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Malaria risks, transmission, and prevention

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Where Malaria is transmitted as well as tested solutions for a prevention and control

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## **SERVICE & SUPPORT**

Unparalleled support, technical assistance, training, and service parts availability make Hudson® products the right choice for professionals. Complete global service for dependable operation ensure less down time

# **ANNUAL STATS**



#### 3.2B PEOPLE

Half of the world's population is at risk of getting malaria and many other vector-borne diseases



**MORE THAN 2/3** 

of all malaria deaths are children under 5 years old



**229M**Malaria Cases



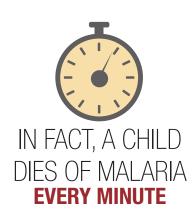
**409K** Malaria Deaths

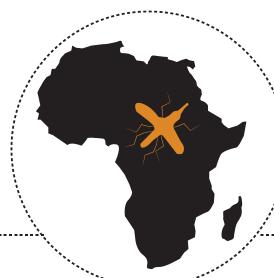


# **KNOW THE FACTS**

## **OVER 90% OF MALARIA DEATHS OCCUR IN AFRICA**

mostly in young children







including absenteeism, health care, and burden on families.



Cost to protect one person with an insecticide-treated bed net for one year.



Investment to protect an entire family with indoor spraying of insecticide for one year. IRS protects entire an family without any member having to "make an active decision to sleep under a net.

## What is Malaria?

Malaria is a life-threatening disease caused by parasites transmitted exclusively through mosquitoes bites.

## Who is at risk?

In 2021, 97 countries and territories have ongoing malaria transmission. Most malaria cases and deaths occur in sub-Saharan Africa.

## **Can Malaria be prevented?**

Indoor residual spraying (IRS) with insecticides has proven to be the most effective method to rapidly reduce malaria transmission. IRS is also credited with eliminating Malaria in many countries over decades.





# **HISTORY**



## WE'RE ABOUT SAVING LIVES.

## Since 1950, Hudson® has been actively advocating for public health programs.

At Hudson® we are advocates for public health programs that reduce or eliminate the threat to life and human well being resulting from vector-borne disease transmission.

Malaria has one of the largest histories of causing pain, suffering, death, and social and econonomic impact on many parts of the world.

Malaria is transmitted from the mosquito to humans when the mosquito seeks a blood meal thru a bite.

Indoor Residual Spraying (IRS) played a significant role in the eradication of malaria from over 100 nations in four continents and continues to provide long-lasting protection in programs with active surveillance and vector population suppression interventions.

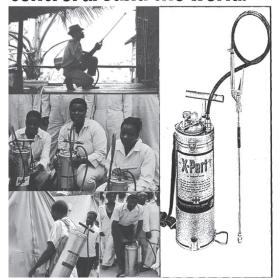


Hudson® X-Pert® brand sprayer on the move to fight Malaria



Hudson® X-Pert® brand sprayer being used in disease vector control efforts.

# Hudson developed the X-Pert Sprayer for malaria control around the world.



Historical brochure on efforts to control Malaria.



Hudson® X-Pert® brand sprayer applying life saving pesticide inside a house.



Hudson® X-Pert® brand sprayers being cleaned.



IRS Team & Hudson® X-Pert® brand sprayers.





# MALARIA IS PREVENTABLE AND CURABLE.

## **Hudson®** has been involved in Disease Vector Control initiatives for over 70 years

The experience we have gained producing the best sprayers for world health and agriculture simply means that we have more knowledge about how to build better performing sprayers than anyone in the industry.

This equipment has been found by the International Pesticide Application Research Centre (IPARC), Harper Adams University, Newport, Shropshire. UK) to be FULLY COMPLIANT with the requirements of the Equipment for Vector Control Specification Guidelines, 2nd Edition. Geneva: World Health Organization; 2018. The Hudson X-Pert sprayer is the only sprayer to have complied with the more demanding original WHO Specification number WHO/VBC/89.970. (Proof of certification provided upon request.)

