

APV RGE4

VANNE DE RÉGULATION

FORM NO.: H204227 REVISION: FR-4

READ AND UNDERSTAND THIS MANUAL PRIOR TO OPERATING OR SERVICING THIS PRODUCT.



Déclaration de conformité de l'UE pour vannes et manifolds

SPX FLOW TECHNOLOGY GERMANY GMBH
Gottlieb-Daimler-Str. 13, D-59439 Holzwickede
déclare par la présente que les

**vannes double joint et double siège APV des gammes
SD4, SDT4, SDU4, SDMS4, SDMSU4, SDTMS4, SWcip4, DSV,
DA3, DA3SLD, DE3, DEU3, DET3, DKR2, DKRT2, DKRH2**
des diamètres nominaux DN 25 - 150, ISO 1" – 6" et 1 Sh5 - 6 Sh5

vannes papillon APV des gammes SV1 et SVS1F, SVL et SVSL
des diamètres nominaux DN 25 - 100, DN 125 - 250 et ISO 1" – 4"

soupapes à tournant sphérique APV des gammes KHI, KHV
des diamètres nominaux DN 15 - 100

vannes simple siège, vannes à membrane et soupapes à ressort APV des gammes
**S2, SW4, SWHp4, SW4DPF, SWmini4, SWT4, SWS4, MF4, MS4, MSP4, AP/T1, CPV,
RG4, RG4DPF, RGMS4, RGE4, RGE4DPF, RGEMS4, PR2, PRD2, SI2, UF/R3, VRA/H**
des diamètres nominaux DN 10 - 150, ISO 1/2" – 4" et 1 Sh5 - 6 Sh5

et les manifolds fabriqués

sont conformes aux exigences des Directives 2006/42/CE (substitution pour 89/392/CEE et 98/37/CE) et ProdSG (substitution pour GPSG - 9.GPSGV).

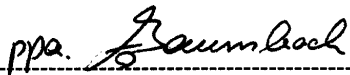
Pour des vérifications officielles, SPX FLOW présente
une documentation technique selon Annexe VII de la Directive du Conseil.
Elle est composée des documents de développement et de construction,
de la description des mesures prises pour assurer la conformité et
correspondre aux exigences essentielles de sécurité et de santé,
incluant une analyse des risques, ainsi qu'un manuel d'instructions
contenant des instructions de sécurité.

La conformité des vannes et des manifolds est garantie.

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RG4 vérin pneumatique MAT 3277 MFS-normalement fermé et MFH-normalement ouvert avec régulateur de position intégré (electropneumatique) 3725	RN 01.170.13-2
RG4 vérin pneumatique MAT 3271 MFS-normalement fermé et MFH-normalement ouvert	RN 01.170.13-3

1. Généralités

Ce manuel doit être très attentivement lu et observé à la lettre par les opérateurs et le personnel de maintenance.

Notez que notre responsabilité ne sera pas engagée pour des dommages ou mauvais fonctionnements dûs au non respect des règles de ce manuel.

Nous nous réservons le droit d'effectuer des modifications sur les descriptions et données techniques fournies.

2. Instructions de sécurité



Danger!

Ce symbole vous signale les mesures principales de sécurité. Vous le trouverez là où les activités décrites comportent des risques pour la santé, pour les individus et les valeurs réelles.



- Ne pas introduire vos doigts dans, ni toucher l'étrier et les étendues de commande (régulateur de position) de la vanne. Risque de blessure par soudain actionnement de la vanne.



- Avant toute intervention sur la vanne (p. ex. remplacement des joints) séparer les raccords électriques et pneumatiques.



- Ne pas introduire vos doigts dans, ni toucher une vanne ouverte. En outre, observer les instructions pour la vanne en état monté.



- La maintenance régulière de la vanne avec remplacement de tous les joints et garnitures de coussinet est nécessaire afin d'éviter les fuites et l'échappement de liquides.
- Avant toute intervention sur la vanne s'assurer que les tuyauteries ne sont plus sous pression! Vider les tuyauteries si possible.
- Observer les instructions de montage/démontage pour assurer en toute sécurité l'entretien et la maintenance de la vanne.
- La vanne devra toujours être installée, démontée ou remontée par un personnel qualifié ayant la formation nécessaire pour les vannes APV ou bien encore par des monteurs SPX FLOW. Au besoin, contactez votre revendeur SPX FLOW.

3. Utilisation conforme à la destination



L'utilisation conforme à sa destination comme domaine d'application de la vanne régulateur RGE4 est la régulation du débit et de la pression de liquides et de gazes.

L'application est seulement licite dans les limites admissibles de pression et de température et dans le respect des influences chimiques et corrosives.

Chaque usage dépassant ces directives est considéré comme non conforme.

Le constructeur décline toute responsabilité pour les dommages susceptibles d'en résulter. Seul l'utilisateur en porte le risque.

Attention!

L'utilisation non conforme de la vanne entraîne:

- l'endommagement
- la perte d'étanchéité
- la destruction
- Des perturbations lors du processus de production sont possible.

Des modifications arbitraires de la construction de la vanne dépravent la sécurité ainsi que la fonctionnalité de la vanne et ne sont pas licites.

Autorisations et Evaluations Externes:

3-A Sanitary Standards, Inc.

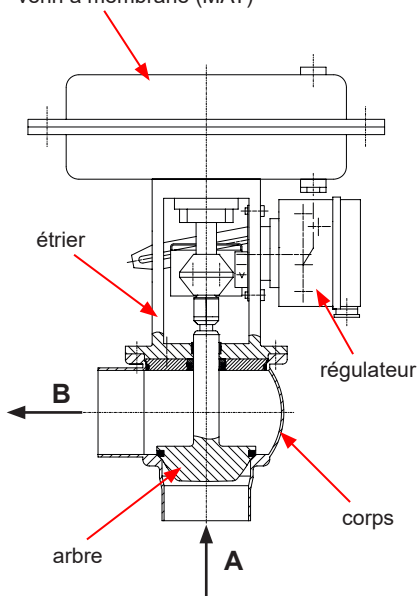
Remarque: il ne s'agit pas d'une norme

4. Fonctionnement

Vanne RGE avec vérin à membrane MAT 3271 et régulateur de position

fig. 1

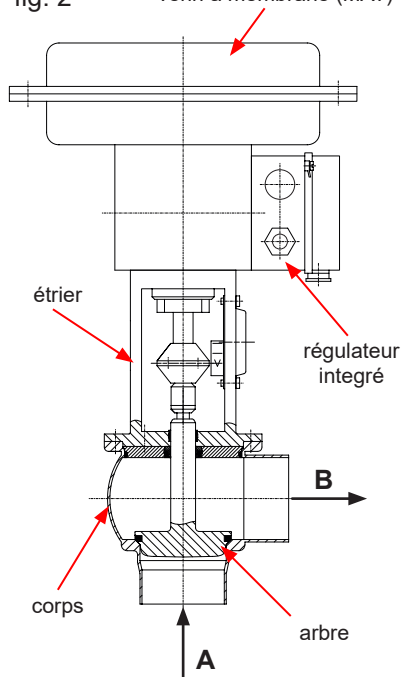
vérin à membrane (MAT)



Vanne RGE avec vérin à membrane MAT 3277 et régulateur de position

fig. 2

vérin à membrane (MAT)



4.1. Généralités

Les vannes hygiéniques de régulation RGE4 sont conçues pour être utilisées pour le réglage continu de débits dans les domaines suivants: industries des boissons, entreprises alimentaires et industries pharmaceutiques et de la chimie fine. Les vannes de régulation sont employées pour le réglage de débits et de pression de liquides et de gaz.

Il s'agit d'une construction de vanne à usage universel qui excelle par une haute fiabilité mécanique et une qualité supérieure de maintenance.

- En version de base, la vanne Delta RGE4 est construite comme vanne d'équerre et, ainsi, offre une dérivation favorable de débits, le sens de débit étant de **A** à **B**.
- Le corps exempt de zones mortes offre un nettoyage optimal. Étanchéité sans fentes des différentes parties du corps grâce au joint profilé - pas de sources d'infection.
- La dépendance entre le débit et la course du cône est définie par la ligne caractéristique.
- On distingue les caractéristiques linéaires et les caractéristiques proportionnelles.
- Quant aux dimensions DN 25, DN 40, 1T et 1,5T, outre les caractéristiques, les valeurs kvs peuvent être modifiées. (voir chap. 8.4)
- Les raccordements pour l'alimentation électrique et pneumatique se trouvent dans la partie latérale de l'étrier.
- Une indication optique de position (indication de course) se trouve à l'étrier.

Le vérin pneumatique fournit le mouvement et la force pour ouvrir et fermer le dispositif de réglage. Le vérin à membrane convient pour les plus grands mouvements de réglage avec la moindre friction propre.

Après la vanne RGE4, les régulateurs de position sont montés latéralement à l'étrier (selon Namur, fig. 1) ou ils font partie de l'unité vérin à membrane/régulateur de position (conception intégrée, fig. 2).

Comme standard, des régulateurs de position électropneumatique sont utilisés. En principe, le signal de réglage est 4 - 20 mA.

4. Fonctionnement

- Dépendant des besoins, la vanne de réglage peut être opérée en fonction vanne - normalement ouverte (NO) ou vanne - normalement fermée (NF).

MFS - Vérin à membrane - normalement fermé

Le vérin ouvre à pression de réglage et ferme à pression de ressort.

MFH - Vérin à membrane - normalement ouvert

Le vérin ferme à pression de réglage et ouvre à pression de ressort.

Pour les différentes applications, les vérins à membrane sont disponibles dans des différentes tailles avec différentes pressions de réglage.

Manuel d'installation et manuel d'instructions des vérins à membrane MAT 3271 et MAT 3277 voir <https://www.samsongroup.com/fr/produits/servomoteurs/>

Pour 120 cm² : EB 8310-1

Pour 175 cm², 350 cm², 750 cm² : EB 8310-5

Le régulateur de position garantit l'adjonction prédéfinie de la position de la vanne et du signal de réglage. Il compare le signal de réglage transmis par le dispositif de réglage à la course du vérin et définit la pression de réglage pneumatique comme grandeur de sortie.

Manuel d'installation et manuel d'instructions du régulateur de position voir <https://www.samsongroup.com/fr/produits/accessoires/>

- **Montage selon Namur**

Régulateur de position IP4763

Régulateur de position électropneumatique type 4763
(Samson - Instructions EB 8359-2)

- **Montage Intégré**

Régulateur de position électropneumatique 3730- conceptions différentes

Conception standard: TROVIS 3730-1

(Samson - Instructions EB 8484-1)

Conception Low Cost: 3725

(Samson - Instructions EB 8394)

5. Nettoyage

5.1. Les portées de flux

Les passages de la vanne sont nettoyés lors du nettoyage des lignes raccordées par les solutions de nettoyage.

Vérifier la comptabilité des procès et des liquides de nettoyage avec la matière de joint installée.

6. Mise en place

6.1. Généralités

La vanne RGE4 doit être installée de manière à ce que le produit ou la solution de nettoyage puisse s'écouler du corps de vanne, c'est-à-dire en position verticale de préférence.

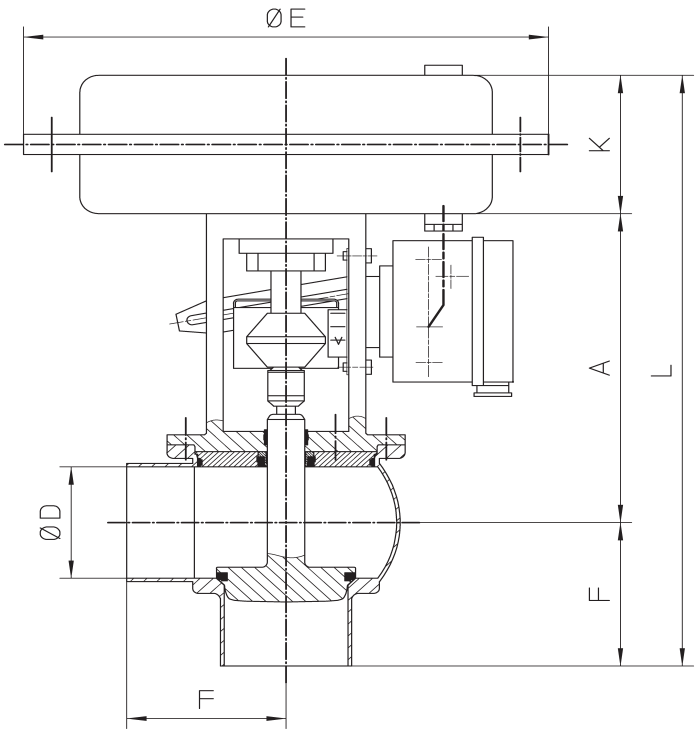
Attention! Observer les instructions de soudage.

6.2. Instructions de soudage

- Démontez l'intérieur avec le vérin et le régulateur de position du corps de vanne avant tout soudage. Agir soigneusement pour éviter des dommages.
- Les soudures ne doivent être effectuées que par des soudeurs qualifiés (DIN EN ISO 9606-1). (qualité de soudure DIN EN ISO 5817).
- Le soudage du corps de la vanne doit être effectué de manière à ce que les forces de déformation ne puissent être transférées de l'extérieur au corps de la vanne.
- La préparation d'un joint soudé allant jusqu'à 3 mm d'épaisseur doit être réalisée de bout à bout de forme carrée sans air. (Prévoyez le retrait!)
- Une soudure "orbitale" TIG est préférable!
- Après les soudages du corps de la vanne et de la ligne, les parties correspondantes de l'installation ou de la ligne doivent être nettoyées de résidus de soudage et de crasses. En cas de non respect de ces instructions de nettoyage, les résidus de soudage ou les crasses peuvent se déposer dans la vanne et causer des détériorations.
- Tout type de détérioration survenant en raison d'instructions de soudage qui n'ont pas été respectées ne seront pas couverts par notre garantie.
- Observer les règles de soudage pour les applications aseptiques des Directives AWS/ANSI et EHEDG.

