

Importance of **Portable Equipment** in Integrated Pest Management

Entegre Zararlı Yönetiminde
Taşınabilir Ekipmanların önemi



Summary

Özet

1. INTRODUCTION

(GİRİŞ)

2. SUCCESS STORIES

(BAŞARI ÖYKÜLERİ)

3. PH & PC EQUIPMENT RANGE

(HALK SAĞLIĞI ve PEST KONTROL EKİPMAN SERİSİ)

1. INTRODUCTION

(GİRİŞ)

 **Goizper Group**

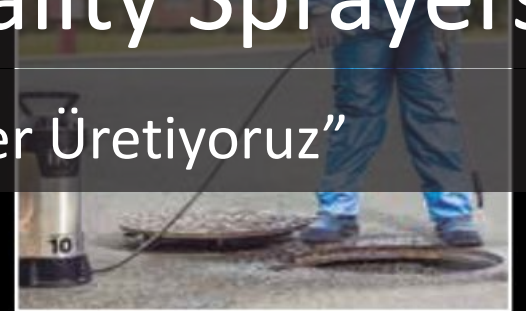
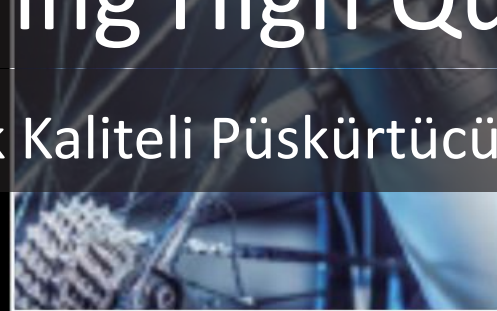
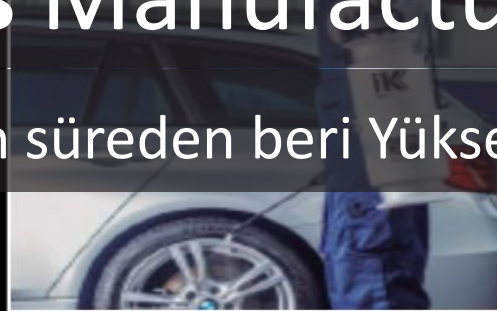
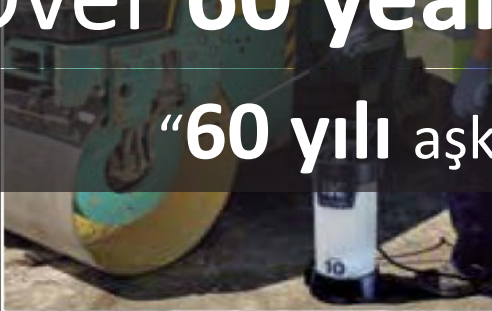


Goizper Group



“Over 60 years Manufacturing High Quality Sprayers”

“60 yılı aşkın süreden beri Yüksek Kaliteli Püskürtücüler Üretiyoruz”





Goizper Group

REGIONAL OFFICES

BÖLGESEL OFİSLER

iK

MICRON



**PUBLIC HEALTH
& PEST CONTROL**
Professional equipment



2. SUCCESS STORIES

(BAŞARI ÖYKÜLERİ)

2.1. VECTOR CONTROL

New tools for effective
Indoor Residual Spraying
& Larviciding

Kapalı Alan Rezidüel Spreyleme
ve Larvasit Uygulamalarında
etkili olmak için yeni araçlar.

VECTOR BORNE DISEASES (VB)

VEKTÖR KAYNAKLI HASTALIKLAR



MALARIA

SITMA



Zika

Dengue

Chikungunya

Yellow Fever

Zika

Dang Humması

Chikungunya

Sarı Humma



Chagas

Chagas



Leishmaniasis

Şark Çıbanı

Indoor Residual Spraying (IRS)

Kapalı Alan Rezidüel Spreyleme

“One of the primary interventions against VB diseases”

“Vektör kaynaklı hastalıklara karşı birincil müdahalelerdendir”





- **Traditional Metallic Compression** sprayers have been used for long time for IRS (1950): **very heavy, carried in just one shoulder, complex maintenance**
- Geleneksel Metal, basınçlı pulverizatörler IRS için uzun süredir kullanılmaktadır (1950): **çok ağır, tek omuzda taşınan, bakımı zor.**
- Shall IRS be done **more efficient, safe and user friendly**?
- **IRS uygulamaları, daha verimli, güvenli ve kullanıcı dostu mu olmalı?**

IK VECTOR CONTROL SUPER



ROBUST (GÜÇLÜ/DAYANIKLI)



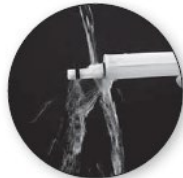
EFFICIENT (VERİMLİ)



SAFE (GÜVENLİ)



LIGHT AND COMFORTABLE
(HAFİF ve ERGONOMİK)



EASY TO MAINTAIN (BAKIMI KOLAY)

1st
NON METALLIC
SPRAYER

WHOPES 2010
FULLY COMPLIANT



NEW TOOLS FOR INDOOR RESIDUAL SPRAYING

KAPALI ALAN REZİDÜEL SPREYLEME İÇİN YENİ ARAÇLAR



ROBUST

GÜÇLÜ/DAYANIKLI

WHOPES CERTIFICATION (BY IPARC)

WHOPES SERTİFİKASI (IPARC TARAFINDAN)

