



Advance to the next level.

Terumo has led the way in oxygenator innovation and quality for more than 30 years and was the first company to manufacture its own hollow fiber.

The new CAPIOX® FX Advance Oxygenator advances your oxygenator to the next level by enhancing flow dynamics,¹ resulting in lower minimum operating levels and increased maximum blood flow rates. Now, you can expand your options and choose a smaller, lower prime oxygenator for even more patients.

Working together with your surgery team, Terumo Cardiovascular Group helps save lives every day. That's why we never compromise quality. And it's why we constantly strive to deliver new technologies that advance patient outcomes and deliver exceptional clinical value.

Choose the oxygenator that expands your options and advances patient outcomes. Choose the CAPIOX FX Advance Oxygenator.

Terumo Cardiovascular Group





Introducing the CAPIOX® FX Advance Oxygenator with improved flow dynamics.

Patients come in all shapes and sizes — so do CAPIOX FX Oxygenators. Now, you can expand the use of CAPIOX FX Oxygenators through the enhanced flow dynamics offered on the CAPIOX Advance Hardshell Reservoir.

Advancements include an increased blood flow rate on the 3,000 mL reservoir — available on the CAPIOX FX15 Advance Oxygenator — and a lower minimum operating level on the 4,000 mL reservoir — available on the CAPIOX FX15 and FX25 Advance Oxygenators.

3,000 mL Hardshell Reservoir

Advantage:

Increased maximum blood flow to 5 L/min on the CAPIOX FX15 Advance Oxygenator*

Benefit:

Flexibility to use on a wider range of patients and the lowest prime adult oxygenator available today

 $^*\mbox{Use}$ of Vacuum Assisted Venous Drainage may be required to achieve flow rate of 5 L/min.

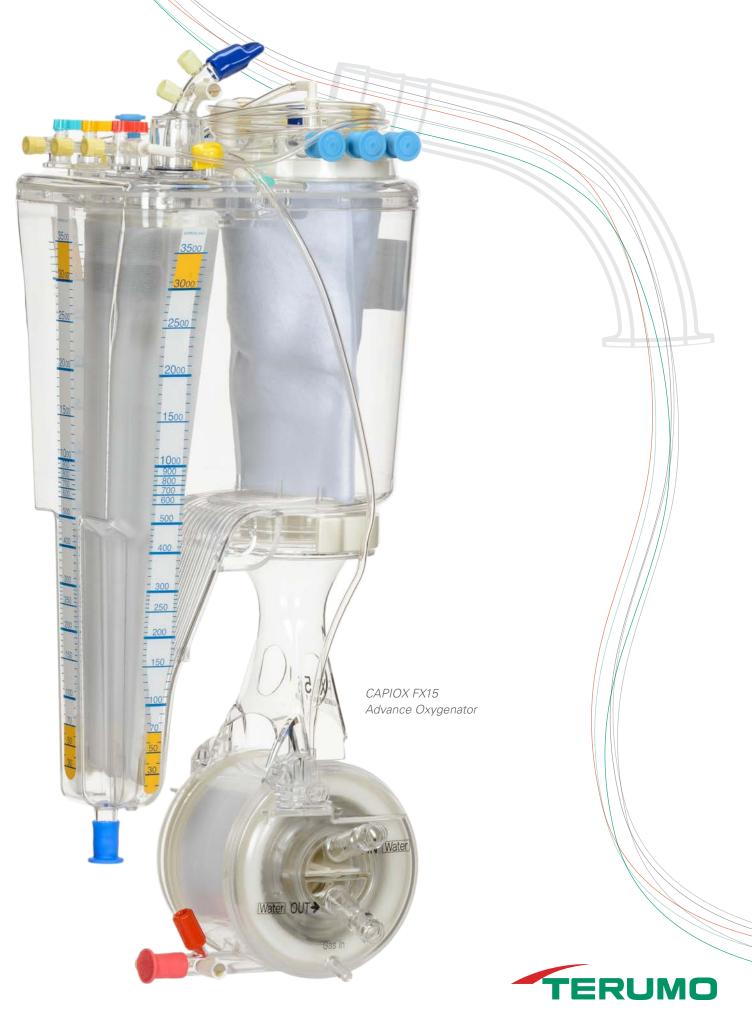
4,000 mL Hardshell Reservoir

Advantage:

Reduced minimum operating level of 150 mL on the CAPIOX FX15 and FX25 Advance Oxygenators

Benefit:

Further helps minimize hemodilution with the lowest-prime full-size oxygenator²



Advancing Outcomes

Built around Terumo CV Group's integrated arterial filter with self-venting technology, the CAPIOX® FX Advance Oxygenator helps clinicians reduce prime volume and lower hemodilution.² The design of the CAPIOX FX Advance Oxygenator contributes to fewer blood transfusions⁴ and reduced hospital costs.²

Low prime volume oxygenators reduce hemodilution, blood transfusions and the risk of Acute Kidney Injury

It is well known, with a high level of evidence (Class 1 level a), that excessive hemodilution during cardiopulmonary bypass (CPB) can lead to an increased incidence of red blood cell transfusions and other patient risks, including post-operative Acute Kidney Injury (AKI).

A recent study demonstrates that reducing hemodilution with a low prime volume oxygenator, by as little as 150 mL, is associated with fewer blood transfusions and reduced risk of post-operative AKI.³

CAPIOX FX Advance
Oxygenators allow you to
minimize hemodilution, resulting
in fewer blood transfusions and
may decrease the risk of AKI.



Curved venous inlet enhances flow dynamics



3/8" - 1/4" adapters for the CAPIOX FX15 Oxygenator with 3,000 mL reservoir

Enhanced flow dynamics. Expanded patient range.



Hardshell Reservoir

Enhanced flow dynamics

- Improved flow dynamics reduces blood turbulance and enhances gaseous microemboli removal
- Rotating, curved venous inlet enhances ease-of-use
- Increased maximum blood flow to 5 L/min on the CAPIOX FX15 Advance Oxygenator, with 3,000 mL reservoir, for use on a wider range of patients*
- Decreased minimum operating level of 150 mL on the CAPIOX FX15 and FX25 Advance Oxygenators, with the 4,000 mL reservoir, reduces hemodilution
- Elongated shape provides stable, smooth blood flow path
- Volume indicators on three sides enhances visibility at all levels and angles
- Built-in positive pressure relief valve increases convenience and assurance

 * Use of Vacuum Assisted Venous Drainage may be required to achieve flow rate of 5 L/min.



CAPIOX FX Oxygenator

Proven performance and fully integrated arterial filter

- Features self-venting technology
- Low priming volume, high gas exchange and low pressure drop are optimally balanced for superb performance
- Terumo's exclusive hollow fiber technology enables total process control from raw materials to finished product
- Woven fiber bundle design provides consistent and high-performance gas exchange
- Less foreign surface area contact minimizes systemic inflammatory response
- Multiple blood outlet port configurations allow easy access and circuit flexibility



West Outlet Port

Oxy inlet on right when outlet is facing away from user.



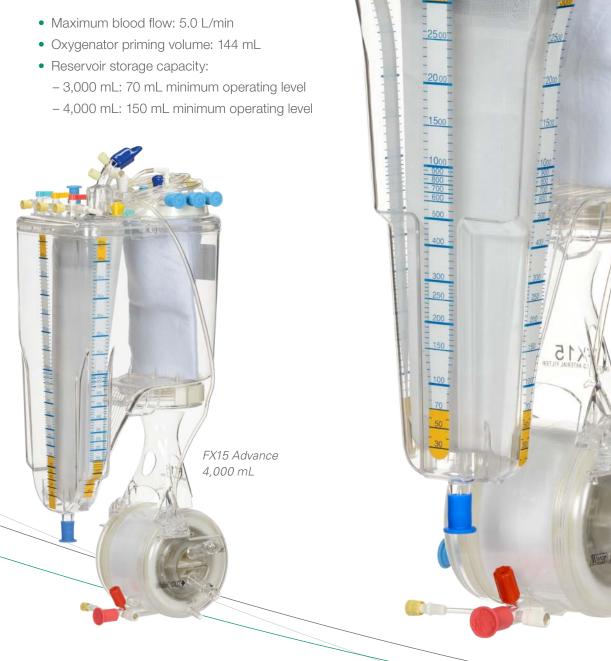
East Outlet Port

Oxy inlet on left when outlet is facing away from user.



CAPIOX® FX15 Advance Oxygenator

The CAPIOX FX15 Advance Oxygenator significantly lowers prime volume for patients at risk for a higher rate of blood transfusions. With the CAPIOX FX15 Advance Oxygenator, smaller patients can have surgery with an oxygenator that best fits their unique metabolic needs. And now, the increased blood flow rate available with the 3,000 mL hardshell reservoir expands the use of a smaller oxygenator to more patients.



FX15 Advance 3,000 mL

CAPIOX FX25 Advance Oxygenator

The design of the CAPIOX FX25 Advance Oxygenator provides a full-size oxygenator with a low prime volume, and the hardshell reservoir offers a reduced minimum operating level.

• Maximum blood flow: 7.0 L/min

• Oxygenator priming volume: 260 mL

• Reservoir storage capacity: 4,000 mL

• Minimum operating level: 150 mL



CAPIOX FX05 Oxygenator

The CAPIOX FX05 Oxygenator offers exceptionally low prime volume and high performance. Your most delicate patients deserve the lowest prime volume possible.

• Maximum blood flow: 1.5 L/min

• Oxygenator priming volume: 43 mL

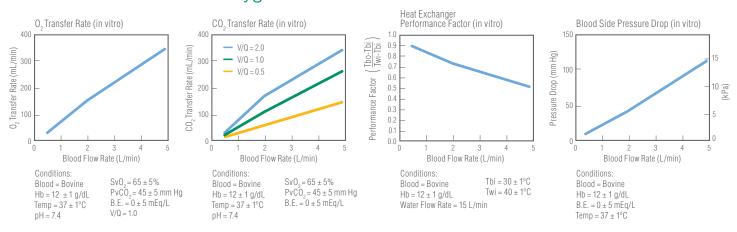
• Reservoir storage capacity: 1,000 mL

• Minimum operating level: 15 mL

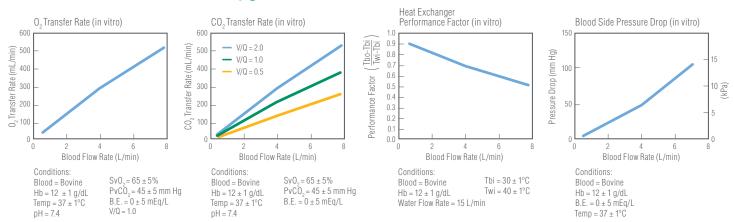




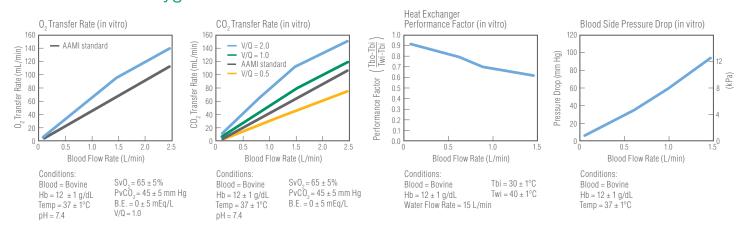
CAPIOX® FX15 Advance Oxygenator Performance Data¹



CAPIOX FX25 Advance Oxygenator Performance Data¹



CAPIOX FX05 Oxygenator Performance Data¹



Holder Systems



Specifications

	Housing	Polycarbonate			
Material	Oxygenator fibers	Microporous polypropylene	Microporous polypropylene Stainless steel		
	Heat Exchanger	Stainless steel			
Oxygenator	FX15	FX25	FX05		
Fiber bundle surface area	Approx. 1.5 m ²	Approx. 2.5 m ²	Approx. 0.5 m ²		
Heat exchanger surface area	Approx. 0.14 m ²	Approx. 0.2 m ²	Approx. 0.035 m ²		
Blood flow range	0.5 - 5.0 L/min	0.5 - 7.0 L/min	0.1 - 1.5 L/min		
Priming volume (static)	144 mL	260 mL	43 mL		
Blood inlet port (from pump)	3/8" (9.5 mm)		1/4" (6.4 mm)		
Blood outlet port	3/8" (9.5 mm)		1/4" (6.4 mm)		
Cardioplegia port	1/4" (6.4 mm)		N/A		
Luer port (for recirc. or blood cardioplegia)	N/A	One luer lock on blood outlet p			
Gas inlet port	1/4" (6.4 mm)				
Gas outlet port	1/4" (6.4 mm)	1/4" (6.4 mm)			
Water ports	1/2" (12.7 mm) Hansen qu	1/2" (12.7 mm) Hansen quick connect fitting			
Maximum pressure blood inlet	1.000 mm Hg (133 kPa) (1	1.000 mm Hg (133 kPa) (1.36 kgf/cm²)			
Maximum pressure water inlet	1,470 mm Hg (196 kPa) (2	1,470 mm Hg (196 kPa) (2 kgf/cm²)			
Arterial Filter					
Filter material	Polyester screen type				
Pore size	32 µm				
Surface area	360 cm ²	600 cm ²	130 cm ²		

CAPIOX® FX15/FX25 Advance Hardshell Reserve	oir and CAPIOX®FX05	Hardshell Reservoir		
	Housing	Polycarbonate		
NA-A	Venous filter	Polyester screen type, pore size 47 µm		
Material	Cardiotomy filter	Polyester depth type		
	Defoamer	Polyurethane foam		
Hardshell Reservoir	F	X15	FX25	FX05
	R30C	R40C		
Blood flow range • Venous flow • Cardiotomy inlet • Combined flow	0.5 - 5.0 L/min Max. 4.0 L/min Max. 5.0 L/min	0.5 - 5.0 L/min Max. 5.0 L/min Max. 5.0 L/min	0.5 - 7.0 L/min Max. 5.0 L/min Max. 7.0 L/min	0.1 - 1.5 L/min Max. 1.5 L/min Max. 1.5 L/min
Blood storage capacity	3,000 mL	4,000 mL	4,000 mL	1.000 mL
Minimum operating volume	70 mL	150 mL	150 mL	15 mL
Venous blood inlet port	3/8" (9.5 mm) Rotatable	1/2" (12.7 mm) Rotatable	1/2" (12.7 mm) Rotatable	1/4" (6.4 mm) Rotatable
Blood outlet port (to pump)	3/8" (9.5 mm) 1/4" (6.4 mm)			1/4" (6.4 mm)
Suction ports			Five, 3/16" - 1/4" (4.8 mm - 6.4 mm) Rotatable	
Vertical port to CR filter	3/8" (9.5 mm) N/A			N/A
Quick prime port	1/4" (6.4 mm)			
Vent port	1/4" (6.4 mm)			
Auxiliary port	1/4" - 3/8" (6.4 mm - 9.5 mm)			
Luer ports	Three filtered luer locks to cardiotomy filter. One non-filtered luer lock. Two luer locks on venous inlet.			
Maximum sustainable negative pressure in reservoir	-150 mm Hg (-20 kPa)			
Positive pressure relief valve	0 - 8 mm Hg (1.1 kPa) N/A			



Xcoating™ Surface Coating. Terumo's biocompatible amphiphilic polymer surface coating is a standard feature on all CAPIOX FX Advance Oxygenators.



Ordering Information



West Outlet Port Oxy inlet on right when outlet is facing away from user.



Catalog #	Description	Units/Case
CAPIOX® FX15 Oxygenator		
CX*FX15W ⁺	With integrated arterial filter, "west" orientation	4
CX*FX15E+	With integrated arterial filter, "east" orientation	4
CAPIOX® FX15 Advance Oxygen	ator	
3CX*FX15RW30C#	With integrated arterial filter, 3,000 mL hardshell reservoir, "west" orientation	4
3CX*FX15RE30C#	With integrated arterial filter, 3,000 mL hardshell reservoir, "east" orientation	4
3CX*FX15RW40C	With integrated arterial filter, 4,000 mL hardshell reservoir, "west" orientation	4
3CX*FX15RE40C	With integrated arterial filter, 4,000 mL hardshell reservoir, "east" orientation	4
CAPIOX FX25 Oxygenator		
CX*FX25W	With integrated arterial filter, "west" orientation	4
CX*FX25E	With integrated arterial filter, "east" orientation	4
CAPIOX FX25 Advance Oxygena	tor	
3CX*FX25RWC	With integrated arterial filter, 4,000 mL hardshell reservoir, "west" orientation	4
3CX*FX25REC	With integrated arterial filter, 4,000 mL hardshell reservoir, "east" orientation	4
CAPIOX FX05 Oxygenator		
CX*FX05RW [^]	With integrated arterial filter, 1,000 mL hardshell reservoir, "west" orientation	4
CX*FX05RE^	With integrated arterial filter, 1,000 mL hardshell reservoir, "east" orientation	4
Holders for CAPIOX FX Oxygena	tors	
XX*CXH15	FX15/25 oxygenators	1
XX*CXH18R	FX15/25 Advance oxygenators with hardshell reservoir	1
XX*CXH25F	FX15/25 Advance oxygenators when separated from reservoir	1
XX*XH032	FX15/25 Advance oxygenators with hardshell reservoir, short arm	1
XX*CXH05	FX05 oxygenator	1
XX*CXH05R	FX05 oxygenator with hardshell reservoir	1
XX*CXH05AD	Adapter for SX holder for FX05	1
Accessories for CAPIOX FX Oxyg	genators	
CX*BP021	Blue thermistor wire	10
CX*BP022	Red thermistor wire	10

⁺ Contains two 1/4" - 3/8" adapters

REFERENCES:

- 1. Internal testing, data on file.
- 2. Bronson, S., et al. Prescriptive Patient Extracorporeal Circuit and Oxygenator Sizing Reduces Hemodilution and Allogeneic Blood Product Transfusion during Adult Cardiac Surgery. *JECT*. 2013; 45:167-172.
- 3. Ranucci, M., et al. Effects of priming volume reduction on allogeneic red blood cell transfusions and renal outcome after heart surgery. Perfusion. March 2015; 30(2).
- 4. Lahanas, A., et al. A retrospective comparison of blood transfusion requirements during cardiopulmonary bypass with two different small adult oxygenators. Perfusion. July 2013; 28(4).
- 5. Deptula, J., et al. Clinical Evaluation of the Terumo CAPIOX FX05 Hollow Fiber Oxygenator with Integrated Arterial Line Filter. JECT. 2009; 41:220-225.



For information on Terumo Cardiovascular Group products:

Terumo Cardiovascular Group

6200 Jackson Road Ann Arbor, MI 48103-9300 USA Tel: +1.734.663.4145 Fax: +1.734.663.7981

www.terumo-cvgroup.com

Terumo Corporation

2-44-1, Hatagaya Shibuya-Ku, Tokyo 151-0072 Japan Tel: +81.3.3374.8111

Tel: +81.3.3374.8111 Fax: +81.3.3374.8399 www.terumo.co.jp Terumo Europe NV

Interleuvenlaan 40, 3001 Leuven Belgium Tel: +32.16.38.12.11 Fax: +32.16.40.02.49

Terumo Europe NV Cardiovascular Division Ludwig-Erhard-Strasse 6 65760 Eschborn Germany Tel: +49.6196.8023.0

Fax: +49.6196.8023.555

www.terumo-europe.com

Fax: +1.305.477.4872 **Terumo Corporation**Dubai Branch

Tel: +1.305.477.4822

Miami, FL 33178

USA

Al Masraf Tower, 22nd Floor P.O. Box 20291, Dubai UAE

Terumo Latin America Corporation

8750 NW 36th Street, Suite 600

Tel: +971.4.2212220 Fax: +971.4.2213330 Terumo India Pvt. Ltd.

