

CAPIOX® FX Family of Oxygenators with Integrated Arterial Filter

Breakthrough technology for added patient safety¹



TERUMO

CAPIOX® FX Family of Oxygenators

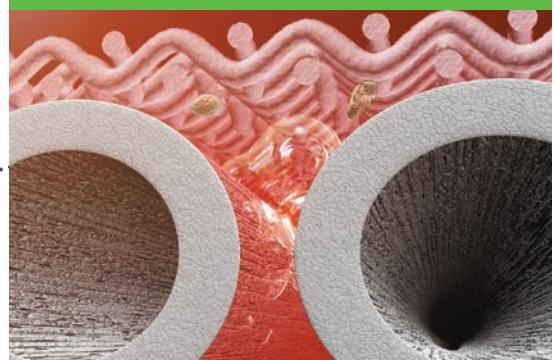
Integrated arterial filter with self-venting technology

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.

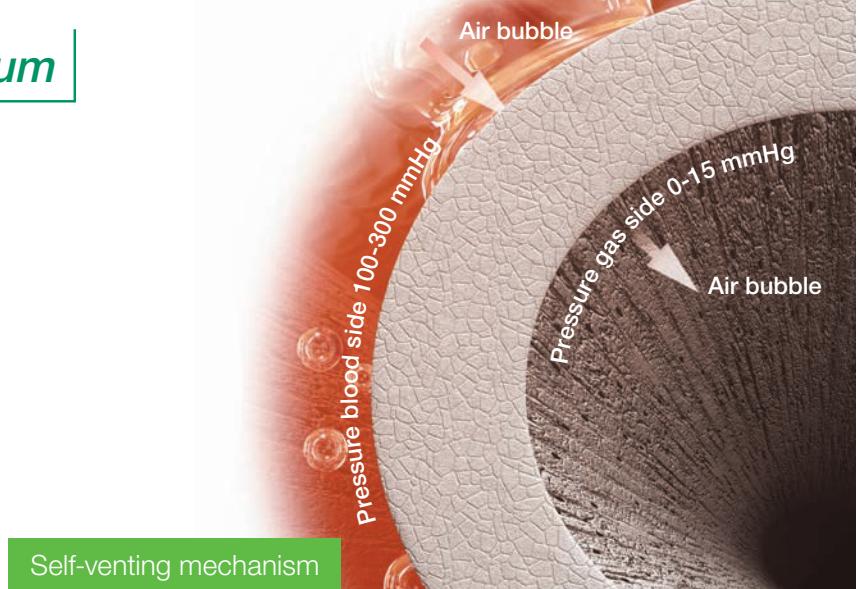


Filter Pore Size $32\mu\text{m}$

Screen filter surrounds the fiber layer, traps particulate micro-emboli and retains gaseous emboli.



Driven by the pressure difference between the blood side and gas side of the oxygenator, gaseous emboli enter the inner lumen of the microporous hollow fiber and are eliminated via the gas outlet.



Self-venting mechanism



Terumo's own biocompatible amphiphilic polymer surface coating, is a standard feature of all CAPIOX® FX oxygenators.

CAPIOX® FX05 Oxygenator

For neonates and infants

Integrated arterial filter

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

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



Hardshell Reservoir

Full featured

- Elongated shape provides stable blood flow path and enhanced² 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

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

West blood outlet port
Oxygenator blood inlet on right when blood outlet is facing away from user



East blood outlet port
Oxygenator blood inlet on left when blood outlet is facing away from user



Reference:

1 Gomez D et al. Evaluation of air handling in a new generation neonatal oxygenator with integral arterial filter. 2009; 24:107.

2 Internal testing, data on file.

Choose the blood outlet port configuration that best suits your circuit

CAPIOX® FX 15 Oxygenator

For children, small adults and minimized circuits



Available in
two reservoir sizes



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



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

CAPIOX® FX 25 Oxygenator

For all adults



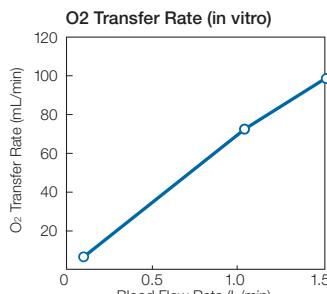
- Reservoir storage capacity: 4000 mL
- Maximum blood flow: 7.0 L/min
- Oxygenator priming volume: 260 mL
- Arterial filter surface area: 600 cm²



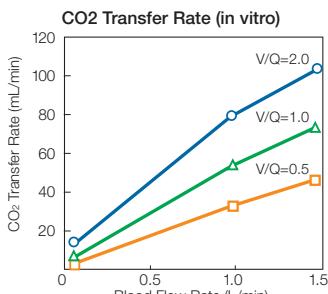
TOTM – an alternative plasticizer

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 (triethyl trimellitate) offers outstanding physical properties (such as flexibility) to the material and low plasticizer elution.

