



AS/AV



AS/AT

Avtomatične mehčalne naprave z elektronskim programatorjem na časovno (AS/AT) ali volumetrično (AS/AV) upravljanje so primerne za tretma vode, tako za civilne kakor tudi industrijske potrebe. Delovanje naprave je krmiljeno z integralno avtomatiko z mikroprocesorskim programatorjem, napajanim z nizko (12 V) napetostjo, zahvaljujoč vgrajenemu transformatorju. Slednje omogoča popolno kontrolo učinkovitosti naprave, ob enem pa preprečuje nepotrebno potrošnjo vode in soli, potrebne za regeneracijo. Eventuelni odvzemi vzorcev med fazo regeneracije so omogočeni s pomočjo internega by-passa, vgrajenega v krmilnem ventilu. Vsi uporabljeni materiali so atoksični in primerni za uporabo v prehrabeni industriji. Rezervoar za ionsko maso je iz poliestra, ojačanega s steklenimi vlakni, visokopacitivne ionske mase pa so primerne za uporabo v prehrabeni industriji. Ohišje - rezervoar za sol je iz plastičnega materiala, odpornega na udarce. Naprave so opremljene z integrirano avtomatiko s 5 faznim ventilom (protismerno pranje, sesanje slanice in počasno pranje, izplaknjevanje, dotakanje rezervoarja za sol in delovanje), s prikazovalnikom faz delovanja, kompletno s programatorjem za avtomatičnim upravljanjem regeneracije. Tako kakor vse mehčalne naprave NOBEL, so tudi ti modeli opremljeni s priključkom za montažo avtomatičnega dezinfektorja CL90. Poleg tega imajo vsi modeli tudi mešalni ventil za reguliranje rezidualne trdnosti. Na podlagi povpraševanja je možno vstaviti tudi alarm za obveščanje o pomanjkanju soli.

Polavtomatsko delovanje (za vse modele)

V kateremkoli trenutku, neodvisno od prenestavljenega avtomatizma je možno preprosto sprožiti regeneracijo s pritiskom na gumb. Postopek regeneracije se sam zaključi in se vzpostavi prvotno stanje delovanja mehčalne naprave.

Automatic softeners with electronic programmer, available time (AS/AT) or volume controlled (AS/AV). Both series can be used for residential (drinking water) and industrial applications; for its special characteristics the series AS/AV is specially suitable for treatment of feed water of closed (heating & cooling) systems. The working of the unit is controlled by an electronic computerized programmer, low tension working (12 V), by a built-in transformer. The time of the several phases of the regeneration can be adjusted, in order to fit the working of the unit to the special application and to avoid useless waste of water and salt for regeneration. A special by-pass built-in the control valve warrants the feeding of water even during regeneration cycle. All construction materials are no-toxic and suitable for drinking water. Vessel in fiberglass reinforced polyester resin, food grade ion exchange resins for softening, with high exchange capacity, brine tank in shock-resistant plastic material, control valve 5-cycles working (backwash, brine draw and purge, rinse, brine refill, service) with visualization of functions and programme. All models are equipped with blending valve to set the residual hardness; besides, an alarm device in case of lacking of salt, is also available upon request. AS/AT and AS/AV serie softeners, as well as all NOBEL softeners, can be equipped with CL90 device, for self-sterilizing regeneration.

Semi-automatic working

Auxiliary push-button regeneration start, regardless of any preset automatic programme. The regeneration will be automatically completed and the unit will turn on service mode.

TEHNIČNE KARAKTERISTIKE / TECHNICAL DATA

	max pretok / max flow rate mm	cikel / cycle mm	smole / resins mm	sol na cikel / salt for cycle kg	priključki / connections
AS 60	1,2	60	10	1,50	1"
AS 90	1,6	90	15	2,25	1"
AS 150	2,4	150	25	3,75	1"
AS 210	2,8	210	35	5,25	1"
AS 300	3,2	300	50	7,50	1"
AS 450	3,5	450	75	11,25	1"
AS 600	3,7	600	100	15,00	1"
AS 450/A2	4,1	450	75	11,25	1"
AS 600/A2	4,5	600	100	15,00	1"
AS 800/A2	4,5	800	130	19,50	1"

A2 – Modeli z višjimi pretoki / models with higher flow rate

Tehnične karakteristike zgoraj navedene so enake za modele AS/AT in AS/AV / The technical characteristics are the same for both models AS/AT and AS/AV.

