

# PRODUCTS HANDBOOK



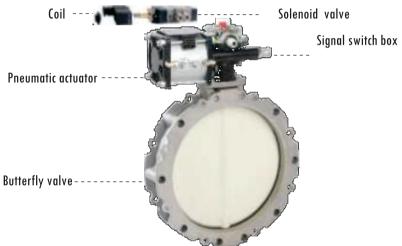


### **Silo Discharge Butterfly Valves**

#### **ACS** Powder pneumatic valve

ACS Butterfly Valves are mainly used silo switch bins, hoppers and equipped with powdered or granular materials. Can be applied to deal with all powdery and granular materials, the use of the material itself gravity valve closure and pneumatic conveying of dry materials.

ACS2FS300GBN/24VDC Is: Double flange connection butterfly valve, diameter 300mm, wear dust-proof valve plate, NBR seal, with solenoid valve coil voltage of 24 VDC, with ACS21 signal feedback.





ACS 1F...GBN

#### PNEUMATIC ACTUATOR COUPLING

Path	ACS 100	ACS 150	ACS 200	ACS 250	ACS 300	ACS 350	ACS 400
Mechanism Under light load	AC 101	AC 126	AC 126				
Mechanism Under heavy load	AC 101	AC 101	AC 101	AC 126	AC 126	AC 126T	AC126T

- 1 Single flange butterfly valve for sleeve connection
- 2 Double flange butterfly valve
- NO Detachable open type single flange (double flange with single flange)

## ACS 2F...GBN

#### **COUPLING OF MANUAL LEVER**

Path	ACS*F 100	ACS*F 150	ACS*F 200	ACS*F 250	ACS*F 300	ACS*F 400	
Mechanism	ML4	ML4	ML4	ML4	ML4	ML3B	

- 1 Single flange butterfly valve for sleeve connection
- 2 Double flange butterfly valve
- NO Detachable open type single flange (double flange with single flange)

N.B.. ACTUATOR CHOICE DEPENDS APPLICATION AND TYPE OF MATERIAL, WITH LUMPY, GRANULAR AND FIBROUS PRODUCTS, IT IS ADVISABLE TO USE A CASTIRON OR AISI 304 DISC.



## **ACS F Butterfly Valves**

Body uses lightweight high pressure die casting aluminum alloy the disc plate material for milling of cast iron, with wear-resistant rubber ring seal structure is very suitable for all kinds of powder and granular materials Applications, and especially for the strong wear of the material



### **How To Order**

ACS F	300	S	N
Model	Path	Discs	Sealing Ring
ACS F = DOUBLE FLANGE WITH SINGLE FLANGE		S: Molecular Material	N: NBR F· EPDM
ACS 1F = SINGLE FLANGE	DN 100 — 400	GB: Nodular cast iron A: Stainless Steel	S: SI
ACS2F = DOUBLE FLANGE	DIVIOU 400	L: Aluminum alloy	I: FDA

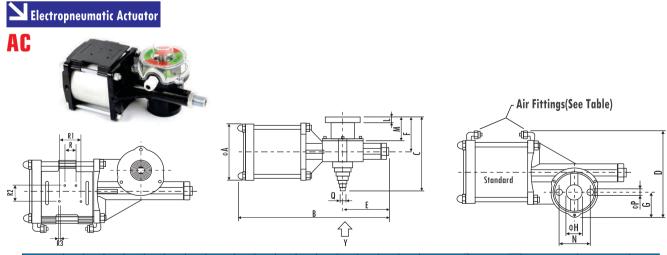
#### **ACS F GBN**

- 1 Yoke-Casting Aluminium Alloy
- 2 Shaft Sleeve-Nylon
- 3 Valve Body-Casting Aluminium Alloy
- 4 GB Series Disc-Nodular cast iron GS 400/12
- 5 Series Sealing Ring-NBR Rubber
- 6 Shaft Sleeve-Nylon
- 7 Valve Body-Casting Aluminium Alloy