- Corrosion and UV resistant
(special material selection)
Korozyona ve UV ışınlarına dayanıklı (özel malzeme)
- Pressure resistant (special design)
Basınca dayanıklı (özel tasarım)
- Impact resistant (special design)
Darbeye dayanıklı (özel tasarım)
- No leakages (no welding parts)
Sızdırmaz (kaynak parçası yok)

Imperial College London  **INTERNATIONAL PESTICIDE APPLICATION RESEARCH CENTRE**
Imperial College, Silwood Park
Buckhurst Road, Sunninghill,
Ascot, Berkshire, SL5 7PY, UK

*Safe and efficient application
for chemical and biological
pest management* a World Health Organisation (WHO) collaborating centre

Fax direct to IPARC 0207 5942 450
<http://www.iparc.org.uk>

CERTIFICATE OF COMPLIANCE

This is to certify that the:

Plastic Mod IK VECTOR CONTROL SUPER Compression Sprayer

Supplied by Goizper s.coop
ANTIGA, 4.
20577 ANTZUOLA
Apartado 211-20570 Begara
GUIPUZCOA
SPAIN goizper@goizper.com

were evaluated on site and at the International Pesticide Application Research Centre (IPARC), Imperial College London, Silwood Park, UK.

The samples were **FULLY COMPLIANT** with the requirements of the

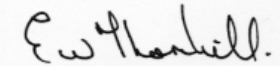
WHO Equipment for Vector Control Specification Guidelines
(WHO/CDS/NTD/WHOPES/GCDPP/2010.9)

REVISED EDITION 2010 for: =

Hand Operated Compression Sprayers

Tested at IPARC by:

E.W. Thornhill
Consultant



Countersigned by:

Prof.G.A.Matthews



January 2016

NEW TOOLS FOR INDOOR RESIDUAL SPRAYING

KAPALI ALAN REZİDÜEL SPREYLEME İÇİN YENİ ARAÇLAR



EFFICIENT VERİMLİ

2.1. Reduction of INSECTICIDE
DOSAGE VARIATION on the wall
Yüzeydeki insektisit dozunun eşit dağıtılması

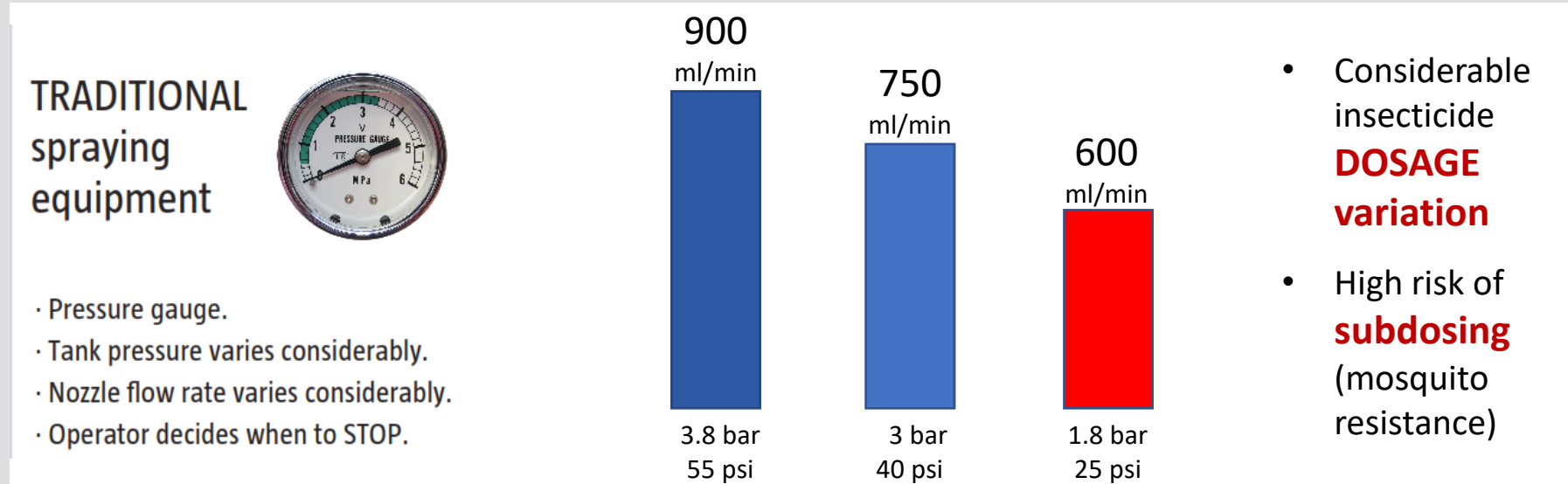


TRADITIONAL METALLIC EQUIPMENT

“PRESSURE GAUGE”

GELENEKSEL METALİK EKİPMAN

“Basınç ölçer”



- Dikkate değer insektisit **DOZAJ** değişkenliği
- Yüksek **doz aşımı** riski (sivrisinek direnci)



IK VECTOR CONTROL SUPER

“CONTROL FLOW VALVE”

“AKIŞ KONTROL VALFİ”

NEW

Low
Pressure
CFV



- Nozzle flow rate constant.
- Automatic STOP.

750
ml/min



1.5 bar
40 psi

750
ml/min



1.5 bar
40 psi

750
ml/min



1.5 bar
40 psi

- **Uniform** liquid volume emitted during all the application.
- Uygulama süresince **Sabit (1.5 bar)** sıvı hacmi.

