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1. How much will the Impulse Valve cost?
  - a. The Impulse Valve will be offered at the same list price as the current GCA and SAV containers.
2. How does it work?
  - a. The Impulse Valve is a brass-bodied valve that threads on to the clean agent container. It houses an inverted, reverse-acting, rupture disc that is struck by a pin upon activation.
3. What does it look like?



- i.
4. When is it coming out?
  - a. Fike will begin accepting orders for the Impulse Valve during April 2010.
5. How long will I be able to get GCA/SAV valves?
  - a. Fike will accept orders for GCA and SAV valves for a 90-day transition period after the launch of the Impulse Valve. After that time GCA and SAV valves will be available with permission from your Fike Regional Manager for the following special situations:
    - i. Replacing and existing GCA cylinder
    - ii. Adding to existing GCA systems
    - iii. Fulfilling existing quotations submitted to your customer before March 2010
6. Will Impulse Valve require a new flow calculation?
  - a. When designing for an Impulse Valve clean agent system, the appropriate Impulse Valve container must be selected in the flow calculation software. The Impulse Valve containers have different part numbers and slightly different flow characteristics than the GCA and SAV valves so systems must be designed with the appropriate cylinder in the flow calculation software.
7. Will I have to buy new flow calcs? How much will it cost?
  - a. Both the FM-200 and ECARO-25 flow calculation software updates will be available for download from the Fike forums website free of charge.
    - i. The FM-200 software will still require the software key from Hughes and Associates. The key you are currently using with version 3.01 will work with the new version 3.02.
8. Will the container sizes be the same?
  - a. The 125i and 215i inverted containers will no longer be available. The new 150-lb container is available in an inverted configuration as a substitute.
  - b. All other container sizes, including their internal volumes, will be the same.

- c. The Impulse Valve containers will carry new part numbers.
- 9. Will I be able to get a 125i or a 215i inverted container with a threaded GCA valve?
  - a. No. Due to the small number of inverted containers in the field. Fike will not offer inverted containers with threaded GCA valves. Once our stock of welded cylinders has run out, we will not produce any more.
- 10. Will I be able to get GCA/SAV reload kits?
  - a. Yes. GCA and SAV reloads kits will still be available to service existing clean agent containers.
- 11. Will I still be able to get GCA's?
  - a. Yes. GCA's will still be available to service existing containers.
- 12. Will I still be able to get Nitrogen Actuators?
  - a. Yes. Master and Slave Nitrogen Actuators will still be available as replacement parts for existing systems.
- 13. Will I need to re-calc if I use a threaded GCA/SAV valve?
  - a. No. There is no difference between the welded and threaded GCA and SAV valves as far as the flow calculation is concerned. You will not need to re-run a flow calc to accommodate a threaded GCA or SAV valve. You will only need to re-run flow calcs if you are converting an existing GCA or SAV calc to the Impulse Valve.
- 14. What's so great about Impulse Valve? What's in it for me?
  - a. No more GCA's and the shipping problems that go along with it.
  - b. The new actuation device, the Impulse Valve Operator (IVO), is resettable so it will not need to be replaced after activation.
  - c. The IVO has no shelf life and does not need to be replaced after 10 years.
  - d. The Impulse Valve Operator (IVO) will provide a manual method for discharging containers.
  - e. A discharge pressure switch is available.
  - f. The Impulse Valve Operator (IVO) can be removed from the clean agent container and test fired without the use of flashbulbs.
  - g. The Liquid Level Indicator (LLi) is included as standard equipment on all containers with a 3" (80-mm) valve sizes 150-lb (61-L) and up.
- 15. How hard is it to refill?
  - a. After activation, an Impulse Valve container is reconditioned by replacing the rupture disc, friction ring and an o-ring. Please refer to the recharge manual (p/n: 06-290) for further information.
- 16. Do I need to order a different reload kit for Impulse containers with ECARO-25 vs. FM-200?
  - a. No. The Impulse reload kits are not agent specific. You only need to know what size valve you are reconditioning. The 1" (25-mm) valve is used on the 5-lb thru 100-lb (2-L thru 44-L) containers. The 3" (80-mm) valve is used on the 150-lb thru 1000-lb (61-L thru 423-L) containers.
- 17. What happens to my UL Initial Fill Station status?
  - a. If you are currently participating as a UL Initial Filling station for FM-200 and ECARO-25, you will be able to initial fill the Impulse containers as well. Please refer to the current version of the UL Initial Fill Station Manual (p/n: 06-124 rev3).
- 18. Will a discharge pressure switch be available?
  - a. A clean agent discharge pressure switch is available and will be required on all systems that use the Impulse Valve Operator (IVO) that have the red manual actuation button installed. This allows the control panel to know that the system has been released and to activate the appropriate notification devices and shut down the necessary equipment.
- 19. Do I need a pressure gauge adaptor?
  - a. The pressure gauge adaptor is built in to the Impulse Valve body. The pressure gauge port is designed to slowly leak pressure from the container which allows the pressure gauge to be replaced without first emptying the container. Please note that either a pressure gauge or a plug should be installed in the pressure gauge port at all times to prevent agent from slowly leaking over time.