7. Dimensions / Poids

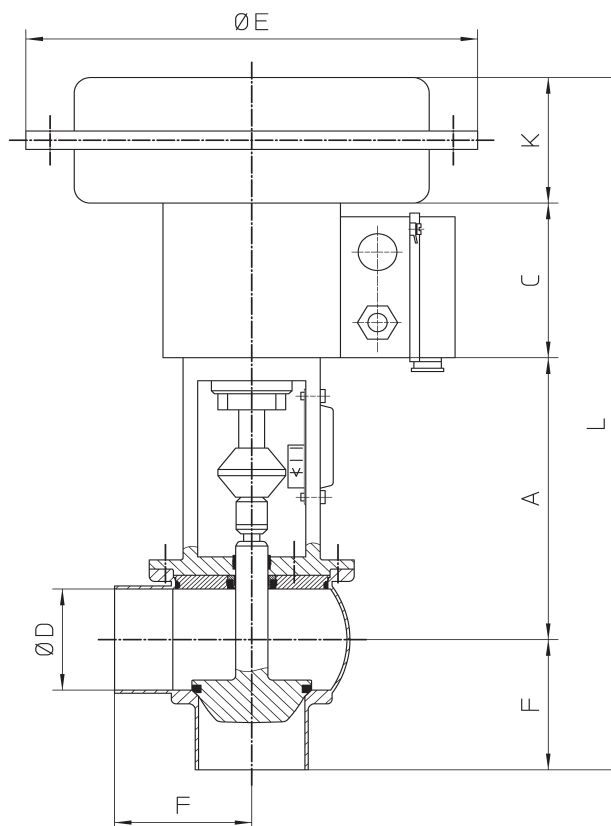
7.1. Montage du régulateur de position selon Namur



Dimensions en mm								Poids en kg
DN	surface de vérin (cm²)	L	A	ØD	F	ØE	K	
25	120	283	163.5	26	50	168	69	9.0
40	120	306	169.5	38	67	168	69	10.5
	175	315				215	78	12.5
50	175	326	175.5	50	72	215	78	14.5
65	175	347	184.0	66	85	215	78	15.8
	350	351				280	82	15.8
80	350	372	191.5	81	98	280	82	17.0
100	350	394	201.0	100	111	280	82	19.4
pouce								
1"	120	281	161.6	22.2	50	168	69	9.0
1,5"	120	304	167.9	34.8	67	168	69	10.5
	175	313				215	78	12.5
2"	175	324	174.3	47.6	72	215	78	14.5
2,5"	175	344	181.2	60.3	85	215	78	15.8
	350	348				280	82	15.8
3"	350	360	187.5	72.9	90	280	82	17.0
4"	350	393	199.8	97.6	111	280	82	19.4

7. Dimensions / Poids

7.2. Montage du régulateur de position intégré



Dimensions en mm									Poids en kg
DN	surface de vérin (cm ²)	L	A	C	ØD	F	ØE	K	
25	120	372	163.5	88	26	50	168	70	9.0
40	120	395	169.5	88	38	67	168	70	10.5
	175	416		101			215	78	12.5
50	175	427	175.5	101	50	72	215	78	14.5
65	175	448	184.0	101	66	85	215	78	15.8
	350	452					280	82	15.8
80	350	473	191.5	101	81	98	280	82	17.0
100	350	495	201.0	101	100	111	280	82	19.4
pouce									
1"	120	370	161.6	88	22.2	50	168	70	9.0
1,5"	120	393	167.9	88	34.8	67	168	70	10.5
	175	414		101			215	78	12.5
2"	175	425	174.3	101	47.6	72	215	78	14.5
2,5"	175	445	181.2	101	60.3	85	215	78	15.8
	350	449					280	82	15.8
3"	350	461	187.5	101	72.9	90	280	82	17.0
4"	350	494	199.8	101	97.6	111	280	82	19.4

8. Données techniques

8.1. Données générales

- Pression de service admissible:

DN25 - DN65	25 bar
1" - 2,5" pouce	25 bar
DN80 - DN100	16 bar
3" - 4" pouce	16 bar
- Rapport de réglage: 1: 50
- Version standard:

corps 1.4404
surface intérieure
polie Ra 1,6 µm
surface extérieure mate
- Pression d'air du vérin à membrane:

6 bar max.
(0,4 bar min. au dessus de
la pression de réglage max.
par ex. 0,6 - 3 bar
*min.: 3,4 bar)
- Grandeur de référence du régulateur de position électropneumatique: 4 - 20 mA
- Température max. de service: 135°C EPDM, HNBR
*FPM, *VMQ
- **Charge à courte durée:** **140°C EPDM, HNBR**
*FPM, *VMQ
*(pas de vapeur)
- Température ambiante: 0 - 40 °C

8. Données techniques

8.2. Qualité de l'air comprimé

- Qualité de l'air comprimé: classe de qualité selon DIN ISO 8573-1

Teneur en particules de corps solides:

classe de qualité 3,
grandeur max. des particules par m³
10000 de 0,5 µm < d ≤ 1,0 µm
500 de 1,0 µm < d ≤ 5,0 µm

Teneur en eau:

classe de qualité 3,
température max. du point de rosée -20 °C
Dans le cas d'installation lors
de températures basses ou élevées,
prendre des mesures supplémentaires
afin de réduire la pression du point de
rosée en conséquence.

Teneur en huile:

classe de qualité 1,
max. 0,01 mg/m³

L'huile appliquée doit être compatible avec les matières
d'élastomère polyuréthane.

8.3. Matières

Composant	Matière
corps, arbre de vanne, couvercle	1.4404 (DIN EN 10088)
étrier	1.4308 (DIN EN 10088)
accouplement (complet), vis, écrous	1.4301 (DIN EN 10088)
joint de corps	standard: EPDM option: HNBR, FPM
joint de siège	standard: EPDM option: HNBR, FPM, VMQ (Uniquement comme pièce de rechange)
joint d'arbre	standard: PTFE combiné avec EPDM option: HNBR, FPM, VMQ (Uniquement comme pièce de rechange)
bouchon guide	PA 6
plaque d'identité	autocollant PVC

8. Données techniques

8.3. Matières

Vérin à membrane	Matière
membrane coquille	tôle d'acier revêtue aux résines synthétiques ou aluminium coulé sous pression
membrane roulante	NBR ou EPDM à couche textile intermédiaire
tige de raccord, pièce intermédiaire	1.4301 (DIN EN 10088)
ressorts	1.1250 ou 1.7102 revêtue aux résines synthétiques
Régulateur de position	Matière
corps	aluminium de coulée sous pression, revêtue aux résines synthétiques ou plastique (IP3725)
parties extérieures	1.4301 et 1.4104 (DIN EN 10088)

8.4. Valeurs kvs en m³/h, Course en mm, Ø Siège (S) en mm

DN25 / 1"		DN40		1,5"		DN50 / 2"		DN 65 / 2,5"		DN80		3"		DN100 / 4"	
course: 15 mm		course: 15 mm		course: 15 mm		course: 15 mm		course: 15 mm		course: 15 mm		course: 15 mm		course 15 mm	
Kvs	S Ø	Kvs	S Ø	Kvs	S Ø	Kvs	S Ø	Kvs	S Ø	Kvs	S Ø	Kvs	S Ø	Kvs	S Ø
10	26	25	38	25	38	40	50	63	66	80	72.9	160	100	160	100
6.3		16		16		25	38	40	50	63	66	100	81		
				10	26										
				6.3											
				4.0	13										
				2.5											

9. Maintenance

La fréquence des opérations de maintenance dépend de l'application et devra être déterminée par l'utilisateur après quelques vérifications régulières.

Ne jamais nettoyez la vanne avec des produits abrasifs ou de polissage. Surtout les arbres de vanne ne doivent en aucune circonstance être nettoyés avec ces produits. Les dommages à l'arbre de vanne peuvent causer des fuites.

Le remplacement des joints se fait selon les instructions de montage/démontage. La mise en magasin par le client de joints de rechange est recommandée. Pour la maintenance de la vanne nous livrons des jeux de joints complets (voir listes de pièces détachées).

Attention! N'utiliser que de graisse alimentaire spéciale propre à la matière de joint respective.

Recommandation:

Graisse de montage APV pour EPDM, FPM, HNBR et NBR
(boîte de 0,75 kg - réf. 000 70-01-019/93; H147382)
(tube de - réf. 000 70-01-018/93; H147381)

ou

Graisse de montage pour VMQ (Silicone)
(boîte de 0,6 kg - réf. 000 70-01-017/93; H147380)
(tube de 60 g - réf. 000 70-01-016/93; H147379)

- ! Ne pas utiliser de graisse contenant de l'huile minérale avec les joints EPDM.
- ! Ne pas utiliser de graisse sur base silicone avec les joints VMQ.

Les types de graisse moins propre peuvent influencer la fonction et la durée de vie.

Pour la maintenance des vérins à membrane et des régulateurs de position voir siehe <https://www.samsongroup.com/fr/produits/>

10. Instructions de démontage/montage

Les numéros de code se réfèrent aux listes de pièces détachées

RN 01.170.2 DN 25 - 100; 1" - 4" version pouce

RN 01.170.10 1" - 4" version pouce 3-A

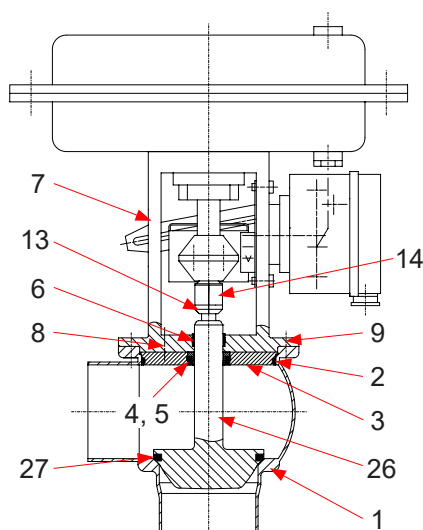
10.1. Démontage de la ligne



1. Dépressuriser la ligne et décharger les lignes si possible.
2. Fermer la ligne d'air pneumatique et la séparer.

Note: Pour l'actionneur MFS de taille 175cm² : actionneur de commande avec air.

3. Couper l'alimentation de commande et débrancher le câble de raccordement.
4. Déboulonner les vis de bride du corps (9) et enlever l'intérieur avec le régulateur de position et le vérin à membrane du corps (1). Si nécessaire, visser deux vis dans les trous taraudés de l'étrier (7) pour presser ainsi l'intérieur du corps.



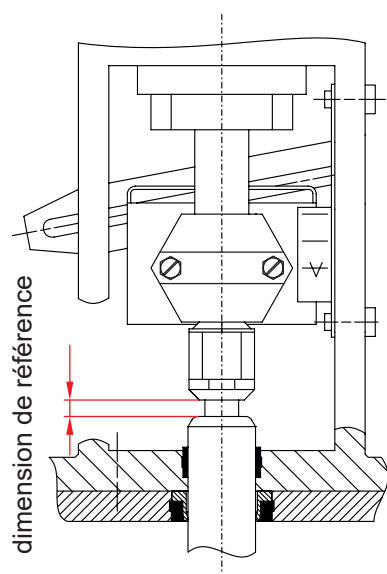
10.2. Démontage de la vanne pour le remplacement des joints et guides

1. Voir chapitre 10.1. positions 1. - 4.

Attention! Avant de détacher le contre-écrou (13), observer la dimension de référence entre le contre-écrou et l'arbre de vanne. Voir fig. 10.2.

2. Dévisser le contre-écrou (13), desserrer les vis d'accouplement, retirer l'arbre de vanne (26) de la tête d'accouplement (14) et l'enlever du couvercle de corps (3).
3. Desserrer la vis hex. (8) et démonter le couvercle de corps (3) de l'étrier (7).
4. Enlever le joint de corps (2) du couvercle de corps (3).
5. Démonter le joint d'arbre (5) et le joint de siège (4) du couvercle de corps.
6. Enlever le bouchon guide (6) de l'étrier (7).
7. Démonter le joint de siège (27) de l'arbre de vanne (cône) (26).

fig. 10.2.



10.3. Démontage de la vanne pour modifier les caractéristiques et les valeurs kvs (dimensions plus petites)

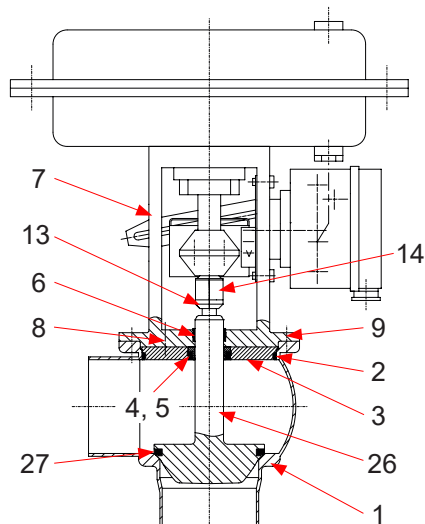
1. Voir chapitre 10.1. positions 1. - 4.
2. Desserrer la tête d'accouplement (14) et le contre-écrou (13) de l'arbre de vanne (26). Observer la dimension de référence du contre-écrou et de l'arbre de vanne.

10. Instructions de démontage/montage

10.4. Montage de la vanne et installation des joints et guides

Attention!

Afin de garantir un montage facile et une longue durabilité des pièces d'usure (joints, bouchons guides, etc.) les pièces doivent être pourvues d'une couche mince de graisse. N'utiliser pas d'outil à angles vifs pour le montage des pièces pour garantir leur fonction propre.



1. Monter le joint de siège (27) sur l'arbre (cône) (26) (voir pos. 12.).

Attention!

Evacuer la gorge avec un outil approprié.
Vérifier la bonne position du joint de siège.

2. Placer le bouchon guide (6) dans l'étrier (7).
3. Insérer le joint d'arbre (5) et puis le joint de siège (4) dans le couvercle de corps.
4. Visser le couvercle (3) et l'étrier (7) à la main.
5. Introduire l'arbre de vanne (26) à travers le couvercle de corps dans l'étrier. Ne visser le contre-écrou (13) et la tête d'accouplement (14) sur le filetage de l'arbre de vanne que maintenant, sinon le joint d'arbre (5, 4) est détruit par le six pans de l'accouplement ou du contre-écrou.

Attention!

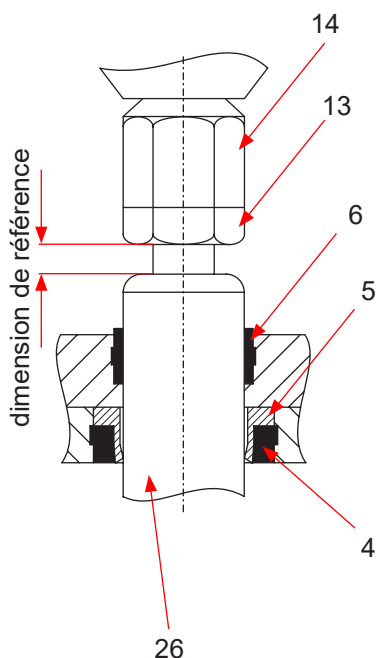
Observer la dimension de référence.
Serrer le contre-écrou!

Raccorder l'arbre de vanne et la tige du vérin à membrane par l'accouplement.

6. Presser l'intérieur de vanne dans le corps et le fixer à la bride de corps en serrant les vis hexagonales (9) en croix.

