



Kharkov Bearing Plant

HARP-AGRO BEARINGS FOR AGRICULTURAL MACHINERY

PROVEN SOLUTIONS FOR YOU!



Kharkov Bearing Plant (HARP)



Kharkov Bearing Plant HARP is one of the biggest manufacturers of the bearing products in the CIS.



Year of foundation – 1947

Area – 45,56 ha

**Number of employees
– over 1500**

Kharkov Bearing Plant (HARP)



■ SPECIALIZATION:

- ball and roller bearings
 - semi-finished bearing parts
-
- More than 500 types of bearings with outer diameter from 30 to 400 mm
-
- Trademarks: **HARP, HARP-AGRO, HARP-AUTO, HARP Agro Unit, X-SHIELD**
-
- Production capacity: about 30 million bearings per year



Quality and durability

- Control at every product stage
- Material testing
- 100% rejection of materials which are not corresponding to the requirements



Product quality control



HARP is the only
approved supplier
of components for
Schaeffler Group in
Ukraine

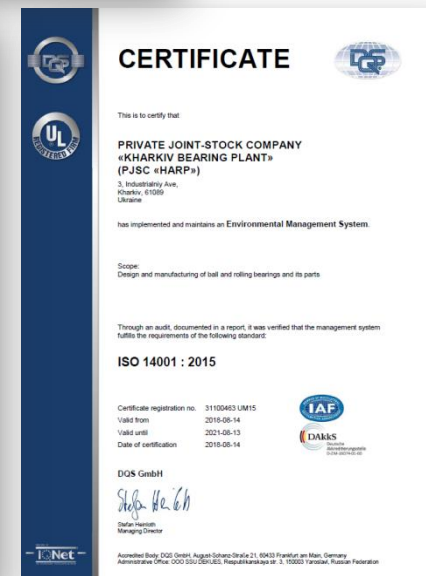
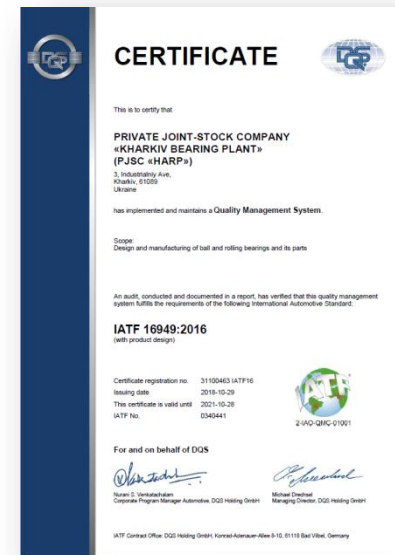
Kharkov Bearing Plant (HARP)



Quality and durability

ISO 9001
ISO/TS 16949
ISO 14001

ISO 492
GOST 520

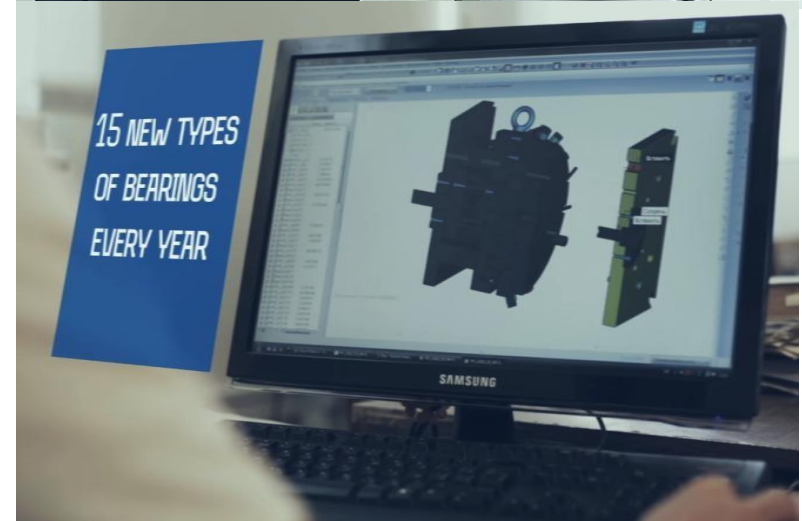
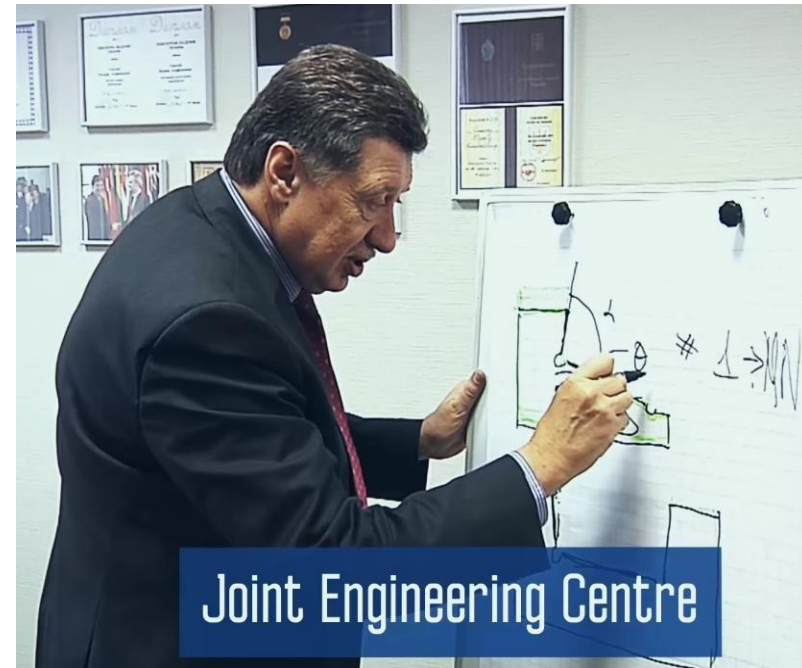


