



CATALOGUE  
**HYDRAULIC TIPPING SOLUTIONS**



# HYVA WETKITS

We offer a wide variety of hydraulic systems which can cope with the most demanding work conditions and applications.

Every Hyva customer can count on being fully served – from specifying the wetkit for a given application to installation on the vehicle. Our wetkits are individually specified by experienced Hyva staff with years of market experience in matching Hyva cylinders to assure best possible performance.

Wetkit for tipping semitrailers [page 4-5](#)

Wetkit for tipper truck [page 6-7](#)

Wetkit for moving floor, gas and liquid semitrailers [page 8-9](#)

Wetkit for moving floor and tipping semitrailers [page 10-11](#)

Wetkit for gas and liquid semitrailers with oil cooler [page 12-13](#)

**Hyva Alpha front end cylinders** [page 14-15](#)

**Underbody cylinders and power pack wetkits** [page 16-19](#)

Power take offs (PTO) [page 20-21](#)

Pumps [page 22-25](#)

Tipping valves HT1150 series [page 26-27](#)

Tipping valves HT1220 series [page 28-29](#)

Other valves [page 30](#)

Oil tanks [page 31-33](#)

Air controls [page 34-35](#)

High and low pressure hoses [page 36](#)

Couplings and seals [page 37](#)

High and low pressure adaptors [page 38-39](#)

Interesting examples of installations [page 40-41](#)

## WETKITS FOR TIPPING SEMITRAILERS

Optimal efficiency, low weight, short tipping cycle and safety are key principles followed while configuring wetkits for our customers. Our systems are fully optimized in terms of oil capacity, flow and working pressure to ensure the highest level of efficiency and safety.

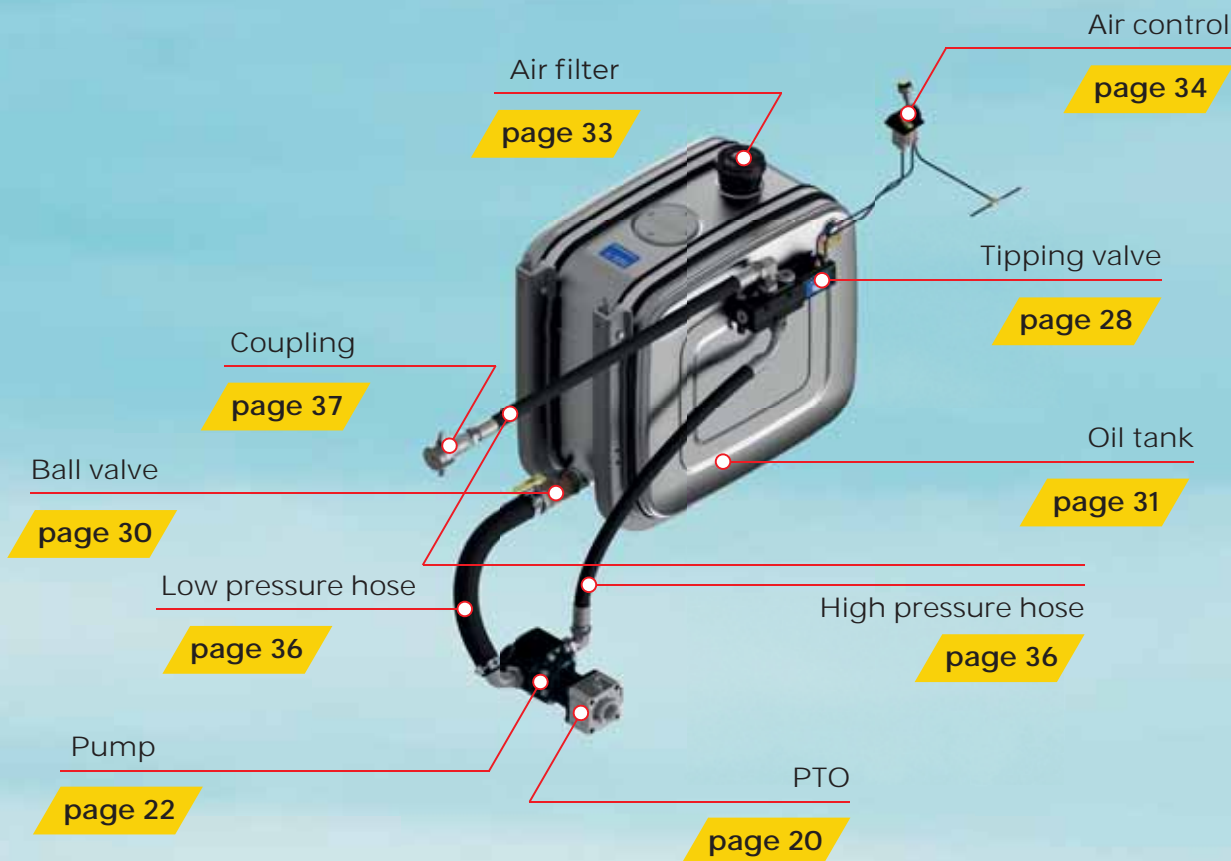
A wide range of gear and piston pump sizes allows us to select a wetkit with highest performance for every type of truck, gearbox and PTO.

Hyva offers a complete range of oil tanks manufactured from highest quality steel and aluminium in several mounting positions on the truck frame or behind the cabin. The design ensures optimized shape and superior size to volume ratio to utilize as little space as possible, following the latest trends on modern trucks.

Hyva HT tipping valves are specially designed for tipping applications. They guarantee the highest standard of efficiency and safety. High flow rates reduce the tipping cycle, wear on the pump and extend the overall lifetime of the system. For over 15 years this unique design concept has proven to be the safest solution for tipping applications in all possible working conditions around the world.

Hyva tipping systems based on such components, and in combination with Hyva Alpha cylinders, are a fully harmonized and highly efficient solution, bringing its owner real savings at safe working conditions.





## WETKITS FOR TIPPER TRUCKS

In the case of tipper trucks, the key features of Hyva wetkits become even more relevant as the expectation for efficiency and productivity is very high.

Hyva systems meet these demands and ensure shortest tipping cycle times at low weight, together with safe and breakdown free operation.

With full integration of the hydraulic system and tipping cylinder, we are able to deliver maximum performance. A wide range of gear and piston pump sizes allows us to reach the highest possible oil flow for every type of truck, gearbox and PTO. And a full range of oil tanks allows optimal size and oil volume at low weight.

Hyva HT tipping valves are specially designed for tipping applications. In combination with a knock off valve they guarantee the highest standard of efficiency and safety. High flow rates reduce the tipping cycle, wear on the pump and extend the overall lifetime of the system. For over 15 years this unique design concept has proven to be the safest solution for tipping applications in all possible mining and construction working conditions around the world.