Note: Pour l'actionneur MFS de taille 175cm² : actionneur de commande avec une pression d'air de 1,7 bar.

7. Serrer l'accouplement et la vis hexagonale (8).
8. Raccorder les lignes électriques et pneumatiques. Réinitialiser le régulateur de position.



10. Instructions de démontage/montage

10.5. Montage de la vanne pour modifier les caractéristiques et les valeurs kvs (dimensions plus petites)

Pour la désignation des arbres à remplacer se référer aux listes de pièces détachées RN 01.170.2 et RN 01.170.10.

1. Vérifier la fonction des pièces d'usure (joints et bouchon guide). Les pièces défectueuses doivent être remplacées immédiatement. (désignation et numéro de référence, voir listes de pièces détachées, chapitre 13).
2. Voir chapitre 10.4. positions 1. - 6.
3. Serrer l'accouplement.
4. Raccorder les lignes électriques et pneumatiques. Réinitialiser le régulateur de position.

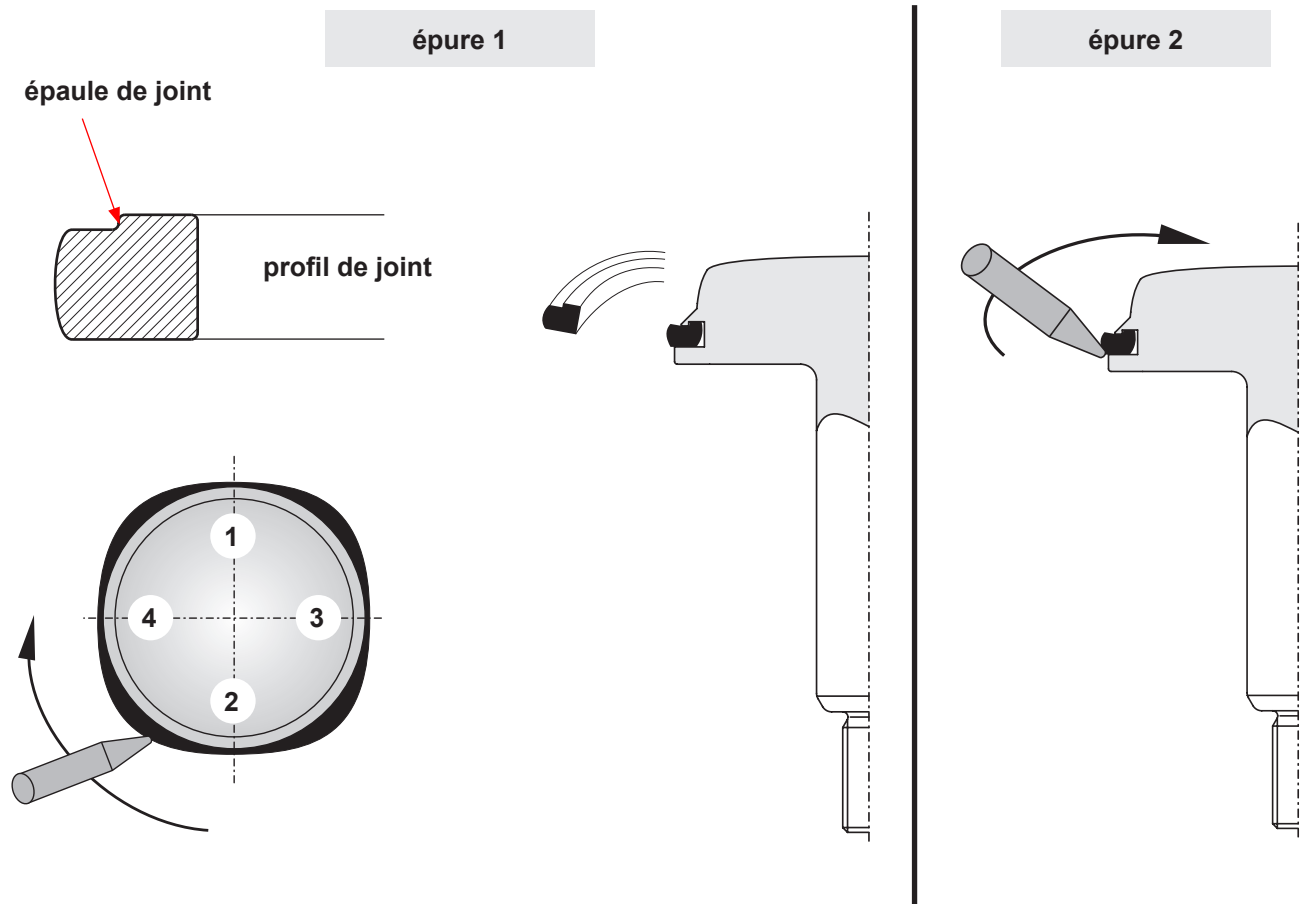
11. Montage du joint de siège

11.1. Montage manuel du joint de siège (27)

1. Pourvoir le joint de siège d'une couche mince de graisse avant l'installation.

La gorge pour le joint de siège ne doit pas être graissée.
2. Ensermer l'arbre de vanne dans l'étai.

L'arbre de vanne ne doit pas être endommagé pendant ce procédé. Utiliser des mâchoires de protection.
3. Presser le joint légèrement graissé à quatre points avec le côté de le plus large en avant dans la gorge (**voir épure 1**).
4. Presser le joint avec l'outil de montage (tournevis avec rebord arrondi) à quatre côtés opposés **1-2, 3-4** dans la gorge (**voir épure 1**).
5. Procéder par étapes pour presser le joint dans la gorge. Travailler aux points opposés de la gorge. Veiller à une position égale du joint de siège.
6. Après presser l'outil de montage entre l'épaule de joint et le paroi de la gorge et faire le tour tout autour de la gorge. Par cette mesure, le fond de la gorge est désaéré et l'épaule de joint enclenche (**voir épure 2**).



12. Suppression des anomalies

Anomalie	Mesure
Vanne n'est pas étanche.	Remplacer le joint de siège (27).
Fuite entre bride du corps et bride de l'étrier	Remplacer le joint de coprs (2).
Fuite à l'étrier	Remplacer le bouchon guide (6), le joint d'arbre (5) et le joint de siège (4).
Vérin à membrane types 3271 et 3277	
Echappement de l'air du vérin à membrane	Vérifier les raccordement à vis, remplacer la membrane roulante si nécessaire. Observer le manuel d'instructions du vérin à membrane. Voir: https://www.samsongroup.com/fr/produits/servomoteurs/
Régulateur de position type 4763	
Défaut dans la régulation des débits	Vérifier les raccordement et la pression d'air. Vérifier le raccordement électrique et le signal de réglage. Utiliser le manuel d'instructions du régulateur de position dans la recherche de défaut. Voir: https://www.samsongroup.com/fr/produits/accessoires/

13. Listes de pièces détachées

Vous trouverez ci-joint les dessins des pièces de rechange avec listes correspondantes contenant le numéro de référence des pièces de rechange pour les différentes versions et tailles de vanne.

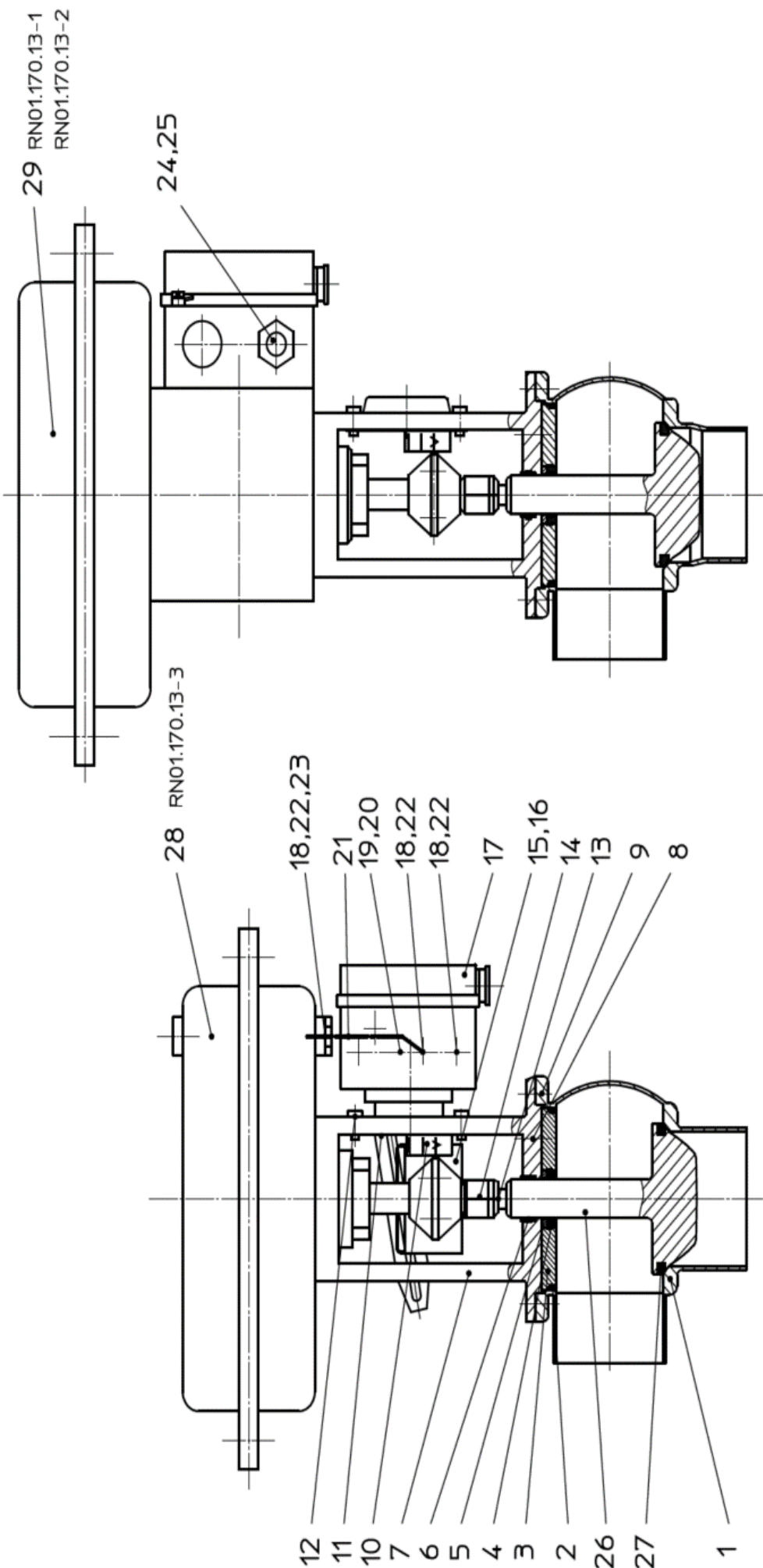
Veuillez indiquer les informations suivantes lors de votre commande:

- le nombre des pièces demandées
- le numéro de référence
- la désignation.

sous réserve de modification

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Spare parts list:				Date: 21.09.1531.03.1623.01.23				SPX FLOW	
Modulating valve RGE4 - DN25-DN100; 1" - 4"				Name: Trytko Trytko Shreshth					
Diaphragm actuator MAT 3271 or MAT 3277 (Spring: closed or open) - 120, 175, 350, 750cm ²				Approved by:					
Digital electro-pneumatic positioner				Date:				Page 1 of 14	
Flow characteristic: linear or equal percentage				Name:				RN 01.170.2	
				Approved by:					



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Spare parts list:

Modulating valve RGE4 - DN 25

Diaphragm actuator MAT 3271 or MAT 3277 (Spring: closed or open) - 120, 175, 350, 750cm²

Digital electro-pneumatic positioner

Flow characteristic: linear or equal percentage

Spare parts list:										SPX FLOW			
Modulating valve RGE4 - DN 25													
Diaphragm actuator MAT 3271 or MAT 3277 (Spring: closed or open) - 120, 175, 350, 750cm ²										Date: 21.09.15 31.03.16 23.01.23			
Digital electro-pneumatic positioner										Name: Trytko Trytko Shreshth			
Flow characteristic: linear or equal percentage										Approved by:			
										Date:			
										Name:			
										Approved by:			
										Page 2 of 14			
										RN 01.170.2			
Item	Quantity	Description	Material	Part no.	Item	Quantity	Description	Material	Part no.				
1	1	Housing	RGE41 RGE42 1.4404	H177840 H331872	23	1	Red. nipple G3/4" G1/8" for actuator 350-750	MS58	H17019				
					24	1	Elbow union G1/8" Ø6mm slewable		H208825				
2	1	Housing seal	Ø45 Ø45 Ø45 HNB FPM	H77439 H170017 H77438 H156869	25	1	Red. nipple G1/4" G1/8" for actuator 120-750	MS58	H17018				
					26	1	Shaft - linear LD* kvs = 6,3 m³/h kvs = 10 m³/h	1.4404 1.4404	H159478 H159479				
3	1	Housing cover	1.4404 EPDM	H77442 H170176		1	Shaft - equal percen. GD*	1.4404	H159143				
					27	1	Seat seal kvs = 6,3 m³/h kvs = 10 m³/h	1.4404 EPDM HNBR FPM VMQ	H159144 H77445 H172173 H77444 H77443				
4	1	Seat seal	VMQ	H77440									
5	1	Shaft seal	Turcon MF6	H323082	28	1	Pneumatic actuator MAT 3271 + IP763 see RN 01.170.13-3						
6	1	Bushing 20x9	PTFE + 25% carbon	H207154	29	1	Pneumatic actuator MAT 3277 + TROVIS3730-1, IP3730-X, IP3725 see RN 01.170.13-1, RN 01.170.13-2						
7	1	Yoke	1.4308	H157564									
8	1	Hex. screw M6x16	DIN EN 24017	H78751									
9	4	Hex. screw M8x16	DIN EN 24017	H78772									
10	1	Stroke indicator	Stroke: 15mm	H161761									
11	1	Mounting plate for stroke indicator	1.4301	H161763									
12	2	Pan head screw M5x12	DIN EN ISO 1580	H127391									
13	1	Counternut	M10x1 , Stroke: 15mm	H162483									
14	1	Coupling top small	for actuator 120	H162484									
	1	Coupling top big	for actuator 175-750	H162485									
15	1	Driving plate complete		H162486									
16	1	Angle bracket	for kvs 16-160										
17	1	Electro-pneumatic positioner IP763	without accessory: lever I, spring I (stroke 15mm)	H66919									
18	3	Elbow union	G1/8" Ø6mm slewable	H208825									
19	1	Hex. screw M8x70	DIN EN 24014	H78803									
20	1	Washer	DIN 125 A I=8,4	H79594									
21	1	Hose	6x1x500	H16541									
22	3	Red. nipple G1/4" G1/8" for actuator 120-175	MS58	H17018									
	2	Red. nipple G1/4" G1/8" for actuator 350-750	MS58	H17018									