### **PUBLIC HEALTH INITIATIVES**

Hudson® is a leader in the worldwide efforts to improve community health through disease vector control. Founded in 1905 by H. D. Hudson, from its inception the company has established a global reputation for quality and service. During World War II, Hudson® produced an enormous quantity of sprayers and dusters used by the USA Armed Forces, for the prevention and control of insect-borne diseases on displaced persons and in the aftermath of emergencies and disasters.

#### **ACTIVELY ADVOCATING FOR HEALTH**

Over the years we have pioneered advances in sprayer features and technology and we hold numerous sprayer and sprayer-related patents.

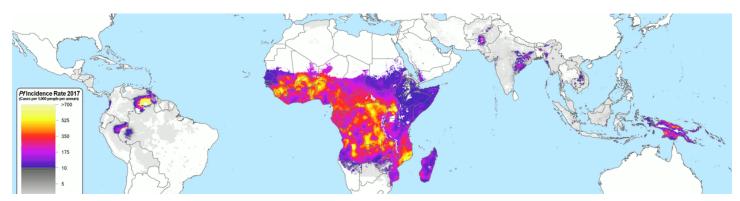






# **HISTORY**

## **GEOGRAPHY**



Malaria occurs mostly in poor, tropical and subtropical areas of the world

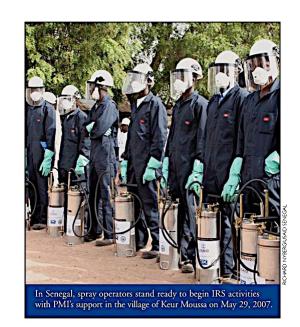


### Africa is the most affected due to a combination of factors:

- A very efficient mosquito (*Anopheles gambiae* complex) is responsible for high transmission.
- The predominant and most dangerous parasite species is *Plasmodium falciparum*, which is the species that is most likely to cause severe malaria and death.
- Local weather conditions often allow transmission to occur year round.
- Lack of technical resources, field entomology teams, technical capacity, experts, resources, and instability have hindered efficient malaria control activities.

In other areas of the world, Malaria is a less prominent cause of deaths, but can cause substantial disease, incapacitation and disruption of limited resources, especially in rural areas of some countries in South America and South Asia where IRS is also used against Chagas disease vectors. Malaria is one of the most severe public health problems worldwide. It is a leading cause of death and disease in many developing countries, where young children and pregnant women are the groups most affected.







# THE SOLUTION

For individuals, personal protection against mosquito bites represents the first line of defense for malaria prevention.

#### INDOOR SPRAYING WITH RESIDUAL INSECTICIDES

Indoor residual spraying (IRS) with insecticides is a powerful way to rapidly reduce Malaria transmission. Its full potential is realized when at least 80% of houses in targeted areas are sprayed. Indoor spraying is effective for 3–6 months, depending on the insecticide used and the type of surface on which it is sprayed. DDT can be effective for 9–12 months in some cases. Longer lasting forms of existing IRS insecticides, as well as new classes of insecticides for use in IRS programs, are under development.



vector control is the only intervention that can reduce malaria transmission from very high levels to close to zero at the community level. Malaria occurs mostly in poor, tropical and subtropical areas of the world.

Source: World Health Organization, World Malaria Report 2013









## **BRAND COMPRESSION SPRAYER**

Built for the expert, the professional user who wants the finest performance and ease of use.

The Hudson X-Pert® brand sprayer fully meets field operational requirements for manually operated compression sprayers used in global and national disease vector control programs.

Engineered and built to meet the precise and standardized application procedures used in residual pesticide application for control of Malaria, Chagas Disease, Dengue Fever, and Yellow Fever. The Hudson® X-Pert® brand sprayer meets the test of constant use in the most rigorous and demanding conditions and provides maximum use life and reliability.

