Energy buffer storage tank EnerVal (100-300)

- Energy buffer storage tank made of steel for hydraulic integration with heat pumps
- Thermal insulation made of polyurethane hard foam, foamed on the storage
- Removable foil casing in red
- (100): 2 connection sleeves Rp 1 ½″,
  2 connection nozzles R 1″
  (200): 5 connection sleeves Rp 1 ½″
  (300): 8 connection sleeves Rp 1 ½″
- 1 sleeve Rp 1/2″ with thermometer and immersion sleeve mounted
- 2 sensor channels

Delivery
- Energy buffer storage tank with foil casing completely mounted and packed (can be disassembled for introduction)

Energy buffer storage tank EnerVal (500)

- Energy buffer storage tank made of steel for hydraulic integration with boilers, heat pumps and solar installations
- Thermal insulation made of polyurethane hard foam, foamed on the calorifier
- Removable foil casing in red
- 8 connection sleeves Rp 1 ½″
- 1 sleeve Rp 1 ½″ for screw-in electrical heating inset
- 1 sleeve Rp 1/2″ with thermometer and immersion sleeve mounted
- 2 sensor channels

Delivery
- Energy buffer storage tank with foil casing completely mounted and packed

Energy buffer storage tank EnerVal (800-2000)

- Energy buffer storage tank made of steel for hydraulic integration with boiler, solid fuel boiler, heat pumps and solar installations
- Thermal insulation made of polyester fleece with foil jacket, colour red
- 9 connection sleeves Rp 2″
- 2 connection sleeves Rp 3″
- 1 sleeve Rp ½″ for screw-in electrical heating inset
- 1 sleeve Rp ½″ for sensor/thermometer
- Terminal strips for contact sensors
- Perforated separating plate in the central area for separation of the temperature zones
- Flow diversions permanently installed
- 11 insulated cover caps made of EPP hard foam, 2-piece (can be broken out)
- 1 sleeve Rp ½″ with thermometer and immersion sleeve mounted

Delivery
- Energy buffer storage tank with foil casing completely mounted and packed
- Insulated cover caps already installed (can be removed and broken out)

Range

EnerVal type		Nominal content l	Operating pressure bar
(100)	B	117	3
(200)	B	222	3
(300)	B	283	3
(500)	B	473	3
(800)		781	3
(1000)		922	3
(1500)		1416	3
(2000)		2000	3

Screw-in electrical heating inset type EP 2.5 to EP 7.5

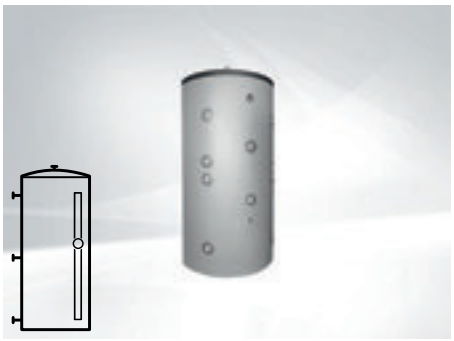
- Made of Incoloy® 825
- Heat input 2.35 to 7.5 kW
- Incl. temperature control and safety temperature limiter
- Connection:
  EP 2.5: 3 x 400 V (1 x 230 V)
  EP 3.5 and EP 7.5: 3 x 400 V

Delivery
- Delivered separately packed

On site
- Installation of the electrical heating inset

Energy buffer storage tanks 800-2000 cannot be used in refrigeration systems.

