TECHNICAL BULLETIN

Design Program Upgrade Version 12.3

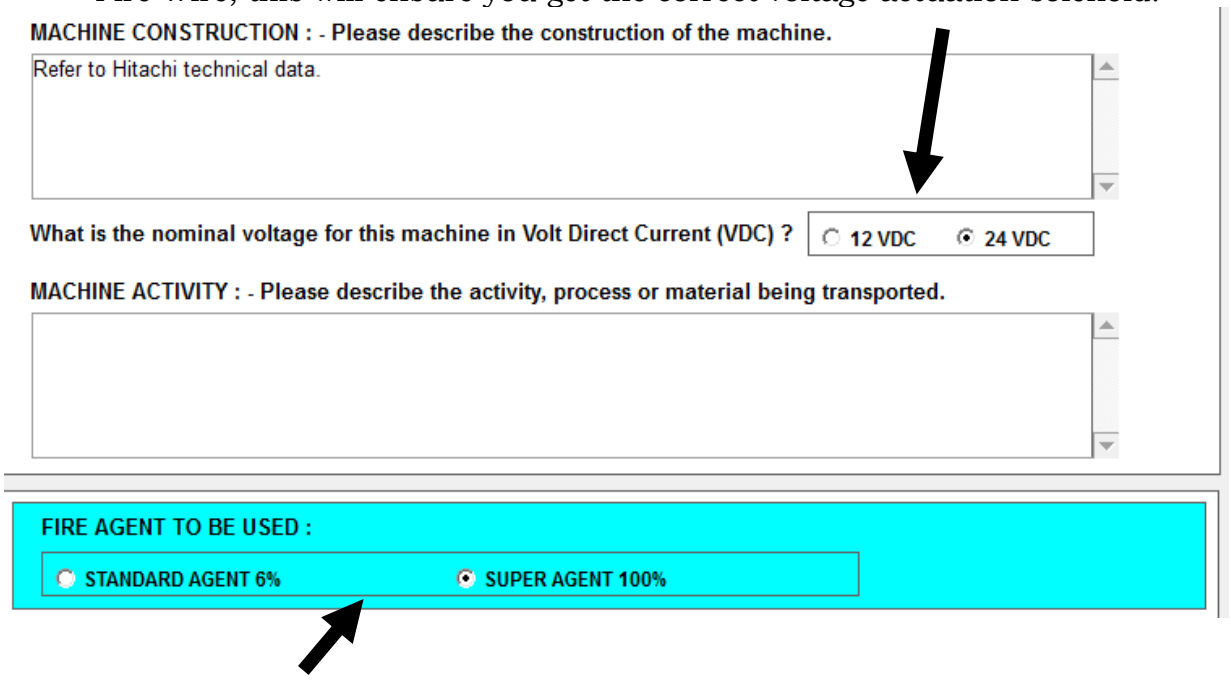
DISTRIBUTION TO :-
Existing designers of ETI Fire Systems using version 12.2.

After recent announcements of our new product releases, being Super Agent (Refer TB030 and Fire Wire (Refer TB031), I am pleased to announce that our proprietary software has been also updated with the changes. The enclosed email will advise the means of gaining a copy of version 12.3.

Please uninstall version 12.2 and simply install the new version. Activation and licensing procedures are unchanged.

The following are notes and advices apply on the changes from 12.2 to 12.3.