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Spare parts list:										SPX FLOW							
Modulating valve RGE4 - 1"										Date:	21.09.15	31.03.16	23.01.23				
Diaphragm actuator MAT 3271 or MAT 3277 (Spring: closed or open) - 120, 175, 350, 750cm ² Digital electro-pneumatic positioner Flow characteristic: linear or equal percentage										Name:	Trytko	Trytko	Shreshth				
										Approved by:							
										Date:				Page	3	of	14
										Name:				RN 01.170.2			
										Approved by:							
Item	Quantity	Description	Material	Part no.	Item	Quantity	Description	Material	Part no.								
1	1	Housing	1.4404	H177851	23	1	Red. nipple G3/4" G1/8" for actuator 350-750	MS58	H17019								
		RGE41	1.4404	H331509	24	1	Elbow union G1/8" Ø6mm slewable		H208825								
		RGE42	EPDM	H77439	25	1	Red. nipple G1/4" G1/8" for actuator 120-750	MS58	H17018								
2	1	Housing seal	HNBR	H170017	26	1	Shaft - linear LD*	1.4404	H159478								
		Ø45	FPM	H77438		kvs = 6,3 m³/h	1.4404	H159479									
		Ø45	1.4404	H156869		kvs = 10 m³/h	1.4404	H159143									
3	1	Housing cover	EPDM	H77442	1	Shaft - equal percn. GD*	kvs = 6,3 m³/h	1.4404	H159144								
			HNBR	H170176	27	1	Seat seal	EPDM	H77445								
4	1	Seat seal	FPM	H77441				kvs = 6,3 m³/h	HNBR	H172173							
			VMQ	H77440				kvs = 10 m³/h	FPM	H77444							
5	1	Shaft seal	Turcon MF6	H323082				VMQ	H77443								
6	1	Bushing 20x9	PTFE + 25% carbon	H207154	28	1	Pneumatic actuator MAT 3271 + IP763 see RN 01.170.13-3										
7	1	Yoke	1.4308	H157564	29	1	Pneumatic actuator MAT 3277 + TROVIS3730-1, IP3730-X, IP3725 see RN 01.170.13-1, RN 01.170.13-2										
8	1	Hex. screw M6x16	A2-70	H78751													
9	4	Hex. screw M8x16	A2-70	H78772													
10	1	Stroke indicator	1.4301	H161761													
11	1	Mounting plate for stroke	1.4301	H161763													
12	2	Pan head screw M5x12	1.4301	H127391													
13	1	Counterut M10x1 , Stroke: 15mm	1.4301	H162483													
14	1	Coupling top small for actuator 120	1.4301	H162484													
	1	Coupling top big for actuator 175-750	1.4301	H162485													
15	1	Driving plate complete	1.4301	H162486													
16	1	Angle bracket for kvs 16-160	1.4301														
17	1	Electro-pneumatic positioner IP763 without accessory: lever I, spring I (stroke 15mm)	Aluminium die casted	H66919			Item 2, 4, 5, 6, 27 available as complete seal kits only										
18	3	Elbow union G1/8" Ø6mm slewable		H208825	1	1	Seal kit	EPDM	H200221								
19	1	Hex. screw M8x70	A2-70	H78803	1	1	Seal kit	HNBR	H324701								
20	1	Washer DIN 125 A I=8,4	A2-70	H79594	1	1	Seal kit	FPM	H324458								
21	1	Hose 6x1x500		H16541	1	1	Seal kit	VMQ	H324459								
22	3	Red. nipple G1/4" G1/8" for actuator 120-175	MS58	H17018		*	LD* = linear flow characteristic, soft sealing										
	2	Red. nipple G1/4" G1/8" for actuator 350-750	MS58	H17018		*	GD* = equal percentage flow characteristic, soft sealing										

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Spare parts list:										SPX FLOW				
Modulating valve RGE4 - DN 40										Date:	21.09.15	31.03.16	23.01.23	
Diaphragm actuator MAT 3271 or MAT 3277 (Spring: closed or open) - 120, 175, 350, 750cm ² Digital electro-pneumatic positioner Flow characteristic: linear or equal percentage										Name:	Trytko	Trytko	Shreshth	
										Approved by:				
										Date:				Page 4 of 14
										Name:				RN 01.170.2
										Approved by:				
Item	Quantity	Description	Material	Part no.	Item	Quantity	Description	Material	Part no.					
1	1	Housing	RGE41	1.4404	23	1	Red. nipple G3/4" G1/8" for actuator 350-750	MS58	H17019					
			RGE42	1.4404	24	1	Elbow union G1/8" Ø6mm slewable	H208825						
2	1	Housing seal	Ø61	EPDM	25	1	Red. nipple G1/4" G1/8" for actuator 120-750	MS58	H17018					
			Ø61	HNBR			kvs = 16 m³/h	1.4404	H159480					
			Ø61	FPM			kvs = 25 m³/h	1.4404	H159481					
3	1	Housing cover		1.4404	26	1	Shaft - linear LD*	1.4404	H159145					
			EPDM					kvs = 16 m³/h	1.4404	H159146				
4	1	Seat seal		HNBR			kvs = 25 m³/h	EPDM	H77470					
				FPM				HNBR	H172175					
				VMQ				FPM	H77469					
5	1	Shaft seal		Turcon MF6				VMQ	H77468					
6	1	Bushing 20x9		PTFE + 25% carbon			Pneumatic actuator MAT 3271 + IP763 see RN 01.170.13-3							
7	1	Yoke		1.4308	28	1								
8	1	Hex. screw M8x16	DIN EN 24017	A2-70	29	1	Pneumatic actuator MAT 3277 + TROVIS3730-1, IP3730-X, IP3725 see RN 01.170.13-1, RN 01.170.13-2							
9	4	Hex. screw M8x16	DIN EN 24017	A2-70										
10	1	Stroke indicator	Stroke: 15mm	A2-70										
11	1	Mounting plate for stroke		1.4301										
12	2	Pan head screw M5x12	DIN EN ISO 1580	1.4301										
13	1	Counterut	M10x1 , Stroke: 15mm	1.4301										
14	1	Coupling top small	for actuator 120	1.4301										
	1	Coupling top big	for actuator 175-750	1.4301										
15	1	Driving plate complete		1.4301										
16	1	Angle bracket	for kvs 16-160	1.4301			Item 2, 4, 5, 6, 27 available as complete seal kits only							
17	1	Electro-pneumatic positioner IP763	without accessory: lever I, spring I (stroke 15mm)	Aluminium die casted		1	Seal kit	EPDM	H200222					
18	3	Elbow union	G1/8" Ø6mm slewable			1	Seal kit	HNBR	H325397					
19	1	Hex. screw M8x70	DIN EN 24014	A2-70		1	Seal kit	FPM	H325398					
20	1	Washer	DIN 125 A I=8,4	A2-70		1	Seal kit	VMQ	H325399					
21	1	Hose	6x1x500											
22	3	Red. nipple G1/4" G1/8" for actuator 120-175		MS58		*	LD* = linear flow characteristic, soft sealing							
	2	Red. nipple G1/4" G1/8" for actuator 350-750		MS58		*	GD* = equal percentage flow characteristic, soft sealing							

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Diaphragm actuator MAT 3271 or MAT 3277 (Spring: closed or open) - 120, 175, 350, 750cm ²										SPX FLOW		
Spare parts list:										Date: 21.09.15 31.03.16 23.01.23		
Modulating valve RGE4 - 1,5"										Trytko Trytko Shreshth		
Digital electro-pneumatic positioner										Approved by:		
Flow characteristic: linear or equal percentage										Date: 21.09.15 31.03.16 23.01.23		
Approved by:										Page 5 of 14		
Approved by:										RN 01.170.2		
Item	Quantity	Description	Material	Part no.	Item	Quantity	Description	Material	Part no.			
1	1	RGE41-1,5"-ø13	1.4404	H178584	22	3	Red. nipple G1/4" G1/8" for actuator 120-175	MS58	H17018			
		RGE41-1,5"-ø26	1.4404	H178585		2	Red. nipple G1/4" G1/8" for actuator 350-750	MS58	H17018			
		RGE41-1,5"-ø38	1.4404	H177852	23	1	Red. nipple G3/4" G1/8" for actuator 350-750	MS58	H17019			
		RGE42	1.4404	H207975		24	Elbow union G1/8" ø6mm slewable		H208825			
		RGE42-1,5"-ø26	1.4404	H208162	25	Red. nipple G1/4" G1/8" for actuator 120-750	MS58	H17018				
2	1	Housing seal	EPDM	H77464	26	1	kvs = 2.5 m³/h	1.4404	H159476			
			HNBR	H170018			kvs = 4 m³/h	1.4404	H159477			
			FPM	H77463			kvs = 6.3 m³/h	1.4404	H159478			
3	1	Housing cover	1.4404	H156409			kvs = 10 m³/h	1.4404	H159479			
			EPDM	H77442			kvs = 16 m³/h	1.4404	H159480			
			HNBR	H170176			kvs = 25 m³/h	1.4404	H159481			
4	1	Seat seal	FPM	H77441			kvs = 2.5 m³/h	1.4404	H159141			
			VMQ	H77440			kvs = 4 m³/h	1.4404	H159142			
			Turcon MF6	H323082			kvs = 6.3 m³/h	1.4404	H159143			
5	1	Shaft seal	PTFE + 25% carbon	H207154			1	1	GD*	1.4404	H159144	
					27	1			Seal seal	1.4404	H159145	
7	1	Yoke	1.4308	H157765								
			A2-70	H78772								
8	1	Hex. screw M8x16	DIN EN 24017	H78772								
			A2-70	H161761								
9	4	Hex. screw M8x16	DIN EN 24017	H161761								
			Stroke: 15mm	H161763								
10	1	Stroke indicator	1.4301	H161763								
			1.4301	H127391								
11	1	Mounting plate for stroke indicator	1.4301	H162483								
			1.4301	H162484								
12	2	Pan head screw M5x12	DIN EN ISO 1580	H162485								
			M10x1 , Stroke: 15mm	H162486								
13	1	Counternut	for actuator 120	H162487								
			for actuator 175-750	H66919								
14	1	Coupling top small	for kvs 16-160	H208825								
			without accessory: lever I, spring I (stroke 15mm)	H78803								
15	1	Coupling top big	Aluminium die casted	H79594								
			for kvs 16-160	H16541								
16	1	Driving plate complete	Electro-pneumatic positioner IP763	H16541								
			for kvs 16-160	H16541								
17	1	Angle bracket	G1/8" ø6mm slewable	H16541								
			DIN EN 24014	H16541								
18	3	Elbow union	DIN 125 A l=8.4	H16541								
			6x1x500	H16541								
19	1	Hex. screw M8x70	DIN 125 A l=8.4	H16541								
			6x1x500	H16541								
20	1	Washer	DIN 125 A l=8.4	H16541								
			6x1x500	H16541								
21	1	Hose	DIN 125 A l=8.4	H16541								
			6x1x500	H16541								

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Spare parts list:

Modulating valve RGE4 - 1,5"

Diaphragm actuator MAT 3271 or MAT 3277 (Spring: closed or open) - 120, 175, 350, 750cm²

Digital electro-pneumatic positioner

Flow characteristic: linear or equal percentage

[illegible]

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Spare parts list:										SPX FLOW			
Modulating valve RGE4 - DN 50										Date:	21.09.15	31.03.16	23.01.23
Diaphragm actuator MAT 3271 or MAT 3277 (Spring: closed or open) - 120, 175, 350, 750cm² Digital electro-pneumatic positioner Flow characteristic: linear or equal percentage										Name:	Trytko	Trytko	Shreshth
										Approved by:			
										Date:			
										Name:			
Flow characteristic: linear or equal percentage										Approved by:			
										Page	7	of	14
										RN 01.170.2			
Item	Quantity	Description	Material	Part no.	Item	Quantity	Description	Material	Part no.				
1	1	Housing	1.4404	H177838	23	1	Red. nipple G3/4" G1/8" for actuator 350-750	MS58	H17019				
		RGE41			24	1	Elbow union G1/8" Ø6mm slewable		H208825				
		RGE42	1.4404		25	1	Red. nipple G1/4" G1/8" for actuator 120-750	MS58	H17018				
2	1	Housing seal	EPDM	H77488		1	Shaft - linear LD* kvs = 40 m³/h	1.4404	H159482				
		Ø73	HNBR	H168714	26	1	Shaft - equal percen. GD* kvs = 40 m³/h	1.4404	H159147				
		Ø73	FPM	H77487				EPDM	H77494				
3	1	Housing cover	1.4404	H148194				HNBR	H165709				
			EPDM	H77442	27	1	Seat seal kvs = 40 m³/h	FPM	H77493				
4	1	Seat seal	HNBR	H170176				VMQ	H77492				
			FPM	H77441									
			VMQ	H77440	28	1	Pneumatic actuator MAT 3271 + IP763						
5	1	Shaft seal	Turcon MF6	H323082			see RN 01.170.13-3						
6	1	Bushing 20x9	PTFE + 25% carbon	H207154	29	1	Pneumatic actuator MAT 3277 + TROVIS3730-1, IP3730-X, IP3725						
							see RN 01.170.13-1, RN 01.170.13-2						
7	1	Yoke	1.4308	H157567									
8	1	Hex. screw M8x16	A2-70	H78772									
9	4	Hex. screw M8x16	A2-70	H78772									
10	1	Stroke indicator	1.4301	H161761									
11	1	Mounting plate for stroke	1.4301	H161763									
12	2	Pan head screw M5x12	1.4301	H127391									
13	1	Counterut	1.4301	H162483									
		M10x1 , Stroke: 15mm											
14	1	Coupling top small	1.4301	H162484									
		for actuator 120											
15	1	Coupling top big	1.4301	H162485									
		for actuator 175-750											
16	1	Driving plate complete	1.4301	H162486									
		for kvs 16-160											
17	1	Electro-pneumatic positioner IP763	Aluminium die	H66919			Item 2, 4, 5, 6, 27 available as complete seal kits only	EPDM	H200223				
		without accessory: lever I, spring I (stroke 15mm)	casted					HNBR	H207604				
18	3	Elbow union		H208825				FPM	H315255				
19	1	Hex. screw M8x70	A2-70	H78803				VMQ	H337833				
20	1	Washer	A2-70	H79594									
21	1	Hose		H16541									
		6x1x500											
22	3	Red. nipple G1/4" G1/8" for actuator 120-175	MS58	H17018		*	LD* = linear flow characteristic, soft sealing						
	2	Red. nipple G1/4" G1/8" for actuator 350-750	MS58	H17018		*	GD* = equal percentage flow characteristic, soft sealing						