Energy buffer storage tank



EnerVal (100-2000)

Steel container unmachined on inside, EnerVal (200-500) with casing finished, EnerVal (800-2000) thermal insulation already installed

EnerVal type		Nominal content l	Part No.
(100)	B	117	7016 826
(200)	B	222	7013 681
(300)	B	283	7015 975
(500)	B	473	7015 976
(800)		781	7016 785
(1000)		922	7016 786
(1500)		1416	7016 787
(2000)		2032	7016 788

Accessories

Connection hose with T-piece — 6019 013
for EnerVal (500)
for the hydraulic parallel connection of two energy buffer storage tanks EnerVal
Consisting of:
flexible hose included insulation and a T-piece 1½″

Connection hose with T-piece — 6023 573
for EnerVal (800-2000)
for the hydraulic parallel connection of two energy buffer storage tanks EnerVal
Consisting of:
flexible hose included insulation with a T-piece 2″

Connection hose — 6019 014
for EnerVal (500)
for the hydraulic parallel connection of two energy buffer storage tanks EnerVal
Consisting of:
flexible hose included insulation 1½″

Connection hose — 6023 574
for EnerVal (800-2000)
for the hydraulic parallel connection of two energy buffer storage tanks EnerVal
Consisting of:
flexible hose included insulation 2″

Accessories

Part No.

Double thermostat ATH-22 — 2054 650
Usable as minimal thermostat flow
to open the loading pump.
Usable as maximal thermostat
to limit the flow.
Bottom part of the casing made of
die-cast aluminium with plastic cover,
with rigid shaft
1 separate temperature adjustment
each in the casing
Type of protection IP54
Switching capacity: 230 V/10 A cos=1
Control range 1.2: 0 °C … +100 °C
Switching differential 1.2: 3-4 %
of the scale range
Immersion sleeve: G ½″, L = 150 mm,
D = 15 mm
Immersion sleeve brass nickel-plated
Version according to DIN EN 14597

Flow temperature guard
RAK-TW1000.S SB 150. — 6010 082
Immersion thermostat incl.
immersion sleeve ½″, immersion
depth 150 mm.

Thermometer kit — 6052 107
for EnerVal (200-6000)
Thermometer 0-120 °C with
chromium plated edge and Hoval logo
Stem length: 80 mm, stem Ø: 9 (13) mm,
External Ø: 80 mm
incl. immersion sleeve ½″ nickel-plated
brass, installation length: 200 mm,
external Ø: 16 mm, internal Ø: 15 mm
and clamping spring

Screw-in electrical heating inset
of Incoloy® alloy 825, with temperature control
and safety temperature limiter.
Delivery separately, installation on site.

Type	Output [kW]	Voltage [V]	Installation [mm]	For EnerVal type	Part No.
EP 2.5	2.35	3 x 400	390	(200-1500)	6049 557
EP 3.5	3.6	3 x 400	500	(200-1500)	6049 558
EP 5	4.9	3 x 400	620	(500-1500)	6049 559
EP 7.5	7.5	3 x 400	850	(800-2000)	6049 560

Inject lance — 6051 645
for EnerVal (200-500)
For horizontal installation in the
energy buffer storage tank.
For the decrease of the turbulence of
the attached water.
Screw-in depth: 450 mm
Connection: Rp 1½″

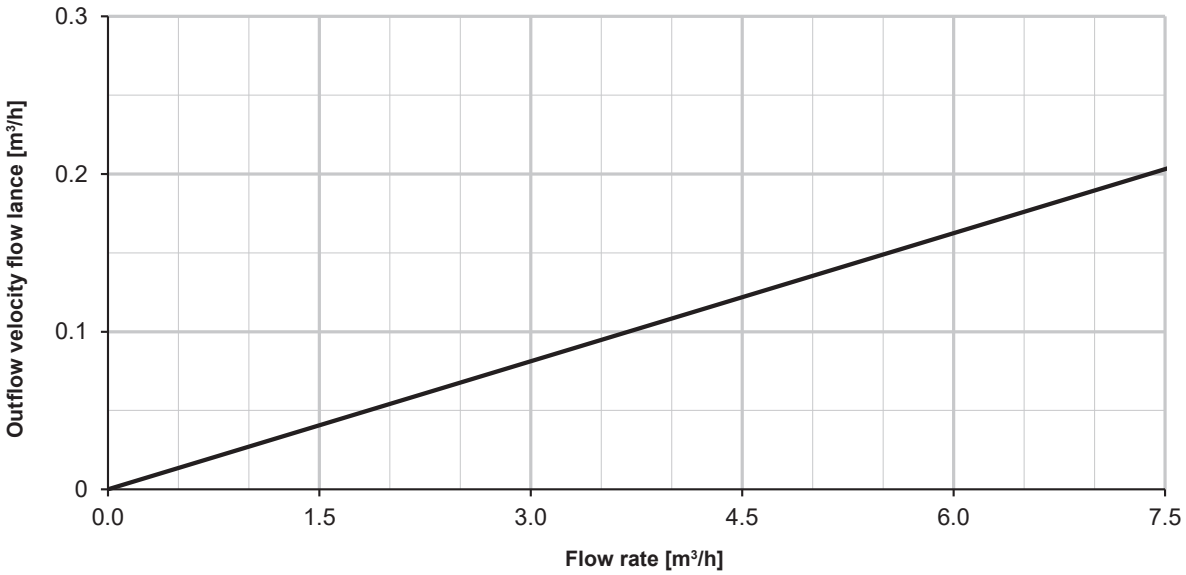
EnerVal (100-2000)

