

## Пожарные и промышленные гидранты



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## ERHARD POST FIRE HYDRANTS

### ERHARD post fire hydrant with cast post – the tried-and-trusted hydrant available in numerous versions

For years now, the ERHARD post fire hydrant according to DIN EN 14384 has been a tried-and-trusted solution which has numerous high-quality design features:

- The very latest sealing cone technology using PUR material
- Double cut-off with multi-chamber ball for replacing the inner set of fittings or the lower part of the post under full operational pressure
- Sophisticated safety interlock to prevent the dangerous ejection of the inner set of fittings during dismantling
- Service-friendly break system for straightforward repairs in the event of damage

The casing is made of spheroidal cast iron EN-JS1050 with EPDM used for the sealing elements. The ERHARD underground hydrant is enamelled on the inside and outside with a DUPLEX coating made up of zinc spraying with EP / PUR-based topcoat for optimum corrosion protection.

The ERHARD post fire hydrant is available in numerous versions:

- In nominal sizes DN 80 and DN 100 (the nominal size DN 150 can be realised with the aid of an optional reducing flange XR)
- For pipe cover of 1.00, 1.25 and 1.50 metres
- With two B fixed couplings at the top in accordance with DIN 14318 as well as one A fixed coupling at the bottom in accordance with DIN 14319
- With flange connection or spigot end according to the BLS system (Buderus Lock System)
- Optional with protective mantle made of plastic in fire red (RAL 3000)
- Special version as "Classic Line", the special design of which makes it particularly suitable for use in historic environments (with DUPLEX coating in anthracite grey)



ERHARD  
post fire  
hydrant

ERHARD  
post fire  
hydrant with  
protective  
mantle

ERHARD  
post fire  
hydrant Classic  
Line

**ERHARD CITY hydrant –  
the post fire hydrant with stainless steel post for a long service life**

Post fire hydrants are exposed to the weather day in, day out. Thanks to its stainless steel post and high-quality coating of the hydrant head, the ERHARD CITY hydrant provides the perfect solution to last for decades. As a consistent ongoing development of the ERHARD post fire hydrants used for many years, it is of course equipped with all the tried-and-trusted components such as the PUR cone, the double cut-off, the safety interlock and service-friendly break system.

The underground post of the ERHARD CITY hydrant, which can be rotated through 360 degrees, is enamelled on the inside and outside with an enamel primer which is supplemented by a double topcoat on artificial resin basis in the colour anthracite grey RAL 7016. The post hydrant is made of stainless steel with an electro-chemically polished surface. The hydrant head is protected inside and out by ERHARD Pro-Enamel in the colour dark blue, which has a second enamel coat in the colour dark red on the outside. This results in a comprehensive and reliable corrosion protection system.

The ERHARD CITY hydrant is available in numerous versions:

- In nominal sizes DN 80 and DN 100 (the nominal size DN 150 can be realised with the aid of an optional reducing flange XR with the ERHARD CITY hydrant, too)
- For pipe cover of 1.00, 1.25 and 1.50 metres
- With two B fixed couplings at the top in accordance with DIN 14318 as well as one A fixed coupling at the bottom in accordance with DIN 14319
- Optional with protective mantle in fire red (RAL 3000)



*ERHARD  
CITY hydrant*



*ERHARD  
CITY hydrant  
with protective  
mantle*

# ERHARD POST FIRE HYDRANTS – ALL DIMENSIONS AT A GLANCE

DN	RD mm	h1 mm	h2 mm	h3 mm	h4 mm*	h5 mm	Hexagon mm	Coupl. B	Coupl. A	Weight appr. kg	Volume m <sup>3</sup>
<b>ERHARD post fire hydrant with cast post [1]</b>											
80	1,00	1832	864	610	120	270	70	2	–	88	0,14
80	1,25	2082	864	610	120	270	70	2	–	94	0,16
80	1,50	2332	864	610	120	270	70	2	–	100	0,18
100	1,00	1832	864	610	120	270	70	2	1	92	0,19
100	1,25	2082	864	610	120	270	70	2	1	98	0,22
100	1,50	2332	864	610	120	270	70	2	1	104	0,25