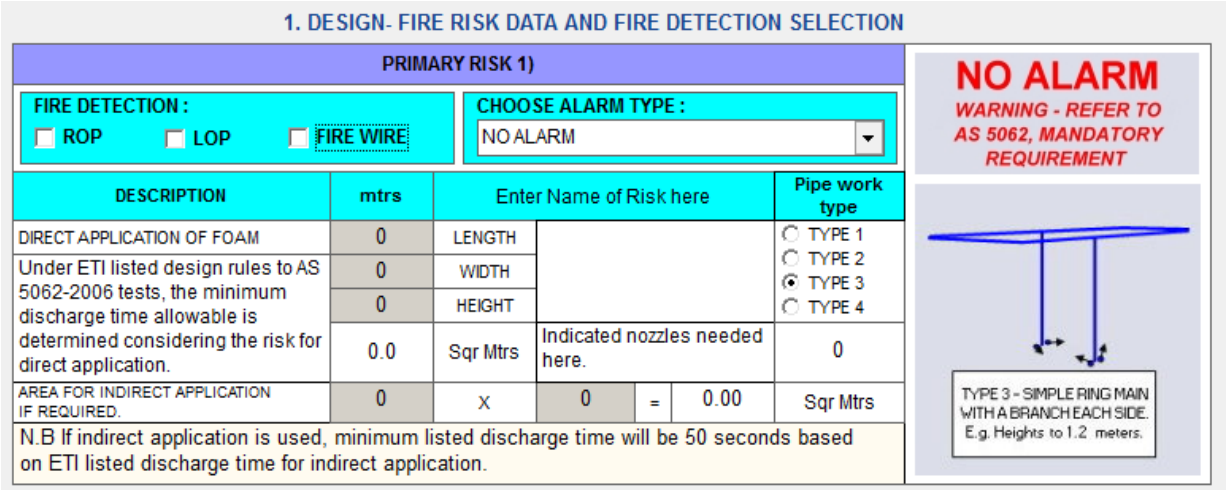
1) In APPLICATION SPECIFICATION – PAGE 2
   You are asked to nominate the battery voltage of the machine. If you order Fire Wire, this will ensure you get the correct voltage actuation solenoid.



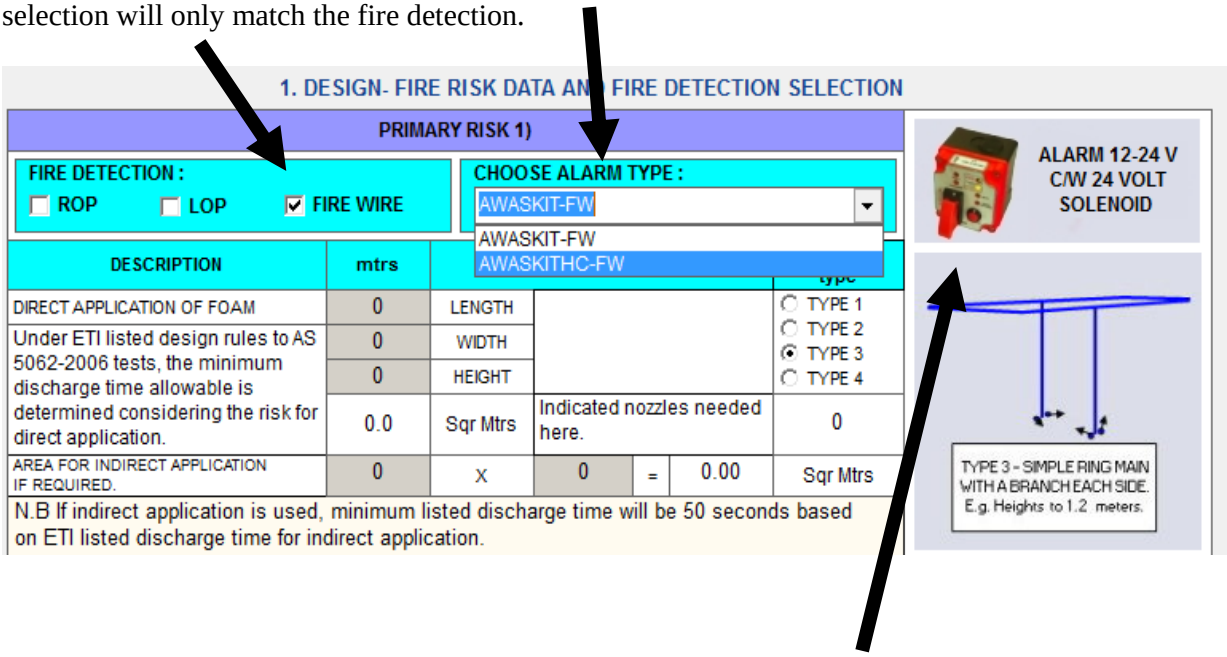
You are also asked which agent you are using. This is important because it will effect the allowable discharge times in design and will also change the part numbers to the selected agent type.

