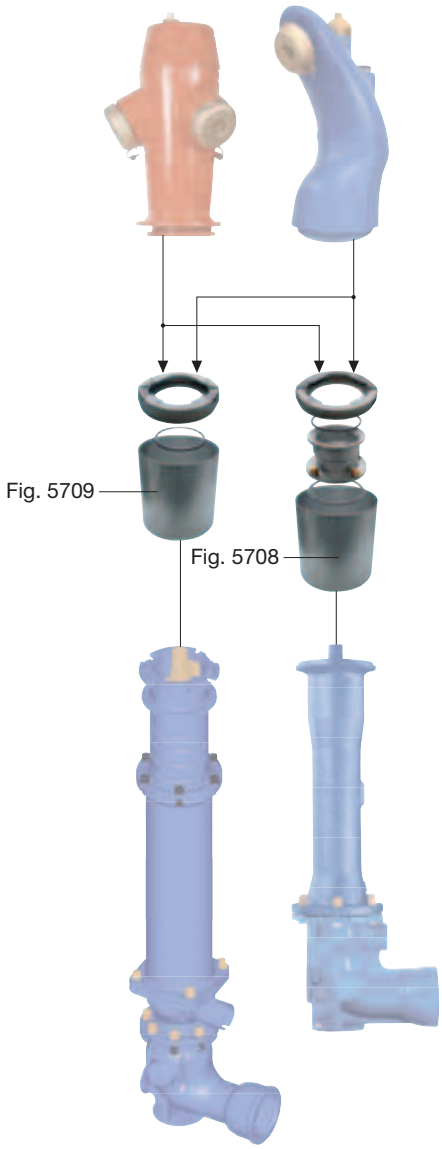
Connection sets for hydrant types hy⁺ 5700 and 5000S⁺

Figure 5708 / 5709

Connection set Figure 5709 to the vonRoll vario adjustable lower part
Connection set Figure 5708 to the lower part fix as from the year 1935

The hydrants upper parts hy⁺ 5700 and 5000S⁺ are mounted on the lower part, vonRoll vario Figure 5347 or fix – Figure 5144 using the connection set.

Weight:
Figure 5708 = 16.5 kg
Figure 5709 = 9.6 kg



Coating

Hot dip galvanised or hot dip galvanised with Epoxy coating in red RAL 3000, blue RAL 5005, yellow RAL 1003, lemon green, aluminium white RAL 9006 and other RAL colours by request.

Material

Connection set Figure 5708
Foundation ring made from hot dip galvanised steel
Bridge made from hot dip galvanised ductile cast iron
Seals made from EPDM rubber
Adapter made from hot dip galvanised ductile cast iron
Threaded parts made from stainless steel
Domed cap nut made from brass
O-ring made from EPDM rubber

Connection set Figure 5709
Foundation ring made from hot dip galvanised steel
Bridge made from hot dip galvanised ductile cast iron
Column pipe seals made from EPDM rubber

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Above ground Hydrant lower column vonRoll vario

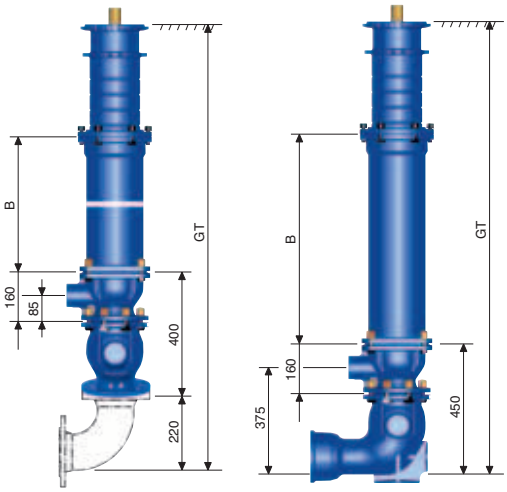
Figure 5347

DN 100/125, PN 16

Pipe covering 0.75 to 2.15 m
Telescope tube adjustable in steps of 5 cm.
Soft sealed main valve vulcanized with EPDM
Automatic drainage valve and protection against loss of supply water
Safety interlocking of the subassembly of inner parts
Single shut-off
Appropriated for tunnel climate

