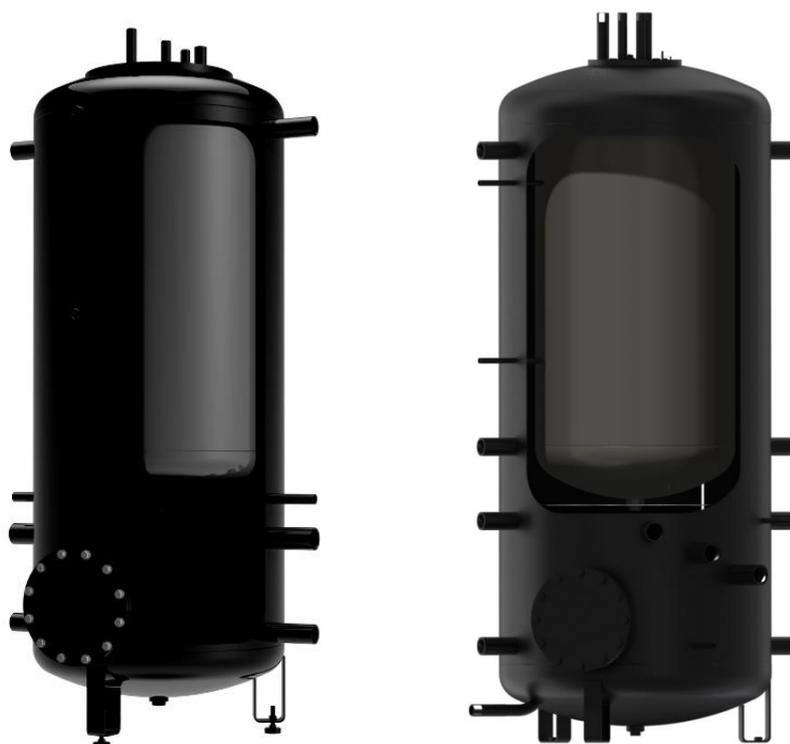


# OPERATING AND INSTALLATION MANUAL

## STORAGE TANKS

NADO 500/300 v1

NADO 750/250 v1



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## CAREFULLY READ THIS MANUAL BEFORE INSTALLING THE TANK!

Dear Customer,

Družstevní závody Dražice - strojírna s.r.o., 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.

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 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 a 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.

## 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!



The appliance has to be mounted at a convenient place, it means that the appliance must be easily available for potential necessary maintenance, repair or replacement, as the case may be.

**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.

### 3 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	bar	3	3
MAXIMUM PRESSURE OF THE INNER ACCUMULATOR	bar	6	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 (2x4.5)	3x9
ENERGY EFFICIENCY CLASS		B	C
STATIC LOSS	W	80	117