2) In BASIC DESIGN

You first must select what fire detection you are using!



When you do that, you must select the alarm that you plan to use. To avoid mistakes the available selection will only match the fire detection.



A picture will appear against the selection made just as a visual confirmation.

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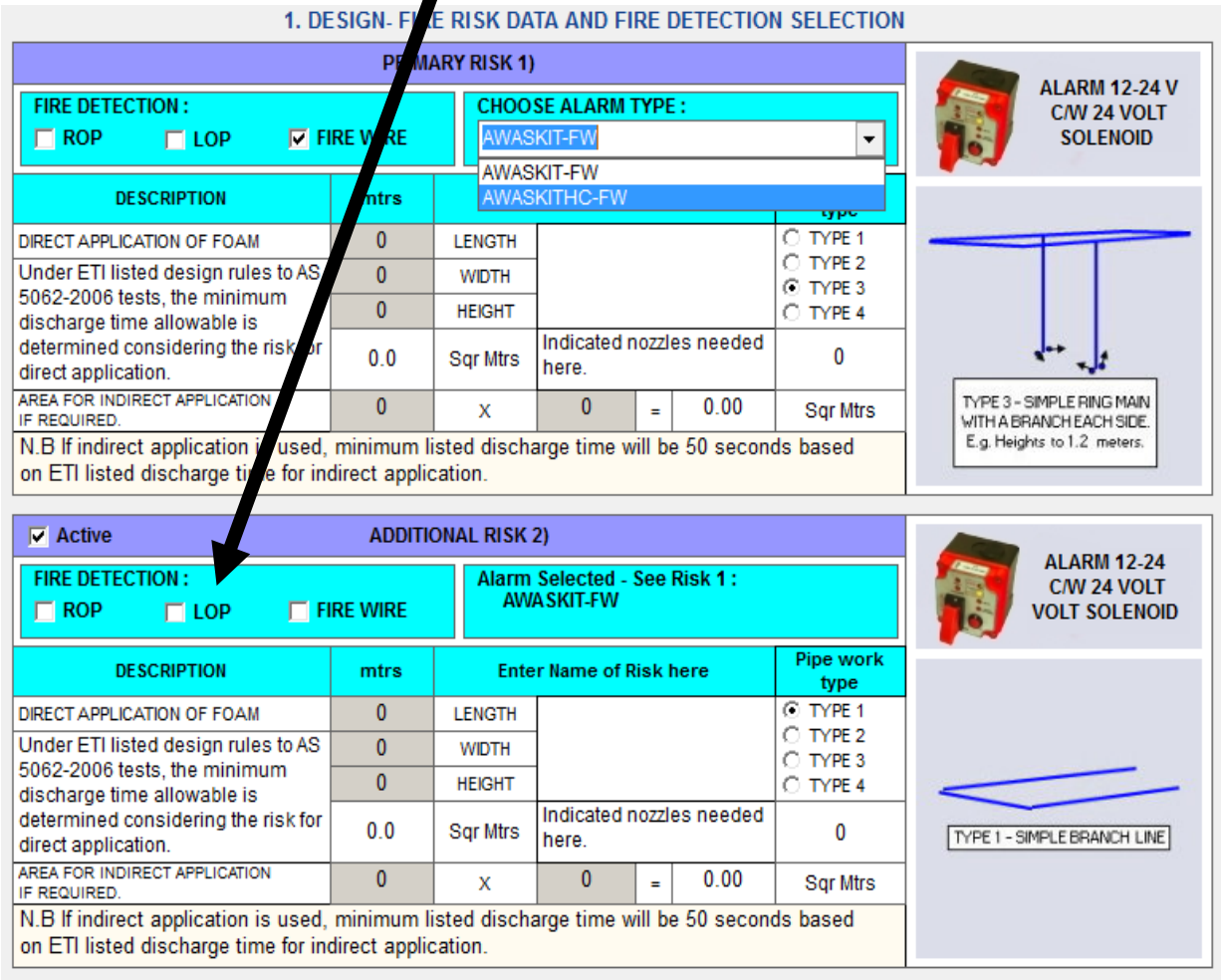
If more fire risk areas are added by clicking the “active” box, you can select fire detection if that is needed for that area, however the alarm being used is already nominated from Risk 1, so alarm cannot be changed here. It is however reconfirmed with the same picture.



