



LIQUID LEAK DETECTION SYSTEMS

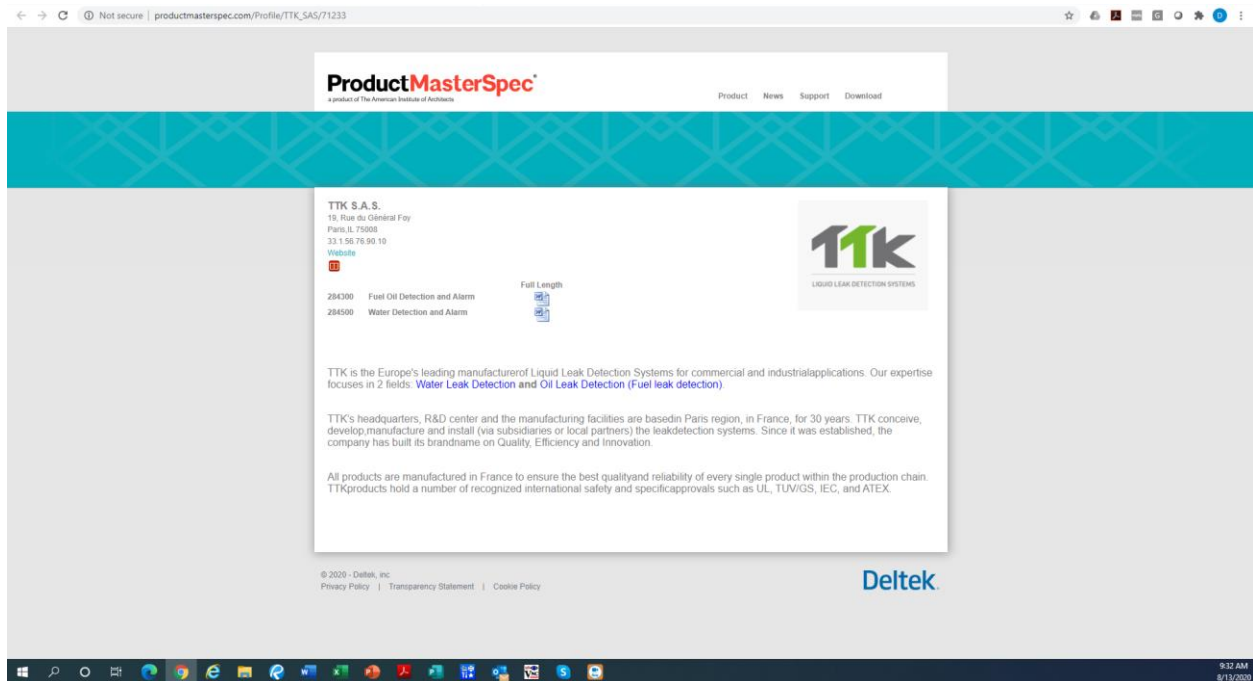
## **TTK Leak Detection: Masterspec Partnership, CSI Format Specification**

284300: Fuel Oil Detection and Alarm

284500: Water Detection and Alarm

**Home Page: TTK Leak Detection (accessible via hyperlink below)**

[http://productmasterspec.com/Profile/TTK\\_SAS/71233](http://productmasterspec.com/Profile/TTK_SAS/71233)



### **Locating TTK Leak Detection Specifications**

Two avenues to find the TTK Leak Detection specification:

1. Search by Manufacturer (Product Masterspec)
2. Search by Section (Masterspec)



LIQUID LEAK DETECTION SYSTEMS

### Option 1: Search by Manufacturer Name (TTK)

The screenshot shows a web browser window with the URL `productmasterspec.com/default.aspx?orderby=manufacturer&searchName=TTK`. The page header includes the **ProductMasterSpec** logo and navigation links for Product, News, Support, and Download. The main content area is titled "Product MasterSpec Downloads" and features a search filter for "Manufacturer" set to "TTK". Below the search bar, there are two search results:

Manufacturer	Section	Section Name	FL
TTK S.A.S.	284300	Fuel Oil Detection and Alarm	
TTK S.A.S.	284500	Water Detection and Alarm	

There are 2 records.

At the bottom of the page, there is a copyright notice for © 2020 - Deltek, Inc. and links for Privacy Policy, Transparency Statement, and Cookie Policy. The Deltek logo is also present in the bottom right corner. The browser's taskbar at the bottom shows the time as 12:03 PM on 5/7/2020.

