

# SELECTION GUIDE

PTFE Seals Worldwide - Made in Denmark. Accofluor gets you from sealing concept to working application. High Quality products – PTFE seals, guiding elements, special components and much more.





## TABLE OF CONTENT

- 4 ABOUT OUR COMPANY
- 5 GUIDE
- 6 PISTON SEALS
- 8 ROD SEALS
- 10 WIPER SEALS
- **11** SPRING ENERGIZED SEALS
- 12 GUIDE TAPE
- 13 GUIDE RINGS, O-RINGS, BACK-UP RINGS
- 14 MATERIALS
- 18 CASES



## ABOUT OUR COMPANY



Our growth is based on hundreds of projects completed and our ability to combine quality throughout our organization with service and putting ourselves in our customers place. With our application expertise, material knowledge and specialized machining know-how we strive for excellence as a sealing solution provider.

### PRODUCTS

We produce our PTFE seals from raw powder to final seal, ready to install. Our product range expands from standard profiles to highly specialized and individual solutions. Our production is ISO-certified, and we are able to trace and guarantee any seal delivered from us. Upon request, any material technical data sheet is available.

### **GREEN FOOTPRINT**

We care about our environment. All energy used in production is from renewable energy like wind or hydropower. All off-cut materials are collected and upcycled. We strive to use materials that are earth friendly and continuously develops environmentally friendly counter materials.

#### HISTORY

Accofluor is a family owned business specialized in PTFE sealing solutions with more than 40 years of experience. Throughout the years the family has developed a company with agility and know-how towards an everchanging industrial market and now appears as a leading supplier and business partner – worldwide!

## **SELECTION** GUIDE

You will find a selection of Accofluor standard seals on the following pages. Select the profile cross section in accordance with the groove dimension, and the nominal size of the seal.

A selection of Accofluor material is found in the material table on page 14/15





### **PROFILE OVERVIEW – PISTON SEALS**

### DYNAMIC SLIDE RING DOUBLE ACTING



Profile	Piston seal nominal diameter	width	Groove	O-ring
A	8,0 - 14,9	2,2	2,45	1,78
В	15,0 - 39,9	3,2	3,75	2,62
C	40,0 - 79,9	4,2	5,5	3,53
D	80,0 - 132,9	6,3	7,75	5,33
E	133,0 - 329,9	8,1	10,5	7,0
F	330,0 - 669,9	8,1	12,25	7,0
G	670,0 - 999,9	9,5	14,0	8,4
Н	1000-	13,8	19,0	12,0

### DYNAMIC SLIDE RING DOUBLE ACTING

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AF-5	30

Profile	Piston seal nominal diameter	Groove width	Groove	O-ring
А	5,0 - 13,9	2,4	1,45	1,78
В	14,0 - 24,9	3,6	2,25	2,62
С	25,0 - 45,9	4,8	3,1	3,53
D	46,0 - 124,9		4,7	5,33
E	125,0 - 669,9	9,5	6,1	7,0
F	670,0 - 999,9	10,0	7,5	8,4

### DYNAMIC SLIDE RING SINGLE ACTING

AF-541 AF-546

Profile	Piston seal nominal diameter	Groove width	Groove	O-ring
А	8,0 - 16,9	2,2	2,45	1,78
В	17,0 - 26,9	3,2	3,65	2,62
С	27,0 - 59,9	4,2	3,1	3,53
D	60,0 - 199,9	6,3	4,7	5,33
E	200,0 - 255,9	8,1	6,1	7,0
F	256,0 - 669,9	8,1	7,5	8,4
G	670,0 - 999,9	9,5	14,0	8,4
Н	1000-	13,8	19,0	12,0

Profile	Piston seal nominal diameter	Groove width	Groove	O-ring
А	8,0 - 14,9	2,2	2,5	1,78
В	15,0 - 39,9	3,2	3,75	2,62
с	40,0 - 79,9	4,2	5,5	3,53
D	80,0 - 132,9	6,3	7,75	5,33
Е	133,0 - 329,9	8,1	10,5	7,0
F	330,0 - 669,9	8,1	12,5	7,0
G	670,0 - 999,9	9,5	13,65	8,4
н	1000-	13,8	19,0	12,0

DYNAMIC SLIDE RING SINGLE ACTING ISO GROOVE

AF-544

X-ring

### **DYNAMIC SLIDE RING DOUBLE ACTING**

AF-551

U AF-553

Profile	Piston seal nominal diameter	Groove width	Groove	O-ring	X-rin
1	15,0 - 39,9	4,2	5,5	3,53	1,78
2	40,0 - 79,9	6,3	7,75	5,33	1,78
3	80,0 - 132,9	8,1	10,5	7,0	2,62
4	133,0 - 252,9	8,1	12,25	7,0	2,62
5	253,0 - 462,9	9,5	14,0	8,4	3,53