Unit No. 1601 & 1602 Tower B 16th Floor, Unitech Cyber Park Sector-39

Gurgaon, Haryana 122001 India

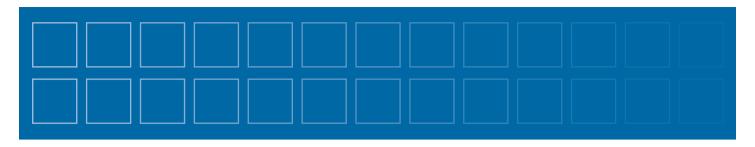
Tel: +91.124.4718700 Fax: +91.124.4718718

Terumo Asia Holdings Pte. Ltd. 300 Beach Road #33-03 The Concourse 199555 Singapore

Tel: +65.6.295.1792 Fax: +65.6.294.2329

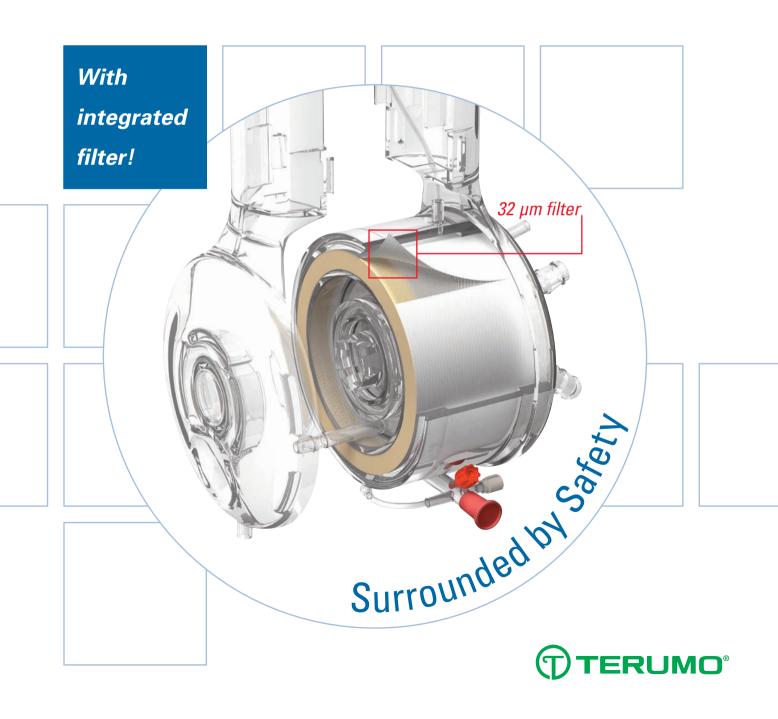
[#] Contains four 1/4" - 3/8" adapters

[^] Contains four 3/16" - 1/4" adapters, one 1/4" - 3/8" adapters, and a recirculation line



CAPIOX® FX Family of Oxygenators with Integrated Arterial Filter

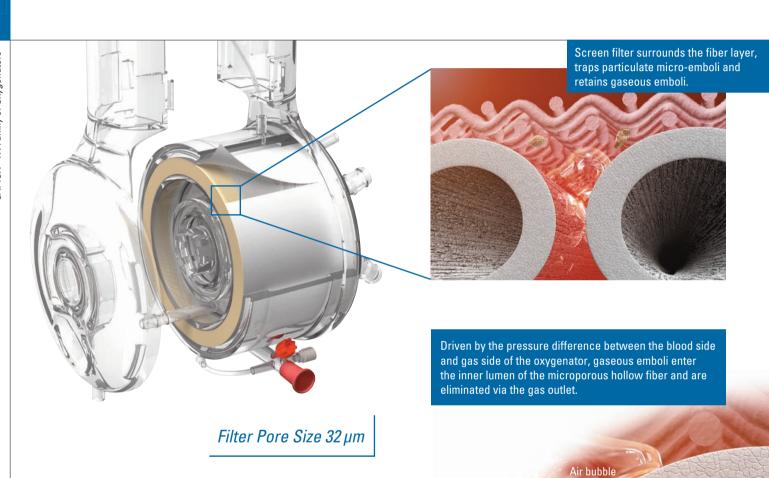
Breakthrough technology for added patient safety



CAPIOX® FX Family of Oxygenators

Integrated arterial filter with self-venting technology

A 32 µm screen filter surrounds the fiber layer of the oxygenator. Particulate micro-emboli that may be present in the blood are trapped in the filter mesh while gaseous emboli remain inside the oxygenator and in contact with the hollow fibers. Driven by the pressure difference, gaseous emboli enter the inner lumen of the microporous hollow fiber and are eliminated via the gas outlet.



Air bubble

Self-venting mechanism



Integrated arterial filter

- Filter inside oxygenator housing
- 32 μm pore size
- Self-venting technology

CAPIOX® FX05 Oxygenator

For neonates and infants

Oxygenator

Proven performance

- Fully integrated arterial filter with self-venting technology
- Low priming volume, high gas exchange and low pressure drop are optimally balanced for superb performance
- Hollow fibers manufactured exclusively by Terumo using a patented technology means total quality management from raw materials to finished product
- Woven fiber bundle ensures consistent and high-performance gas exchange
- Choice of blood outlet port configurations for easy access and increased circuit flexibility
- No DEHP used in PVC tubing

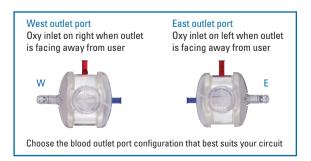


Hardshell Reservoir

Full featured

- Elongated shape provides stable blood flow path and enhanced visibility at all levels from all angles
- Rotating venous inlet improves set-up flexibility
- Connecting mount increases flexibility in circuit set-up and oxygenator rotation
- Funnel-shaped cardiotomy filter improves breakthrough and residual volumes
- No DEHP used in PVC tubing

- Maximum blood flow: 1.5 L/min
- Oxygenator priming volume: 43 mL
- Arterial filter surface area: 130 cm²
- Reservoir storage capacity: 1000 mL



CAPIOX® FX 15 Oxygenator

For children, small adults and minimized circuits

CAPIOX® FX25 Oxygenator

For all adults







- Maximum blood flow: 4.0 L/min
- Oxygenator priming volume: 144 mL
- Arterial filter surface area: 360 cm²
- Reservoir storage capacity: 3000 mL
- Maximum blood flow: 7.0 L/min
- Oxygenator priming volume: 260 mL
- Arterial filter surface area: 600 cm²
- Reservoir storage capacity: 4000 mL



- Maximum blood flow: 5.0 L/min
- Oxygenator priming volume: 144 mL
- Arterial filter surface area: 360 cm²
- Reservoir storage capacity: 4000 mL

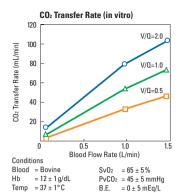


TOTM – an alternative plasticizer

Terumo is ever striving to develop new medical technologies with minimal negative impact to patients and the environment.

In line with this goal, Terumo provides an alternative plasticizer for the manufacturing of its products. TOTM (trioctyl trimellitate) offers outstanding physical properties (such as flexibility) to the material and low plasticizer elution.

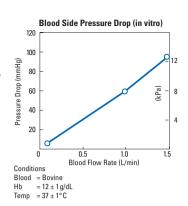
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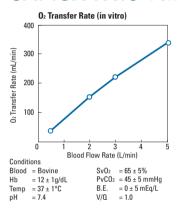
= 7.4

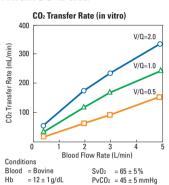
Temp = $37 \pm 1^{\circ}$ C

Heat Exchanger Performance Factor (in vitro) 1.0 0.9 0.9 IM-Tbi 0.7 0.7 0.6 Performance Factor 0.5 0.4 0.3 N 2 0.1 Blood Flow Rate (L/min) Conditions Blood = Bovine = 12 ± 1 g/dL = 30 + 1°C Water flow rate = 15 L/min



CAPIOX FX15 Performance Data

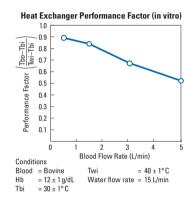


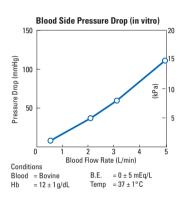


ΒF

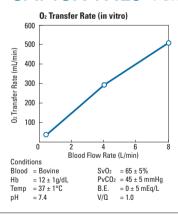
 $= 0 \pm 5 \text{ mEa/L}$

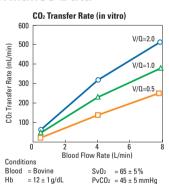
= 0 ± 5 mEq/L

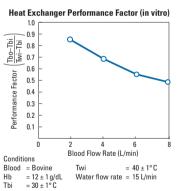


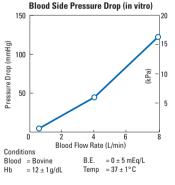


CAPIOX FX25 Performance Data









Holder Systems CAPIOX FX05 Oxygenator





Temp = 37 ± 1°C pH = 7.4



CAPIOX FX 15 and CAPIOX FX 25 Oxygenators





Order # 801804 XX*CXH18R (Europe only)

Order # 801139 XX*XH032 (Europe only)

Order # 812613 for FX25 (US only) 812614 for FX15 (US only) XX*CXH15 (Europe only)

CAPIOX FX Family of Oxygenators

Specifications

Oxygenator

Material	Housing	Polycarbonate
	Fibers	Microporous polypropylene
	Heat exchanger	Stainless steel

Oxygenator	FX05	FX15	FX25	
Fiber bundle				
surface area	Approx. 0.5 m ²	Approx. 1.5 m ²	Approx. 2.5 m ²	
Heat exchanger				
surface area	Approx. 0.035 m ²	Approx. 0.14 m ²	Approx. 0.2 m ²	
Blood flow range	0.1 – 1.5 L/min	0.5 – 5.0 L/min,	0.5 – 7.0 L/min	
		0.5 – 4.0 L/min		
Reference blood flow		(with R30)		
(AAMI std.)	2.5 L/min	7.0 L/min	n.a.	
Priming volume (static)	43 mL	144 mL	260 mL	
Blood inlet port	IO III E	11111112	200 1112	
(from pump)	1/4" (6.4 mm)	3/8" (9.5 mm)		
Blood outlet port	1/4" (6.4 mm)	3/8" (9.5 mm)		
Cardioplegia port	_	1/4" (6.4 mm)		
Luer port (for recirc.	One luer lock			
or blood cardioplegia)	on blood outlet port	n.a.		
Gas inlet port	1/4" (6.4 mm)			
Gas outlet port	5/16" (7.9 mm)	1/4" (6.4 mm)		
Water ports	1/2" (12.7 mm) Hanser	quick-connect fitti	ngs	
Maximum pressure				
Blood inlet	1000 mmHg (133 kPa)			
Maximum pressure				
Water inlet	2 kgf/cm² (196 kPa) (28	3.5 psi)		
Arterial filter				
Filter material	Polyester screen type			
Pore size	32 μm			
Surface area	130 cm ²	360 cm ²	600 cm ²	

Hardshell Reservoir

Material	Housing	Polycarbonate	
	Venous filter	Polyester screen type, Pore size 47 μm	
	Cardiotomy filter	Polyester depth type	
	Defoamer	Polyurethane foam	

Hardshell reservoir	FX05	FX15		FX25
		R30 (for FX15)	R40 (for FX15)	
Blood flow range Venous flow Cardiotomy inlet Combined flow	0.1 – 1.5 L/min Max. 1.5 L/min Max. 1.5 L/min	0.5 – 4.0 L/min Max. 4.0 L/min Max. 4.0 L/min	0.5 – 5.0 L/min Max. 5.0 L/min Max. 5.0 L/min	0.5 – 7.0 L/min Max. 5.0 L/min Max. 7.0 L/min
Blood storage capacity	1000 mL	3000 mL	4000 mL	4000 mL
Min. operating volume	15 mL	70 mL	200 mL	200 mL
Venous blood inlet port	1/4" (6.4 mm) rotatable	3/8" (9.5 mm) rotatable	1/2" (12.7 mm) rotatable	1/2" (12.7 mm) rotatable
Blood outlet port (to pump)	1/4" (6.4 mm)	3/8" (9.5 mm)		
Suction ports	Five 3/16" – 1/4" (4.8 mm – 6.4 mm) rotatable	Six 1/4" (6.4 mm)		
Vertical port (to CR filter)	n.a.	3/8" (9.5 mm)		
Quick prime port	1/4" (6.4 mm)			
Vent port	1/4" (6.4 mm)			
Auxiliary port	1/4" - 3/8" (6.4 mm - 9.5 mm)			
Luer ports	Three filtered luer locks to cardiotomy filter, one non-filtered luer lock, two luer locks on venous inlet			
Maximum sustainable negative pressure in reservoir	-150 mmHg (-20.0 k	Pa)		

Ordering Information

DESCRIPTION CATALOG NO. UNITS/CASE DESCRIPTION CATALOG NO. UNITS/CASE

CAPIOX FX05 Oxygenator

CAPIOX FX15 Oxygenator

Oxygenator with integrated arterial filter/hardshell reservoir ...CX*FX15RW402 Oxygenator with integrated arterial filter/hardshell reservoir CX*FX15RE40 2 Holder for FX15/25 oxygenator with hardshell reservoir,

CAPINY FY25 Overenator

CAPION FA25 Oxygenator		
Oxygenator with integrated arterial filter	CX*FX25W	4
Oxygenator with integrated arterial filter	CX*FX25E	4
Oxygenator with integrated arterial filter/hardshell reservoir	CX*FX25RW	2
Oxygenator with integrated arterial filter/hardshell reservoir	CX*FX25RE	2

Oxygenator with integrated arterial filter \frac{1}{1} \quad CX*FX05W \quad 4 \quad Holder for FX05 oxygenator \quad XX*CXH05 \quad 1 \quad \quad 1 \quad \q Oxygenator with integrated arterial filter³ CX*FX15W 4 Holder for FX25 oxygenator (US only) 812613 1
Oxygenator with integrated arterial filter³ CX*FX15E 4 Holder for FX15/25 oxygenator (US only) 812614 1
Oxygenator with integrated arterial filter/hardshell reservoir⁴ CX*FX15RW30 2 Holder for FX15/25 oxygenator (Europe only) XX*CXH15 1 Holder for FX15/25 oxygenator when separated from reservoir XX*CXH25F 1 Holder for FX15/25 oxygenator with hardshell reservoir (Europe only) XX*CXH18R1

- short arm (Europe only) 1 Contains 2 adapters $3/16^{\prime\prime}-1/4^{\prime\prime}$ and a recirculation line
- ² Contains 4 adapters 3/16" 1/4", 1 adapter 1/4" 3/8" and a recirculation line 3 Contains 2 adapters 1/4" 3/8"
- 4 Contains 4 adapters 1/4" 3/8"

Holders for CAPIOX FX Oxygenators



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TERUMO CARDIOVASCULAR SYSTEMS CORPORATION

6200 Jackson Road Ann Arbor, Michigan 48103-9300 USA 734 663 4145 phone 734 663 7981 fax 800 521 2818 toll free

www.terumo-cvs.com

TERUMO EUROPE N.V.

Researchpark Haasrode 1520 Interleuvenlaan 40 B-3001 Leuven Belaium 32 16 38 12 11 phone 32 16 40 02 49 fax www.terumo-europe.com

TERUMO EUROPE N.V. **CARDIOVASCULAR DIVISION**

Hauptstrasse 87 D-65760 Eschborn Germany 49 6196 8023 500 phone 49 6196 8023 555 fax www.terumo-europe.com

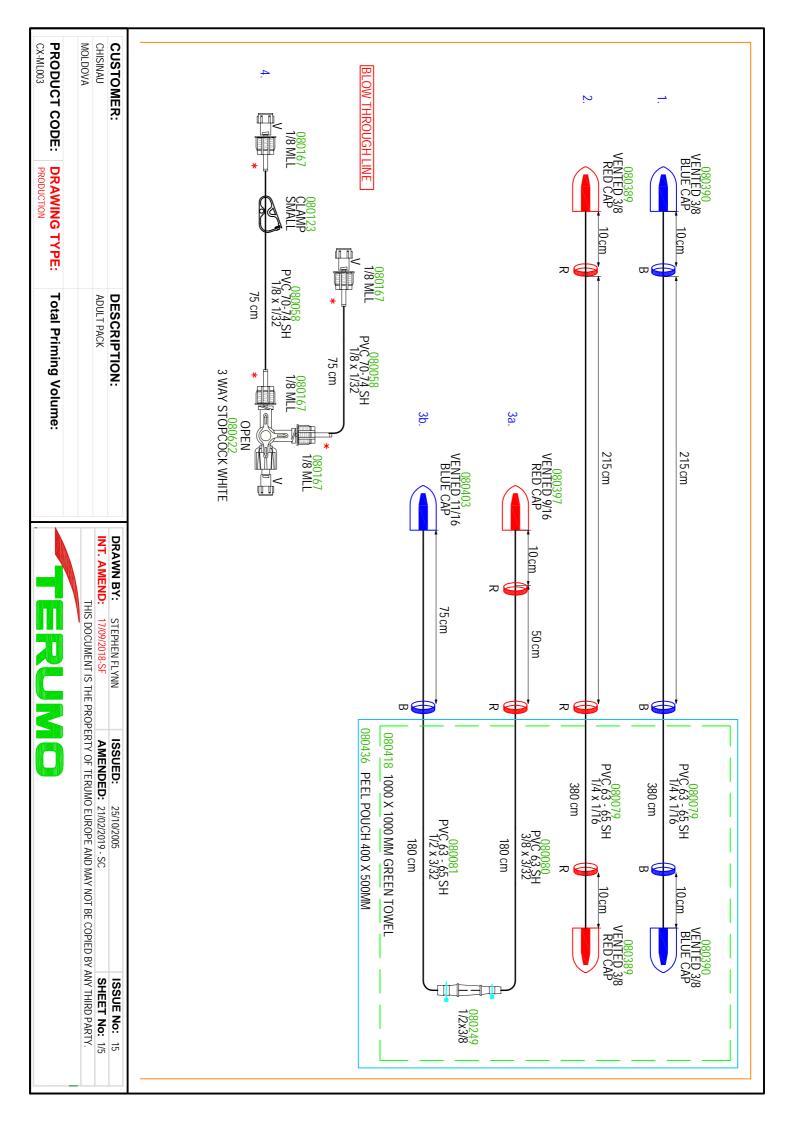
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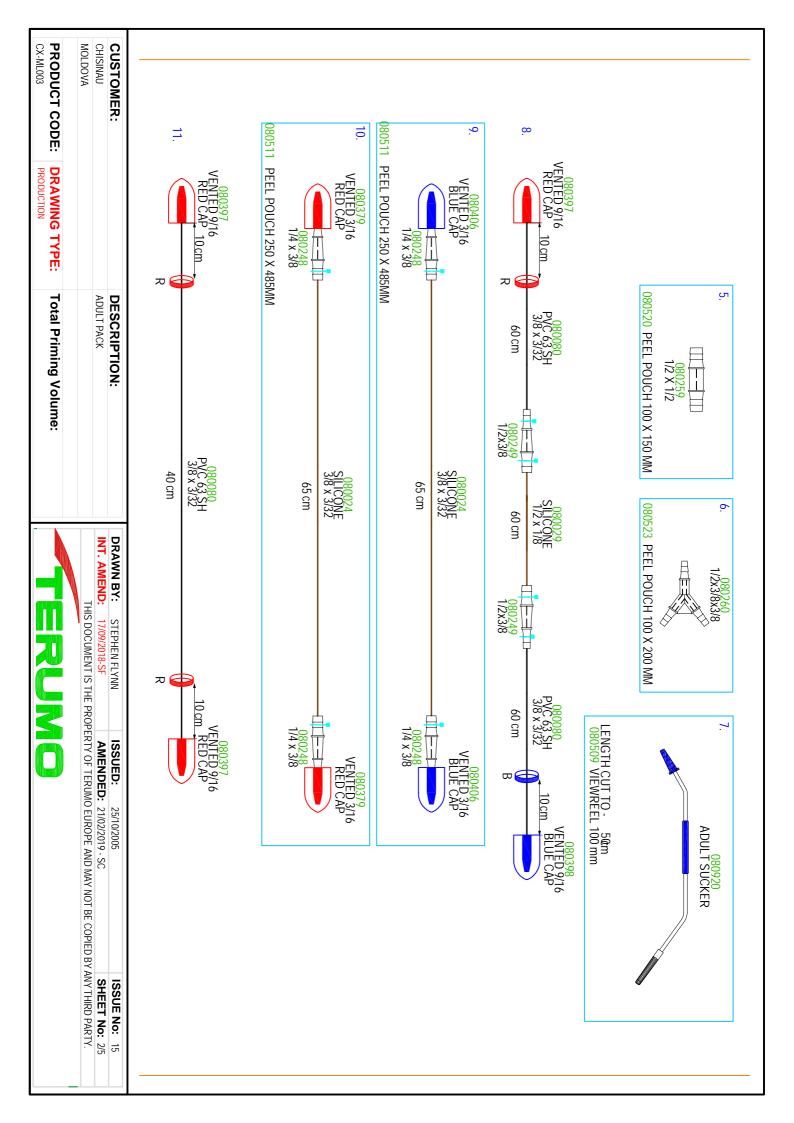
8750 NW 36th Street, Suite 600 Miami, Florida 33178 USA 305 477 4822 phone 305 477 4872 fax 800 283 7866 toll free

