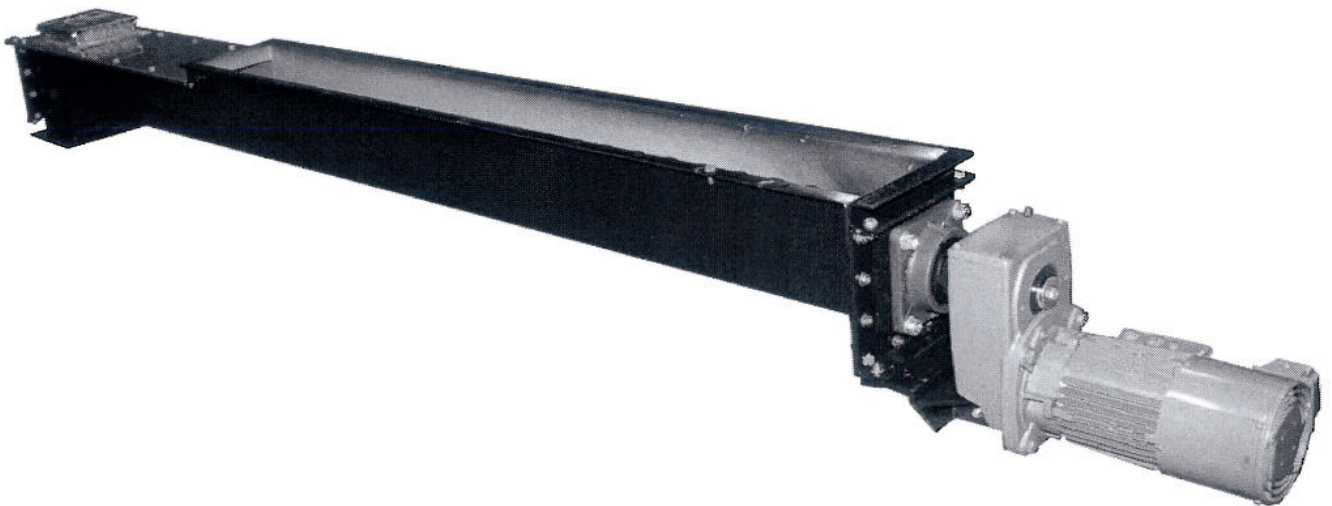




INSTRUCTION MANUAL



SCREW AUGER -TROUGH



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Screw Auger

Preface

Please read the Instruction Manual thoroughly and ensure that all instructions concerning safety, running and maintenance are followed, in order to ensure optimal operation of the machine / equipment.

Please provide the following information when making any enquiries:

Type / Model, Fabrication Number / Year

All equipment has an attached label, giving fabrication details.



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Screw Auger

EU – Certificate of agreement

Manufacturer:

Crocus
Virkevangen 25
Assentoft
DK-8960 Randers SØ

Hereby declare that this machine:

Type: **Crocus Screw Auger**

Model:

is manufactured according to regulations in EU-directive from 14th June 1989 about mutual rapprochement of the legislation in each member country concerning machines (89/392/EØF) specially referring to the directorates appendix 1 regarding essential security – and health requirements relating to construction and manufacturing of machines.

4/12 03
Date


Ejvind Møller (Manufacturer)

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Screw Auger

Safety regulations

Please observe the following safety regulations for prevention of accidents.

The Screw Auger must be equipped with an electronic safety cut-off switch.

Turn off and lock the electronic switch during inspection / repair and when cleaning ie. scraping out the trough of the screw auger.

Replace covers immediately following inspection / repair even when the auger is not in use.

The clutch safety-guard must always be in place during operation.

All electrical installation / repair must be carried out according to the regulations applicable for high voltage installations and should be carried out by an authorised electrician.

Screw Auger

2. Description

Technical description

1. Usage

Crocus screw augers are manufactured in an industrial design, which guarantees efficient conveyance of cereals and meal products for the seed and foodstuff industry, breweries, agriculture and other products/granulates in other industries.

2. Function

The screw auger is driven by a gear motor which effect is transmitted directly to the auger by a flexible coupling or by mounting a hollow gear shaft directly on the drive shaft.

Material is led through an inlet in the top plate and transported by a screw to an outlet valve or end outlet.

In a situation where the outlet is blocked – eg. when a silo is full – material is transported further along the trough to the drive station where a safety cut-off switch stops the machine.

The inlet may be positioned arbitrarily in the top plate. Likewise, the number of outlets that may be fitted is governed by the physical space available.

The screw auger may be fitted with a suction point enabling connection of a dust extraction unit, or directly fitted with a filter and ventilator.

See Page No. 601 for parts list / technical data.

Screw Auger

3. Operation

Operating Instructions

The screw auger must not be overloaded.

There must always be sufficient space in front of the motor section, to enable the plate with the safety switch to open.

