

**SE UTILIZA EL SISTEMA INTERNACIONAL DE MEDIDAS
THE INTERNATIONAL SYSTEM OF MEASUREMENT IS USED**

Cantidad de kilogramos de químico a emplear para aumentar la alcalinidad o acidificar el agua del tanque de reposición luego de pasar por el filtro en el ejemplo se necesitan 11.6 kg de químico para lograr los 9.5 pH en un tanque de 1000 litros.

Amount of kilograms of chemical to be used to increase the alkalinity or acidify the make-up tank water after passing through the filter in the example 11.6 kg of chemical is needed to achieve the 9.5 pH in a 1000 liter tank.

Flujo de agua por día se refiere a la cantidad de agua de reposición hacia la caldera en 24 horas el valor 1299.2 Lts/día.

Water flow per day refers to the amount of make-up water to the boiler in 24 hours the value 1299.2 Lts/day.

Flujo de agua por mes se refiere a la cantidad de agua de reposición hacia la caldera en 24 días aproximadamente.

Water flow per month refers to the amount of make-up water to the boiler in approximately 24 days.

Se refiere al porcentaje de purga de la caldera que deberá instruir al operador $(15\% / 100\%) \times 1299.2 \text{ Lts/día} = 194.88 \text{ Lts/día}$.

Refers to the percentage of boiler blowdown to be instructed to the operator $(15\% / 100\%) \times 1299.2 \text{ Lts/day} = 194.88 \text{ Lts/day}$.

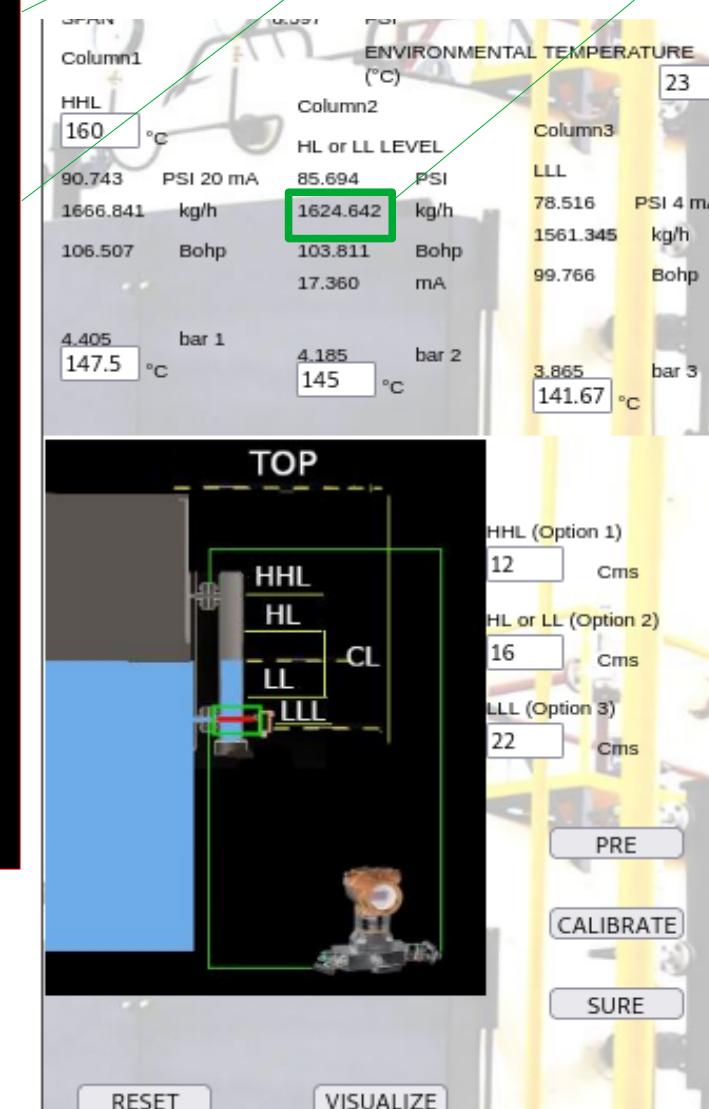
Se refiere a la cantidad de vapor que condensara puede escapar al ambiente para un sistema no presurizado y como fuga o vapor flash en sistema presurizado.

Refers to the amount of steam that condensate can escape to the environment for a non-pressurized system and as leakage or flash steam in a pressurized system.

CHANGE OF PH

CHEMICAL DENSITY	2160	kg/m ³
POST FILTER TDS	450	ppm
EFFICIENCY	80	%
STEAM FLOW	1624	Kg/h
pH BEFORE	7	
pH REQUIRED	9.5	
TANK MAKE-UP WATER	1000	LITERS
KILOGRAMS OF CHEMICAL	11.6	kg / 1000 Lts
WATER FLOW PER DAY	1299.2	Lts/day
WATER FLOW PER MONTH	31180.8	Lts/mth
BOILER DRAIN	15.0	%
CONDENSATE RETURN	6.5	Kg/h

Buttons: RESET, INTRO, DISPLAY, CALIBRATE



Coloque la densidad del químico a utilizar en el agua de reposición después de haber pasado por los filtros físicos y antes de ingresar a la caldera.