20. Do I need new filling tooling for threaded GCA/SAV cylinders?
  - a. A new wrench to hold the threaded valves in place while removing the hold-down nut will be required.
    - i. 1" (25-mm) threaded GCA/SAV valve wrench p/n: S70-114
    - ii. 3" (80-mm) threaded GCA/SAV valve wrench p/n: 02-12734
  - b. The threaded GCA and SAV containers will use the same core removal and core depressor tools.
21. Do I need new filling tooling for Impulse Valve cylinders?
  - a. Yes. New filling tooling will be required for the Impulse valves:
    - i. Core Removal Tool p/n: 70-282
    - ii. Core Depressor Tool p/n: 70-281
    - iii. Hold-Down Nut Spanner Wrench p/n: 70-2153-100
    - iv. Impulse Valve Wrench p/n: 02-12682
  - b. All four of the above items will be used on both sizes of the Impulse Valve.
22. Can I use any fire panel to release an Impulse Valve?
  - a. The Impulse Valve must be connected to a Fike fire suppression releasing panel such as the Cheetah Xi or SHP Pro. The series firing circuit from the control panel connects to the Impulse Releasing Module (IRM) and the IRM connects to the Impulse Valve Operator (IVO).
23. How do I convert existing GCA/SAV flow calcs to Impulse Valve?
  - a. You will first need to download and install the current version of the appropriate flow calculation software (ECARO-25 v4.00, FM-200 v3.02). Open the existing flow calculation file, choose the Impulse Valve container set, select the appropriate sized Impulse container and re-run the flow calculation. The flow characteristics of the Impulse containers are very similar to those of the GCA and SAV valves. Nozzle codes may vary, but the majority of the piping sizes should remain the same.
24. Will the warranty be affected?
  - a. The standard Fike equipment warranty will apply to the Impulse valve and its components.
25. Will the nozzles change?
  - a. No. The introduction of the Impulse valve has no effect on the clean agent nozzles.
26. Where can I get manuals and other information regarding the Impulse Valve?
  - a. All information Impulse related is available on the [www.Fike.com](http://www.Fike.com) website.
27. Will I lose my Fike ECARO-25 or FM-200 design certification?
  - a. No. You will not lose your ECARO-25 or FM-200 Fike design certification. The basic principles of clean agent design still apply, it is only a hardware change.
28. Is it UL and FM approved? Any other approvals?
  - a. Fike clean agent suppression systems utilizing the Impulse valve technology carry UL listing and FM Approvals.
29. Can I convert a GCA or SAV valve to an Impulse valve?
  - a. No. You cannot convert a welded GCA or SAV container to the Impulse Valve. The welded GCA and SAV containers do not have the threads necessary to attach an Impulse Valve.
30. What differences, if any, will my installing technician need to be aware of when installing a new system with the Impulse Valve vs. the GCA or Solenoid Operated valves?
  - a. The installing technicians will need a complete understanding of the Impulse Valve releasing circuit. This includes the Impulse Releasing Module (IRM), the Impulse Valve Operator (IVO) and Impulse Valve Pneumatic Operator (IVPO).
31. What training is Fike providing for the Impulse Valve?
  - a. The new Impulse technology will be included in the already-scheduled training sessions for 2010.
  - b. During April 2010, Fike will host Impulse Valve sales and technical introduction training sessions in different regions around the US. More information will follow from your Regional Manager.
32. Do we need to train our whole technical staff?