The Joint Engineering Center

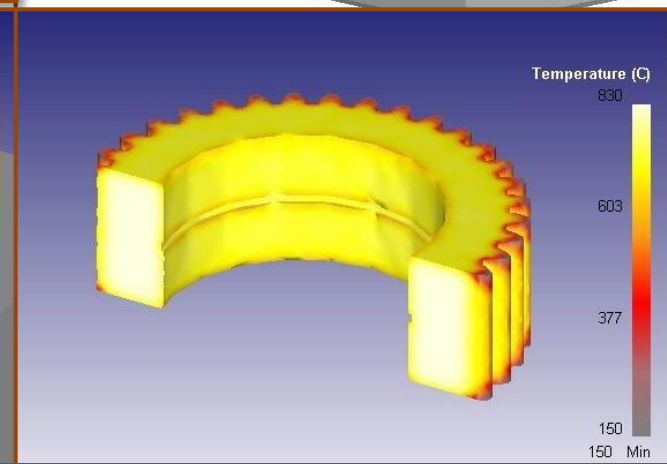
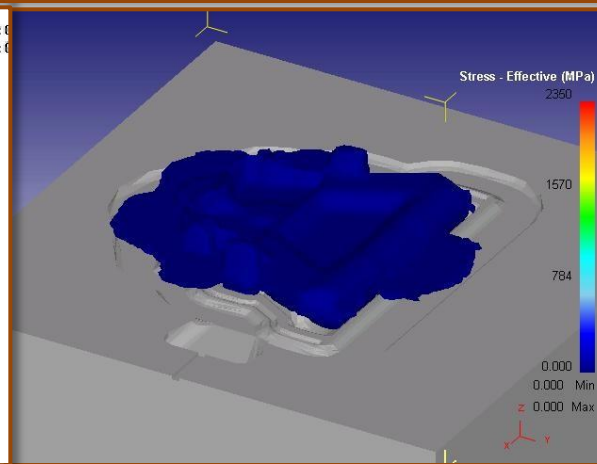
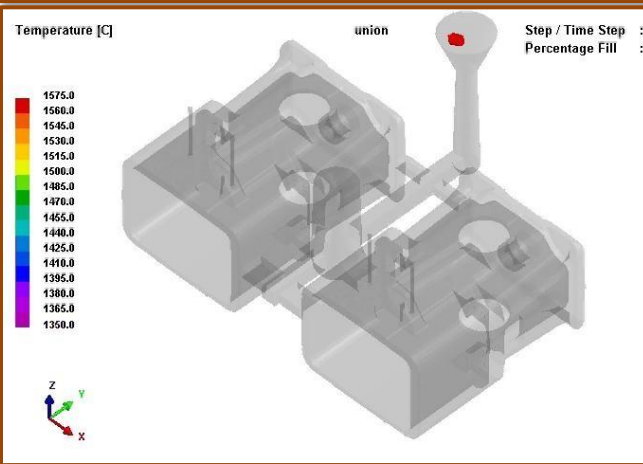
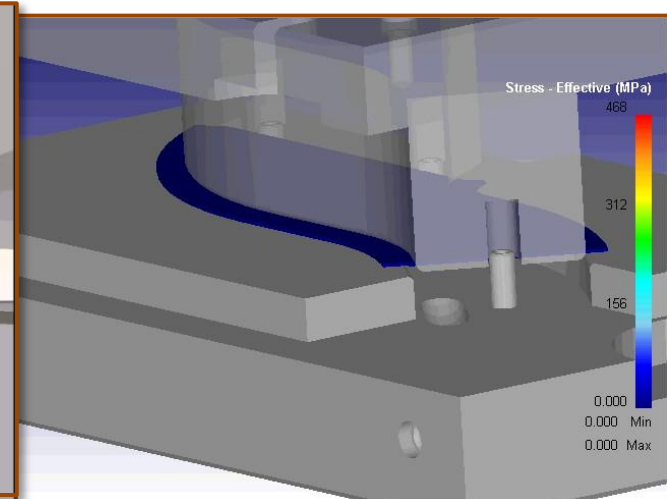
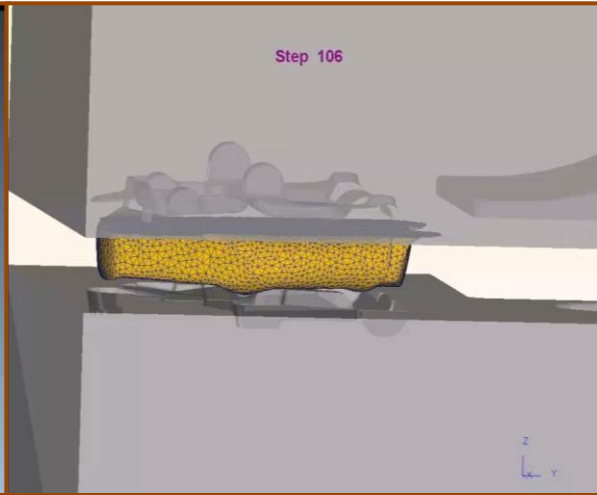


