LIQUID RING VACUUM PUMPS & COMPRESSORS

SEALING OPTIONS

Packing or mechanical seal. Your process, your call.

PACKING · SINGLE COMPONENT · SINGLE CARTRIDGE · DUAL CARTRIDGE

Four ways to seal the shaft. Tell us which one you want when you order — NES builds it in.

THE CHOICE

Same pump.

Four sealing choices.

NES liquid ring vacuum pumps and compressors can be built with conventional packing or one of three mechanical seal arrangements. The right choice depends on the gas you handle, how much leakage you can accept, and how you prefer to maintain the pump.

- **Mechanical seals typically supplied only when you specify one.**
- **Barrier/buffer fluid systems for dual seals available from NES.**



— SHOWN: CARTRIDGE MECHANICAL SEAL

	OPTION 1 PACKING	OPTION 2 SINGLE COMPONENT SEAL	OPTION 3 SINGLE CARTRIDGE SEAL	OPTION 4 DUAL CARTRIDGE SEAL
HOW IT SEALS	Rings of compression packing in the stuffing box, tightened by an adjustable gland.	Rotating and stationary seal faces, springs and elastomers installed as separate parts on the shaft.	A complete seal pre-assembled and pre-set on its own sleeve, installed as one unit.	Two seals in one cartridge with a barrier or buffer fluid between them.
LEAKAGE	A small, controlled drip is normal — it lubricates and cools the packing.	Minimal; no routine drip.	Minimal; no routine drip.	Process side contained by the inner seal; outer seal backs it up.
INSTALLATION	Simple; repack in the field with common tools.	Faces must be set and measured carefully on the shaft.	Bolt-on — no measuring or setting, fewer installation errors.	Bolt-on cartridge, plus barrier/buffer fluid piping.
UPKEEP	Periodic gland adjustment and repacking; watch for sleeve wear.	Replace faces and elastomers when worn.	Swap the cartridge for faster turnaround.	Monitor the barrier/buffer fluid system.
SUPPORT NEEDED	Gland/flush water to the stuffing box.	Flush as required by the duty.	Flush as required by the duty.	Barrier or buffer fluid system — NES can supply one.
GOOD FIT	**General service, lowest first cost, easy field repair.**	**Clean, non-hazardous service where you want to stop packing leakage at the lowest seal cost.**	**Plants that want simple seal changes and less downtime.**	**Hazardous, toxic or corrosive gas, or wherever leakage to atmosphere must be minimized.**

Specify / Order

YOU CHOOSE — WE DON'T ASSUME

Mechanical seals are built in only when you specify one. Tell us your sealing choice with your order or quote request, along with the details below, so NES can confirm materials and any support system.

WHAT TO TELL US

01	**Pump or compressor —** model and serial number from the nameplate.
02	**Sealing choice —** packing, single component, single cartridge or dual cartridge.
03	**Process gas & seal liquid —** composition, and whether either is corrosive, toxic or hazardous.
04	**Operating conditions —** vacuum or discharge pressure, temperature and duty cycle.
05	**Material preferences —** any plant standard for faces, elastomers or seal brand.
06	**Seal support —** for dual cartridge seals, whether NES should supply the barrier/buffer fluid system.

TYPICAL MATERIALS · CONFIRMED AT QUOTE

— SEAL FACES

Matched to the duty. Carbon, silicon carbide or tungsten carbide combinations.

— ELASTOMERS

Chemically compatible. FKM (Viton*), EPDM and others as the process requires.

— PACKING

PTFE. PTFE packing is standard on NES NL and NC Series pumps.

KITS, SUPPORT & SERVICE

— REPAIR KITS

Gaskets, shims & packing. Kits typically include all three. Bearings, mechanical seals and major components are sold separately.

— SEAL SUPPORT

Available from NES. Barrier/buffer fluid systems for dual cartridge seals, on request.

— REFURBISHING

Part of every rebuild. Mechanical seals are refurbished during NES remanufacturing.

IMPORTANT NOTICES

Trademarks. NES Company is an independent manufacturer and distributor of OEM and non-OEM vacuum pumps and is not affiliated with, endorsed by or sponsored by any company named here. Viton (marked *) and all other brand names are the property of their respective owners.

Selection. This brochure is general guidance, not an engineering recommendation for a specific installation. Seal type, materials and support systems are confirmed by NES at quotation from the information you provide; the customer is responsible for accurate process data, including any hazardous or toxic components.

Performance & warranty. Seal life and leakage depend on installation, operating conditions, seal liquid quality and maintenance. Materials listed are typical options and are confirmed at quote. Warranty terms are set by the NES quotation and NES Terms & Conditions. Specifications are subject to change without notice.

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