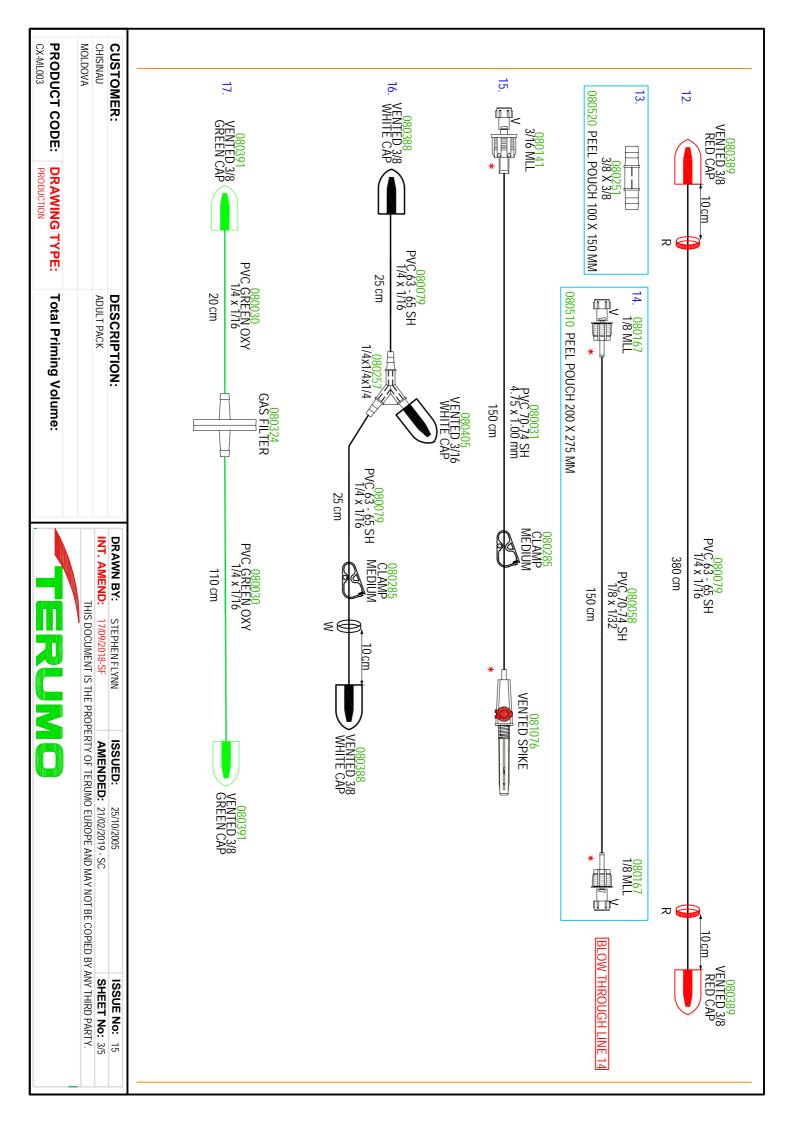
TERUMO CORPORATION

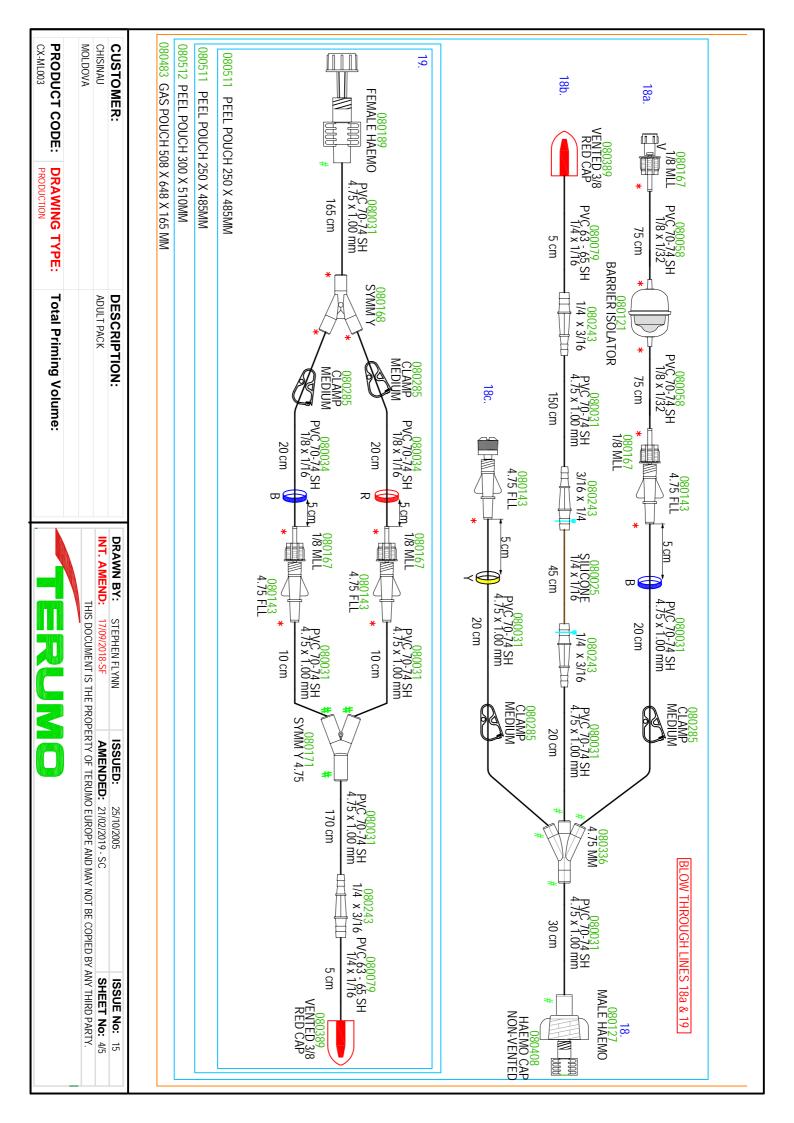
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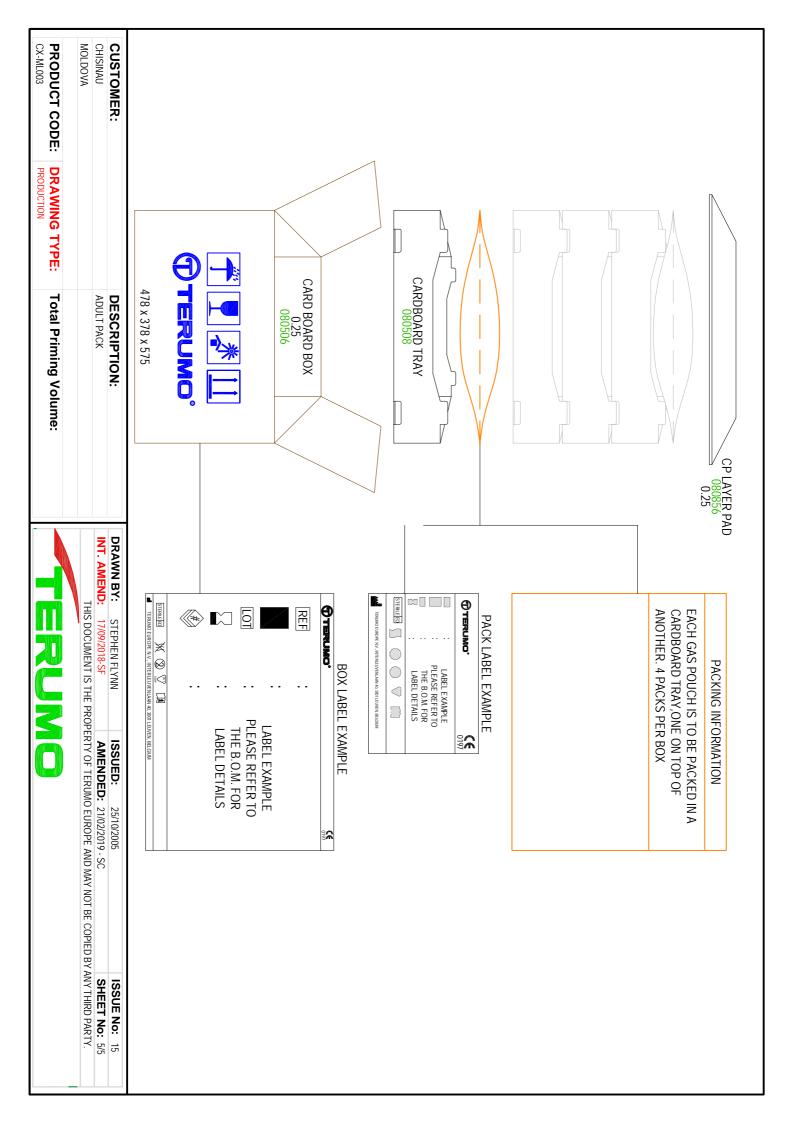
44-1, 2-chome Hatagaya, Shibuya-ku Tokyo 151-0072 Japan 81 3 3374 8111 phone 81 3 3374 8196 fax www.terumo.com