Optional:
Inside right or left hand thread G2" for house connection.
Version with double shut off

Lower parts vonRoll vario are assembled with the hydrant upper parts Classic, 5000S+, hy+ 5700 and Nostalgie to complete the hydrants.
For the assembly of the hydrant upper part 5000S+ and hy+ 5700 the connection set Figure 5709 is required (see page 5/11)



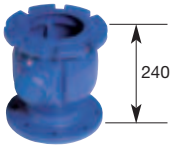
Version with double shut-off

Technical dimensions

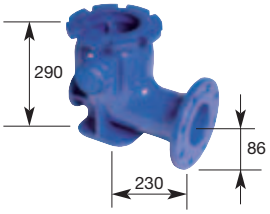
Execution		L1	L2	L3	L4*
Pipe covering**	GT	0,90 – 1,10 m	1,10 – 1,50 m	1,30 – 1,85 m	1,60 – 2,15 m
Mantle tube	B	280 mm	480 mm	680 mm	680 + 300 mm
Weight		95 kg	103 kg	110 kg	128 kg

* Type L4 with extension part of 300 mm
** Hydrants 5000S+ and hy+ 5700: pipe covering is 0,15 m less than indicated

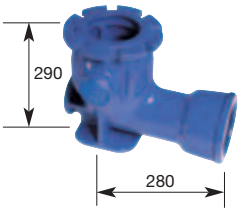
Version Inlet



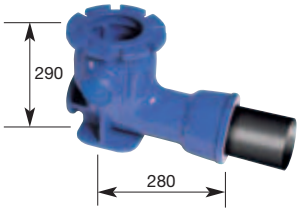
Vertical inlet
with flange DN 100



90° inlet elbow
with flange DN 100



90° inlet elbow
with sleeve coupling
DN 100 or DN 125



90° inlet elbow
with PE insert end
DA 110, 125,140 or 160

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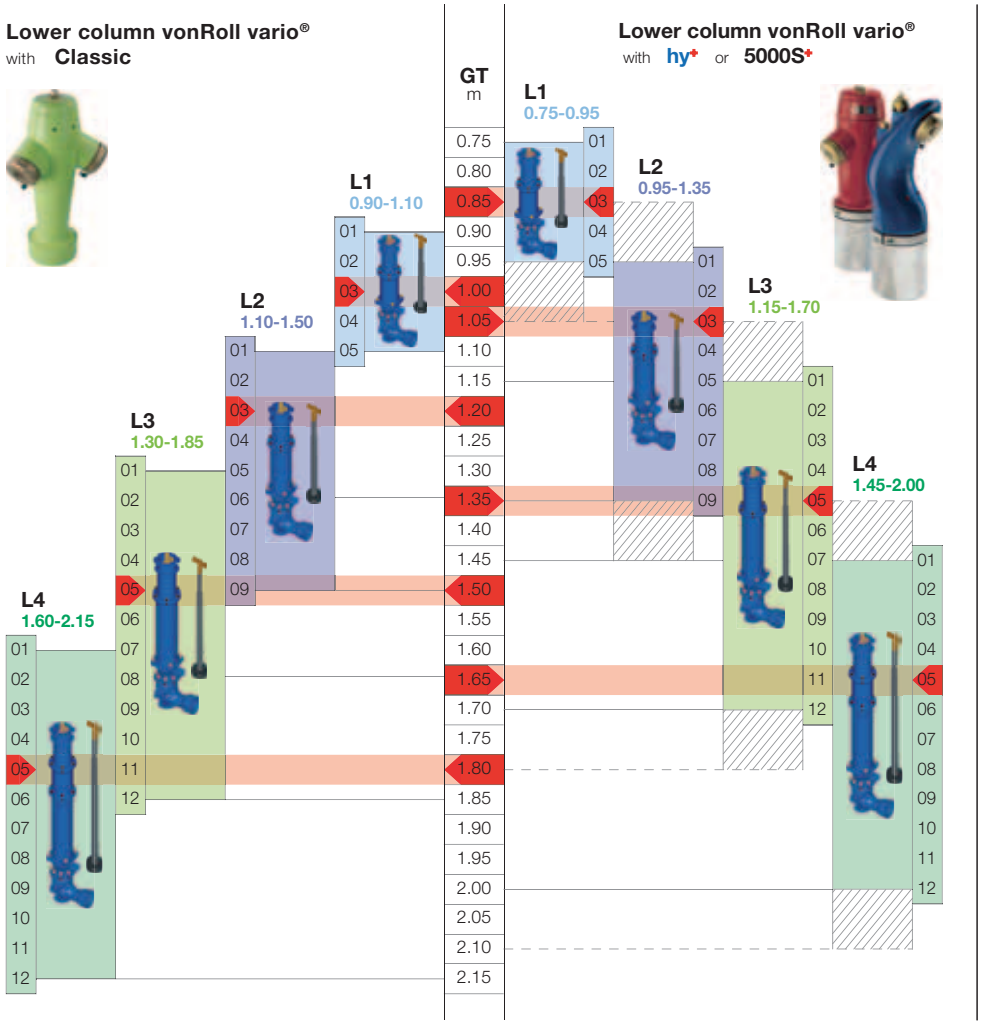
Above ground hydrant lower column vonRoll vario