Tipping cylinder Alpha

page 14

high pressure hose

page 36

Tipping valve

page 28

High pressure hose

page 36

PTO

page 20

Knock off valve

page 30

Return filter

page 33

Air filter

page 33

Oil tank

page 31

Ball valve

page 30

Low pressure hose

page 36

Pump

page 22

## WETKITS FOR MOVING FLOOR, GAS AND LIQUID SEMITRAILERS

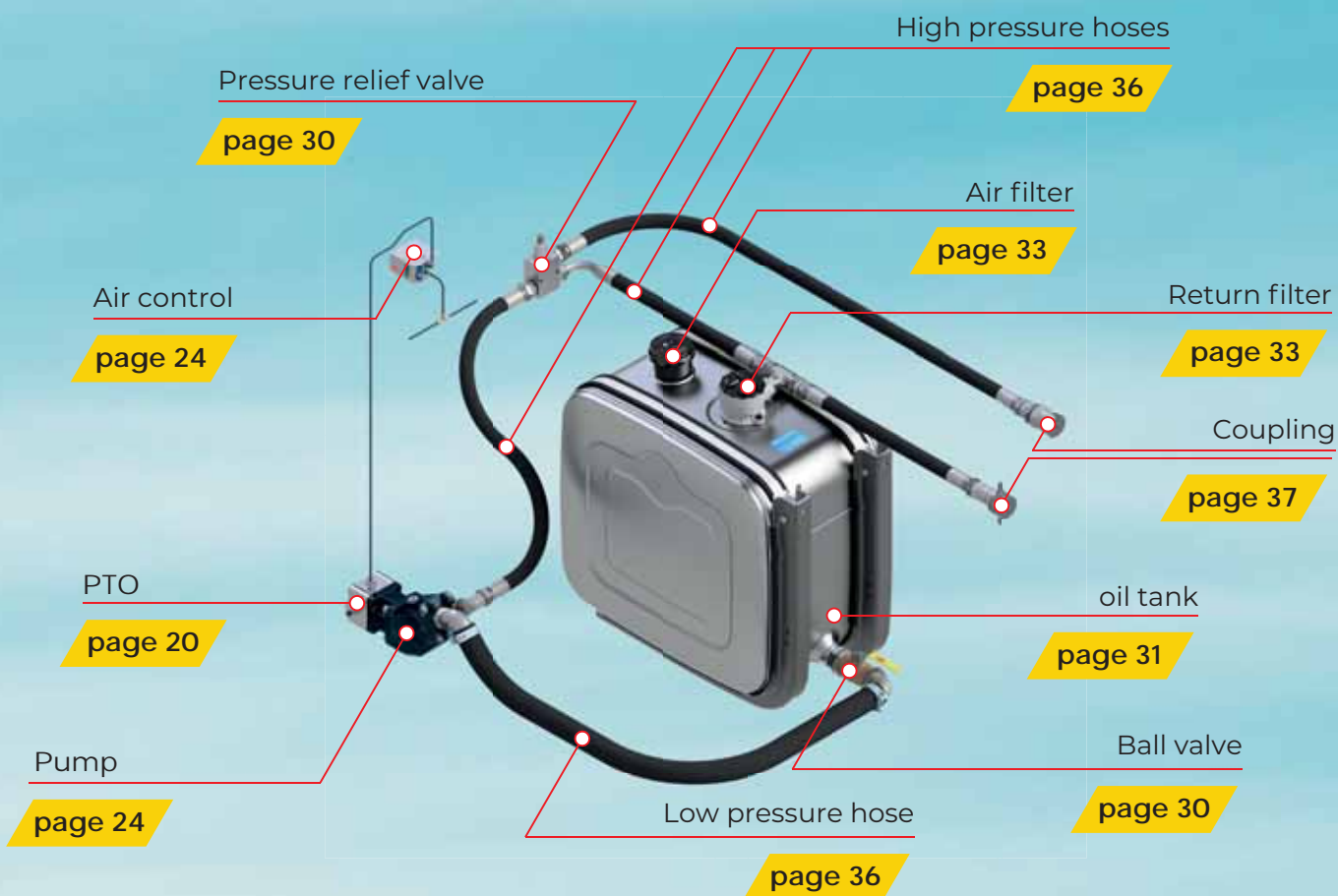
These 2-line wetkits are intended for applications such as:

- Moving floor systems
- Low bed trailers with hydraulic ramps and adjustments
- Cranes, hookloaders, skiploaders and similar
- Unloading gas and liquid tankers

Such applications demand some specific requirements such as low weight, high working pressure for longer periods of unloading, and, compact dimensions which contribute to the overall productivity of the vehicle. Hyva components used in such wetkits are designed to meet these requirements. We offer several proven solutions such as hose guides, various options for coupling locations, low return filters and other solutions useful for such applications. A wide range of gear and piston pump sizes allows us to reach the highest possible oil flow for every type of truck, gearbox and PTO. A full range of aluminium and steel oil tanks allows optimal size and oil volume at low weight.







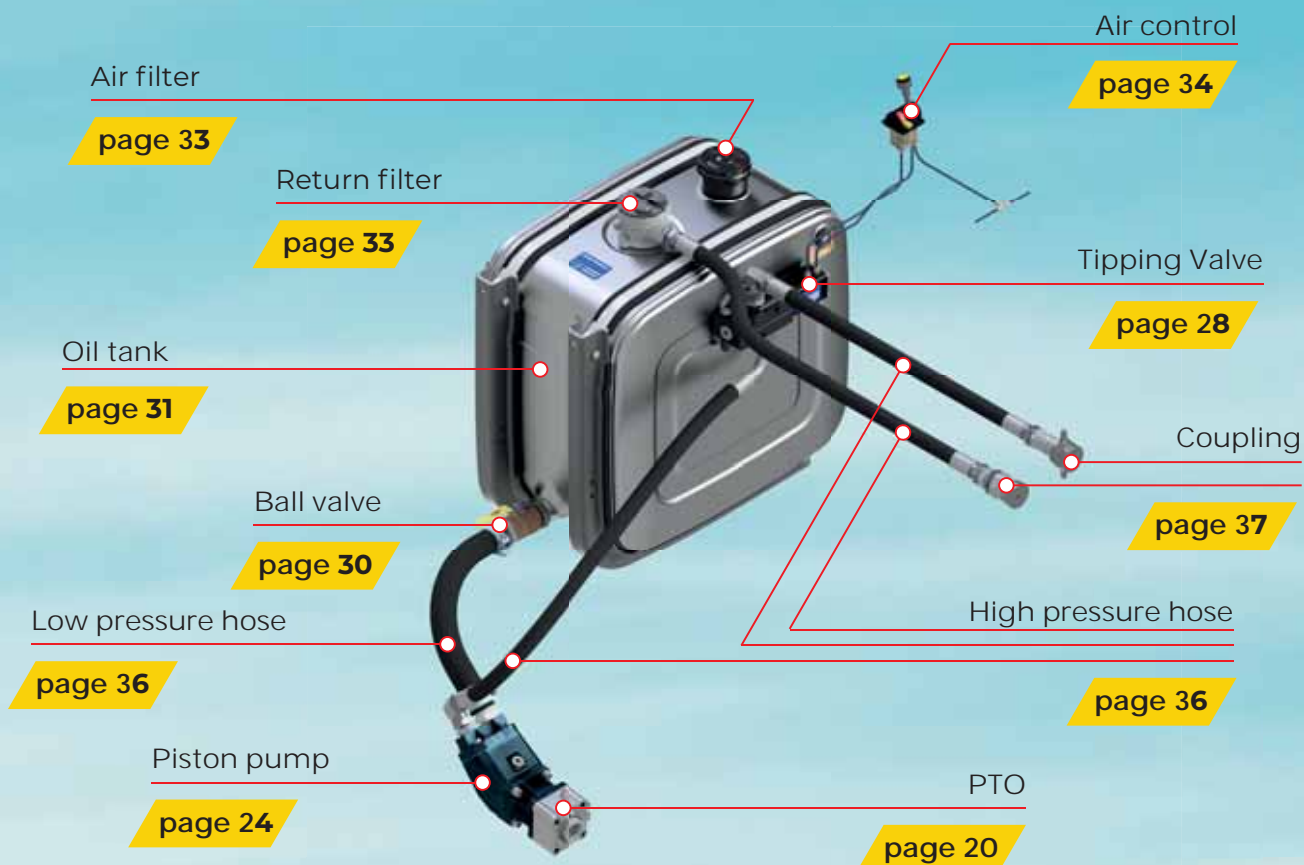
## WETKIT FOR MOVING FLOOR AND TIPPING SEMITRAILERS

This solution is suggested to customers who use their tractors with tipping and moving floor, liquid tanker semitrailers or other configurations where a 2-line hydraulic system is needed.

The working pressure on the Hyva dual pressure valve can be changed easily and safely. We can select one of several pressure combinations, the most common is 170/250 bar.

These wetkits are universal and allow interchangeability of the tractor with several semitrailers in the customer's fleet.