### DYNAMIC SLIDE RING DOUBLE ACTING

IC SLIDE RING ACTING	Profile	Piston seal nominal diameter	Groove width	Groove	O-ring	X-ring
	1	40,0 - 79,9	6,3	5,0	2 x 2,62	1,78
	2	80,0 - 132,9	8,3	6,5	2 x 3,53	1,62
	3	133,0 - 462,9	12,3	9,0	2 x 5,33	3,53
	4	463.0 - 700.0	16.3	15.5	2 x 7.00	5.33

### DYNAMIC ROTARY SEAL **DOUBLE ACTING**

AF-521 AF-523 AF-524

Profile	Piston seal nominal diameter	Groove width	Groove	O-ring
А	8,0 - 39,9	2,2	2,45	1,78
В	40,0 - 79,9	3,2	3,75	2,62
C	80,0 - 132,9	4,2	5,3	3,53
D	133,0 - 329,9	6,3	7,75	5,33
E	330,0 - 669,9	8,1	10,5	7,0
G	670,0 - 699,9	9,5	14,0	8,4

### **PROFILE OVERVIEW - ROD SEALS**

### DYNAMIC SLIDE RING DOUBLE ACTING



Profile	Rod seal nominal diameter	Groove width	Groove	O-ring
А	3,0 - 7,9	2,2	2,45	1,78
В	8,0 - 18,9	3,2	3,65	2,62
C	19,0 - 37,9	4,2	5,35	3,53
D	38,0 - 199,9	6,3	7,55	5,33
E	200,0 - 255,9	8,1	10,25	7,0
F	256,0 - 649,9	8,1	12,0	7,0
G	650,0 - 999,9	9,5	13,65	8,4
Н	1000-	13,8	19,0	12,0

### DYNAMIC SLIDE RING DOUBLE ACTING

AF-430

Profile	Rod seal nominal diameter	Groove width	Groove	O-ring
А	4,0 - 9,9	2,4	1,45	1,78
В	10,0 - 19,9	3,6	2,25	2,62
С	20,0 - 39,9	4,8	3,1	3,53
D	40,0 - 119,9		4,7	5,33
E	120,0 - 649,9	9,5	6,1	7,0
F	650,0 - 999,9	10,0	7,5	8,4

### DYNAMIC SLIDE RING SINGLE ACTING



Profile	Rod seal nominal diameter	Groove width	Groove	O-ring
А	3,0 - 7,9	2,2	2,45	1,78
В	8,0 - 18,9	3,2	3,65	2,62
C	19,0 - 37,9	4,2	3,1	3,53
D	38,0 - 199,9	6,3	4,7	5,33
E	200,0 - 255,9	8,1	6,1	7,0
F	256,0 - 669,9	8,1	7,5	8,4
G	670,0 - 999,9	9,5	14,0	8,4
Н	1000-	13,8	19,0	12,0

DYNAMIC SLIDE RING SINGLE ACTING ISO GROOVE



Profile	Rod seal nominal diameter	Groove width	Groove	O-ring
А	6,0 - 11,9	2,2	2,5	1,78
В	12,0 - 24,9	3,2	3,75	2,62
С	25,0 - 62,9	4,2	5,5	3,53
D	63,0 - 159,9	6,3	7,75	5,33
E	160,0 - 249,9	8,1	10,5	7,0
F	250,0 - 659,9	8,1	12,5	7,0
G	660,0 - 999,9	9,5	13,65	8,4
Н	1000-	13,8	19,0	12,0

### DYNAMIC SLIDE RING DOUBLE ACTING



Profile	Rod seal nominal diameter	Groove width	Groove	O-ring
А	6,0 - 18,9	2,2	2,45	1,78
В	19,0 - 37,9	3,2	3,75	2,62
C	38,0 - 199,9	4,2	5,5	3,53
D	200,0 - 399,9	6,3	7,75	5,33
E	400,0 - 649,9	8,1	10,5	7,0
G	650,0 - 999,9	9,5	14,0	8,4

### DYNAMIC SLIDE RING DOUBLE ACTING

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AF-	451

Profile	Rod seal nominal diameter	Groove width	Groove	O-ring	X-ring
1	19,0 - 37,9	4,2	5,5	3,53	1,78
2	38,0 - 199,9	6,3	7,75	5,33	1,78
3	200,0 - 255,9	8,1	10,5	7,0	2,62
4	256,0 - 649,9	8,1	12,25	7,0	2,62
5	650,0 - 999,9	9,5	14,0	8,4	3,53