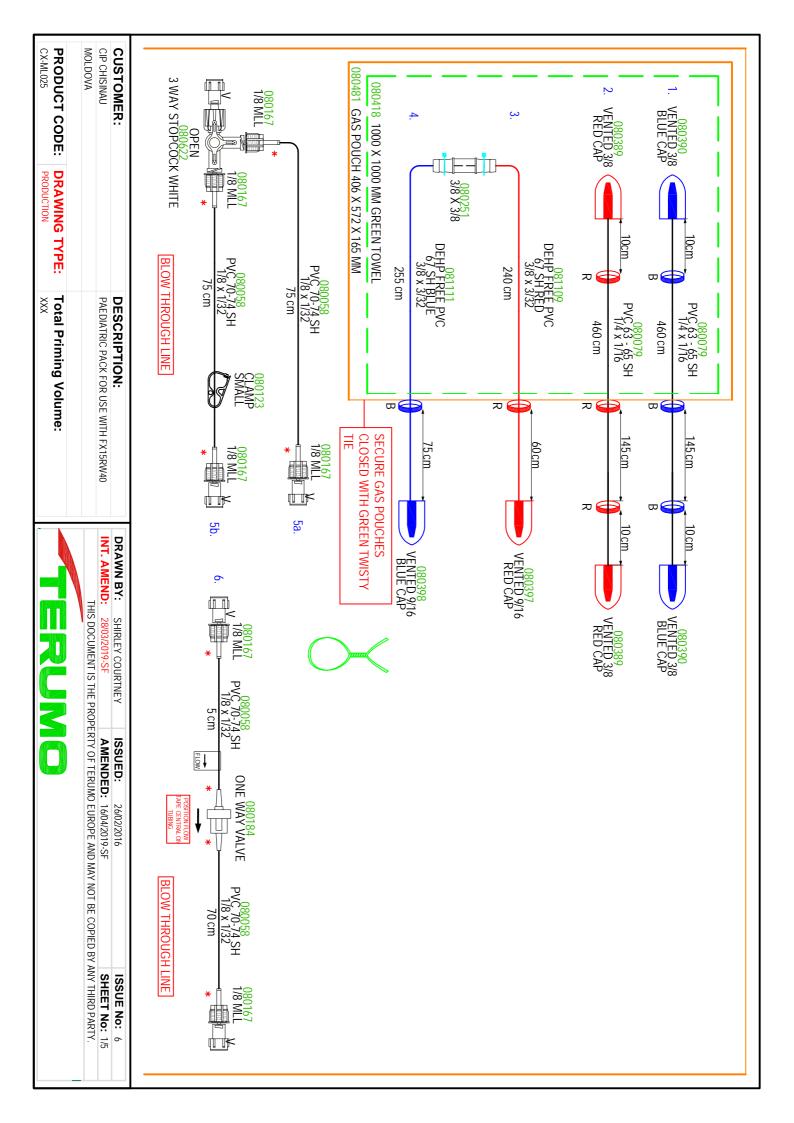


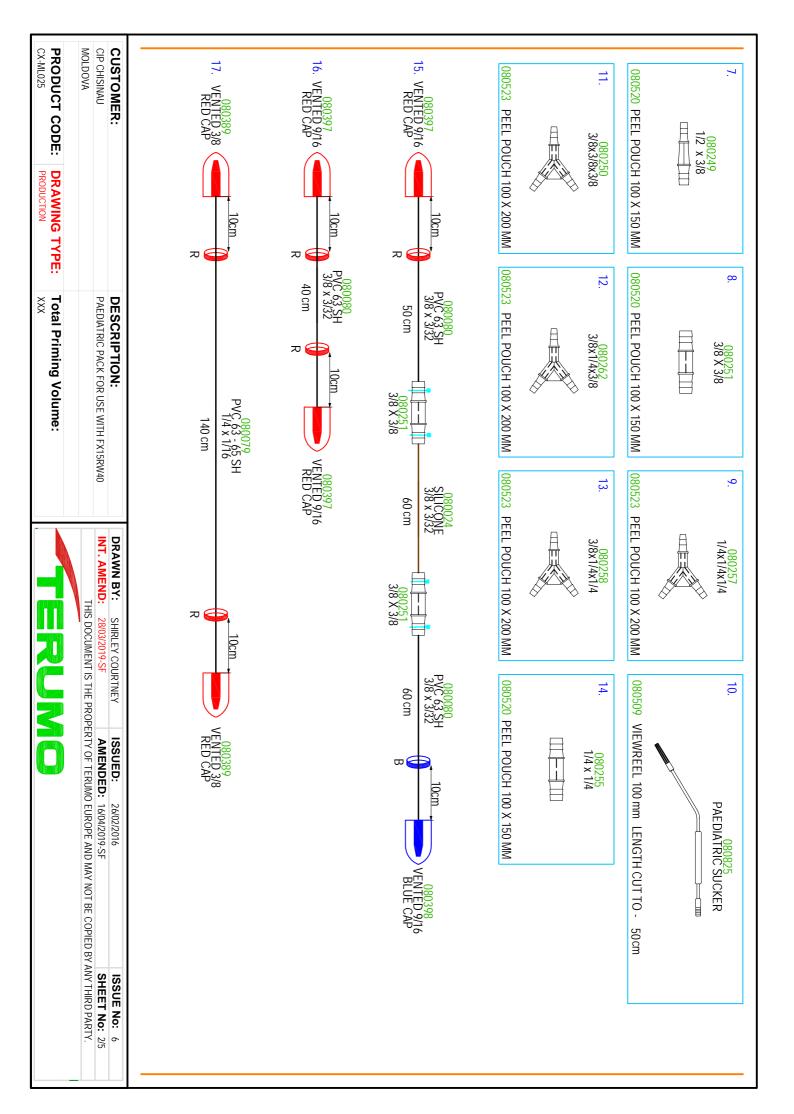


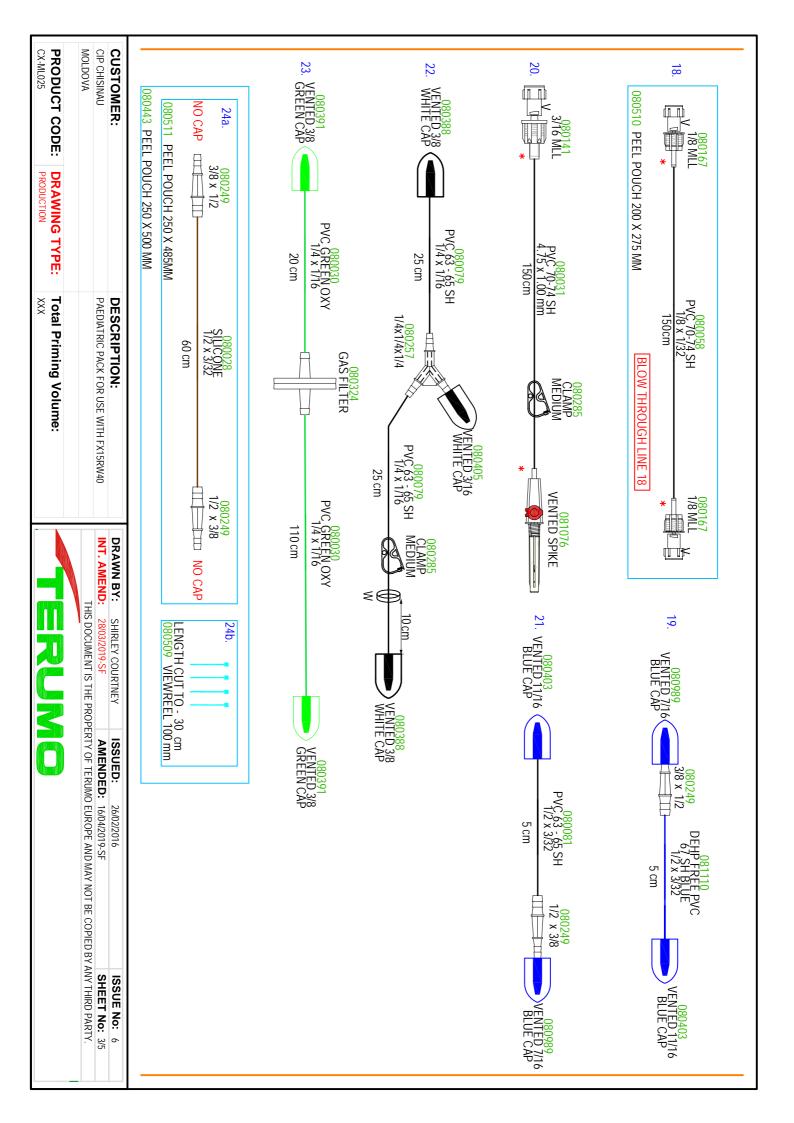


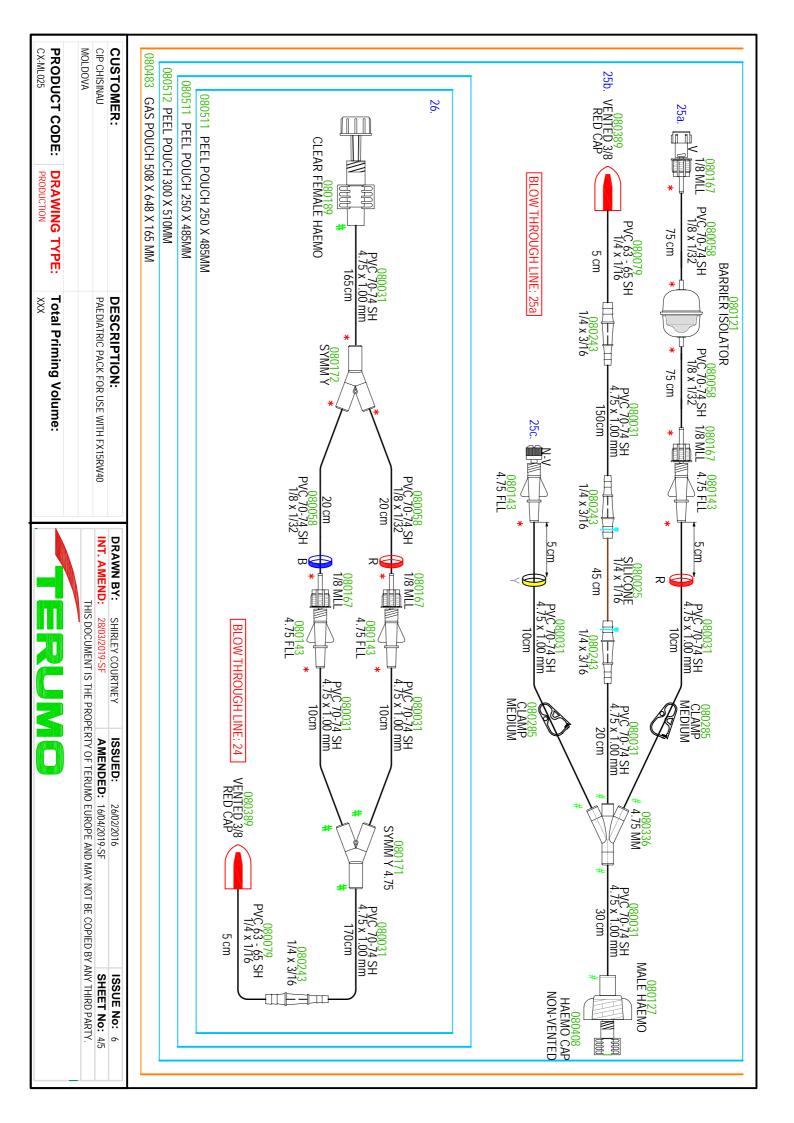


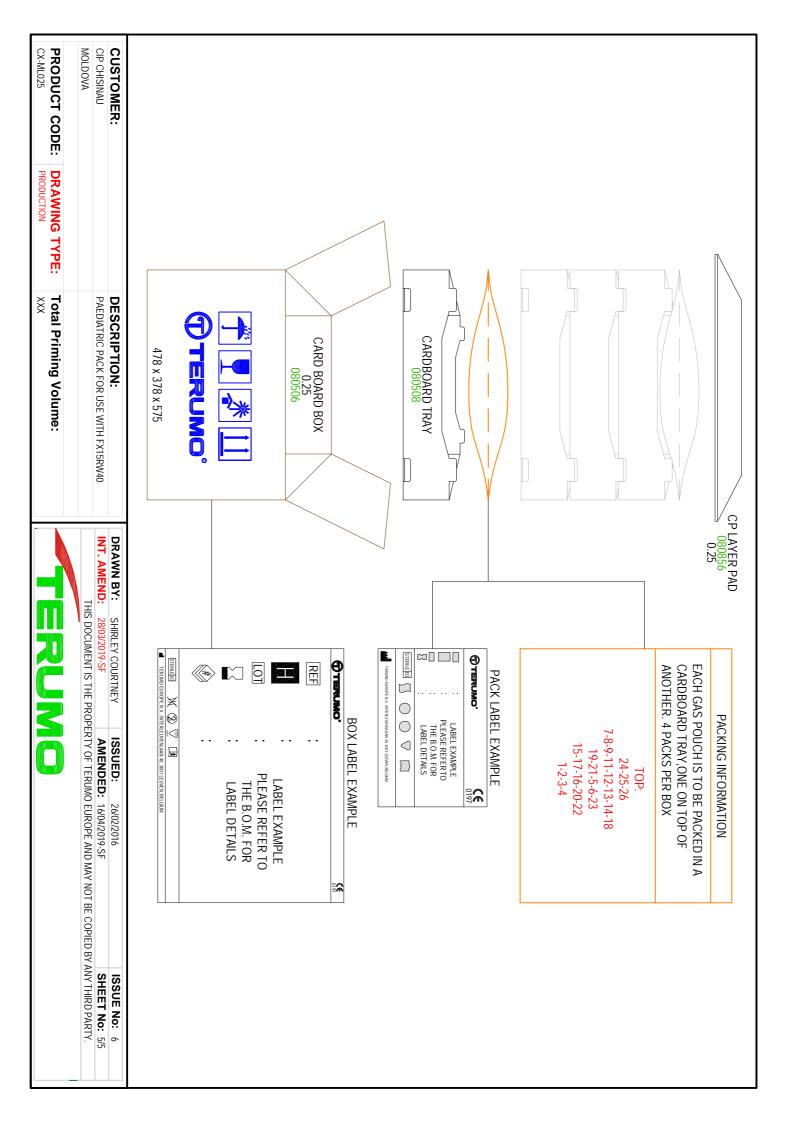


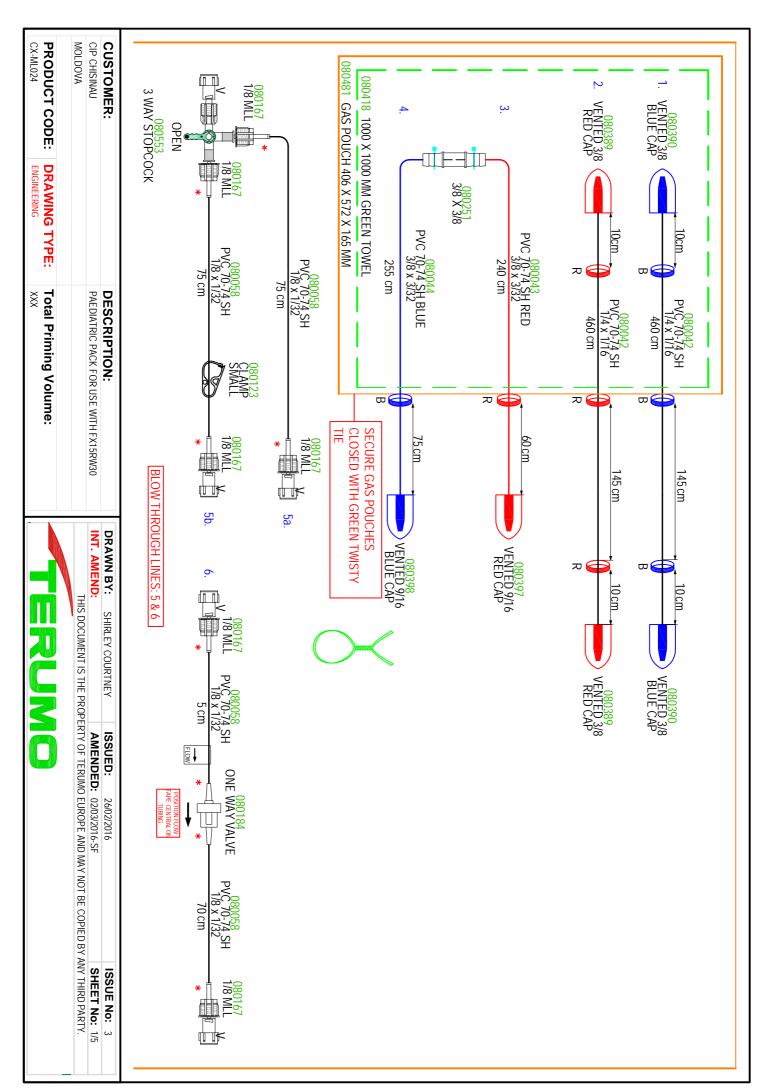


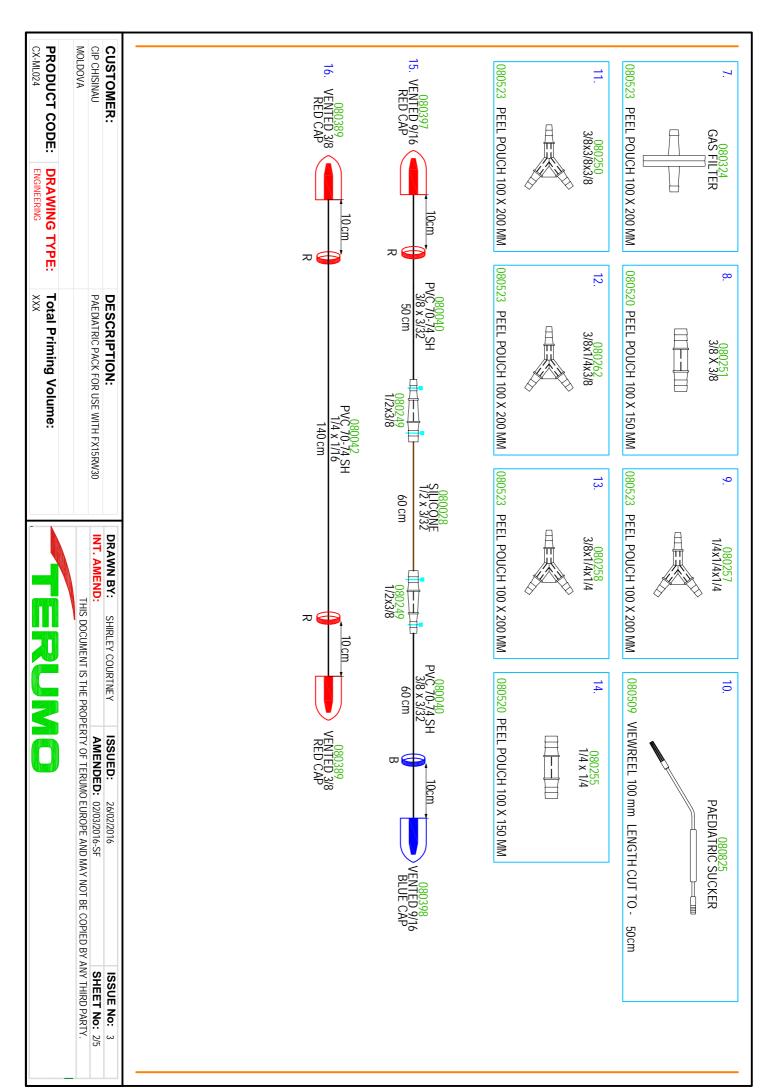


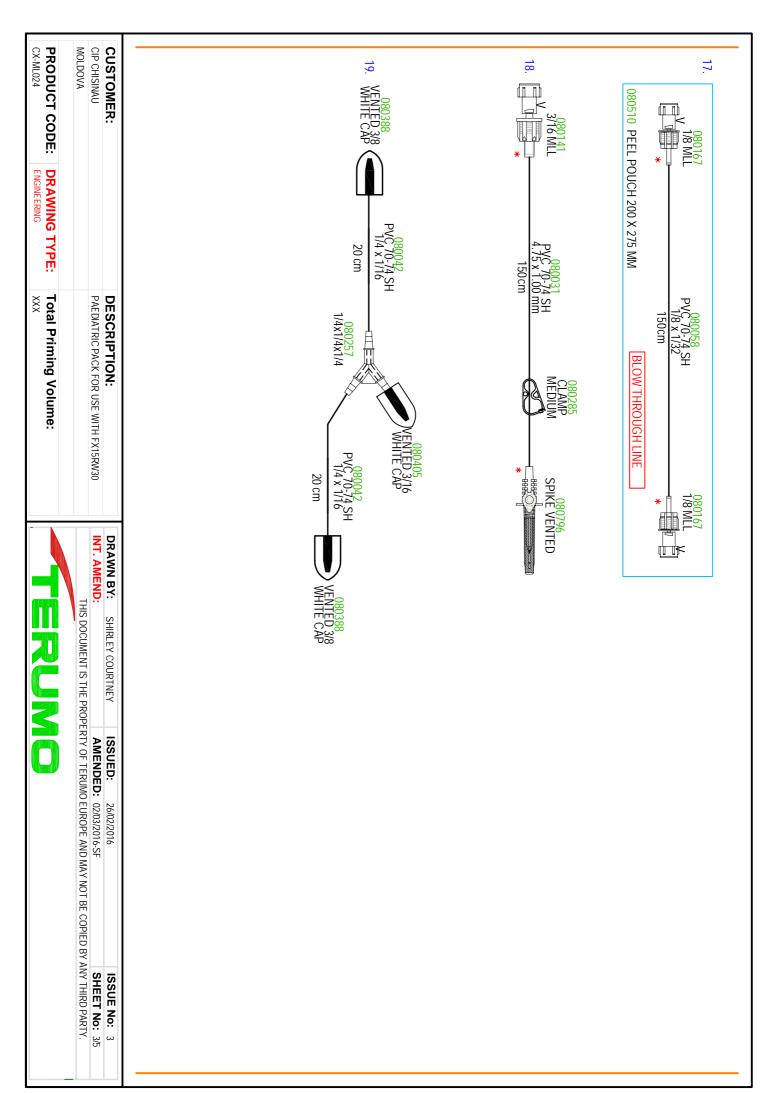


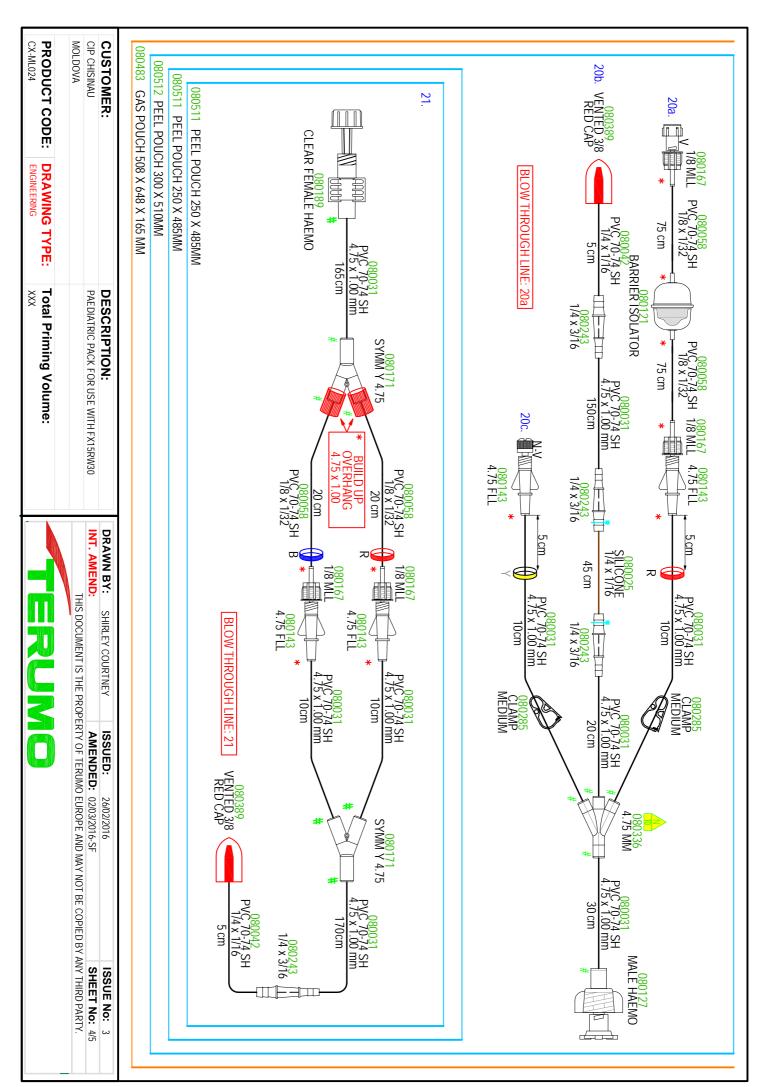


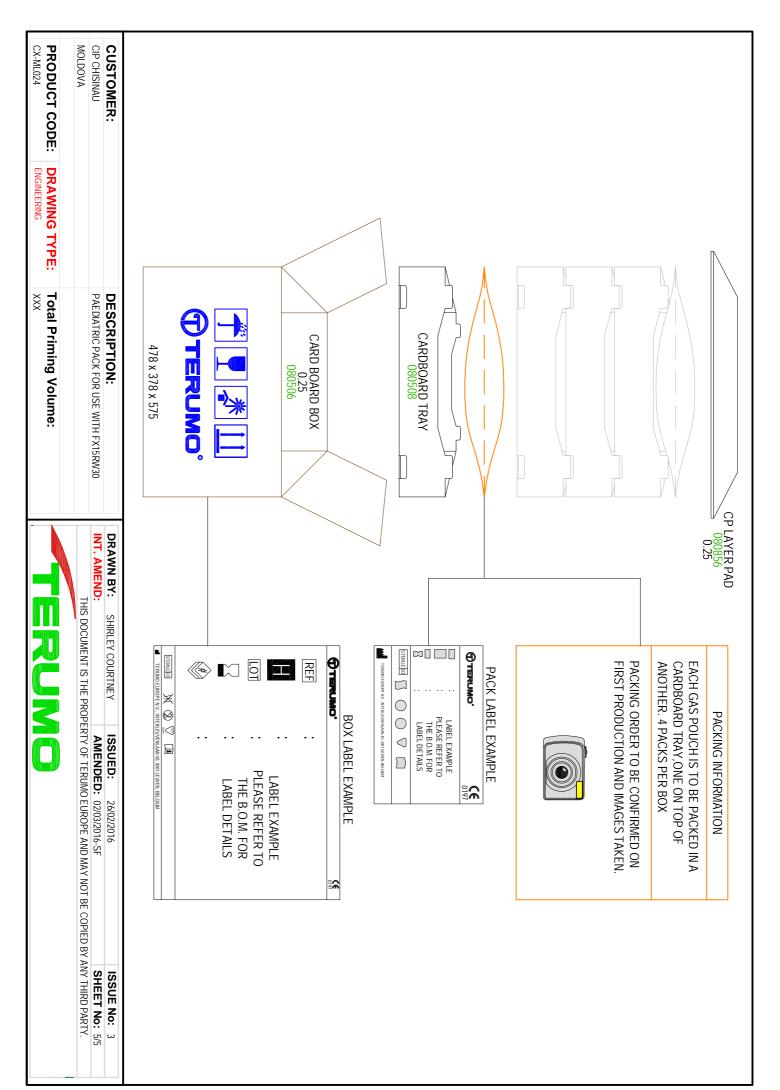


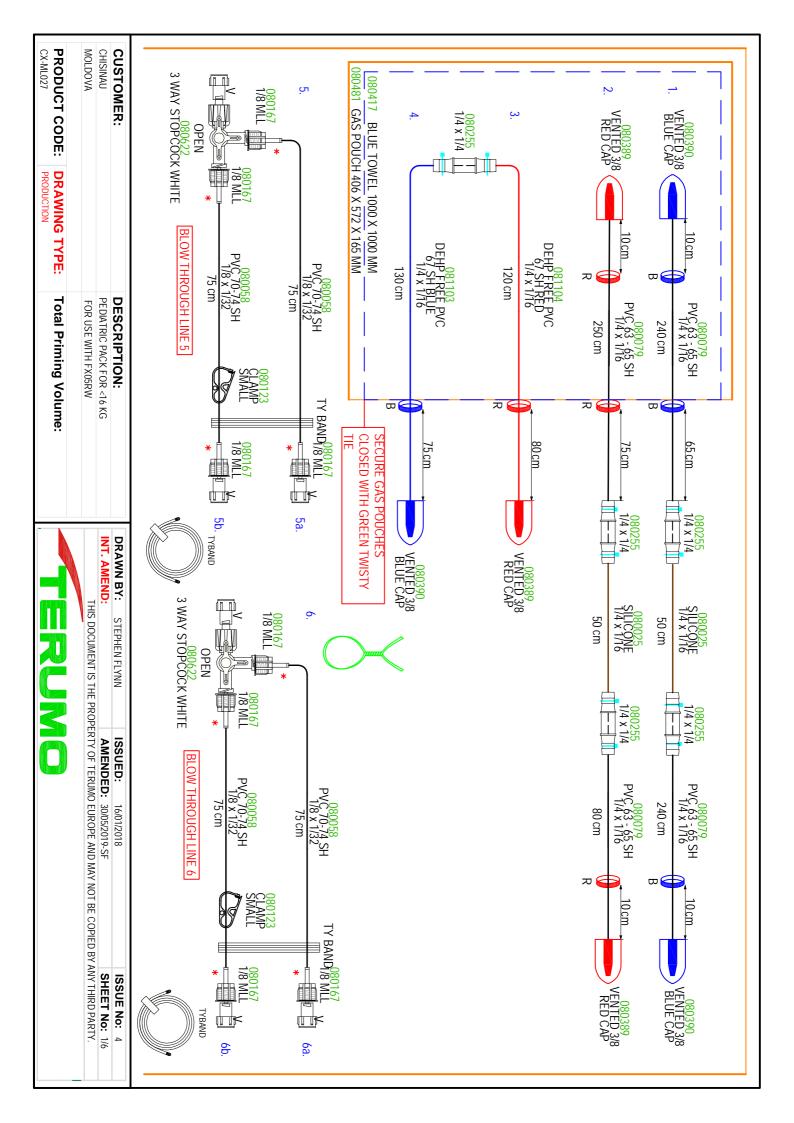