\* value stated by calculation

Table 1

# 4 DIMENSIONS AND CONNECTION

NADO 500/300v1

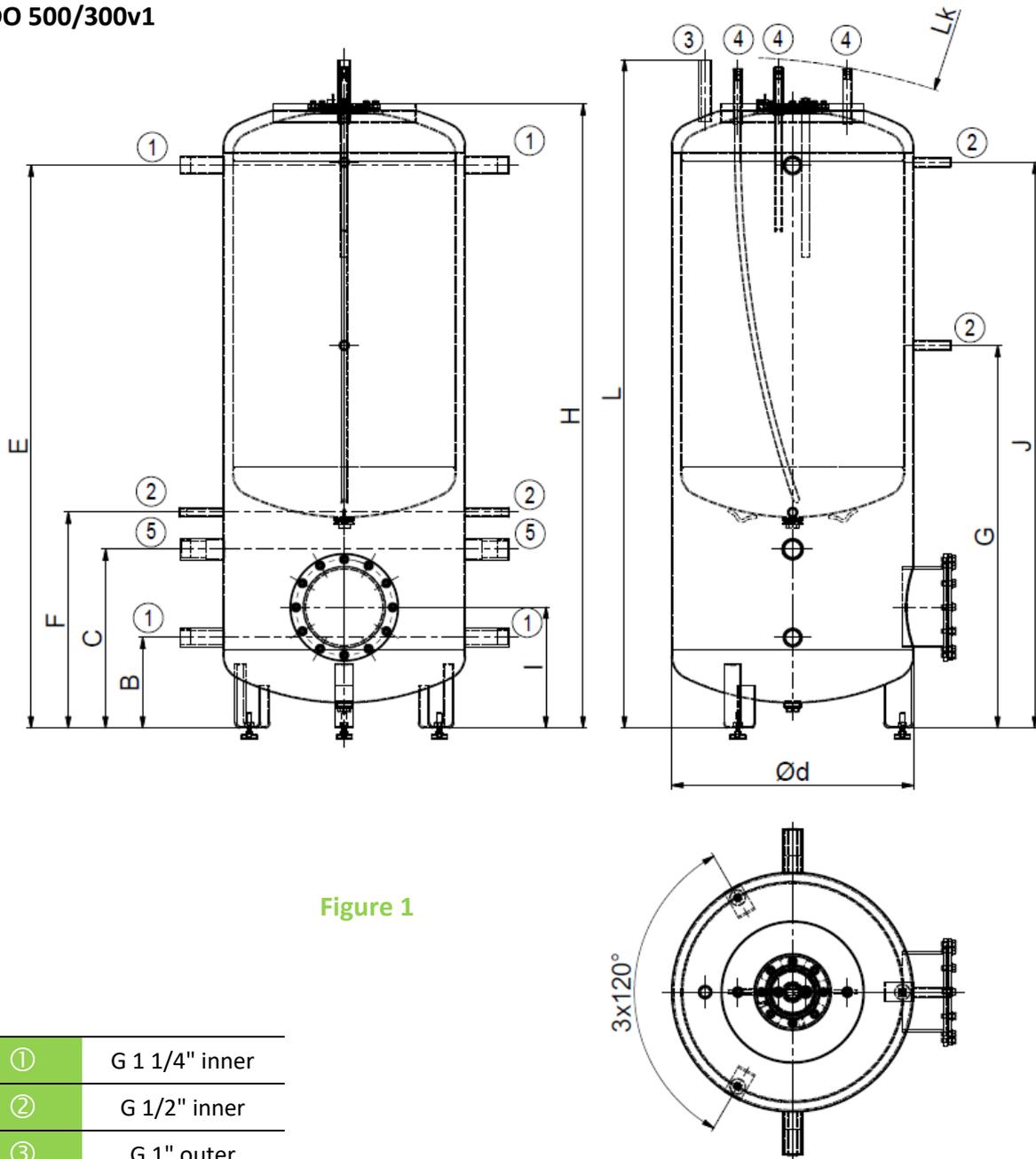


Figure 1

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	484	650	1524	584	1036	1690	327	1532	1821	1841

