

Product manual

Starter

SA-24

Table of contents: Page:

Technical description	2
Delivery	2
Advantages	2
Technical data	2
Installation alternatives and systems	2
Alternative solutions	3
Spare part drawing	4-5
Wiring diagram	6
List of apparatus	7



Thank you for buying a PlymoVent product.
Before you unpack and put it into operation please read
this product manual, and follow the instructions.

**THIS MANUAL SHOULD BE HANDED OVER
AND KEPT BY THE SERVICE DEPARTMENT
AFTER THE INSTALLATION!**



PlymoVent AB, Föreningsgatan 37,
S-211 52 Malmö, Sweden
Tel: +46 (0)40 30 31 30
Fax: +46 (0)40 30 31 40

Starter
SA-24

© Copyright 1997: All rights reserved. All information within this printed matter may not be reproduced, handed over, copied, xeroxed or translated into another language in any form or means without written permission from PlymoVent AB. PlymoVent AB reserves the right to make design changes.

Starter SA-24

The PlymoVent starter, SA-24, enables you to operate the fan and lamp cartridge from a switch at the extractor hood. The starter is wall mounted. Power, 400/230V AC, is connected to the extraction fan via the starter. The starter has a built-in contactor which operates the fan via a control voltage of 24V. A lamp cartridge in the extractor hood may also be connected to the 24V transformer of the starter.

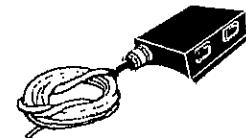
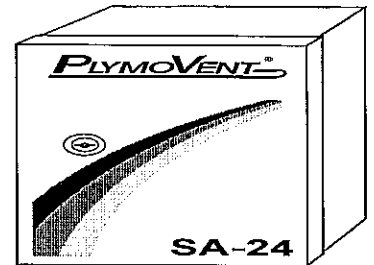
The SA-24 is available in two versions: SA-24/75 for one extractor with light and separate fan. SA-24/75-2 for two extractors with separate lights and one fan.

Delivery

The starter is delivered as standard complete with switch assembly, 10 m cable, to be mounted onto the hood, built-in contactor and a transformer. The contactor must be fitted with relevant fan motor overload protection (not included). The halogen lamp cartridge (HL-20/24) can be ordered as an accessory.

Advantages

- More convenient start/stop of the fan. Gives huge savings on heating costs.
- Simplifies the electrical installation.
- Increases the use of the extractor. The fan start/stop switch and the lamp switch are within easy reach.



Technical data

SA-24/75

Intended for use at one work station with one extractor and one fan.

Power supply: 400/230 V.

Transformer: 24 V/75W for one halogen lamp cartridge (HL-20/24). The transformer also controls the built-in contactor.

SA-24/75-2

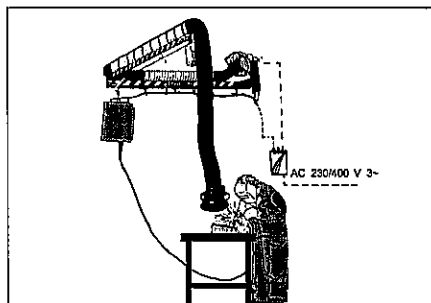
Intended for use with two extractors (delivered with two switches).

Transformer: 24V/75W.

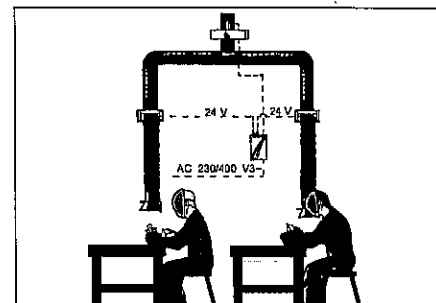
Table for choice of motor overload for SA-24

Fan	Motor kW V	Motor Overload A	Prod. no:
FUA-1300	0,37 3-fas 400 V	0,6 - 1,0	MS-0810
FUA-1301	0,37 1-fas 230V	2,2 - 3,1	MS-2231
FUA-1800	0,55 3-fas 400V	1,0 - 1,4	MS-1014
FUA-2100	0,75 3-fas 400V	1,7 - 2,4	MS-1724
FUA-2101	0,75 1-fas 230V	4,5 - 6,5	MS-4665
FS-3000	1,1 3-fas 400V	2,2 - 3,1	MS-2231
FS-4700	2,2 3-fas 400V	4,5 - 6,5	MS-4665
FA-6000	4,0 3-fas 400V	7,5 - 11,0	MS-7511

Installation alternatives and systems



Starter SA-24/75 in use with the PlymoVent Extractor Crane, UK-4516, with lamp cartridge in the hood and one fan, FUK-1800.