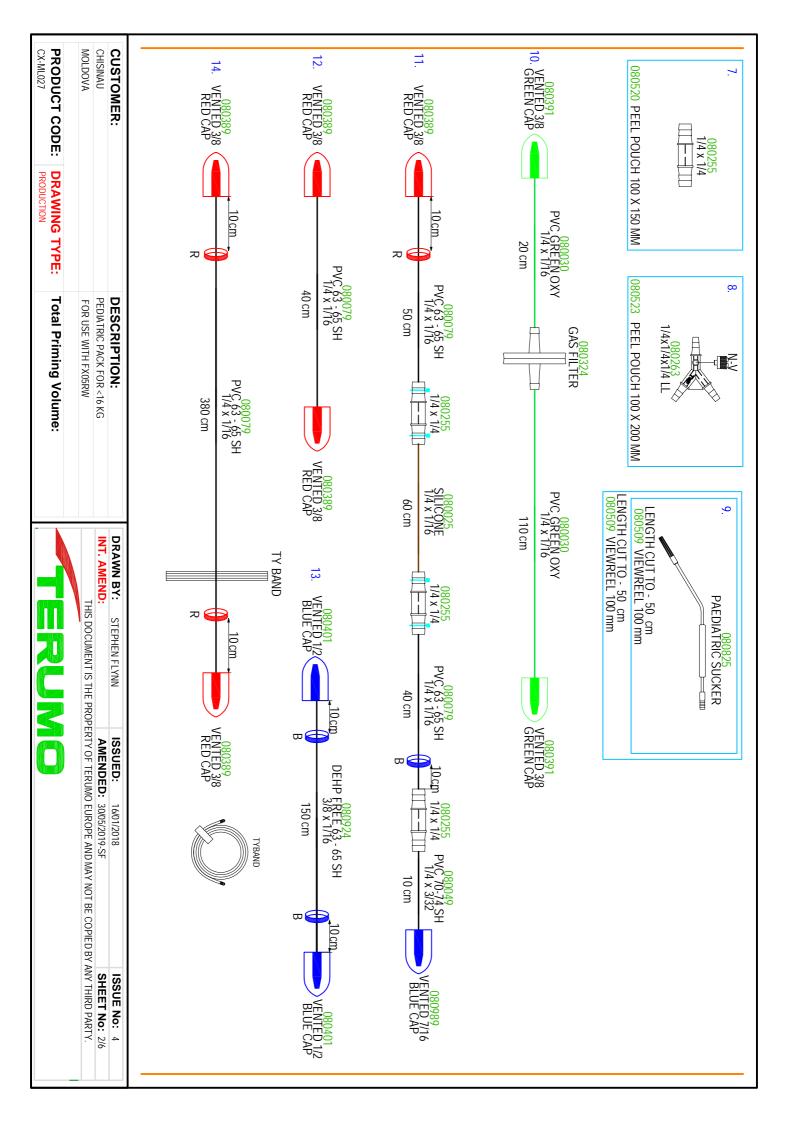


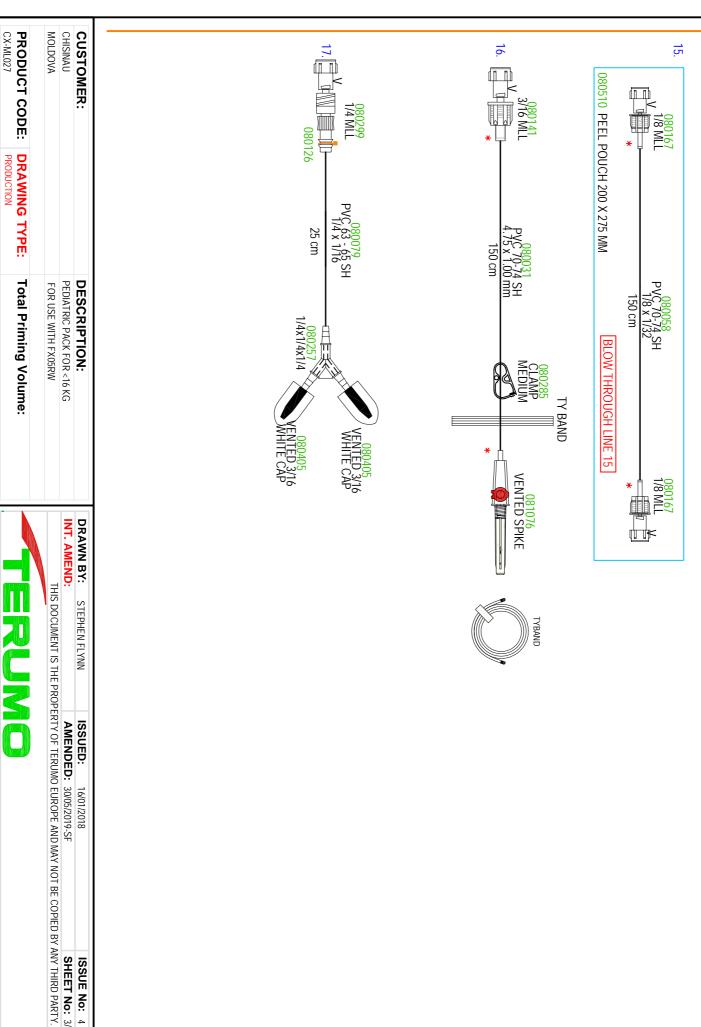












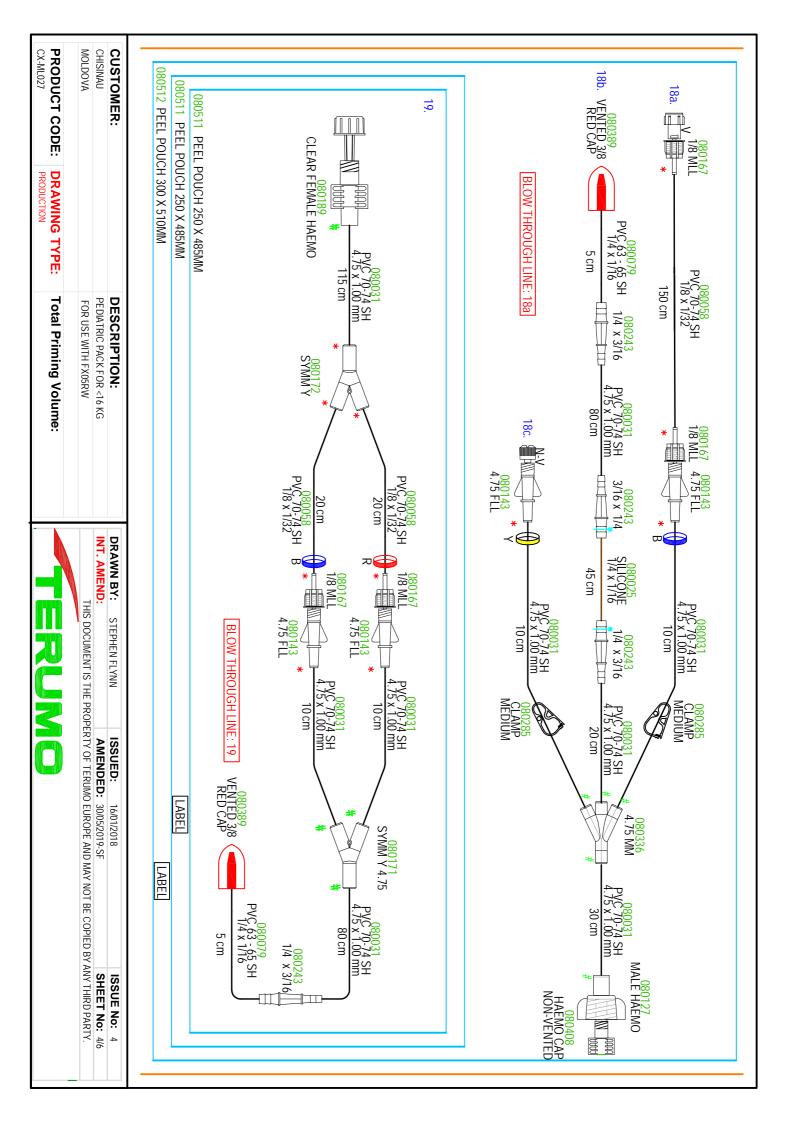


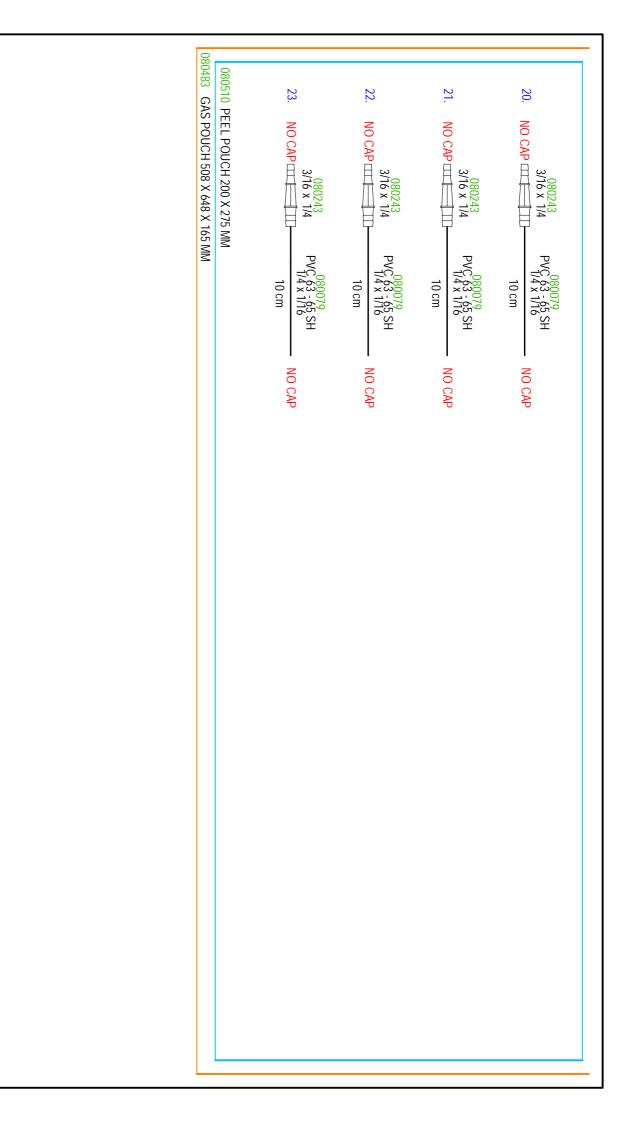
AMENDED: 30/05/2019-SF

SHEET No: 3/6 ISSUE No: 4

ISSUED:

16/01/2018





CUSTOMER:

DESCRIPTION:PEDIATRIC PACK FOR <16 KG
FOR USE WITH FX05RW

DRAWN BY: STEPHEN FLYNN

INT. AMEND:

THIS DOCUMENT IS THE PROPERTY OF TERUMO EUROPE AND MAY NOT BE COPIED BY ANY THIRD PARTY.