Type		(100)	(200)	(300)	(500)	(800)	(1000)	(1500)	(2000)
• Nominal content	litres	117	222	283	473	781	922	1416	2032
• Operating pressure/test pressure	bar	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
• Operating temperature min./max.	°C	5-95	5-95	5-95	5-95	20-95	20-95	20-95	20-95
• Thermal insulation PU rigid foam foamed	mm	50	50	75	75	-	-	-	-
• Thermal insulation polyester fleece	mm	-	-	-	-	120	120	120	120
• Thermal insulation λ	W/mK	0.027	0.027	0.027	0.027	0.04	0.04	0.04	0.04
• Fire protection class		B2	B2	B2	B2	B2	B2	B2	B2
• Heat loss at 65 °C	W	51	53	54	72	136	144	167	192
• Transport weight	kg	41	59	79	111	145	159	236	350
• U value	W/m^2K	0.359	0.359	0.279	0.296	0.396	0.374	0.345	0.33
Dimensions		see table of dimensions							

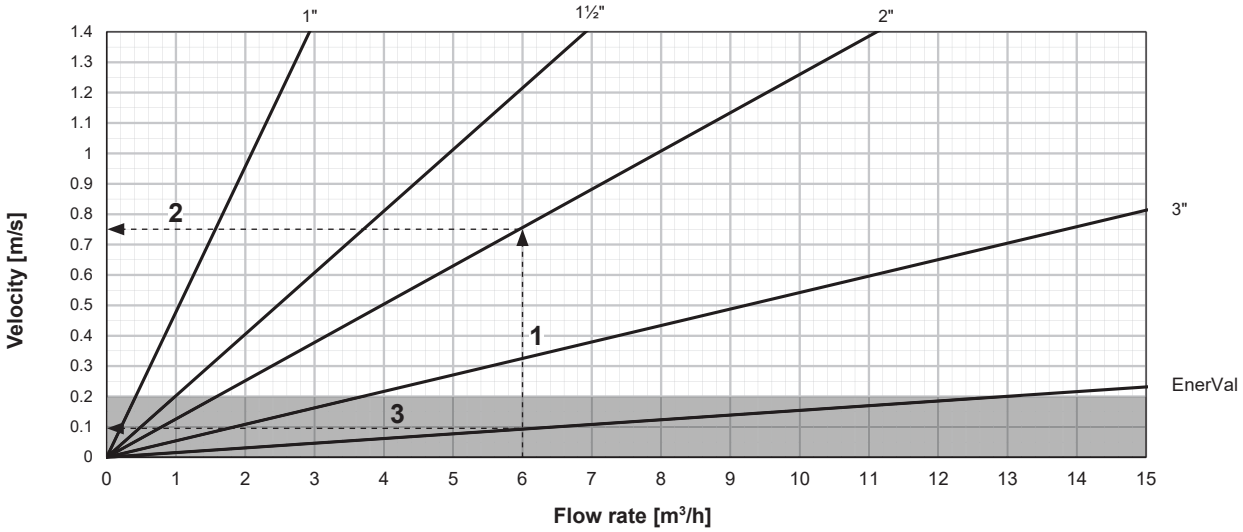
Screw-in electrical heat insets
made of Incoloy® alloy 825,
with temperature controller and safety temperature limiter,
delivered separately, installation on site.