* LD* = linear flow characteristic, soft sealing

* GD* = equal percentage flow characteristic, soft sealing

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Spare parts list:										SPX FLOW			
Modulating valve RGE4 - 2"										Date:	21.09.15	31.03.16	23.01.23
										Name:	Trytko	Trytko	Shreshth
										Approved by:			
Diaphragm actuator MAT 3271 or MAT 3277 (Spring: closed or open) - 120, 175, 350, 750cm ²										Date:			
Digital electro-pneumatic positioner										Name:			
Flow characteristic: linear or equal percentage										Approved by:			
										RN 01.170.2			
Item	Quantity	Description	Material	Part no.	Item	Quantity	Description	Material	Part no.				
1	1	Housing	1.4404	H177853	23	1	Red. nipple G3/4" G1/8" for actuator 350-750	MS58	H17019				
		RGE41			24	1	Elbow union G1/8" Ø6mm slewable		H208825				
		RGE42	1.4404	H325540	25	1	Red. nipple G1/4" G1/8" for actuator 120-750	MS58	H17018				
2	1	Housing seal	EPDM	H77488	26	1	Shaft - linear LD* kvs = 40 m³/h	1.4404	H159482				
		Ø73	HNBR	H168714		1	Shaft - equal percen. GD* kvs = 40 m³/h	1.4404	H159147				
		Ø73	FPM	H77487				EPDM	H77494				
3	1	Housing cover	1.4404	H148194	27	1	Seat seal kvs = 40 m³/h	HNBR	H165709				
			EPDM	H77442				FPM	H77493				
4	1	Seat seal	HNBR	H170176				VMQ	H77492				
			FPM	H77441									
			VMQ	H77440	28	1	Pneumatic actuator MAT 3271 + IP763 see RN 01.170.13-3						
5	1	Shaft seal	Turcon MF6	H323082	29	1	Pneumatic actuator MAT 3277 + TROVIS3730-1, IP3730-X, IP3725 see RN 01.170.13-1, RN 01.170.13-2						
6	1	Bushing 20x9	PTFE + 25% carbon	H207154									
7	1	Yoke	1.4308	H157567									
8	1	Hex. screw M8x16	DIN EN 24017	H78772									
9	4	Hex. screw M8x16	DIN EN 24017	H78772									
10	1	Stroke indicator	Stroke: 15mm	H161761									
11	1	Mounting plate for stroke		H161763									
12	2	Pan head screw M5x12	DIN EN ISO 1580	H127391									
13	1	Counterut	M10x1 , Stroke: 15mm	H162483									
	1	Coupling top small	for actuator 120	H162484									
14	1	Coupling top big	for actuator 175-750	H162485									
15	1	Driving plate complete		H162486									
16	1	Angle bracket	for kvs 16-160	H162487									
		Electro-pneumatic positioner IP763	without accessory: lever I, spring I (stroke 15mm)	H66919									
17	1												
18	3	Elbow union	G1/8" Ø6mm slewable	H208825									
19	1	Hex. screw M8x70	DIN EN 24014	H78803									
20	1	Washer	DIN 125 A l=8,4	H79594									
21	1	Hose	6x1x500	H16541									
22	3	Red. nipple G1/4" G1/8" for actuator 120-175	MS58	H17018									
		Red. nipple G1/4" G1/8" for actuator 350-750	MS58	H17018									

* LD* = linear flow characteristic, soft sealing

* GD* = equal percentage flow characteristic, soft sealing

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Spare parts list:

Modulating valve RGE4 - DN 65

Diaphragm actuator MAT 3271 or MAT 3277 (Spring: closed or open) - 120, 175, 350, 750cm²

Digital electro-pneumatic positioner

Flow characteristic: linear or equal percentage

Spare parts list:									
Modulating valve RGE4 - DN 65									
Diaphragm actuator MAT 3271 or MAT 3277 (Spring: closed or open) - 120, 175, 350, 750cm ²									
Digital electro-pneumatic positioner									
Flow characteristic: linear or equal percentage									
Item	Quantity	Description	Material	Part no.	Item	Quantity	Description	Material	Part no.
1	1	Housing	RGE41 RGE42	1.4404 1.4404	23	1	Red. nipple G3/4" G1/8"	for actuator 350-750	MS58
					24	1	Elbow union	G1/8" Ø6mm slewable	H208825
2	1	Housing seal	Ø81	EPDM	25	1	Red. nipple G1/4" G1/8"	for actuator 120-750	MS58
			Ø81	HNBR	26	1	Shaft - linear LD*	kvs = 63 m³/h	1.4404
3	1	Housing cover	Ø81	FPM		1	Shaft - equal percen. GD*	kvs = 63 m³/h	1.4404
				1.4404					EPDM
4	1	Seat seal		EPDM	27	1	Seat seal	kvs = 63 m³/h	HNBR
				HNBR					FPM
				FPM					VMQ
5	1	Shaft seal		VMQ	28	1	Pneumatic actuator MAT 3271 + IP763 see RN 01.170.13-3		H77516
6	1	Bushing 20x9		Turcon MF6	29	1	Pneumatic actuator MAT 3277 + TROVIS3730-1, IP3730-X, IP3725 see RN 01.170.13-1, RN 01.170.13-2		
7	1	Yoke		1.4308					
8	1	Hex. screw M8x16	DIN EN 24017	A2-70					
9	4	Hex. screw M8x16	DIN EN 24017	A2-70					
10	1	Stroke indicator	Stroke: 15mm	1.4301					
11	1	Mounting plate for stroke		1.4301					
12	2	Pan head screw M5x12	DIN EN ISO 1580	1.4301					
13	1	Counternut	M10x1 , Stroke: 15mm	1.4301					
14	1	Coupling top small	for actuator 120	1.4301					
	1	Coupling top big	for actuator 175-750	1.4301					
15	1	Driving plate complete		1.4301					
16	1	Angle bracket	for kvs 16-160	1.4301					
17	1	Electro-pneumatic positioner IP763	without accessory: lever I, spring I (stroke 15mm)	Aluminium die casted			Item 2, 4, 5, 6, 27 available as complete seal kits only		
18	3	Elbow union	G1/8" Ø6mm slewable			1	Seal kit	EPDM	H200224
19	1	Hex. screw M8x70	DIN EN 24014	A2-70		1	Seal kit	HNBR	H317120
20	1	Washer	DIN 125 A I=8,4	A2-70		1	Seal kit	FPM	H337828
21	1	Hose	6x1x500			1	Seal kit	VMQ	H336753
22	3	Red. nipple G1/4" G1/8"	for actuator 120-175	MS58		*	LD* = linear flow characteristic, soft sealing		
	2	Red. nipple G1/4" G1/8"	for actuator 350-750	MS58		*	GD* = equal percentage flow characteristic, soft sealing		

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Spare parts list:										SPX FLOW				
Diaphragm actuator MAT 3271 or MAT 3277 (Spring: closed or open) - 120, 175, 350, 750cm ² Digital electro-pneumatic positioner Flow characteristic: linear or equal percentage										Date:	21.09.15	31.03.16	23.01.23	
										Name:	Trytko	Trytko	Shreshth	
										Approved by:				
										Page 10 of 14				
										RN 01.170.2				
										Date:				
										Name:				
										Approved by:				
Item	Quantity	Description	Material	Part no.	Item	Quantity	Description	Material	Part no.					
1	1	Housing	1.4404	H177854	23	1	Red. nipple G3/4" G1/8" for actuator 350-750	MS58	H17019					
			1.4404	H316082	24	1	Elbow union G1/8" Ø6mm slewable		H208825					
			EPDM	H77512	25	1	Red. nipple G1/4" G1/8" for actuator 120-750	MS58	H17018					
2	1	Housing seal	HNBR	H168759	26	1	Shaft - linear LD* kvs = 63 m³/h	1.4404	H321259					
			FPM	H77511		1	Shaft - equal percen. GD* kvs = 63 m³/h	1.4404	H321260					
3	1	Housing cover	1.4404	H151968				EPDM	H77518					
			EPDM	H77442	27	1	Seat seal kvs = 63 m³/h	HNBR	H172178					
4	1	Seat seal	HNBR	H170176				FPM	H77517					
			FPM	H77441				VMQ	H77516					
			VMQ	H77440	28	1	Pneumatic actuator MAT 3271 + IP763							
5	1	Shaft seal	Turcon MF6	H323082			see RN 01.170.13-3							
6	1	Bushing 20x9	PTFE + 25% carbon	H207154	29	1	Pneumatic actuator MAT 3277 + TROVIS3730-1, IP3730-X, IP3725							
							see RN 01.170.13-1, RN 01.170.13-2							
7	1	Yoke	1.4308	H157568										
8	1	Hex. screw M8x16	A2-70	H78772										
9	4	Hex. screw M8x16	A2-70	H78772										
10	1	Stroke indicator	1.4301	H161761										
11	1	Mounting plate for stroke	1.4301	H161763										
12	2	Pan head screw M5x12	1.4301	H127391										
13	1	Counterut	1.4301	H162483										
		M10x1 , Stroke: 15mm												
14	1	Coupling top small	1.4301	H162484										
	1	Coupling top big	1.4301	H162485										
		for actuator 175-750												
15	1	Driving plate complete	1.4301	H162486										
16	1	Angle bracket	1.4301	H162487										
		for kvs 16-160												
17	1	Electro-pneumatic positioner IP763	Aluminium die	H66919										
		without accessory: lever I, spring I (stroke 15mm)	casted											
18	3	Elbow union		H208825	1	1	Seal kit	EPDM	H200224					
		G1/8" Ø6mm slewable			1	1	Seal kit	HNBR	H317120					
19	1	Hex. screw M8x70	A2-70	H78803	1	1	Seal kit	FPM	H337828					
		DIN EN 24014			1	1	Seal kit	VMQ	H336753					
20	1	Washer	A2-70	H79594										
		DIN 125 A I=8,4												
21	1	Hose		H16541										
		6x1x500												
22	3	Red. nipple G1/4" G1/8" for actuator 120-175	MS58	H17018	*	*	LD* = linear flow characteristic, soft sealing							
	2	Red. nipple G1/4" G1/8" for actuator 350-750	MS58	H17018	*	*	GD* = equal percentage flow characteristic, soft sealing							

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Spare parts list:														
Modulating valve RGE4 - 3"														
Diaphragm actuator MAT 3271 or MAT 3277 (Spring: closed or open) - 120, 175, 350, 750cm²														
Digital electro-pneumatic positioner														
Flow characteristic: linear or equal percentage														
Item	Quantity	Description	Material	Part no.	Item	Quantity	Description	Material	Part no.	SPX FLOW				
1	1	Housing	RGE41 RGE42	H177855	23	1	Red. nipple G3/4" G1/8" for actuator 350-750	MS58	H17019	Page 11 of 14				
					24	1	Elbow union G1/8" Ø6mm slewable		H208825	RN 01.170.2				
2	1	Housing seal	Ø88 Ø88 Ø88	H77558 H170013 H77557	25	1	Red. nipple G1/4" G1/8" for actuator 120-750	MS58	H17018					
					26	1	Shaft - linear LD* kvs = 80 m³/h	1.4404	H159763					
3	1	Housing cover		H159895		1	Shaft - equal percen. GD* kvs = 80 m³/h	1.4404	H159762					
4	1	Seat seal		H77442 H170176 H77441	27	1	Seat seal kvs = 80 m³/h	EPDM	H77564					
								HNBR	H176688					
								FPM	H77563					
								VMQ	H77562					
5	1	Shaft seal		H77440	28	1	Pneumatic actuator MAT 3271 + IP763 see RN 01.170.13-3							
6	1	Bushing 20x9		H207154	29	1	Pneumatic actuator MAT 3277 + TROVIS3730-1, IP3730-X, IP3725 see RN 01.170.13-1, RN 01.170.13-2							
7	1	Yoke		H159379										
8	1	Hex. screw M8x16	DIN EN 24017	H78772										
9	4	Hex. screw M8x16	DIN EN 24017	H78772										
10	1	Stroke indicator	Stroke: 15mm	H161761										
11	1	Mounting plate for stroke		H161763										
12	2	Pan head screw M5x12	DIN EN ISO 1580	H127391										
13	1	Counterut	M10x1 , Stroke: 15mm	H162483										
14	1	Coupling top small	for actuator 120	H162484										
	1	Coupling top big	for actuator 175-750	H162485										
15	1	Driving plate complete		H162486										
16	1	Angle bracket	for kvs 16-160	H162487										
17	1	Electro-pneumatic positioner IP763	without accessory: lever I, spring I (stroke 15mm)	H66919						Item 2, 4, 5, 6, 27 available as complete seal kits only				
18	3	Elbow union	G1/8" Ø6mm slewable	H208825		1	Seal kit	EPDM	H200225					
19	1	Hex. screw M8x70	DIN EN 24014	H78803		1	Seal kit	HNBR	H337824					
20	1	Washer	DIN 125 A l=8,4	H79594		1	Seal kit	FPM	H337829					
21	1	Hose	6x1x500	H16541		1	Seal kit	VMQ	H325384					
22	3	Red. nipple G1/4" G1/8" for actuator 120-175		H17018		*	LD* = linear flow characteristic, soft sealing							
	2	Red. nipple G1/4" G1/8" for actuator 350-750		H17018		*	GD* = equal percentage flow characteristic, soft sealing							

* LD* = linear flow characteristic, soft sealing

* GD* = equal percentage flow characteristic, soft sealing

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Spare parts list:

Modulating valve RGE4 - DN80

Diaphragm actuator MAT 3271 or MAT 3277 (Spring: closed or open) - 120, 175, 350, 750cm²

