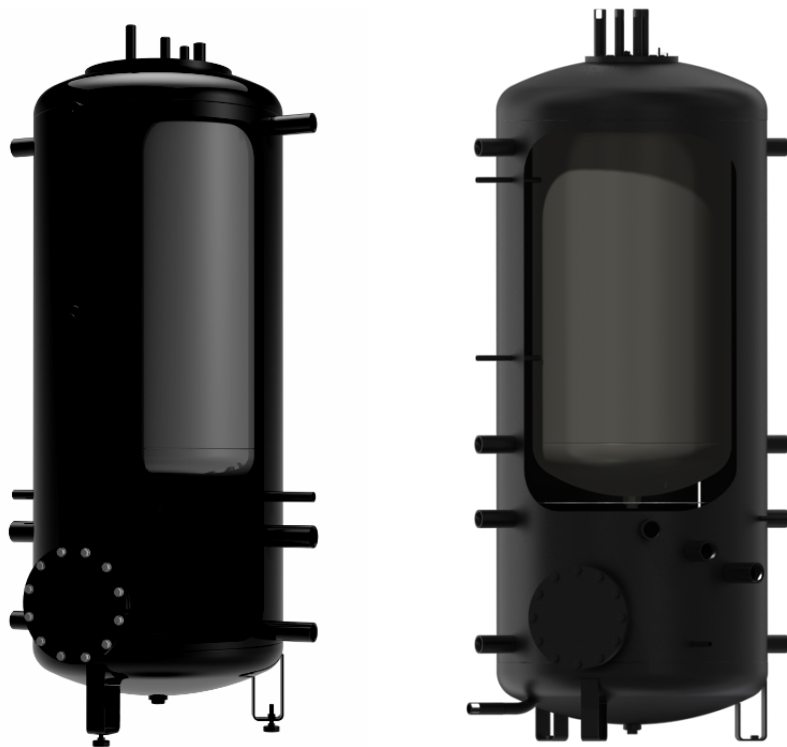


OPERATING AND INSTALLATION MANUAL

STORAGE TANKS

NADO 500/300 v1

NADO 750/250 v1



Družstevní závody Dražice-strojárna s.r.o.
(Works Cooperative - Dražice - Machine Plant, Ltd.)
Dražice 69, 294 71 Benátky nad Jizerou
tel.: +420 / 326 370 911
fax: +420 / 326 370 980
e-mail: export@dzd.cz



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CAREFULLY READ THIS MANUAL BEFORE INSTALLING THE TANK!

Dear Customer,

The Works Cooperative of Dražice - Machine Plant, Ltd., would like to thank you for your decision to use a product of our brand.



The product is not intended to be controlled by

- a) people (including children) with reduced physical, sensual or mental capacities, or
- b) people with insufficient knowledge and experiences unless supervised by responsible person, or unless properly instructed by such responsible person.

The manufacturer reserves the right for engineering modification of the product. The product is designed for permanent contact with drinkable water.

It is recommended to use the product in indoor environment with air temperatures from +2 °C to +45 °C and a relative humidity up to 80 %.

Product's reliability and safety is proven by tests implemented by the Engineering Test Institute in Brno.

Made in the Czech Republic.

Meaning of pictograms used in the Manual



Important information for heater users.



Abiding by the recommendations of the manufacturer serves to ensure trouble-free operation and the long service life of the product.



Caution!
Important notice to be observed.

1 PRODUCT TECHNICAL SPECIFICATION

1.1 FUNCTION DESCRIPTION

Storage tanks serve accumulation of excessive heat from its source. The source may be a solid fuel boiler, heat pump, solar collectors, fireplace inserts, etc. Some types of storage tanks allow combination of connecting even multiple sources.

The NADO type tanks serve accumulation of heat in the heating system and allow heating or preheating of HSW (Hot Service Water) in an inner tank. Incorporation of an storage tank in the heating system with a solid fuel boiler allows an ideal run of a boiler at favourable temperature during the boiler operation. The main benefit lies in the period of optimum operation (i.e. with maximum efficiency) when the excessive unconsumed heat accumulates in the storage tank.

The tanks are made of steel, without any inner surface treatment, the outer surface of the tank is provided with a protective paint. The tanks are manufactured in 500 and 750 litre volumes. Individual versions are additionally equipped with an inner accumulator of 300 and 250 litre volumes, and funnels G1½" mm, with a possibility to install an electric heating element of TJ 6/4" series. The tanks are equipped with a removable 80 mm thick insulation and a lock.