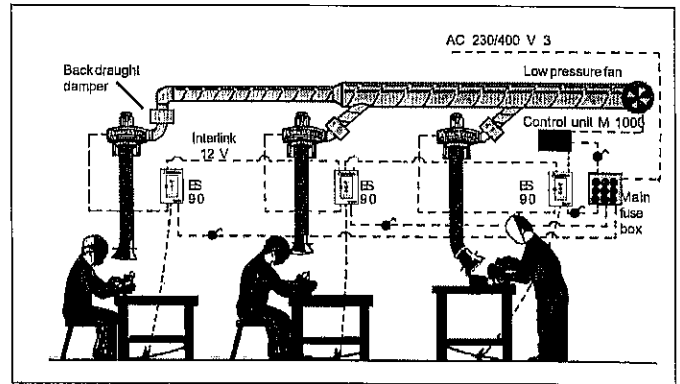


Starter SA-24/75-2 connected to two (PlymoVent LM-2 extractors) with one fan, FS-3000, and lamp cartridges in the hoods of both extractors.

Alternative solutions

ES-90

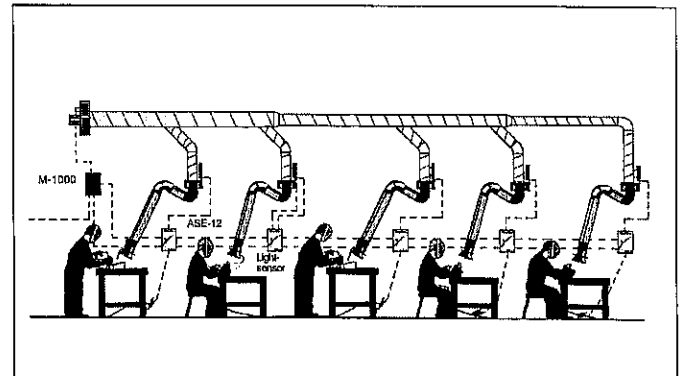
Separate fans and energy savers are good solutions even if you only want to connect the extractors to central ducting. The direction of the airflow is then governed by a low pressure central fan. The energy savers are connected in series to the M-1000 control unit which starts/stops the low pressure fan at the same time as the extraction fans are started/stopped. The system also requires back draught dampers on each sub-duct to prevent forward flow down the arms not in use. The advantage with a separate fan is that one is always sure to get an even and strong extraction rate in every extractor, regardless of how many are in use at the same time.



Central system: 3 X LM-2 with individual fans and energy savers, connected to M-1000 control unit for control of the low pressure fan.