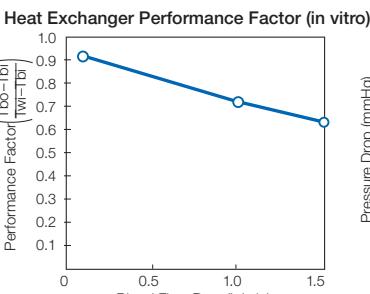
CAPIOX® FX05 Performance Data



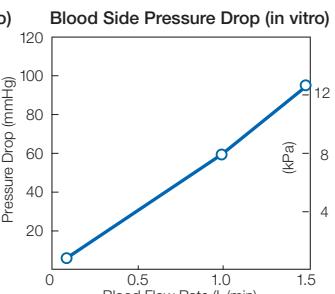
Conditions
Blood = Bovine
Hb = 12 ± 1g/dL
Temp = 37 ± 1°C
pH = 7.4
SvO₂ = 65 ± 5%
PvCO₂ = 45 ± 5 mmHg
B.E. = 0 ± 5 mEq/L
V/Q = 1.0



Conditions
Blood = Bovine
Hb = 12 ± 1g/dL
Temp = 37 ± 1°C
pH = 7.4
SvO₂ = 65 ± 5%
PvCO₂ = 45 ± 5 mmHg
B.E. = 0 ± 5 mEq/L
V/Q = 1.0

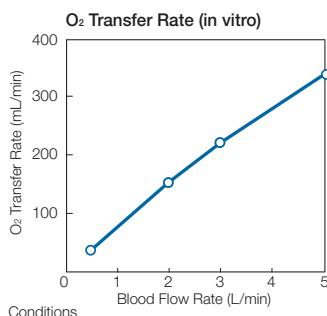


Conditions
Blood = Bovine
Hb = 12 ± 1g/dL
Temp = 37 ± 1°C
pH = 7.4
Hb = 12 ± 1g/dL
PvCO₂ = 45 ± 5 mmHg
B.E. = 0 ± 5 mEq/L
Twi = 40 ± 1°C
Tbi = 30 ± 1°C
Water flow rate = 15 L/min

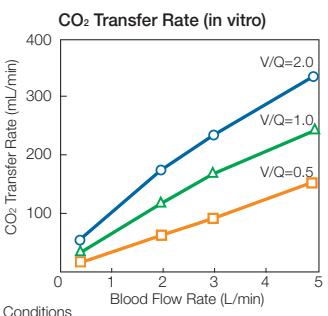


Conditions
Blood = Bovine
Hb = 12 ± 1g/dL
Temp = 37 ± 1°C

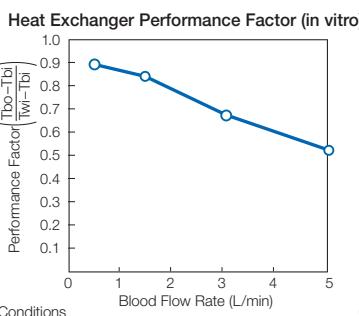
CAPIOX® FX15 Performance Data



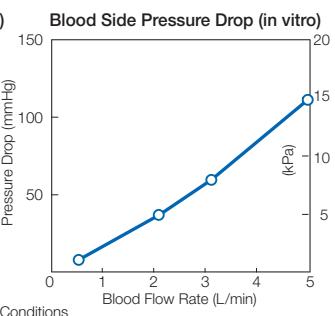
Conditions
Blood = Bovine
Hb = 12 ± 1g/dL
Temp = 37 ± 1°C
pH = 7.4
SvO₂ = 65 ± 5%
PvCO₂ = 45 ± 5 mmHg
B.E. = 0 ± 5 mEq/L
V/Q = 1.0



