

Filters



RKM Series Service and Parts

up to 211 gpm (800 l/min), up to 145 psi (10 bar)

1. Maintenance

1.1 General

Please follow the maintenance instructions on the last page.

1.2 Installation

Before installing the filter into the system, check that the operating pressure of the system does not exceed the permitted operating pressure of the filter.

Refer to the type code label on the filter.

1.3 Commissioning

Check that the correct filter element is fitted, apply the cover plate and secure it. Switch on the hydraulic system and check filter for leakage. Vent filter at an appropriate point in the system.

1.4 Maintenance Tools

Size	Cover plate bolts	Tightning torque Nm [ft-lb]	Hex mm
80	-	15 [11]	-
100	-	15 [11]	-
120	-	15 [11]	-
151	-	25 [18]	-
201	-	25 [18]	-
251	-	25 [18]	-
300	M10 x 30	26 [19]	17 (ext.)
350	-	45 [33]	-
400	M12 x 30	40 [29]	9.5 (int.)
800	M12 x 30	40 [29]	9.5 (int.)

*for SO184

1.5 Torque Values

Type	Max. Torque Nm [ft-lb]	Thread
VMF clogging indicator	15 [11]	G 1/8
VR clogging indicator	30 [22]	G 1/2
Lid or end cover	Do not Torque (See 1.3 and 2.2)	

Note: use Loctite 542 or equivalent for VMF indicator installation.

1.6 Torque Values for Reservoir Mounting Bolts

Size	Torque Nm [ft-lb]	Bolt Size
RKM80/100/120	20 [15]	M8
RKM151/201/251	20 [15]	M8
RKM300	20 [15]	M8
RKM350	20 [15]	M8
RKM400/800	25 [19]	M10

2. Element Replacement

2.1 Element Removal

- Switch off hydraulic system and release filter pressure. (release pressure in the tank, if any)
- Size 80 – 251, 350:
Unscrew cover plate.
Size 300, 400 – 800:
Loosen cover plate bolts and lift off the cover plate.
- Size 80 – 251, 350:
Pull out the filter divider (separator assembly) with attached filter element and filter bowl by turning gently.
Size 300:
Pull out the filter element with attached filter bowl.
Size 400 – 800:
Pull out the filter divider (separator assembly) with attached filter element by turning gently. The filter bowl remains in the filter head.
- Dismantled the removed unit into the divider (separator assembly), filter element and bowl.
- Clean bowl, cover plate, divider (separator assembly) and dirt retainer (if present).
- Examine filter, especially sealing surfaces, for mechanical damage.
- Check O-rings – and replace if necessary.

2.2 Element Installation

- Wet the sealing surfaces and thread on the filter head and bowl/lid, as well as the O-ring, with clean operating fluid.
- When installing a new filter element, check that the designation corresponds to that of the old element.
Size 400 – 800:
Install the dirt retainer onto the new filter element by turning clockwise.
- Assemble the divider (separator assembly), element and bowl to form a unit.
- Size 80 – 251, 350:
Install the filter divider (separator assembly) with attached filter element and filter bowl by turning gently.
Size 300:
Install the filter element with attached filter bowl.
Size 400 – 800:
Install the filter divider (separator assembly) with attached filter element by turning gently.
- Size 80 – 251, 350:
Replace cover plate and screw in manually.
Size 300, 400 – 800:
Mount cover plate and screw tight with cover plate bolts.
- Switch on hydraulic system and vent filter at a suitable point in the system.
- Check filter for leakage.

NOTE:

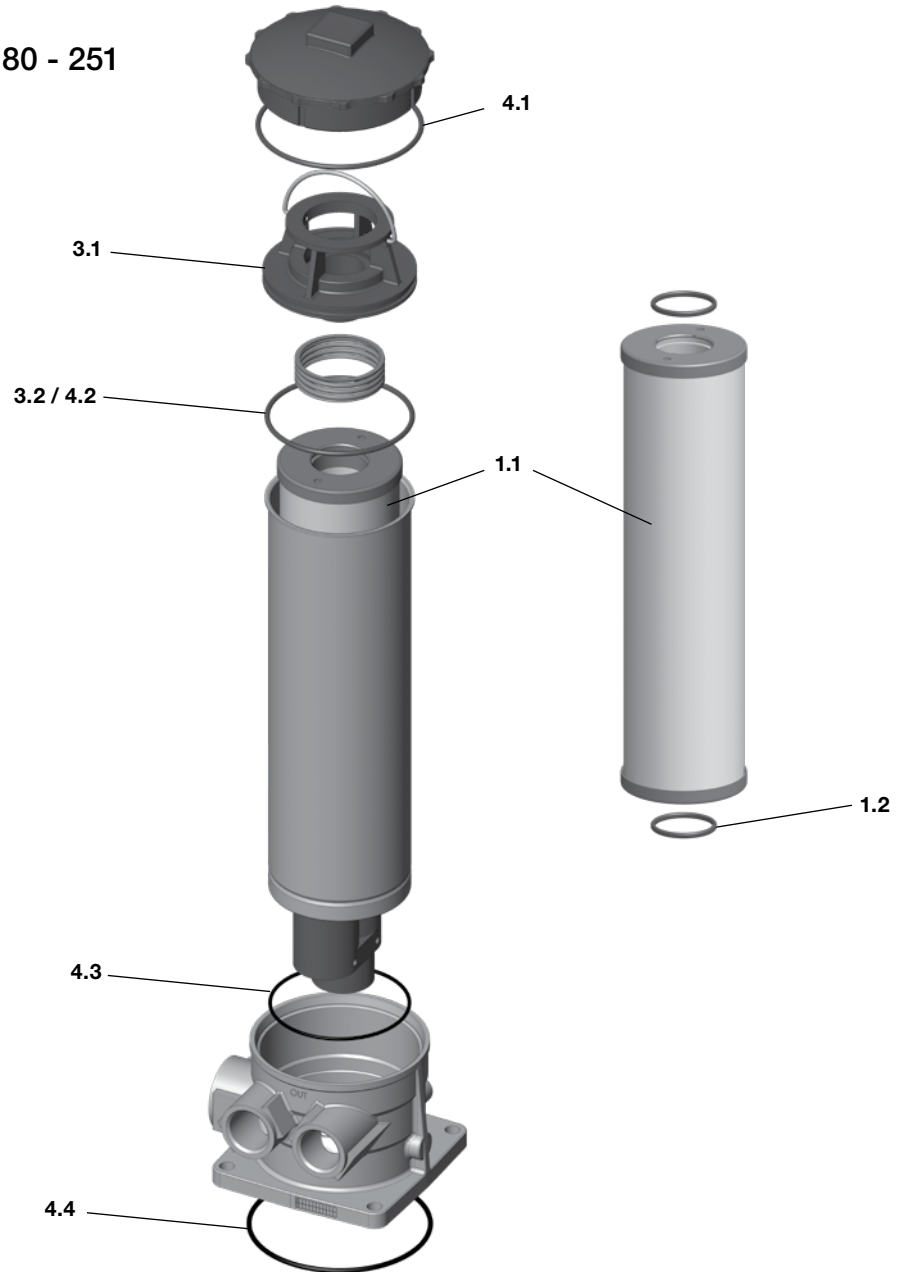
Dirt or incomplete pressure release on disassembly can lead to "seizing".

Filter elements are to be disposed of in an environmentally safe manner.

FILTER MAINTENANCE

3. Spare Parts

3.1 Spare Parts Drawing RKM 80 - 251



Item	Consists	Designation	80	100	120	151	201	251
1.		Filter element	See Point 4. Replacement elements					
	1.1	Filter element	0080 RK...	0100 RK...	0120 RK...	0151 RK...	0201 RK...	0251 RK...
	1.2	O-ring	28 x 3			40 x 3.5		
2.		Clogging indicator or screw plug	See Point 5. Replacement clogging indicators					
3.		Divider (separator assembly) E RKM...W.0	01276813			01274178		
		Divider (separator assembly) E RKM..W.0 /-NRF	01270754			01272259		
	3.1	Divider	RKM 100			RKM 198		
	3.2	O-ring	72.62 x 3.53			98.02 x 3.53		
4.		Repair kit E RKM...0.0	01270753			01271462		
		Repair kit E RKM...0.0 /-V	01277282			01277283		
	4.1	O-ring (cover plate)	Seal RFM (84 x 3.5 x 3.4)			110.72 x 3.53		
	4.2	O-ring (divider)	72.62 x 3.53			98.02 x 3.53		
	4.3	O-ring (head)	71.12 x 2.62			94.92 x 2.62		
	4.4	O-ring (flange)	85.32 x 3.53			123.42 x 3.53		