ASE-12

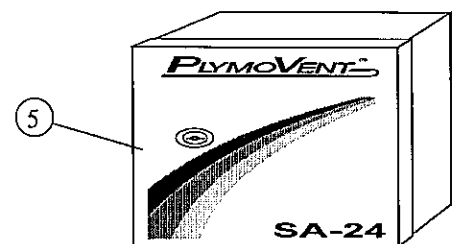
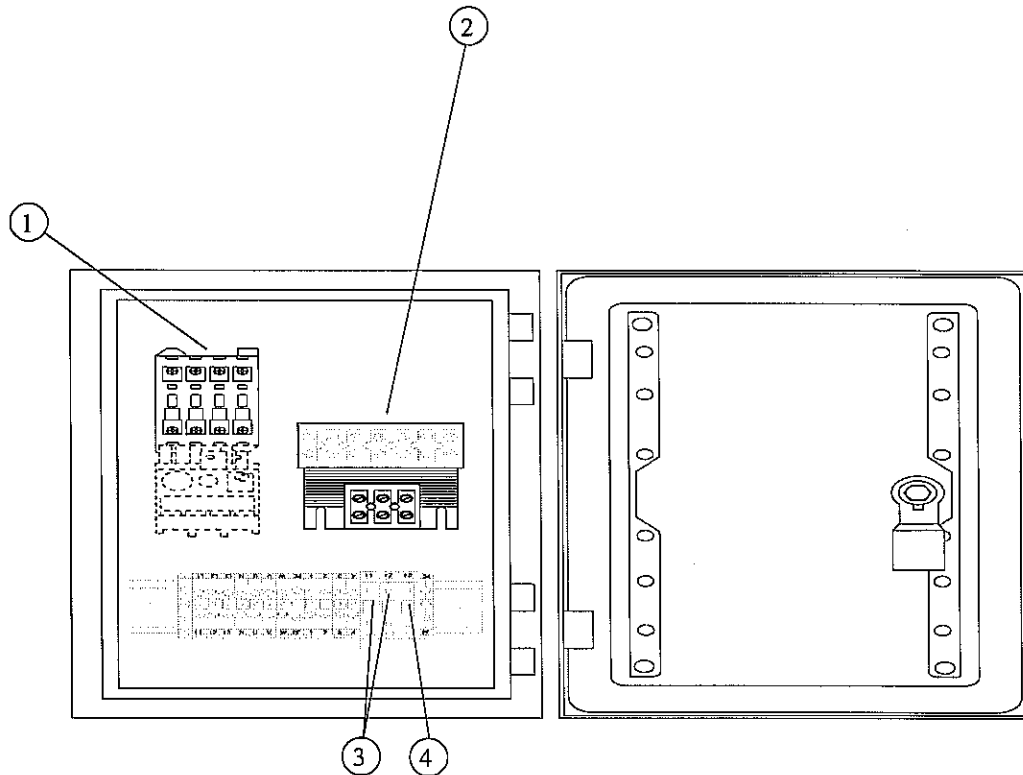
In a system with a central extraction fan, each extractor can be equipped with an automatic damper (ASE-12). These open and close automatically as each work station starts and stops. The control unit (M-1000) stops the central extraction fan when all the automatic dampers are closed. Extracted air volumes can, in this way, be reduced by more than 50%. The ASE-12 is an excellent addition to an existing system. When more arms are added they will ensure the same extraction rate is maintained at each hood by closing off unused arms.



Central system: 5 X KUA-3 with automatic dampers ASE-12, control unit M-1000 and one fan FS-3000, FS-2100 or FS-4700. Recommended number of workplaces: FS-2100: 2-4, FS-3000: 3-6, FS-4700: 4-8, FA-6000; 6-10.

STARTER
SA-24/75, SA-24/75-2

© Copyright 1997: All rights reserved. All information within this printed matter may not be reproduced, handed over, copied, xeroxed or translated into another language in any form or means without written permission from PlymoVent AB. PlymoVent AB reserves the right to make design changes.





SPARE PARTS LIST

BSAB No: T3.1
 Ser. No:SA-24/ RR
 Date:Dec-00
 Replace: Aug -98

STARTER
 SA-24

© Copyright: All right reserved. All information within this printed matter may not be reproduced, copied, xeroxed or translated into another language, in any form or any means without written permission from PlymoVent AB. PlymoVent AB reserves the right to make design

Produkt No:	Description
A	All models
B	
C	
D	
E	
F	
G	

Abbreviations

X= Order as required, state required length.

Pos	Art. No:	A	B	C	D	E	F	G	Description	Note
1	935 387	1							Contactora	
2	939 520	1							Transformer	
3	939 797	2							Fuse 1,6 A	
4	939 801	1							Fuse 3,15 A	
5	517 813	1							Housing	
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										

When ordering spare parts please quote:

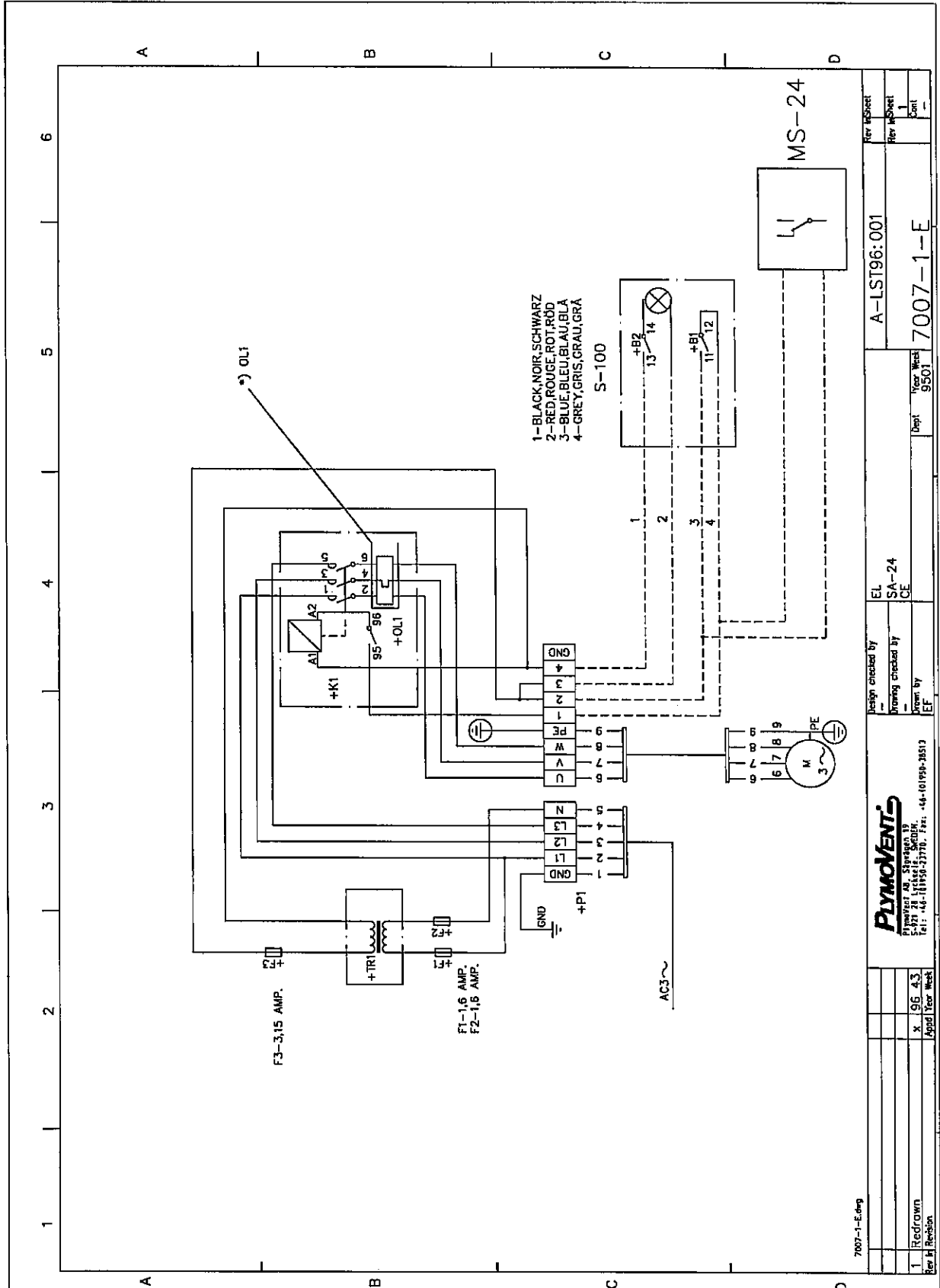
•Product No. (see label) • Batch No • Description • Part No • Quantity

For example:

SA-24, 00040, contactor, 935494, 1 pc

STARTER
 SA-24

© Copyright 1997: All rights reserved. All information within this printed matter may not be reproduced, handed over, copied, xeroxed or translated into another language in any form or means without written permission from PlymoVent AB. PlymoVent AB reserves the right to make design changes.



7007-1-E.dwg		Design checked by EL		A-LST96:001	
SA-24		Drawing checked by CE		Rev MSheet	
PlymoVent AB, Strygövägen 19		Dept. Year Week		7007-1-E	
S-227 28 Lillaås, Skövde, SWEDEN		9501		Rev MSheet	
Tel: +46-11150-23707, Fax: +46-10195-20517		EF		Cont.	
1 Redrawn X 95 4.3		Appr. Year Week			
Rev H Revision					

STARTER
 SA-24

© Copyright 1997: All rights reserved. All information within this printed matter may not be reproduced, handed over, copied, xeroxed or translated into another language in any form or means without written permission from PlymoVent AB. PlymoVent AB reserves the right to make design changes.