NEW TOOLS FOR INDOOR RESIDUAL SPRAYING

KAPALI ALAN REZİDÜEL SPREYLEME İÇİN YENİ ARAÇLAR



EFFICIENT VERİMLİ

2.1. Reduction of insecticide
DEPOSIT VARIATION on the wall

2.2. Reduction of
insecticide LOSS
İnsektisit tasarrufu sağlanması

NEW TOOLS FOR INDOOR RESIDUAL SPRAYING

KAPALI ALAN REZİDÜEL SPREYLEME İÇİN YENİ ARAÇLAR

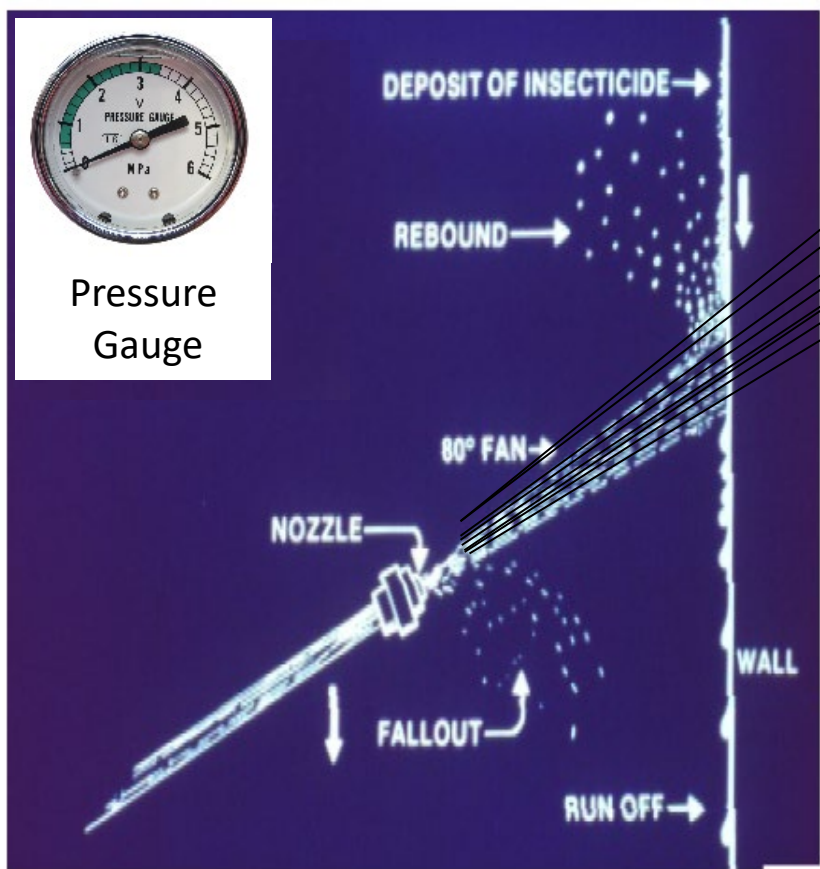


TRADITIONAL METALLIC EQUIPMENT

“HIGH SPRAYING PRESSURE (average 3bar/40psi)”

GELENEKSEL METALİK EKİPMAN

“YÜKSEK PÜSKÜRTME BASINCI (ortalama 3bar/40psi)”



There is an **insecticide loss of 16%** due to rebound and atomization
Sıçrama ve atomizasyonda %16 insektisit kaybı vardır.

Fine droplets fail to reach the wall (atomization)

İnce damlacıklar yüzeye ulaşamıyor

Big droplets rebound or Run off

Büyük damlacıklar yüzeyden sıçrıyor

“WHO recommended droplet size **200µm**”

“DSÖ **200µm** damlacık boyutu tavsiye ediyor”



IK VECTOR CONTROL SUPER

“CONTROL FLOW VALVE (low pressure 1.5 bar/21 psi)”

“AKIŞ KONTROL VALFİ (düşük basınç 1.5 bar/21 psi)”



50 % REDUCTION
OF INSECTICIDE LOSS

because the rebound
and atomization effect
is significantly reduced
when spraying at low
pressure (1.5bar/21psi).

%50 INSEKTİSİT
TASARRUFU

Çünkü düşük basınçta
(1.5bar/21psi)
püskürtme yapıldığında
sıçrama ve atomizasyon
etkisi önemli ölçüde
azalır.

NEW TOOLS FOR INDOOR RESIDUAL SPRAYING

KAPALI ALAN REZİDÜEL SPREYLEME İÇİN YENİ ARAÇLAR



EFFICIENT

VERİMLİ

- 2.1. Reduction of insecticide DEPOSIT VARIATION on the wall
- 2.2. Reduction of insecticide LOSS

2.3. Nozzle Life Span (erosion)

Nozul ömrü (yıpranma)