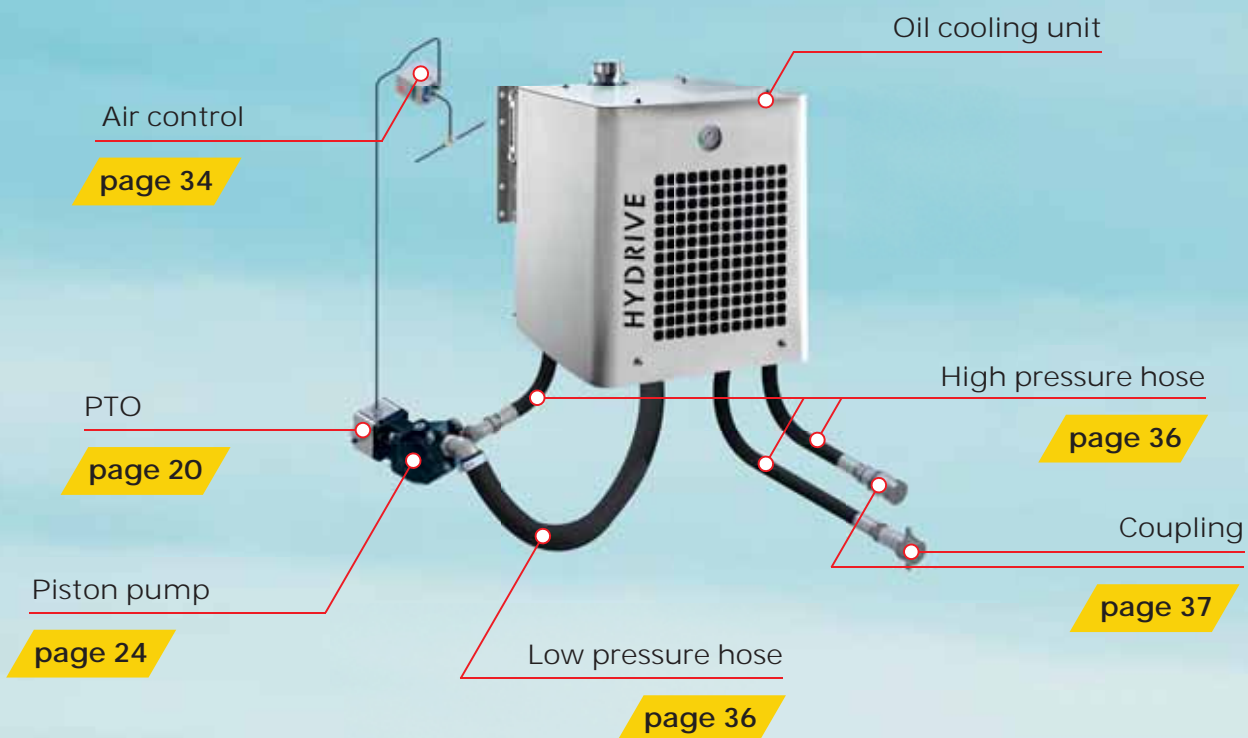
## WETKITS FOR GAS AND LIQUID SEMITRAILERS WITH OIL COOLER

This solution is highly recommended for applications where the hydraulic system is required to work for long periods of time with high pressure which can cause significant oil heating. This compact solution with integrated oil cooler is a great choice to work with hydraulic motors driving, for example, gas or liquid unloading systems or moving floor and other systems where long operation at controlled operation is needed. The cooling system is hydraulically driven and this solution is ADR standard suitable.

Its compact and efficient design requires only a very small amount of oil. Its tank contains just under 20 litres, while a traditional hydraulic wetkit without cooling needs 170 litres of oil or more. The weight difference between these solutions can reach 200kg which is critical for efficiency in modern transportation, especially for gas and liquid.

The system is made of stainless steel to cope with hard working conditions and frequent washing of trucks transporting chemical liquids.







## FRONT END CYLINDERS, HYVA ALPHA

Hyva is the world leader in the production of front end telescopic tipping cylinders for rear end tipping vehicles of all kinds.

We offer a full range of cylinder types. Our most popular cylinders are FC (cover type) and FE (eye type) and all of our cylinders are available in the newest generation of Hyva Alpha.

The most important features of Alpha cylinders are:

- Smaller dimensions and lower weight while sustaining the key work parameters
- More robust and suitable to work with 250 bar pressure
- Two duty versions – standard (STD) for construction applications and heavy duty (HD) for mining and difficult conditions. Hard chrome options for both versions
- Cast brackets in maintenance free or greased versions
- Optimized and modern design of the cylinder and brackets

### Popular FC type cylinders

Part no.	Description	Pressure [bar]	Lifting Capacity [T]	Weight [kg]	Oil Volume [L]	K [mm]
701 24 230	FC A118-3-03880-000-K0343	250	33 - 55	190	34	343
705 24 210	FC A129-3-03880-000-K0343	250	44 - 58	206	41	343
701 25 364	FC A137-4-04980-004-K1050	250	35 - 52	202	52	1050
705 25 390	FC A149-4-04660-000-K0343	250	46 - 59	230	59	343
705 25 408	FC A149-4-05180-000-K0343	250	45 - 59	250	65	343
705 26 450	FC A169-5-05830-000-K0343	250	46 - 58	282	87	343
705 26 490	FC A169-5-06230-000-K0343	250	45 - 57	295	93	343
705 26 528	FC A169-5-06480-014-K1050	250	45 - 56	292	97	1050
705 26 580	FC A169-5-07130-000-K0343	250	44 - 56	329	106	343
705 26 718	FC A169-5-08130-000-K0486	190	33 - 47	369	121	486
705 27 550	FC A191-5-06830-000-K0343	250	65 - 79	405	134	343



### Popular FE type cylinders

Part no.	Description	Pressure [bar]	Lifting capacity [T]	Weight [kg]	Oil volume [L]	K [mm]
705 44 230	FE A129-3-03880-001-K1600	250	43 - 59	142	41	1600
705 45 296	FE A149-4-04660-009-K1485	250	45 - 60	172	59	1485
705 45 360	FE A149-4-04980-001-K1530	250	45 - 60	180	63	1530
705 46 526	FE A169-5-06230-019-K1559	190	34 - 52	236	93	1559
705 46 556	FE A169-5-06830-011-K1669	170	30 - 48	257	102	1669
705 46 584	FE A169-5-07030-019-K1729	170	30 - 42	265	106	1729
705 47 602	FE A191-5-07130-011-K1732	170	43 - 61	316	139	1732



### Popular sealkits for FC/FE cylinders

Part no.	Suitable for cylinder
719 07 430K	A118-3
719 07 540K	A137-4
719 07 541K	A137-4-HD
719 08 540K	A149-4
719 07 650K	A157-5
719 07 651K	A157-5-HD
719 08 640K	A169-4
719 08 650K	A169-5
719 08 651K	A169-5-HD



### Cylinder brackets

Part no.	Description
015 09 130	Lifting bracket right FC 118/129/137/149/157/169/179
015 09 131	Lifting bracket left FC 118/129/137/149/157/169/179
015 06 777	Top bracket for FE cylinder
015 06 131	Chassis bracket FC 118/129/137/149/157/169/179



015 09 130

015 06 131

### Tipper body clamp

Part no.	Description
081 02 864T	Hyfix body clamp
148 97 167T	Hyfix bracket



081 02 864T

148 97 167T

# UNDERBODY CYLINDERS AND POWER PACK WETKITS

Hyva offers a wide range of underbody tipping cylinders, starting from lighter ULB series cylinders for vehicles up to 13T to bigger capacity cylinders from UMB series for heavier vehicles.

Both series of cylinders can be mounted with cylinder cardan cradles for use in 3-way tippers. These cylinders can work with PTO and pump wetkits and with electrical power pack systems if PTO cannot be used.

Here we present our popular cylinders. For more options please contact Hyva to ask for a customized solution for your specific application.