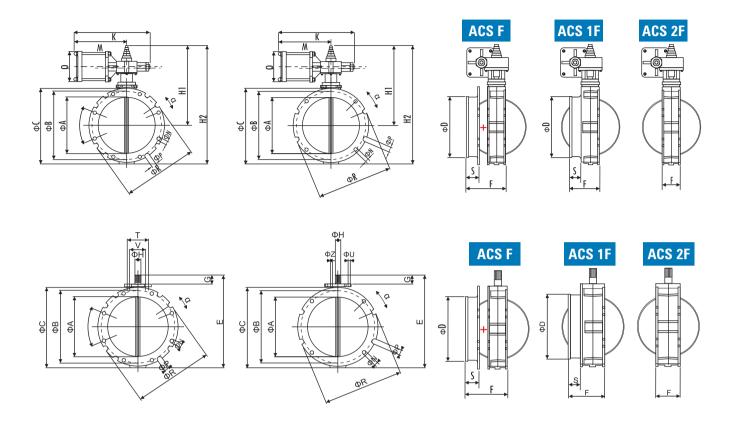
### **Valve Actuators**

Electropneumatic Actuator- AC-Series AC



ТҮРЕ	ΦА	В	С	D	E	F	G	Ф Н DIN 5482	ι	M	N	ΦР	Q	R	R1	R2	R3	ΦThread	Ф Hose	Air Consumption per Cycle at 6 bar(NI)	Operation time in sec.at 6 bar	Kg
AC 063	70	265	130	140	85	60	33	22X19	10	47	50	11	12	18	36	26	M4	1/8	8x6	2.0(x2)	0.8	2.8
AC 101	106	260	130	150	85	60	33	22X19	10	47	50	11	12	18	36	26	M4	1/8	8x6	4.4(x2)	0.8	3.3
AC 126	125	450	180	215	170	100	65	28x25	16	52	80	13	12	22	60	40	M4	1/4	8x6	6.3(x2)	0.5	9.5

## Technology Abstract - ACS



### Single Flange Butterfly Valve For Sleeve Connection

ТҮРЕ	ф А	ф В	Ф С	ф <b>D</b>	E	F	G	ф <b>Н</b> DIN5482	<b>N</b> Drilling	P External grooves	ΦR	α	S	т	<b>–</b>	v	Z	kg
ACS1F	95	180	220	105	250	117	35	22x19	N°4x φ 14	N°4x φ 20	220	22°30	40	80	M12	50	M10	6
ACS1F	150	200	228	163	290	117	35	22x19	N°4x φ 14	N°4x φ 20	228	22°30	40	80	M12	50	M10	7
ACS1F	200	250	278	213	340	117	35	22x19	N°4x φ 14	N°4x φ 20	278	22°30	40	80	M12	50	M10	9
ACS1F	250	300	328	263	390	117	35	22x19	N°8x φ 14	N°8x φ 20	325	11°15	40	80	M12	50	M10	11
ACS1F	300	350	378	313	440	117	35	22x19	N°8x φ 14	N°16x ф 20	375	5°41	40	80	M12	50	M10	15

### Double Flange Butterfly Valve

ТҮРЕ	Ф А	Ф В	Ф С	E	F	G	ф <b>Н</b> DIN5482	<b>N</b> Drilling	<b>P</b> External grooves	ΦR	α	т	U	V	Z	kg
ACS2F	95	180	220	250	77	35	22x19	N°4x φ 14	N°4x φ 20	220	22°30	80	M12	50	M10	6
ACS2F	150	200	228	290	77	35	22x19	N°4x φ 14	N°4x φ 20	228	22°30	80	M12	50	M10	6
ACS2F	200	250	278	340	77	35	22x19	N°4x φ 14	N°4x φ 20	278	22°30	80	M12	50	M10	7.5
ACS2F	250	300	328	390	77	35	22x19	N°8x φ 14	N°8x φ 20	325	11°15	80	M12	50	M10	9.5
ACS2F	300	350	378	440	77	35	22x19	N°8x φ 14	N°16x φ 20	375	5°41	80	M12	50	M10	13
ACS2F	400	470	530	580	85	50	28x25	N°8x φ 14	N°16x φ 20	530	4°30	80	M12	-	-	30

## **Signalling Systems**

#### Switch Box - ACS-Series ACS 21

Micro signal switch box suitable actuator in type AC, opening and closing of the output signal of the feedback



Switch box

### **ACS 21**

#### **Performance & Technical Features - Benefits**

- · High strength of PC shell, switch position can be clearly identified indicator
- Protection grade: IP67/NEMA4&4X (standard) IP68 (option)
- · Device: can adjust the positioning cam cam position signal
- Mechanical switch: 2SPDT
- Contact: 250VAC/16A 400VAC/10A
- Single-wire interface:PG9
- Terminal: 5points(0.08-2.5mm2)