Other spare parts on request

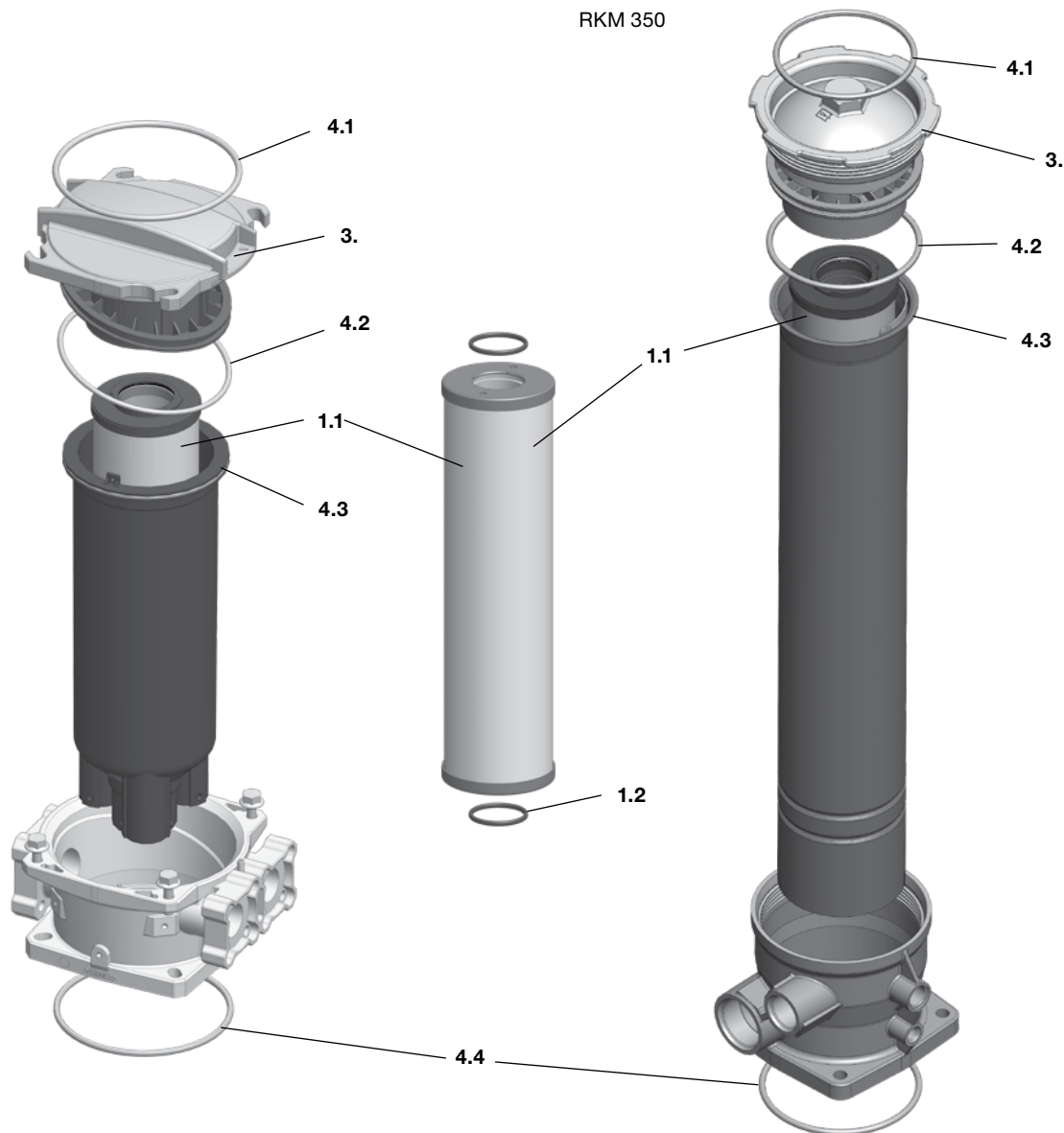
- O-Ring durometer can range from 70-80Sh. EPR Seal Kits available on request.