## Popular UMB cylinders

Part no.	Description	Lifting capacity [T]	Body length [mm]	Weight [kg]	Hose connection [inch]	ØW** [mm]	K* [mm]
714 04 203	UMB 129-3-0700-K318-45-1/2"-HC	15 - 21	2400 - 3100	46	1/2	45	318
714 04 421	UMB 129-5-1480-K192-45-1/2"-HC	6 - 17	4100 - 5400	59	1/2	45	192
714 04 537	UMB 129-5-1880-K192-45-1/2"-HC	6 - 17	4900 - 6500	67	1/2	45	192
714 04 365	UMB 129-5-1280-K192-45-1/2"-HC	6 - 17	3600 - 4900	53	1/2	45	192
714 05 291	UMB 149-4-1020-K265-50-3/4"-HC	19 - 29	3200 - 4300	62	3/4	50	265
714 05 623	UMB 149-4-2180-K265-50-3/4"-HC	20 - 32	5200 - 6900	96	3/4	50	265
714 05 421	UMB 149-5-1480-K258-50-3/4"-HC	12 - 23	4200 - 5600	69	3/4	50	258
714 05 537	UMB 149-5-1880-K258-50-3/4"-HC	11 - 23	5100 - 6700	79	3/4	50	258
714 05 709	UMB 149-5-2480-K258-50-3/4"-HC	13 - 25	5700 - 7700	95	3/4	50	258
714 05 439	UMB 149-6-1540-K245-50-3/4"-HC	6 - 17	4300 - 6000	68	3/4	50	245
714 05 681	UMB 149-6-2380-K245-50-3/4"-HC	7 - 19	5500 - 7400	89	3/4	50	245
714 06 537	UMB 169-5-1880-K265-50-3/4"-HC	18 - 28	5300 - 7000	96	3/4	50	265
714 06 439	UMB 169-6-1540-K258-50-3/4"-HC	12 - 23	4500 - 6100	79	3/4	50	265
714 06 509	UMB 169-6-1780-K258-50-3/4"-HC	12 - 23	5000 - 6700	86	3/4	50	258
714 06 852	UMB 169-6-2980-K258-50-3/4"-HC	13 - 25	6900 - 9200	119	3/4	50	258
714 07 909	UMB 191-5-3180-K270-60-3/4"-HC	29 - 40	7200 - 9700	165	3/4	60	270
714 07 511	UMB 191-6-1780-K270-60-3/4"-HC	19 - 34	5000 - 6700	107	3/4	60	270
714 07 681	UMB 191-8-2380-K278-60-3/4"-HC	7 - 22	5800 - 7600	116	3/4	60	278



### Selected ULB cylinders

Part no.	Description	Lifting capacity [T]	Body length [mm]	Weight [kg]	Hose connection [inch]	ØW** [mm]	K* [mm]
714 18 297	ULB-110-5-1040-K169-40-½"-HC	4 - 9	3000 - 4100	28	1/2	40	169
714 18 349	ULB 110-5-1240-K169-40-½"-HC	4 - 9	3400 - 4600	32	1/2	40	169
714 18 441	ULB 110-5-1540-K169-40-½"-HC	4 - 9	4000 - 5500	36	1/2	40	169

### Boltable brackets

Part no.	Description	ØW** [mm]	Weight [kg]
731 05 071	Bracket UL to bolt 77-110	40,5	1,1
731 05 073	Bracket UM to bolt 129	45,5	1,0
731 05 076	Bracket UM to bolt 149-169	50,5	1,4
731 05 079	Bracket UM to bolt 191	60,5	1,6

### Welded brackets

Part no.	Description	ØW** [mm]	Weight [kg]
731 05 035	Bracket to weld UM D50	50	1,5
731 05 036	Bracket to weld UM D60	60	2,1

### Cylinder cradles

Part no.	Description	ØW** [mm]	Weight [kg]
731 04 011	Cradle UL 110-PIN40-D40	40	8,3
731 04 021	Cradle UM 129-PIN50-D45	50	12,8
731 04 031	Cradle UM 149-PIN50-D50	50	20,4
731 04 041	Cradle UM 169-PIN50-D50	50	26,5
731 04 051	Cradle UM 191-PIN60-D60	60	38,9
731 04 023	Cradle UM 129 KOPN-bracket	50	13,8
731 04 033	Cradle UM 149 KOPN-bracket	50	26,7
731 04 043	Cradle UM 169 KOPN-bracket	50	33,0
731 04 053	Cradle UM 191 KOPN-bracket	60	45,6

\* K – Built in dimension / closed length

\*\* W – Cylinder pin diameter



Power Pack is a compact electro hydraulic unit consisting of 12V or 24V electric motor, hydraulic pump, oil tank and control valve. It is controlled with in-cab switches or outer control connected with cables. This solution is advised for tipper applications with underbody cylinders where PTO wetkit is not preferred. Power Pack kits are also often used for driving hydraulic systems on low bed trailers, silo trailers, small cranes and others.

### Power Pack system

Part no.	Description
145 53 000	Power Pack 12V, 2kW, 3.1cc, 10 L
145 53 001	Power Pack 12V, 2kW, 3.1cc, 15 L
145 53 500	Power Pack 24V, 3kW, 3.1cc, 10 L
145 53 501	Power Pack 24V, 3kW, 3.1cc, 15 L
020 70 111	Limit switch mini tipper electric NC
020 70 121	Switch panel electric TIP/LOWER
145 52 657	2 button remote control (2m) cable



For heavy tipper vehicles, with 3-way tippers, Hyva offers KRA and KRM series cylinders. Due to its unique design these cylinders are characterized by very low closed length and built in dimensions. These cylinders are delivered with heavy duty 3-way cradle with integrated knock off valve. High quality of production with hard chromed stages option guarantee long operating life.

### Selected KRM cylinders

Part no.	Description	Lifting capacity [T]	Weight [kg]	Oil volume [L]
R654 19 152	KRM 145-4-0935	25	93	10,7
R677 45 354	KRM 193-7-2085	21	216	30,4
R688 45 354	KRM 223-8-2195	30	235	39,1
R688 47 354	KRM 223-8-2435	30	246	43,2



## POWER TAKE OFF (PTO)

Power take off is a mechanical auxiliary device transferring drive from truck gearbox to hydraulic pumps, compressors and other similar units. Clutch dependant PTOs mounted on the gearbox are described by parameters such as transferred torque, ratio, rotation direction, mounting position and connection / output type (flange, shaft etc.).

Hyva offers PTOs for the majority of trucks and gearboxes for several applications.

For more information and help with PTO selection please contact your local Hyva representative.

### Power take off



### Mounting kits



### Quill shafts



## Power take off – Volvo

Gearbox type	Torque [Nm]	Rotation direction	PTO	Mounting kit	Quill shaft [mm]
VT 2412	1000	↻	021 21 5010	021 45 7000	021 31 3000 (261)
	300	↻	021 21 5022	021 46 3000	
VT 2412 + IT	1000	↻	021 21 5010	021 45 7000	021 31 3010 (297)
	300	↻	021 21 5022	021 46 3000	
AT 2612	1000	↻	021 21 5010	021 45 7000	021 31 3001 (225,3)
	300	↻	021 21 5022	021 46 3000	

## Power take off – SCANIA

Gearbox type	Torque [Nm]	Rotation direction	Rear PTO	Side PTO	Mounting kit
GR 875/905 GRS 895/905	450	↻	021 21 1076	n/d	021 46 5006
GRS 890 GRS 900 GRS 920	480	↻	021 21 1071	n/d	021 46 1000
GRSO 905	370	↻	021 21 1075	n/d	021 46 5006
GR 975-895	n/d	↻	n/d	020 90 471H	n/d
GR905-GRS905	n/d	↻	n/d	020 90 469H	n/d
GRSO 905	n/d	↻	n/d	020 90 470H	n/d

## Power take off – MERCEDES

Gearbox type	Torque [Nm]	Rotation direction	PTO	Mounting kit	Quill shaft [mm]
G 221-16	1000	↻	021 21 5010	021 45 7000	021 30 7002 (249)
	300	↻	021 21 5022	021 46 3000	
G 221-16 IT	1000	↻	021 21 5010	021 45 7000	021 30 1000 (275)
	300	↻	021 21 5022	021 46 3000	

## Power take off – ZF

Gearbox type	Torque [Nm]	Rotation direction	PTO	Mounting kit	Quill shaft [mm]
16S-1620 TD	1000	↻	021 21 5010	021 45 7000	021 31 4000 (213,5)
	300	↻	021 21 5022	021 46 3000	
16S-1621 TD+IT	1000	↻	021 21 5010	021 46 4002	021 31 4002 (248,5)
	250	↻	021 21 5022	021 41 6001	
12AS-2330 TD	1000	↻	021 21 5010	021 45 7000	021 31 4005 (248,5)
	300	↻	021 21 5022	021 46 3000	
12AS2331 TD+IT	1000	↻	021 21 5010	021 46 4004	021 31 4004 (272,5)
	300	↻	021 21 5022	021 46 4000	
16TX-1640 TD	300	↻	021 21 5022	021 46 3000	021 31 4049

## Adaptors

Part no.	Description
021 43 0005	Flange kit DIN 10 for PTO code 17/18
020 50 531H	Adaptor 4H – Flange kit DIN 10





## HYDRAULIC GEAR PUMPS

Hyva offers a wide range of hydraulic pumps for all offered wetkits and applications. Our most popular pumps are gear versions mounted on gearbox PTOs.