Table 2

NADO 750/250v1

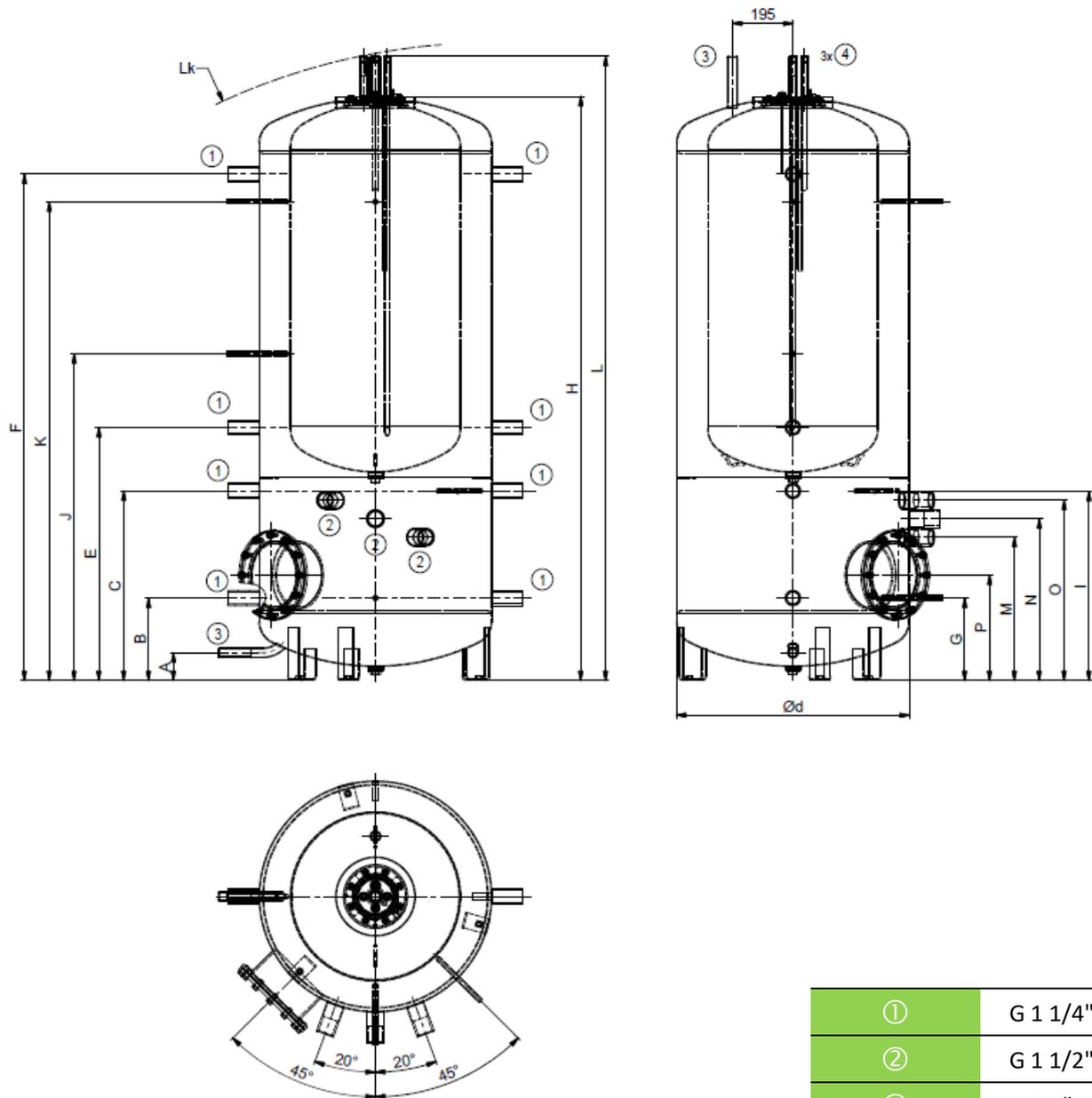


Figure 2

①	G 1 1/4" inner
②	G 1 1/2" inner
③	G 1" outer
④	G 3/4" outer
Sensor well	$\Phi$ 15x2-150

A	B	C	d	E	F	G	H	I	J	K	L	Lk	M	N	O	P
100	278	625	750	831	1656	278	1914	625	1070	1566	2041	2063	475	535	595	352

Table 3

### Thermal insulation NEODUL LB PP

Insulation NEODUL 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.**

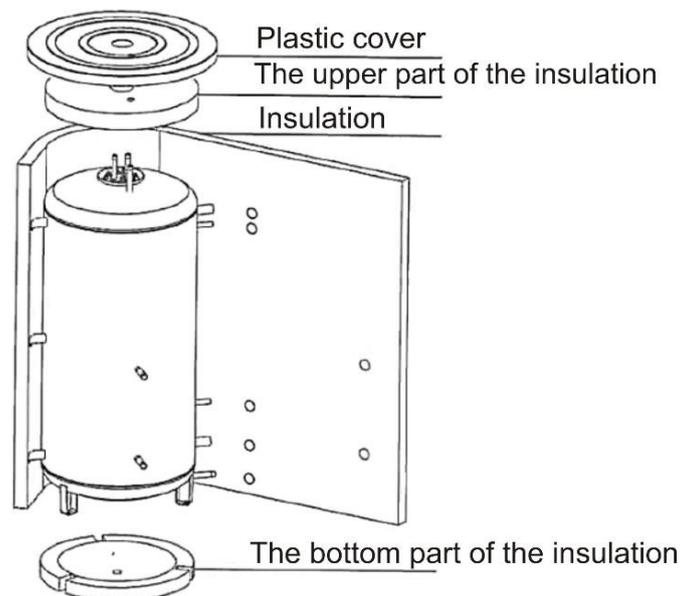


Figure 3

## 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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