- Lid assembly kits on request - kits include complete lid with seals, vent plug (if present). Bolts not included.

3.3 Spare Parts Drawing RKM 300, 350

RKM 300

RKM 350



Item	Consists	Designation	300	350
1.		Filter element	See Point 4. Replacement elements	
	1.1	Filter element	0300 RK...	0350 RK...
	1.2	O-ring	48 x 3	48 x 3
2.		Clogging indicator or screw plug	See Point 5. Replacement clogging indicator	
3.		Cover plate E RKM....W.0 Cover plate E RKM....W.0 /-NRF125	01253296 01277733	01305527 01305528
4.		Repair kit E RKM...0.0 Repair kit E RKM...0.0 /-V	01253300 01277284	01305529 01305530
	4.1	O-ring (cover plate)	151.76 x 5.33	135.89 x 5.33
	4.2	O-ring (divider)	139.07 x 5.33	123.19 x 5.33
	4.3	O-ring (head)	132.94 x 3.53	113.67 x 5.33
	4.4	O-ring (element)	139.07 x 5.33	129.54 x 5.33

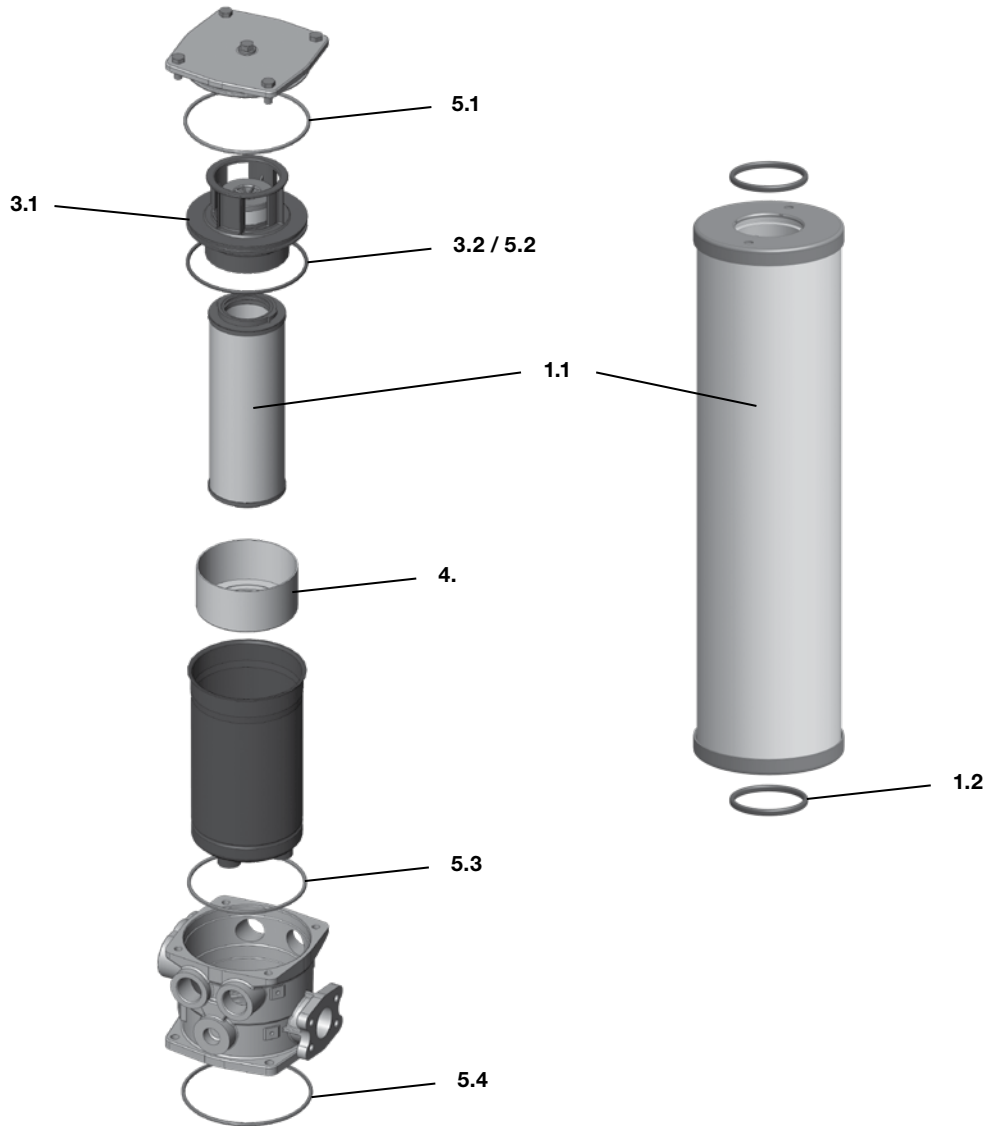
Other spare parts on request

- O-Ring durometer can range from 70-80Sh. EPR Seal Kits available on request.