### **PROFILE OVERVIEW - WIPERS**

### WIPER, SINGLE AND **DOUBLE ACTING**

AF-480 AF-485

Profile	Rod seal nominal diameter	Groove width	Groove	O-ring
А	6,0 - 11,9	3,7	2,4	1,78
В	12,0 - 64,9	5,0	3,4	2,62
С	65,0 - 250,9	6,0	4,4	3,53
D	251,0 - 420,9	8,4	6,1	5,33
E	421,0 - 650,9	11,0	8,0	7,0
G	651,0 - 999,0	14,0	10,0	8,4

### WIPER DOUBLE ACTING

AF-487

Profile	Rod seal nominal diameter	Groove width	Groove	O-ring
А	19 - 39,9	4,2	3,8	2,62
В	40 - 69,9	6,3	4,4	2,62
С	70 - 139,9	8,1	6,1	3,53
D	140 - 399,9	9,5	8,0	5,33
E	400 - 649,9	14,0	11,0	7,0
G	650 - 999,9	16,0	13,65	8,4

### WIPER DOUBLE ACTING

Prome	nominal diameter	width	GIUOVE	0-mig
A	8,0 - 14,9	2,2	2,45	1,78
	15,0 - 39,9	3,2	3,75	2,62
С	40,0 - 79,9	4,2	5,5	3,53
D	80,0 - 132,9	6,3	7,75	5,33
E	133,0 - 329,9	8,1	10,5	7,0
	330,0 - 669,9	8,1	12,25	7,0
G	670.0 - 999.9	0.5	14.0	8 /

Rod seal

### **PISTON SEAL UPON REQUEST:**

Wiper, single and double acting



AF-PT1



AF-587\*

\*By request

Profile	Piston seal nominal diameter	Groove width	Groove	O-ring
А				
С				
D				
E				
G				
Н	-	-	-	-

### **ACCOFLUOR SPRING ENERGIZED LIP SEALS**

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**ROD/PISTON:** Asymmetric with a wiper lip

**ROD/PISTON** SHAFT SEAL: with a flange and a strong dynamic lip

SEAL FOR OUT-/ **INSIDE PRESSURE,** 

Could be made in all above variants.



AF-610R



AF-710R



AF-711S AF-611S







**ROD/PISTON:** Symmetrical for static applications

**ROD/PISTON** 

SHAFT SEAL,

Rod/piston, asymmetric

silicone filled for FDA/ EU-FCM approval could be made in all variants.

with a strong dynamic lip,



AF-610S

 $\square$ 

AF-710S





AF-610D..VSQ AF-710D..VSQ

**ASL-SEAL: Piston seal** Groove Profile nominal diameter width А 6,0 - 13,9 2,4 1,45 С 25,0 - 45,9 4,8 3,1 Е 125,0 - 649,9 9,5 6,1

**SPRING FORCE Spring Force Spring material** Spring code **ASL-SEALS** SS Slanted Coil Spring V Spring SE Low Helical Band Spring SH որորո Slanted Coil Spring HS High V Spring ΗE Helical Band Spring ΗH

### **GUIDE ELEMENTS**

#### **GUIDE TAPE**



Standard dimensions. For further information, please contact Accofluor A/S

#### **CUT IN LENGTHS**

		2
X cut	Y cut	Z cut

- Guide for Standard- or Special dimensions up to 95 mm width
- Full length rolls or cut in pieces to length
- Standard or teardrop dynamic surfaces
- Standard material: PTFE 40% Bronze & PTFE 25% Carbon



#### **GUIDE RINGS**



Guide rings are made in any sizes, standard as well as custom. We produce guide rings in various materials such as AF-9200, Polyester resin with PTFE particles, AF-9600, Phenolic resin, AF-5640 PTFE+40% Bronze or even AF-7720 PE with FDA/EU-FCM approval.

#### **O-RINGS**



Accofluor offers a wide range of specialized products for static applications, including metal seals, ideal for extreme temperature and pressure conditions. PTFE seal are often or mostly used in combination with an O-ring. O-ring is the most used seal in the world, need a back-up ring when high pressure.

We can supply all kind of O-rings in any size. All our O-rings are burr free and carefully examined before leaving our warehouse. Our product range in O-rings features NBR, HNBR, Silicone, EPDM, FKM, Viton, FEP encapsulated and of course PTFE.