Type	Heat output [kW]	Voltage [V]	Installation length [mm]	for EnerVal
EP 2,5	2.35	3 x 400 (1 x 230)	390	(200-1500)
EP 3,5	3.6	3 x 400	500	(200-1500)
EP 5	4.9	3 x 400	620	(500-1500)
EP 7,5	7.5	3 x 400	850	(800-2000)

Outflow velocity flow lance DN40



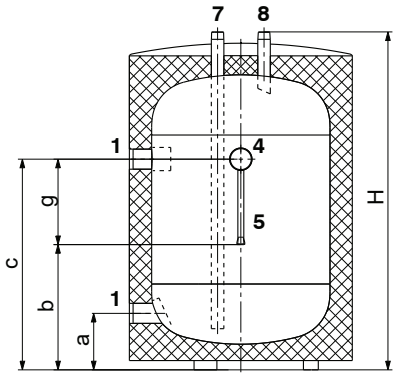
Velocity in the connection nozzles and inflow velocity with flow deflection in the EnerVal (800-2000)

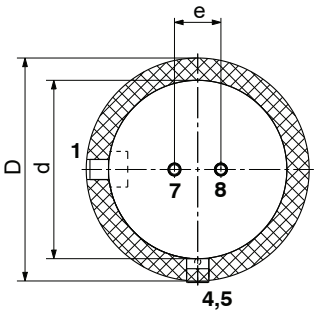


1 = flow rate
2 = velocity in the connection nozzles
3 = inflow velocity with flow deflection in the EnerVal

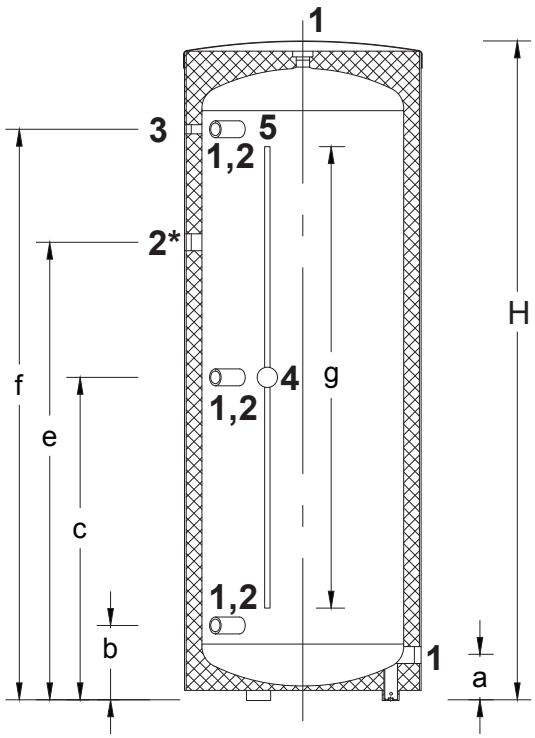
EnerVal (100)

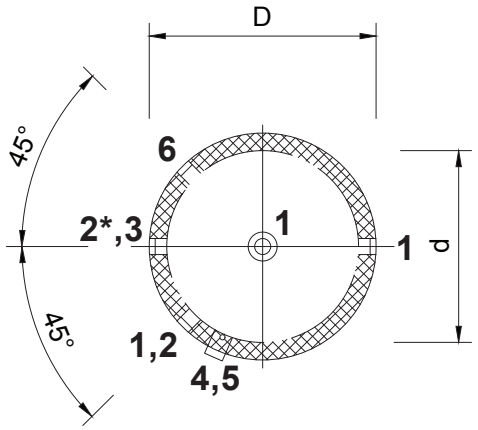
(Dimensions in mm)