If the screw auger stops due to overload a new outlet must be opened and the auger must be emptied in order to reset the safety switch.

Screw Auger

4. Maintenance

Maintenance instructions

1. Gear / gear motor

Check oil levels before start.

New gears are supplied with synthetic oil. An oil change is recommended after the first 10.000 hours operation.

Following that – the oil should be changed for every 20.000 hours operation or every 4th year. Use synthetic oil only.
See the following pages for further information.

Clean dust from the gear motor, compressed air may be used.

2. Lubrication

The bearings on the screw auger are equipped with a lubrication nipple. Every six months 1,5 g. of lubricant should be applied by pressing the nipple twice. This is the recommended amount for 24 hour operation.

Keep the bearings free of dust and dirt.

Screw Auger

4. Maintenance

Gear

Schmierstoffe

Vor Inbetriebnahme und längerem Lagern ist der Verschleiß der Entlastungschauche zu entfernen, um einen Überdruck im Getriebe und damit eine Undichtigkeitschädigung zu vermeiden. Getriebe und Getriebeventile sind bei der Auslieferung mit Schmierstoff befüllt. Diese Erhaltung entsprechend einer Schmierstoffauswahl aus der Untergeschichte der Schmierstoffauswahl. Die Schmierstoffauswahl ist abhängig von den Umgebungsbedingungen und der entsprechenden Schmierstoffauswahl. Bei Befüllung mit Mineralöl soll ein Schmierstoffwechsel alle 10.000 Betriebsstunden oder nach zwei Jahren durchgeführt werden. Für synthetische Produkte verlängert sich diese Fristen bei extremen Betriebsbedingungen, z.B. hohe Luftfeuchtigkeit, aggressive Umgebung und hohe Temperaturschwankungen sind kürzere Schmierstoffintervalle vorteilhaft. Es ist empfehlenswert den Schmierstoffwechsel mit gründlicher Reinigung des Getriebes zu verbinden. Bemerkung: Synthetische und mineralische Schmierstoffe nicht miteinander mischen! Das gilt auch für die Entsorgung.

Lubricants

Before starting and before storage for extended period, the seal in the vent plug must be removed in order to prevent excessive pressure build up and oil leaks. Gear units and geared motors leave the factory ready for operation filled with lubricant. All units shipped are filled with the normal lubricant listed in the ambient temperature column of the following chart. For other ambient temperatures the listed lubricants are available at an additional charge. The mineral-oil lubricant should be changed every 10,000 service hours or latest after two years. For synthetic products, the lube should be changed every 20,000 service hours or after four years, in case of extreme operating conditions, e.g. high humidity, aggressive environment and large temperature variations, shorter intervals between changes are recommended. It is advisable to combine the lubricant change with thorough cleaning of the gear unit.

Note: Synthetic and mineral lubricants must not be mixed neither for filling nor for disposal! Ceci s'applique également pour le remplissage des lubrifiants!

Lubricants

Avant la mise en service et lors d'un stockage prolongé, il faut enlever la mèche du bouchon d'évent, pour éviter des fuites dues à une surpression à l'intérieur du réducteur. Les réducteurs et motorréducteurs sont livrés prêts à fonctionner, et remplis de lubrifiant selon la demande. Ces remplissages d'origine correspondent à un lubrifiant de la colonne >>température ambiante<<(normale) du tableau des lubrifiants. Pour toute autre température ambiante, les lubrifiants indiqués sont préconisés et livrables contre un supplément de prix. Une vidange doit être réalisée toutes les 10.000 heures ou après 2 ans de fonctionnement. Ces délais sont doublés pour des produits synthétiques. Dans des conditions extrêmes, par exemple: hygrométrie élevée, ambiance agressive, ou variations importantes des températures, des intervalles réduits entre les vidanges sont préférables. Il est recommandé de profiter de la vidange pour faire un nettoyage approfondi du réducteur. Remarque: Des lubrifiants synthétiques et minéraux ne doivent pas être mélangés! Ceci s'applique également pour le remplissage des lubrifiants!