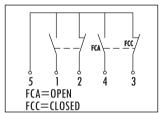


#### Micro-Switch Box

**IP67** 



0-10A 400V 0-16A 250V For AC



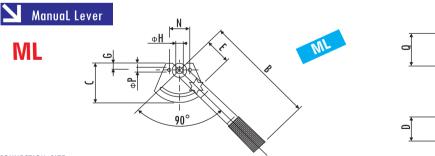


320g

### **Signalling Systems**

#### Manual Lever ML Series ML

ML handle driver suitable for control of ACS type butterfly valve, ball valve of VSS type and DVA type bidirectional shunt valve opening and closing







#### **CONNECTION SIZE**

ТҮРЕ	В	С	D	E	G	H DIN 5482	N	P	Q	Kg
ML4	300	104		72	14	22x19	50	10.5	115	1.3

#### **COUPLING OF MANUAL LEVER**

ACS*F 100	ACS*F 150	ACS*F 200	ACS*F 250	ACS*F 300	
ML4	ML4	ML4	ML4	ML4	

### **Pressure Relief Valve**

#### Pressure Relief Valve ACSP - Series ACSP273

ACSP Pressure Relief Valves are the last resort when abnormal pressure conditions endanger the silo structure. This is why sudden excess or suction pressure inside the silo must be dealt with instantaneously. Even though ideally a Pressure Relief Valve should never have to go into action, it must be efficient and reliable if needed.



#### **Performance & Technical Features**

- Carbon steel body (ACSP2731C / ACSP3751C) painted RAL 7001 or 304 stainless steel body (ACSP2732C / ACSP 3752C)
- · Weather protection cover in stainless steel for all versions
- Body diameter = 273 / 356mm (10" / 14")
- Air volume up to 7,000m3/h (4,120 cfm) for ACSP273 or 13,000m3/h (7,650 cfm) for ACSP375
- · Equipment for inductive signalling sensors
- All standard versions preset for an activation negative pressure of - 0.005 bar (0.07 psi) and an excess pressure of + 0.05 bar (0.72 psi)
- In case of particular customer requirements calibration can be changed by means of a special spring kits



#### **How To Order**

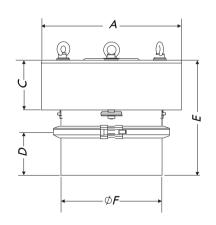
ACSP	273	1	В
Туре	Body diameter	body	
Pressure Relief Valves	273 mm	0 = Carbon steel body 1 = Carbon steel body andStainless steel 2 = 304 Stainless steel body 3 = 316 Stainless steel body	В

## Pressure Relief Valve

Calibration by manufacturer

Pressure 500mm H₂O

Negative Pressure -20mm H₂O





Pressure 280→1000mm H<sub>2</sub>0 \*

Negative Pressure -20→ -120mm H<sub>2</sub>0 \*

Туре	А	В	С	D	E	ФЕ	kg
ACSP2730B	380	-	125	120	325	273	12

### **Level Indicators**

#### Rotary Paddle Level Meter-ACSRPLM-Series ACSRPLM

ACSRPLM Bin Level Indicators have been designed for electric signalling by rotary action of minimum or maximum material level inside bins, hoppers or silos.



### **RPLM**

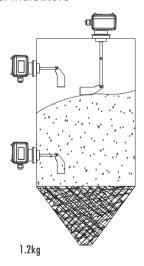
#### **Operating Conditions**

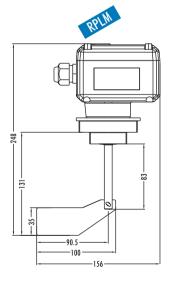
- · Container excess pressure: max. 0. 8 bar
- Temperature inside vessel: -20 to 80° C
- Ambient temperature inside casing : -20 to 70° C
- Enclosure: IP 65
- Process connection: Thread G1 1/4", G1 1/2", G2 ½"
- · measuring vane: Stainless Steel
- · Friction clutch: Protection of the gearing from impact
- · Pickup delay: Approx. 1.3 sec
- · Sensitivity: Adjustable via reset force
- Speed of measuring vane: 1 r.p.m.