- Lid assembly kits on request - kits include complete lid with seals, vent plug (if present). Bolts not included.

FILTER MAINTENANCE

3.1 Spare Parts Drawing RKM 400 - 800



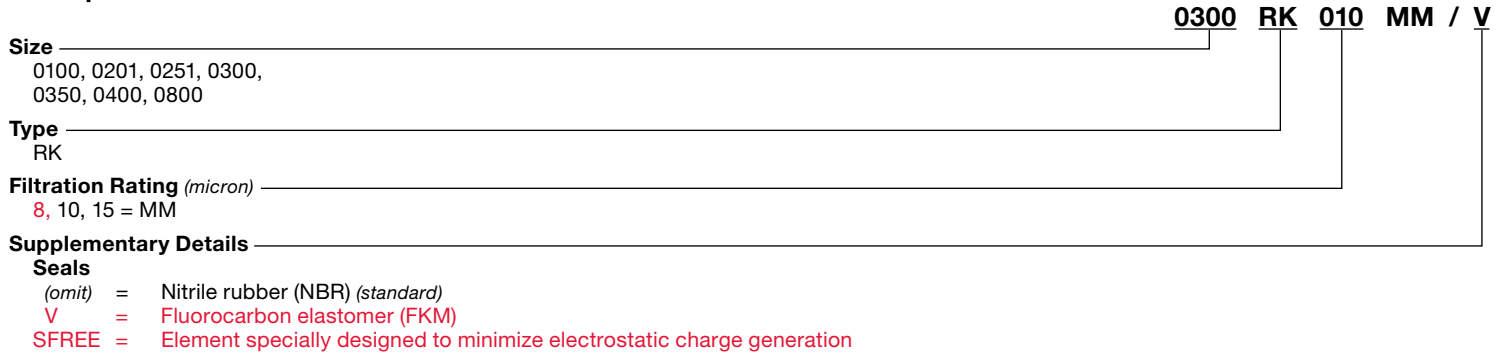
Item	Consists	Designation	400	800
1.		Filter element	See Point 4. Replacement elements	
	1.1	Filter element	0400 RK...	0800 RK...
	1.2	O-ring	68 x 5	
2.		Clogging indicator or screw plug	See Point 5. Replacement clogging indicator	
3.		Divider (separator assembly) E RKM..W.0	01271135	
		Divider (separator assembly) E RKM..W.0 /-NRF	01272054	
	3.1	Divider	RKM 400	
	3.2	O-ring	164.47 x 5.33	
4.		Contamination retainer	01202357	
5.		Repair kit E RKM...0.0	01271189	
		Repair kit E RKM...0.0 /-V	01277285	
	5.1	O-ring (cover plate)	164.47 x 5.33	
	5.2	O-ring (divider)	164.47 x 5.33	
	5.3	O-ring (head)	164.67 x 5.33	
	5.4	O-ring (flange)	183.52 x 5.33	
	5.5	O-ring (VR 0 A.0)	18 x 2.5	

Other spare parts on request

- O-Ring durometer can range from 70-80Sh. EPR Seal Kits available on request.