Pipe covering



GT Pipe covering

Pipe covering at factory

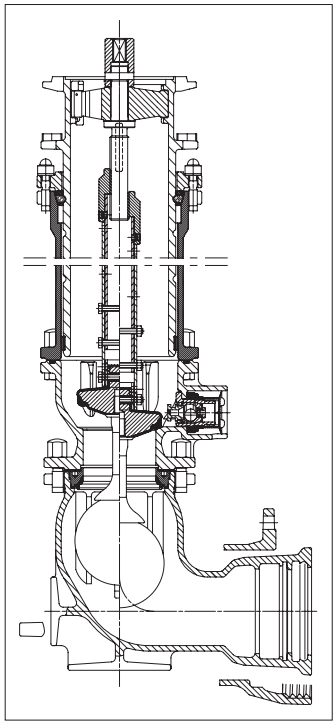
Base ring +/- 10 cm

Coating

Epoxy full protection coating blue, min 250 µm;

Material

Mantle tube, telescope tube and counter flange of ductile cast iron.
Seat of spindle, spindle nut and spindle connections made from brass.
Main valve spindle and stem made from stainless steel.
Main valve cone vulcanised with EPDM.
Automatic drainage valve made from brass.
Inlet and main valve housing made from ductile cast iron.
Elastomere made from rubber
Floating sphere of POM (version double shut off)



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Above ground hydrant lower column fix

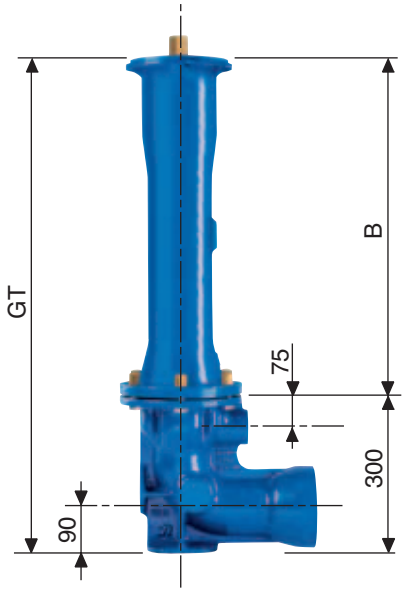
Figure 5144

DN100/125, PN16

Pipe covering: 1.0 m bis 2.10 m
Soft sealed main valve vulcanized with EPDM
Automatic drainage valve and protection against loss of supply water
Safety interlocking of the subassembly of inner parts
Single shut-off
Appropriated for tunnel conditions

Option: Inside thread G2" for house connection right or left

Lower parts fix are assembled with the hydrant upper parts 5000S+, hy+ 5700 Classic and Nostalgia to complete the hydrants.
For the assembly of the hydrant upper part 5000S+ and hy+ 5700 the connection set Figure 5708 is required.