NEW

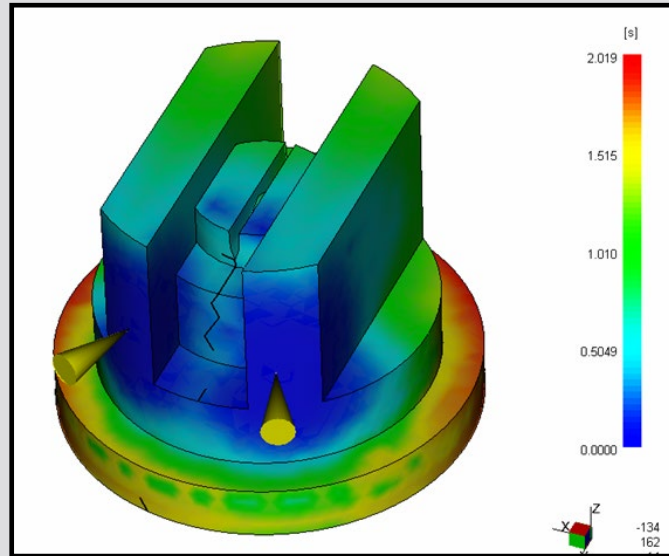




IK VECTOR CONTROL SUPER

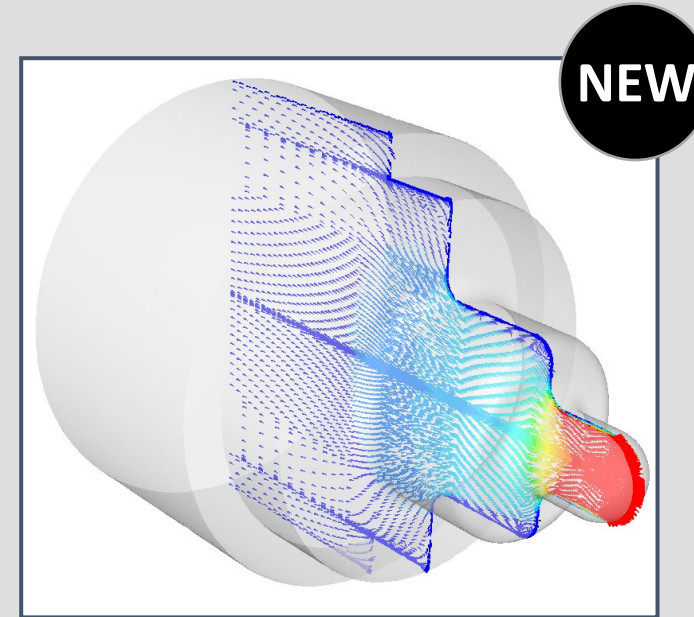
“MUCH MORE DURABLE AND BETTER PERFORMANCE NOZZLES”

“ÇOK DAHA İYİ PERFORMANSLI ve DAYANIKLI NOZULLAR”