EnerVal (200-500)





1	Heating connection	Rp 1½″ (IT)
2	Connection for screw-in electrical heating inset (positioning depending of the plants, see hydraulic schematics boiler)	Rp 1½″ (IT)
2*	Additional connection for screw-in electric immersion heater, only for EnerVal (500)	Rp 1½″ (IT)
3	Thermometer and immersion sleeve (mounted)	
4	Removable cap (60 mm) for positioning the sensor in the sensor channel	
5	Sensor duct inner Ø 11 mm	
6	3 heating connections Rp 1 ½″ only for EnerVal (300,500)	Rp 1½″ (IT)
7	Heating circuit flow	R 1″ (ET)
8	Heating circuit return	R 1″ (ET)

7+8 suitable for direct installation of an armature group LG/HA 25-2 and 32-2

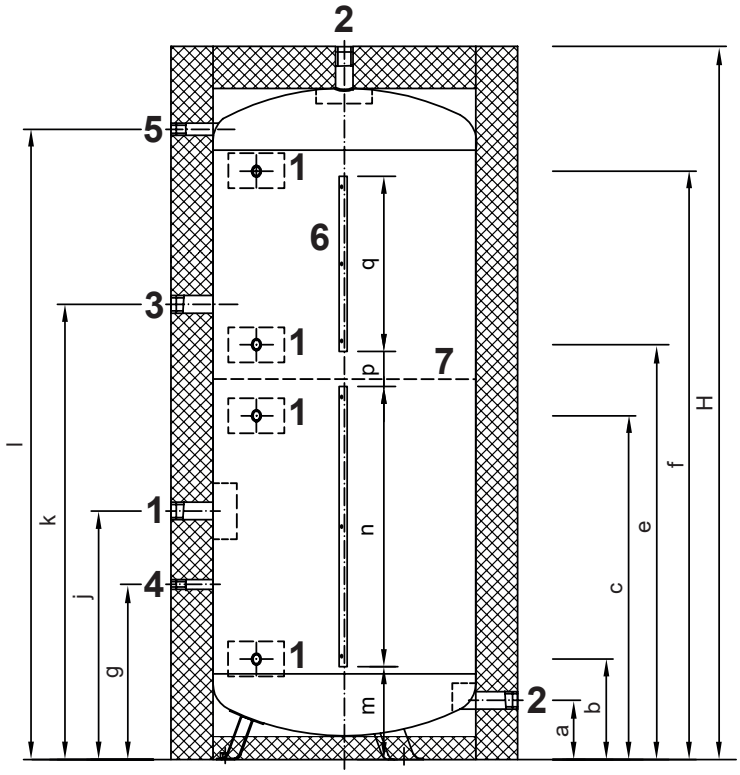
Couplings length: type (100,200) 50 mm, type (300,500) 75 mm

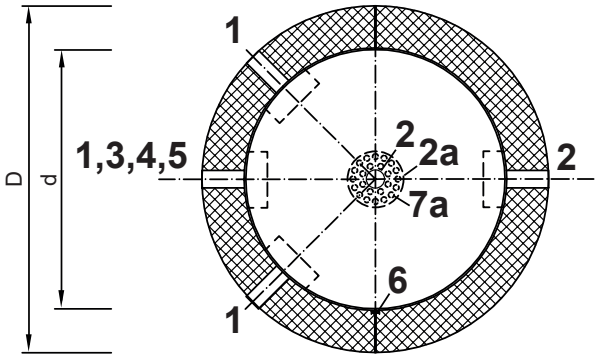
EnerVal type	D	d	H	a	b	c	e	f	g	Tilting measure
(100)	600	480	910	152	337	567	125	-	230	985
(200)	600	480	1440	152	300	720	-	1140	860	1560
(300)	650	480	1780	152	300	890	-	1479	1285	1895
(500)	750	597	1921	127	220	946	1400	1670	1360	2025