Digital electro-pneumatic positioner

Flow characteristic: linear or equal percentage

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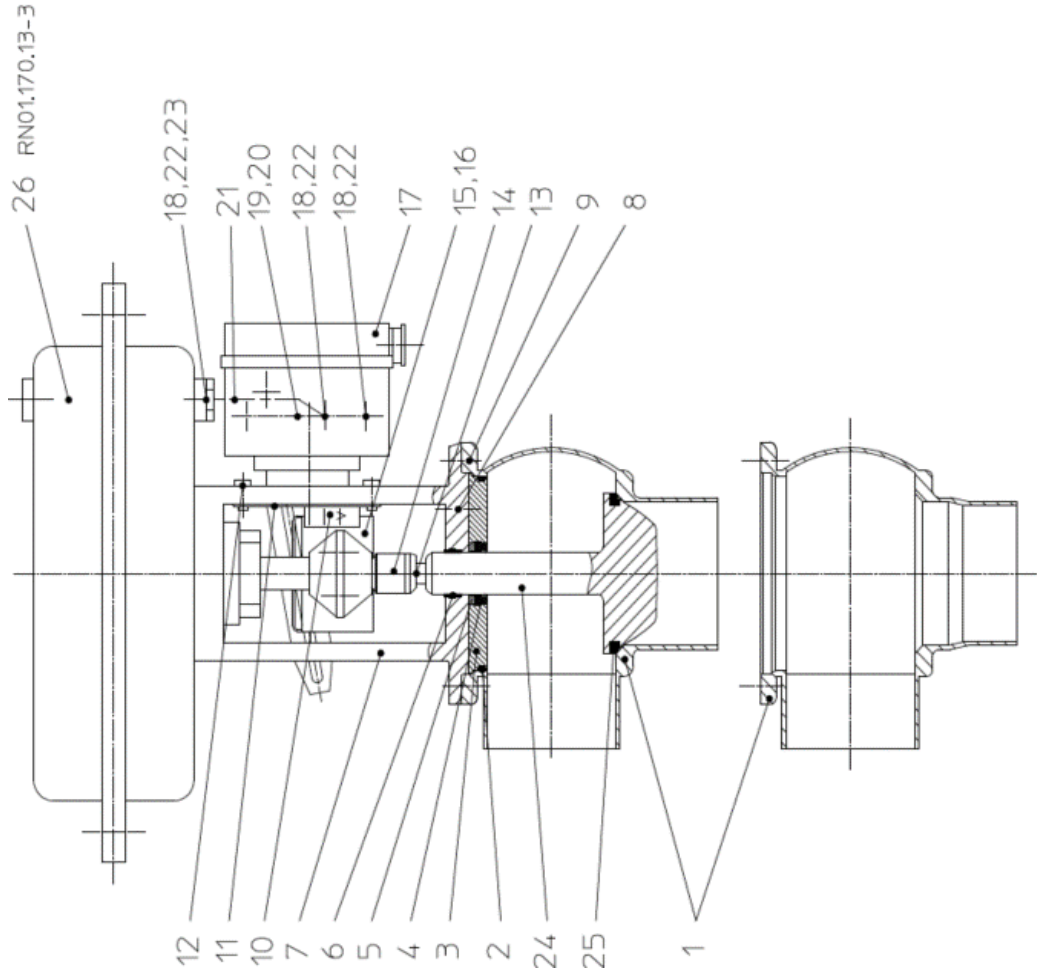
Spare parts list:										SPX FLOW							
Modulating valve RGE4 - DN100										Date:	21.09.15	31.03.16	23.01.23				
Diaphragm actuator MAT 3271 or MAT 3277 (Spring: closed or open) - 120, 175, 350, 750cm² Digital electro-pneumatic positioner Flow characteristic: linear or equal percentage										Name:	Trytko	Trytko	Shreshth				
										Approved by:							
										Date:				Page	13	of	14
										Name:				RN 01.170.2			
										Approved by:							
Item	Quantity	Description	Material	Part no.	Item	Quantity	Description	Material	Part no.								
1	1	Housing	RGE41	H177836	23	1	Red. nipple G3/4" G1/8" for actuator 350-750	MS58	H17019								
			RGE42		24	1	Elbow union G1/8" Ø6mm slewable		H208825								
2	1	Housing seal	Ø110.2	H77583	25	1	Red. nipple G1/4" G1/8" for actuator 120-750	MS58	H17018								
			Ø110.2	H170074	26	1	Shaft - linear LD* kvs = 160 m³/h	1.4404	H167867								
3	1	Housing cover	Ø110.2	H77582	1	1	Shaft - equal percen. GD* kvs = 160 m³/h	1.4404	H175422								
				H159888	27	1	Seat seal kvs = 160 m³/h	EPDM	H77589								
4	1	Seat seal		H77442				HNBR	H172183								
				H170176				FPM	H77588								
				H77441				VMQ	H77587								
5	1	Shaft seal		H77440	28	1	Pneumatic actuator MAT 3271 + IP763 see RN 01.170.13-3										
6	1	Bushing 20x9		H323082	29	1	Pneumatic actuator MAT 3277 + TROVIS3730-1, IP3730-X, IP3725 see RN 01.170.13-1, RN 01.170.13-2										
7	1	Yoke		H207154													
				H157572													
8	1	Hex. screw M8x16	DIN EN 24017	H78772													
9	8	Hex. screw M10x16	DIN EN 24017	H78806													
10	1	Stroke indicator	Stroke: 15mm	H161761													
11	1	Mounting plate for stroke		H161763													
12	2	Pan head screw M5x12	DIN EN ISO 1580	H127391													
13	1	Counterut	M10x1 , Stroke: 15mm	H162483													
14	1	Coupling top small	for actuator 120	H162484													
	1	Coupling top big	for actuator 175-750	H162485													
15	1	Driving plate complete		H162486													
16	1	Angle bracket	for kvs 16-160	H162487													
17	1	Electro-pneumatic positioner IP763	without accessory: lever I, spring I (stroke 15mm)	H66919			Item 2, 4, 5, 6, 27 available as complete seal kits only										
18	3	Elbow union	G1/8" Ø6mm slewable	H208825		1	Seal kit	EPDM	H200227								
19	1	Hex. screw M8x70	DIN EN 24014	H78803		1	Seal kit	HNBR	H325388								
20	1	Washer	DIN 125 A f=8,4	H79594		1	Seal kit	FPM	H337831								
21	1	Hose	6x1x500	H16541		1	Seal kit	VMQ	H337835								
22	3	Red. nipple G1/4" G1/8" for actuator 120-175		H17018		*	LD* = linear flow characteristic, soft sealing										
	2	Red. nipple G1/4" G1/8" for actuator 350-750		H17018		*	GD* = equal percentage flow characteristic, soft sealing										

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Spare parts list:										Date: 21.09.1531.03.1623.01.23			SPX FLOW		
Modulating valve RGE4 - 4"										TrytkoTrytkoShreshth					
Diaphragm actuator MAT 3271 or MAT 3277 (Spring: closed or open) - 120, 175, 350, 750cm²										Approved by:					
Digital electro-pneumatic positioner										Date:			Page 14 of 14		
Flow characteristic: linear or equal percentage										Name:			RN 01.170.2		
										Approved by:					
Item	Quantity	Description	Material	Part no.	Item	Quantity	Description	Material	Part no.						
1	1	Housing	1.4404	H177856	23	1	Red. nipple G3/4" G1/8" for actuator 350-750	MS58	H17019						
			1.4404		24	1	Elbow union G1/8" Ø6mm slewable		H208825						
2	1	Housing seal	EPDM	H77583	25	1	Red. nipple G1/4" G1/8" for actuator 120-750	MS58	H17018						
			HNBR	H170074	26	1	Shaft - linear LD*	1.4404	H167867						
3	1	Housing cover	FPM	H77582		1	Shaft - equal persen. GD*	1.4404	H175422						
			1.4404	H159888	27	1	Seat seal kvs = 160 m³/h	EPDM	H77589						
4	1	Seat seal	EPDM	H77442				HNBR	H172183						
			HNBR	H170176				FPM	H77588						
			FPM	H77441				VMQ	H77587						
5	1	Shaft seal	VMQ	H77440	28	1	Pneumatic actuator MAT 3271 + IP763								
			Turcon MF6	H323082			see RN 01.170.13-3								
6	1	Bushing 20x9	PTFE + 25% carbon	H207154	29	1	Pneumatic actuator MAT 3277 + TROVIS3730-1, IP3730-X, IP3725								
							see RN 01.170.13-1, RN 01.170.13-2								
7	1	Yoke	1.4308	H157572											
8	1	Hex. screw M8x16	A2-70	H78772											
9	8	Hex. screw M10x16	A2-70	H78806											
10	1	Stroke indicator	1.4301	H161761											
11	1	Mounting plate for stroke	1.4301	H161763											
12	2	Pan head screw M5x12	1.4301	H127391											
13	1	Counterut	1.4301	H162483											
	1	Coupling top small	1.4301	H162484											
14	1	Coupling top big	1.4301	H162485											
	1	Driving plate complete	1.4301	H162486											
15	1	Angle bracket	1.4301	H162487											
16	1	Electro-pneumatic positioner IP763	Aluminium die casted	H66919			Item 2, 4, 5, 6, 27 available as complete seal kits only								
17	3	Elbow union		H208825											
18	1	Hex. screw M8x70	A2-70	H78803	1	1	Seal kit	EPDM	H200227						
19	1	Washer	A2-70	H79594	1	1	Seal kit	HNBR	H325388						
20	1	Hose		H16541	1	1	Seal kit	FPM	H337831						
21	3	Red. nipple G1/4" G1/8" for actuator 120-175	MS58	H17018	1	1	Seal kit	VMQ	H337835						
22	2	Red. nipple G1/4" G1/8" for actuator 350-750	MS58	H17018			LD* = linear flow characteristic, soft sealing								
					*	*	GD* = equal percentage flow characteristic, soft sealing								

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Spare parts list:				Date: 22.09.1530.01.23		SPX FLOW	
Modulating valve RGE4 - 1" - 4" 3A				Name: Trytko Shreshth			
Diaphragm actuator MAT 3271 (Spring: closed or open) - 120, 175, 350, 750cm ² Digital electro-pneumatic positioner Flow characteristic: linear or equal percentage				Approved by:			
				Date:		Page 1 of 8	
				Name:		RN 01.170.10	
				Approved by:			



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Spare parts list:

Modulating valve RGE4 - 1" - 3A

Diaphragm actuator MAT 3271 (Spring: closed or open) - 120, 175, 350, 750cm

Digital electro-pneumatic positioner

Flow characteristic: linear or equal percentage

Spare parts list:										SPX FLOW							
Modulating valve RGE4 - 1" - 3A										Date:	22.09.15	30.01.23					
Diaphragm actuator MAT 3271 (Spring: closed or open) - 120, 175, 350, 750cm² Digital electro-pneumatic positioner Flow characteristic: linear or equal percentage										Name:	Tryko	Shreshth					
										Approved by:							
										Date:					Page 2 of 8		
										Name:					RN 01.170.10		
										Approved by:							
Item	Quantity	Description	Material	Part no.	Item	Quantity	Description	Material	Part no.								
1	1	Housing	RGE41 design 3A-bright fin.	1.4404	H321265	23	1	Red. nipple G3/4" G1/8" for actuator 350-750	MS58	H17019							
2	1	Housing seal	Ø45	EPDM	H77439	24	1	Shaft - linear LD*	1.4404	H159478							
			Ø45	HNBR	H170017				1.4404	H159479							
			Ø45	FPM	H77438				1.4404	H159143							
3	1	Housing cover		1.4404	H156869	25	1	Shaft - equal percent. GD*	1.4404	H159144							
4	1	Seat seal		EPDM	H77442					kvs = 6,3 m³/h	EPDM	H77445					
				HNBR	H170176					kvs = 10 m³/h	HNBR	H172173					
				FPM	H77441				FPM	H77444							
				VMQ	H77440	26	1	Pneumatic actuator MAT 3271 + IP763 see RN 01.170.13-3	VMQ	H77443							
5	1	Shaft seal		Turcon MF6	H323082												
6	1	Bushing 20x9		PEEK	H315800												
7	1	Yoke	design 3A-bright finish	1.4308	H321161												
8	1	Hex. screw M6x16	design satin finish	1.4308	H157564												
			DIN EN 24017	A2-70	H78751												
9	4	Hex. screw M8x16	DIN EN 24017	A2-70	H78772												
10	1	Stroke indicator	Stroke: 15mm	1.4301	H161761												
11	1	Mounting plate for stroke indicator		1.4301	H161763												
12	2	Pan head screw M5x12	DIN EN ISO 1580	1.4301	H127391												
13	1	Counternut	M10x1 , Stroke: 15mm	1.4301	H162483												
14	1	Coupling top small	for actuator 120	1.4301	H162484												
	1	Coupling top big	for actuator 175-750	1.4301	H162485												
15	1	Driving plate complete		1.4301	H162486												
16	1	Angle bracket	for kvs 16-160	1.4301	H162487												
17	1	Electro-pneumatic positioner IP763	without accessory: lever I, spring I (stroke 15mm)	Aluminium die casted	H66919			Item 2, 4, 5, 6, 25 available as complete seal kits only									
18	3	Elbow union	G1/8" Ø6mm slewable		H208825		1	Seal kit	EPDM	H337624							
19	1	Hex. screw M8x70	DIN EN 24014	A2-70	H78803		1	Seal kit	HNBR	H324701							
20	1	Washer	DIN 125 A I=8,4	A2-70	H79594		1	Seal kit	FPM	H324458							
21	1	Hose	6x1x500		H16541		1	Seal kit	VMQ	H324459							
22	3	Red. nipple G1/4" G1/8" for actuator 120-175		MS58	H17018		*	LD* = linear flow characteristic, soft sealing									
	2	Red. nipple G1/4" G1/8" for actuator 350-750		MS58	H17018		*	GD* = equal percentage flow characteristic, soft sealing									

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Spare parts list: Modulating valve RGE4 - 1,5" - 3A Diaphragm actuator MAT 3271 (Spring: closed or open) - 120, 175, 350, 750cm² Digital electro-pneumatic positioner Flow characteristic: linear or equal percentage	Date:	22.09.15	30.01.23		SPX FLOW
	Name:		Shreshth		
	Approved by:				
	Date:				
	Name:				
	Approved by:				
					Page 3 of 8 RN 01.170.10

Modulating valve RGE4 - 1,5" - 3A			
Diaphragm actuator MAT 3271 (Spring: closed or open) - 120, 175, 350, 750cm ²			
Digital electro-pneumatic positioner			
Flow characteristic: linear or equal percentage			
Name:		I rytko	Shresnth
Approved by:			
Date:			
Name:			
Approved by:			
Page 3		of 8	
SPX FLOW			
RN 01.170.10			

Diaphragm actuator MAT 3271 (Spring: closed or open) - 120, 175, 350, 750cm ²			
Digital electro-pneumatic positioner			
Flow characteristic: linear or equal percentage			
Date:			Page 3 of 8
Name:			RN 01.170.10
Approved by:			

Digital electro-pneumatic positioner
Flow characteristic: linear or equal percentage

Flow characteristic: linear or equal percentage				
	Name:			
	Approved by:			
				RN 01.170.10