<b>ERHARD post fire hydrant with cast post and protective mantle</b>											
100	1,00	2090	1121	835	120	270	70	2	1	97	0,28
100	1,25	2340	1121	835	120	270	70	2	1	103	0,31
100	1,50	2590	1121	835	120	270	70	2	1	109	0,34

<b>ERHARD post fire hydrant with cast post and BLS spigot end</b>											
80	1,25	2233	1030	610	120	270	70	2	–	94	0,16
80	1,50	2483	1030	610	120	270	70	2	–	100	0,18
100	1,25	2242	1030	610	120	270	70	2	1	98	0,22
100	1,50	2492	1030	610	120	270	70	2	1	104	0,25

<b>ERHARD post fire hydrant with cast post, BLS spigot end and protective mantle [2]</b>											
100	1,25	2500	1121	835	120	270	70	2	1	133	0,31
100	1,50	2750	1121	835	120	270	70	2	1	139	0,34

<b>ERHARD post fire hydrant with cast post "Classic Line" [3]</b>											
80	1,00	1832	864	610	120	270	70	2	–	93	0,21
80	1,25	2082	864	610	120	270	70	2	–	99	0,24
80	1,50	2332	864	610	120	270	70	2	–	105	0,27
100	1,00	1832	864	610	120	270	70	2	1	97	0,23
100	1,25	2082	864	610	120	270	70	2	1	103	0,26
100	1,50	2332	864	610	120	270	70	2	1	109	0,29

<b>ERHARD CITY hydrant [4]</b>											
80	1,00	1832	864	610	120	270	70	2	–	93	0,21
80	1,25	2082	864	610	120	270	70	2	–	94	0,24
80	1,50	2332	864	610	120	270	70	2	–	100	0,27
100	1,00	1832	864	610	120	270	70	2	1	97	0,23
100	1,25	2082	864	610	120	270	70	2	1	98	0,26
100	1,50	2332	864	610	120	270	70	2	1	104	0,29

<b>ERHARD CITY hydrant with protective mantle [5]</b>											
100	1,00	2090	1121	835	120	270	70	2	1	97	0,28
100	1,25	2340	1121	835	120	270	70	2	1	103	0,31
100	1,50	2590	1121	835	120	270	70	2	1	109	0,34

\* Tolerance  $\pm 80$  mm

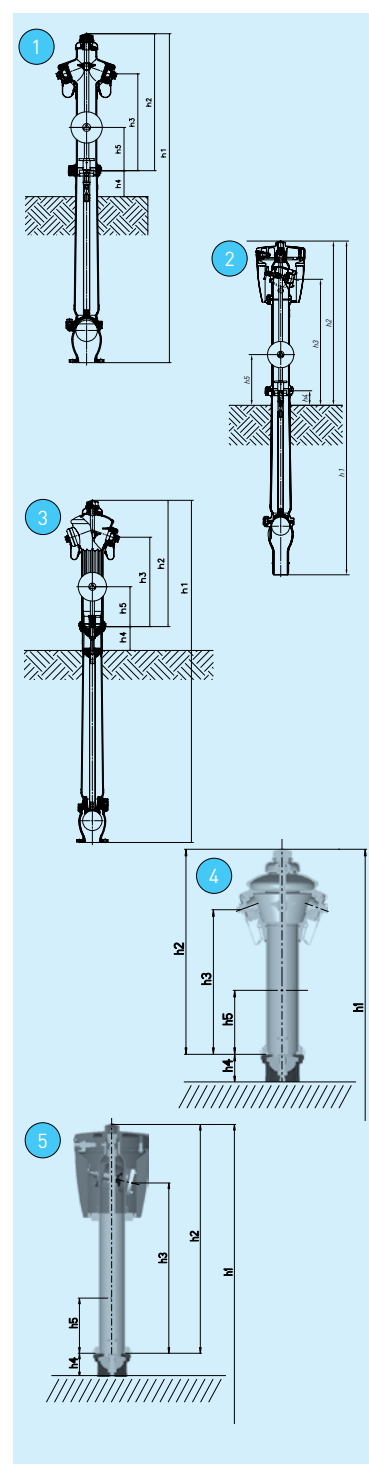
Flange connection EN 1092-2, PN 16, Type 21, raised face, type B