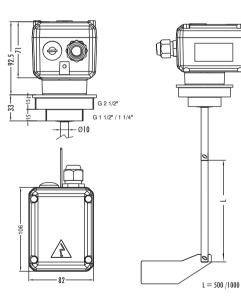
#### **How To Order**

RPLM	C	0
Туре	Voltage	Connect
Rotary Paddle Level Meter	C: 115V/220 AC 50-60Hz A: 24V/48V AC 50-60Hz D: 24V DC	Threaded 0: 1 ½ - 2 ½ 2: 1 ¼ NPT 5: Flanged A: Triple palette

#### **Level Indicators**





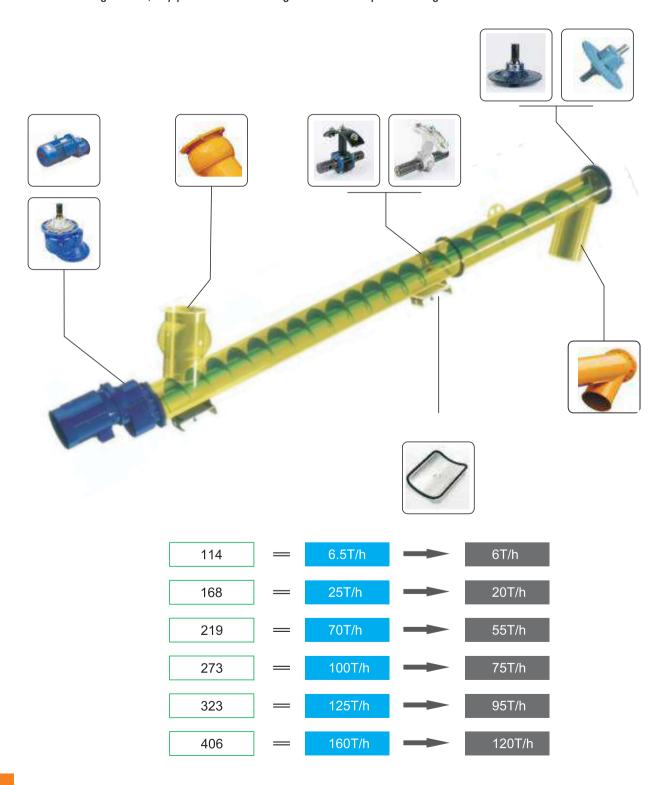


Part #	Stem Material	Mains voltage	Signal output	Installed load	Connection terminal	Process connection
RPLM	Stainless Steel	24 V - DC	DC max. 300 V, 2 A, 60 W	3VA (3W)	1 x max. 1.5 mm <sup>2</sup>	1½" - 2½" NPT

## **Screw Conveyor Accessories**

#### Tubular Screw Conveyor ACS C / ACS F

Tubular screw conveyors can be used to high price / performance ratio with the use of various accessories. The products adopt standardized design and automatic production, and have been widely used in industries such as concrete mixing station, dry powder sand mixing station and asphalt mixing station.



## **Screw Conveyor Accessories**

#### **OUTLET END BEARING ASSEMBLY ACS EB Series**

ACS EB series of export terminal support assembly is an indispensable connector in the screw feeder, is used for spiral tail support blade spindle.



## **ACS EB**

#### Code

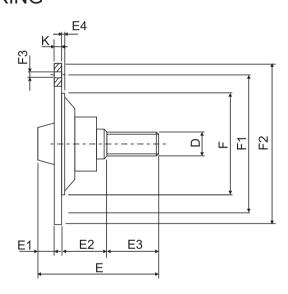
### A C S E B O O A C S C A

		Ø Feeder		
1-	Ø 168	•	~	219 273
2=	Ø 193	5=	~	323



### **OUTLET END BEARING**





0-4-	ar I	DIN 5482	Е	E1	E2	E3	E4	ØF	ØF1	ØF2	·	=3	K	KG	Bearing
Code	ØFeeder	ØD				1		VI	<b>1</b> 01 1	VI 2	Ø	N"		20	
ACS EB 168	168	40 <b>×</b> 36	197.5	32	72.5	85	3	162	220	250	M10	8	14	7	6008-2RS
ACS EB 193	193	40 <b>×</b> 36	197.5	32	72.5	85	3	186	220	250	M10	8	14	7	6008-2RS
ACS EB 219	219	40 <b>×</b> 36	197.5	32	72.5	85	3	210	250	275	M10	8	15	7.5	6008 2RS
ACS EB 273	273	40 <b>×</b> 36	197.5	32	72.5	85	3	265	305	330	M10	8	15	9.5	6008-2RS
ACS EB 323	323	40 <b>×</b> 36	197.5	26	72.5	85	4	315	370	405	M10	8	15	15	6008-2RS

## **Screw Conveyor Accessories**

#### Intermediate Hanger Bearing ACSC H Series

ACSC H series of intermediate shaft is screw feeder hanging essential connection is with self-lubricating liner hanger.