Item	Quantity	Description	Material	Part no.
1	1	RGE41-1.5"/kvs 6.3+10design 3A-bright fin.	1.4404	H325633
		RGE41-1.5"/kvs 16+25design 3A-bright fin.	1.4404	H323655
		RGE41-1.5"/kvs 16+25 design satin fin	1.4404	H323141
		RGE42-1.5"/kvs 6.3+10design 3A-bright fin.	1.4404	H329547
		RGE42-1.5"/kvs 16+25design 3A-bright fin.	1.4404	H329548
2	1	Housing seal	Ø61	H77464
			Ø61	H170018
			Ø61	H77463
3	1	Housing cover	1.4404	H156409
4	1	Seat seal	EPDM	H77442
			HNBR	H170176
			FPM	H77441
			VMQ	H77440
5	1	Shaft seal	Turcon MF6	H323082
6	1	Bushing 20x9	PEEK	H315800
7	1	Yoke	design 3A-bright finish	1.4308
			design satin finish	H321126
8	1	Hex. screw M6x16	1.4308	H157765
9	4	Hex. screw M8x16	A2-70	H78751
10	1	Stroke indicator	A2-70	H78772
11	1	Mounting plate for stroke indicator	1.4301	H161761
12	2	Pan head screw M5x12	1.4301	H161763
13	1	Counternut	DIN EN ISO 1580	H127391
14	1	Coupling top small	M10x1 , Stroke: 15mm	H162483
			for actuator 120	H162484
15	1	Driving plate complete	for actuator 175-750	H162485
16	1	Angle bracket	for kvs 16-160	H162486
17	1	Electro-pneumatic positioner IP763	for kvs 16-160	H162487
18	3	Elbow union	Aluminium die casted	H66919
19	1	Hex. screw M8x70	G1/8" Ø6mm slewable	H208825
20	1	Washer	DIN EN 24014	H78803
21	1	Hose	DIN 125 A l=8.4	H79594
			6x1x500	H16541

Item	Quantity	Description	Material	Part no.
22	3	Red. nipple G1/4" G1/8" for actuator 120-175	MS58	H17018
	2	Red. nipple G1/4" G1/8" for actuator 350-750	MS58	H17018
23	1	Red. nipple G3/4" G1/8" for actuator 350-750	MS58	H17019
24	1	Shaft - linear LD*	kvs = 2.5 m³/h	1.4404
			kvs = 4 m³/h	1.4404
			kvs = 6.3 m³/h	1.4404
			kvs = 10 m³/h	1.4404
			kvs = 16 m³/h	1.4404
25	1	Seat seal	kvs = 2.5 m³/h	1.4404
			kvs = 4 m³/h	1.4404
			kvs = 6.3 m³/h	1.4404
			kvs = 10 m³/h	1.4404
			kvs = 16 m³/h	1.4404
26	1	Pneumatic actuator MAT 3271 + IP763 see RN 01.170.13-3	kvs = 25 m³/h	1.4404
			kvs = 2.5 m³/h	EPDM
			kvs = 4 m³/h	HNBR
			kvs = 6.3 m³/h	FPM
			kvs = 10 m³/h	VMQ
27	1	Seat seal	EPDM	H77443
			HNBR	H77470
			FPM	H172175
			VMQ	H77469
			VMQ	H77468
28	1	Pneumatic actuator MAT 3271 + IP763 see RN 01.170.13-3		
29				
30				
31				
32				
33				
34	*	LD* = linear flow characteristic, soft sealing		
35	*	GD* = equal percentage flow characteristic, soft sealing		

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Spare parts list:

Modulating valve RGE4 - 1,5" - 3A

Diaphragm actuator MAT 3271 (Spring: closed or open) - 120, 175, 350, 750cm²

Digital electro-pneumatic positioner

Flow characteristic: linear or equal percentage

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Spare parts list:									
Modulating valve RGE4 - 2" - 3A									
Diaphragm actuator MAT 3271 (Spring: closed or open) - 120, 175, 350, 750cm²									
Digital electro-pneumatic positioner									
Flow characteristic: linear or equal percentage									
Item	Quantity	Description	Material	Part no.	Item	Quantity	Description	Material	Part no.
1	1	Housing	RGE41 design 3A-bright fin.	H311117	23	1	Red. nipple G3/4" G1/8" for actuator 350-750	MS58	H17019
			RGE41 design satin fin.	H335226	24	1	Shaft - linear LD* kvs = 40 m³/h	1.4404	H159482
2	1	Housing seal	Ø73	H77488		1	Shaft - equal persen. GD* kvs = 40 m³/h	1.4404	H159147
			Ø73	H168714				EPDM	H77494
3	1	Housing cover	Ø73	H77487	25	1	Seat seal kvs = 40 m³/h	HNBR	H165709
				H148194				FPM	H77493
4	1	Seat seal		H77442	26	1	Pneumatic actuator MAT 3271 + IP763 see RN 01.170.13-3	VMQ	H77492
				H170176					
				H77441					
5	1	Shaft seal		H77440					
6	1	Bushing 20x9		H323082					
				H315800					
7	1	Yoke	design 3A-bright finish	H311118					
			design satin finish	H157567					
8	1	Hex. screw M8x16	DIN EN 24017	H78772					
9	4	Hex. screw M8x16	DIN EN 24017	H78772					
10	1	Stroke indicator	Stroke: 15mm	H161761					
11	1	Mounting plate for stroke indicator		H161763					
12	2	Pan head screw M5x12	DIN EN ISO 1580	H127391					
13	1	Counternut	M10x1 , Stroke: 15mm	H162483					
14	1	Coupling top small	for actuator 120	H162484					
	1	Coupling top big	for actuator 175-750	H162485					
15	1	Driving plate complete		H162486					
16	1	Angle bracket	for kvs 16-160	H162487					
17	1	Electro-pneumatic positioner IP763	without accessory: lever I, spring I (stroke 15mm)	H66919					
18	3	Elbow union	G1/8" Ø6mm slewable	H208825		1	Seal kit	EPDM	H337627
19	1	Hex. screw M8x70	DIN EN 24014	H78803		1	Seal kit	HNBR	H337858
20	1	Washer	DIN 125 A I=8,4	H79594		1	Seal kit	FPM	H337836
21	1	Hose	6x1x500	H16541		1	Seal kit	VMQ	H337851
22	3	Red. nipple G1/4" G1/8" for actuator 120-175		H17018		*	LD* = linear flow charaeristic, soft sealing		
	2	Red. nipple G1/4" G1/8" for actuator 350-750		H17018		*	GD* = equal percentage flow characteristic, soft sealing		

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Spare parts list:										Date:	22.09.15	30.01.23	SPX FLOW								
Modulating valve RGE4 - 2,5" - 3A										Name:	Trytko	Shreshth									
										Approved by:											
										Date:			Page	6	of 8						
										Name:			RN 01.170.10								
										Approved by:											
Diaphragm actuator MAT 3271 (Spring: closed or open) - 120, 175, 350, 750cm ²										Quantity	Item	Description	Material	Part no.							
Digital electro-pneumatic positioner																					
Flow characteristic: linear or equal percentage																					
1	1	Housing	RGE41 design 3A-bright fin. RGE41 design satin fin.	1.4404 1.4404						1	23	Red. nipple G3/4" G1/8" for actuator 350-750	MS58	H17019							
2	1	Housing seal	Ø81 Ø81 Ø81	EPDM HNBR FPM	H77512 H168759 H77511					1	24	Shaft - linear LD* kvs = 63 m³/h	1.4404 1.4404	H321259 H321260							
3	1	Housing cover		1.4404	H151968					1	25	Shaft - equal persen. GD* kvs = 63 m³/h	EPDM HNBR FPM	H77518 H172178 H77517							
4	1	Seat seal		EPDM HNBR FPM	H77442 H170176 H77441					1	26	Seat seal kvs = 63 m³/h	VMQ	H77516							
5	1	Shaft seal		VMQ	H77440					1	26	Pneumatic actuator MAT 3271 + IP763 see RN 01.170.13-3									
6	1	Bushing 20x9		Turcon MF6	H323082																
7	1	Yoke	design 3A-bright finish design satin finish	PEEK 1.4308 1.4308	H315800 H329381 H157568																
8	1	Hex. screw M8x16	DIN EN 24017	A2-70	H78772																
9	4	Hex. screw M8x16	DIN EN 24017	A2-70	H78772																
10	1	Stroke indicator	Stroke: 15mm	1.4301	H161761																
11	1	Mounting plate for stroke indicator		1.4301	H161763																
12	2	Pan head screw M5x12	DIN EN ISO 1580	1.4301	H127391																
13	1	Counterut	M10x1 , Stroke: 15mm	1.4301	H162483																
14	1	Coupling top small	for actuator 120	1.4301	H162484																
15	1	Coupling top big	for actuator 175-750	1.4301	H162485																
16	1	Driving plate complete		1.4301	H162486																
17	1	Angle bracket	for kvs 16-160	1.4301	H162487																
18	3	Electro-pneumatic positioner IP763	without accessory: lever I, spring I (stroke 15mm)	Aluminium die casted	H66919																
19	1	Elbow union	G1/8" Ø6mm slewable		H208825																
20	1	Hex. screw M8x70	DIN EN 24014	A2-70	H78803																
21	1	Washer	DIN 125 A l=8,4	A2-70	H79594																
22	2	Hose	6x1x500		H16541																
	3	Red. nipple G1/4" G1/8" for actuator 120-175		MS58	H17018					*											
	2	Red. nipple G1/4" G1/8" for actuator 350-750		MS58	H17018					*											
										Item 2, 4, 5, 6, 25 available as complete seal kits only											
										1	Seal kit		EPDM	H337628							
										1	Seal kit		HNBR	H337859							
										1	Seal kit		FPM	H337837							
										1	Seal kit		VMQ	H337852							
										LD* = linear flow characteristic, soft sealing											
										GD* = equal percentage flow characteristic, soft sealing											

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Spare parts list:

Modulating valve RGE4 - 3" - 3A

Diaphragm actuator MAT 3271 (Spring: closed or open) - 120, 175, 350, 750cm²

Digital electro-pneumatic positioner

Flow characteristic: linear or equal percentage

Date: 22.09.15 30.01.23

Name: Trytko Shreshth

Approved by:

Date:

Name:

Approved by:

Page 7 of 8

RN 01.170.10

Item	Quantity	Description	Material	Part no.	Item	Quantity	Description	Material	Part no.
1	1	Housing	RGE41 design 3A-bright fin.	H327812	23	1	Red. nipple G3/4" G1/8" for actuator 350-750	MS58	H17019
			RGE41 design satin fin.	H325072	24	1	Shaft - linear LD*	1.4404	H159763
2	1	Housing seal	Ø86	H77558		1	Shaft - equal persen. GD*	1.4404	H159762
			Ø86	H170013				EPDM	H77564
3	1	Housing cover	Ø86	H77557	25	1	Seat seal	HNBR	H176688
				H159895				FPM	H77563
4	1	Seat seal	1.4404	H77442	26	1	Pneumatic actuator MAT 3271 + IP763	VMQ	H77562
			EPDM	H170176					
			HNBR	H77441					
			FPM	H77440					
5	1	Shaft seal	VMQ	H77440					
6	1	Bushing 20x9	Turcon MF6	H323082					
			PEEK	H315800					
7	1	Yoke	1.4308	H320035					
			design 3A-bright finish	H159379					
			design satin finish						
8	1	Hex. screw M8x16	DIN EN 24017	H78772					
9	4	Hex. screw M8x16	DIN EN 24017	H78772					
10	1	Stroke indicator	A2-70	H161761					
			Stroke: 15mm	H161761					
11	1	Mounting plate for stroke indicator	1.4301	H161763					
12	2	Pan head screw M5x12	1.4301	H127391					
13	1	Counterut	DIN EN ISO 1580	H162483					
			M10x1 , Stroke: 15mm	H162484					
14	1	Coupling top small	1.4301	H162485					
			for actuator 120	H162485					
15	1	Coupling top big	1.4301	H162486					
			for actuator 175-750	H162486					
16	1	Driving plate complete	1.4301	H162487					
			for kvs 16-160	H162487					
17	1	Electro-pneumatic positioner IP763	Aluminium die casted	H66919					
			without accessory: lever I, spring I (stroke 15mm)						
18	3	Elbow union	G1/8" Ø6mm slewable	H208825					
19	1	Hex. screw M8x70	DIN EN 24014	H78803					
20	1	Washer	DIN 125 A I=8,4	H79594					
21	1	Hose	6x1x500	H16541					
22	3	Red. nipple G1/4" G1/8" for actuator 120-175		H17018					
2	2	Red. nipple G1/4" G1/8" for actuator 350-750	MS58	H17018					

*

LD* = linear flow characteristic, soft sealing

*

GD* = equal percentage flow characteristic, soft sealing

Item 2, 4, 5, 6, 25 available as complete seal kits only

1 Seal kit EPDM H337630

1 Seal kit HNBR H319332

1 Seal kit FPM H325385

1 Seal kit VMQ H337853

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Spare parts list:										Date: 22.09.15		30.01.23		SPX FLOW	
Modulating valve RGE4 - 4" - 3A										Name: Trytko		Shreshth			
										Approved by:					
Diaphragm actuator MAT 3271 (Spring: closed or open) - 120, 175, 350, 750cm ²										Date:				Page 8 of 8	
Digital electro-pneumatic positioner										Name:				RN 01.170.10	
Flow characteristic: linear or equal percentage										Approved by:					
Item	Quantity	Description	Material	Part no.	Item	Quantity	Description	Material	Part no.						
1	1	Housing	1.4404		23	1	Red. nipple G3/4" G1/8" for actuator 350-750	MS58	H17019						
		RGE41 design 3A-bright fin.	1.4404		24	1	Shaft - linear LD* kvs = 160 m³/h	1.4404	H167867						
		RGE41 design satin fin.	EPDM	H77583		1	Shaft - equal persen. GD* kvs = 160 m³/h	1.4404	H175422						
2	1	Housing seal	HNBR	H170074				EPDM	H77589						
		Ø110,2	FPM	H77582				HNBR	H172183						
		Ø110,2	1.4404	H159888	25	1	Seat seal kvs = 160 m³/h	FPM	H77588						
3	1	Housing cover	EPDM	H77442				VMQ	H77587						
			HNBR	H170176											
4	1	Seat seal	FPM	H77441	26	1	Pneumatic actuator MAT 3271 + IP763 see RN 01.170.13-3								
			VMQ	H77440											
5	1	Shaft seal	Turcon MF6	H323082											
6	1	Bushing 20x9	PEEK	H315800											
			1.4308	H157572											
7	1	Yoke	1.4308	H78772											
		design 3A-bright finish	A2-70	H78806											
		design satin finish	A2-70	H161761											
8	1	Hex. screw M8x16	1.4301	H161763											
9	8	Hex. screw M10x16	1.4301	H127391											
		DIN EN 24017	1.4301	H162483											
10	1	Stroke indicator	1.4301	H162484											
		Stroke: 15mm	1.4301	H162485											
11	1	Mounting plate for stroke	1.4301	H162486											
12	2	Pan head screw M5x12	1.4301	H162487											
		DIN EN ISO 1580	Aluminium die	H66919											
13	1	Counterut	casted	H208825											
		M10x1 , Stroke: 15mm		H78803											
14	1	Coupling top small	1.4301	H79594											
		for actuator 120	1.4301	H16541											
15	1	Coupling top big	1.4301	H17018											
		for actuator 175-750													
16	1	Driving plate complete	1.4301												
		for kvs 16-160													
17	1	Angle bracket	1.4301												
		without accessory: lever I,													
		spring I (stroke 15mm)													
18	3	Elbow union	Aluminium die												
		G1/8" Ø6mm slewable	casted												
19	1	Hex. screw M8x70	A2-70												
		DIN EN 24014	A2-70												
20	1	Washer	A2-70												
		DIN 125 A l=8,4													
21	1	Hose	6x1x500												
22	3	Red. nipple G1/4" G1/8" for actuator 120-175	MS58												
22	2	Red. nipple G1/4" G1/8" for actuator 350-750	MS58												