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At the bottom of BASIC DESIGN is the TOTAL RISK SUMMARY where the important calculations are made for agent quantity, nozzle quantity and predicted discharge time. Here is where the alarm shutdown delay setting must now be nominated.

TOTAL RISK SUMMARY	CALC		AGENT SELECTED : SUPER AGENT 100%
Total Risk Area(s) - Direct Application	0.0	Sqr Mtrs	SHUTDOWN TIME ALLOWANCE: ○ 0 Sec ◉ 6 Secs ○ 12 Secs ○ 24 Secs
Total Minimum Foam Required	0	Litres	
Minimum Total Nozzles Required	0	0	PASS FOR MINIMUM NOZZLES
Area Allowance for Indirect Application	0.0	Sqr Mtrs	DESIGN ALLOWANCE - INDIRECT AREA.
Min. allowable discharge time, normally	31	31	DESIGN DISCHARGE TIME MIN PASS
Extra Foam Required for Indirect Application	0	Litres	EXTRA FOAM FOR INDIRECT AREA.
Extra Foam if cylinders Horizontal	0.0	Litres	20% if applicable
Total MINIMUM Foam Required for this Design	0	Litres	Adjusted for rounding up from nozzle count.

WARNING : The minimum discharge time is based on live fire testing by ETI to AS5062-2006. Engine shutdown time allowance is added to the minimum extinguishing time to allow for reduced performance before the engine is stopped.
In case where the space available restrics the size of agent container, ETI Super Agent should be used with no less than 25 seconds discharge.

A slight change to minimum discharge time rule will now apply. The time estimated to achieve engine shutdown will be added to the absolute design minimum. Above, the new Super Agent has a minimum discharge time of 25 seconds, however the selected 6 seconds for engine shutdown has been added to this. This is intended to keep designs on the conservative side of absolute minimums, allowing for the disruption to fire fighting effect that may be caused while the engine is still running.

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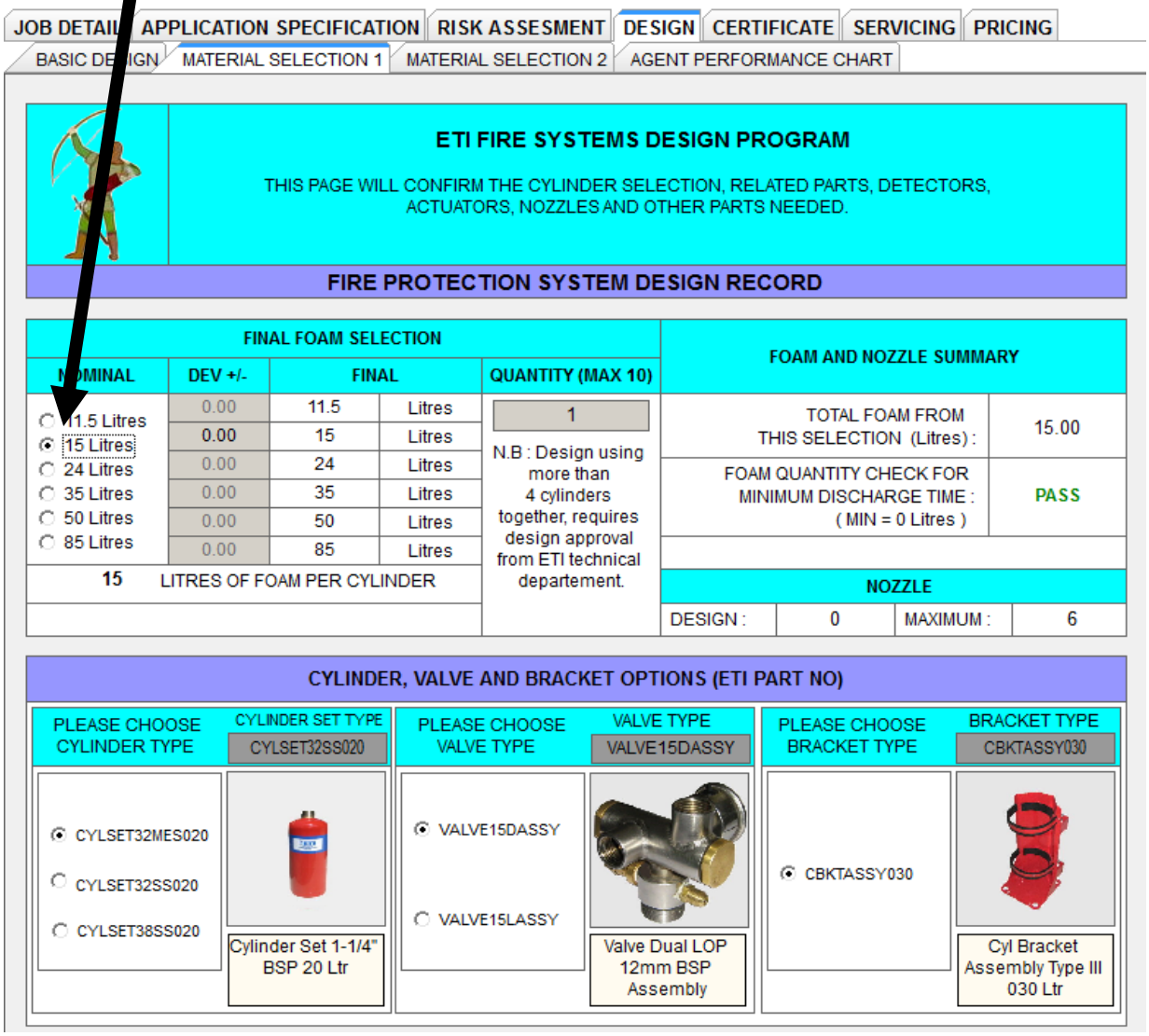
3) In DESIGN – MATERIAL SELECTION 1

