B BRAUN
SHARING EXPERTISE

NEW WITH OPTIONAL AIRSTOP

Cyto-Set™ IV Set

Advanced preparation and administration of hazardous drugs

COMMON CHALLENGES

CHALLENGES IN HAZARDOUS DRUG ADMINISTRATION

Treatment with hazardous drugs is one of the most challenging processes in infusion therapy. Healthcare workers face many risks when preparing, transporting, administering and disposing of hazardous drugs. That is why B. Braun has designed Cyto-Set® to be effective in the handling of hazardous drugs, efficient in its delivery and to offer a high safety standard for use from preparation in the pharmacy to administration and disposal.

Cyto-Set is a single-use, sterile infusion system designed as a closed system for the administration of multiple hazardous drugs. Cyto-Set Mix for the admixture of drugs in the pharmacy, Cyto-Set Infusion for gravity administration and Cyto-Set Infusomat® Space® for infusion via a pump are designed to reduce the challenges of administering hazardous drugs.

PATIENT & HEALTHCARE WORKER SAFETY

EXPENSE MANAGEMENT

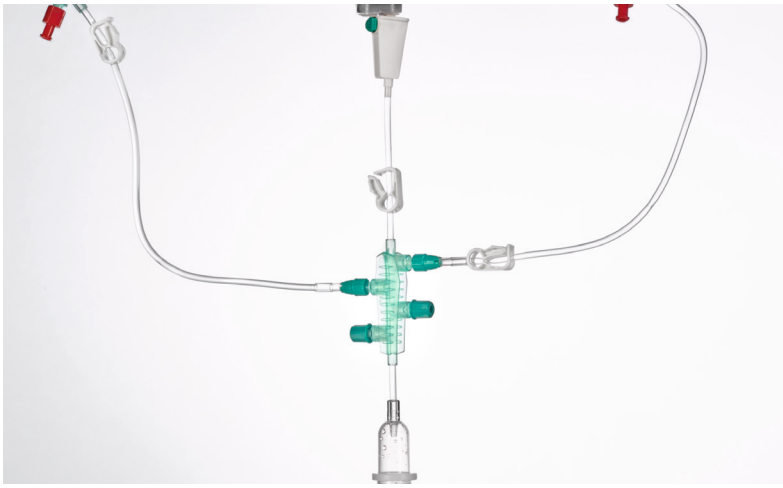
WORKFLOW EFFICIENCY

Cyto-Set™ IV Sets

PATIENT AND HEALTHCARE WORKER SAFETY

Cyto-Set has many product features that are designed to protect both clinicians and patients during the administration of hazardous drugs.

- Integrated backcheck valves in the spike and needle-free valves of the grip plate reduce the risk of drug leakage, protecting clinicians and patients from exposure to hazardous drugs.[1]
- The audible click confirms a tight connection between the secondary line and the grip plate on the main line.
- The optional AirStop filter is designed to only allow fluid to pass and reduces the risk of air in the line.[2]
- Cyto-Set is not made with diethylhexyl phthalate (DEHP) or polyvivyl chloride (PVC).
- Cyto-Set is available in UV light-protective tubing to better meet the needs of photosensitive cytotoxic drugs.



WORKFLOW EFFICIENCY

Cyto-Set is designed to be a closed infusion system according to NIOSH.[1]

- The PrimeStop cap on Cyto-Set allows the secondary lines and the main line to be primed with saline before administering hazardous drugs.[3]
- When primed first, the PrimeStop cap on the secondary line and the needle-free valves on the grip plate reduce the risk of microbial contamination and exposure to hazardous drugs when connecting a seconday line to the main line.[3]
- The 90° angle of the Cyto-Set grip plate allows a nurse to clearly distinguish between multiple secondary lines and is designed to reduce the risk of mistaking drugs within a therapy.

EXPENSE MANAGEMENT

Hazardous drug administration represents a substantial cost to hospitals. Cyto-Set can help manage the expenses associated with hazardous drugs.

- The flow rate of the needle-free valve is 320 ml/min.[4] This allows for faster infusion of solutions, where indicated.
- Cyto-Set secondary lines run empty to help ensure that that the entire secondary fluid container is being administered during treatment.

Risk Reduction with Cyto-Set™ IV Set

Clinicians are frequently exposed to the risks of hazardous drugs during their delivery

Cyto-Set Mix and Cyto-Set Infusomat Space are available in UV light-protective tubing.