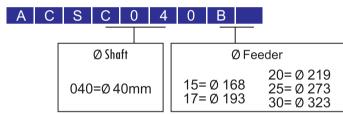
## **ACSC H**

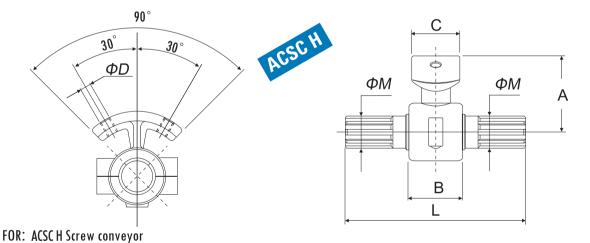
#### **Performance & Technical Features - Benefits**

- Material : Aluminum alloy
- · Suitable for cement, lime and similar powders



#### Code





#### **CONNECTION SIZE**

Part #	Φ Shaft	Φ Feeder	A	В	C	D	M DIN 5482	L	Kg
ACSC H 168	40	ACSC 168	80	55	51	M14	40x36	245	3.5
ACSC H 193	40	ACSC 193	92.5	55	51	M14	40x36	245	3.5
ACSC H 219	40	ACSC 219	105.5	55	51	M14	40x36	245	3.9
ACSC H 273	40	ACSC 273	132.5	55	51	M14	40x36	245	4.5
ACSC H 323	40	ACSC 323	157.5	55	51	M14	40x36	245	5.0

## **Screw Conveyor Accessories**

#### Intermediate Hanger Bearing ACS FH Series

ACS FH series of intermediate shaft is screw feeder hanging essential connection is with self-lubricating liner hanger.



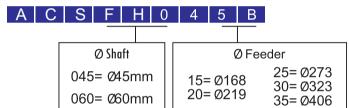
### **ACS FH**

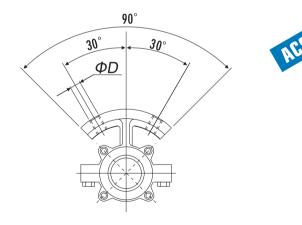
#### **Performance & Technical Features - Benefits**

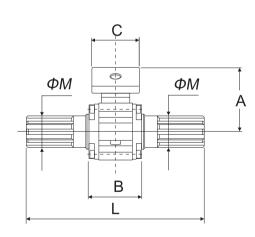
- · Material: carbon steel
- · Suitable for cement, lime and similar powders



#### Code







FOR: ACS FH Screw conveyor

Part #	Φ Shaft	Φ Feeder	A	В	С	D	M DIN 5482	L	Kg
ACS FH 219	45	ACS F 219	105.5	75	62	M14	40x36	225	4.5
ACS FH 273	45	ACS F 273	132.5	75	62	M14	40x36	225	4.7
ACS FH 323	45	ACS F 323	157.5	75	62	M14	40x36	225	5.0
ACS FH 406	60	ACS F 406	197.0	75	60	M20	60x55	295	14.0

### **Vibrator Round Filter**

ACS G/ DCV Groung Mounted Vibratory Type Dust Collector Filter





#### **ACS G/DCV**

ACS G/DCV is engineered to suit venting of pneumatically filled silos. This cylindrically shaped stainless steel body contains vertically mounted pleated PE cartridge elements.

Dust gets separated from the air stream once it passes through cartridges and drops back into the hopper due to the vibrating cleaning device.

#### 1.1 OPERATING CONDITIONS

These filters are designed to work under following conditions: Dirty air flow temp. - 20 deg. to 80 deg. C.

Maximum static pressure suitable for filter body  $-500 \, \text{mm} \, \text{H}_2\text{O}$  to  $+750 \, \text{mm} \, \text{H}_2\text{O}$ 

The equipment is not designed to operate in hazardous conditions and for dangerous, explosive, toxic, flammable and any other harmful materials.

The connections with the mains supply should be carried out by qualified personnel. Before connections, ensure that plate data and voltage supply match.

Carry out a correct grounding of the filter components by connecting the earth wires and ensure that the filter is well mounted onto the supporting structure (hopper, silo etc.) which must be equally grounded according to industrial standards.