The company's know-hows are being created at the **Joint Engineering Center (JEC)**, which includes a number of specialized engineering centers and departments.

The JEC performs the most complex calculations and studies, mathematical simulations and optimal designs for all product areas.



Mathematical modeling of key technologies



HARP bearings - manufactured types



Single row radial ball bearings



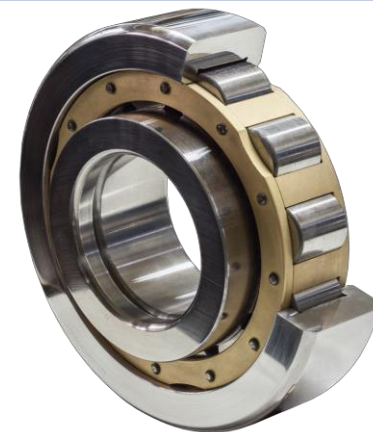
Radial spherical double row



Angular contact ball bearings



Radial roller with short cylindrical rollers



Our customer segments

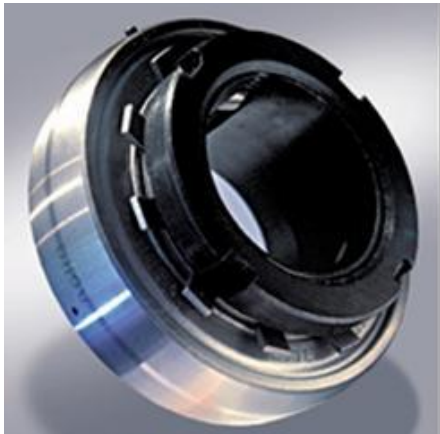
- **Agricultural producers**
- **Automotive industry**
- **Railways**
- **Mining and Metallurgy companies**



HARP-AGRO bearings for agricultural machinery



A special place in the assortment of products of the Kharkov Bearing Plant is occupied by bearings and bearing units for agricultural machinery, since the plant was built for the needs of agricultural machinery.