Pos	Description	Art. no	Qty.	Manufacturer	Remarks
+P1	TERMINAL BLOCK	513770	1	ENTRELEC	
+F1	FUSE 2AMP	939797	1	LITTELFUSE	
+F2	FUSE 2AMP	939797	1	LITTELFUSE	
+F3	FUSE 3,15AMP	939801	1	LITTELFUSE	
+TR1	TRANSFORMER 75VA	939520	1	Transformator teknik	
+K1	CONTACTOR B9,24V	935387	1	Allen Bradley	
+OL1	OVERLOAD	*)	1	Allen Bradley	*)
					1,0-2,9 AMP 939041
					3,7-12,0 AMP 939058
					12,0-32,0 AMP 939017



GB EU Declaration of Conformity

We hereby declare that the equipment described below conforms to the relevant fundamental safety and health requirements of the appropriate EU Directives, both in its basic design and construction as well as in the version marketed by us. This declaration will cease to be valid if any modifications are made to the machine without our express approval.

Appropriate internal measures have been taken to ensure that series-production units conform at all times to the requirements of current EU Directives and relevant standards. The signatories are empowered to represent and act on behalf of the company management.

D EG Konformitätserklärung

Hiermit erklären wir, daß die nachfolgend bezeichnete Maschine aufgrund ihrer Konzipierung und Bauart sowie in der von uns in Verkehr gebrachten Ausführung den einschlägigen grundlegenden Sicherheits- und Gesundheitsanforderungen der EG-Richtlinien entspricht. Bei einer nicht mit uns abgestimmten Änderung der Maschine verliert diese Erklärung ihre Gültigkeit.

Es ist durch interne Maßnahmen sichergestellt, daß die Seriengeräte immer den Anforderungen der aktuellen EG-Richtlinien und den angewandten Normen entsprechen. Die Unterzeichnenden handeln im Auftrag und mit Vollmacht der Geschäftsführung.

F Déclaration de conformité européenne

Par la présente, nous déclarons que la machine ci-après répond, de par sa conception et sa construction ainsi que de par le modèle que nous avons mis sur le marché, aux exigences de sécurité et d'hygiène en vigueur de la directive européenne. En cas de modification de la machine effectuée sans notre accord, cette déclaration sera caduque. La conformité permanente des appareils de série avec les exigences consignées dans les directives actuelles de la CE et avec les normes appliquées est garantie par des mesures internes. Les soussignés agissent par ordre et avec les pleins pouvoirs de la Direction commerciale.

I Dichiarazione di conformità CE

Dichiariamo con la presente, che la macchina qui di seguito indicata, in base alla sua concezione e al tipo di costruzione, e nella versione da noi introdotta sul mercato, è conforme ai relativi requisiti fondamentali di sicurezza e di sanità delle direttive della CE. In caso di modifica apporrate alla macchina senza il nostro accordo, questa dichiarazione perde la sua validità.

Mediante accorgimenti interni, è stato assicurato che gli apparecchi di serie siano sempre conformi ai requisiti delle attuali direttive CE e alle norme applicate. I firmatari agiscono su incarico e con i poteri dell'Amministrazione.

NL EU-conformiteitsverklaring

Hiermee verklaren wij dat de hierna vermelde machine op grond van haar concipiëring en constructie en in de door ons in omloop gebrachte uitvoering beantwoordt aan de desbetreffende veiligheids- en gezondheidsvoorschriften van de EG-richtlijnen. Na een wijziging aan de machine die niet in overleg met ons wordt uitgevoerd, verliest deze verklaring haar geldigheid.

Door interne maatregelen is er voor gezorgd dat de standaard-apparaten altijd beantwoorden aan de eisen van de actuele richtlijnen en de toegepaste normen. De ondergetekenden handelen in opdracht en op volmacht van de bedrijfsleiding.