There is a new cylinder now available. It has a fill capacity of 15 liters of agent with a total volume of 20 litres.



This cylinder is the same diameter as the 30 liter cylinder at 230mm but is considerably shorter. It uses the same bracket as the 30 Liter making inventory simpler.

Please note also that the 30 Liter and 20 Liter Cylinders are unique in they have options to fit any size valve made by ETI.

1) Order CYLSETMES( ) for small series ½" outlet ported valves, M-30 Inlet.
2) Order CYLSET32 ( ) for standard series ¾"outlet ported valves, 1 ¼" Inlet.
3) Order CYLSET38 ( ) For special orders for 1" outlet ported valves, 1 ½" Inlet.

In this same section, the new Remote Electric actuator has been added. In the selection below, you see the manual actuation points is 2 in the comment box. This is because the Fire Wire Alarm has one actuation point on the alarm face added to the 1 remote electric actuator selected. This would give an all electric system. As per the technical bulletin, clear understanding of this and communication to the customer is needed. For example while the two electric actuation point work on battery backup when the engine is shutdown, isolating the machines battery may isolate the fire system entirely. This would be perfectly acceptable however if the risk assessment accepted that an engine fire is a remote possibility if the engine is not running!

SELECT REMOTE ACTUATORS AND FIRE DETECTION				
ETI PART NO	**DESCRIPTION**		**TOTAL**	**COMMENT**
VALVEMAN20LOPASSY	MANUAL ACTUATOR 20mm VALVE	☐	0	MANUAL VALVE ACTUATOR INCLUDED STANDARD
(SEE ALARM SELECTION)	ONE MANUAL ACTUATION ON ALARM		1	**TOTAL MANUAL ACTUATION POINTS = 2** **PASS** **MINIMAL 2 ACTUATION POINT**
REMACTUATORB	REMOTE ACTUATOR ASSEMBLY ROP	◉	0	
REMOTEBLOPI	REMOTE ACTUATOR LOP KIT	○	1	
REMOTELECT	REMOTE ACTUATOR ELECTRIC		1	
SOLES24V	EXTRA CYLINDER SOLENOID	0	EXTRA	**ELECTRIC ACTUATION SOLENOID VALVE**
	N.B : ONE STANDARD INCLUDED IN ALARM KIT	1	1	
NOTES ON REMOTE ACTUATORS :	AS 5062-2006 REQUIRES A MINIMUM OF (1) MANUAL ACTUATION POINT. IF CO2 IS USED A MINIMUM OF (2) POINTS IS REQUIRED. IF THE ELECTRIC FIRE WIRE SYSTEM IS USED, AN ELECTRIC SOLENOID ACTUATOR MUST BE FITTED TO EACH CYLINDER VALVE. ONE IS INCLUDED INTHE ALARM KIT. EXTRAS MUST BE ORDERED WHEN MORE THAN ONE AGENT CYLINDER IS USED			