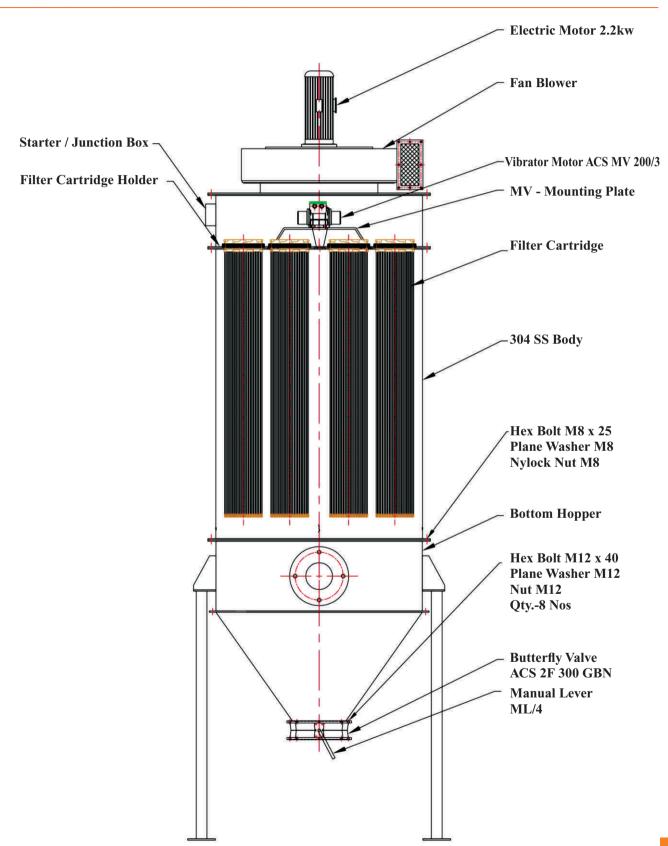
Before carrying out maintenance jobs. ensure that the filter is disconnected from mains.

Before starting, make sure all protections are installed correctly.

ACS SYSTEMS declines any responsibility for damages to things or people caused by the absence of such accident prevention devices.

## **Vibrator Round Filter**

#### **COMPOSITION AND GENERAL DIMENSIONS**



## **Screw Conveyor Accessories**

#### **Inspection Hatch**

Inspection hatches are provided on standard feeders beneath the first inlet spout, as well as beneath each intermediate bearing. The convenient maintenance.



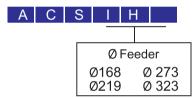
## **ACS IH**

#### **Performance & Technical Features - Benefits**

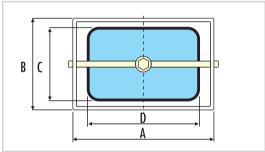
- Suitable for 168/219/273/323 screw conveyor
- · With an elastic sealing strip
- · With a fixed link

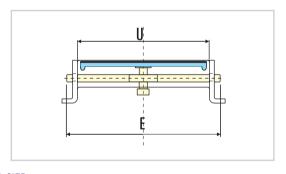


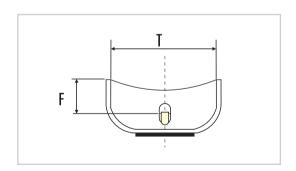
#### Code











#### **CONNECTION SIZE**

Code	Ø Feeder	А	В	С	D	Е	F	Т	J	Kg
ACS IH 168	168		150	144						3.5
										3.5
ACS IH 219	219	274	187	180	265	300	71.0	181	267	3.5
ACS IH 273	273		212	205				206		3.5
ACS IH 323	323		236	230				230		3.5

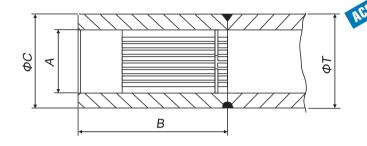
## **Reducer Shaft Couplings**

### **Shaft Couplings**

ACS SC spline sets are welded to the ends of the inner tube for the connection of the screw blades. Suitable for 219/273/323 screw



## **ACS SC**

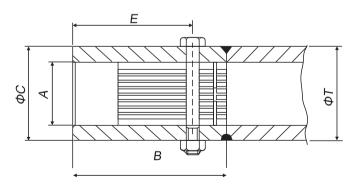




Part #	Φ Feeder	Number of teeth	А	В	C	1	Kg
ACS SC 20	168 193 219 273 323	20	40X36	92	60	60	1.2

## Shaft Couplings

## **ACS SCH**





Part #	Φ Feeder	Number of teeth	A	В	C	E	ī	Kg
ACS SCH 20	168 193 219 273 323	20	40X36	92	60	35	60	1.2

## **Description and Technical Characteristics**

#### **ACS V2 Silo Venting Filters**

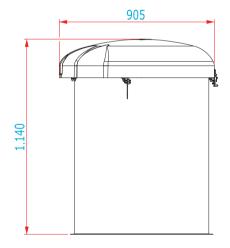
ACS V2 is a cylindrically shaped dust collector for venting of pneumatically filled silos. The stainless steel body contains vertically mounted, filter elements. The air jet cleaning system is integrated in the hinged weather protection cover.