The NADO type enables direct heating of HSW (Hot Service Water) in an inner accumulator, or preheating of water for another water heater. Connection to a boiler usually allows direct HSW heating in an inner accumulator to the desired temperature whilst, on the contrary, connection to solar collectors or to a heat pump only preheats HSW and this tank can be connected to e.g. an electric heater to complete heating of the water to the desired temperature, or an electric reheat can be fitted in the storage tank which is enabled by a TJ 6/4" series electric heating unit. In the standard version, the flange is blinded.

1.2 THE DESIGN OF SUITABLE VOLUME AND TANK INSTALLATION

An ideal size of the storage tank is designed by a design engineer, or a person sufficiently qualified to design heating systems.

Product assembly must be implemented by an authorised person (confirmed in the warranty certificate).



When putting into operation, water has to be filled first into the inner tank for HSW and the operating pressure inside it has to be kept, only then heating water can be filled into the outer storage tank, otherwise the product may get damaged!



The manufacturer explicitly emphasises the necessity of being particular in testing the tightness of the heating circuit (radiators, piping joints, floor heating, etc.) with the connection of the storage tank. No pressure grow in the storage tank heating water compartment may occur above the maximum operating pressure of 0.3 MPa, if the heating system is pressurised to higher than the maximum operating pressure, the inner enamelled tank may get permanently damaged!

No stop fitting can be put between the security fitting of the heating circuit and the storage tank!!!

Connection of the inner tank to HSW must comply with ČSN 06 0830, a safety valve has to be fitted on the cold water inlet.



It is necessary to activate the heating circuit and remove potential impurities that are captured in the filter; after that the system is fully functional.

2 TECHNICAL PARAMETERS

| | NADO 500/300 v1 | NADO 750/250 v1 |
|---|-----------------|-----------------|
| TANK CAPACITY [l] | 475 | 772 |
| INNER TANK CAPACITY [l] | 279 | 260 |
| WEIGHT [kg] | 153 | 180 |
| MAXIMUM TANK PRESSURE [MPa] | 0,3 | 0,3 |
| MAXIMUM PRESSURE OF THE INNER ACCUMULATOR [MPa] | 0,6 | 0,6 |
| 40°C HOT WATER YIELD AT 53°C WATER TEMPERATURE IN THE TANK INLET WATER 15°C / HW FLOW RATE [l/(l/min)] | *260 / 10 | 490 / 10 |
| 40°C HOT WATER YIELD AT 80°C WATER TEMPERATURE IN THE TANK INLET WATER 15°C / HW FLOW RATE [l/(l/min)] | *650 / 10 | 1170 / 10 |
| MAXIMUM OPERATING TEMPERATURE OF WATER IN THE TANK [°C] | 90 | 90 |
| MAXIMUM OPERATING TEMPERATURE OF WATER IN THE ACCUMULATOR [°C] | 90 | 90 |
| MAXIMUM OUTPUT OF EL. HEATING ELEMENT OF TJ 6/4" SERIES [kW] | 1x9 (2x4.) | 3x9 |

* value stated by calculation

Table 1

3 INFORMATION SHEET

| | NADO 500/300 v1 | NADO 750/250 v1 |
|--------------------------------|-----------------|-----------------|
| ENERGY EFFICIENCY CLASS | B | C |
| STATIC LOSS [W] | 80 | 117 |