Gear pumps are mainly used for tipping applications on tractors or truck tippers. Due to highest quality of production and 250 bar working pressure standards these pumps are very durable even in the most demanding heavy duty applications.

The pumps are offered in several connection versions, the most popular are 3-hole and 4-hole mounting patterns (3H, 4H).

The great majority of Hyva pumps are bi-rotational. The rotation direction is determined by connection of the hoses without the need to disassemble the pump to change its rotation.

Hyva gear pumps are equipped with a unique safety system of leakage indicator to avoid internal leakages of oil from the hydraulic system to the gearbox and vice versa.

### Gear pump 4H

1 Type plate port

2 Drive shaft

3 Side port

4 Rear port

5 Connection flange 4H



### Gear pumps – 4H versions

Part no.	Description	Max working pressure [bar]	Pressure port [inch]	Suction port [inch]
145 62 005	Gear pump 035L-BI-4H-BRITE	250	3/4	3/4
145 62 010	Gear pump 052L-BI-4H5-BRITE	250	1	1
145 62 015	Gear pump 061L-BI-4H5-BRITE	250	1	1
145 71 224	Gear pump 082L-BI-4H5-2S	250	1	1
145 62 091	Gear pump 082L-BI-4H5-2R	250	1 1/4	1 1/4
145 62 325	Gear pump 082L-BI-4H	225	1	1
145 62 030	Gear pump 092L-BI-4H5-BR	250	1 1/4	1 1/4
145 62 093	Gear pump 100L-BI-4H5-2R	250	1 1/4	1 1/4
145 62 095	Gear pump 100L-BI-4H5-2S	250	1 1/4	1 1/4
145 62 036	Gear pump 113L-BI-4H5-4P	250	1 1/4	1 1/4

Part no.	Seal kit for gear pump 4H
024 60 001	Seal kit Brite BI Gear pump 035L - 061L
024 60 005	Seal kit Brite BI Gear pump 092L - 113L
024 60 007	Seal kit Brite BI Gear pump 82L - 100L
146 00 100	Seal kit Brite BI Gear pump 145 62 325
146 24 850	Gasket for ISO 4H pump



### Gear pumps – 3H versions

Part no.	Description	Max working pressure [bar]
145 63 028	Gear pump 020L-BI-3H	250
145 63 033	Gear pump 025L-BI-3H	250
145 63 043	Gear pump 032L-BI-3H	250
145 63 034	Gear pump 035L-BI-3H	250
145 63 052	Gear pump 052L-BI-3H	250
145 63 061	Gear pump 061L-BI-3H	250
145 63 082	Gear pump 082L-BI-3H	250



Part no.	Connection adaptors
0214 19 601	Connection kit PTO UNI 3H – Pump 3H 27 L
0214 19 605	Drive Kit DIN-13 Pump to UNI-3H PTO 20, 25, 32 L
0214 15 006	Adaptor PTO UNI 3H – Pump ISO 4H
0214 15 022	Adaptor 4H SE PTO UNI 3H PUMP SB
020 50 010H	PUMP CONNECTION KIT UNI-3H





## HYDRAULIC PISTON PUMPS

Piston pumps are used in more demanding hydraulic systems to drive systems such as moving floors, cranes, hook- and skiploaders, gas and liquid tankers.

Such pumps are the ideal choice for systems where high working pressure and long working time is required.

Our most popular piston pumps are bent axis 4H pumps. We offer a wide range of sizes with working pressure up to 350 bar. In addition to single flow pumps, Hyva offers a full range of twin flow pumps for scrap and timber cranes.

### Piston pump 4H

1 Type plate

2 Drive shaft

3 Connection flange 4H

4 Pressure port

3 Suction port





### Piston pumps single flow

Part no.	Description	Rotation direction	Max working pressure [bar]	Pressure port [inch]	Suction port [inch]
145 69 025	Piston pump 034L-LH-4H-BA	↻	350	3/4	1
145 69 020	Piston pump 034L-RH-4H-BA	↻		3/4	1
145 69 017	Piston pump 040L-LH-4H-BA	↻		3/4	1
145 69 016	Piston pump 040L-RH-4H-BA	↻		3/4	1
145 69 001	Piston pump 047L-LH-4H-BA	↻		3/4	1 1/4
145 69 000	Piston pump 047L-RH-4H-BA	↻		3/4	1 1/4
145 69 005	Piston pump 064L-LH-4H-BA	↻		3/4	1 1/4
145 69 004	Piston pump 064L-RH-4H-BA	↻		3/4	1 1/4
145 69 007	Piston pump 080L-LH-4H-BA	↻	250	3/4	1 1/4
145 69 006	Piston pump 080L-RH-4H-BA	↻		3/4	1 1/4
145 69 305	Piston pump 084L-LH-4H-BAHP	↻	350	1	1 1/4
145 69 300	Piston pump 084L-RH-4H-BAHP	↻		1	1 1/4
145 69 315	Piston pump 096L-LH-4H-BAHP	↻		1	1 1/4
145 69 310	Piston pump 096L-RH-4H-BAHP	↻		1	1 1/4
145 69 325	Piston pump 108L-LH-4H-BAHP	↻		1	1 1/4
145 69 320	Piston pump 108L-RH-4H-BAHP	↻		1	1 1/4
145 69 225	Piston pump 130L-LH-4H-BAHP	↻	250	1	1 1/4
145 69 223	Piston pump 130L-RH-4H-BAHP	↻		1	1 1/4

### Piston pumps twin flow

Part no.	Description	Rotation direction	Max working pressure [bar]
145 35 241	Piston pump F2-042L/042L-L-4H	↻	350
145 35 240	Piston pump F2-042L/042L-R-4H	↻	
145 35 250	Piston pump F2-053L/053L-R-4H	↻	
145 35 251	Piston pump F2-053L/053L-L-4H	↻	
145 35 244	Piston pump F2-055L/028L-R-4H	↻	
145 35 245	Piston pump F2-055L/028L-L-4H	↻	
145 35 243	Piston pump F2-070L/070L-R-4H	↻	
145 35 242	Piston pump F2-070L/070L-L-4H	↻	
145 35 270	Piston pump F2-070L/035L-R-4H	↻	
145 35 271	Piston pump F2-070L/035L-L-4H	↻	





## HYDRAULIC TIPPING VALVES, HT 1150 SERIES

HT 1150 series valves are suitable for tipping applications in systems where the maximum oil flow does not exceed 150 L/min.

It is a very good choice for standard work duty tipper trucks and smaller tipping semitrailers.

This series is designed in a unique way allowing the valve to be mounted either on the tank mounting plate or directly on the Hyva cylinder SAE port.

If mounted directly on the cylinder, it also acts as a hose burst valve in the event of high pressure hose failure.

The maximum working pressure is secured by a fixed cartridge design, characteristic of Hyva HT valves.

### Hydraulic tipping valves HT 1150 series

- |  |  |
|--|--|
| <b>1</b> Pneumatic connection (TIP) 6 mm   | <b>4</b> Pressure gauge connection port  |
| <b>2</b> Pneumatic connection (LOWER) 6 mm | <b>5</b> Tank connection                 |
| <b>3</b> Pump connection                   | <b>6</b> Pressure relief cartridge       |
|  | <b>7</b> Cylinder connection SAE         |
|  | <b>8</b> Lowering speed adjustment screw |



## Tipping valves HT 1150 series

Part no.	Description	Working pressure [bar]
		Max.
147 67 213	Tipping valve HT-TNK/SAE-1150-135-P3/4"	135
147 67 215	Tipping valve HT-TNK/SAE-1150-150-P3/4"	150
147 67 217	Tipping valve HT-TNK/SAE-1150-170-P3/4"	170
147 67 219	Tipping valve HT-TNK/SAE-1150-190-P3/4"	190
147 67 222	Tipping valve HT-TNK/SAE-1150-220-P3/4"	220
147 67 225	Tipping valve HT-TNK/SAE-1150-250-P3/4"	250
147 67 263	Tipping valve HT-TNK/SAE-1150-135-P1"	135
147 67 265	Tipping valve HT-TNK/SAE-1150-150-P1"	150
147 67 267	Tipping valve HT-TNK/SAE-1150-170-P1"	170
147 67 269	Tipping valve HT-TNK/SAE-1150-190-P1"	190
147 67 272	Tipping valve HT-TNK/SAE-1150-220-P1"	220
147 67 275	Tipping valve HT-TNK/SAE-1150-250-P1"	250

## Pressure relief cartridges

Part no.	Max working pressure [bar]
147 72 135	135
147 72 150	150
147 72 170	170
147 72 190	190
147 72 200	200
147 72 220	220
147 72 250	250
147 72 280	280
147 72 350	350



## Mounting parts

Part no.	Description
148 44 010	Seal kit PT/JT/HT valve
147 35 208	Mounting kit HT1220 valve on chassis*

\* supplied separately





## HYDRAULIC TIPPING VALVES, HT 1220 SERIES

HT 1220 series valves are high performance valves suitable for the most demanding tipping applications with maximum oil flow of 220 L/min.