Conditions
Blood = Bovine
Hb = 12 ± 1g/dL
Temp = 37 ± 1°C
pH = 7.4
SvO₂ = 65 ± 5%
PvCO₂ = 45 ± 5 mmHg
B.E. = 0 ± 5 mEq/L
V/Q = 1.0

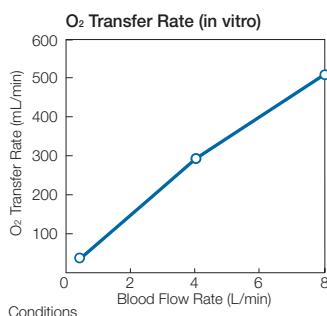


Conditions
Blood = Bovine
Hb = 12 ± 1g/dL
Temp = 37 ± 1°C
pH = 7.4
Hb = 12 ± 1g/dL
PvCO₂ = 45 ± 5 mmHg
B.E. = 0 ± 5 mEq/L
Twi = 40 ± 1°C
Tbi = 30 ± 1°C
Water flow rate = 15 L/min

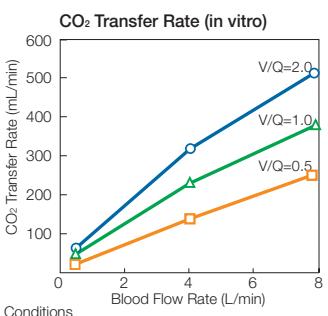


Conditions
Blood = Bovine
B.E. = 0 ± 5 mEq/L
Hb = 12 ± 1g/dL
Temp = 37 ± 1°C

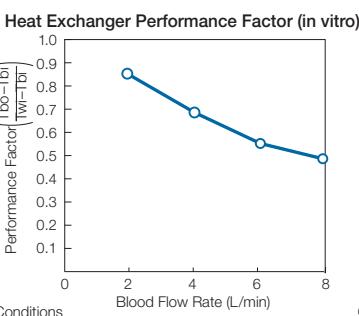
CAPIOX® FX25 Performance Data



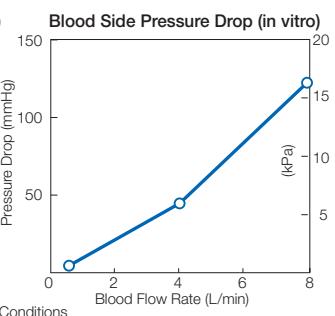
Conditions
Blood = Bovine
Hb = 12 ± 1g/dL
Temp = 37 ± 1°C
pH = 7.4
SvO₂ = 65 ± 5%
PvCO₂ = 45 ± 5 mmHg
B.E. = 0 ± 5 mEq/L
V/Q = 1.0



Conditions
Blood = Bovine
Hb = 12 ± 1g/dL
Temp = 37 ± 1°C
pH = 7.4
SvO₂ = 65 ± 5%
PvCO₂ = 45 ± 5 mmHg
B.E. = 0 ± 5 mEq/L
V/Q = 1.0



Conditions
Blood = Bovine
Hb = 12 ± 1g/dL
Temp = 37 ± 1°C
pH = 7.4
Hb = 12 ± 1g/dL
PvCO₂ = 45 ± 5 mmHg
B.E. = 0 ± 5 mEq/L
Twi = 40 ± 1°C
Tbi = 30 ± 1°C
Water flow rate = 15 L/min



Conditions
Blood = Bovine
B.E. = 0 ± 5 mEq/L
Hb = 12 ± 1g/dL
Temp = 37 ± 1°C

Holder Systems

CAPIOX® FX05 Oxygenator



XX*CXH05R



XX*CXH05

CAPIOX® FX15 and CAPIOX® FX25 Oxygenators



XX*XH18R



XX*XH032



XX*CXH15

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 – 4.0 L/min (with R30)	0.5 – 7.0 L/min
Reference blood flow (AAMI std.)	2.5 L/min	7.0 L/min	N/A
Priming volume (static)	43 mL	144 mL	260 mL
Blood inlet port (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	N/A	1/4" (6.4 mm)	
Luer port (for recirc. or blood cardioplegia)	One luer lock 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)	Hansen quick-connect fittings	
Maximum pressure Blood inlet	1000 mmHg (133 kPa)		
Maximum pressure Water inlet	2 kgf/cm ² (196 kPa) (28.5 psi)		