Below shows an alternative arrangement for a Fire Wire installation where an ROP pneumatic remote actuator could be used if the customer wanted to at least ensure that the manual actuator still works if the battery is completely isolated. In this selection, the designer needs to ensure there is an normal alarm pressure switch on the manual actuation line. This is because the alarm still must be notified if someone uses a manual actuation point.

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VALVEMAN20LOPASSY	MANUAL ACTUATOR 20mm VALVE	☐	0	MANUAL VALVE ACTUATOR INCLUDED STANDARD
(SEE ALARM SELECTION)	ONE MANUAL ACTUATION ON ALARM		1	**TOTAL MANUAL ACTUATION POINTS = 2** **PASS** **MINIMAL 2 ACTUATION POINT**
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REMOTEBLOPI	REMOTE ACTUATOR LOP KIT	○	1	
REMOTELECT	REMOTE ACTUATOR ELECTRIC		0	
SOLES24V	EXTRA CYLINDER SOLENOID	0	EXTRA	**ELECTRIC ACTUATION SOLENOID VALVE**
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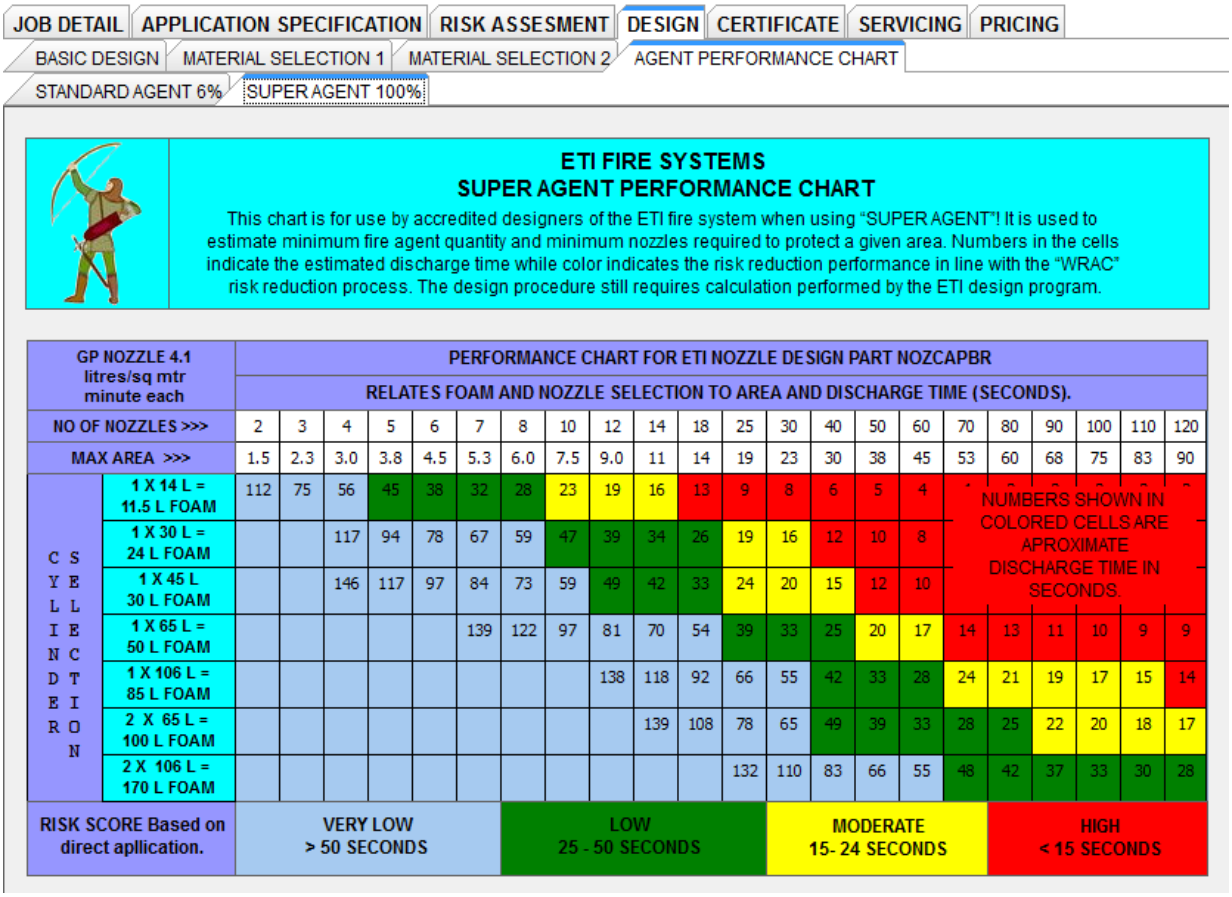
4) In the AGENT PERFORMANCE CHART area, there is now a second tab for SUPER AGENT. This is the same concept you have been trained on for the standard 6% agent which is still there on the adjacent tab. The new Super Agent chart reflects the much lower minimum discharge times listed for this product, and presents it in the same risk profile as our standard Workplace Risk Assessment and Control WRAC. Of course the design program already handles the design relationship between Area, No of Nozzles and the amount of Agent used in a design. These charts are intended to provide assistance in presentations and training or where an estimate needs to be made preliminarily before using the design program.