## Areas of use

Nominal size DN	Pressure rating PN	Allowable working pressure in bars	Allowable working temperature for neutral liquids in °C
80	16	16	60
100	16	16	60

## Test pressure according to EN 12266

Test pressure in the body with water: 17,6 bar



## Operating instructions

BA84E012\_UEHF\_drehbar\_  
Nirosaeule  
BA84E005\_UEH\_UEHF\_  
drehbar

**Informations about the post fire hydrants DN 80 and DN100:**

The instructions on the operation of hydrants according DVGWW331 section 6 are to be observed.

For operating either a key to DIN 3323-A in conjunction with DIN 3111-70 or a operating-key must be used according to DIN 3223-B. Thereby don't turn with too much forces.

- Turns begins to flow: 6 +/-1
- Turns per stroke to fully open: 12 +/-1
- Turns from the insertion of the flow until the full open position: 6 +/-1

Strength of the hydrants against operating forces:

- Highest operating torque (MOT) according to DIN EN 14384/4.10.1
- Minimum strength of moment (mST) according to DIN EN 14384/4.10.2: torque range 3

**Operating torque**

Hydrant DN	Highest operating torque MOT (Nm)			Minimum strength of moment mST (Nm)		
	80	100	150*	80	100	150*
Range 3	130	150	195	210	260	380

\* only inlet with DN 150, other components like as DN 100

## ERHARD UNDERGROUND HYDRANTS

### ERHARD underground hydrant DN 80 – the underground hydrant with the durable PUR cone

The innovative shut-off cone makes the ERHARD underground hydrant DN 80 with PUR cone (see page 4) particularly durable, since the PUR sheathing of the shut-off cone results in very high abrasion resistance and thus low wear. At the same time it is insensitive to dirt and has a very good tear propagation resistance and a high ageing resistance. It goes without saying that the ERHARD underground hydrant with PUR cone is also fitted with a safety interlock for the inner set of fittings which prevents their dangerous ejection during dismantling. During improper dismantling e.g. in an attempt to remove the inner set of fittings under operational pressure, the pressurised inner set of fittings is not ejected outwards but rather trapped by a safety stop.

The underground hydrant is made completely in ERHARD Pro-Enamel for optimum corrosion protection. This high-grade fibre enamel is extremely sturdy, crack-proof and tough.

The ERHARD underground hydrant DN 80 with flange connection is available with different claw-covers – each with (form AD) or without (form A) double cut-off:

- Claw-cover made of plastic (standard)
- Self-locking claw-cover made of EN-JS1050
- Claw-cover which remains open, made of EN-JS1050

In addition the version with flange connection, there is also a version with spigot end DN 80 available which can be combined with the push-in socket system BLS (Buderus Lock System). N-pieces are available as accessories.

### ERHARD compact pit fire hydrant – the compact hydrant for installation in pits

The ERHARD compact pit hydrant has been specially designed for use in inspection pits of the size 150 x 150 used in Baden-Württemberg. Its encapsulated spindle bearing which is without play guarantees a high degree of reliability and durability. The standard version has been designed for installation in Württemberg pits with a central bore hole, clockwise or anti-clockwise closing. Other versions in DN 65 are also optionally available:

- Württemberg design with central drum bore hole, clockwise closing
- With flange hole according to DIN (clockwise or anti-clockwise closing)
- With off-centre drum bore hole, clockwise closing
- Additionally with automatic draining