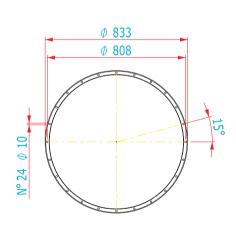
### **ACS V2**

Feature -	Function -	_
Standard Stainless Steel Body	Resistance to Corrosion	Reduced Maintenance Costs Due to Increased Durability
High Quality Filter Media	High Filtration Effciency	Lower Dust Emission
Push-Fit Filter Elements	No tools for cartridge maintenance needed (no loss of hardware)	Lower Maintenance Costs
Maintenance Height = 1,150mm (3.8 ft)	Easy Maintenance	Increased Work Safety - Reduced Maintenance Costs
Easy opening system with hinged cover	Easy Maintenance	Reduced Maintenance Costs

## Overall Dimensions







### **Overall Dimensions**

CODE	BODY Ø mm [in]	FILTER SURFACE m <sup>2</sup> [sq ft]	MAX. HEIGHT WHEN CLOSED mm [in]	MAX. HEIGHT WHEN OPEN mm [in]	WEIGHT kg [lb]
ACS V2	800 [31.5]	24 [147]	1,140 [44.9]	1,825 [71.8]	120 [264]

### **Silo Venting Filters**

#### **ACS V2 Filter Elements**

Folding filter using PET polyester fiber, has good rigidity, the thickness of the filter cloth is only 0.2 mm, surface filtering performance is outstanding, the pressure loss is small, easy cleaning, long service life, filter made of high strength plastic internal skeleton, and folded filter cloth cast into an organic whole, have good integrity and seal performance, folding filter with 900 mm and 750 mm length.

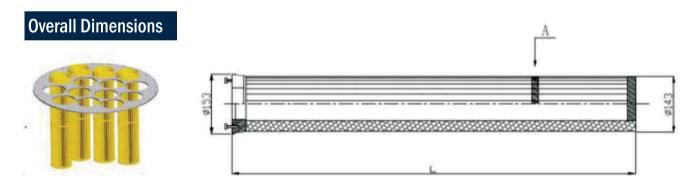


### ACS V2

The main component of the filter is the filter element. They are made of polyester fiber and are made of inner cylindrical metal frame. Various types of filter media are very suitable. The outer diameter of the cylindrical filter element is about 140mm, and the length depends on the filter area (see table below.)

Folding filter characteristics: effective filter area per unit volume is very big, is 4 times the left and right sides of bag filter circle (as shown in the figure below): so as to greatly reduce the volume of a dust collector, reduce the cost of equipment, installation and maintenance more convenient also. The folding filter is widely used, but it is not suitable for some special powder materials.

Should be used	General powder	Wet or oily powder.	It needs to be de-static.	A special powder.
Material handling		Teflon coating.	Anti-static	Polytetrafluoroethylene film.
	FP	FV	FA	FT
Filtering material	PP	PV	PA	PT



### **Overall Dimensions**

Ø (mm)	BODY Ø mm	FILTER SURFACE m <sup>2</sup>	FILTER MEDIUM	FILTER THE NUMBER	LENGTH (mm)
Dust Collactor	143	22	PP-PV-PA-PT	14	900

## **Description and Technical Characteristics**

#### ACS BR - Accessories - Bottom Ring

#### **BOTTOM RING**

Used to connect the filter with a hopper, silo etc. This connection is made by welding

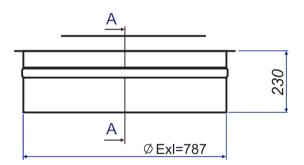
#### **FINISHING:**

- Carbon steel powder-coated RAL 7001 (silver grey)
- AISI 304 stainless steel

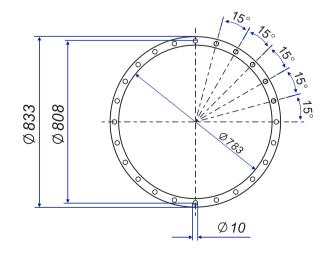


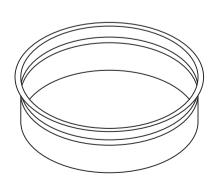
#### Code

ACS BR	800	
Туре	Specification	Material
ACS BR	800mm	1: Carbon steel 2: AISI 304









### **Flow Aids**

#### **ACS AP21 Series Vibrating Bin Aerators**

ACS AP21 and 44vibratory bowl for help gas flow to improve the bulk material



#### **Performance & Technical Features - Benefits**

- · Sturdy design Self-cleaning Abrasion-resistant Easy to install
- Air pressure 2 to 4 bar (29 to 58 PSI)
- Working temperature 43-44 -40° C to 230° C (-40° F to 450° F)
- For powders and granular products Food-grade (FDA-approved)