ISSUED: 16/01/2018 **AMENDED:** 30/05/2019-SF

SHEET No: 5/6

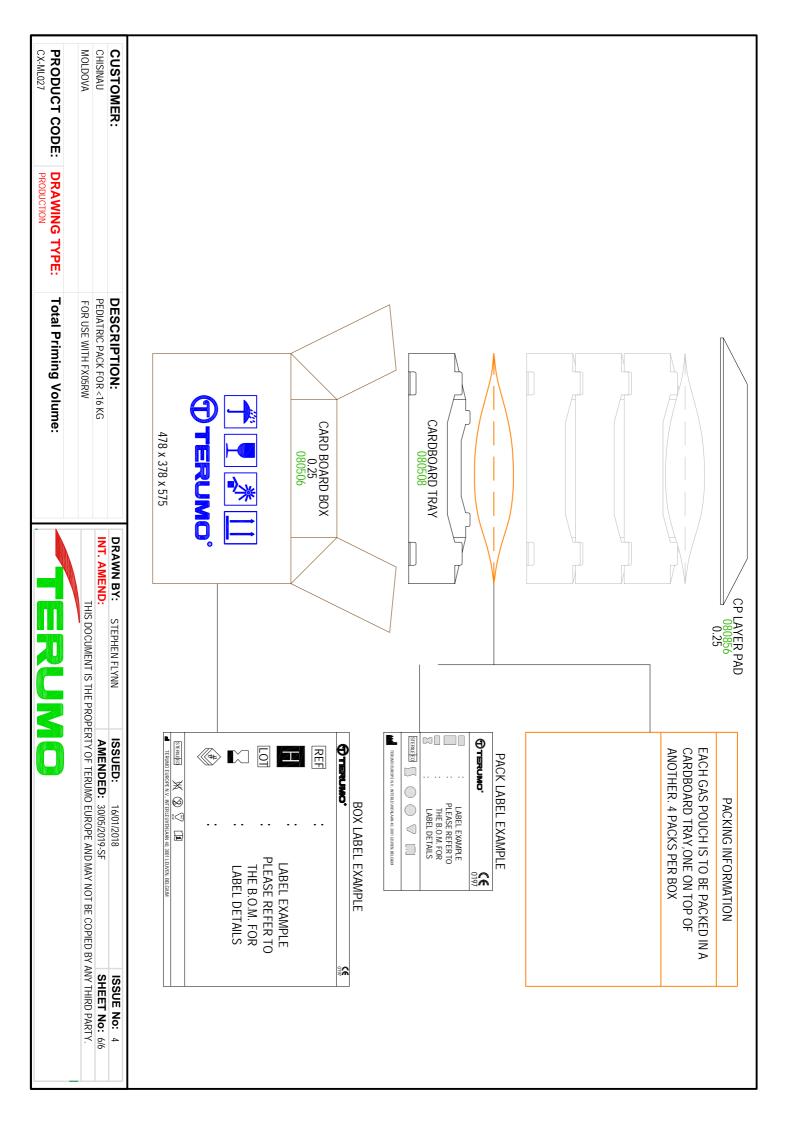
CHISINAU MOLDOVA

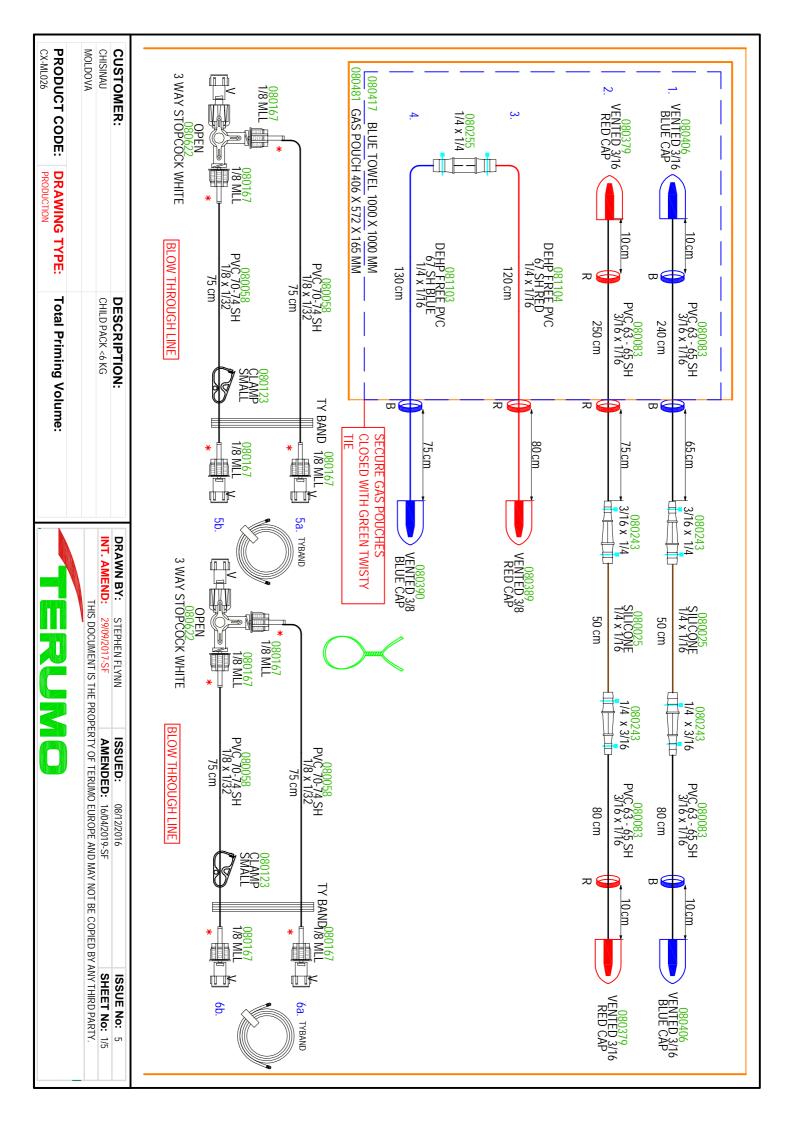
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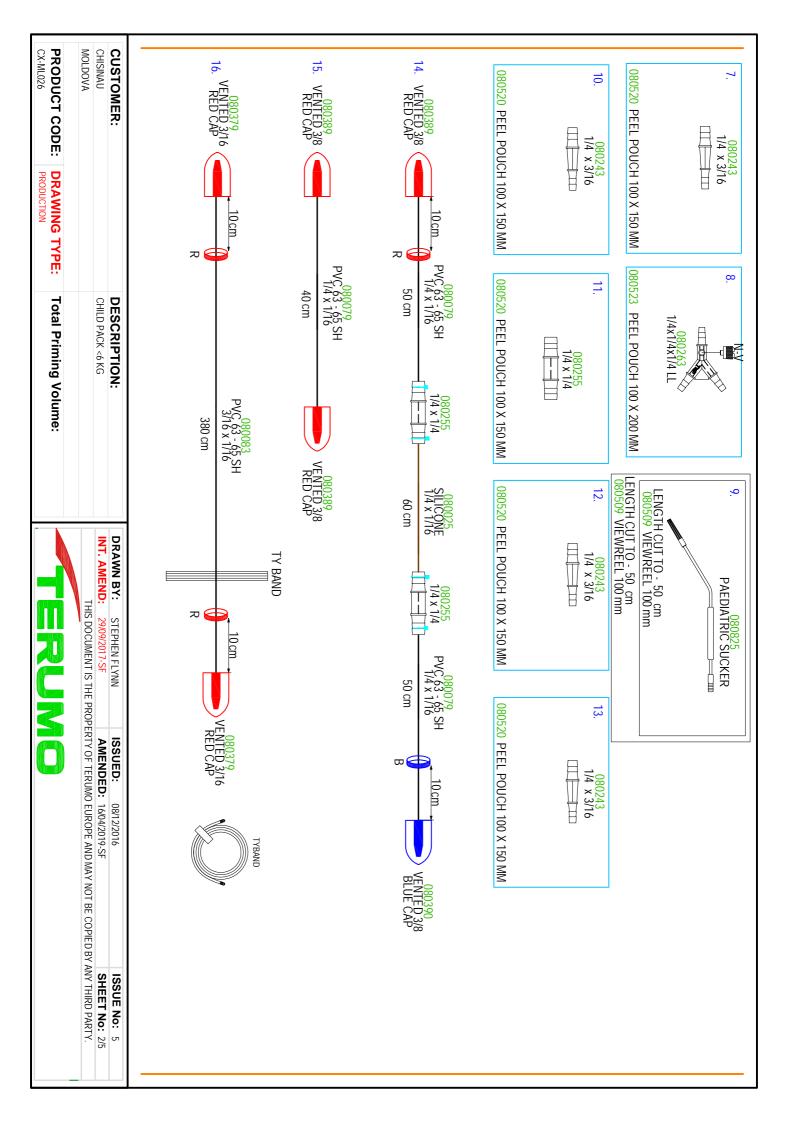
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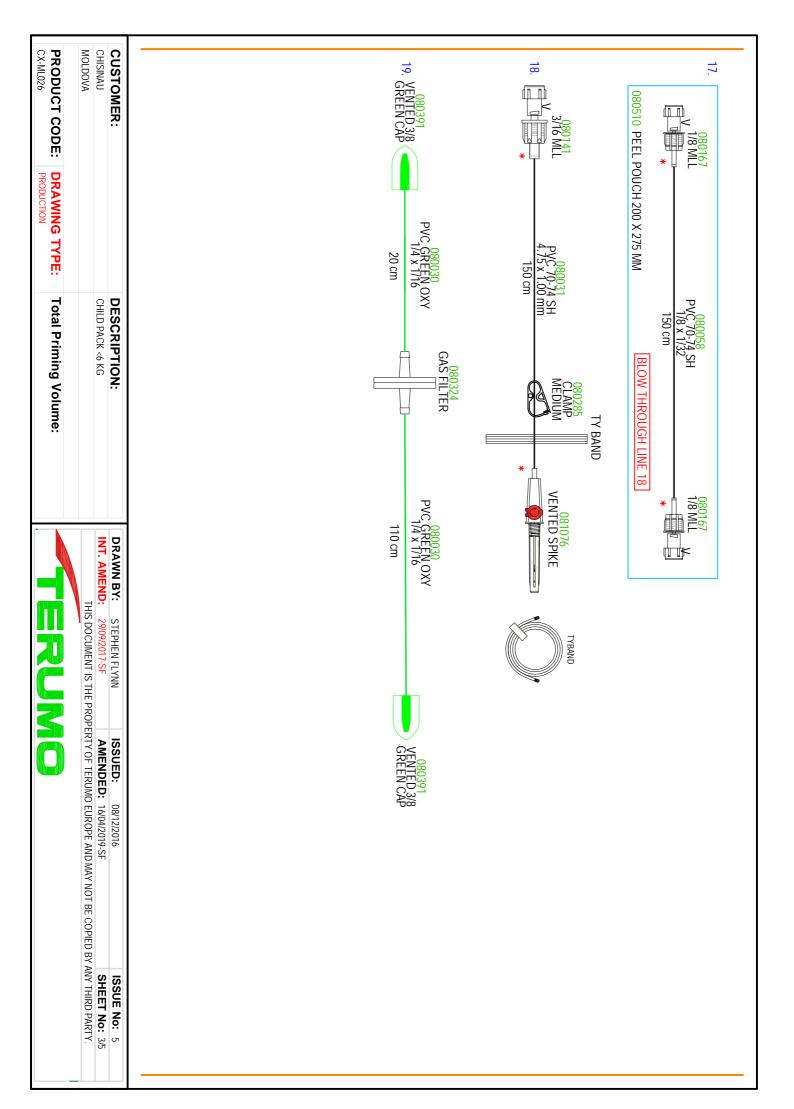
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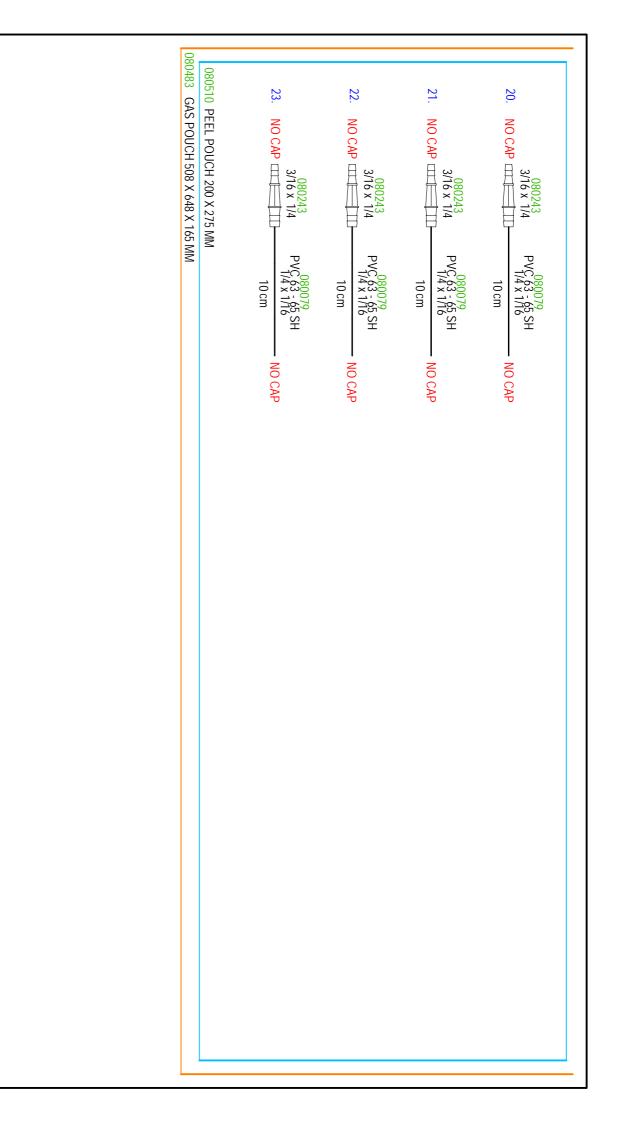
CX-ML027











CUSTOMER: CHISINAU

MOLDOVA

PRODUCT CODE: DRAWING TYPE:

Total Priming Volume:

THIS DOCUMENT IS THE PROPERTY OF TERUMO EUROPE AND MAY NOT BE COPIED BY ANY THIRD PARTY.

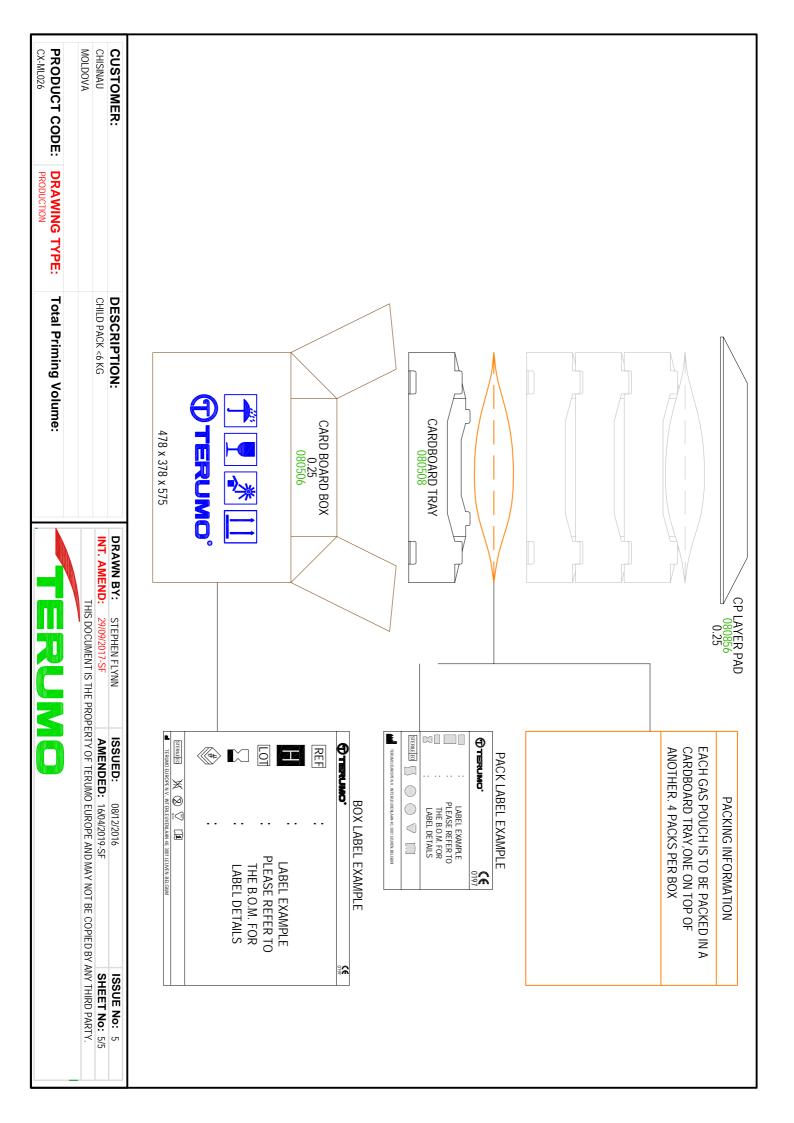
ISSUED: 08/12/2016 **AMENDED:** 16/04/2019-SF

SHEET No: 4/5

DESCRIPTION:CHILD PACK <6 KG

DRAWN BY: STEPHEN FLYNN INT. AMEND: 29/09/2017-SF

CX-ML026





Quality Management System EN ISO 13485:2016

Registration No.:

SX 1567993-1

Organization:

Terumo Corporation Ashitaka Plant 150, Maimaigi-cho Fujinomiya-shi Shizuoka, 418-0015 Japan

Scope:

Design and Development, Manufacture, Service and

Sterilization (ETO, E-beam) of

- Cardiopulmonary Bypass Arterial Line Blood Filter

- Heart-Lung Bypass Defoamer

- Cardiotomy Reservoir

- Haemoconcentration Filter

- Extra-corporeal Membrane Oxygenator

- Cardiopulmonary Bypass Blood Reservoir

- Angiographic Catheter

- Stents

- Balloon Dilatation Catheter

- Catheter Guide Wire

- Catheter Introducer

- Wire Twister

- Guiding Catheter

- Extension Tube

- Coronary Imaging Catheters

- Centrifugal Pump

- Radial Artery Hemostasis Band

The Certification Body of TÜV Rheinland LGA Products GmbH certifies that the organization has established and applies a quality management system for medical devices.

Proof has been furnished that the requirements specified in the abovementioned standard are fulfilled. The quality management system is subject to yearly surveillance.

Report No.:

12031333 010

Effective date:

2021-01-10

Expiry date:

2023-07-09

Issue date:

2020-12-23



TÜVRheinland III Masahiro Asami



Quality Management System EN ISO 13485:2016

Registration No.:

SX 1567993-1

Organization:

Terumo Corporation Ashitaka Plant 150, Maimaigi-cho Fujinomiya-shi Shizuoka, 418-0015 Japan

Design and Development, Manufacture, Service and Sterilization (ETO, E-beam) of

- Temperature Control Unit for Heart-Lung Bypass System Module
- Air/Fluid Level Detector for Heart-Lung Bypass System Module
- Centrifugal Pump Controller
- Syringe Infusion Pump
- Infusion Pump
- Clinical Electronic Thermometer
- Deep Body Temperature Monitor
- Clinical Electronic Blood-Pressure Meter
- Medical Equipment for Blood Collection
- Medical Equipment for APD Systems
- Sterile Tube Connecting Systems
- Coronary Optical Coherence Tomography Systems
- Blood Glucose Meters for Blood Glucose Monitoring Systems

Report No.:

12031333 010

Effective date:

2021-01-10

Expiry date:

2023-07-09

Issue date:

2020-12-23





Masahiro Asami A Products GmbH



Quality Management System EN ISO 13485:2016

Registration No.:

SX 1567993-1

Organization:

Terumo Corporation Ashitaka Plant 150, Maimaigi-cho Fujinomiya-shi Shizuoka,

418-0015 Japan

The scope of certification also covers the following:

No.	Facility	Scope
/01	Terumo Corporation Ashitaka Plant 150, Maimaigi-cho Fujinomiya-shi Shizuoka, 418-0015 Japan	Activities related to Design and Development, Manufacture and Sterilization (ETO, E-beam) of the same as the scope of the main certificate except for design and development of Blood Glucose Meters for Blood Glucose Monitoring Systems.

Report No.: 12031333 010

Effective date: 2021-01-10

Expiry date: 2023-07-09

Issue date: 2020-12-23







Quality Management System EN ISO 13485:2016

Registration No.:

SX 1567993-1

Organization:

Terumo Corporation Ashitaka Plant 150, Maimaigi-cho Fujinomiya-shi Shizuoka,

418-0015 Japan

The scope of certification also covers the following:

/02 Terumo Corporation - Tokyo office

3-20-2 Nishi-Shinjuku Shinjuku-ku, Tokyo 163-1450 Japan Activities related to service of all the active medical devices in the scope of the main certificate except for Blood Glucose Meters for Blood Glucose Monitoring Systems. Specifically, Temperature Control Unit for Heart-Lung Bypass System Module, Air/Fluid Level Detector for Heart-Lung Bypass System Module, Centrifugal Pump Controller. Syringe Infusion Pump, Infusion Pump, Clinical Electronic Thermometer, Deep Body Temperature Monitor, Clinical Electronic Blood-Pressure Meter, Medical Equipment for Blood Collection, Medical Equipment for APD Systems, Sterile Tube Connecting Systems, Coronary Optical Coherence Tomography Systems.

Report No.:

12031333 010

Effective date:

2021-01-10

Expiry date:

2023-07-09

Issue date:

2020-12-23





Masahiro Asami



Quality Management System EN ISO 13485:2016

Registration No.:

SX 1567993-1

Organization:

Terumo Corporation Ashitaka Plant 150, Maimaigi-cho Fujinomiya-shi Shizuoka,

418-0015 Japan

The scope of certification also covers the following:

/03

Terumo Corporation, Shonan Center 1500 Inokuchi, Nakai-machi Ashigarakami-gun, Kanagawa 259-0151 Japan

Activities related to Design and Development and Service of all the active medical devices in the scope of the main certificate except for Blood Glucose Meters for Blood Glucose Monitoring Systems. Specifically, Temperature Control Unit for Heart-Lung Bypass System Module, Air/Fluid Level Detector for Heart-Lung Bypass System Module, Centrifugal Pump Controller, Syringe Infusion Pump, Infusion Pump, Clinical Electronic Thermometer, Deep Body Temperature Monitor, Clinical Electronic Blood-Pressure Meter, Medical Equipment for Blood Collection, Medical Equipment for APD Systems, Sterile Tube Connecting Systems, Coronary Optical Coherence Tomography Systems.

Report No.:

12031333 010

Effective date:

2021-01-10

Expiry date:

2023-07-09

Issue date:

2020-12-23





Masahiro Asami



Quality Management System EN ISO 13485:2016

Registration No.:

SX 1567993-1

Organization:

Terumo Corporation Ashitaka Plant 150, Maimaigi-cho Fujinomiya-shi Shizuoka,

418-0015 Japan

The scope of certification also covers the following:

/04

Terumo Corporation - ME Center (Nagaizumi)

1002-1 Shimonagakubo Nagaizumi-cho, Sunto-gun, Shizuoka

411-0934 Japan

Activities related to Design and Development, Manufacture and Service of all the active medical devices in the scope of the main certificate except for Blood Glucose Meters for Blood Glucose Monitoring Systems. Specifically, Temperature Control Unit for Heart-Lung Bypass System Module, Air/Fluid Level Detector for Heart-Lung Bypass System Module, Centrifugal Pump Controller, Syringe Infusion Pump, Infusion Pump, Clinical Electronic Thermometer, Deep Body Temperature Monitor, Clinical Electronic Blood-Pressure Meter, Medical Equipment for Blood Collection, Medical Equipment for APD Systems, Sterile Tube Connecting Systems, Coronary Optical Coherence Tomography Systems.