ETI FIRE SYSTEMS
SUPER AGENT PERFORMANCE CHART

This chart is for use by accredited designers of the ETI fire system when using "SUPER AGENT"! It is used to estimate minimum fire agent quantity and minimum nozzles required to protect a given area. Numbers in the cells indicate the estimated discharge time while color indicates the risk reduction performance in line with the "WRAC" risk reduction process. The design procedure still requires calculation performed by the ETI design program.

GP NOZZLE 4.1 litres/sq mtr minute each		PERFORMANCE CHART FOR ETI NOZZLE DESIGN PART NOZCAPBR RELATES FOAM AND NOZZLE SELECTION TO AREA AND DISCHARGE TIME (SECONDS).																					
NO OF NOZZLES >>>		2	3	4	5	6	7	8	10	12	14	18	25	30	40	50	60	70	80	90	100	110	120
MAX AREA >>>		1.5	2.3	3.0	3.8	4.5	5.3	6.0	7.5	9.0	11	14	19	23	30	38	45	53	60	68	75	83	90
CYLINDERS	1 X 14 L = 11.5 L FOAM	112	75	56	45	38	32	28	23	19	16	13	9	8	6	5	4	NUMBERS SHOWN IN COLORED CELLS ARE APROXIMATE DISCHARGE TIME IN SECONDS.					
	1 X 30 L = 24 L FOAM			117	94	78	67	59	47	39	34	26	19	16	12	10	8						
	1 X 45 L 30 L FOAM			146	117	97	84	73	59	49	42	33	24	20	15	12	10						
	1 X 65 L = 50 L FOAM						139	122	97	81	70	54	39	33	25	20	17	14	13	11	10	9	9
	1 X 106 L = 85 L FOAM									138	118	92	66	55	42	33	28	24	21	19	17	15	14
	2 X 65 L = 100 L FOAM										139	108	78	65	49	39	33	28	25	22	20	18	17
	2 X 106 L = 170 L FOAM												132	110	83	66	55	48	42	37	33	30	28
RISK SCORE Based on direct apllication.		VERY LOW > 50 SECONDS						LOW 25 - 50 SECONDS					MODERATE 15- 24 SECONDS					HIGH < 15 SECONDS					

Yours sincerely

L D Waldon

LEIGH WALDON
Technical Director