World-wide reputation for trouble-free performance. Critical service parts are interchangeable, regardless of year of manufacture, contributing to uninterrupted vector control programs. This assures optimum cost/benefit with less down time and less maintenance costs.

This equipment has been found by the International Pesticide Application Research Centre (IPARC), Harper Adams University, Newport, Shropshire. UK) to be FULLY COMPLIANT with the requirements of the Equipment for Vector Control Specification Guidelines, 2nd Edition. Geneva: World Health Organization; 2018. The Hudson X-Pert

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# **PRODUCTS**



OVER 19
OUTSTANDING DESIGN AND CONSTRUCTION FEATURES.

MULTIPLE OPTIONS MAKE THE X-PERT® THE SPRAYER OF CHOICE THROUGHOUT THE WORLD.

OVER 70 YEARS

OF PROVEN DURABILITY, RELIABILITY AND PERFORMANCE IN DISEASE VECTOR CONTROL.

## **BUILT TO PERFORM**

## Unique features especially design for public health programs

#### **CUSTOMIZE TO YOUR SPECIFICATIONS**

Four models are available, all in high quality chromium-nickel stainless steel. 10 and 11 liter working capacities (3.0 and 3.5 total capacities). Since 1950, Hudson X-Pert<sup>®</sup> brand sprayers have been used in major world and local disease vector control programs.

Total Capacity 11.5 L / 3.0 Gal. Working Capacity 10.0 L / 2.6 Gal.	Total Capacity 13.3 L / 3.5 Gal. Working Capacity 11.0 L / 3.0 Gal.	Pressure Gauge	Shutoff Cock	Thrustless <sup>TM</sup> Valve	Strap 50mm / 2 in.
67322AD	67422AD	•		•	•
67322WD	67422WD	•	•	•	•

# **PRODUCTS**

# EXCLUSIVE HUDSON® PERFORMANCE POLICY.



NO OTHER
SPRAYER IN
THE WORLD
COMES WITH
COMPARABLE
SUPPORT.



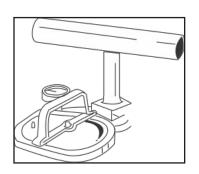
## **BRAND COMPRESSION SPRAYER**

## PATENTED, EXCLUSIVE FEATURES FOR PROFESSIONALS IN THE FIELD.

- Metal On/Off Valve locks on and off for safety and comfort.
- Large opening with Simplex Inner-Seal® for tighter seal.
- Quickly pressurize with high efficiency pump.
- Adjustable heavy-duty straps for comfort and ease of use.
- Pressure Gauge provides accurate display of internal pressure. Pressure relief valve for safety.



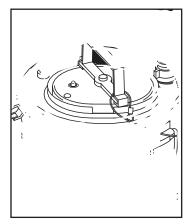
## **EXCLUSIVE FEATURES**



**T-HANDLE** Extra large for easy, comfortable, 2-hand pumping. Plunger shaft locks in place for easy carrying.

PLUNGER SHAFT Bumper springs at top and bottom of pump minimizes impact shock while pumping.

PRESSURE GAUGE Shows pressure in tank. Mounted in corrosion-resistant housing. Moisture & shatter resistant cover.



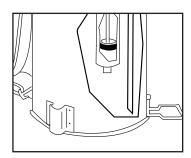
SIMPLEX INNER-SEAL® FILL OPENING AND SEAL Easy to fill, empty and clean tank without removing pump - prevents unwanted entry of debris (dirt). The higher the pressure, the tighter the seal.

PRESSURE RELEASE VALVE Pressure release for added safety.

#### **KEM OIL® 250 HIGH PRESSURE HOSE**

Brass hose connections; no tools required to remove hose.

**STAINLESS STEEL TANK** Provides the most resistance to pesticides and oxidation. Maximum strength while minimizing weight.