**Low erosion materials and
manufacturing processes**

**Dayanıklı malzemelerden
düşük erezyonlu nozul üretimi**



**Nozzle Internal Design
using CFD software**

**CFD yazılımı kullanılarak
Nozul İç Tasarımı**

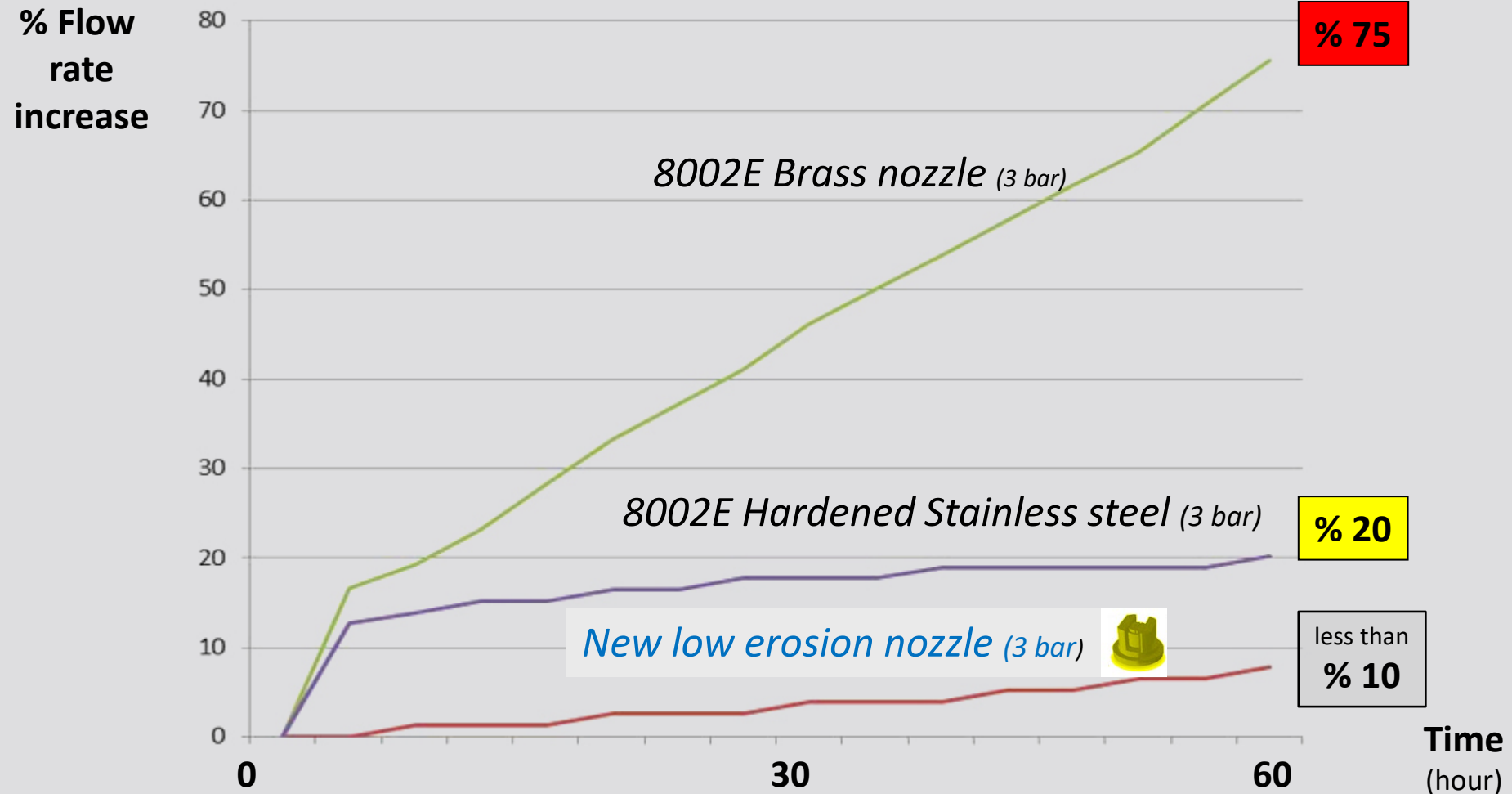
NEW TOOLS FOR INDOOR RESIDUAL SPRAYING

KAPALI ALAN REZİDÜEL SPREYLEME İÇİN YENİ ARAÇLAR



“LOWER EROSION (%50 less), LONGER LIFE (X2), SAVING MONEY”

“DAHA DÜŞÜK EROZYON (%50 daha az), DAHA UZUN ÖMÜR (X2), PARA TASARRUFU”



NEW TOOLS FOR INDOOR RESIDUAL SPRAYING

KAPALI ALAN REZİDÜEL SPREYLEME İÇİN YENİ ARAÇLAR



EFFICIENT

VERİMLİ

2.1. Reduction of insecticide
DEPOSIT VARIATION on the wall

2.2. Reduction of insecticide
LOSS

2.3. Nozzle Life Span (erosion)

2.4. Nozzle Blockages

Nozul tıkanıklıkları



TRADITIONAL METALLIC EQUIPMENT

“NOZZLE BLOCKAGES DUE TO DIRTINESS”

GELENEKSEL METALİK EKİPMAN

“KİRLİLİK NEDENİYLE NOZUL TIKANMALARI”

**Unprotected
nozzle**



Risk of NOZZLE
BLOCKAGES

NEW TOOLS FOR INDOOR RESIDUAL SPRAYING

KAPALI ALAN REZİDÜEL SPREYLEME İÇİN YENİ ARAÇLAR



IK VECTOR CONTROL SUPER

“NOZZLE PROTECTED FROM DIRTINESS”

“KİRLENMEYE KARŞI KORUMALI NOZUL”

Nozzle protection

NEW

OPEN fixed position



CLOSED fixed position



Protected

NEW TOOLS FOR INDOOR RESIDUAL SPRAYING

KAPALI ALAN REZİDÜEL SPREYLEME İÇİN YENİ ARAÇLAR



EFFICIENT VERİMLİ

- 2.1. Reduction of insecticide DEPOSIT VARIATION on the Wall
- 2.2. Reduction of insecticide LOSS
- 2.3. Nozzle Life Span (erosion)
- 2.4. Nozzle Blockages

2.5. Correct Chemical Mixing
Doğru kimyasal karıştırma

NEW TOOLS FOR INDOOR RESIDUAL SPRAYING

KAPALI ALAN REZİDÜEL SPREYLEME İÇİN YENİ ARAÇLAR



IK VECTOR CONTROL SUPER

“SEMI TRANSLUCENT TANK”

“YARI ŞEFFAF TANK”

- **Easy** to READ THE TANK VOLUME correctly
Tank hacmini okuma kolaylığı
- **Easy** to prepare the CHEMICAL MIXING correctly
Kimyasal karışımı doğru hazırlama kolaylığı



10 L



8 L



7.5 L

IK VC SUPER

MODELS

NEW TOOLS FOR INDOOR RESIDUAL SPRAYING

KAPALI ALAN REZİDÜEL SPREYLEME İÇİN YENİ ARAÇLAR



EFFICIENT VERİMLİ

- 2.1. Reduction of insecticide DEPOSIT VARIATION on the Wall
- 2.2. Reduction of insecticide LOSS
- 2.3. Nozzle Life Span (erosion)
- 2.4. Nozzle Blockages
- 2.5. Correct Chemical Mixing

2.6. Unique features

Benzersiz özellikler

NEW TOOLS FOR INDOOR RESIDUAL SPRAYING

KAPALI ALAN REZİDÜEL SPREYLEME İÇİN YENİ ARAÇLAR



IK VECTOR CONTROL SUPER

“UNIQUE FEATURES”

“BENZERSİZ ÖZELLİKLER”