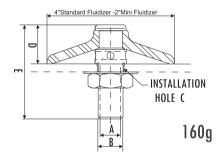


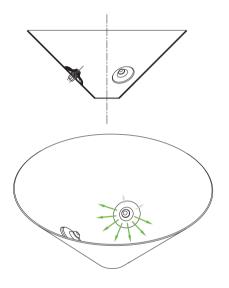
#### **Options & Accessories**

- · With stainless steel shaft
- · For external assembly
- Miniature execution

#### **How To Order**

ACS AP21	3	02
Туре	Thread	Shaft
ACS AP21	3= 1/2	Stainless steel





Part #	Stem Material	Disk Color	Disk Material	A	В	С	D	E	Airline Options
ACS AP21	Stainless Steel	White	Silicone	½" NPT	3/4" NPT	11/16" (27mm)	1-1/4" (32mm)	3 1/16" (78mm)	½" 3/4" (13-19mm) Tubing or Hose

The work broken arch recommended intermittent operation, such as using open 2-3 seconds, stop for 10-15 seconds, different pressures and under different working intermittently broken arch device will produce different effects of aid flows.

Contra		Air c	onsumption	MAX.				
Series	0.5bar(7.2psi)	1bar(14.5psi)	1.5bar( 21.7 psi)	2bar(29psi)	3bar(43psi)	3.5 bar( 50.7 psi)	4bar(58psi)	
	m³/h	m³/h	m³/h	m³/h	m³/h	m³/h	m³/h	
ACS AP21	23	46	70					

### **Electric Motovibrators**

#### Electric vibrators ACS MV-series

ACS MV series single, three phase standard vibration motor is a universal excitation source for all kinds of vibration machinery. This product can be widely used in mining, metallurgy, coal, electric power, construction, chemical, casting, light industry food and other industries.

ACS MV series single, three phase standard vibration motor has the characteristics of light weight, small volume, convenient excitation force adjustment, high insulation level and high protection level.



## **ACS MV**



#### Technical parameters of ACS MV series vibrating motor:

Rated voltage: 380V (three-phase) Insulation level: class H, level F Working system: continuous (S1) (also available for 23/400v, 23/460v)

Rated frequency: 50HZ (also available for 60HZ)

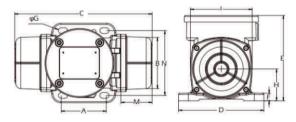
Protection level: Ip65

Vibration adjustment range: 0 - maximum

Three phase 0---13000kg

#### Code

ACS MV	200	/ 3	M
Туре	Force (kg)	Speed (r/min)	Voltage
ACS MV	60-516	3: 3000	BLANK:Three phase 380V



#### Mounting Dimension Unit: mm

Model	A	В	ØG	C	D	E	F	H		- 1	M	N	Cable gland	Fig
ACS MV60/3	62-74	106 83-102	6	211	130	136	12	48	94	121	45	86	M16×1.5	A
ACS MV100/3	62-74	106	6	221	130	136	12	48	94	121	50	86	M16×1.5	Α
ACS MV200/3	62-74	106	9	231	131	159	15	64	121	123	54	112	M20×1.5	В
ACS MV300/3	80 90	110	11	253	155	175	15	79	142	163	45	131	M20×1.5	c
ACS MV400/3	124 135	110	11	273	155	175	15	79	142	163	55	131	M20×1.5	С
ACS MV500/3	105	140	13	334	168	196	22	92	169	178	78	158	M20×1.5	D

Model	Voltage	Current	Input power	Force	Weight	Sha
Model	M	A.Max(Y)	(KW)	(KN)	(KG)	Size
ACS MV60/3	220/380	0.16	0.08	0.7	4.6	size 10
ACS MV100/3	220/380	0.19	0.1	1	4.7	size 10
ACS MV200/3	220/380	0.35	0.18	2	6.3	size 20
ACS MV300/3	220/380	0.52	0.27	3	9.9	size30
ACS MV400/3	220/380	0.58	0.3	4	10.2	size30
ACS MV500/3	220/380	0.96	0.5	5	16.7	size40