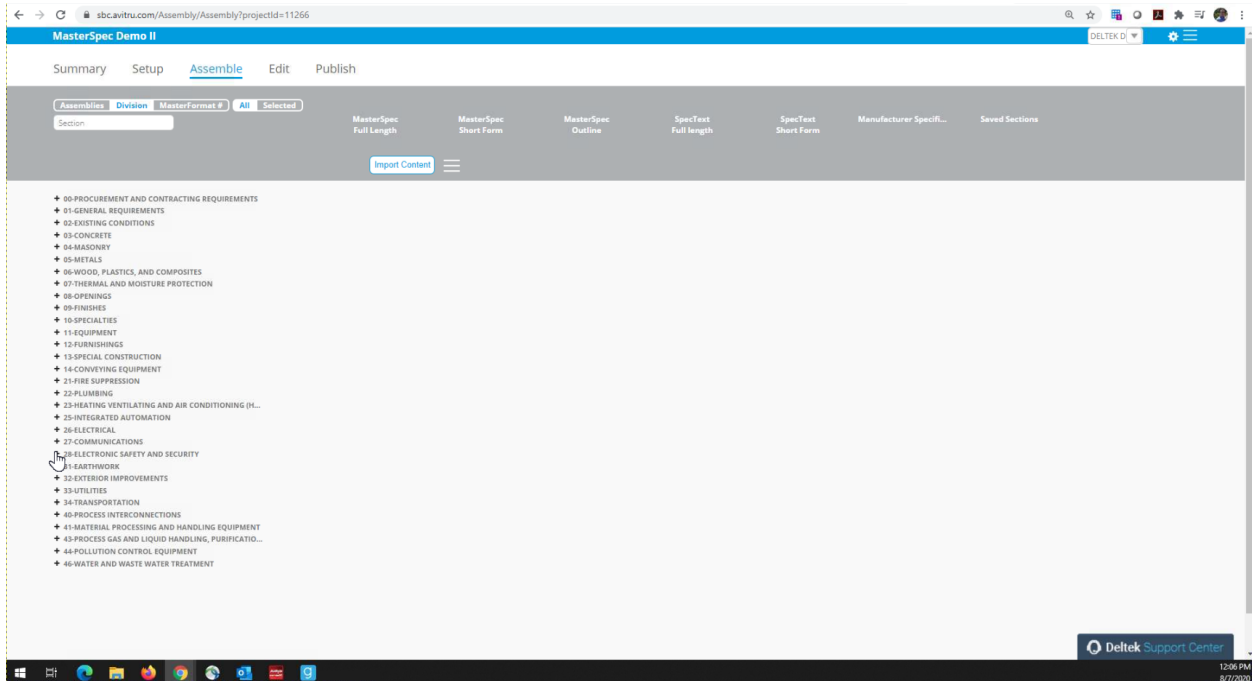
Anyone can get here with hyperlink, no password protection.

[http://productmasterspec.com/Profile/TTK\\_SAS/71233](http://productmasterspec.com/Profile/TTK_SAS/71233)



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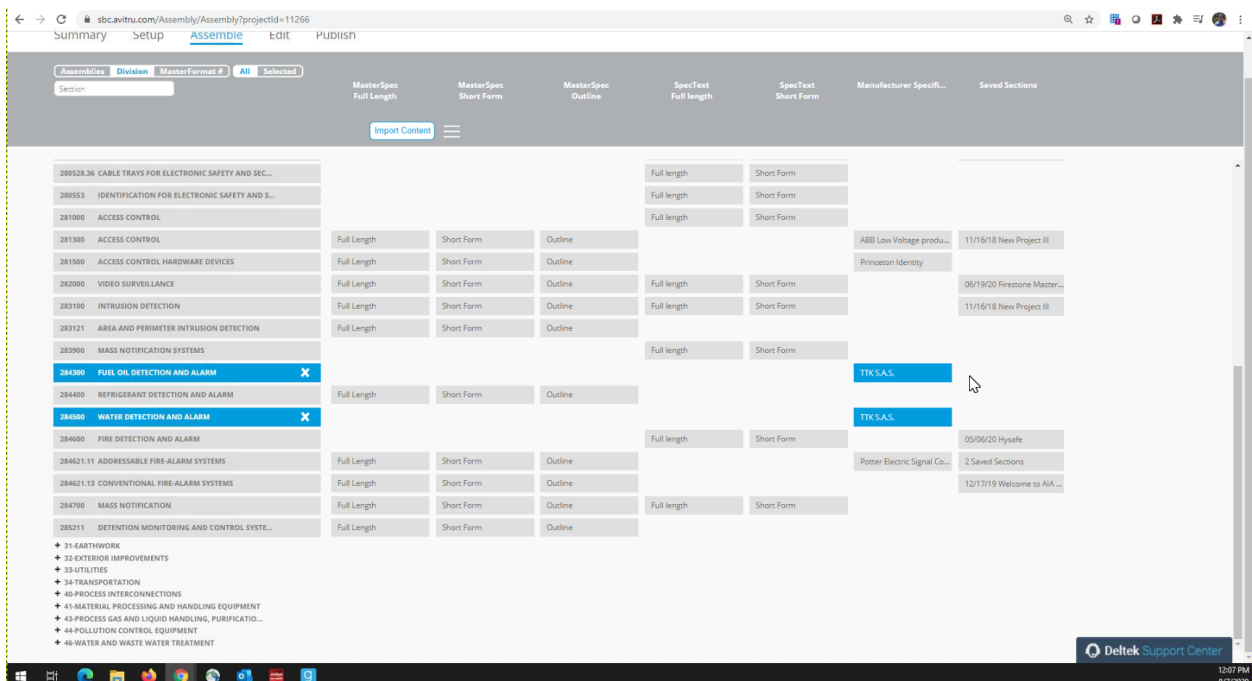
## Option 2: Registered User is Logged into Masterspec, Search by Section (Division 28: Electronic Safety and Security)