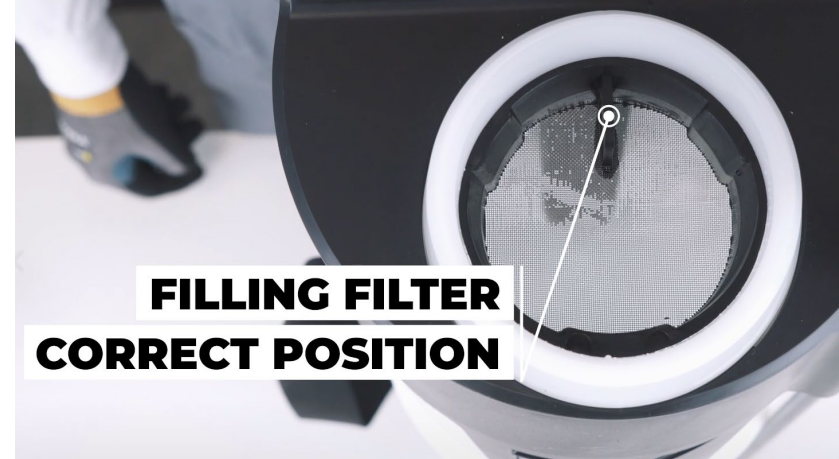


SAFETY VALVE

GÜVENLİK VALFİ

It prevents the tank to be overpressurized releasing air automatically

Tankın aşırı basınca maruz kalmasını önler, fazla basıncı otomatik serbest bırakır



FILLING FILTER

DOLUM FİLTRESİ

Filling filter suitable for wide filling mouth

Geniş dolum ağzına uygun dolum filtresi



SPECIAL LID DESIGN

ÖZEL KAPAK TASARIMI

to store extra nozzles
(2 even fan nozzles, 2 larviciding nozzles,
1 nozzle filter)

ekstra nozulları saklamak için
(2 çift yelpaze nozulu, 2 larvisit nozulu, 1
nozul filtresi)



LIGHT & COMFORTABLE

HAFİF ve KONFORLU

2.7. Reduction Operator's
fatigue

Operatör yorgunluğunun azaltılması



NEW TOOLS FOR INDOOR RESIDUAL SPRAYING

KAPALI ALAN REZİDÜEL SPREYLEME İÇİN YENİ ARAÇLAR



TRADITIONAL METALLIC EQUIPMENT

“VERY HEAVY AND UNCOMFORTABLE TO CARRY JUST IN ONE SHOULDER”

GELENEKSEL METALİK EKİPMAN

“TEK OMUZDA TAŞIMAYA UYGUN ve RAHATSIZ EDİCİ”

- Very tiring and uncomfortable task
Çok yorucu ve rahatsız edici
- Risk to lose precision in spraying technique
Püskürtme tekniğinde hassasiyeti kaybetme riski

NEW TOOLS FOR INDOOR RESIDUAL SPRAYING

KAPALI ALAN REZİDÜEL SPREYLEME İÇİN YENİ ARAÇLAR



IK VECTOR CONTROL SUPER

“NEW MATERIALS OFFER
NEW DESIGN POSSIBILITIES”

“YENİ MALZEMELER, YENİ TASARIM OLANAKLARI SUNAR”

- Very Light Tank
(3 Kg) Çok hafif tank (3 Kg)

NEW

- More Comfortable (double easily adjustable straps to carry the pump in the back)

Daha konforlu (Pompayı sırtta taşımak için ayarlanabilen çift taşıma kayışı)

NEW TOOLS FOR INDOOR RESIDUAL SPRAYING

KAPALI ALAN REZİDÜEL SPREYLEME İÇİN YENİ ARAÇLAR



ENVIRONMENTAL & HEALTH

ÇEVRE SAĞLIĞI

2.8. Reduction Operator's
contamination Risk

Operatörün maruz kalma riskini azaltma



TRADITIONAL METALLIC EQUIPMENT

“OPERATOR’S HIGH CONTAMINATION RISK”

GELENEKSEL METALİK EKİPMANLARDA
“OPERATÖRÜN YÜKSEK MARUZ KALMA RİSKİ”

	<u>Operator’s contamination</u>	
	Dermal (mg/man/hour)	Respiratory (mg/man/hour)
IRS (DDT) at 4 bar (55 psi)	2.760	11.1
IRS (DDT) at 3 bar (40 psi)	1.755	7.1
IRS (DDT) at 2 bar (30 psi)	719	2.9
IRS (DDT) at 1.5 bar (20 psi)	255	1




IK VECTOR CONTROL SUPER

“7 TIMES REDUCTION OF THE CONTAMINATION RISK”


“MARUZ KALMA RİSKİ 7 KAT DAHA AZ”

Operator's contamination

Dermal (mg/man/hour) Respiratory (mg/man/hour)

 CFV	4 bar (55 psi)	2.760	11.1
	3 bar (55 psi)	1.755	7.1
	2 bar (55 psi)	719	2.9
	IRS (DDT) at 1.5 bar (20 psi)	255	1

7 times reduction





EASY TO CLEAN AND MAINTAIN

TEMİZLİK ve BAKIMI KOLAY

2.9. No need of expertise
and expensive spares & tools

Uzman olmaya, pahalı yedek parça ve aletlere
ihtiyaç duymaz

- Sprayer design: made of 50% fewer parts than traditional sprayers. Less parts, less problems. Püskürtücü tasarımı: Geleneksel püskürtüçülere göre %50 daha az parçadan yapılmıştır. Daha az parça, daha az sorun.
- Very Easy to manipulate. Çok kolay müdahale.
- Almost 100% tool free. Neredeyse %100 alet kullanmadan.