Place the density of the chemical to be used in the make-up water after it has passed through the physical filters and before entering the boiler. physical filters and before entering the boiler.

Coloque el valor de los sólidos disueltos del agua de reposición después de haber pasado por los filtros físicos y antes de ingresar a la caldera.

Enter the value of the dissolved solids of the make-up water after passing through the physical filters and before entering the boiler. physical filters and before entering the boiler.

Coloque la eficiencia de la caldera que indica el fabricante. Enter the boiler efficiency as indicated by the manufacturer.

Coloque el valor calibrado del programa "DIFUALIVER" en los valores internos "alto nivel o alto fuego y bajo nivel o bajo fuego" pero se recomienda colocar el valor de alto nivel o alto fuego que según la demostración fue 1624.68 kg/h.

Set the calibrated value of the "DIFUALIVER" program to the internal values "high level or high fire and low level or low fire". and low level or low fire" but it is recommended to set the value of high level or high fire which according to the demonstration was 1624.68 kg/h.

Se toma y escribe la medida de pH del agua de reposición después de haber pasado por los filtros físicos y antes de ingresar a la caldera.

The pH measurement of the make-up water is taken and written down after it has passed through the physical filters and prior to entering the physical filters and before entering the boiler.

Se predice el pH que se quiere lograr lo mas recomendado son 9.5 y 10.

The pH to be achieved is predicted, the most recommended are 9.5 and 10.

Se coloca la capacidad del tanque donde se verterá el químico regulador de pH que deberá estar ubicado después de los filtros.

The capacity of the tank where the pH regulator chemical will be poured is placed, which should be located after the filters and before entering the boiler. located after the filters

CHANGE OF PH

CHEMICAL DENSITY	2160	kg/m ³	
POST FILTER TDS	450	ppm	
EFFICIENCY	80	%	
STEAM FLOW	1624	Kg/h	
pH BEFORE	7	pH REQUIRED	9.5
TANK MAKE-UP WATER	1000	LITERS	
KILOGRAMS OF CHEMICAL	11.6	Kg / 1000 Lts	
WATER FLOW PER DAY	1299.2	Lts/day	
WATER FLOW PER MONTH	31180.8	Lts/mth	
BOILER DRAIN	15.0	%	
CONDENSATE RETURN	6.5	Kg/h	

RESET **INTRO** **DISPLAY** **CALIBRATE**

INTRODUCTION OF USE

MATERIAL REQUIRED: A reliable Ph meter (Phmeter) and dissolved solids (TDS).

MEASUREMENTS REQUIRED: Know the density in (kg/m³). Capacity of the make-up water tank in liters, average load or efficiency of the boiler in (%), steam output in (kg/h), measurement of the current pH of the water before entering the make-up water tank and the pH to be reached is generally 9.5 to 10.

PROCEDURE : 1st. add the density of the softener in (kg/m³), in TDS it is recommended to add an amount less than 300 ppm maximum 3000 ppm, also the percentage of average load or efficiency of the boiler, also the steam output in kg/h and the capacity of the make-up water tank in liters. 2nd with a pH meter measure the pH of the water before entering the make-up tank and after passing through the filters, add a target pH value recommended between 9.5 to 10.

SOME DENSITIES: FOR ALKALINIZING; Brine 2160 kg/m³ Anionic resin 1110 to 1440 kg/m³, sodium bicarbonate 2200 kg/m³, sodium sulfite (Na₂SO₃) density 2633 kg/m³, caustic soda (NaOH) 2100 kg/m³, ammonia (NH₃) 0.73 kg/m³, Amines usually have a density 971 kg/m³ AND FOR ACIDIFYING; dry ice 1200 to 1600 kg/m³.

CALIBRATE BUTTON: Obtain the resulting values.

RESET BUTTON : Reset the initial values.

CHECK : Ph and TDS will be measured after filtering.

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LOG

Boiler :	Labelname		
	EFFICIENCY 80 %		
DENSITY	2160 kg/m ³	FLOW	1624 Kg/h
TDS	450 PPM	TANK MAKE-	1000 LTS
Ph 1	7	UP WATER	
Ph 2	9.5		

VALUES OBTAINED

KILOGRAMS OF CHEMICAL	11.6	Kg PER 1000	Lts
BOILER DRAIN	15.0	%	
WATER FLOW PER HOUR	1299.2	Kg/h	
WATER FLOW PER DAY	31180.8	Kg/Dia	
CONDENSATE RETURN	155.9	Kg/h	

DATE Thu Nov 23
2023 22:36:24
GMT-0400 (hora de Venezuela)

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