Find us in Section:

284300 “Fuel Oil Detection and Alarm”

284500 “Water Detection and Alarm”





LIQUID LEAK DETECTION SYSTEMS

## Search by Section Number:

“284300” for Fuel Oil Detection and Alarm

The screenshot shows a web browser window with the URL `sbcaivitu.com/Assembly/Assembly?projectId=11266`. The page is titled "summary" and has tabs for "setup", "Assemble", "Edit", and "Publish". The "Assemble" tab is active. A search bar at the top left contains the text "284300". Below the search bar, a list of sections is displayed. The section "284300 FUEL OIL DETECTION AND ALARM" is highlighted in blue. To the right of this section, there are buttons for "Full Length", "Short Form", and "Outline". Further right, there are buttons for "Full length" and "Short Form". At the bottom right of the page, there is a "Deltek Support Center" button and a timestamp "12:08 PM 8/7/2020".

Section Number	Description	Full Length	Short Form	Outline	Full length	Short Form	Manufacturer Specific	Saved Sections
280528.36	CABLE TRAYS FOR ELECTRONIC SAFETY AND SEC...				Full length	Short Form		
280553	IDENTIFICATION FOR ELECTRONIC SAFETY AND S...				Full length	Short Form		
281000	ACCESS CONTROL				Full length	Short Form		
281300	ACCESS CONTROL	Full Length	Short Form	Outline			ABB Low Voltage produ...	11/16/18 New Project II
281500	ACCESS CONTROL HARDWARE DEVICES	Full Length	Short Form	Outline			Princeton Identity	
282000	VIDEO SURVEILLANCE	Full Length	Short Form	Outline	Full length	Short Form		06/19/20 Firezone Master...
283100	INTRUSION DETECTION	Full Length	Short Form	Outline	Full length	Short Form		11/16/18 New Project II
283121	AREA AND PERIMETER INTRUSION DETECTION	Full Length	Short Form	Outline				
283900	MASS NOTIFICATION SYSTEMS				Full length	Short Form		
284300	FUEL OIL DETECTION AND ALARM						TK-SAS	
284400	REFRIGERANT DETECTION AND ALARM	Full Length	Short Form	Outline				
284500	WATER DETECTION AND ALARM						TK-SAS	
284600	FIRE DETECTION AND ALARM				Full length	Short Form		05/06/20 Hysafe
284621.11	ADDRESSABLE FIRE-ALARM SYSTEMS	Full Length	Short Form	Outline			Potter Electric Signal Co...	2 Saved Sections
284621.13	CONVENTIONAL FIRE-ALARM SYSTEMS	Full Length	Short Form	Outline				12/17/19 Welcome to AIA...
284700	MASS NOTIFICATION	Full Length	Short Form	Outline	Full length	Short Form		
285211	DEFENTION MONITORING AND CONTROL SYSTEMS	Full Length	Short Form	Outline				

“284500” for Water Detection and Alarm

The screenshot shows the same software interface as above, but with the search bar containing "284500". The section "284500 WATER DETECTION AND ALARM" is now highlighted in blue. The rest of the interface, including the table of sections and the "Deltek Support Center" button, remains the same.