Table 2

4 DIMENSIONS AND CONNECTION

NADO 500/300v1

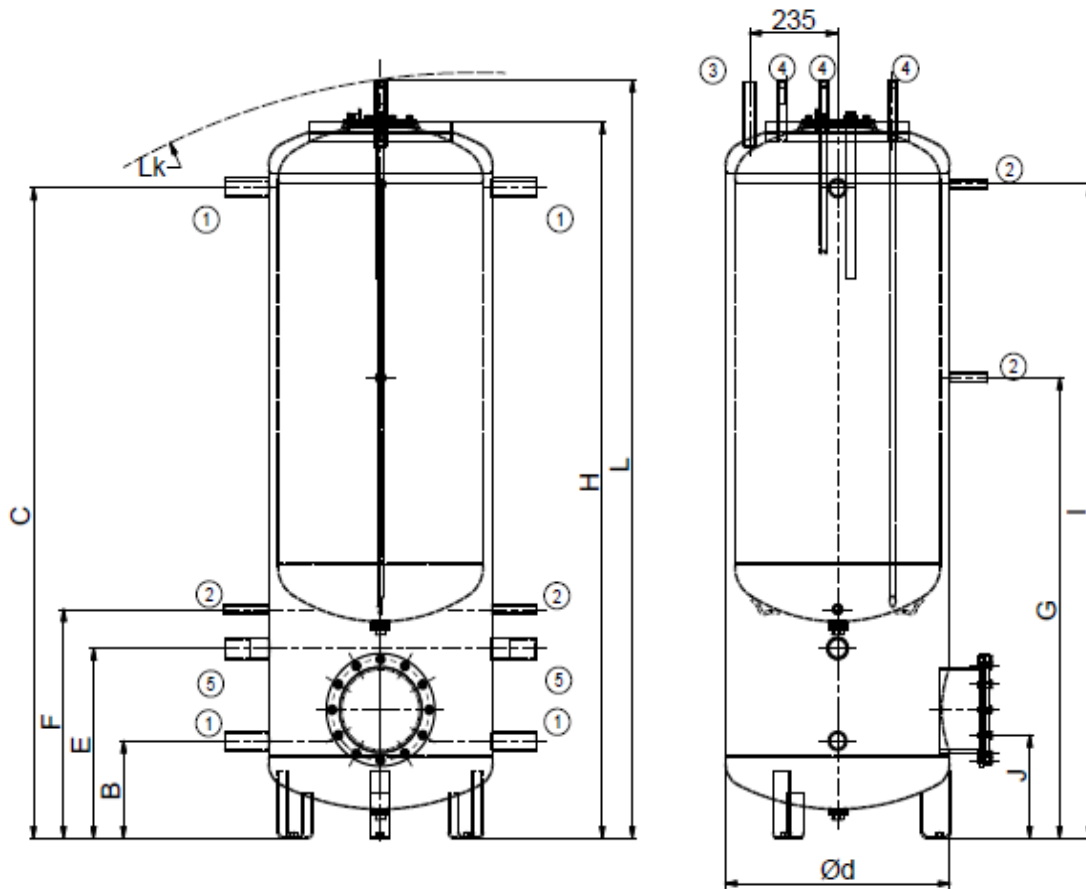
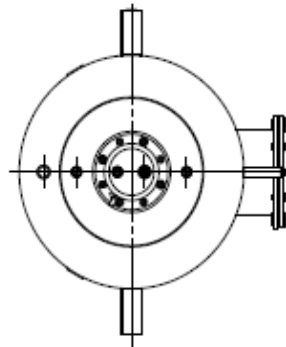


Figure 1

| | |
|---|----------------|
| ① | G 1 1/4" inner |
| ② | G 1/2" inner |
| ③ | G 1" outer |
| ④ | G 3/4" outer |
| ⑤ | G 1 1/2" inner |



| B | C | d | E | F | G | H | I | J | L | Lk |
|-----|------|-----|-----|-----|------|------|------|-----|------|------|
| 245 | 1524 | 650 | 484 | 584 | 1036 | 1691 | 1532 | 327 | 1821 | 1841 |