Common cytotoxic drugs that require light-protection during administration[6]	
Vincristine	Ifosfamide
Bleomycin	Cisplatin
Dacarbazine	Etoposide
Fotemustine	Vinblastine
Methotrexate	Pentostatin

MICROBIAL CONTAMINATION

The hydrophobic, bacteria-retentive PrimeStop cap on the patient connector reduces the risk of microbial contamination.[3]

The 0.2 Sterifix® filter is available as an option on Cyto-Set seconday lines and Cyto-Set Infusomat Space.

DEHP EXPOSURE

Cyto-Set main lines and secondary lines are not made with PVC or DEHP.

EXPOSURE TO HAZARDOUS DRUGS

The sealing disc in the needle-free valves are designed to prevent spillage thereby reducing the risk of exposure to hazardous drugs.[1]

DRUG INCOMPATIBILITY

Integrated back check are designed to reduce reflux, thereby reducing the risk of unintended drug mixture.[7]

MEDICATION ERROR

The 90° angles of the needle-free valves on the grip plate help to clearly distinguish secondary lines which can reduce the risk of mistaking the drugs within the therapy.

PARTICULATE CONTAMINATION

The optional15 µm filter in the drip chamber is designed to reduce the infusion of particles greater than or equal to 15 µm.[5] Available on select Cyto-Set main lines.

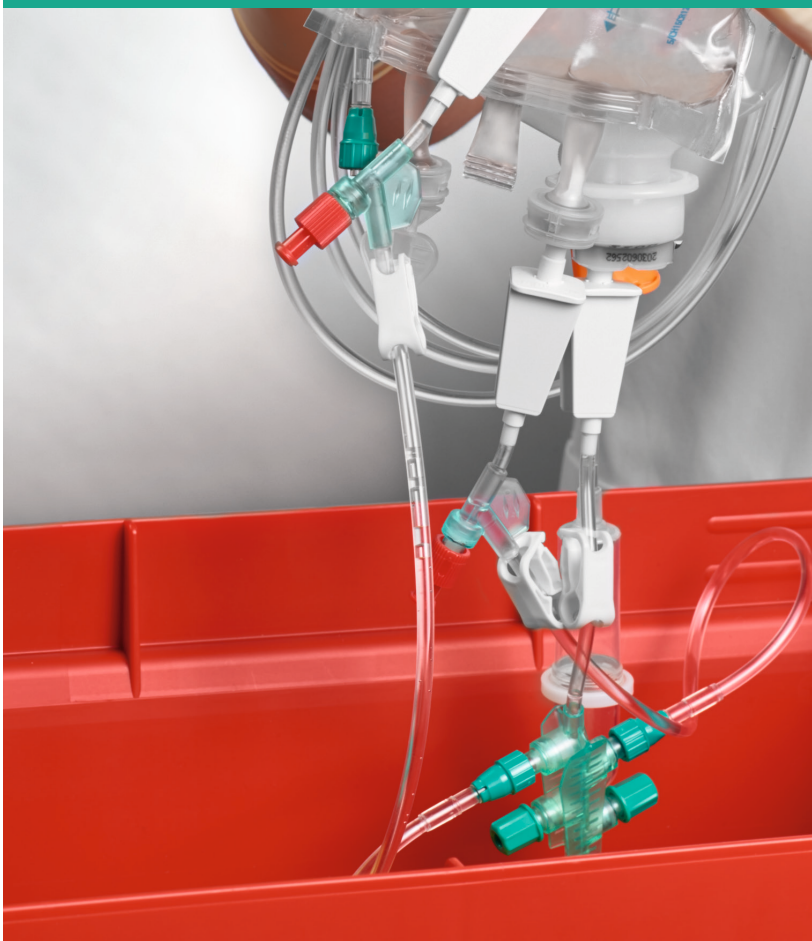
SHARPS INJURY

The needle-free valves on Cyto-Set Mix provide needle-free access during the drug admixture process, eliminating the risk of needlestick injuries.[8]

AIR EMBOLISM

Optional Airstop filter is designed to protect against air infusion and filters down to 0.2 µm.[2]

No disconnection between the main line and secondary lines during the treatment or afterwards is needed to dispose of the system.



A Closed System Design

INNOVATION IN DESIGN AND TECHNOLOGY

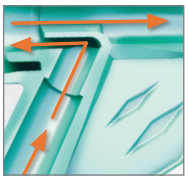
The improved design of Cyto-Set® offers new features that contribute to a higher level of patient and user safety. In addition, these new features are designed to increase the usability of the IV set.

Cyto-Set is a closed system as defined by NIOSH guidelines. Its valve-protected connection between the main line and the secondary line prevents the escape of hazardous contaminants into the adjacent environment.[1]

CLOSED SYSTEM

Cyto-Set Product Details

PrimeStop Cap
The PrimeStop Cap filter functions as a microbial barrier.[3]



Integrated fluid path designed with minimal dead space.