Delovni tlak: 2,0 ÷ 8,0 bar (200 ÷ 800 kPa)

Working pressure

Delovna temperatura: 5 ÷ 40°C (41 ÷ 104°F)

Working temperature

Električno napajanje: 220 V 50/60 Hz 10w

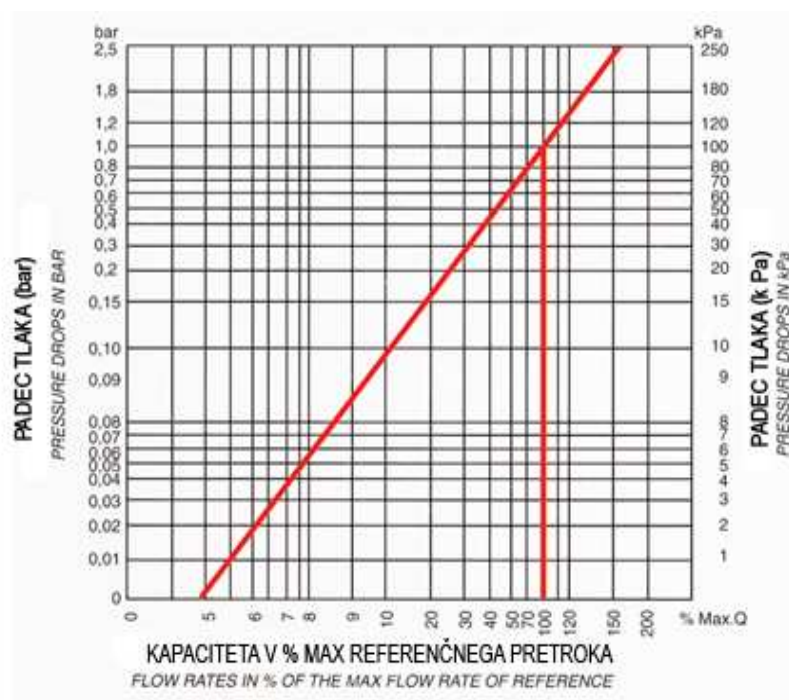
Power Supply

Delovna napetost - s transformator: 12 V 50 Hz

Working tension with built-in transformer

Graf na desni prikazuje padce tlaka v bar in kPa glede na različne pretoke, ki so prikazani kot % max pretoka vode.

The diagram shows the pressure drop, in bar and kPa, at the different flow rates, which are indicated as % of the max flow rate of reference.



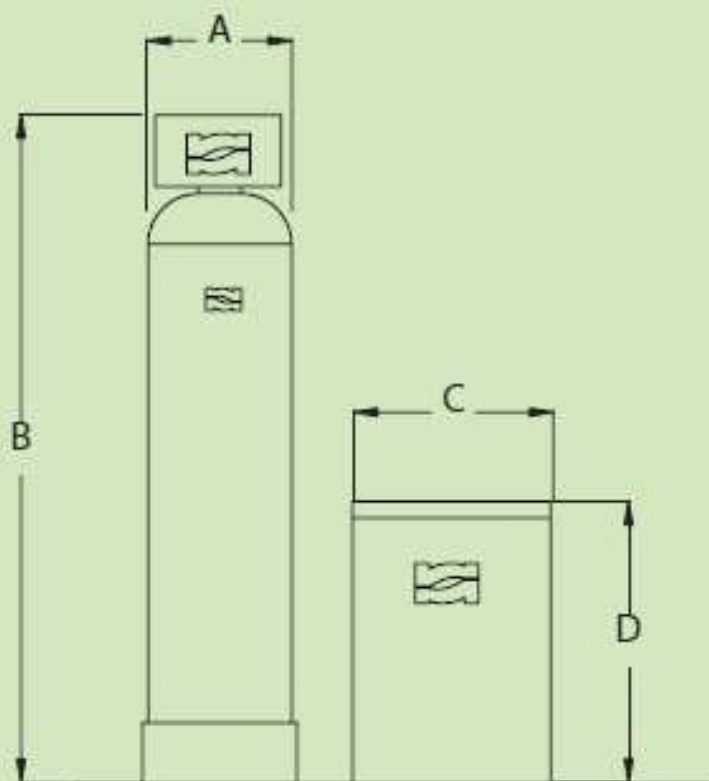
DIMENZIJE (mm) - DIMENSIONS (mm)