It is a very good choice for heavy duty and high speed tipping systems.

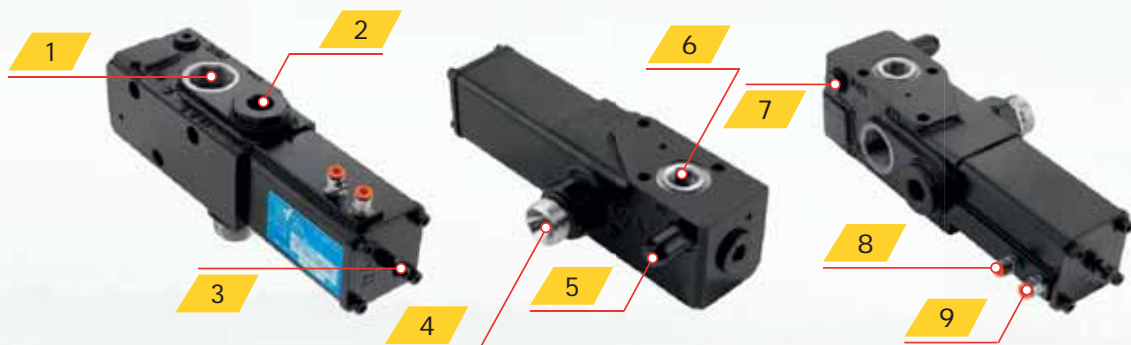
Hyva offers these valves in two mounting options, either on the tank mounting plate or directly on the Hyva cylinder SAE port.

If mounted directly on the cylinder it also acts as a hose burst valve in case of high pressure hose failure.

The maximum working pressure is secured by a fixed cartridge design, characteristic of Hyva HT valves. Its design guarantees the highest level of safety to avoid high pressure peaks during heavy duty operation.

### Hydraulic tipping valves HT 1220 series

- |  |   |
|--|---|
| <b>1</b> Cylinder connection               | <b>6</b> Tank connection                  |
| <b>2</b> Additional tank return connection | <b>7</b> Pressure gauge connection port   |
| <b>3</b> Lowering speed adjustment screw   | <b>8</b> Pneumatic connection (LOWER) 6mm |
| <b>4</b> Pump connection                   | <b>9</b> Pneumatic connection (TIP) 6mm   |
| <b>5</b> Pressure relief cartridge         |   |



### Tipping valves HT 1220 series

Part no.	Description	Working pressure [bar]
		Max.
147 67 111	Tipping valve HT-TNK-1220-110-P1"	110
147 67 113	Tipping valve HT-TNK-1220-135-P1"	135
147 67 115	Tipping valve HT-TNK-1220-150-P1"	150
147 67 117	Tipping valve HT-TNK-1220-170-P1"	170
147 67 119	Tipping valve HT-TNK-1220-190-P1"	190
147 67 122	Tipping valve HT-TNK-1220-220-P1"	220
147 67 125	Tipping valve HT-TNK-1220-250-P1"	250
147 67 128	Tipping valve HT-TNK-1220-280-P1"	280
147 67 135	Tipping valve HT-TNK-1220-350-P1"	350

### Dual pressure tipping valves HT 2220 series

Part no.	Description	Working pressure [bar]*	
		LP	HP
147 67 172	Tipping valve HT-TNK-2220-170-220-P1"	170	220
147 67 175	Tipping valve HT-TNK-2220-170-250-P1"	170	250
147 67 192	Tipping valve HT-TNK-2220-190-220-P1"	190	220
147 67 195	Tipping valve HT-TNK-2220-190-250-P1"	190	250

\* Maximum working pressure is set by turning a lever (manually or pneumatically) into HP (Higher Pressure) or LP (Lower Pressure) option.

### Dual pressure tipping valves HT 2220 series

- |  |   |
|--|---|
| <b>1</b> Pneumatic connection (TIP)<br>6mm   | <b>6</b> Pump connection                  |
| <b>2</b> Pneumatic connection (LOWER)<br>6mm | <b>7</b> Tank connection                  |
| <b>3</b> Additional tank return connection   | <b>8</b> Pressure relief cartridge        |
| <b>4</b> Cylinder connection                 | <b>9</b> Pressure relief cartridge        |
| <b>5</b> LP/HP pressure selector             | <b>10</b> Pressure gauge connection port  |
|  | <b>11</b> Lowering speed adjustment screw |



## OTHER VALVES

Apart from tipping valves, Hyva also offers a range of other valves which are used in several wetkit types. These are pressure relief valves, knock off valves, shut off valves and others used for tipping, moving floor, two line and other hydraulic systems.

### Pressure relief valves

Part no.	Description	Connections [inch]	Max. working pressure [bar]	Oil flow [L/min]
013 19 880	Pressure relief valve adj. (alu)	3/4"	50-210	100
013 19 885	Pressure relief valve adj. (steel)	3/4"	180-350	100
013 19 890	Pressure relief valve adj. (steel)	1"	180-350	100

### Other valves

Part no	Description	Connections [inch]	Max. working pressure [bar]	Oil flow [L/min]
021 418 011	Diverter valve manual-3/3	3/4"	400	110
147 67 620	Tipping valve pneumatic 80L	3/8" / 3/4" / 1/2"	300	80

### Knock off valves

Part no.	Description	Connections	Max. working pressure [bar]
147 20 171	Knock-off valve 2/2 60L normally open	3/8"	350
147 20 211	Knock-off valve 2/2 120L normally open	3/4"	350
147 00 506	Knock-off valve pneumatic with support	6 mm	
147 00 575	Knock-off valve pneumatic Heavy Duty incl. MK	6 mm	

### Ball valves

Part no.	Description	Connection [inch]
147 80 980	Ball valve 1 1/2" BSP LP lever operated	1 1/2" BSP
147 80 981	Ball valve 1 1/2" BSPOT+NUT - 1 1/2" BSP	1 1/2" BSP

#### Pressure relief valves



#### Diverter valves



#### Knock off valves



#### Ball valves



# OIL TANKS

Hyva offers a complete range of oil tanks manufactured from the highest quality materials – steel and aluminium. We offer several mounting possibilities – behind the cabin, on the side of the vehicle, in the cylinder cradle and others. All of our tanks are compatible with Hyva air breathers and return oil filters. Hyva HT 1150 and 1220 series tipping valves can be mounted either on mounting plates or directly on the return filter. The tanks are optimized for size, weight and working volume to deliver maximum efficiency in the hardest working conditions.

