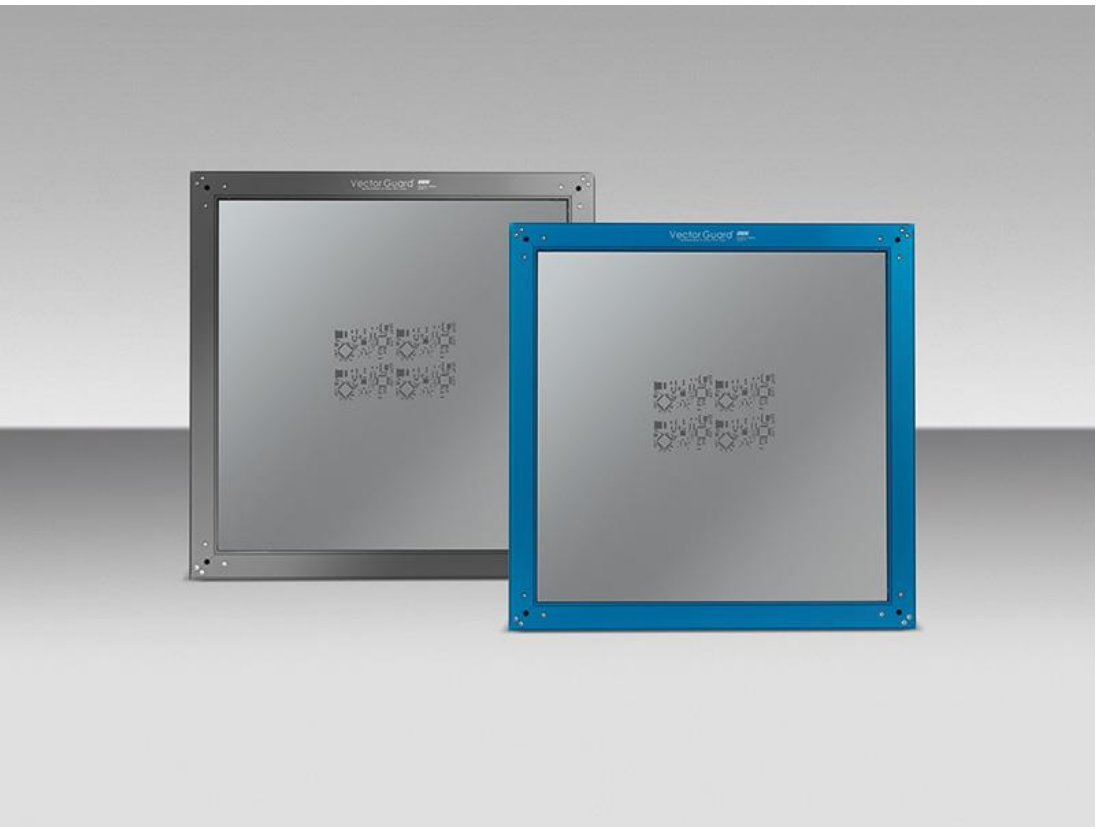


VectorGuard™ Stencil Frame

General User Information

www.asm-smt.com

Issue v1.0 – 14/06/2018

All names identified by ® are registered trademarks of the ASM Assembly Systems GmbH & Co. KG. The remaining trademarks in this publication may be trademarks whose use by third parties for their own purposes could violate the rights of the owner.

We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information given in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

Copyright © ASM Assembly Systems | Technical data subject to change

ASM Assembly Systems GmbH & Co. KG
Rupert-Mayer-Strasse 44
81379 Munich
Germany

www.asm-smt.com

Item-no.: 03171983-01 (431873)

Alle mit dem Schutzrechtsvermerk ® gekennzeichneten Bezeichnungen sind eingetragene Marken der ASM Assembly Systems GmbH & Co. KG. Die übrigen Bezeichnungen in dieser Schrift können Marken sein, deren Benutzung durch Dritte für deren Zwecke die Rechte der Inhaber verletzen kann.

Wir haben den Inhalt der Druckschrift auf Übereinstimmung mit der beschriebenen Hard- und Software geprüft. Dennoch können Abweichungen nicht ausgeschlossen werden, sodass wir für die vollständige Übereinstimmung keine Gewähr übernehmen. Die Angaben in dieser Druckschrift werden regelmäßig überprüft und notwendige Korrekturen sind in den nachfolgenden Auflagen enthalten.