NEW TOOLS FOR INDOOR RESIDUAL SPRAYING

KAPALI ALAN REZİDÜEL SPREYLEME İÇİN YENİ ARAÇLAR



iK

VECTOR CONTROL
TRAINING VIDEOS

ENGLISH

cutt.ly/IKVC-1



CASTELLANO

cutt.ly/IKVC-2



FRANCAIS

cutt.ly/IKVC-3



PORTUGUÊS

cutt.ly/IKVC-4



TRAINING SUPPORT & MATERIAL

EĞİTİM DESTEĞİ ve YEDEK PARÇA

- Training **Goizper and local Staff**
Goizper ve Yerel Distribütör personeli eğitimi
- Training **Documents**
Eğitim belgeleri
- Training **VIDEOS**
Eğitim videoları

NEW

MARKET EXPANSION

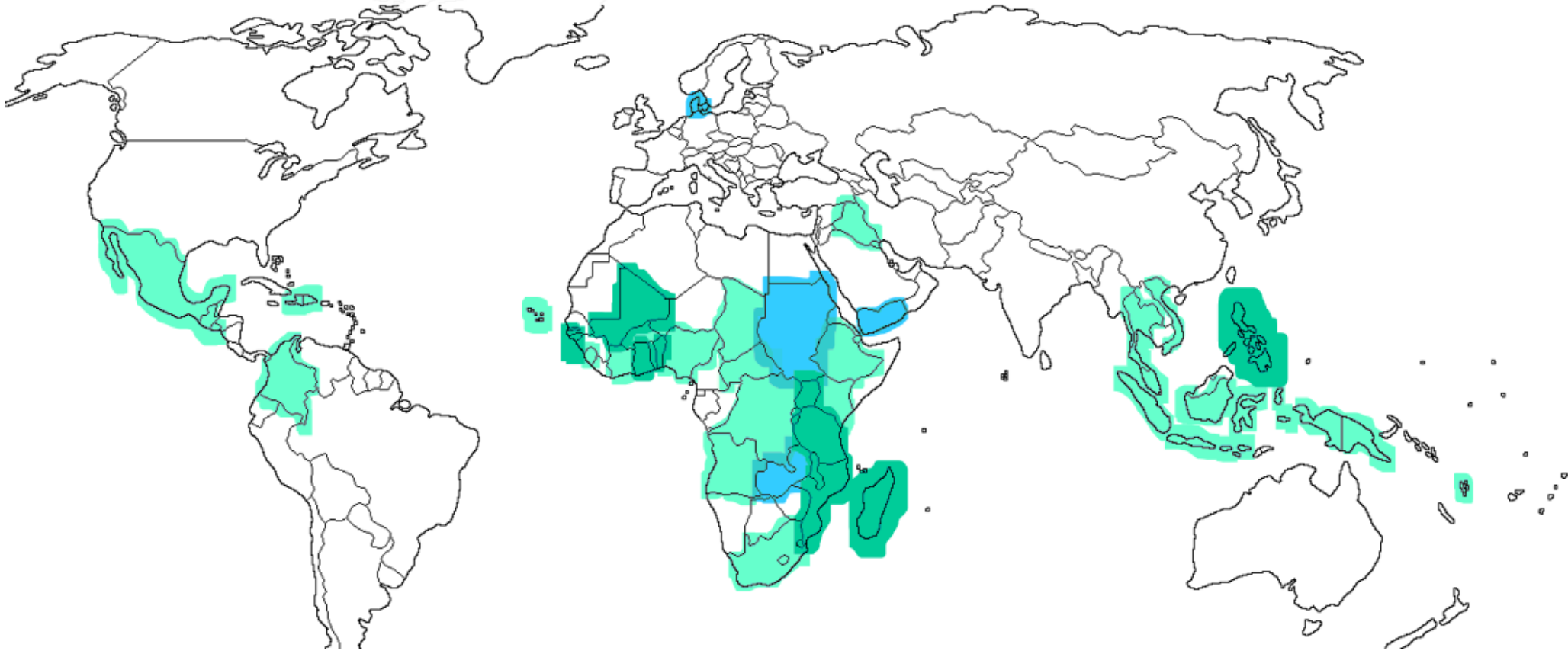
VERY RAPID & HIGHLY SUCCESSFUL

(>50 Malaria countries)

PAZAR PAYI

ÇOK HILZI ve ÇOK BAŞARILI

(Sıtma görülen 50'den fazla ülkede)





**IRS uygulama
sprey
kalitesini ve
etkinliğini
artırmak için
tasarlanmış
dijital eğitim
materyali**

DESIGNED TO IMPROVE IRS APPLICATION SPRAY QUALITY AND EFFECTIVENESS

IRS is one of the most important interventions against Vector Borne Diseases. Thousands of operators are intensively trained every year but few tools are available to effectively evaluate IRS spray quality. The IK Smart Light has been specifically designed to train and guide operators and supervisors and provide feedback about their spraying technique and quality. Using the IK Smart Light can potentially cut training times, provide data driven assessment of operator performance, and improve the quality and effectiveness of IRS campaigns.



1

Colored lights help applicator control spraying distance easily



CORRECT
(45 cm)



TOO CLOSE
Overdose
(<40 cm)



TOO FAR
Underdose
(>50 cm)