## Side mounted tanks for mounting on truck frame (SM)

	Part no.	Description	Dimensions (L x H x W) [mm]
SM ALPHA Steel Single support	140 17 246	Tank kit SM – 132L/110L-MP-MR with support	706 x 636 x 330
SM ALPHA Steel Double support	140 17 254	Oil tank SM – 155L/130L-MP-MR	706 x 636 x 380
	140 17 258	Oil tank SM – 179L/150L-MP-MR	706 x 636 x 440
	140 17 262	Oil tank SM – 201L/170L-MP-MR	706 x 636 x 495
	140 17 266	Oil tank SM – 236L/200L-MP-MR	706 x 636 x 580

	Part no.	Description	Dimensions (L x H x W) [mm]
SM ALPHA Aluminium Single support	140 18 246	Tank kit SM – 132L/110L-AL-MP-MR with support	706 x 636 x 330
	140 18 292	Tank kit SM – 132L/112L-AL-MP with support	706 x 666 x 330
	140 18 293	Tank kit SM – 132L/112L-AL-MP2 with support	706 x 666 x 340
SM ALPHA Aluminium Double support	140 18 270	Oil tank SM – 155L/130L-AL-MP-MR	706 x 636 x 380
	140 18 272	Oil tank SM – 179L/150L-AL-MP-MR	706 x 636 x 440
	140 18 274	Oil tank SM – 201L/170L-AL-MP-MR	706 x 636 x 495
	140 18 276	Oil tank SM – 236L/200L-AL-MP-MR	706 x 636 x 580

	Part no.	Description
SM tanks Mounting kits	140 20 167	Support kit oil tank SM 3H
Part no. for SM mounting kits	140 20 320	Support bracket 706x636 1H + rubber
	140 20 321	Support bracket 706x636 3H + rubber
	140 20 435	Rubber for SM tank support 140 20 320 (706x636)
	140 20 308	Strap + Rubber SM tank 706x636
	140 20 425	Rubber for strap SM tank 706x636 L=1250



### Tanks mounted on cylinder cradle (CM)

	Part no.	Description	Dimensions (L x H x W) [mm]
CM ALPHA steel	140 16 500	Oil tank CM-066L/047L-039L-MF	500 x 525 x 280
	140 16 505	Oil tank CM-083L/059L-048L-MF	620 x 525 x 280
	140 16 510	Oil tank CM-97L/069L-057L-MF	660 x 525 x 280
	140 16 520	Oil tank CM-108L/086L-078L-069L-MF	620 x 700 x 280
CM ALPHA mounting kits	140 21 013	Support kit for CM tank 140 16 500, 505 and 510	
	140 21 014	Support kit for CM tank 140 16 520	

### Tanks mounted behind truck cabin (RM)

	Part no.	Description	Dimensions (W x H x L) [mm]
RM tanks steel	140 15 240	Oil tank RM-139L/117L-MP	311 x 674 x 770
	140 15 280	Oil tank RM-195L/165L-MP	311 x 674 x 1070
	140 15 265	Oil tank RM-214L/181L-MP	311 x 674 x 1170
	140 15 300	Oil tank RM-252L/213L-MP	311 x 674 x 1370
RM tanks ALPHA	140 15 050	Oil tank RM-240L/198L-179L-159L-MF	284 x 700 x 1336
	140 15 070	Oil tank RM-240L/198L-179L-159L-AL-MF	284 x 700 x 1336
RM tanks Mounting kits	140 20 010	Strap 1500 x 40MM	
	140 20 020	Rubber 1440 x 40MM	
	142 21 530	Mounting profile RM tank	
	142 21 582	Rubber for RM tank mounting profile	
	081 01 078	Vibration damper assembly	
081 01 050	Rubber block for oil tank		





## Other components

Part no.	Description
081 02 121	1" Level spy eye
081 02 116	Filler/breather assembly complete
081 02 117	Filter element to suit 081 02 116
147 80 303	Tank return filter house kit 350mm
147 80 306	Tank return filter house, no pipe sc no click
148 95 919	Tank return filter plate kit 462mm
148 95 921	Tank return filter plate kit 662mm
148 96 991A	Return filter element 25mu for 147 80 306



## AIR CONTROLS

Hyva offers a wide range of configurations in air controls for tipping valves, PTOs and other related components with air pressure from 5 to 12 bar. Our options include spring return levers, fixed position options, automatic PTO disengagement and several others. Hyva air controls are proportional on lowering function for maximum precision and safety.

### PTO and tipping valve control

Part no.	Tipping position fixed	Auto disengagement of PTO
147 50 644H	YES	NO
147 50 646H	NO	NO
147 50 650H	YES	YES
147 50 652H	NO	YES
147 50 665H	YES	-
147 50 667H	NO	-

Part no.	Description
147 51 082H	TIP-PTO control-AIR-TF/LF-PNL
147 50 119K	Air tube kit PTO/Valve control - 6mm/25m
147 52 532H	Support Tip control 147506-serie plastic
147 52 535H	Fixing kit support international



# MULTI SECTIONAL TIP CONTROL

Multi-sectional controls are used to control the tipping cylinder and a number of additional functions, such as opening of the rear door, sheeting systems, side boards and others. Hyva can offer sets of controllers that can be customised to the needs of a given application and the required number of control sections.

Part no.	Description	Pos.
147 50 430	Tip control flat model MS-AIR-TF/LF	1
147 50 440	Tip control flat model MS-AIR-TS/LF	1
147 50 455	Tip control flat model-AIR-3/2 button	2
147 50 460	Tip control flat model-AIR 4/3 button	3

Part no.	Description
147 50 511	Mounting kit 1 section flat model
147 50 512	Mounting kit 2 sections flat model
147 50 513	Mounting kit 3 sections flat model



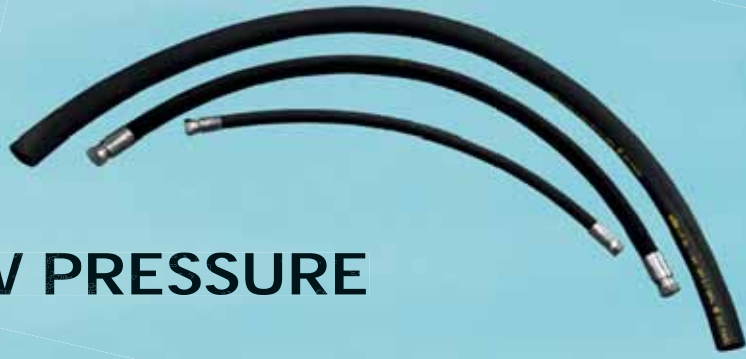
1



2



3



## HIGH AND LOW PRESSURE HOSES

Hyva offers a full range of high pressure and low pressure (suction) hoses in several diameters, lengths and coupling types. Our pressure hoses are high quality, factory made products suitable to work with Hyva Alpha standards of 250 bar working pressure. Below our most popular items are presented.

### Low pressure suction hoses

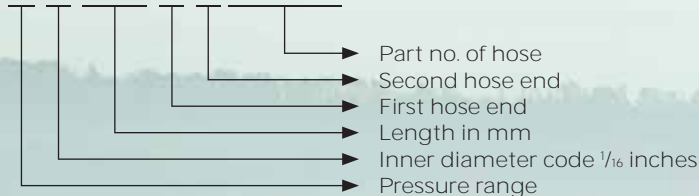
Hoses for connecting oil tank and pump

Part no.	Description
147 95 120	Hose 1 $\frac{3}{4}$ "-LP-28-02000
147 95 853	Hose 2"-LP-32-02000
147 95 103	Hose 1 $\frac{3}{4}$ "-LP-28-MB
147 96 600	Hose clip for LP28 reinforced
092 23 001	Hose fixing P-clip D=61 mm (LP28)
147 96 612	Hose clip LP32 Heavy Duty 60-63 mm

### High pressure hoses

Part no.	Description	Part no.	Description
147 89 483	Hose 1/2"-HP-08-00700-00-00 310 bar	147 90 087	Hose 3/4"-HP-12-03500-00-00 280 bar
147 89 486	Hose 1/2"-HP-08-01000-00-00 310 bar	147 90 075	Hose 3/4"-HP-12-04000-00-00 280 bar
147 89 504	Hose 1/2"-HP-08-01500-00-00 310 bar	147 90 707	Hose 1"-HP-16-00700-00-00 250 bar
147 89 510	Hose 1/2"-HP-08-02000-00-00 310 bar	147 90 710	Hose 1"-HP-16-01000-00-00 250 bar
147 89 530	Hose 1/2"-HP-08-02500-00-00 310 bar	147 90 712	Hose 1"-HP-16-01200-00-00 250 bar
147 89 549	Hose 1/2"-HP-08-03000-00-00 310 bar	147 90 715	Hose 1"-HP-16-01500-00-00 250 bar
147 89 553	Hose 1/2"-HP-08-03500-00-00 310 bar	147 90 720	Hose 1"-HP-16-02000-00-00 250 bar
147 90 026	Hose 3/4"-HP-12-01000-00-00 280 bar	147 90 725	Hose 1"-HP-16-02500-00-00 250 bar
147 90 002	Hose 3/4"-HP-12-01200-00-00 280 bar	147 90 730	Hose 1"-HP-16-03000-00-00 250 bar
147 90 038	Hose 3/4"-HP-12-01500-00-00 280 bar	147 90 735	Hose 1"-HP-16-03500-00-00 250 bar
147 90 040	Hose 3/4"-HP-12-02000-00-00 280 bar	147 90 740	Hose 1"-HP-16-04000-00-00 250 bar
147 90 051	Hose 3/4"-HP-12-02500-00-00 280 bar	147 90 745	Hose 1"-HP-16-04500-00-00 250 bar
147 90 063	Hose 3/4"-HP-12-03000-00-00 280 bar	147 90 750	Hose 1"-HP-16-05000-00-00 250 bar

HP 08-00700-00-00 147 89 483



## QUICK RELEASE COUPLINGS

Hyva offers quick release couplings for the easy and safe connecting and disconnecting of hydraulic hoses. The most common application is the connection between tractor unit and semitrailer.