Copyright © ASM Assembly Systems | Änderungen vorbehalten

ASM Assembly Systems GmbH & Co. KG
Rupert-Mayer-Straße 44
81379 München
Deutschland

www.asm-smt.com

Artikel-Nr.: 03171983-01 (431873)

General User Information

VectorGuard™ Stencil Frame

Product Range:	VectorGuard™ Frame System
Document No.:	03171983-01 (431873) **Issue:** V1.0 **Date:** 14/06/2018

This document contains basic User Information for the VectorGuard™ Frame Product Range.

CONTENTS:

1x VectorGuard™ Stencil Frame

1x Storage Stencil (x 0.005” / 0.125mm)

1x ASM Certificate of Conformity

1x General User Information

IMPORTANT: Please read the following document carefully before using this VectorGuard™ Frame Product.

CAUTION:
NEVER immerse a VectorGuard™ Frame in a solvent bath or place it in industrial screen washing equipment.
The service life of the internal components will be significantly reduced.

CAUTION:
ASM AS recommends using solvents that are environmentally friendly and comply with local guidelines. Always use solvents as directed & wear protective equipment.

WARNING:
VectorGuard™ Frames contain high force spring components which can crush.
Keep fingers clear when opening or closing the Tension Claws.

General User Information

VectorGuard™ Stencil Frame

CAUTION:
High Pressure Compressed Air is required to operate VectorGuard™ Frame Products.
Care must be taken when pressurising / de-pressurising a VG Frame.
ASM AS recommends the use of Eye Protection during Stencil Changeovers.

General User Information

VectorGuard™ Stencil Frame

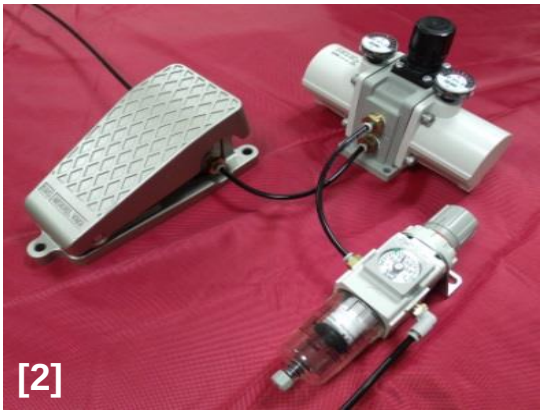
VectorGuard™ Frame Work Area Requirements:

For loading / un-loading a VectorGuard™ Frame, it is recommended that a 'workstation' consisting of a flat workbench / table with a clear working area of at least 750mm x 750mm is used with an adjacent foot switch operated compressed air supply of:

- **7-8 bar (0.7-0.8 MPa / 101-116 psi)** for **Standard** VectorGuard™ frames
- **8-10 bar (0.8-1.0 MPa / 116-145 psi)** for **High Tension** VectorGuard™ frames

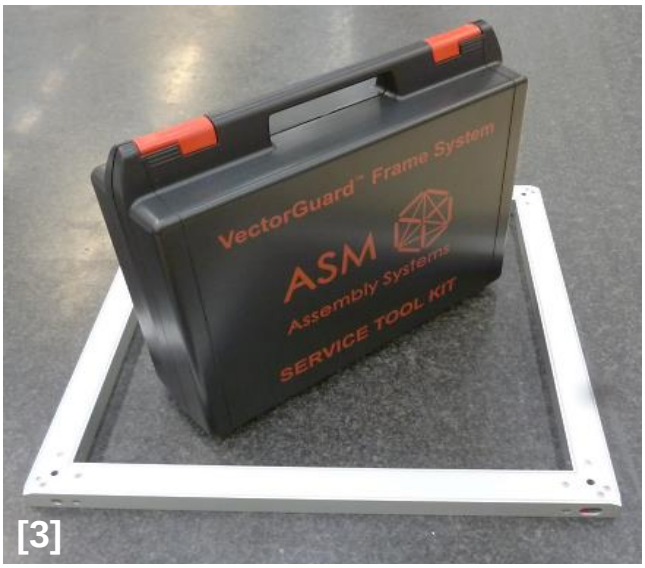
The following Compressed Air Supply components are recommended for use with the VectorGuard™ Frame System and supplied separately by ASM AS…. see **[2]**

- **03130217-01 (430647)** Regulator & Footswitch Kit
- **03130224-01 (431394)** Air Pressure Doubling Unit


[2]

Recommended VectorGuard™ Servicing Tools:

- VectorGuard™ Service Tool Kit - Level 1
  (ASM Part No.: **03162857-01 / 800033**)
- VectorGuard™ Service Tool Kit - Level 2
  (ASM Part No.: **03162858-01 / 800034**)
- VectorGuard™ Service Tool Kit Upgrade
  From Level 1 - Level 2
  (ASM Part No.: **03162859-01 / 800036**)



[3]

ASM VectorGuard™ Repair Spares & Consumables:

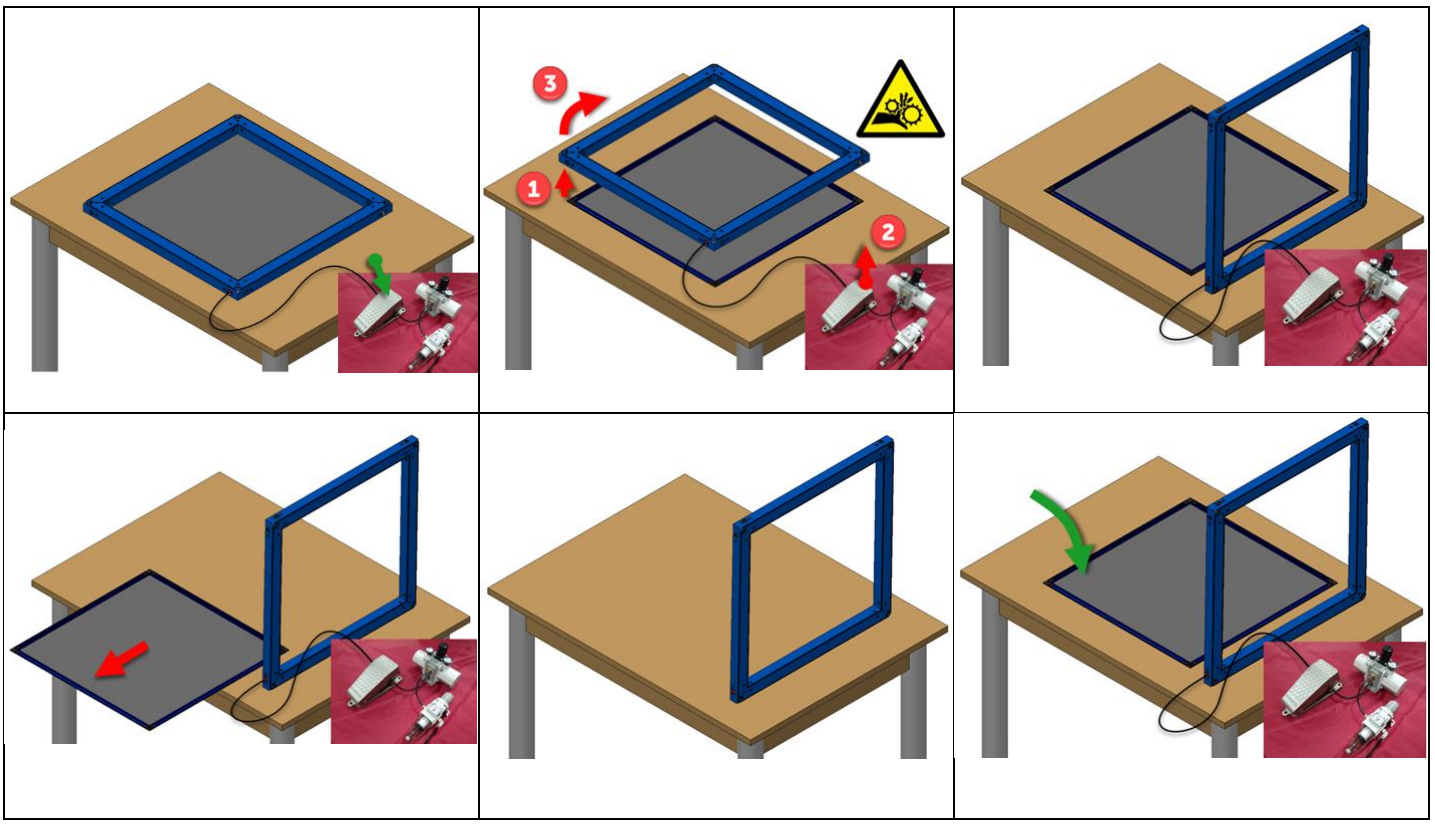
- **03131610-02 (430885)** 10x VG Frame Re-Tubing Kit (Spares for 10x VG Frames)
- **03127432-02 (430887)** 1x VG Frame Re-Tubing Kit (Spares for 1x VG Frame)
-
- **03134010-01 (173017)** Latex Gloves (XL) or…
- **03134004-01 (173021)** Nitrile Gloves (XL)
- **03126895-01 (115806)** IPA/DI 100x Pre-Saturated Wipes (185mm x 140mm)