2

Electronic beeper at 1 sec intervals to help applicator timing

3

LED spotlight for spraying in dark houses coupled with a rechargeable battery

4

Flow meter to measure amount sprayed by each applicator

5

Smart Phone App to visualize and supervise spray quality

2.2. PEST CONTROL & DISINFECTION

New tools for optimized, effective, quick
and comfortable application

HAŐERE KONTROLÜ & DEZENFEKSİYON

Optimize edilmiş, etkili, hızlı ve rahat uygulama için yeni araçlar



BATTERY Sprayer IK e 15 BS

SPECIALLY DESIGNED FOR
CLEANING, DISINFECTION, PEST CONTROL,
VIRUS AND EPIDEMICS CONTROL

PEST KONTROL, DEZENFEKSİYON, TEMİZLİK,
VİRÜS VE SALGIN KONTROLÜ İÇİN
ÖZEL OLARAK TASARLANDI



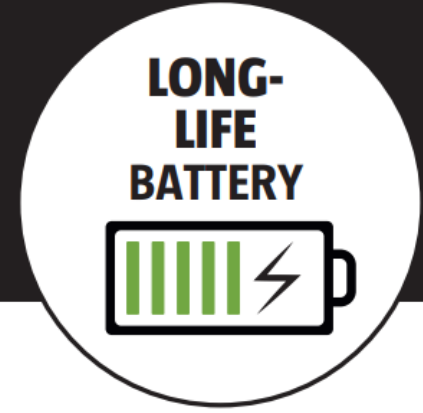
- **ROBUST** GÜÇLÜ/DAYANIKLI
- **RELIABLE APPLICATION** GÜVENİLİR KULLANIM
- **SAFE APPLICATION** GÜVENLİ UYGULAMA
- **COMFORTABLE TO WEAR** KONFORLU TASARIM



BATTERY Sprayer IK e 15 BS



- **15 l. Tank Volume** **15 l. Tank hacmi**
- **Long-life 18v Lithium battery**
Uzun ömürlü 18 V Lityum Pil
- **Kit with 4 special nozzles**
4'lü özel nozul seti
to optimize the efficiency of treatments in different working areas (indoors and outdoors). **Farklı çalışma alanlarında uygulamayı optimize etmek için (açık ve kapalı alanlarda)**
- **Two-position electronic control**
for homogeneous spraying:
iki konumlu elektronik püskürtme kontrolü homojen püskürtme için
Position 1: Pest control. **(Pest Kontrol)**
Position 2: Cleaning and Disinfection. **(Temizlik ve Dezenfeksiyon)**
- **Stainless steel lance and handle.**
Paslanmaz çelik tetik ve mızrak
- **Wide filling mouth.** **Geniş doldurma ağızı**
- **Padded and adjustable straps with front closure.**
Yastıklı, önden mandallı ve ayarlanabilir taşıma kayışları



LTC ONTROL

Video IK e 15 BS



3. PC & PH EQUIPMENT RANGE

HALK SAĞLIĞI ve PEST KONTROL EKİPMAN SERİSİ



MICRON

**PUBLIC HEALTH
& PEST CONTROL**
Professional equipment



AERIAL RANGE



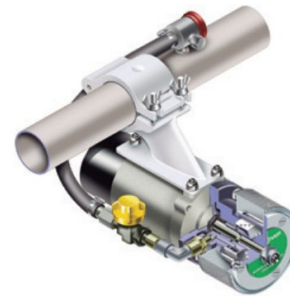
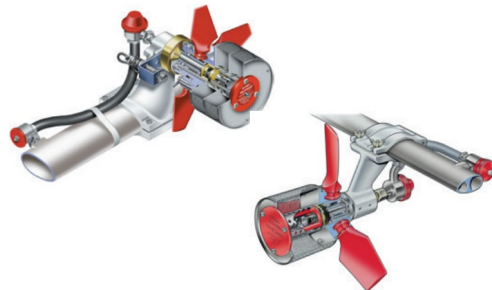
Image courtesy of VDCI, USA



MICRONAIR AU4000

MICRONAIR AU5000

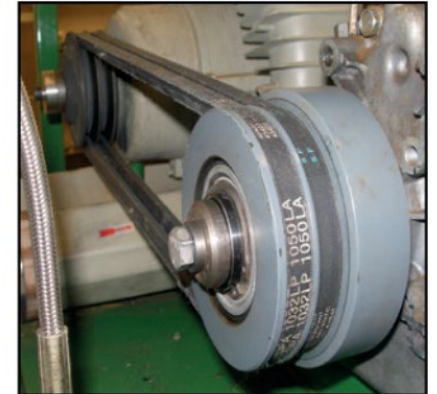
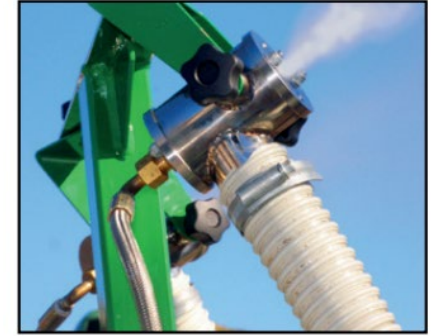
MICRONAIR SPRAY POD



MICRONAIR AU6539

VEHICLE MOUNTED ULV COLD FOGGER

AU9000 ULV TRUCK MOUNTED FOGGER



PORTABLE ULV EQUIPMENT

MANUAL ULV FOGGER LINE



MICROFOG THERMAL FOGGER RANGE



SPRAYERS FOR

INDOOR RESIDUAL SPRAYERS PEST CONTROL & DISINFECTION

INDOOR RESIDUAL SPRAYERS



PEST CONTROL & DISINFECTION



OTHER APPLICATION EQUIPMENT

HAND PUFFERS



FLEXY PRO AEROSOL DELIVERY SYSTEM



COMPRESSION SPRAYER PCO SERIES 5L/4L/2L



PCO UNIQUE SPRAY



PCO MINISPRAY



PRECISION 'PISTOL STYLE' GEL APPLICATOR



Thank you