*ERHARD underground hydrant DN 80 with ERHARD Pro-Enamel*



*ERHARD compact pit fire hydrant*

# ERHARD UNDERGROUND HYDRANTS – ALL DIMENSIONS AT A GLANCE

## ERHARD Underground Hydrants

Nominal size DN	Pipe cover RD m	Flange- ø D mm	Bayonet measurements			Height h2 mm	Weight approx. kg	Volume m <sup>3</sup>
			d1 mm	d2 mm	h1 mm			
<b>ERHARD underground hydrant DN 80 with flange connection [1]</b>								
80	0,75	200	110	75	50	530	28	0,03
80	1,00	200	110	75	50	725	31	0,04
80	1,25	200	110	75	50	975	36	0,06
80	1,50	200	110	75	50	1225	41	0,07
<b>ERHARD underground hydrant DN 80 with BLS spigot end</b>								
80	1,00	200	110	75	50	865	32	0,05
80	1,25	200	110	75	50	1115	37	0,06
80	1,50	200	110	75	50	1365	42	0,07

The instructions on the operation of hydrants according to DVGW331 section 6 are to be observed.

Application: For drinking water, according to DIN EN 1074-6, approved. The used materials and the corrosion protection are resistant to usually disinfectants.

For operating must be used a key to DIN 3323-C. Thereby don't turn with too much forces.

- Turns begins to flow: 3,5
- Turns per stroke to fully open: 9 +/-1

### Operating torque to DIN EN 1074-6

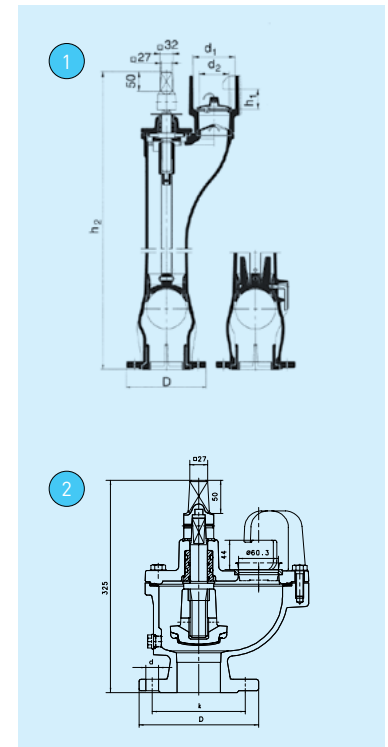
Nominal size DN	max. operating torque MOT (Nm)	minimum strength of moment mST (Nm)
80	105	210

### ERHARD compact pit fire hydrant [2]

Nominal size DN	Flange- ø D mm	hole- circle-ø k mm	screw hole		turn/ stroke	Weight approx. kg	Volume m <sup>3</sup>
			quantity	ø d mm			
65	180	145	4	18	4	20,5	0,015
65	180	140*	8	18	4	20,5	0,015

\* design barrel bore, 8-holes (mounting on axis)

- clockwise closing: yellow square cap
- left closing: blue square cap



### Operating instructions

ERHARD Underground hydrant DN 80:  
BA84E011\_UHA\_DN80

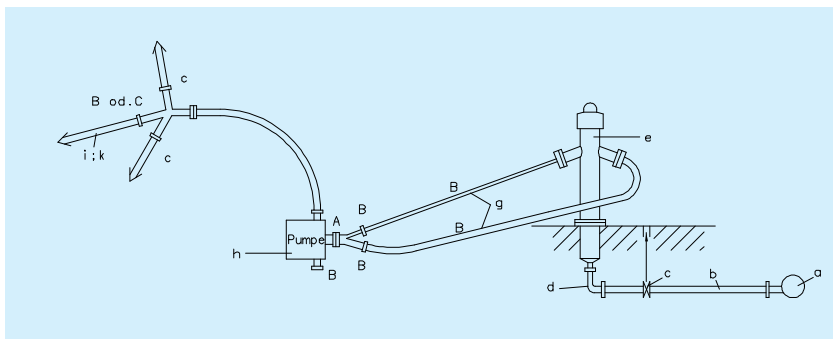
ERHARD Compact pit fire hydrant: BA84E008