Process Support Product Information & Webshop: https://www.asm-psp.com/en/

VectorGuard™ BASIC OPERATION OF FRAME

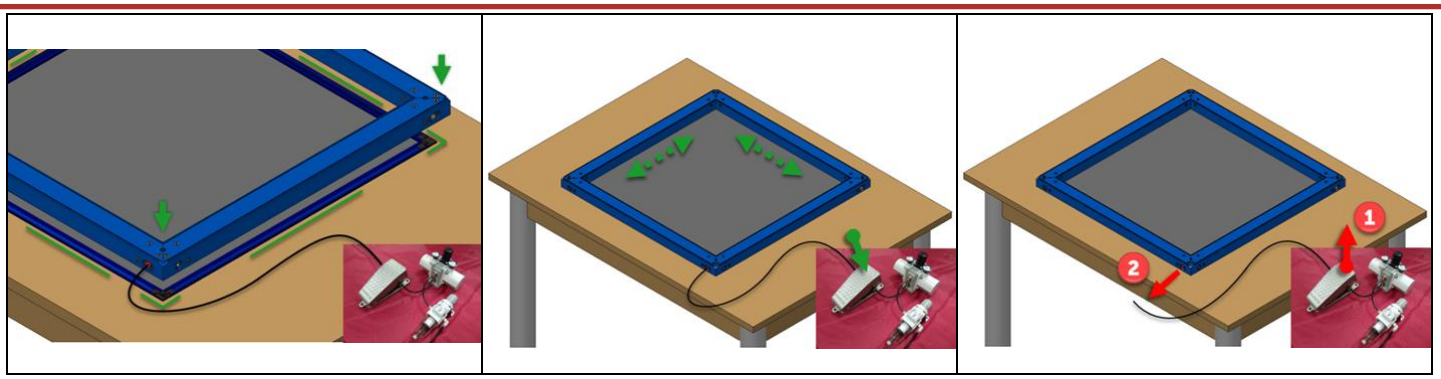
1. VectorGuard™ STENCIL CHANGEOVER, REMOVAL & FITTING

Place the VectorGuard™ Frame STENCIL DOWN on a flat work surface
Connect the recommended air supply via a 4mm diameter tube
Depress the Footswitch to apply air
Beware - Finger Trap!!
Lift the Frame UP (1), remove the air supply (2) & rotate UP (3) as shown
Remove the Stencil to storage
Place a new VectorGuard™ STENCIL on a flat work surface.
Locate the VectorGuard™ Frame CENTRALLY OVER the Stencil
Depress the Footswitch to apply air, check that the Frame has ENGAGED with the Stencil and is FLAT
Release the Footswitch (1) BEFORE removing the air supply tube (2)



General User Information

VectorGuard™ Stencil Frame



VectorGuard™ MAINTENANCE RECOMMENDATIONS

For continued fault free operation, ASM AS recommends that your VectorGuard™ Frame is maintained every 12-18 months* **or** after completing 2000x* frame operation cycles *(*based on average use testing)*

During this maintenance, the VectorGuard™ frame should:

- be inspected for any damage
- be inspected for flatness & squareness
- be inspected for full & correct operation
- be cleaned of any solder paste deposits
- have all four internal inflation tubes replaced
- have the force of each Tension Claw logged

IMPORTANT NOTE:
ALWAYS fit a blank stencil to your VectorGuard™ Stencil Frame when it is to be stored for **any** length of time. A 'Storage Stencil' is supplied with your VectorGuard™ Frame for this purpose.

Storing a Frame without a Stencil for prolonged periods may shorten the Service Life of the Product.

VectorGuard™ SERVICING OPTIONS & INFORMATION

The VectorGuard™ Level 1 Service Tool Kit is designed for Basic Frame Maintenance and enables users to recover stencils & replace inflation tubes during annual maintenance or in the event of a tube failure.

VectorGuard™ Frames are designed to have a long service life. The high-quality springs used during manufacture are responsible for maintaining the applied stencil tension.