Application of HARP-AGRO bearings



HARP-AGRO bearing with X-SHIELD™ seal

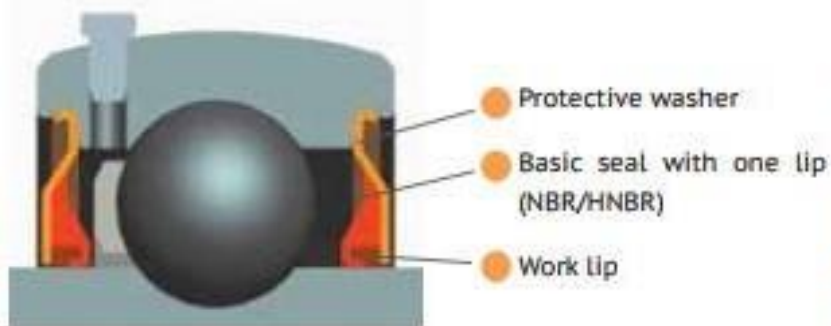


Improved work features — 100% bearing tightness and protection against mechanical damage:

X-SHIELD™ allows the bearing to work effectively even in extreme and dusty conditions of agricultural machinery operation and extends its service life.



X-SHIELD combined seal



X-SHIELD-6 reinforced combined seal



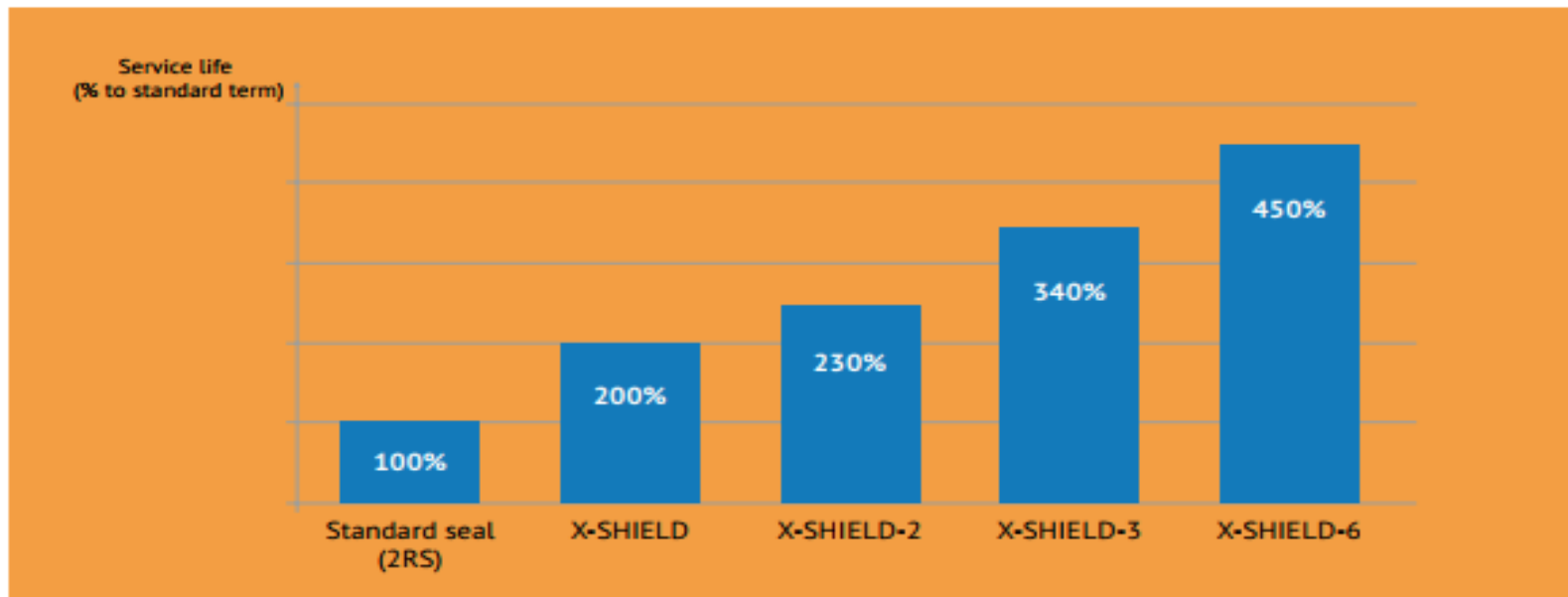
X-SHIELD™ — multi-lip seals of increased tightness



Advantages of X-SHIELD™ seals:

- Bearings do not require maintenance during the entire period of operation.
- Unique system of multi-lip seals in combination with protective washers ensures 100% tightness of bearings.
- Term of HARP AGRO bearing's safe operation with X-SHIELD™ seal is in 2-4,5 times higher than with standard seal.
- Extended range of the seal operating temperatures: from -40 to +150°C (HNBR).