- Lid assembly kits on request - kits include complete lid with seals, vent plug (if present). Bolts not included.

4. Replacement Element Model Code



Clogging Indicator Model Code



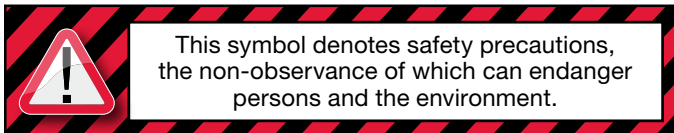
FILTER MAINTENANCE

6. Maintenance Instructions

6.1 User Instructions for Filters



- This pressure equipment must only be put into operation in conjunction with a machine or system.
- The pressure equipment must only be used as stipulated in the operating instructions of the machine or system.
- This pressure equipment must only be operated using hydraulic or lubricating fluid.
- It is the responsibility of the operator to comply with the water regulations of the country concerned.



CAUTION

- The user must take appropriate action (e.g. venting) to prevent the formation of air pockets.
- Repairs, maintenance work and commissioning must only be carried out by trained personnel.
- Allow the pressure equipment to cool before handling.
- The stipulations of the operating instructions of the machine or the system must be followed.
- Statutory accident prevention regulations, safety regulations and safety data sheets for fluids must be observed.
- Filter housing must be grounded.
- When working on, or in the vicinity of, hydraulic systems, open flames, sparks and smoking are forbidden.
- Hydraulic oils and water-polluting fluids must not be allowed to enter the soil or watercourses or sewer systems. Please ensure safe and environmentally friendly disposal of hydraulic oils. The relevant regulations in the country concerned with regard to ground water pollution, used oil and waste must be complied with.
- Whenever work is carried out on the filter, be prepared for hot oil to escape which can cause injury or scalding as a result of its high pressure or temperature.

DANGER!

- Caution: pressure equipment! Before any work is carried out on the pressure equipment, ensure the pressure chamber concerned (filter housing) is depressurized
- On no account must any modifications (welding, drilling, opening by force...) be carried out on the pressure equipment.
- When using electrical clogging indicators, the electrical power supply to the system must be switched off before removing the clogging indicator connector.

6.2 Maintenance, General

This section describes maintenance work which must be carried out periodically. The operational safety and life expectancy of the filter, and whether it is ready for use, depend to a large extent on regular and careful maintenance.

6.3 Maintenance Measures

- Spare parts must fulfil the technical requirements specified by the manufacturer.
This is always ensured when using original HYDAC spare parts.
- Keep tools, working area and equipment clean.
- After disassembling the filter, clean all parts, check for damage or wear and replace parts if necessary.
- When changing a filter element, a high level of cleanliness must be observed.

6.4 Interval Between Element Changes

In principle we recommend that the filter element is changed every 6 months or upon indication, whichever occurs first.

We recommend installing the filter with a clogging indicator (visual and/or electrical or electronic) to monitor the filter element.

If the clogging indicator responds, it is necessary to change or clean the filter element without delay (only W and V elements can be cleaned).

When no clogging indicator has been installed, we recommend changing the elements at specific intervals. (*The frequency of changing the filter elements depends on the filter design and the conditions under which the filter is operated*). When filter elements are subject to high dynamic loading it may prove necessary to change them more frequently. The same applies when the hydraulic system is commissioned, repaired or when the oil is changed.

The standard clogging indicators only respond when fluid is flowing through the filter. With electrical indicators the signal can also be converted into a continuous display on the control panel. In this case the continuous display must be switched off during a cold start or after changing the element.

If the clogging indicator responds during a cold start only, it is possible that the element does not yet need to be changed.

Customer Information in respect of Machinery Directive 2006/42/EC

Hydraulic filters are defined as fluid power parts / components and are therefore excluded from the scope of the Machinery Directive, sections 1.4.1 - 1.4.3. They do not bear the CE mark.

Before using these components, ensure compliance with the specifications provided by HYDAC Technology Corporation. The specifications also contain information on the relevant essential health and safety requirements (based on Machinery Directive 2006/42/EC).