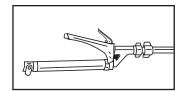
PUMP CYLINDER Efficient, for quick pump-up. Withstands high pressure. Special grade mildew-proof leather gasket on pump plunger.

CHECK VALVE Spring mounted, self-sealing closure in a machined, brass body. Ensures consistent, long life.

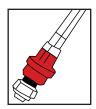
**SEAMLESS TUBULAR BRASS SUPPLY TUBE** Easily removable for cleaning with no tools.

**EXTENSION HOLDER** Extension passes through loop and rests in cup; cup protects nozzle in transport.

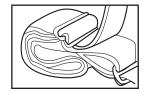
**FOOT REST** Provides leverage for easier pumping.



BRASS THRUSTLESS™ **CONTROL VALVE** Lasts longer and shuts off quicker - with less fatigue. Locks on and off for added safety. Nylon in-line strainer inside to keep out impurities.



**NOZZLE** Brass nozzle body, cap & stainless steel tip. Flat fan pattern 80°. OPTIONAL CFTM (CONSTANT FLOW) **CONTROL VALVE** Maintains a constant pressure and steady flow at the nozzle.



**ADJUSTABLE CARRYING STRAP** Heavy-duty. Wide. spring steel clips attach to extra-strong loops.



# **PARTS & SERVICE**

Unparalleled support, training, and service parts availability make Hudson® the right choice for professionals.

#### SAVE MORE LIVES WITH LESS DOWN TIME.

Hudson® understands that a successful IRS campaign is only effective when sprayers can be kept at their optimal performance standards. That's why we offer a variety of parts kit configurations for all types of service - from in the field to in the repair shop. And with easy ordering you can rest assured you will have the necessary parts always on hand to fully rebuild your sprayer should the need arise.



## **Hudson® X-Pert® Parts Kit Model 148-676**

The rugged Hudson® Brand X-Pert® sprayer is globally known for its durability and performance under the most challenging conditions with periodic, regular maintenance. This Hudson® X-Pert® parts kit, model 148-676, provides an assortment of the parts most often required to service 10 - 12 sprayers and keep your Hudson® X-Pert® sprayer operating properly several years. We suggest ordering 100 kits (10%) with orders of 1,000 sprayers.







# **SERVICE & SUPPORT**

## **COMPLETE GLOBAL SERVICE**

Only Hudson® can provide a complete program for dependable operation.

## **PARTS & ACCESSORIES**

Kits • Pumps • Extensions Valves • Hose



## **QUALITY ASSURANCE**

Cycle Tested • Freight Tested
Lab Tested • Burst Tested
Line Tested • Customer Tested



## **TRAINING & SUPPORT**

## **On-site Training Programs**

- Multi-Lingual Instructions
- Diagrams & Schematics
- Video Overviews
- Training Manuals

## **GLOBAL DISPATCH**

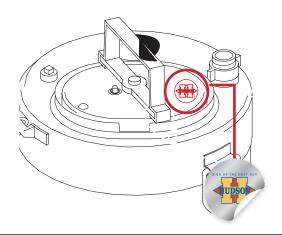
# In country stock parts. Vast distributor network.

H.D. Hudson Manufacturing Company 1000 Foreman St. Lowell, MI 49331 www.hdhudson.com phone: 1.800.997.7293

1.616.897.9211 publichealth@hdhudson.com

#### Always look for the Official Hudson® Seal of Authenticity.

The holographic emblem on all X-Pert® brand sprayers ensures you are using the original X-Pert® sprayer and genuine professional parts, only available from Hudson®.







# **Contact Us Today!**

H.D. Hudson Manufacturing Company 1000 Foreman St. Lowell, MI 49331 www.hdhudson.com Phone: 1.800.977.7293

1.616.897.9211

Email: publichealth@hdhudson.com

The Original Hudson® Brand X-pert® Sprayer

# The Company We Keep

































**ROTARIANS AGAINST MALARIA - GLOBAL ROTARY ACTION GROUP** 