Dependence of the service life of the bearing (bearing unit) on the type of the sealing according to the results of tillage machinery field testing (Ukraine, 2017)



HARP-AGRO bearing with X-SHIELD™ seal



- For harsh operation conditions.
- Best solution for operation in very polluted environment (dust, dirt, moisture, sand, clay, etc.).

Application of bearings with X-Shield™ seals:

- Combines of the largest CIS producers
- Maintenance and repair for general engineering



HARP-AGRO bearings can be applied in various foreign agricultural machinery (OEM, AM)



combines, tractors, balers, harvesters and other aggregates of:



HARP BEARING UNITS



HARP insert bearings



Kharkov Bearing Plant manufactures insert bearings of UC-series (analogues of YAR, YET, YEL) and bearing units on their basis (UCF, UCP, UCFL).



UC
205...210



ES
205...208



EX
205...210

Sealed (maintenance-free) bearing solutions

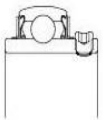
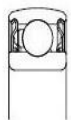

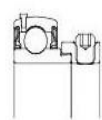
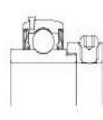


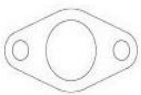
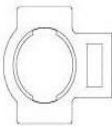

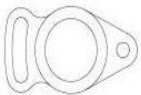
Advantages of the HARP bearing units:

- Self-alignment of the bearing outer diameter and housing inner diameter.
- Increased service life of the bearing unit.
- Effective sealing X-SHIELD®.
- Durable cast iron housing.
- Locking pin that eliminates rotation of the bearing outer ring in the housing.
- Complete interchangeability of bearing and housing.
- No special requirements to the shaft mounting surface.



Table of housings and bearings compatibility

The housing
can be
assembled
with bearings
of other types

Housing type	HARP bearing				
					
	P480000-UCP200 (Ø25...50 mm)	P580000, P1580000 (Ø25...55 mm)	P680000, P1680000 (Ø25...50 mm)	P780000K-ESP200 (Ø25...50 mm)	P780000-EXP200 (Ø25...50 mm)
	F480000-UCF200 (Ø25...50 mm)	F580000, F1580000 (Ø25...55 mm)	F680000, F1680000 (Ø25...50 mm)	F780000K-ESF200 (Ø25...50 mm)	F780000-EXF200 (Ø25...50 mm)
	FL480000-UCFL200 (Ø25...50 mm)	FL580000, FL1580000 (Ø25...50 mm)	FL680000, FL1680000 (Ø25...50 mm)	FL780000K-ESFL200 (Ø25...50 mm)	FL780000-EXFL200 (Ø25...50 mm)
	T480000-UCT200 (Ø25...50 mm)	T580000, T1580000 (Ø25...50 mm)	T680000, T1680000 (Ø25...50 mm)	T780000K-EST200 (Ø25...50 mm)	T780000-EXT200 (Ø25...50 mm)
	FC480000-UCFC200 (Ø25...50 mm)	FC580000, FC1580000 (Ø25...50 mm)	FC680000, FC1680000 (Ø25...50 mm)	FC780000K-ESFC200 (Ø25...50 mm)	FC780000-EXFC200 (Ø25...50 mm)
	FA480000-UCFA200 (Ø25...50 mm)	FA580000, FA1580000 (Ø25...50 mm)	FA680000, FA1680000 (Ø25...50 mm)	FA780000K-ESFA200 (Ø25...50 mm)	FA780000-EXFA200 (Ø25...50 mm)