Variation because of the production tolerance possible
Dimension +/- 10 mm

EnerVal (800-2000)

(Dimensions in mm)





		(800, 1000, 1500)	(2000)
1	Heating connection	G 2″ (IT)	Rp 2″ (IT)
2	Heating connection	G 3″ (IT)	Rp 3″ (IT)
2a	Baffle plate for heating connection 2		
3	Connection for screw-in electric heating element	G 1½″ (IT)	Rp 1½″ (IT)
4	Sleeve for immersion sleeve, thermostat or thermometer	G ½″ (IT)	Rp ½″ (IT)
5	Thermometer with immersion sleeve (mounted)		
6	Sensor terminal bar		
7	Isolation plate		
7a	Holes of the separating plate		

Variation because of the production tolerance possible
Dimension +/- 10 mm

Length of all connecting pieces: 120 mm

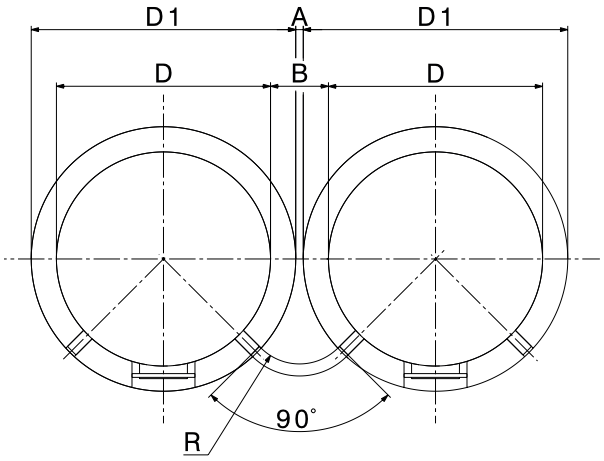
EnerVal type	D	d	H	a	b	c	e	f	g	j	k	l	m	n	p	q	Tilting measure
(800)	1030	790	1845	108	255	932	1135	1477	410	657	1230	1612	300	800	100	500	1888
(1000)	1030	790	2132	108	309	1006	1209	1699	500	710	1300	1882	300	800	100	500	2172
(1500)	1240	1000	2142	220	368	1006	1209	1699	500	800	1337	1839	300	800	100	500	2200
(2000)	1440	1200	2142	220	382	1030	1230	1692	500	800	1230	1839	300	800	100	500	2200

Connection set for energy buffer storage tank EnerVal

(Dimensions in mm)

Connection of 2 EnerVal (500-1000)

EnerVal type	A	B	D	D1	R
(500)	20	270	597	750	180
(800-1000)	10	250	790	1030	210



Connection of 2 EnerVal (1500-2000)

EnerVal type	A	B	D	D1	R	Q
(1500)	60	300	1000	1240	266	5°
(2000)	10	250	1200	1440	250	8°

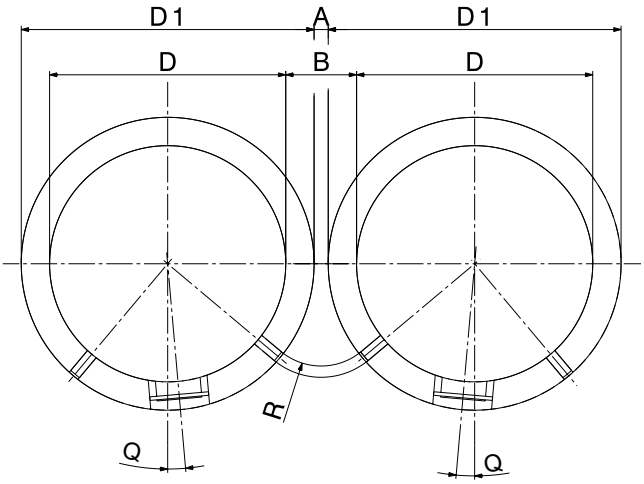


Illustration: connection of 2 energy buffer storage tanks EnerVal with connection set