	A	B	C	D	kapaciteta rezervoarja / tank capacity l.	teža kg*
	mm	mm	mm	mm		
AS 60	250	1000	500	700	100	25
AS 90	250	1100	500	700	100	30
AS 150	250	1400	500	700	100	40
AS 210	300	1400	500	700	100	50
AS 300	300	1600	600	800	150	70
AS 450	350	1600	600	800	150	95
AS 600	350	1900	600	800	150	130
AS 450/A2	350	1600	600	800	150	95
AS 600/A2	350	1600	600	800	150	130
AS 800/A2	400	1900	600	1100	200	160

(*) Teža ob odpremi – *shipping weight*

Dimenzije in teža navedenih naprav ustrezajo napravam z oznako AS/AT in AS/AV.

The dimensions and weight are the same for models AS/AT and AS/AV



AS/AT Mehčalne naprave s časovnim upravljanjem

Naprava omogoča programiranje ure, dneva in frekvence sprožitve regeneracije od min 1 regeneracije vsakih 12 ur do max 1 regeneracije vsakih 99 dni. Možno je tudi nastaviti regulacijo na točno določene dneve in ure v tednu.

Zaslon programatorja prikazuje:

- uro in dan
- prenestavljeno uro regeneracije
- frekvenco regeneracije
- porabo soli
- ciklično kapaciteto naprave



AS/AV

Med regeneracijo se na zaslonu izpiše tudi predvideni čas zaključka le-te in trenutnega cikla. Znotraj programatorja je možno vgraditi tudi čisti kontakt za prenos na daljavo signala statusa regeneracije. Regeneracijo je možno sprožiti tudi na daljavo z zunanjim signalom ter nastaviti opozorilo o periodičnem vzdrževanju.

AS/AV mehčalne naprave z volumetričnim upravljanjem

Tovrstni modeli vsebujejo senzor in števec s turbino za regulacijo regeneracije na podlagi volumetričnih pretokov. Naprava omogoča programiranje regeneracije na sledeča načina:

- **čas - volumen:** regeneracija se sproži po preteku določenega volumna vode ob določenem času
- **čisti volumen:** regeneracija se sproži takoj po preteku določenega volumna
- **čas:** enako kot opisano pri modelu AS/AT

Poleg naštetega je možno programirati tudi spontano regeneracijo min vsakih 12 ur in max 99 dni, ki je neodvisna od doseženega pretoka in porabe vode.

Zaslon programatorja prikazuje:

- pretok vode med obratovanjem (l/min)
- razpoložljiva količina omehčane vode pred regeneracijo
- uro in dan
- prenestavljeno uro regeneracije
- frekvenco regeneracije
- porabo soli
- ciklično kapaciteto naprave



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AS/AT automatic softeners time control

The unit allows to set how often (minimum every 12 hours up to every 99 days) and the time of the day when the regeneration starts. It is also possible to set the regeneration at fixed day(s) of week, and at a fixed time.

The display of the programmer shows:

- *current day and time*
- *programmed time of regeneration*
- *how often the regeneration is programmed.*
- *consumption of salt*
- *capacity (cycle) of the unit*

Besides, during the regeneration, the display shows the expected time to the end of the running phase and of the regeneration. A free voltage contact for remote report of the status of service/regeneration is also available, upon request. Regeneration can also be started by remote signal (free voltage) from other device; it is also possible to programme a notice of periodical maintenance required, on scheduled basis.

AS/AV automatic softeners volume control

These units are equipped with a flow rate sensor and a water meter, turbine type, both devices built-in the automatic control.

The unit allows to set the regeneration according to the following modes:

- time/volume mode: regeneration starts afterthat the pre-set volume of water has been supplied, but only at a pre-set time of day
- volume mode : regeneration starts immediately afterthat the preset volume of water has been supplied
- time mode: same way of AS/AT models

Besides an additional regeneration can be scheduled, minimum every 12 hours up to every 99 days, regardless of the actual volume of supplied water.

The display of the programmer shows:

- flow rate during service
- available volume of treated water before the regeneration
- current day and time
- programmed time of regeneration
- how often the regeneration is programmed.
- consumption of salt
- capacity (cycle) of the unit

Besides, during the regeneration, the display shows the expected time to the end of the running phase and of the regeneration. A free voltage contact for remote report of the status of service/regeneration is also available, upon request. Regeneration can also be started by remote signal (free voltage) from other device; it is also possible to programme a notice of periodical maintenance required, on scheduled basis.