The VectorGuard™ Level 2 Service Tool Kit contains all the Maintenance Tools of the Level 1 Kit. Additionally, the Level 2 Kit contains measurement equipment which enables the user to check the

individual claw forces around the VectorGuard™ Frame to ensure optimum process performance is maintained.

The Level 2 Tools are available as an Upgrade Kit for customers who purchase the Level 1 Service Kit.

To complement the Level 1 & 2 Tool Kits, advanced VectorGuard™ Return To Base (RTB) Maintenance Services are also available from ASM Assembly Systems.

ASM operates the following RTB services in each of the main global regions.

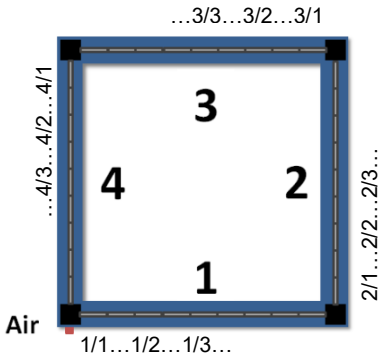
- VG-STD or VG-HT Refurbishment – Replacement of all springs to original OEM specification.
- Standard to High Tension Upgrade Option
- Trade in discounts when upgrading to a VG-HT Frame **Trade in not available in all regions…*

Please contact your local ASM Sales Representative for details or visit www.asm-smt.com.

VG FRAME SERVICING / WARRANTY REFERENCE CONVENTIONS

Before contacting ASM with Servicing or Warranty enquiries:-

Place the VectorGuard™ Frame 'stencil' side up as shown in [4].
The air connector will be in the bottom left corner.
VG Frame Sides and Claws are numbered anti-clockwise as shown.



[4]

Individual VectorGuard™ Tension Claws are identified using the following format:
'**SIDE / CLAW No.**' *i.e. the first side / first claw is* ***'1/1'*** *while third side / fourth claw is* ***'3/4***

Please use this Reference Method when describing the operation of your VectorGuard™ Frame

VectorGuard™ Stencil Frame TROUBLE SHOOTING

Tension Claws Not OPENING Fully		
Low Pressure Air Supply	~	Check Air Supply Pressure / Connecting Equipment
Failed Inflation Tube	~	Tube Repair Required - Use VG Service Kit Level 1 (800033) + VG Spares from VG Re-Tubing Kit (430885 or 430887)
Twisted Inflation Tube - Air Blocked	~	Tube Repair Required - Use VG Service Kit Level 1 (800033) + VG Spares from VG Re-Tubing Kit (430885 or 430887)
Tension Claws Not CLOSING Fully		
Twisted Inflation Tube - Air Trapped	~	Tube Repair Required - Use VG Service Kit Level 1 (800033) + VG Spares from VG Re-Tubing Kit (430885 or 430887)

Spring Failure	~	ASM Return To Base Service Only
Displaced Springs	~	ASM Return To Base Service Only
Air Escaping from Frame		
Failed Inflation Tube	~	Tube Repair Required - Use VG Service Kit Level 1 (800033)
Displaced Tube Plug	~	Tube Repair Required - Use VG Service Kit Level 1 (800033)
		+ VG Spares from VG Re-Tubing Kit (430885 or 430887)
Frame Seal Screw Missing	~	Fit Replacement Screw from VG Re-Tubing Kit (430885 or 430887)
Parts re-used	~	Apply PTFE Tape from VG Service Kit to seals
Inflation Tube or Plug CANNOT be removed		
Overlapping tubes in corner blocks	~	Tube Repair Required - Use VG Service Kit Level 1 (800033)
		+ VG Spares from VG Re-Tubing Kit (430885 / 430887)
Air Supply Tube is Blown from Frame when Foot Pedal is used		
Air Connector tube grip failure	~	Replace Air Connector Fitting (431805)

USER NOTES:

ASM Process Support
Products Website

www.asm-psp.com

ASM Process Support
Products Webshop

www.asm-smt.com/en/webshop

ASM
Website

www.asm-smt.com

ASM
YouTube

www.youtube.com/c/ASMSMTSolutions

Item-no.: 03171983-01 (431873)
Printed by ASM Assembly Systems GmbH & Co. KG

ASM Assembly Systems GmbH & Co. KG
Rupert-Mayer-Str. 44
81379 Munich, Germany
Tel.: +49 89 20800-27819
Fax: +49 89 20800-36692