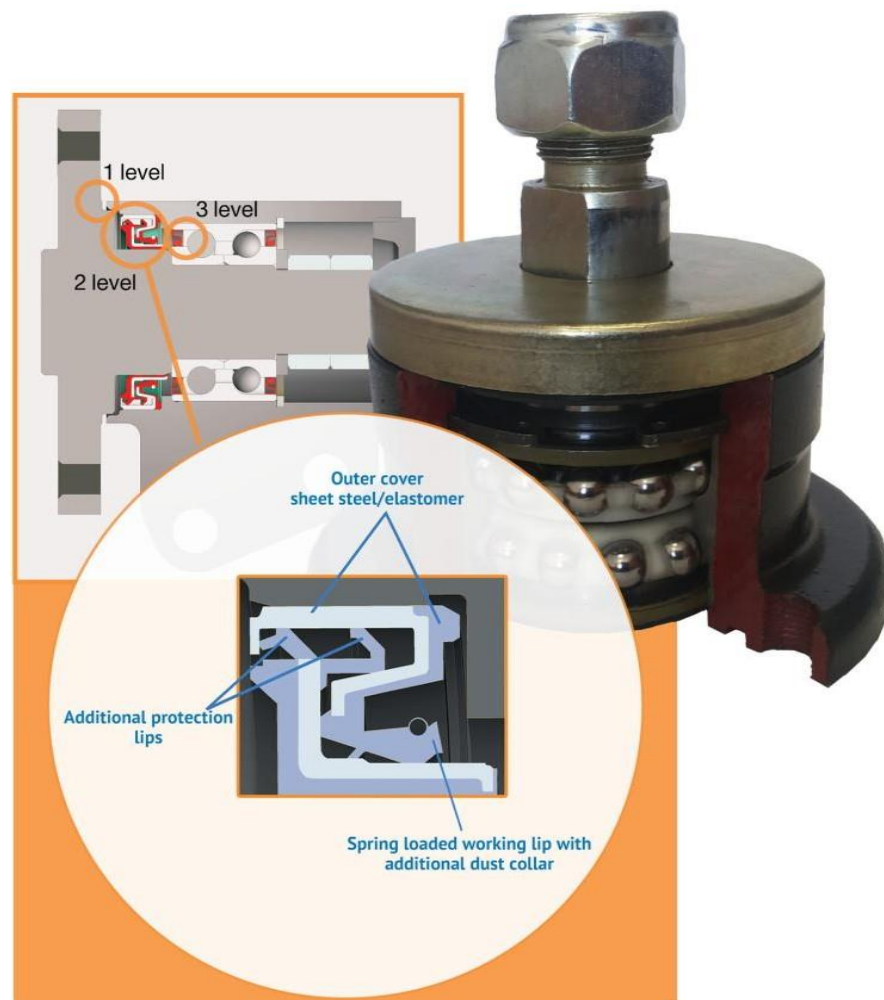
HARP AGRO UNIT



HARP AGRO UNIT is used for discs of various diameters in a wide range of tillage machinery: cultivators and harrows, seed drills and other.

HARP AGRO UNIT:

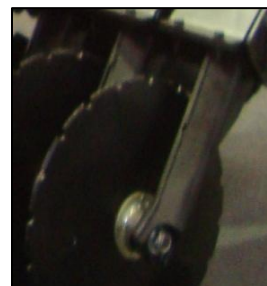
- Increased service life.
- Ultra-reliable three-level bearing protection.
- Cassette bearing, which does not require additional lubrication throughout the life cycle.
- Possibility of restoration, incl. with bearing replacement without housing replacement in a normal workshop.
- Fast mounting and dismantling (which minimizes downtime of equipment).
- Long-term reliable work.



BEARING UNITS FOR COMPACT DISC HARROWS



1. Simple adjustment and mounting on any tillage equipment.
2. Reliable bearing three-level protection (labyrinth cutter, cassette sealing, lip sealing).
3. Bearing does not require additional lubrication for the entire life cycle. Some models of HARP AGRO UNIT use one of the best hub bearing with service life of over 6 000 m.h.
4. High-quality greasing.
5. Reinforced forged hub.
6. Possibility of unit restoration and bearing replacement.



BEARING UNITS FOR DISC COULTERS OF THE SEED DRILLS



1. Simple adjustment and mounting on any tillage equipment for a variety of seeders (Sunflower, Salford, Elvorti).
2. No need in maintenance.
3. Two-stage unit protection.
4. Three-lip seal of bearings.
5. Durable forged housing.



Kharkov Bearing Plant HARP



**4, Marshal
Batitskiy Str.
61038 Kharkov
Ukraine**



**+38 057 766-60-50
+38 057 776-60-51**



i.g@upec.ua



www.harp.ua



**Proven solutions
for you**