Schmierstoffarten / Type of lubricant

Schmierstoffart Type of lubricant Type de lubrifiant	Umgebungstemp. Ambient temp. Temp. ambiante	APRIL	BP	Castrol	DEA	LEBEO	FUCHS	KLOBER LUBRICATION	Mobil	Optimol	Shell	Tribol
Mineralöl Mineral oil Huile minérale	ISO VG 680 0 ... 40°C	Deqol BG 680 plus Deqol BG 680	Energyol GR-XP 220	Alpha SP 680	Falcon CLP 680	Spartan EP 220	Renolin CLP 680 Plus Renolin CLP 220 Renolin CLP 220 Plus	Küberoil GEM 1-680	Mobilgear 630 - 636 - XMP 680 Mobilgear 630 Mobilgear XMP 220	Optigear BM 680	Shell Omala 680	Tribol 1100/680
	ISO VG 220 -5 ... 40°C (normal)	Deqol BG 220 plus BG-220 plus	Energyol GR-XP 220	Alpha SP 220 Alpha MAX 220	Falcon CLP 220	Spartan EP 220	Renolin CLP 220 Renolin CLP 220 Plus	Küberoil GEM 1-220	Mobilgear 630 Mobilgear XMP 220	Optigear BM 220	Shell Omala 220	Tribol 1100 / 220
	ISO VG 100 -15 ... 25°C	Deqol BG 100 plus BG-100 plus	Energyol GR-XP 100	Alpha SP 100 Alpha MW 100 Alpha MAX 100	Falcon CLP 100	Spartan EP 100	Renolin CLP 100 Renolin CLP 100 Plus	Küberoil GEM 1-100	Mobilgear 630 Mobilgear XMP 220	Optigear BM 100	Shell Omala 100	Tribol 1100 / 100
	ISO VG 15 -45 ... -15°C *	Vitalube HV 15 10/10	Barfisan HV 15	Hypsyn SP 15 Hypsyn ZZ 15	Astron HVLP 15	Univis J13	Renolin B 15 HVI	Isorflex MT 30 rot	Mobil DTE 11 M	Ultra 10	Shell Tellus T 15	Tribol 943 AW 22
Synthetisches Öl Synthetic oil Huile synthétique	Schneckengetriebe ISO VG 680 -5 ... 60°C	Deqol GS 680	Energyol SG-XP 680	Castrol SES 220	Ergon ELP 220	Glycolube 220	Plantogear CLP 680	Küberoil GH-6-680	Glypyle HE 680	Optiflex A 680	Shell Tivela S 680	Tribol 800/680
	ISO VG 220 -25 ... 80°C *	Deqol GS 220	Energyol SG-XP 220	Castrol SES 220	Ergon ELP 220	Glycolube 220	Plantogear CLP 220	Küberoil GH-6-220	Glypyle HE 220	Optiflex A 220	Shell Tivela WB Tivela S 220	Tribol 800/220
Biologisch abbaubares Öl Biodegradable oil Huile biologisch abbaubare	ISO VG 680 -5 ... 40°C	Deqol BAB 220	Biogear SE 220	Castrol SES 220	Ergon ELP 220	Glycolube 220	Plantogear CLP 680	Küberoil UHT 6-220	Glypyle HE 220	Optiflex A 220	Shell Tivela WB Tivela S 220	Tribol 800/220
Lebensmittelverträgliches Öl Food-grade oil Huile pour alimentation	ISO VG 680 5 ... 40°C	Eural Gear 220	Energyol SGF	Vitalube GS 220	Ergon ELP 220	Glycolube 220	Plantogear CLP 680	Küberoil UHT 6-220	Glypyle HE 220	Optiflex A 220	Shell Tivela WB Tivela S 220	Tribol 800/220
	ISO VG 220 -25 ... 40°C	Eural Gear 220	Energyol SGF	Vitalube GS 220	Ergon ELP 220	Glycolube 220	Plantogear CLP 220	Küberoil UHT 6-220	Glypyle HE 220	Optiflex A 220	Shell Tivela WB Tivela S 220	Tribol 800/220
Synth. Fliedflüssigkeit Synth. fluid grease Graisse fluide synthétique	25 ... 80°C	Atalub BAB EP0	Energyol SGF	Alpha Gel 00	Ergon ELP 220	Glycolube 220	Plantogear CLP 220	Küberoil UHT 6-220	Glypyle HE 220	Optiflex A 220	Shell Tivela WB Tivela S 220	Tribol 800/220

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4. Maintenance



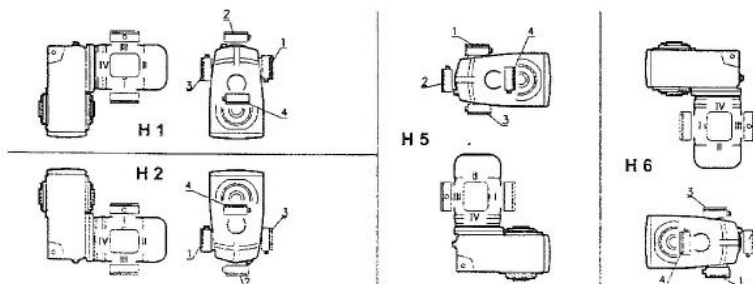
Öfüllmengen
Lubricant capacities
Quantite de lubrifiant

