

ACT UNDER CONTRACT No. 22 DATED 23.11.1999

202VP-12/3 compressor: no teardown, no shutdown — faster charging, cooler air

OJSC Kupiansk Bread Plant: chief engineer O. E. Kolosovsky, chief mechanic A. V. Gromakov · XADO LLC: general director V. L. Zozulya, head of implementation department A. I. Vinnichenko
Kharkiv region, Ukraine · contract No. 22 dated 23.11.1999 · act signed 30.08.2000

PRODUCT

XADO RVS
repair and restoration
compound; introduced into the
lubrication system while the
compressor was running

TREATED UNIT

202VP-12/3 reciprocating
compressor
cylinders and lubrication
system (crankcase)

DOCUMENT TYPE

Bilateral act
with signatures and seals
OJSC Kupiansk Bread Plant and
XADO LLC

EQUIPMENT

202VP-12/3 reciprocating
compressor

**CONDITION AT THE START OF THE
TRIAL**

In service at the plant: pressure of **3.2
kgf/cm²** was reached in **4 min 40 s**,
discharge air at **140-160 °C**, elevated
oil consumption

WHAT WAS MEASURED

Time to reach working
pressure, discharge air
temperature in both cylinders,
oil consumption in the
crankcase

The XADO RVS compound was introduced into the lubrication system of the running compressor: without disassembling the unit and without stopping production.

Key results

↓ **45 s**

time to reach the working pressure of 3.2 kgf/cm², 4
min 40 s → 3 min 55 s

↓ **21-25 %**

discharge air temperature in both cylinders, 140-160 →
110-120 °C

What changed on the compressor after treatment

PARAMETER	BEFORE TREATMENT	AFTER TREATMENT
Time to reach 3.2 kgf/cm²	4 min 40 s	3 min 55 s
Discharge air temperature, both cylinders	140-160 °C	110-120 °C, stable
Oil consumption in the crankcase	elevated	3× lower

The pressure is the same in both measurements — **3.2 kgf/cm²**: what is compared is the time the compressor needs to reach it, that is, the capacity of the unit.

Findings of the commission

The treatment was carried out without disassembly and without stopping production: the compound was introduced into the lubrication system of the running compressor. The commission of OJSC Kupiansk Bread Plant and XADO LLC recorded that after treatment the compressor reaches **3.2 kgf/cm²** in **3 min 55 s**, whereas before treatment this took **4 min 40 s**. The discharge air temperature in both cylinders fell from **140-160 °C** to **110-120 °C** and stabilised, and oil consumption in the crankcase decreased **3×**. All three results point to one thing — the restored tightness of the cylinder-piston group: less blow-by means faster pressure build-up, weaker heating of the compressed air and less oil carry-over. In the conclusions of the act the commission recommended carrying out the same work on the next compressor of the enterprise.



© XADO. All rights reserved.

The results refer to the 202VP-12/3 reciprocating compressor under the conditions of OJSC Kupiansk Bread Plant; on other units and duty cycles the figures may differ. RVS is an obsolete XADO designation for zero-generation compounds; the current product generation is revitalizants. The original act is published in full and available for download.