E Declaración de conformidad de la Unión Europea

Por la presente declaramos los abajo firmantes que la máquina designada a continuación cumple, tanto por su concepción y clase de construcción como por la ejecución que hemos puesto en circulación, las normas fundamentales de seguridad y protección de la salud formuladas en las directivas comunitarias correspondientes. La presente declaración pierde su validez en caso de alteraciones en la máquina efectuadas sin nuestro consentimiento explícito. Mediante una serie de medidas internas, queda asegurado que los aparatos y equipos de serie cumplan siempre las exigencias formuladas en las directivas comunitarias actuales y en las normas correspondientes a aplicar. Los firmantes actúan autorizados y con poder otorgado por la dirección de la empresa.

P CE-Declaração de conformidade

Nós declaramos pelo presente instrumento que a máquina abaixo indicada corresponde, na sua concepção, fabricação bem como no tipo por nós comercializado, às exigências básicas de segurança e de saúde da directiva da CE. Se houver uma modificação na máquina sem o nosso consentimento prévio, a presente declaração perderá a sua validade.

Assegura-se, através de medidas internas da empresa, que os aparelhos de série correspondem sempre às exigências das directivas atualizadas da CE e às normas aplicadas. Os abaixo assinados, actuam e representam através de procuração a gerência.

DK Eu-overensstemmelseserklæring

Hermed erklærer vi at nedenstående maskine på grund af sin udførelse og konstruktion i den udførelse, i hvilken den sælges af os, overholder EU-direktivernes relevante, grundlæggende sikkerheds- og sundhedsmæssige krav.

Hvis maskinen ændres uden aftale med os, mister denne attest sin gyldighed.

Interne forholdsregler sikrer, at serieapparaterne altid opfylder kravene fra de aktuelle EU-direktiver og de standarder, der blev anvendt: Underskriverne handler på forretningsledelsens vegne og med dennes fuldmagt.

N **EU-KONFORMITETSERKLÄRING**

Vi erklærer herved at maskinen som er beskrevet nedenfor, i konstruktion og uftørelse tilsvarende markedsførte modell og er i overensstemmelse med de gjeldende og grunnleggende sikkerhets- og helsekrav i EU-direktivet. Denne erklæring mister sin gyldighet dersom maskinen endres uten etter avtale med oss.

Gjennom interne tiltak er det sikert at serieproduserte maskiner alltid er i overensstemmelse med kravene i de aktuelle EU-direktiver og anvendte normer. Undertegnede handler etter oppdrag og med fullmakt fra ledelsen.

S **Försäkran om överensstämmelse**

Härmed försäkras vi att den enligt nedan angivna maskinen till konstruktion, byggnadssätt och i av oss levererat utförande motsvarar tillämpliga baskrav beträffande säkerhet och hälsa enligt EU-direktiven.

Vid ändringar på maskinen som icke avtalats med oss upphör denna försäkran att gälla.

Vi har genom interna åtgärder säkerställt, att serietillverkade maskiner alltid motsvarar aktuella EU-direktiv och tillämplade normer. De undertecknade agerar på uppdrag av och med fullmakt av företagsledningen.

FIN **EU-vaatimustenmukaisuusvakuutus**

Me vakuutamme, että alla mainittu tuote vastaa suunnittelultaan ja rakenteeltaan sekä valmistustavaltaan EU-direktiivien asianomaisia turvallisuus- ja terveysvaatimuksia. Jos koneeseen tehdään muutoksia, joista ei ole sovittu kanssamme, tämä vakuutus ei ole enää voimassa.

Sisäisin toimenpitein varmistetaan, että sarjatuotantolaitteet vastaavat aina voimassaolevien EU-direktiivien vaatimuksia ja sovellettuja normeja. Allekirjoittaneet toimivat yrityksen johdon toimeksiannosta ja valtuuttamina.

PRODUCT: CONTROL EQUIPMENT**BATCH NO: 04401--XXXXX****MODELS: ASE 12, ASE-12 E, ES-90****M-1000, PCU-1000, SA-24, ECMOA****EU-DIRECTIVES:****89/336/EEC, 92/31/EEC**

EN 61000-6-4

EN 61000-6-2

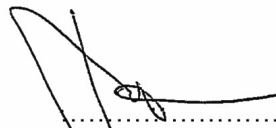
73/23/EEC, 93/68/EEC

EN 60204-1

PlymoVent AB
Box 527
921 28 Lycksele
Sweden



Lennart Wallberg
R&D manager



Tony Norgren
Plant manager