# PRESSURE LOSSES

	lance with nozzle pump pressure 5bar		pressure losses in the hydrant [bar] based on nominal power								Compact pit fire hydrant SH65
	l/min <sup>1)</sup>	m <sup>3</sup> /h <sup>2)</sup>	Post fire hydrants without protective mantle				Post fire hydrants with protective mantle		Underground hydrants without standpipe		
			DN 80 1B	DN 80 2B	DN 100 1B	DN 100 2B	DN 100 1B	DN 100 2B	DN 80	DN 100	
1C-hosepipe	100	6	0,0030	0,0020	0,0025	0,0008	0,0030	0,0009	0,0030	0,0005	0,0085
1B-hosepipe	400	24	0,0480	0,0300	0,0400	0,0130	0,0480	0,0144	0,0480	0,0085	0,1360
2C-hosepipe	200	12	0,0120	0,0070	0,0100	0,0030	0,0120	0,0036	0,0120	0,0021	0,0340
3C-hosepipe	300	18	0,0270	0,0170	0,0230	0,0070	0,0270	0,0081	0,0270	0,0048	0,0770
1C- and 1B- hosepipe	500	30	0,0740	0,0460	0,0620	0,0200	0,0740	0,0220	0,0740	0,0130	0,2130
2C- und 1B- hosepipe	600	36	0,1100	0,0700	0,0900	0,0300	0,1100	0,0320	0,1100	0,0190	0,3070
	like above but without nozzle										
1C-hosepipe	200	12	0,0120	0,0070	0,0100	0,0030	0,0120	0,0036	0,0120	0,0021	0,0340
1B-hosepipe	800	48	0,1900	0,1200	0,1600	0,0520	0,1900	0,0580	0,1900	0,0340	0,5450
2C-hosepipe	400	24	0,0480	0,0300	0,0400	0,0130	0,0480	0,0144	0,0480	0,0085	0,1360
3C-hosepipe	600	36	0,1100	0,0700	0,0900	0,0300	0,1100	0,0330	0,1100	0,0192	0,3070
1C- and 1B- hosepipe	1000	60	0,3000	0,1800	0,2500	0,0820	0,3000	0,0900	0,3000	0,0530	0,8520
2C- and 1B- hosepipe	1200	72	0,4300	0,2600	0,3600	0,1200	0,4300	0,1300	0,4300	0,0770	1,2270
nominal power in l/min**			1833	2333	2000	3500	1833	3333	1833	4333	1083
nominal power in m <sup>3</sup> /h**			110	140	120	210	110	200	110	260	65