Section Number	Description	Full Length	Short Form	Outline	Full length	Short Form	Manufacturer Specific	Saved Sections
280528.36	CABLE TRAYS FOR ELECTRONIC SAFETY AND SEC...				Full length	Short Form		
280553	IDENTIFICATION FOR ELECTRONIC SAFETY AND S...				Full length	Short Form		
281000	ACCESS CONTROL				Full length	Short Form		
281300	ACCESS CONTROL	Full Length	Short Form	Outline			ABB Low Voltage produ...	11/16/18 New Project II
281500	ACCESS CONTROL HARDWARE DEVICES	Full Length	Short Form	Outline			Princeton Identity	
282000	VIDEO SURVEILLANCE	Full Length	Short Form	Outline	Full length	Short Form		06/19/20 Firezone Master...
283100	INTRUSION DETECTION	Full Length	Short Form	Outline	Full length	Short Form		11/16/18 New Project II
283121	AREA AND PERIMETER INTRUSION DETECTION	Full Length	Short Form	Outline				
283900	MASS NOTIFICATION SYSTEMS				Full length	Short Form		
284300	FUEL OIL DETECTION AND ALARM						TK-SAS	
284400	REFRIGERANT DETECTION AND ALARM	Full Length	Short Form	Outline				
284500	WATER DETECTION AND ALARM						TK-SAS	
284600	FIRE DETECTION AND ALARM				Full length	Short Form		05/06/20 Hysafe
284621.11	ADDRESSABLE FIRE-ALARM SYSTEMS	Full Length	Short Form	Outline			Potter Electric Signal Co...	2 Saved Sections
284621.13	CONVENTIONAL FIRE-ALARM SYSTEMS	Full Length	Short Form	Outline				12/17/19 Welcome to AIA...
284700	MASS NOTIFICATION	Full Length	Short Form	Outline	Full length	Short Form		
285211	DEFENTION MONITORING AND CONTROL SYSTEMS	Full Length	Short Form	Outline				



## **Referencing with the Specification book for Leak Detection**

Engineers can put a note in their desired section, to reference the leak detection specification in Division 28.

The TTK specification also has references to all sections within CSI that can utilize leak detection listed in "Part 1.1-B: Related Requirements". The two specifications also reference each other within the specification at the end of Part 1.1-B.

### **Fuel Oil Detection and Alarm**

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PM 08/20

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#### B. Related Requirements:

Retain the subparagraphs below that are included in the Project Manual and refer to systems and equipment requiring coverage by and coordination with the leak detection system. Inclusion (addition) of a similar cross reference in those related sections is recommended to raise awareness of the presence and location of this section in the Project Manual.

1. Section 231113 "Facility Fuel-Oil Piping"
2. Section 231126 "Facility Liquefied-Petroleum Gas Piping"
3. Section 231213 "Facility Fuel-Oil Pumps"
4. Section 231313 "Facility Underground Fuel-Oil Storage Tanks"
5. Section 231323 "Facility Aboveground Fuel-Oil Storage Tanks"
6. Section 235216 "Condensing Boilers"
7. Section 235223 "Cast-Iron Boilers"
8. Section 235233 "Water-Tube Boilers"
9. Section 235239 "Fire-Tube Boilers"
10. Section 235416.16 "Oil-Fired Furnaces"
11. Section 263213.13 "Diesel-Engine-Driven Generator Sets"
12. Section 263213.16 "Gas-Engine-Driven Generator Sets"
13. Section 263213.19 "Bi-Fuel-Engine-Driven Generator Sets"

Retain the subparagraph below if any equipment requiring coverage also exposes the facility to significant risk due to water leaks (e.g. boilers, water-cooled engine generators, etc.). The FG Net leak detection control manufactured by TTK can provide leak detection of both liquids utilizing the appropriate sense cable.

14. Section 284500 "Water Detection and Alarm"

### **Water Detection and Alarm**

**B. Related Requirements:**

Retain the subparagraphs below that are included in the Project Manual and refer to systems and equipment requiring coverage by and coordination with the leak detection system. Inclusion (addition) of a similar cross reference in those related sections is recommended to raise awareness of the presence and location of this section in the Project Manual.