BACK-UP RINGS: Metric, Imperial and US standard AF-120:Solid AF-110:Split AF-100:Spiral AF-100:Spiral AF-150:Concav



## MATERIALS

Accofluor materials are well proven and used in various industries and applications - wordwide. Some are wellknown, some are newly developed for special applications or for replace materials to new ones with less environmental impact.

Material code	Description	Application comments	Temp C°	Color
AF-1012	PTFE Virgin	Good for gaseous medias.	-200 to + 260 °C	White
AF-1022	PTFE + additives	Improved wear and friction properties	-200 to +260 °C	Turquise
AF-1024	PTFE + additives	Like AF-1022, but FDA/EU-FCM approved	-200 to +260 °C	Turquise
AF-1086	PTFE + mineral fiber	FDA/EU-FCM approved	-200 to +260 °C	White
AF-1111	PTFE + Ekonol	For high demand reciprocation and rotary applications at low pressure. Good wear and temperature resistance also in non-lubricated environments. Suitable for soft counter surface ex. aluminium	-200 to +260 °C	Beige
AF-2370	PTFE + special filler	Contact for info.	-200 to +260 °C	Black
AF-2410	PTFE + Carbon	Suitable for low speed rotary applications, also in poor lubricated environment ex. water	-200 to +260 °C	Black
AF-2413	PTFE + 10% Carbon	Very good for rotary applications, not suitable for gases	-200 to +260 °C	Anthracite
AF-2426	PTFE + 25% hard carbon/graphite	Suitable for lubricated pneumatics and hydrau- lics applications, very good extrusion resistance	-200 to +260 °C	Black
AF-2500	PTFE + 25% soft carbon/graphite	Ideally suited for pneumatics and hydraulics both non lubricated and lubricated applications, very good extrusion resistance and overall chem- ical resistant except heavily oxidizing agents	-200 to +260 °C	Black
AF-3015	PTFE + graphite	Electrical conductive	-200 to +260 °C	Anthracite
AF-4025	PTFE + 25% glasfiber	Acid resistent	-200 to +260 °C	White
AF-4115	PTFE + 15% glasfib- er/lubricants	Used for high speed reciprocating applications, hard counter surface required	-200 to +260 °C	Grey
AF-5060	PTFE + 60% Bronze	Hydraulic material for lubricated environment exceptional dimension stability. Well proven for static high pressure	-200 to +260 °C	Brown
AF-5640	PTFE + 40% Bronze/ additives	Standard hydraulic material for lubricated envi- ronment very good dimension stability.	-200 to +260 °C	Green

Material code	Description	Application comments	Temp C°	Color
AF-6050	PTFE + stainless steel	Recommended for valve seats, and static appli- cations	-200 to + 260 °C	Grey
AF-7010	POMC	Improved wear and friction properties	-50 to + 120 °C	White/black
AF-7522	PTFE TFM virgin	Excellent for gaseous medias, good extrusion resistance	-200 to +260 °C	White
AF-7615	PTFE + mineral/addi- tives and lubricants	For high demand reciprocation and rotary applications at medium pressure. Excellent wear and very good temperature resistance also in non-lubricated environments.	-200 to +260 °C	Dark grey
AF-7710	PEHD1000 (UHMW-PE)	For high demand reciprocation and low speed rotary applications at high pressure. Excellent wear also in non- lubricated environments, low stick slip effect. Excellent for hydraulic and wa- ter applications. Environment friendly solution.	-45 to + 80 °C	White
AF-7720	PEHUD	For high demand reciprocation and low speed rotary applications at high pressure, more di- mension stable at higher temperature. Excellent wear also in non-lubricated environments, low stick slip effect. Excellent for hydraulic and water applications. Good choice for environment friendly solution. FDA/EU-FCM approved	-45 to 120 °C	White/Orange
AF-8160	PUR shore 60D	For lubricated reciprocation applications. MOCA free acc.to ECHA regulations	-45 to 100 °C	White
AF-8170	PUR Shore 70D	For lubricated hydraulic applications, high extrusion resistance. MOCA free acc.to ECHA regulations	-45 to 100 °C	White
AF-9200	Polyester resin and fabric + PTFE	High flexural strenght, minimum risk of break- age, improved sliding properties and no water absorption.	-40 to +130°C	Turquoise
AF-9305	PEEK natural	Excellent pressure and extrusion resistance	-60 to 280 °C	Beige
AF-9600	Cotton fabric	High loadbearing capability and low friction	-40 to +130°C	Brown
ATXC-33	PTFE + polymer and additives	FDA/EU-FCM approved	-200 to + 280 °C	Sand
ATXC-66	PTFE + polymer, ad- divtes and lubricants	For very high demand reciprocation and rotary applications at high pressure. Excellent wear and temperature resistance also in non-lubricated environments.	-200 to +280 °C	Olive green

Technical data sheets are available on request. The values are based on a routine inspection of raw materials and compounds.

