

Further products of KaMo Systemtechnik:

**KaMo Komfort:
Direct Hydraulic Interface Units**
Central production of domestic hot water

**For Domestic Hot Water
(FWS-Eco/FWS-Perfekt)**



KaMo Komplett-System: Indirect Hydraulic Interface Units
Local production of domestic hot water and heating combined with manifolds for floor heating

**For Domestic Hot Water
and Heating (WK-units)**



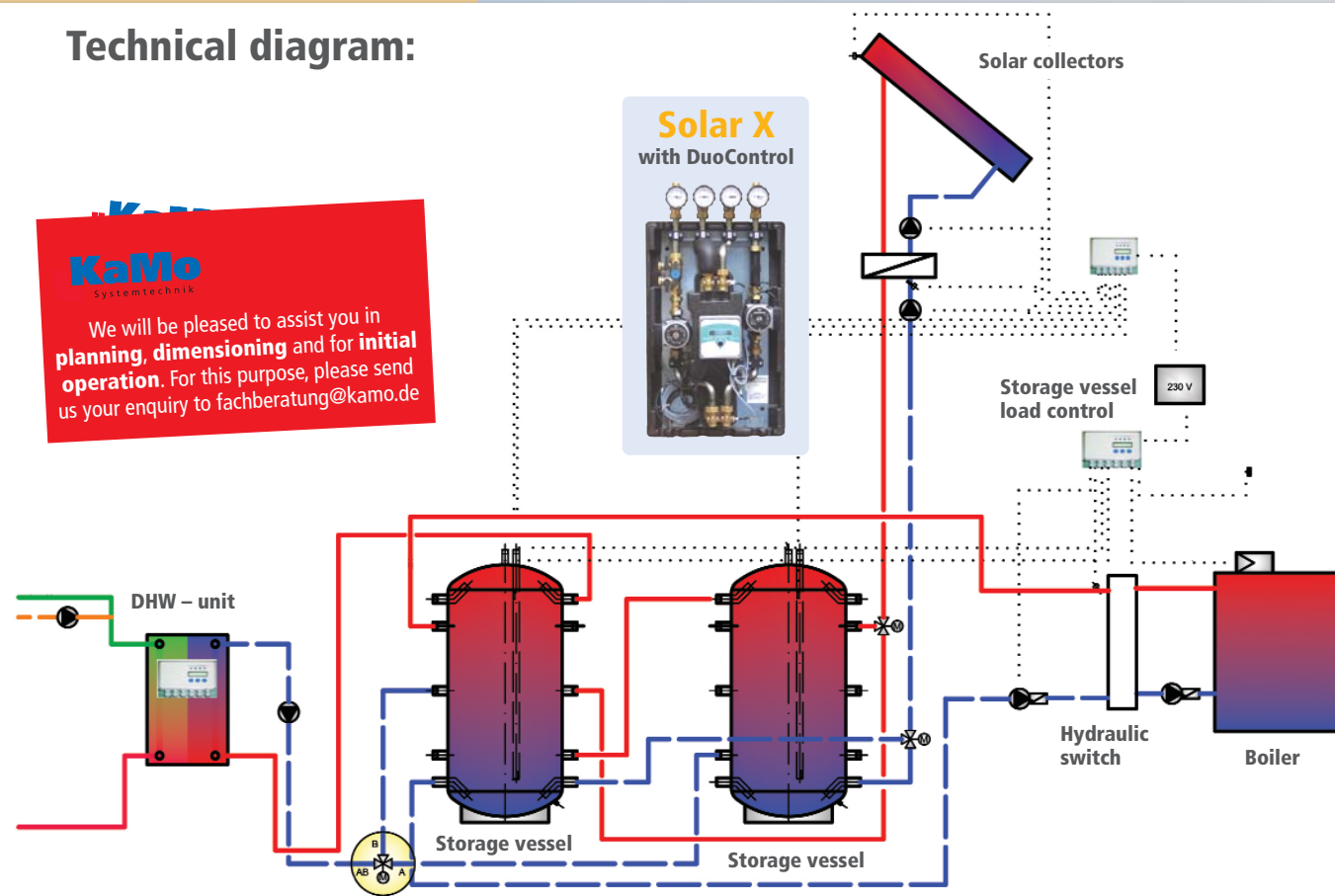
**For Domestic Hot Water
(TW-units)**



**Manifolds made of
stainless steel**



Technical diagram:



KaMo Solar X

**Optimal solution for solar plants
with collector surfaces of
15 m² - 250 m²**



Solar Separation unit

**Energy saving
and high efficient
distribution of
water and heat.**

KaMo Frischwarmwassersysteme GmbH

Max-Planck-Straße 11
89584 Ehingen
Germany

Telefon: + 49 (0) 7391/7007-0
Fax: + 49 (0) 07391/543 15
E-Mail: export@kamo.de
Internet: www.kamo.de

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New standards for the performance control:

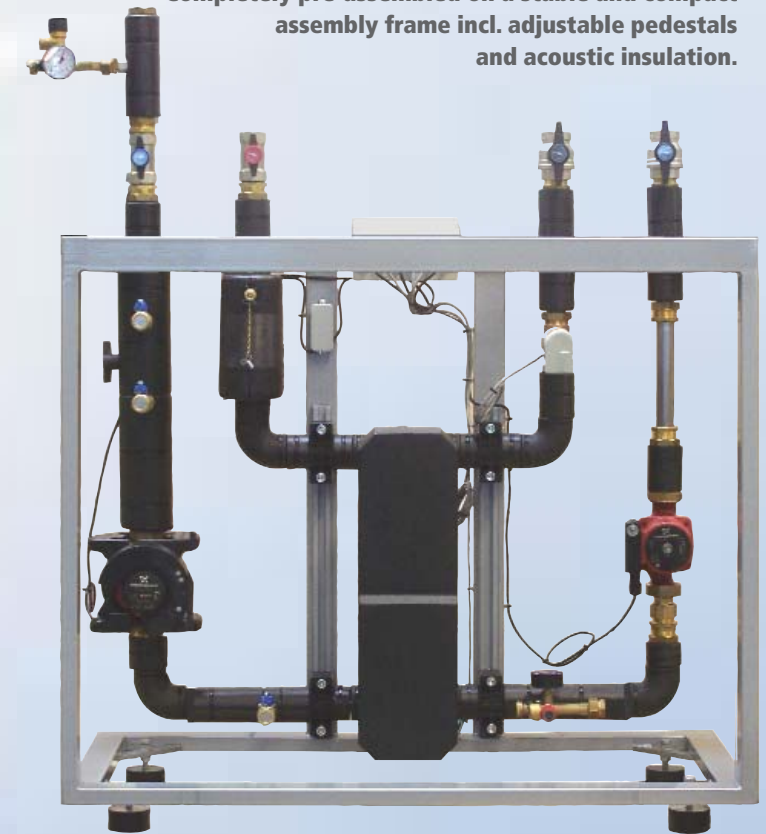
KaMo Solar X

Always the best ratio between solar gain and energy consumption – with the solar unit KaMo Solar X and the DuoControl system.

In the solar unit KaMo Solar X the **DuoControl system** controls the pumping rotation speed of the collector pump as well as of the load pump for the storage vessel – always in dependence on the solar radiation and the storage vessel temperature. By this means the optimal efficiency ratio between the pumps is determined and the auxiliary energy is minimized. The solar energy is transferred effectively to the storage vessel and the solar plant works **efficiently and economically at any time**.

KaMo Solar X Maxi: 45 - 250 m²

Completely pre-assembled on a stable and compact assembly frame incl. adjustable pedestals and acoustic insulation.



The efficient pump control:
the **DuoControl system**
of the KaMo Solar X:



Efficient and economical:

Advantages of the storage vessel load with KaMo Solar X

In comparison to storage systems with internal heat exchangers the storage load with the KaMo Solar X offers important advantages:

- 20 % more efficiency**
 By the DuoControl System the heat transmission to the storage vessel is more efficient of up to 20%
- Strong thermal stratification**
 The solar heat is supplied to the storage vessel from above. By this means, a strong thermal stratification is produced and economic storage vessels (without heating coil) can be applied.
- Versatile applications**
 The KaMo Solar X unit can be applied with all customary flat-plate collectors and evacuated-tube collectors – with a collector surface from 10 m² to 75 m².
- Charge of several storage vessels**
 With the KaMo Solar X several storage vessels can be charged by a 3-way switching valve.



Applicable in all types of solar plants!

KaMo Solar X: 15 - 45 m²

Delivered completely with insulation jacket for a heat insulation conforming to EnEV.

Pump control according to minimum target temperature:

The new and unique DuoControl system decides automatically whether the performance control of the Solar X pumps is carried out according to the target temperature in the storage vessel or according to a determined difference value between the collector and storage vessel temperature.

If the storage vessel temperature is below the target value, the DuoControl system controls the pumps according to the target temperature. Here, the delivery rate of the collector and of the charge pump is adapted permanently to the actual conditions – such as solar radiation, collector and storage vessel temperature, etc.

By this means, the KaMo Solar X achieves the target temperature as fast as possible with the least application of auxiliary energy.

Pump control according to temperature difference value:

As soon as the set-point temperature in the storage vessel is achieved, the DuoControl system switches automatically to the temperature difference value mode. The target is to maintain the temperature difference between storage vessel and collector at the set-point – also with the least possible auxiliary energy.

Also in the control according to the temperature difference value mode, the delivery rates of the pumps are adapted permanently to the temperatures in the storage vessel and in the collector.

The advantage: the combination of both control solutions saves considerable costs and increases remarkably the efficiency of thermal solar plants.

KaMo Solar X is available in several options which are dimensioned for different collector surfaces:

Solar X Mini:	bis 15 qm
Solar X Standard:	bis 25 qm
Solar X Plus:	bis 35 qm
Solar X Perfekt:	bis 45 qm

Solar X Maxi 75:	bis 75 qm
Solar X Maxi 150:	bis 150 qm
Solar X Maxi 250:	bis 250 qm

Solar X Maxi 2-90:	2 x 45 qm
Solar X Maxi 2-250:	2 x 125 qm

For 2 collector surfaces (east/south orientation) with 2 primary heating circuit pumps

The DuoControl System of KaMo Solar X can optionally be equipped with a control outlet to trigger a 3-way valve for the load of several storage vessels.