Optional 15 µm filter

Optional AirStop filter

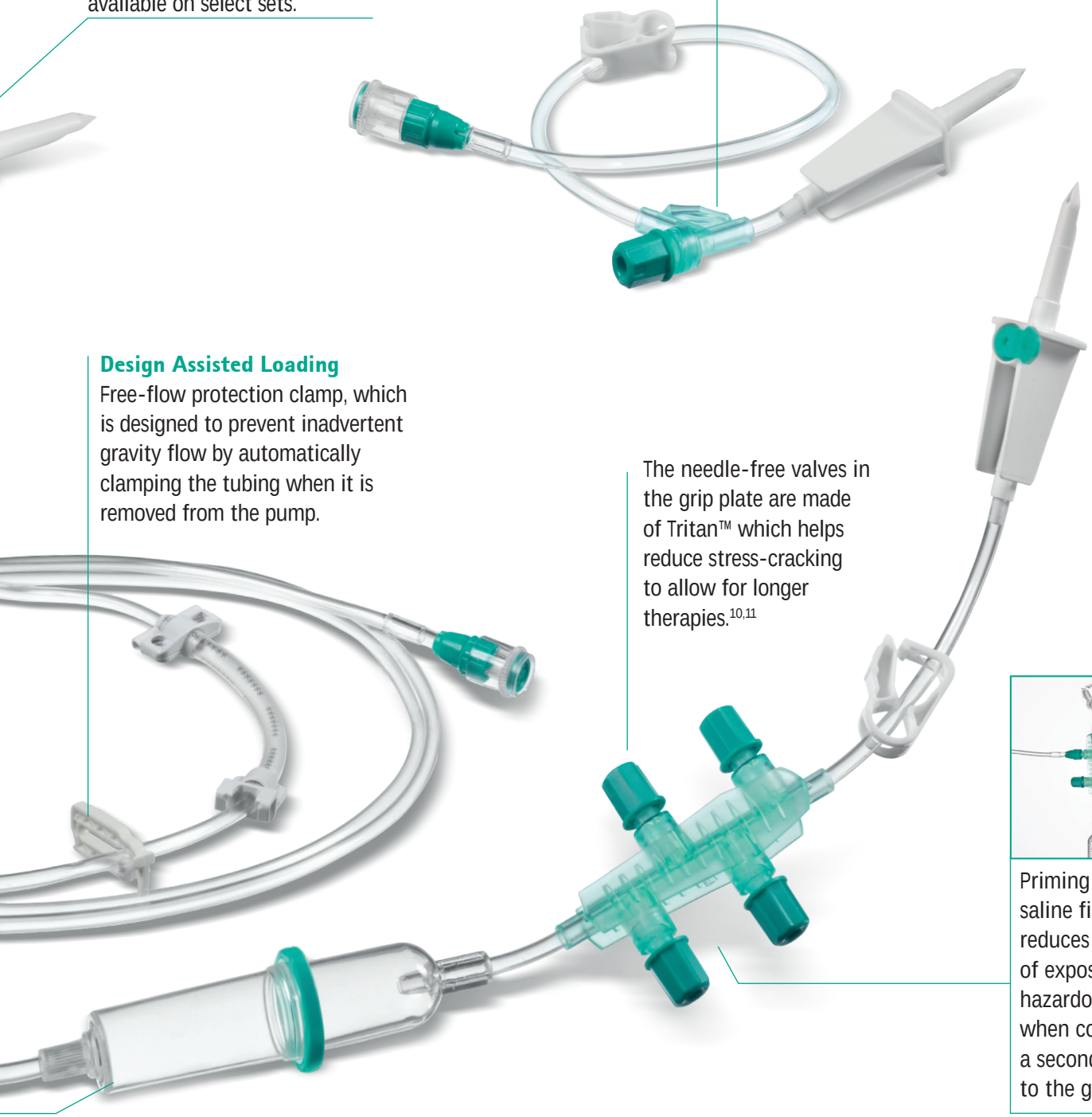
The 15 µm filter is indicated by a white ring on the drip chamber. The AirStop filter is indicated by a green ring on the drip chamber. Both are available in Cyto-Set Infusomat Space and Cyto-Set Infusion.

Air Vent Filter in the Spike

The bacterial and viral filter paper efficiency is higher than 99.99%![9] Vented spike with air vent filter is available on select sets.