1. Section 220516 "Expansion Fittings and Loops for Plumbing Piping"
2. Section 220517 "Sleeves and Sleeve Seals for Plumbing Piping"
3. Section 220519 "Meters and Gages for Plumbing Piping"
4. Section 220523.12 "Ball Valves for Plumbing Piping"
5. Section 220523.13 "Butterfly Valves for Plumbing Piping"
6. Section 220523.14 "Check Valves for Plumbing Piping"
7. Section 220523.15 "Gate Valves for Plumbing Piping"
8. Section 220533 "Heat Tracing for Plumbing Piping"
9. Section 221113 "Facility Water Distribution Piping"
10. Section 221116 "Domestic Water Piping"
11. Section 221117 "Grey-Water Piping"
12. Section 221123.13 "Domestic-Water Packaged Booster Pumps"
13. Section 221123.21 "Inline, Domestic-Water Pumps"
14. Section 221216 "Facility Elevated, Potable-Water Storage Tanks"
15. Section 221219 "Facility Ground-Mounted, Potable-Water Storage Tanks"
16. Section 221316 "Sanitary Waste and Vent Piping"
17. Section 221319 "Sanitary Waste Piping Specialties"
18. Section 221429 "Sump Pumps"
19. Section 223300 "Electric, Domestic-Water Heaters"
20. Section 223400 "Fuel-Fired, Domestic-Water Heaters"
21. Section 223500 "Domestic-Water Heat Exchangers"+
22. Section 224500 "Emergency Plumbing Fixtures"
23. Section 224600 "Security Plumbing Fixtures"
24. Section 224716 "Pressure Water Coolers"
25. Section 226600 "Chemical-Waste Systems for Laboratory and Healthcare Facilities"
26. Section 226713 "Processed Water Piping for Laboratory and Healthcare Facilities"
27. Section 226719 "Processed Water Equipment for Laboratory and Healthcare Facilities"
28. Section 230533 "Heat Tracing for HVAC Piping"
29. Section 230923.18 "Leak Detection Instruments"
30. Section 230923.19 "Moisture Instruments"
31. Section 232113 "Hydronic Piping"
32. Section 232113.13 "Underground Hydronic Piping"
33. Section 232123 "Hydronic Pumps"
34. Section 232213 "Steam and Condensate Piping"
35. Section 232216 "Steam and Condensate Heating Piping Specialties"
36. Section 232223 "Steam Condensate Pumps"
37. Section 235213 "Electric Boilers"
38. Section 235216 "Condensing Boilers"
39. Section 235223 "Cast-Iron Boilers"
40. Section 235233 "Water-Tube Boilers"
41. Section 235239 "Fire-Tube Boilers"
42. Section 235313 "Boiler Feedwater Pump"
43. Section 236200 "Packaged Compressor and Condenser Units"
44. Section 236413.13 "Direct-Fired Absorption Water Chillers"



45. Section 236413.16 "Indirect-Fired Absorption Water Chillers"
46. Section 236416 "Centrifugal Water Chillers"
47. Section 236423.13 "Air-Cooled, Scroll Water Chillers"
48. Section 236423.16 "Water-Cooled, Scroll Water Chillers"
49. Section 236426.13 "Air-Cooled, Rotary-Screw Water Chillers"
50. Section 236426.16 "Water-Cooled, Rotary-Screw Water Chillers"
51. Section 237313.16 "Indoor, Semi-Custom Air-Handling Units"
52. Section 237313.19 "Indoor, Custom Air-Handling Units"
53. Section 238123.11 "Small Capacity (6 Tons (21 kW) and Smaller), Computer-Room Air-Conditioners, Floor-Mounted Units"
54. Section 238123.12 "Large Capacity (7 Tons (25 kW) and Larger), Computer-Room Air-Conditioners, Floor-Mounted Units"
55. Section 238123.13 "Computer-Room Air-Conditioners, Ceiling-Mounted Units"
56. Section 238123.14 "Computer-Room Air-Conditioners, Console Units"
57. Section 238123.18 "Computer-Room, Rack-Cooling Equipment"
58. Section 238216.11 "Hydronic Air Coils"
59. Section 238216.12 "Steam Air Coils"
60. Section 238219 "Fan Coil Units"
61. Section 238233 "Convectors"
62. Section 238236 "Finned-Tube Radiation Heaters"
63. Section 263213.13 "Diesel-Engine-Driven Generator Sets"
64. Section 263213.16 "Gas-Engine-Driven Generator Sets"
65. Section 263213.19 "Bi-Fuel-Engine-Driven Generator Sets"

Retain the subparagraph below if any equipment requiring coverage also exposes the facility to significant risk due to fuel oil leaks (e.g. boilers, diesel engine generators, etc.). The FG Net leak detection control manufactured by TTK can provide leak detection of both liquids utilizing the appropriate sense cable.

66. Section 284300 "Fuel Oil Detection and Alarm"