Report No.:

12031333 010

Effective date:

2021-01-10

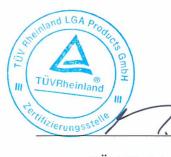
Expiry date:

2023-07-09

Issue date:

2020-12-23





Masahiro Asami



No.DOC-DQ010-0639

Rev.06

DECLARATION OF CONFORMITY

We, TERUMO CORPORATION

44-1, 2-chome, Hatagaya, Shibuya-ku, Tokyo 151-0072, Japan

being the manufacturer of:

CAPIOX FX

Product: Extra-corporeal Membrane Oxygenator

declare that the above products of **Class IIa** are in conformity with the provisions of the EC Council Directive 93/42/EEC of 14 June 1993, as amended, concerning medical devices, and have been subject to the conformity assessment procedure laid down in Article 11, 2 and 11, 3(a) of the Directive, relating to the "Full quality assurance" set out in Annex II, and by certification of Annex II, excluding Section 4 under the supervision of TÜV Rheinland LGA Products GmbH (Registration No.: HD 60121893 0001), Tillystraße 2, 90431 Nürnberg Germany, as Notified Body authorized by the German Competent Authority and carrying the Notified Body No. 0197.

Authorized European Representative:

TERUMO EUROPE N.V. Interleuvenlaan 40, 3001 Leuven, Belgium

Object of the declaration: see appendix A

Tokyo, August 30, 2017 (place and date of issue)

Toshio Nakashima General Manager Quality Assurance Department

TERUMO CORPORATION



No.DOC-DQ010- 0639 Rev.06

Appendix A - List of Code Number Structure

\mathbf{C}	X	*	F	X						
1	2	3	4	5	6	7	8	9	10	11

Character	Character & Meaning
number	
1,2,4,5	Product name
	CAPIOX FX
3	Destination
	*: for export
6-7	Effective fiber surface area
	$25: approx. \ 2.5m^2$
	$05 : approx. 0.5m^2$
	15 : approx. 1.5m ²
8	Availability of hardshell venous reservoir
	R : Available
	Blank : Not available
9	Reserve
	W: Blood outlet port orientation is left when water ports faces this side.
	E: Blood outlet port orientation is right when water ports faces this side.
10-11	Types of hardshell venous reservoir *1
	30: With 3000mL Reservoir
	40: With 4000mL Reservoir
	* 1 FX15 only



Quality Management System EN ISO 13485:2016

Registration No.:

SX 1485480-1

Organization:

Terumo Corporation 44-1, 2-chome, Hatagaya Shibuya-ku, Tokyo 151-0072 Japan

Scope:

Design and Development, Manufacture, Distribution and Service of

- Angiographic Catheter and Accessories

- Anti-adhesion System

- Balloon Dilatation Catheter

- Blood Collection/Transfusion Device and Accessories

- Blood Glucose Monitoring system

- Cartridge Injection System

- Catheter Introducer and Accessories

- Electronic Sphygmomanometer

- Electronic Thermometer

- Embolization Prosthesis and Accessories

- Endoscopic Vessel Harvesting System

- Extracorporeal Circulation Device and Accessories

- Falloposcopic Tuboplasty Device and Accessories

- Guide Wire and Accessories

- Guiding/Micro Catheter and Accessories

- Infusion Pump

- Infusion Set and Accessories

The Certification Body of TÜV Rheinland LGA Products GmbH certifies that the organization has established and applies a quality management system for medical devices.

Proof has been furnished that the requirements specified in the abovementioned standard are fulfilled. The quality management system is subject to yearly surveillance.

Report No.:

150241635-301

Effective date:

2021-08-30

Expiry date:

2023-08-29

Issue date:

2021-08-29



Michiaki Aihara TÜV Rheinland LGA Products GmbH Tillystraße 2 · 90431 Nürnberg · Germany

TÜVRheinland



Quality Management System EN ISO 13485:2016

Registration No.:

SX 1485480-1

Organization:

Terumo Corporation 44-1, 2-chome, Hatagaya Shibuya-ku, Tokyo 151-0072 Japan

- Intravascular Imaging Catheter and Accessories
- Intravascular Imaging System and Accessories
- Intravenous Catheter
- Left-Ventricular Assist System
- Needle
- Open-heart surgery devices and Accessories
- Oral Care Device and Accessories
- Peritoneal Dialysis Device and Accessories
- Pneumatically-powered Massager
- Prefillable Syringe
- Pulse Oximeter
- Radial Artery Hemostasis Device and Accessories
- Stent System
- Syringe
- Syringe Infusion Pump
- Syringe with Needle
- Thrombus Removal Device
- Tube Catheter and Accessories
- Urine test strip
- Vascular Closure Device
- Vascular Inspection/Treatment Kit
- Vascular prosthesis and Accessories
- Wearable Infusion Pump

Report No.:

150241635-301

Effective date:

2021-08-30

Expiry date:

2023-08-29

Issue date:

2021-08-29







Quality Management System EN ISO 13485:2016

Registration No.:

SX 1485480-1

Organization:

Terumo Corporation 44-1, 2-chome, Hatagaya Shibuya-ku, Tokyo 151-0072 Japan

The scope of certification also covers the following:

No.	Facility	Scope
/01	c/o Terumo Corporation 44-1, 2-chome, Hatagaya Shibuya-ku, Tokyo 151-0072 Japan	Aspects related to Design and Development, Manufacture, Distribution and Service.
/02	c/o Terumo Corporation - Tokyo office 3-20-2, Nishi-Shinjuku Shinjuku-ku, Tokyo 163-1450 Japan	Aspects related to Design and Development and activities related to corporate management processes.
/03	c/o Terumo Corporation, Shonan Center 1500, Inokuchi, Nakai-machi Ashigarakami-gun, Kanagawa 259-0151 Japan	Aspects related to Distribution and activities related to customer communication processes.

Report No.: 150241635-301
Effective date: 2021-08-30
Expiry date: 2023-08-29
Issue date: 2021-08-29







Quality Management System EN ISO 13485:2016

Registration No.:

SX 1485480-1

Organization:

Terumo Corporation 44-1, 2-chome, Hatagaya Shibuya-ku, Tokyo 151-0072 Japan

Scope:

Design and Development, Manufacture, Distribution and Service of

- Angiographic Catheter and Accessories

- Anti-adhesion System

- Balloon Dilatation Catheter

- Blood Collection/Transfusion Device and Accessories

- Blood Glucose Monitoring system

- Cartridge Injection System

- Catheter Introducer and Accessories

- Electronic Sphygmomanometer

- Electronic Thermometer

- Embolization Prosthesis and Accessories

- Endoscopic Vessel Harvesting System

- Extracorporeal Circulation Device and Accessories

- Falloposcopic Tuboplasty Device and Accessories

- Guide Wire and Accessories

- Guiding/Micro Catheter and Accessories

- Infusion Pump

- Infusion Set and Accessories

The Certification Body of TÜV Rheinland LGA Products GmbH certifies that the organization has established and applies a quality management system for medical devices.

Proof has been furnished that the requirements specified in the abovementioned standard are fulfilled. The quality management system is subject to yearly surveillance.

Report No.:

150241635-301

Effective date:

2021-08-30

Expiry date:

2023-08-29

Issue date:

2021-08-29



Michiaki Aihara TÜV Rheinland LGA Products GmbH Tillystraße 2 · 90431 Nürnberg · Germany

TÜVRheinland



Quality Management System EN ISO 13485:2016

Registration No.:

SX 1485480-1

Organization:

Terumo Corporation 44-1, 2-chome, Hatagaya Shibuya-ku, Tokyo 151-0072 Japan

- Intravascular Imaging Catheter and Accessories
- Intravascular Imaging System and Accessories
- Intravenous Catheter
- Left-Ventricular Assist System
- Needle
- Open-heart surgery devices and Accessories
- Oral Care Device and Accessories
- Peritoneal Dialysis Device and Accessories
- Pneumatically-powered Massager
- Prefillable Syringe
- Pulse Oximeter
- Radial Artery Hemostasis Device and Accessories
- Stent System
- Syringe
- Syringe Infusion Pump
- Syringe with Needle
- Thrombus Removal Device
- Tube Catheter and Accessories
- Urine test strip
- Vascular Closure Device
- Vascular Inspection/Treatment Kit
- Vascular prosthesis and Accessories
- Wearable Infusion Pump

Report No.:

150241635-301

Effective date:

2021-08-30

Expiry date:

2023-08-29

Issue date:

2021-08-29







Quality Management System EN ISO 13485:2016

Registration No.:

SX 1485480-1

Organization:

Terumo Corporation 44-1, 2-chome, Hatagaya Shibuya-ku, Tokyo 151-0072 Japan

The scope of certification also covers the following:

No.	Facility	Scope
/01	c/o Terumo Corporation 44-1, 2-chome, Hatagaya Shibuya-ku, Tokyo 151-0072 Japan	Aspects related to Design and Development, Manufacture, Distribution and Service.
/02	c/o Terumo Corporation - Tokyo office 3-20-2, Nishi-Shinjuku Shinjuku-ku, Tokyo 163-1450 Japan	Aspects related to Design and Development and activities related to corporate management processes.
/03	c/o Terumo Corporation, Shonan Center 1500, Inokuchi, Nakai-machi Ashigarakami-gun, Kanagawa 259-0151 Japan	Aspects related to Distribution and activities related to customer communication processes.

Report No.: 150241635-301
Effective date: 2021-08-30
Expiry date: 2023-08-29
Issue date: 2021-08-29









Certificate of Registration

QUALITY MANAGEMENT SYSTEM - ISO 13485:2016

This is to certify that: Terumo Cardiovascular Systems

Corporation 125 Blue Ball Rd

Elkton Maryland 21921 USA

Holds Certificate No: FM 584812

and operates a Quality Management System which complies with the requirements of ISO 13485:2016 for the following scope:

Design and Development, Manufacturing and Distribution of Blood Oxygenators, Centrifugal Pumps, Cardioplegia Delivery Sets, Cardiovascular Procedure Kits, Pressure Relief Valves, CDI Cuvettes, CDI Shunt Sensors, CDI Calibration Gases, Blood Reservoirs and Endoscopic Vessel Harvesting Systems, On and Off Pump Coronary Artery Bypass Graft Instruments/Devices and Accessories.

For and on behalf of BSI:

Gary E Slack, Senior Vice President - Medical Devices

Original Registration Date: 2012-05-08 Effective Date: 2021-10-15 Latest Revision Date: 2021-10-13 Expiry Date: 2024-10-14

Page: 1 of 1









Directive 93/42/EEC on Medical Devices, Annex II excluding Section 4

No. CE 584795

Issued To: Terumo Cardiovascular Systems

Corporation 125 Blue Ball Rd

Elkton Maryland 21921 USA

In respect of:

Design, Development and Manufacture of Sterile Blood Oxygenators, Centrifugal Pumps, Cardioplegia Delivery Sets, Pressure Relief Valves, Cuvettes, Shunt Sensors, Blood Reservoirs, Vessel Harvesting Systems, Devices for heart stabilization and positioning for use in open heart surgery.

Those aspects of Annex II related to securing and maintaining Sterility in the manufacture of the suture holder.

on the basis of our examination of the quality assurance system under the requirements of Council Directive 93/42/EEC, Annex II excluding section 4. The quality assurance system meets the requirements of the directive. For the placing on the market of class III products an Annex II section 4 certificate is required.

For and on behalf of BSI, a Notified Body for the above Directive (Notified Body Number 2797):

Gary E Slack, Senior Vice President - Medical Devices

Gary C Stade

This certificate was issued electronically and is bound by the conditions of the contract.

First Issued: **2012-05-31** Date: **2021-05-17** Expiry Date: **2024-05-26**

...making excellence a habit."

Page 1 of 3

Validity of this certificate is conditional on the quality system being maintained to the requirements of the Directive as demonstrated through the required surveillance activities of the Notified Body. This approval excludes all products designed and/or manufactured by a third party on behalf of the company named on this certificate, unless specifically agreed with BSI.





Supplementary Information to CE 584795

Issued To: Terumo Cardiovascular Systems

Corporation 125 Blue Ball Rd

Elkton Maryland 21921 USA

Number	Device Name	Intended purpose per IFU
Class III		15% 10 0000
	CDI Shunt Sensors	See CE 586827
Class IIb		
MD1104	Vessel Harvesting System	The VirtuoSaph Plus Endoscopic Vessel Harvesting System VSP550EX is indicated for use in minimally invasive surgery allowing access for vessel harvesting and is indicated for adult patients undergoing endoscopic surgery for arterial bypass. It is indicated for cutting tissue and controlling bleeding through coagulation, and for adult patients requiring blunt dissection of tissue including dissection of blood vessels of the extremities. Extremity procedures include tissue dissection and/or vessel harvesting along the saphenous vein for coronary artery and peripheral artery bypass. The radial artery is only used for coronary artery bypass.

First Issued: **2012-05-31** Date: **2021-05-17** Expiry Date: **2024-05-26**

...making excellence a habit."

Page 2 of 3

Validity of this certificate is conditional on the quality system being maintained to the requirements of the Directive as demonstrated through the required surveillance activities of the Notified Body. This approval excludes all products designed and/or manufactured by a third party on behalf of the company named on this certificate, unless specifically agreed with BSI.

This certificate was issued electronically and is bound by the conditions of the contract.





Supplementary Information to CE 584795

Issued To: Terumo Cardiovascular Systems

Corporation 125 Blue Ball Rd

Elkton Maryland 21921 USA

Number	Device Name	Intended purpose per IFU
Class IIa		AND THE STATE OF T
MD0102	Cardio Pulmonary ByPass Circuit and Cardioplegia Accessories	- Jessense
MD0106	Devices for heart stabilization and positioning	
Class Is		
MD0106	Suture Holder	2 5/1 /22/2020

First Issued: **2012-05-31** Date: **2021-05-17** Expiry Date: **2024-05-26**

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Page 3 of 3

Validity of this certificate is conditional on the quality system being maintained to the requirements of the Directive as demonstrated through the required surveillance activities of the Notified Body. This approval excludes all products designed and/or manufactured by a third party on behalf of the company named on this certificate, unless specifically agreed with BSI.

This certificate was issued electronically and is bound by the conditions of the contract.





Directive 93/42/EEC on Medical Devices, Annex II excluding Section 4

List of Significant Subcontractors

Recognised as being involved in services relating to the product covered by:

Certificate No: **CE 584795**Date: **2021-05-17**

Issued To: **Terumo Cardiovascular Systems**

Corporation 125 Blue Ball Rd

Elkton Maryland 21921 USA

Subcontractor:

Service(s) supplied

Aomori Olympus Co., Ltd 2-248-1, Okkonoki Kuroishi-Shi AOMORI 036-0357 Japan

mori Olympus Co., Ltd **Manufacture** 148-1, Okkonoki

Indo-MIM Pvt. Ltd. Plot #45 (P) KIADB Industrial Area Hoskote Bangalore 562 114

Karnataka India Manufacture

Isomedix Operations, Inc. 435 Whitney Street Northborough Massachusetts 01532 USA **ETO Sterilization**





Directive 93/42/EEC on Medical Devices, Annex II excluding Section 4

List of Significant Subcontractors

Recognised as being involved in services relating to the product covered by:

Certificate No: **CE 584795**Date: **2021-05-17**

Issued To: **Terumo Cardiovascular Systems**

Corporation 125 Blue Ball Rd

Elkton Maryland 21921 USA

Subcontractor: Service(s) supplied

Sterigenics EO Canada, Inc.

781 Pharmacy Avenue

Toronto

Ontario

M1L3K2

Canada

Sterigenics US, LLC

344 Bonnie Circle

Corona California

92880 USA **Radiation (Gamma Sterilization)**

ETO Sterilization

Sterigenics US, LLC 2311 Lincoln Avenue

Hayward California 94545

USA

Radiation (Gamma Sterilization)





Directive 93/42/EEC on Medical Devices, Annex II excluding Section 4

List of Significant Subcontractors

Recognised as being involved in services relating to the product covered by:

Certificate No: **CE 584795**Date: **2021-05-17**

Issued To: **Terumo Cardiovascular Systems**

Corporation 125 Blue Ball Rd

Elkton Maryland 21921 USA

Subcontractor:

Service(s) supplied

Sterigenics US, LLC 84 Park Road Queensbury New York 12804 USA **ETO Sterilization**

Surmodics, Inc. 9924 West 74th Street Eden Prairie Minnesota 55344 USA **Crucial Supplier**

Terumo Cardiovascular Systems Corp. 6200 Jackson Road Ann Arbor Michigan 48103 USA Design Development





Directive 93/42/EEC on Medical Devices, Annex II excluding Section 4

List of Significant Subcontractors

Recognised as being involved in services relating to the product covered by:

Certificate No: **CE 584795**Date: **2021-05-17**

Issued To: **Terumo Cardiovascular Systems**

Corporation 125 Blue Ball Rd

Elkton Maryland 21921 USA

Subcontractor:

Service(s) supplied

Terumo Europe N.V. Interleuvenlaan 40 3001 Leuven Belgium **EU Representative**

Terumo Medical Corporation 950 Elkton Boulevard Elkton MD 21921 USA **Radiation (Gamma Sterilization)**





EC Certificate - Full Quality Assurance System Certificate History

Certificate No: **CE 584795**Date: **2021-05-17**

Issued To: **Terumo Cardiovascular Systems**

Corporation 125 Blue Ball Rd

Elkton Maryland 21921 USA

Date	Reference Number	Action
31 May 2012	7805751	First issue. Transfer from another Notified Body.
14 August 2014	8180239	Extend scope to include devices for heart stabilization and positioning for use in open heart surgery; Remove "Cardiovascular Procedure Kits" from Scope. Add subcontractors relevant to heart stabilization and positioning devices: ARMM,Inc., Indo-US MIM Tec Pvt. Ltd., and Sterigenics Hayward, and Corona sites.
29 May 2015	8184532	Scope updated from "Endoscopic Vein Harvesting Systems" to "Endoscopic Vessel Harvesting Systems".
09 February 2017	8630231	Certificate renewal. Word 'sterile' added to scope. Crucial supplier SurModics added. Significant subcontractors ARMM Inc in California USA, Sterigenics US LLC in New Jersey USA and Sterigenics in NC USA removed. Administrative changes.
13 February 2019	7843590	Traceable to NB 0086.

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Page 1 of 3

Validity of this certificate is conditional on the quality system being maintained to the requirements of the Directive as demonstrated through the required surveillance activities of the Notified Body. This approval excludes all products designed and/or manufactured by a third party on behalf of the company named on this certificate, unless specifically agreed with BSI.

This certificate was issued electronically and is bound by the conditions of the contract.





EC Certificate - Full Quality Assurance System Certificate History

Certificate No: **CE 584795**Date: **2021-05-17**

Issued To: **Terumo Cardiovascular Systems**

Corporation 125 Blue Ball Rd

Elkton Maryland 21921 USA

Date	Reference Number	Action	
15 May 2020	9749499	Certificate renewal	
		Addition of device table	
		Update to certificate scope:	
		- Removal of arterial filters	
		- Removal of CDI from cuvettes and shunt	
		- Removal of CDI calibration gases	
		- Removal of Endoscopic from vessel harvesting systems	
		- Removal of associated sterile and non-sterile accessories.	
		- Addition of "Those aspects of Annex II related to securing and maintaining Sterility in the manufacture of the suture holder."	
		Updates to certificate subcontractors:	
		- Removal of Olympus Winter	
		- Administrative correction in name and address of Indo-MIM Pvt. Ltd.	
		- Replaced Road with Boulevard in address of Terumo Medical Corporation subcontractor.	
17 May 2021	3430430	Addition of sterilization subcontractor Sterigenics EO Canada, Inc the Terumo Capiox Oxygenators / Reservoirs.	