Arterial Filter		
Filter material	Polyester screen type	
Pore size	32 µm	
Surface area	130 cm ²	360 cm ²
		600 cm ²

Ordering Information

Catalog #	Description	Unit/Cases
CAPIOX® FX05 Oxygenator		
CX*FX05W	Oxygenator with integrated arterial filter ¹	4
CX*FX05E	Oxygenator with integrated arterial filter ¹	4
CX*FX05RW	Oxygenator with integrated arterial filter/ hardshell reservoir ²	4
CX*FX05RE	Oxygenator with integrated arterial filter/ hardshell reservoir ²	4
CAPIOX® FX15 Oxygenator		
CX*FX15W	Oxygenator with integrated arterial filter ³	4
CX*FX15E	Oxygenator with integrated arterial filter ³	4
CX*FX15RW30	Oxygenator with integrated arterial filter/ hardshell reservoir ⁴	2
CX*FX15RE30	Oxygenator with integrated arterial filter/ hardshell reservoir ⁴	2
CX*FX15RW40	Oxygenator with integrated arterial filter/ hardshell reservoir	2
CX*FX15RE40	Oxygenator with integrated arterial filter/ hardshell reservoir	2
CAPIOX® FX25 Oxygenator		
CX*FX25W	Oxygenator with integrated arterial filter	4
CX*FX25E	Oxygenator with integrated arterial filter	4
CX*FX25RW	Oxygenator with integrated arterial filter/ hardshell reservoir	2
CX*FX25RE	Oxygenator with integrated arterial filter/ hardshell reservoir	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 R30 (for FX15)	R40 (for FX15)	FX25
Blood flow range				
Venous flow	0.1 – 1.5 L/min	0.5 – 4.0 L/min	0.5 – 5.0 L/min	0.5 – 7.0 L/min
Cardiotomy inlet	N/A	Max. 4.0 L/min	Max. 5.0 L/min	Max. 5.0 L/min
Combined flow	N/A	Max. 4.0 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 kPa)			

Catalog #	Description	Unit/Cases
Holders for CAPIOX® FX Oxygenators		
XX*CXH05	Holder for FX05 oxygenator	1
XX*CXH05R	Holder for FX05 oxygenator with hardshell reservoir	1
XX*CXH05AD	FX05 adapter for SX holder	1
801139	Holder for FX15/25 oxygenator with hardshell reservoir (short arm)	1
801804	Holder for FX15/25 oxygenator with hardshell reservoir (long arm)	1
XX*CXH15	Holder for FX15/25 oxygenator	1
XX*CXH25F	Holder for FX15/25 oxygenator when separated from reservoir	1
XX*CXH18R	Holder for FX15/25 oxygenator with hardshell reservoir	1
XX*XH032	Holder for FX15/25 oxygenator with hardshell reservoir, short arm	1

1 Contains 2 adapters 3/16" – 1/4", 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"



Terumo Corporation
+81 3 3374 8111

Terumo Cardiovascular Group
+1 734 663 4145

Terumo Europe NV
+32 16 38 12 11

EMEA SALES OFFICES

Terumo Europe NV
Africa Business Division
+32 16 38 13 08

Terumo Europe NV
Benelux Sales Division

Belgium: 0800 14468
The Netherlands: 0800 0231938

Terumo Europe NV
Emerging Market Division
+32 16 38 12 11

Terumo Deutschland GmbH

+49 6196 80 230

Terumo Deutschland GmbH
Switzerland

+41 56 419 10 10

Terumo Europe España SL

+34 902 10 12 98

Terumo France S.A.S.

+33 130 96 13 00

Terumo Italia S.r.l.

+39 06 94 80 28 00

Terumo Russia LLC

+7 495 988 4740

Terumo Sweden AB

+46 3174 85 880

Terumo Sweden AB Denmark

+45 7020 93 80

Terumo Middle East FZE

+971 4 292 0200

Terumo UK Ltd

+44 1276 480 440

Terumo BCT Tibbi Cihazlar Dagitim ve Hizmetleri A.Ş.

+90 216 645 92 00

Addresses subject to change,
please consult our website.

www.terumo-europe.com