Technical dimensions

Pipe covering GT mm	Steigrohrlänge B mm	Weight kg
1000	700	64
1100	800	67
1200	900	70
1300	1000	73
1400	1100	76
1500	1200	79

Pipe covering GT mm	Steigrohrlänge B mm	Weight kg
1600	1300	82
1700	1400	85
1800	1500	88
1900	1600	91
2000	1700	94
2100	1800	97

Version: Inlet

90° inlet elbow
with flange DN 100

Vertical inlet
with flange DN 100

90° inlet elbow
with sleeve coupling
DN 100 or DN 125

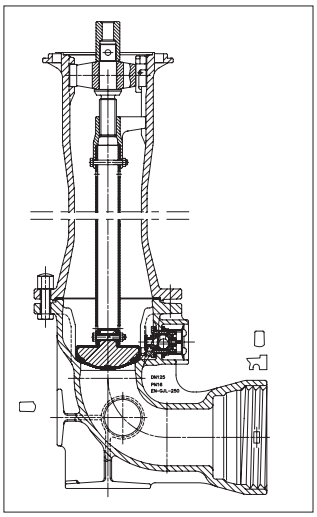
90° inlet elbow with
PE Insert end DA 110,
125, 140 or 160

Coating

Full protection with Epoxy coating, min 250 µm; colour blue

Material

Mantle tube made from grey cast iron
Seat of spindle made from ductile cast iron.
Spindle nut made from brass
Main valve spindle and stem made from stainless steel
Main valve cone made from grey cast iron vulcanised with EPDM
Automatic drainage valve made from brass.
Elastomere made from rubber.
Inlet- and main valve housing made from ductile cast iron.



Industrial-above ground hydrant 5000

Figure 5530

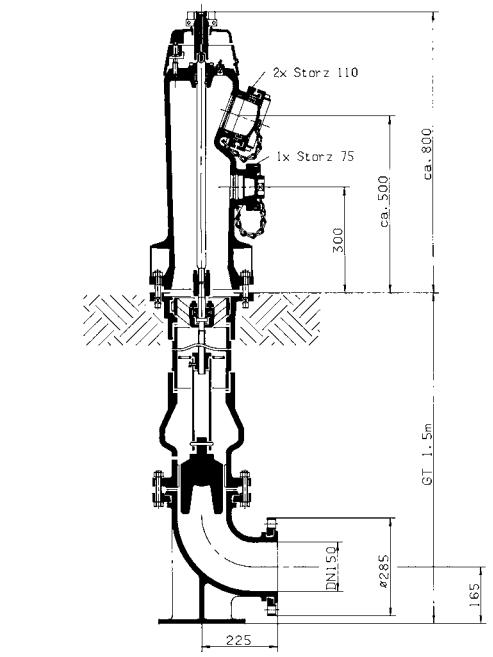
DN150 / PN16
Outlets 2x110 and 1x75 Storz

45° orientation of the hydrant outlets
Single shut off,
Automatic draining
Inlet elbow 90° with flange
Flange PN 10/16 to DIN 2501
Delivery value min. 400 m^3/h (measured at dp = 1bar press drop)
Delivery test according to EN 12266 (DIN 3230 part 4)

Weight 174 kg

Coating

Upper part: hot dip galvanised and epoxy-coated red RAL 3000
Lower part: hot dip galvanised
Inlet part: Epoxy coating, min 250 µm;



Material

Upper column and protection cover made from grey cast iron.
Outlet covers made from Aluminium.
Base ring made from steel
Spindle nut, outlet and sealing bush made from brass
Inlet, main valve housing, mounting tube and seat of spindle are made from ductile cast iron.
Main valve cone made from grey cast iron vulcanised with EPDM.
Main valve spindle, stem and stem extension made from stainless steel
Elastomere made from EPDM

Accessories

License plate Figure 6934
Hydrant key Figure 7598

phone +41 62 388 14 00, fax +41 62 388 14 20, www.vonroll-hydro.ch, info@vonroll-hydro.ch