

Solar water heating INDIRECT SOLAR THERMAL SYSTEM



A.O. Smith also provides indirect solar thermal systems. These systems consist of an indirect tank which is connected to an already existing central heating system or boiler. With use of several accessories you can create the perfect solution. Both the IT and ITS can be part of a solar system. Both can be installed with or without drain back.

The heat exchanger in the IT or ITS transfers the collected heat to the water in the tank. The ITS is equipped with 2 heat exchangers. Both the collected solar heat as well as the heating from the central heating system or boiler transfer their heat into the same tank. Therefore the use of an ITS in this application can provide more comfort.

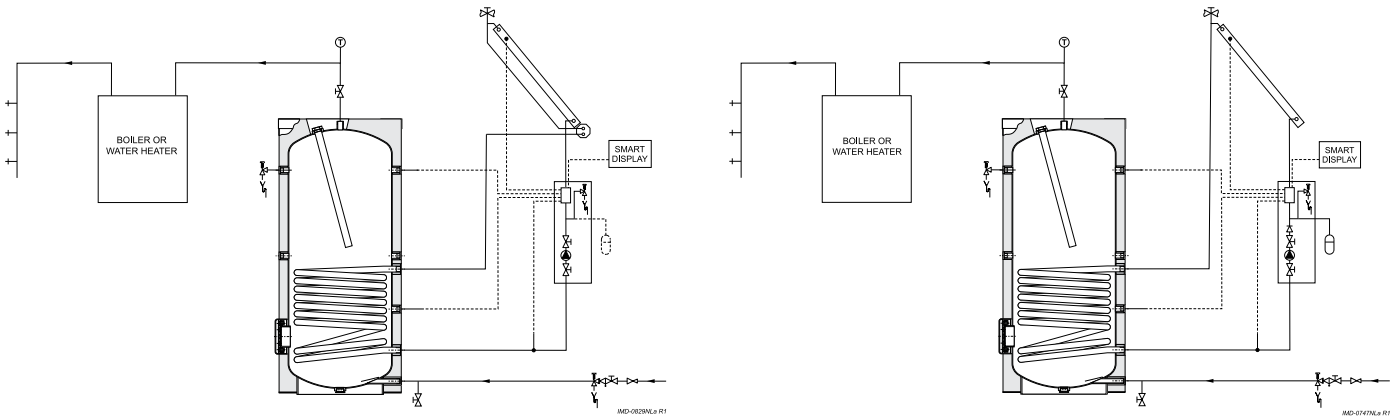
An indirect system is controlled through a standard module integrated in the pump station. This module controls the system based on the temperature in the collector and in the tank. The module displays the temperatures and the capacity of the pump. Selecting the correct pump station is based on the number of collectors and/or the length of the piping. A.O. Smith has regular and large capacity pump stations. Dependant on the installation, the pump stations are available for installations equipped with or without drain back system.



CERTIFICATES

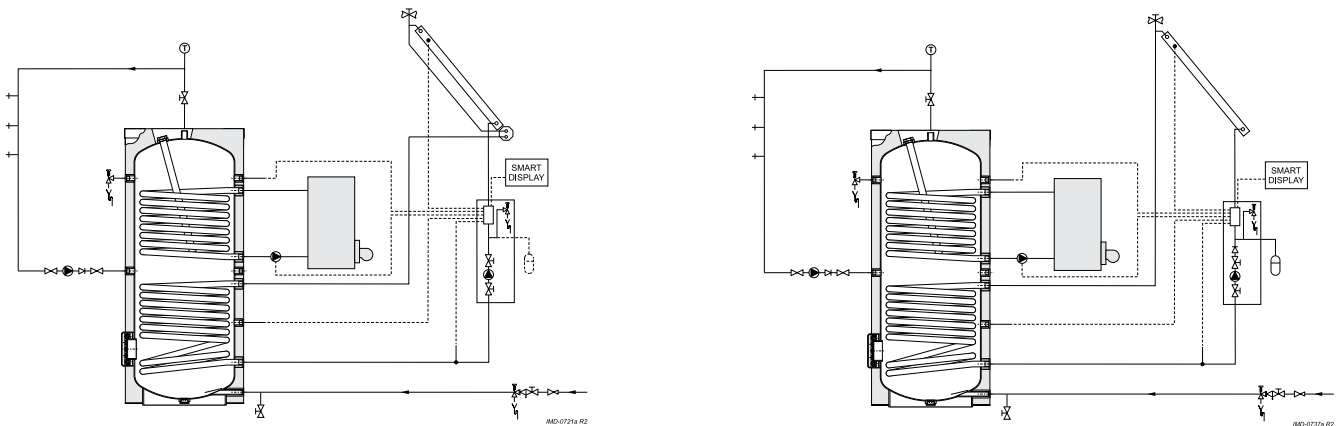
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IT in solar thermal configuration with and without drainback system