## AF-7615 - Meeting increased marked demands, replacing traditional hydraulic materials.

The main goal when developing AF-7615 was to replace numerous standard compounds within hydraulic applications such as PTFE + 40% Bronze, PTFE + Carbon Coke, PTFE + Carbon fibre, PTFE + Glass. With the introduction of the special mineral filler, combined with lubricant and additive AF-7615 achieves same excellent extrusion resistance as PTFE + 40% bronze while decreasing counter surface wear and friction.



One of the main disadvantages of the PTFE + 40 % bronze, when operating at elevated surface temperatures, is that it can lead to Tribo-oxidisation, depositing hard particles, accelerating wear, and reducing lifetime of the seal system.

### **ADVANTAGES COMPARED TO PTFE + 40% BRONZE**

- · Increased wear resistance
- Decreased counter surface wear
- Decreased friction
- · Increased lifetime
- · Reduced environmental impact
- Replaces multiple standard PTFE compounds.
- Competitive pricing
- Temperature range -200 to +260 °C.

### BACKGROUND

With increased focus on environmental impact, limiting usage of scars natural resources and the demand for increased lifetime, Accofluor introduces a new generation compound for the hydraulic industry. Utilising advanced filler composition.

### **AF-7720** - High temperature capable UHMW-PE, PEHUD.

AF-7720 maintains all the advantages of standard UHMW-PE as the long carbon chain is preserved, wear resistance in intact.

But is capable of operating at temperatures as high as 120°C while maintaining mechanical properties and dimensions stability, this has been documented in several tests at customers, as consequence the material has been well embraced in the marked.



The high temperature material displays excellent self-lubrication properties, is suitable for numerous types of applications from high pressure hydraulics to deep sea environment, Wide chemical resistance, good media compatibility.

### **ADVANTAGES**

- Good self-lubrication properties.
- Very good wear performance.
- · Superb extrusion resistance.
- Works across a wide temperature range up to 120°C.
- Wide application range.

### MATERIAL PROPERTIES

Property	Value	Standard	Unit
Density test	0,93	ASTM D792	g/cm3
Tensile strength	45	ASTM D4894-07	MPa
Elongation at break	520	ASTM D4894-07	%

### BACKGROUND

The superb wear resistance and high-pressure performance of UHMW-PE has been known for some time.

The main drawback of UHMW-PE is the limited temperature capability, mechanical properties degrade fast as temperature rises towards to recommended maximum of 80°C.

### **/// HYDREMA**

Hydrema was founded in 1959 in Denmark and was in the beginning developing hydraulic accessories for e.g. tractors.

Today – Hydrema is part of a modern, international group of companies which develops, manufactures and markets high-technology articulated dump trucks, loader excavators, compact wheeled excavators and specialist military equipment including mine clearing vehicles. The main factory and head office are located in Støvring near Aalborg in the north of Denmark

-" As a supplier for Hydrema's products, we choose only the best. The quality must of course be in order and remain in order. Delivery ability is another important parameter, because without items on time, we can not keep our agreements with the customer. Flexibility is another key word when we talk about our suppliers. That is why Hydrema has now for a number of years chosen to trade our packs etc. through Accofluor, as here we find exactly the properties that we appreciate so much."

Marianne Frank Mogensen Purchasing Manager Hydrema Group



#### **FPE Seals**

With more than 35 years in the market and with 6 branches throughout UK, FPESeals supply the hydraulic industry worldwide. FPE Seals stocks and supplies more than 35.000 part numbers from cylinder parts to seals.

#### -"Why choose Accofluor ?"

We chose Accofluor to be a strategic partner on our PTFE requirements because of their product quality and outstanding customer service.

Accofluor is a reliable partner due to their ability to provide a good quality product against an agreed time frame on an extremely consistent basis. They have a proactive attitude towards urgent requirements enabling them to produce parts quickly enabling us to satisfy customer needs if the unplannable arises. "

**TESTIMONIALS** 





01

### PROJECT ADVISORY

Assisting on new projects regarding material and profiling in advanced sealing.

03

### PARTNERSHIPS

Partners achieves first in line technical support, easy to use pricing program, Sealing Academy 02



### AGILE DELIVERY

Sales, engineering, and production works closely to fulfill our customers' needs

### SOLUTION PROVIDER

Total supplier of sealing solutions from concept to working application

## CONTACT INFORMATION

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