Flachgetriebe	Parallel Shaft Gear Units				Réducteurs à arbre parallèles	
Füllmenge [l]	Filling quantities [l]				Quantite de lubrifiant [l]	
2 - stufig 2 - stages à deux trains	Waagerechte Anordnung Horizontal position Position horizontale			H 4	Senkrechte Anordnung Vertical position Position verticale	
	H 1	H 2	H 3		H 5	H 6
SK 0182 NB	0,40	0,60	0,50	0,50	0,55	0,55
SK 0282 NB	0,70	0,80	0,90	0,90	1,10	1,00
SK 1282	0,90	0,90	0,95	0,95	1,20	1,30
SK 2282	1,65	1,90	1,80	1,80	2,00	2,40
SK 3282	3,15	3,25	3,15	3,15	4,10	4,10
SK 4282	4,70	4,75	4,70	4,70	5,40	6,10
SK 5282	7,50	7,50	7,20	7,20	8,80	8,80
SK 6282	17,0	12,0	14,0	10,0	17,5	14,0
SK 7282	25,0	20,0	21,0	16,0	27,0	21,0
SK 8282	37,0	30,0	31,0	31,0	41,0	33,0
SK 9282	74,0	55,0	59,0	69,0	72,0	70,0
SK 10282 *	90,0	40,0	82,0	60,0	90,0	90,0
SK 11282 *	165	145	140	100	195	160
3 - stufig 3 - stages à trois train	Waagerechte Anordnung Horizontal position Position horizontale			H 4	Senkrechte Anordnung Vertical position Position verticale	
	H 1	H 2	H 3		H 5	H 6
SK 1382 NB	1,30	1,40	1,90	2,00	2,10	2,30
SK 2382	1,70	1,90	1,50	1,50	3,10	2,60
SK 3382	4,10	3,30	3,30	3,30	5,60	4,10
SK 4382	5,90	4,90	4,90	4,90	8,30	6,80
SK 5382	12,5	6,70	8,30	8,30	14,0	12,0
SK 6382	16,5	9,60	12,5	14,0	18,0	13,0
SK 7382	22,0	16,0	19,0	23,0	25,0	20,0
SK 8382	34,0	25,0	30,0	35,0	38,0	32,0
SK 9382	73,0	45,0	60,0	65,0	74,0	70,0
SK 10382 *	85,0	73,0	80,0	80,0	88,0	88,0
SK 11382 *	160	140	135	155	210	155
SK 12382 *	160	140	135	155	210	155

Flachgetriebe

Parallel shaft gear units

Réducteurs à arbres parallèles



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Screw Auger

Part list- Spare-part list Type U150

Type: U150
Capacity: 4 tons/time.
Total length: 4.000 mm.
Motor: Nord Fladgear,
Type SK1282AG – 80L/4
0,75 kW - 67 rpm.

Bearings 2 stk.: Housing:
Bearings:
Bearing, drive end : FWS 70A, flange bearing F 206.

Safety cut-off switch: Trojan 5.

Screw Auger

Part list – spare-parts list

Type U200

Type: U200
Capacity: tons/hour.
Length: Motor assembly with end bearing and cover plate
2 m. trough screw auger base with outlet 400 x 150
2 m. extension with split bearing
1,5 m. extension with split bearing
1 m extension with split bearing

Motor: Nord Gear with cover guard
Type SK

Bearings: 6208 2RS
Locking ring: U40, 180

Safety cut-off switch: Trojan 5.

Screw Auger

Part list – Spare-parts list Type U400

Type: U400.
Capacity: 100 tons/hour.
Total length: 3300 mm + special connector
Motor: Nord Gear,
type SK 3282AG – 132S/4
5,5 kW –127 rpm.

Bearings 2 pcs.: Housing: SPK 60 O.L. Tension head bearing housing.
Bearing: HC 212
FWS 70A, flange SAF 210.

Safety cut-off switch: Trojan 5.
Explosion reduction bolts in top cover

Screw Auger

Parts list – Spare part list

Type U430

Type:	U430.
Capacity:	100 tons/hour.
Total length:	10.000 mm welded
Motor:	Nord Gear, Type SK 7282AG 160MH/4– SH 11 kW –21 rpm. Energy motor Warm up while idle
Bearings 2 pcs.:	Housing: FWS 120 O.L. Flange FWS 224 Bearing: HC 120.
Centre pipe:	Dia. 273 x 10 mm L = 9900 mm
Thread:	External. Dia. 403 mm Internal. Dia. 273 mm Lift: 200 mm Thickness: 8 mm 22 pcs. right pcs. left
Velocity guard:	XSA- V11801 24-240V AC/DC
Corrosion resistance :	Painted 4ral 7001
2732-1	1 pc.. axel
2732-2	1 pc. Motor axel
2732-3	4 pcs. Flange for axel
2732-4	1 pc. Thread
2732-5	1 pc. Trough
2732-6	2 pc. Top cover
2732-7	2 pc. Sealing plate
2732-8	2 pc. Bearing plates