- Solar system connected to existing central heating system or boiler
- IT indirect tank with 1 heat exchanger available in capacities from 296 to 2800 litre
- Combined with the correct pump station several numbers of collectors possible. If you use a large pump station, always install an expansion vessel
- Drain back system prevents stagnation temperatures in the installation
- Always use an expansion vessel in an installation without drainback system


ITS in solar thermal configuration with and without drainback system




- Solar system connected to existing central heating system or boiler
- ITS indirect tank with 2 heat exchangers available in capacities from 289 to 1007 litre
- Combined with the correct pump station several numbers of collectors possible. If you use a large pump station, always install an expansion vessel
- Drainback system prevents stagnation temperatures in the installation
- Always use an expansion vessel in an installation without drainback system
- In an ITS installation both the collector and the central heating system or boiler transfer their heat into one tank. This provides more comfort compared to the IT installation




IT			
Type	Litre	kW	
300	296	46	
400	385	78	
500	473	100	
600	643	104	
750	725	112	
1000	1007	145	
1500	1550	147	
2000	1800	147	
2500	2550	156	
3000	2800	156	



ITS			
Type	Litre	kW	
300	289	27	
400	382	37	
500	470	42	
600	641	40	
750	718	56	
1000	1007	58	

PUMP STATION			
Standard pump stations			
	Art. No.	Collectors	DB
	0311594	1-7	no
	0311595	8-15	no
	0311692	1-7	yes
	0311593	8-15	yes
Large pump stations incl. control			
	0309975	n.a. selection is dependant on more factors than solely the number of collectors	yes
	0309979		yes
	0309983		yes
	0309987		yes
	0309991		yes
	0309976		no
	0309980		no
	0309984		no
	0309988		no
	0309992		no

EXPANSION VESSEL			
	Art. No.	Litre	Collectors
	0308875	25	1-4
	0308876	35	5-6
	0308877	50	7-11
	0308878	80	12-15
The selection of the expansion vessel is based on the number of collectors in the installation			

SMART DISPLAY	
	Art. No.
	0309701(S)

GLYCOL				
	Art. No.	Litre		
	0308803	10		
	Corrosion inhibiting and anti-frost agent Tyfocor L Packaging of 10 litres in a 40% mixed solution			
REQUIRED GLYCOL				
	Number of collectors			
	1 - 2	3 - 5	6 - 11	12 - 15
IT 300 ITS 300	40	50	60	70
IT 400 ITS 400	50	60	70	80
IT 500 ITS 500	50	60	70	80
IT 600 ITS 600	60	70	80	90
IT 750 ITS 750	70	70	80	90
IT 1000 ITS 1000	80	80	90	100
IT 1500	80	80	100	100
IT 2000	80	80	100	110
IT 2500	80	80	100	110
IT 3000	80	90	100	110
These quantities are based on the contents of the appliance excluding piping. These quantities are averages. For the exact quantities please contact our Technical Support Group.				

INSULATION MATERIAL		
	Art. No.	Dimensions
	0309933(S)	Ø 22mm x 2m
	0309934(S)	Ø 28mm x 2m

OUTPUT SENSOR		
	Art. No.	Connection
	0309691(S)	22 mm solder
	0309703(S)	28 mm solder

T&P VALVE		
	Art. No.	Connection
	0076527004(S)	¾" / 10 bar

REDUCING NIPPLES												
	Description	IT/ITS										
		300	400	500	600	750	1000	1500	2000	2500	3000	
	Set 2" BSp F x R 1" M	/	0309754(S)	/	/	/	/	/	0309754(S)			
	Set 2" BSp F x R 1 1/2" M	/	0309755(S)	/	/	/	/	/	0309755(S)			
	Set 2 1/2" BSp F x R 1" BSp F	/	/	/	/	0309756(S)		/	/	/	/	
	Set 2 1/2" BSp F x R 1" BSp F	/	/	/	/	0309757(S)		/	/	/	/	
Set 2 1/2" BSp F x R 1 1/2" BSp F	/	/	/	/	0309758(S)		/	/	/	/		



For more information on our solar thermal collectors, please refer to the specific Collectors spec sheet.