We hereby declare that the filters are intended to be incorporated into machinery within the terms of the Directive 2006/42/EC. It is prohibited to put the filters into service until the machinery as a whole is in conformity with the provisions of the Machinery Directive.

Service address

HYDAC Technology Corporation Filter Division

2260 City Line Road
Bethlehem, PA 18017
+1.610.266.0100

NOTE

The information in this brochure relates to the operating conditions and applications described.

For applications or operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.

Global Headquarters
HYDAC INTERNATIONAL
GMBH

Industriegebiet
D – 66280 Sulzbach/Saar
Germany

Tel.: +49 6897 509-01

Fax: +49 6897 509-577

Internet: www.hydac.com
Email: info@hydac.com

North America Locations

USA

www.HYDAC-NA.com

North America Headquarters
HYDAC TECHNOLOGY CORPORATION
Filter Division

2260 City Line Road
Bethlehem, PA 18017
+1.610.266.0100

HYDAC TECHNOLOGY CORPORATION
Electronic Division
Process Filter Division

HYDAC CORPORATION
Accumulator Division
90 Southland Drive
Bethlehem, PA 18017
+1.610.266.0100

HYDAC TECHNOLOGY CORPORATION
Accessory Division

2204 Avenue C
Bethlehem, PA 18017
+1.610.266.0100

HYDAC TECHNOLOGY CORPORATION
Filter System Division
Process Filter Division
Fuel Filtration Division

580 West Park Road
Leetsdale, PA 15056
+1.724.318.1100

HYDAC TECHNOLOGY CORPORATION
Hydraulic Division –
Compact Hydraulics

450 / 445 Windy Point Drive
Glendale Heights, IL 60139
+1.630.545.0800

HYDAC TECHNOLOGY CORPORATION
Hydraulic Division – Tech Center

430 Windy Point Drive
Glendale Heights, IL 60139
+1.630.545.0800

HYDAC TECHNOLOGY CORPORATION
Cooling System Division

1051 Airlie Parkway
Denver, NC 28037
+1.610.266.0100

HYDAC TECHNOLOGY CORPORATION
Mobile Hydraulic Division

1660 Enterprise Parkway • Suite E
Wooster, OH 44691
+1.610.266.0100

HYDAC CYLINDERS LLC

540 Carson Road North
Birmingham, AL 35217
+1.205.520.1220

HYDAC TECHNOLOGY CORPORATION
HYDAC CORPORATION
Sales Office & Operations

510 Stonegate Drive
Katy, TX 77494
+1.281.579.8100

HYDAC TECHNOLOGY CORPORATION
HYDAC CORPORATION
NW Sales Office & Operations

1201 NE 144th St. Bldg. B • Suite 111
Vancouver, WA 98685
+1.610.266.0100

HYDAC TECHNOLOGY CORPORATION
HYDAC CORPORATION
NE Sales Office

1660 Enterprise Parkway • Suite E
Wooster, OH 44691
+1.610.266.0100

HYDAC TECHNOLOGY CORPORATION
HYDAC CORPORATION
SE Sales Office

1051 Airlie Parkway
Denver, NC 28037
+1.610.266.0100

HYDAC TECHNOLOGY CORPORATION
HYDAC CORPORATION
NC Sales Office

9415 West Forest Home Ave. • Suite 200
Hales Corners, WI 53130
+1.610.266.0100

Canada

www.HYDAC-NA.com

HYDAC CORPORATION
14 Federal Road
Welland, Ontario, Canada L3B 3P2
+1.905.714.9322

HYDAC CORPORATION
Sales Office
5160 75 Street NW
Edmonton, Alberta, Canada T6E 6W2
+1.780.484.4228

HYDAC CORPORATION
Sales Office
Montreal, Québec, Canada J2M 1K9
+1.877.539.3388

Mexico

www.HYDACmex.com

HYDAC INTERNATIONAL SA de CV
Calle Alfredo A Nobel No 35
Col Puente de Vigas
Tlalnepantla, Edo Mexico
CP 54090
Mexico
+011.52.55.4777.1262