Our standard type is a screwed coupling which is safe and robust for heavy duty working conditions. High quality of design and production ensure long and safe operation with high pressure Hyva Alpha systems.



### Screwed couplings

Part no.	Description
013 32 600	Quick Release coupling DN16 3/4" female
013 31 605	Quick Release coupling DN16 3/4"-1 1/4" male
013 32 610	Quick Release dust cap 3/4" for 013 31 605
013 32 625	QR coupling DN25 1" screw-on female
013 32 630	QR coupling DN25 1" screw-on male
013 32 635	Quick Release dust cap 1" for 013 31 630
013 32 500	Quick release mounting plate DN16 W1 3/4"
013 32 569	Quick release mounting plate DN20 W2 1/8"

## BONDED SEALS

Hyva bonded seals are used for several connections within Hyva hydraulic systems. Very often these underestimated parts are critical parts to ensure leakage free operation of heavy duty systems. Hyva offers high quality bonded seals, consisting of steel and rubber ring, which are suitable for high pressures and temperatures.

### Bonded seals

Part no.	Size	Part no.	Size
012 06 849	5/8"	01206801	1/8"
012 06 898	1 1/2"	01206850	3/4"
012 06 874	1 1/4"	01206825	3/8"
013 13 848	1"	01206862	7/8"
012 06 813	1/4"	01206837	1/2"



## LOW PRESSURE ADAPTORS

Low pressure adaptors and pillars are used in the suction line between oil tank and pump either by threaded connections or by hose clamps.

### Straight adaptors

Part no.	Description	D1 [inch]	D4 [mm]
145 00 589	Hose pillar LP 20 - 00 - 1" BSPOT	1	32
147 99 000A	Hose pillar LP 28 - 00 - 1" BSPOT	1	44
147 99 005A	Hose pillar LP 28 - 00 - 1 1/4" BSPOT	1 1/4	44
147 99 015A	Hose pillar LP 28 - 00 - 1 1/2" BSPOT	1 1/2	44
145 35 328	Hose pillar LP 32 - 00 - 1 1/4" BSPOT	1 1/4	51
145 00 492	Hose pillar LP 32 - 00 - 1 1/2" BSPOT	1 1/2	51

### 90 degree adaptors

Part no.	Description	D1 [inch]	D4 [mm]
147 99 020A	Hose pillar LP 28 - 90 - 1" BSPOT	1	44
147 99 025A	Hose pillar LP 28 - 90 - 1 1/4" BSPOT	1 1/4	44
147 99 050A	Hose pillar LP 28 - 90 - 1 1/2" BSPOT	1 1/2	44

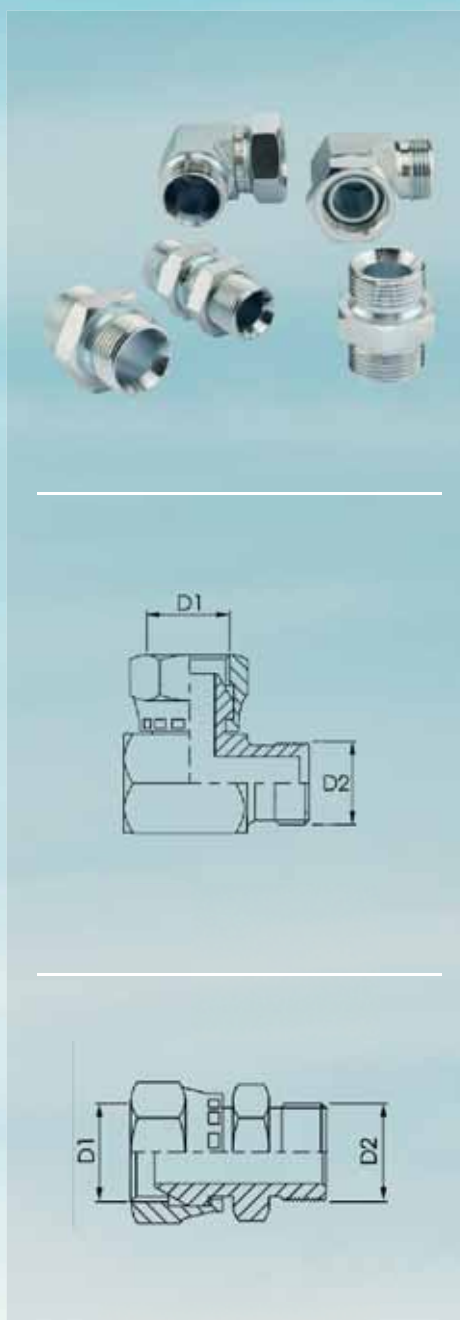


# HIGH PRESSURE ADAPTORS

Hyva high pressure adaptors are critical parts used for all possible hydraulic system installations of mobile hydraulics. The quality of these parts is critical for safe, leakage free systems and long life operation of our systems in the most demanding working conditions.

## Straight adaptor

Part no.	D1 [inch]	D2 [inch]
013 17 802	1/8	1/4
147 99 300	1/4	1/4
013 17 506	1/4	3/8
013 17 704	1/4	1/2
013 17 690	3/8	3/8
013 17 805	3/8	1/2
013 17 706	3/8	3/4
013 17 714	1/2	3/4
013 17 702	5/8	3/4
012 22 661	3/4	3/4
147 99 080	3/4	1
145 00 565	1	1 1/4
013 17 933	1	1
012 22 107	1	1 1/4
145 00 577	1	1 1/2



## 90 degree swivel adaptor

Part no.	D1 [inch]	D2 [inch]
013 17 975	1 1/4	1 1/4
013 17 971	1/2	1/2
013 17 969	3/4	3/4
147 99 054	1	3/4
013 17 982	1	1

## Straight swivel adaptor

Part no.	D1 [inch]	D2 [inch]
012 22 909	3/4	3/4
012 23 677	1	3/4
147 99 108	1	1

# INTERESTING MOUNTING EXAMPLES

Several interesting examples of mounting options are available with Hyva wet kits. These options allow mounting of the system in the space available, in several demanding positions and applications. For every customized request Hyva can offer a competitive and high quality solution.



**Oil tank behind cabin on 4 axle tractor unit**



**Mounting bracket for quick release couplings**



**Hose swivel arm**



**Quick release couplings in the front of the tractor**



Quick release couplings in the rear of the tractor



Tipping valve mounted on the return filter



SM tank with hose guide arm



Low RM tank



## NOTES

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---



130 countries  
+3,000 employees  
25,000 customers  
37 subsidiaries  
12 production facilities



Hyva is a leading provider of innovative and highly efficient transport solutions for commercial vehicles used in transport, construction, mining, materials handling and environmental service industries.

Founded in 1979 in the Netherlands, the company has a global presence with 37 fully owned subsidiaries, extraordinary service coverage and 12 manufacturing facilities in Brazil, China, Europe and India.

For more information on Hyva, please visit [www.hyva.com](http://www.hyva.com)

or follow us on:



**Hyva Holding B.V.**  
Antonie van Leeuwenhoekweg 37  
2408 AK Alphen aan den Rijn  
The Netherlands  
Telephone: +31 (0)172 - 42 35 55  
Telefax: +31 (0)172 - 42 08 80  
[info@hyva.com](mailto:info@hyva.com)  
[www.hyva.com](http://www.hyva.com)



DEALER STAMP