Item 2, 4, 5, 6, 25 available as complete seal kits only

1 Seal kit EPDM H337631

1 Seal kit HNBR H337861

1 Seal kit FPM H337838

1 Seal kit VMQ H337855

* LD* = linear flow characteristic, soft sealing

* GD* = equal percentage flow characteristic, soft sealing

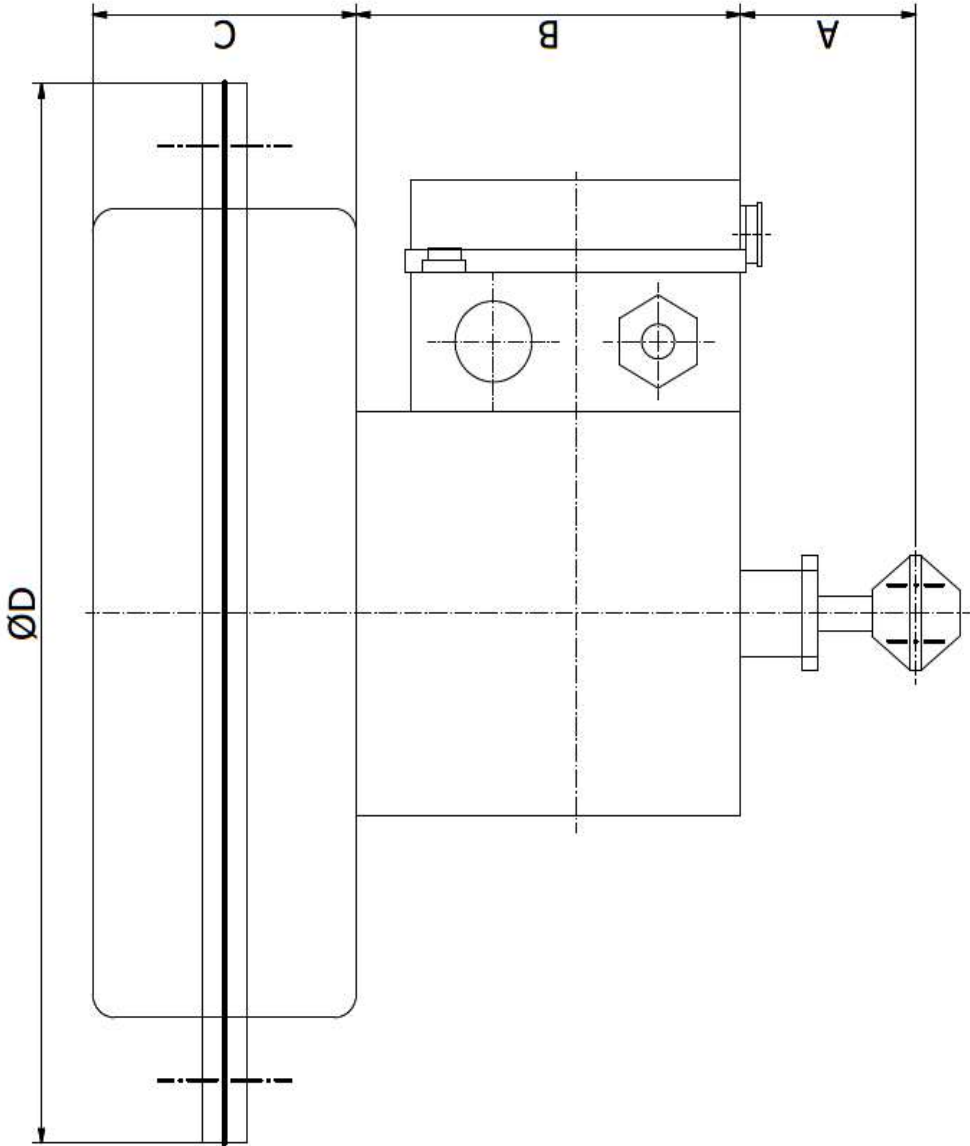
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Spare parts list:

RG4 - Pneum. Actuator MAT 3277 spring: closed or open with digital electro-pneumatic positioner 3730

Date:	16.08.11	23.10.13	24.07.15	28.02.17
Name:	Tryko	Tryko	Tryko	C.Keil
Approved by:	Knöchel	Knöchel	Knöchel	
Date:	31.01.23			
Name:	Shreshth			
Approved by:	Waltenb.			

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Spare parts list:

RG4 - Pneum. Actuator MAT 3277 spring: closed or open with digital electro-pneumatic positioner 3730

Date:	16.08.11	23.10.13	24.07.15	28.02.17
Name:	Trylko	Trylko	Trylko	C.Keil
Approved by:	Knöchel	Knöchel	Knöchel	
Date:	31.01.23			
Name:	Shreshth			
Approved by:	Waltenb.			
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MFH - Membrane actuator normally open					
Area [cm ²]	Set pressure [bar]	IP 3730-0	TROVIS 3730-1	IP 3730-3	IP 3730-4
			LCD-display	HART protocol	Profibus PA
120	0,2 - 1,0		000163161517 H344929		000163142817 H322760
175	0,2 - 1,0		000163161617 H344930	000163161717 H344931	000163161817 H344932
350	0,2 - 1,0		000163161917 H344933	000163162017 H344934	000163162117 H344935
350	0,6 - 3,0				000163162217 H344936
750	0,2 - 1,0				
MFH - Membrane actuator normally open					

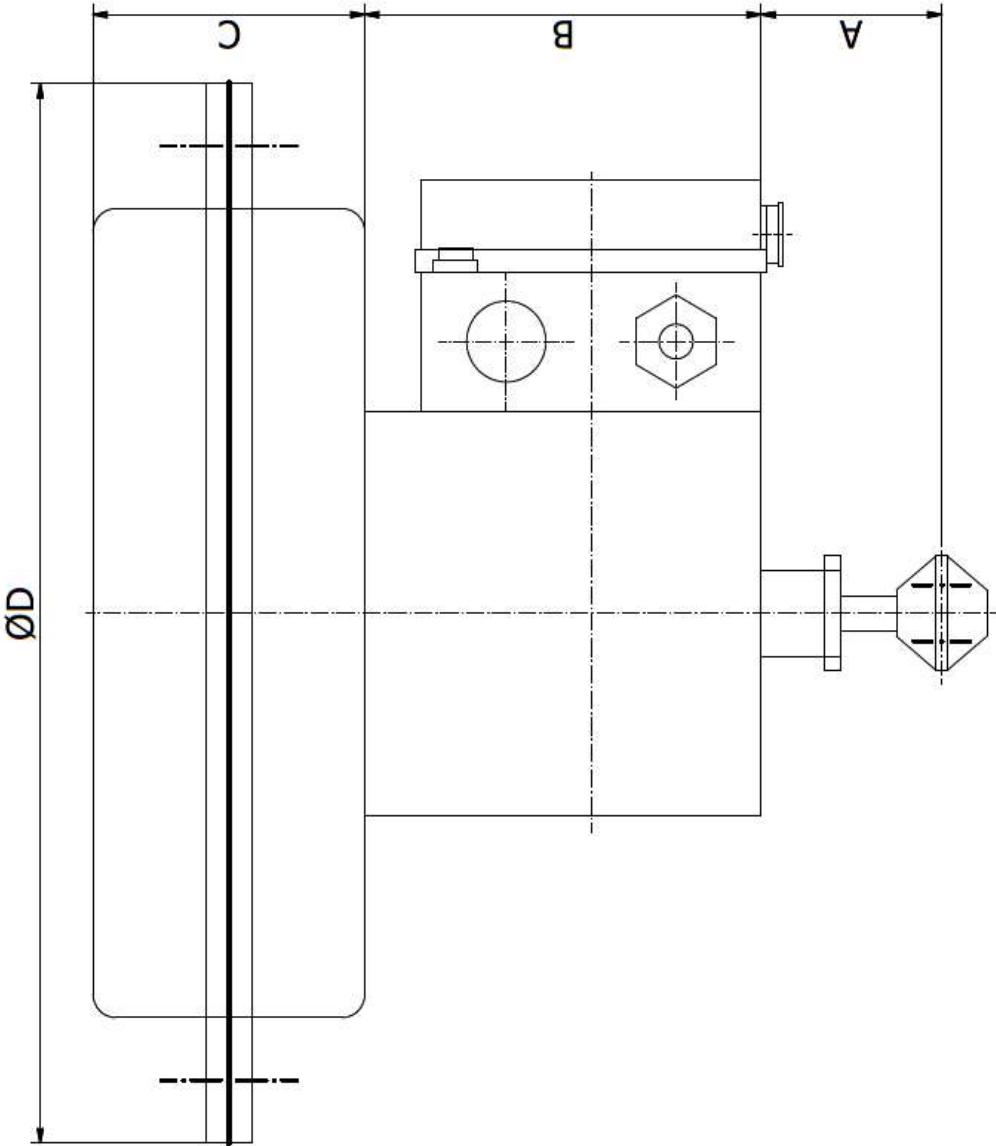
[illegible]

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Spare parts list:

**RG4 - Pneum. Actuator MAT 3277 spring closed and open
with integrated, electro-pneumatic positioner IP 3725**

Date:	16.08.11	20.09.12	23.10.13	24.07.15	SPX FLOW	
Name:	Trytko	Trytko	Trytko	Trytko		
Approved by:	Knöchel	Knöchel	Knöchel	Knöchel		
Date:	28.02.17	31.01.23			Page	1 of 2
Name:	C. Keil	Shreshth			RN 01.170.13-2	
Approved by:		Waltenb.				



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Spare parts list:

RG4 - Pneum. Actuator MAT 3277 spring closed and open with integrated, electro-pneumatic positioner IP 3725

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RN 01.170.13-2

MFH - Membrane actuator normally open

MFS - Membrane actuator normally closed

[illegible]

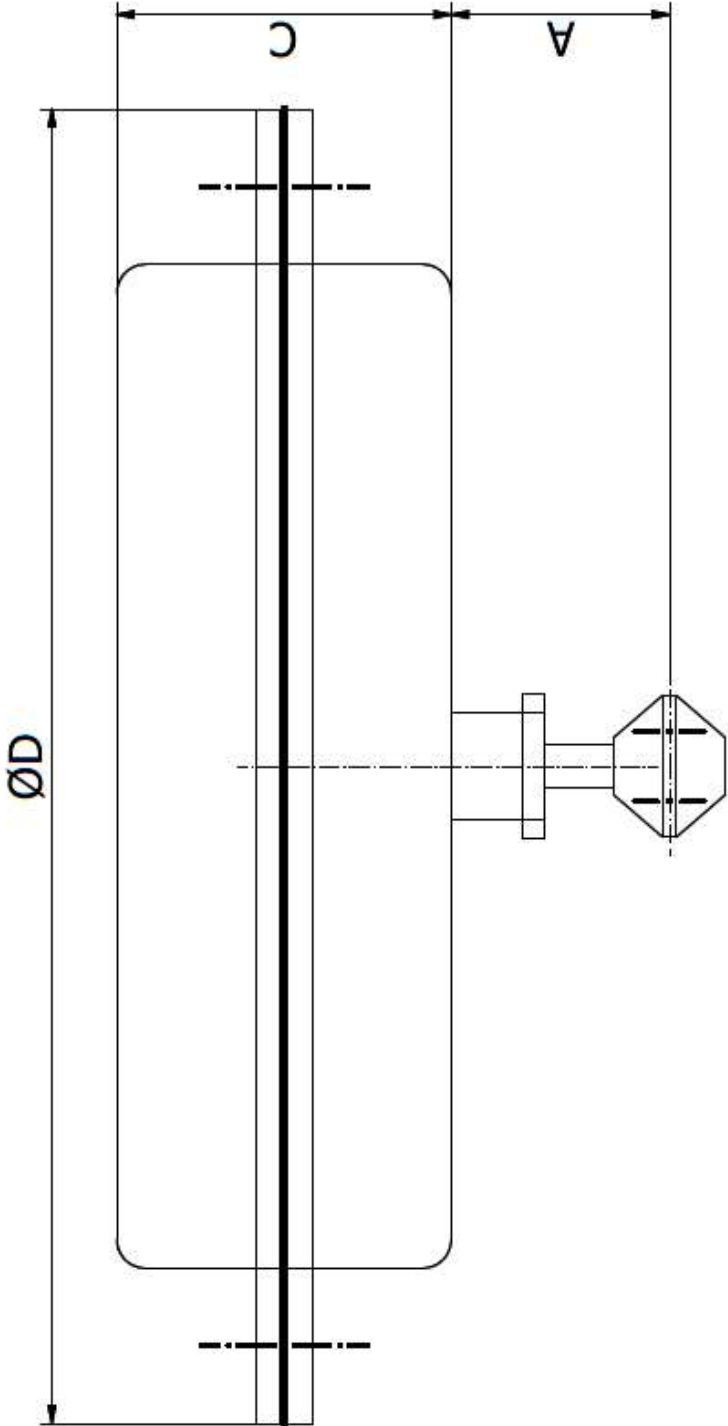
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Spare parts list:

RG4 - Pneumatic actuator MAT 3271 spring closed or open

Date:	21.05.14	24.07.15	02.03.16	02.02.23
Name:	Tryko	Tryko	Tryko	Shreshth
Approved by:	Knöchel	Knöchel	Knöchel	Waltenb.
Date:				
Name:				
Approved by:				

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Spare parts list:

Name:		Trytko	Trytko	Trytko	Shreshith
Approved by:		Knöchel	Knöchel	Knöchel	Waltenb.
Date:					
Name:					
Approved by:					
Page 2 of 2 SPX FLOW					RN 01.170.13-3

RG4 - Pneumatic actuator MAT 3271 spring closed or open

[illegible]

APV RGE4

VANNE DE RÉGULATION



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ISSUED 09/2017 - Traduction du manuel d'instructions d'origine

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