Needle-free Valve

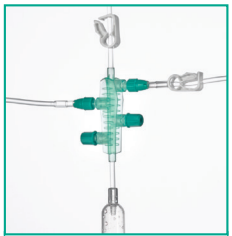
The ergonomically designed finger stopper and finger grip help to reduce the risk of touch contamination.



Design Assisted Loading

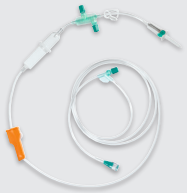
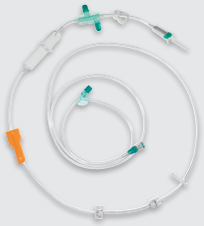
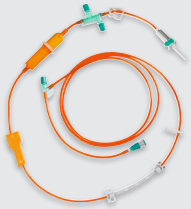
Free-flow protection clamp, which is designed to prevent inadvertent gravity flow by automatically clamping the tubing when it is removed from the pump.

The needle-free valves in the grip plate are made of Tritan™ which helps reduce stress-cracking to allow for longer therapies.[10,11]



Priming with saline first reduces the risk of exposure to hazardous drugs when connecting a secondary line to the grip plate.

Product Portfolio

Cyto-Set™ IV Set	Product	Type	Light Protection	AirStop	Priming Volume [cm³] = [mL]	Length in cm	Code No. (REF) Box of 20
	Preparation						
	Cyto-Set Mix	with 1 needle-free valve	–	–	3.0	32	A2900N
		with 1 needle-free valve, with 0.2 µm filter	–	–	5.6	32	A2903N
		with 1 needle-free valve	■	–	3.3	32	A2906N
	Cyto-Set Line	without needle-free valve	–	–	2.8	30	A2581NF
		without needle-free valve, with 0.2 µm filter	–	–	5.3	32	A2582NF
	**Application (Gravity)**						
	Cyto-Set Infusion	with 3 needle-free valves	-	-	26.5	215	A1687
		with 5 needle-free valves	-	-	26.8	215	A1686SNF
		with 3 needle-free valves	-	■	26.6	215	A1688
		with 5 needle-free valves	-	■	26.8	215	A1687SNF
	Application (Pump) Infusomat® Space®						
	Cyto-Set Infusomat® Space®	with 3 needle-free valves	–	-	27.3	210	8250917SP
		with 3 needle-free valves	–	■	27.3	210	835917SP
		with 5 needle-free valves	–	-	27.6	210	8250817SP
		with 5 needle-free valves	–	■	27.6	210	835817SP
		with 3 needle-free valves	■	-	27.3	210	8250920SP
		with 3 needle-free valves	■	■	27.3	210	835920SP
		with 5 needle-free valves	■	-	27.6	210	8250820SP
		with 5 needle-free valves	■	■	27.6	210	835820SP
		with 5 needle-free valves, with 0.2 µm filter	–	-	31.0	225	8250414SP
		with 5 needle-free valves, with 0.2 µm filter	–	■	31.0	225	835414SP
	Cyto-Set Pump Adapter	4 needle-free valves	–	-	3.0	15	A1673SO

1 Abstract - Closed system test by means of Sodium Fluorescein signed by Dr. rer. nat. J. Brünke Quality Labs BT GmbH Nuremberg, Report 1816.3, 01.09.2015. 2 Peripherven̈öse Schwerkraftinfusionen - Intrafix® SafeSet mit Vorteilen gegenüber herkömmlichen Infusionssystemen written by lic. rer. pol. Andreas Frei, Die Schwester Der Pfleger 43. Jahrg. 5/04. 3 Dr. rer. nat. J. Brünke (2018). Test Report-Microbial Barrier Testing by means of Bacterial Aerosol Contamination. Quality Labs BT GmbH Nurember, Report 20018-0006. 4 Data on file. 5 Confirmation ISO Standard - ISO 8536-4 signed by Gudrun Henke an d Caroline Führ, 01.02.2017 6 Sanchez-Quiles, Farm Hosp. 2011; 35(4):204-215. 7 Flow rate test (2012). F.101-0188.05-VAL-RD-IVS-000755. Data on file. 8 American Nurses Association – Independent Study Module: Needlestick Safety and Prevention written by Mary Foley, MS, RN and Annemarie T. Leyden, EdD, RN. 9 Dr. Heyer H (2015). Laboratory Test Report: BFE / VFE Filter paper 6739680. 10 Haep ST, Reinders G, Tuerk J (2014). Test on stress cracking corrosion with drug solutions. Technical Report No. 141202 B. Abstract 11 Haep ST, Tuerk J (2019). Product resistance test. Technical Report No. F 19/600. Abstract.

B. Braun of Canada Ltd. | Mississauga, ON
1-855-882-7286 | BBraun.ca