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Page 2 of 3

Validity of this certificate is conditional on the quality system being maintained to the requirements of the Directive as demonstrated through the required surveillance activities of the Notified Body. This approval excludes all products designed and/or manufactured by a third party on behalf of the company named on this certificate, unless specifically agreed with BSI.

This certificate was issued electronically and is bound by the conditions of the contract.





EC Certificate - Full Quality Assurance System Certificate History

Certificate No: **CE 584795**Date: **2021-05-17**

Issued To: **Terumo Cardiovascular Systems**

Corporation 125 Blue Ball Rd

Elkton Maryland 21921 USA

Date Reference Number		Action		
Non-significant changes approved after the 26 th May 2021 as per the Transitional Provisions MDR Article 120.3				
		Addition of subcontractor Isomedix Operations, Inc., 435 Whitney Street, Northborough, Massachusetts 01532 USA		

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Page 3 of 3

Validity of this certificate is conditional on the quality system being maintained to the requirements of the Directive as demonstrated through the required surveillance activities of the Notified Body. This approval excludes all products designed and/or manufactured by a third party on behalf of the company named on this certificate, unless specifically agreed with BSI.

This certificate was issued electronically and is bound by the conditions of the contract.



Inspiring trust for a more resilient world.

16 June 2022

Terumo Cardiovascular Systems Corporation 125 Blue Ball Rd Elkton Maryland 21921 **USA**

To whom it may concern,

The transitional provisions specified in MDR Article 120(3) prohibit Notified Bodies from issuing new certificates or amending, modifying, supplementing any existing MDD/AIMDD certificates from 26th May 2021.

This letter is to confirm that BSI has reviewed and approved the change(s) detailed in the table below. These changes do not represent a significant change in design or intended purpose under MDR Article 120(3) and as per the guidance provided in MDCG 2020-3. The related MDD certificate specified below remains valid until the expiry date specified on the certificate.

Certificate	Directive and Annex	Reference Number	Changes approved
CE 584795	93/42/EEC Annex II excluding Section 4	3682750	Addition of subcontractor Isomedix Operations, Inc., 435 Whitney Street, Northborough, Massachusetts 01532 USA

Should you have any queries concerning your certification, or if we can be of further assistance to you, please contact your BSI Scheme Manager.

Yours sincerely,

Graeme Tunbridge

Say Building

John M. Keynesplein 9 1066 EP Amsterdam The Netherlands

Senior Vice President, Medical Devices







Quality Management System EN ISO 13485:2016

Registration No.:

SX 1594584-1

Organization:

TERUMO EUROPE N.V.

Interleuvenlaan 40 3001 Leuven

Belgium

Scope:

Design and development, manufacture and sterilization of syringes, needles, administration sets, angiographic interventional catheter systems, extra corporeal circuits for open heart surgery and ancillary devices, non-vascular guide wires, short peripheral catheters and related accessories.

Clinical investigation, marketing and distribution of active and non-active medical devices, active implantable medical devices, and in vitro diagnostic medical devices.

Installation and serving of active medical devices.

The Certification Body of TÜV Rheinland LGA Products GmbH certifies that the organization has established and applies a quality management system for medical devices.

Proof has been furnished that the requirements specified in the abovementioned standard are fulfilled. The quality management system is subject to yearly surveillance.

Report No.: 3350367-50
Effective date: 2021-12-08
Expiry date: 2024-12-07
Issue date: 2021-11-25

DAKKS

Deutsche
Akkreditierungsstelle
D-ZM-14169-01-02

Dipl.-Ing. (FH) D. Wiedemuth TÜV Rheinland LGA Products GmbH Tillystraße 2 · 90431 Nürnberg · Germany

TÜVRheinlan



Quality Management System EN ISO 13485:2016

Registration No.:

SX 1594584-1

Organization:

TERUMO EUROPE N.V.

Interleuvenlaan 40 3001 Leuven

Belgium

The scope of certification also covers the following sites:

No. Facility

/01 c/o TERUMO EUROPE N.V.

Interieuvenlaan 40 3001 Leuven

Belgium

/02 c/o Terumo Europe UK

3 Unity Grove

Knowsley Business Park South

Merseyside, Knowsley

L34 9GT

United Kingdom

Scope

Design and development, manufacture and sterilization of syringes, needles, administration sets, angiographic interventional catheter systems, extra corporeal circuits for open heart surgery and ancillary devices, non-vascular guide wires, short peripheral catheters and related accessories. Clinical investigation, marketing and distribution of active and non-active medical devices, active implantable medical devices, and in vitro diagnostic medical devices. Installation and serving of active medical devices

Design and development, manufacture and sterilization of extra corporeal circuits for open heart surgery and ancillary devices

 Report No.:
 3350367-50

 Effective date:
 2021-12-08

 Expiry date:
 2024-12-07

 Issue date:
 2021-11-25

DAKKS

Deutsche
Akkreditierungsstelle
D-ZM-14169-01-02

Dipl.-Ing. (FH) D. Wiedemuth

Dipl.-Ing. (FH) D. Wiedemuth TÜV Rheinland LGA Products GmbH Tillystraße 2 · 90431 Nürnberg · Germany



Quality Management System EN ISO 13485:2016

Registration No.:

SX 1594584-1

Organization:

TERUMO EUROPE N.V.

Interleuvenlaan 40 3001 Leuven

Belgium

The scope of certification also covers the following sites:

/03 c/o Terumo Deutschland GmbH

Ludwig-Erhard-Str. 6 65760 Eschborn

Germany

Distribution of active and non-active medical devices, active implantable medical devices, and in-vitro diagnostic medical devices

/04 c/o Terumo France S.A.S.

Bâtiment Renaissance, 3 rond-point des

78280

Saules

Guyancourt France Distribution of active and non-active medical devices, active implantable medical devices, and in-vitro diagnostic medical devices

/05 c/o Terumo Italia S.r.I.

Via Paolo di Dono 73

00142 Roma

Italy

Distribution of active and non-active medical devices, active implantable medical devices, and in-vitro diagnostic medical devices

/06 c/o Terumo Europe España SL

Avda. Juan Carlos I, N°13-7 Planta 28806 Alcalá de Henares (Madrid)

Spain

Distribution of active and non-active medical devices, active implantable medical devices, and in-vitro diagnostic medical devices

Report No.: 3350367-50
Effective date: 2021-12-08
Expiry date: 2024-12-07

Issue date: 2021-11-25

DAKKS

Deutsche
Akkreditierungsstelle
D-ZM-14169-01-02

Dipl.-Ing. (FH) D. Wiedemuth
TÜV Rheinland LGA Products GmbH
Tillystraße 2 · 90431 Nürnberg · Germany



Quality Management System EN ISO 13485:2016

Registration No.:

SX 1594584-1

Organization:

TERUMO EUROPE N.V.

Interleuvenlaan 40 3001 Leuven

Belgium

The scope of certification also covers the following sites:

/07 c/o Terumo Europe UK Ltd.

Otium House

2 Freemantle Road

Bagshot Surrey GU19 5LL United Kingdom

and in-vitro diagnostic medical devices

Distribution of active and non-active medical

devices, active implantable medical devices,

/08 c/o Terumo Europe N.V.

Benelux Sales Division Interleuvenlaan 40 3001 Leuven

Belgium

Distribution of active and non-active medical devices, active implantable medical devices, and in-vitro diagnostic medical devices

/09 c/o Terumo Sweden AB

Sven Källfets gata 16

SE-426 71 Västra Frölunda

Sweden

Distribution of active and non-active medical devices, active implantable medical devices, and in-vitro diagnostic medical devices

/10 c/o Terumo Deutschland GmbH

Zweigniederlassung Switzerland

Bodenäckerstrasse 3 8957 Spreitenbach

Switzerland

Distribution of active and non-active medical devices, active implantable medical devices, and in-vitro diagnostic medical devices

Report No.:

3350367-50

Effective date:

2021-12-08

Expiry date:

2024-12-07

Issue date:

2021-11-25

DAKKS

Deutsche
Akkreditierungsstelle
D-ZM-14169-01-02

Dipl.-ing. (FH) D. Wiedemuth TÜV Rheinland LGA Products GmbH Tillystraße 2 · 90431 Nürnberg · Germany

TÜVRheinla



Quality Management System EN ISO 13485:2016

Registration No.:

SX 1594584-1

Organization:

TERUMO EUROPE N.V.

Interleuvenlaan 40 3001 Leuven

Belgium

The scope of certification also covers the following sites:

/11 c/o Terumo Europe N.V.

European Distribution Center

Brikkenovenstraat 48

3600 Genk Belgium Storage and distribution of active and non-active medical devices, active implantable medical devices, and in-vitro diagnostic

medical devices

/12 c/o Terumo Europe N.V.

Terumo Interventional Systems

EMEA (TIS-EMEA) Interleuvenlaan 40 3001 Leuven Belgium Marketing of active and non-active medical devices, active implantable medical devices, and in-vitro diagnostic medical devices

/13 c/o Terumo Europe N.V.

Terumo Cardiovascular Europe Middle East & Africa (TCV-EMEA)

Ludwig-Erhard-Straße 6

65760 Eschborn

Germany

Marketing of active and non-active medical devices, active implantable medical devices, and in-vitro diagnostic medical devices

Report No.: 3350367-50
Effective date: 2021-12-08
Expiry date: 2024-12-07
Issue date: 2021-11-25





Dipl.-Ing. (FH) D. Wiedemuth TÜV Rheinland LGA Products GmbH Tillystraße 2 90431 Nürnberg Germany



Quality Management System EN ISO 13485:2016

Registration No.: SX 1594584-1

Belgium

Belgium

Organization: TERUMO EUROPE N.V.

> Interleuveniaan 40 3001 Leuven Belgium

The scope of certification also covers the following sites:

/14 c/o Terumo Europe N.V. Marketing of active and non-active medical

Terumo Medical Products devices, active implantable medical devices. EMEA (TMP-EMEA) and in-vitro diagnostic medical devices

Interleuvenlaan 40 3001 Leuven

/15 c/o Terumo Europe N.V. Marketing of active and non-active medical Diabetes Management devices, active implantable medical devices,

EMEA (DM-EMEA) and in-vitro diagnostic medical devices Interleuvenlaan 40 3001 Leuven

/16 c/o Terumo Europe N.V. Marketing of active and non-active medical

Terumo Pharmaceutical Solutions devices and active implantable medical

Interleuvenlaan 40 devices

3001 Leuven Belgium

/17 c/o Terumo Deutschland GmbH Distribution of active and non-active medical Zweigniederlassung Austria devices, active implantable medical devices, Liebermannstrasse F10-301 and in-vitro diagnostic medical devices

2345 Brunn am Gebirge Austria

Report No.: 3350367-50 Effective date: 2021-12-08 Expiry date:

2024-12-07

2021-11-25

Dipl.-Ing. (FH) D. Wiedemuth TÜV Rheinland LGA Products GmbH Tillystraße 2 · 90431 Nürnberg · Germany



Issue date:

TÜVRheinle

Mzlerung91



Quality Management System EN ISO 13485:2016

Registration No.:

SX 1594584-1

Organization:

TERUMO EUROPE N.V.

Interleuvenlaan 40

3001 Leuven Belgium

The scope of certification also covers the following sites:

/18 c/o Terumo Europe N.V.

Emerging Market Division

Interleuvenlaan 40 3001 Leuven Belgium Distribution of active and non-active medical devices, active implantable medical devices, and in-vitro diagnostic medical devices

/19 c/o Terumo Poland Sp. Zoo

Wisniowy Business Park budynek D

ul. 1 Sierpnia 6 02-134 Warszawa

Poland

Distribution of active and non-active medical devices, active implantable medical devices, and in-vitro diagnostic medical devices

Report No.: 3350367-50
Effective date: 2021-12-08
Expiry date: 2024-12-07
Issue date: 2021-11-25





Dipl.-Ing. (FH) D. Wiedemuth TÜV Rheinland LGA Products GmbH Tillystraße 2 · 90431 Nürnberg · Germany



EC Certificate

Directive 93/42/EEC Annex II, excluding Section 4 Full Quality Assurance System Medical Devices

Registration No.: HD 60134707 0001

Report No.: 21240046 017

Manufacturer: TERUMO EUROPE N.V.

Interleuvenlaan 40

3001 Leuven

Belgium

Products: (see attachment for products and additional sites included)

Replaces Certificate, Registration No.: HD 60106290 0001

Expiry Date: 2024-05-26

The Notified Body hereby declares that the requirements of Annex II, excluding section 4 of the directive 93/42/EEC have been met for the listed products. The above named manufacturer has established and applies a quality assurance system, which is subject to periodic surveillance, defined by Annex II, section 5 of the aforementioned directive. For placing on the market of class III devices covered by this certificate an EC design-examination certificate according to Annex II, section 4 is required.

Effective Date: 2020-04-21

Date: 2020-04-21

Dipl.-Ing. (FH) D. Wiedemu

Notified Body

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg TÜV Rheinland LGA Products GmbH is a Notified Body according to Directive 93/42/EEC concerning medical devices with the identification number 0197.



Doc. 1/2, Rev. 0

TÜV Rheinland LGA Products GmbH Tillystraße 2, 90431 Nürnberg

Attachment to

Certificate

Registration No.: HD 60134707 0001

Report No.: 21240046 017

Manufacturer: TERUMO EUROPE N.V.

Interleuvenlaan 40

3001 Leuven Belgium

Products included:

- Syringes
- Needles
- Administration sets
- Extra corporeal circuits for open heart surgery
- Non-vascular guide wires
- Introducer for vascular access
- Angiographic Catheters
- Guidewire for Angiography

For the following devices the scope covers only the aspects of the manufacture concerned with the securing and maintaining sterile conditions:

- Ancillary devices for extracorporeal circuits for open heart surgery
- Mixing needles

Notified Body

Dipl.-Ing. (FH) D. Wiedemuth

10/020 h 04 08 9 TÜlli, TUEV and TUV are registered trademarks. Utilisation and application requires prior approval.

Date: 2020-04-21



Doc. 2/2, Rev. 0

TÜV Rheinland LGA Products GmbH Tillystraße 2, 90431 Nürnberg

Attachment to Certificate

Registration No.: HD 60134707 0001

Report No.: 21240046 017

Manufacturer: TERUMO EUROPE N.V.

Interleuvenlaan 40

3001 Leuven Belgium

additional sites included:

Terumo Europe N.V. European Distribution Center Brikkenovenstraat 48 3600 Genk, Belgium

Terumo Europe UK 3 Unity Grove, Knowsley Business Park South Knowsley, Merseyside L34 9GT, United Kingdom

Dipl.-Ing. (FH) D. Wiedemuth

TÜVRheinland

Notified Body

10/020 h 04.08 TÜ∜, TUSV and TUV are registered trad≠marks. Utilisation and application requires prior approval

Date: 2020-04-21



DECLARATION OF CONFORMITY

We,

TERUMO EUROPE N.V. Interleuvenlaan 40, 3001 Leuven, Belgium

being the manufacturer of:

TUBING SET with X-coating (optional)

Product: Extra-Corporeal Blood Circuit for open heart surgery

(See Appendix A for related product codes)

declare that the above product of Class IIa is in conformity with the provisions of the EC Council Directive 93/42/EEC of 14 June 1993, as amended, concerning medical devices, and has been subject to the conformity assessment procedure laid down in Article 11.2 and 11.3(a) of the Directive, relating to the "Full Quality Assurance System" set out in Annex II, and by certification of Annex II.3 (Registration No: HD 60106290 0001), under the supervision of TÜV Rheinland LGA Products GmbH as Notified Body authorized by the German Competent Authority and carrying the Notified Body No. 0197.

Leuven, 21 December 2018

(place and date of issue)

M.J. Aerts

VP Regulatory & Quality

TERUMO EUROPE N.V.



Appendix A - Related product codes

The product code is composed of 10 digits maximum and explained as follows:

Customer requested device configurations

1	2	3	4	5	6	7	8	9	10					
С	x	Fc	For Capiox® Cardiovascular Devices											
Manu	facturer	-	Te	run	no E	uro	ре							
of Eu sales brand	d countrie ropean ches/othe blocks		c	C										
Sequential number n n n									001,					
X-coating									X Void if no X-coated component is included					
Varia custo	nt pack ro mer	equ	est	ed I	by				A	Sequential letter (A, B,, Z) – void if no variant pack				

Standard device configurations

1	2	3	4	5	6	7	8	9	10	
C	X	Fo	r Ca	apio	X® (Caro	voib	ascı	ular [Devices
Manufacturer - Terun					no E	uro	ре			
Stand Finish	lard ned produ	ıct	F							
Туре	of pack			T	S	Te	run	no S	tand	ard Pack
Sequ	ential nur	nbe	r			0	0	1		
X-coating								X	X-coated components	



Accessory packs for reduced prime circuits:

- Standard device configurations

1	2	3	4	5	6	7							
С	x	For Capiox [®] Cardiovascular Devices											
Manui	-	- Terumo Europe											
Stand ROCsa Acces		k	R	0	c								
Туре	of Access	ory	ра	ck		A	with flexible venous resevoir						
						В	with hardshell venous reservoir and rigid adult sucker						
						C	with rigid adult sucker						
					Ì	G	Table Set						
						H	for pressure monitoring						

- Customer requested device configurations

1	2	3	4	5	6	7	8	9		
C X For Capiox® Cardiovascular Devices										
Manufact	urer	-	Te	run	10 Е	urope	9			
Reduced optimised circuit			R	0	c					
Sequential letter							Α,	В,	,	
Sequential number							n		01,	



Terumo Cardiovascular Group 125 Blue Ball Road, Elkton, Maryland 21921 Main: 410.398.8600 Toll-free; 800.283.7866 www.terumo-cygroup.com

DECLARATION OF CONFORMITY

We, TERUMO CARDIOVASCULAR SYSTEMS CORPORATION, located at 125 Blue Bail Rd., Elkton, Maryland USA 21921, and being the manufacturer of:

Terumo® Capiox Oxygenators/Reservoirs

Product Codes: CX*SX18R, CX*SX18X, CX*SX18RX, CX*SX18R03, CX*SX25R, CX*SX25X, CX*SX25RX, 3CX*RX25RE, 3CX*RX25RW, 3CX*RX15RW30, 3CX*RX15RE30, 3CX*RX15RW40, 3CX*RX15RE40, 3CX*FX15RW30C, 3CX*FX15RW40C, 3CX*FX15RE30C, 3CX*FX15RE40C, 3CX*FX25REC, 3CX*FX25RWC, 3CX*R4000C

Classification: Class IIa - Rule 3 of Annex IX

Declare that the above products are in conformity with the provisions of the EC Council directive 93/42/EEC of 14 June 1993, as amended, concerning medical devices, and have been subject to the conformity assessment procedure laid down in the EC Council Directive 93/42/EEC Article 11, 2 and 3(a) relating to the "Full quality assurance" set out in Annex II, under the supervision of BSI (Certificate Registration No. CE 584795), as Notified Body authorized by the Netherlands Competent Authority and carrying the Notified Body No. 2797.

Authorized European Representative: TERUMO EUROPE N.V. Interleuvenlaan 40 3001 Leuven, Belgium

Adam Pickholtz

Regulatory Affairs Manager

Terumo Cardiovascular Systems Corp.

Elkton, Maryland 21921 USA

Date