1) water power

2) at pressure difference 1bar

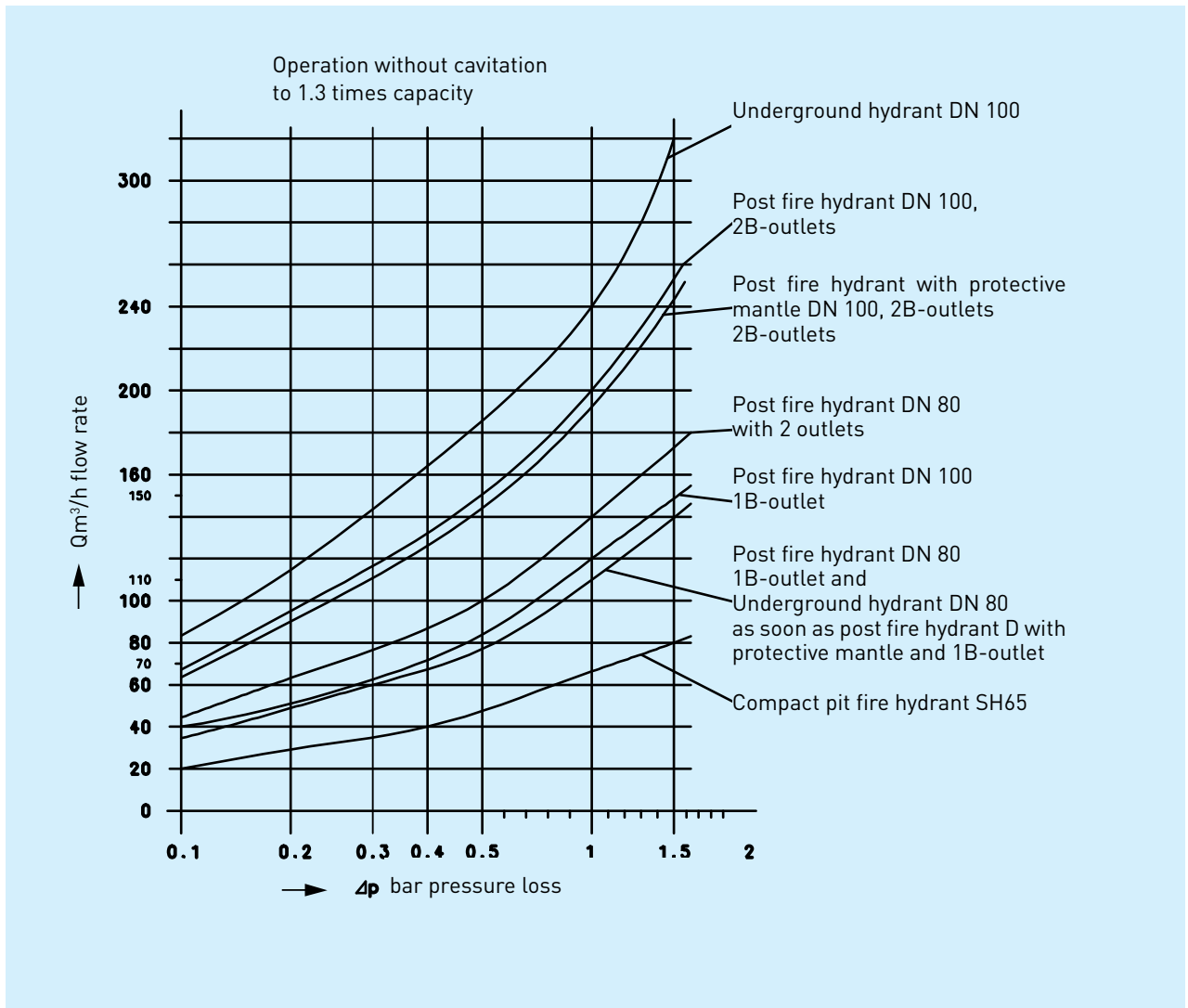


The system consists:

- a) supply pipe
- b) pipe to the hydrant
- c) valve for revision
- d) duckfoot bend
- e) hydrant
- f) standpipe
- g) supply pipe to the pump with 1 or 2B-hosepipes
- h) small pump 800 l/min = 48 m<sup>3</sup>/h
- h) large pump 1600 l/min = 96 m<sup>3</sup>/h
- i) type and numbers of hoses
- k) with or without nozzle



# PRESSURE LOSS CURVE



# FLOW RATE

## Flow rates

outlets	kV-value (m <sup>3</sup> /h)
<b>ERHARD Post fire hydrant DN 100 without protective mantle</b>	
1xB	120
2xB	210
A	260
A+1xB	224
A+2xB	239
<b>ERHARD Post fire hydrant DN 100 with protective mantle</b>	
1xB	110
2xB	200
A	260
A+1xB	220
A+2xB	235
<b>ERHARD Post fire hydrant DN 80</b>	
1xB	110
2xB	140
<b>ERHARD Underground hydrant DN 80</b>	
claw 75	110
<b>ERHARD Compact pit fire hydrant SH65</b>	
claw 60	65

The minimum flow rate of the hydrants are set in the standard norm DIN EN 14339 (for underground hydrants) and in the standard norm DIN EN 14384 (for post fire hydrants).

The Kv-value indicates how much water flow (m/h) at a temperature of 5° C to 30° C and at a pressure loss of 0,981 bar through the valve.

Usually, the existing operating pressure is much higher than 1 bar, the power of the hydrants is accordingly higher. At a differential pressure of 2 bar, the flow at the post fire hydrant DN 100 is already approx. 300 m/h. For comparison: The usual fire pump FP 16/8 has a max. flow rate of 96 m<sup>3</sup>/h.

Comparing the capacities of hydrants and fire pumps, one can find that hydrants are not the bottlenecks in the fire-extinguishing system. For example, a fire hose C52 (tube diameter 52 mm) has a pressure loss of 6,5 bar at 100 m length.

The required fire water demand determines the DVGW leaflet W405 (Supply of fire-fighting water from the public water supply).



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