Table 3

NADO 750/250v1

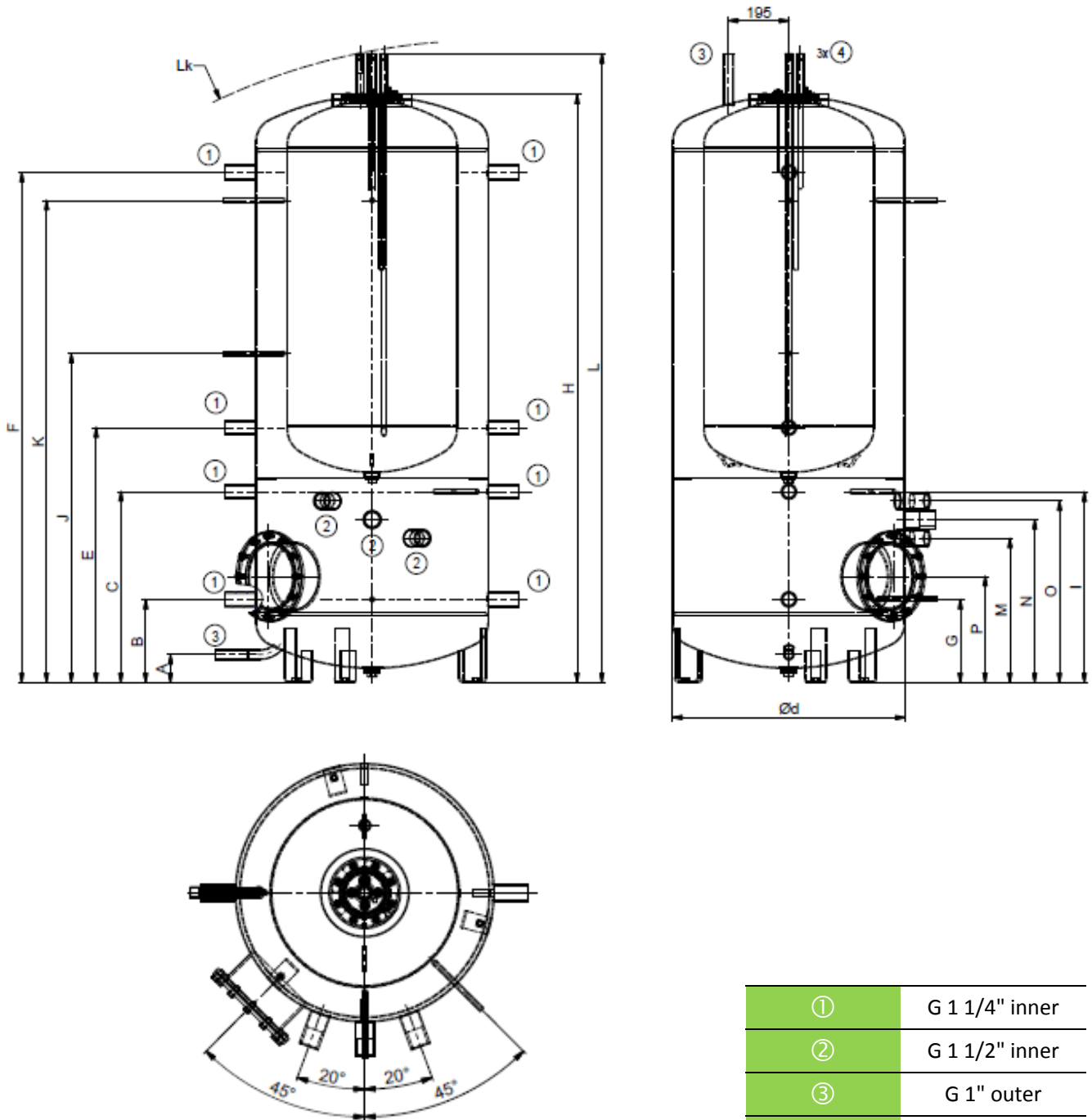


Figure 2

| | |
|-------------|-----------------|
| ① | G 1 1/4" inner |
| ② | G 1 1/2" inner |
| ③ | G 1" outer |
| ④ | G 3/4" outer |
| Sensor well | Φ 15x2-150 |

| A | B | C | d | E | F | G | I | J | K | M | N | O | P | Lk |
|----|-----|-----|-----|-----|------|-----|-----|------|------|-----|-----|-----|-----|------|
| 90 | 268 | 615 | 750 | 821 | 1643 | 268 | 615 | 1060 | 1553 | 465 | 525 | 585 | 342 | 2040 |

Table 4

Thermal insulation NEODUL LB PP

Polyester sheet of 80 mm thickness. It consists of an upper cover, flange cover and hole caps. Insulation is supplied in a separate packaging.

We recommend that the insulation was fitted at room temperature. At temperatures significantly below 20 °C the insulation shrinks. This disables its easy fitting.

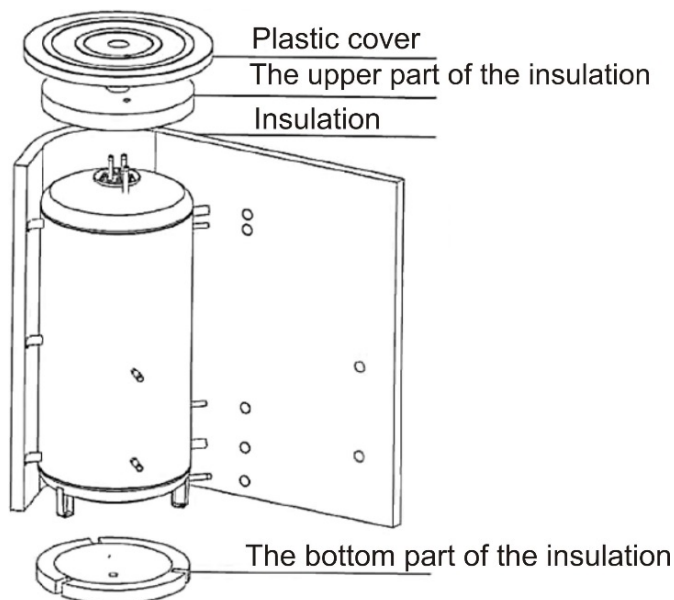


Figure 3

5 DISPOSAL OF PACKAGING MATERIAL AND NON-FUNCTIONING PRODUCT

A service fee for providing return and recovery of packaging material has been paid for the packaging in which the product was delivered. The service fee was paid pursuant to Act No 477/2001 Coll., as amended, at EKO-KOM a.s. The client number of the company is F06020274. Take the water tank packages to a waste disposal place determined by the municipality. When the operation terminates, disassemble and transport the discarded and unserviceable heater to a waste recycling centre (collecting yard), or contact the manufacturer.



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