- a. The entire technical staff need not attend the Fike sponsored training sessions occurring in April 2010.
- 33. Will Fike provide on-line tutorial training on the new Impulse Valve?
  - a. There are no plans to hold online training or provide video tutorials at this time.
- 34. Is the new valve/system City of New York approved?
  - a. The New York City Fire Department requires NYMEA Approvals for pre-engineered systems only. Even though pre-engineered systems are UL listed and FM approved for both ECARO-25 and FM-200, we will not pursue an approval from NYMEA. When designing a fire suppression system for the City of New York, you must engineer the system using the flow calculation software.
- 35. Can we get the new valve/containers in red? Is there a cost difference?
  - a. White is the standard container color but red is available on request. (Red containers subject to increase in pricing and lead time.)
- 36. Will I be able to release both an Impulse and a GCA on the same firing circuit?
  - a. Yes. The Agent Releasing Module (ARM) and the Impulse Releasing Module (IRM) will operate off the same releasing circuit of Fike control panels. It is possible to operate up to six IRM and ARM (Impulse and GCA) containers, in any combination. However, each style of container will need to have its own piping network.
- 37. Can I manifold a GCA and Impulse valve together?
  - a. No. Impulse and GCA containers cannot be tied into the same manifold. NFPA 2001 requires that all containers on a manifold need to be identical.
- 38. Can I manifold a threaded GCA and a welded GCA together?
  - a. Yes. Threaded and welded GCA containers can be placed on the same manifold. They are essentially the same.
- 39. Will the design software allow selection of the type of valve I will be using?
  - a. Yes. The new version of the flow calculation software will require you to choose which container to use. The software will default to the Impulse Valve container set. If you are designing a system for a GCA valve, you will have to change the hardware settings.
- 40. Can I use my existing temperature conversion charts for the Liquid Level Indicator (LLi)?
  - a. No. There are new LLi manuals for the Impulse Valve that contains charts that are different from the GCA LLi manuals. In the past, the length of the LLi was based on container size and the type of agent. Going forward, Fike has changed the length of some of the LLi's to standardize the length of the LLi based on container size alone.
- 41. Will there be new container CAD details available for the Impulse valve?
  - a. Yes. Impulse Valve container CAD details are available on the Fike forums (<http://forums.fike.com>). You must be a registered user to access them so, if you are not already a registered user, sign up today.
- 42. Does the new Impulse valve use the same ARM?
  - a. No. The Impulse Valve does not use the same Agent Release Module (ARM) as the GCA valves. The Impulse Valve uses a similar device, the Impulse Releasing Module (IRM).
- 43. Will the battery calculations be the same of the existing control panels?
  - a. Yes. The supervision currents are the same on both the Agent Release Module (ARM) and the Impulse Release Module (IRM). The battery calculations will not be effected.
- 44. If I require a container recharge can it be updated to the new Impulse valve?
  - a. No. You cannot convert a welded GCA or SAV container to the Impulse Valve. The welded GCA and SAV containers do not have the threads necessary to attach an Impulse Valve.
- 45. Why does the calc program have to be changed if we're still using a rupture disc value?
  - a. The Impulse Valve rupture disc is different than the GCA and SAV rupture disc. The reverse-acting Impulse rupture disc has a different equivalent length and therefore, it has different flow characteristics, which requires different flow calculation. The new

versions of the flow calculation programs contain Impulse Valve cylinder sets that must be selected.

46. What is the cost for a reload kit?
  - a. Please refer to the Impulse Valve Price Sheet for prices of the Impulse Valve components.
47. Should I recommend our customers upgrade to the new valve?
  - a. Fike recommends using the Impulse Valve for all new systems installed after March 1, 2010. Existing GCA systems need not be upgraded to the Impulse Valve because they would have to purchase a new container.
48. If I change out an old valve system for the new, will I have to change any pipe sizes? Nozzles too?
  - a. The flow characteristics of the Impulse containers are very similar to those of the GCA and SAV valves. Some nozzle codes may vary slightly, but the piping sizes should remain the same.
49. Will the new valve be as trouble free as the former? Potential failure points for leaks?
  - a. The new Impulse Valve will provide the same trouble-free operation as the GCA valve.
50. Can I field remove and install gauges, LPS?
  - a. The pressure gauge port is designed to slowly leak pressure from the container which allows the pressure gauge to be replaced without first emptying the container. Please note that either a pressure gauge or a plug should be installed in the pressure gauge port at all times to prevent agent from slowly leaking over time.
  - b. The low pressure switch is installed in the fill port of the Impulse Valve. It contains a Schrader core that must be depressed to open. This allows the low pressure switch to be changed out in the field without emptying the container.
51. Are any other suppliers of clean agent systems using anything similar to the Fike Impulse valve?
  - a. No other clean agent supplier uses this type of reverse-acting rupture disc technology.
52. Any benefit with the filling and mixing of N2 procedure with the new versus the old?
  - a. Yes. It will no longer be necessary to invert the 3" valve containers when super-pressurizing with nitrogen. The Impulse Valve fill port opens directly into the siphon tube so when the nitrogen is filled in the container, it will go down through the siphon tube and bubble up through the container.
53. Can my 150-lb (61-L) container be mounted upright and inverted?
  - a. You will need to indicate at the time of ordering if your 150-lb (61-L) container is intended for upright or inverted use. The upright containers will be assembled with a siphon tube in place. The inverted containers will not be assembled with a siphon tube and two labels will be affixed to indicate that they must be mounted in the inverted position.
54. Will the Impulse Valve rupture disc separate from the holder upon activation?
  - a. No. Extensive testing has proven that the reverse-acting Impulse Valve rupture disc will not separate from the holder during a discharge.