



## Mechanical oil level regulators and adapters

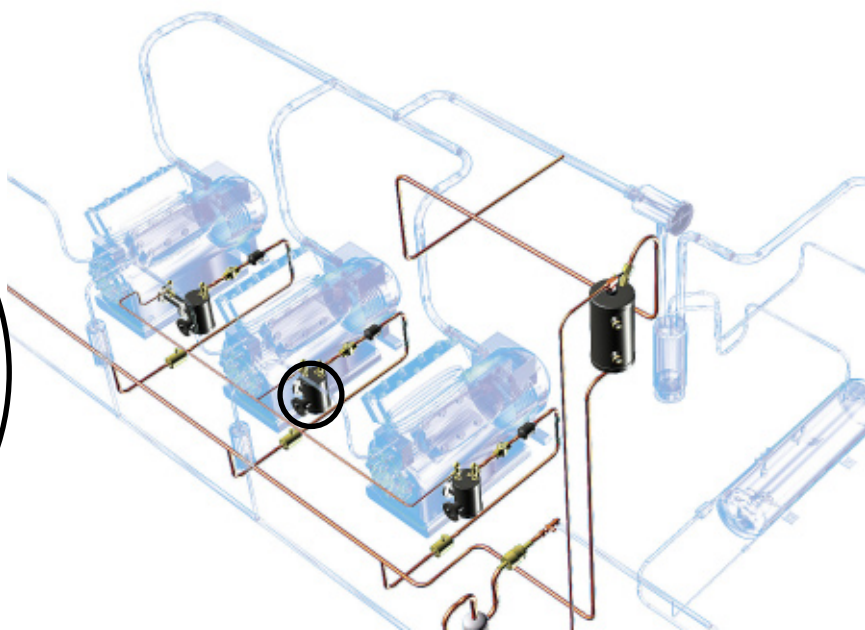
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### → LEVOIL®

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#### ■ Applications

- Monitoring and automatic maintaining of the optimal oil level in each compressor sump of multi-compressor refrigerating and air conditioning installations.



#### ■ Functional features

- Products are compatible with HFCs, HCFCs, CFCs, CO<sub>2</sub> (Subcritical) as well as with their associated oils and additives. Products are designed for use of non-hazardous refrigerants from group 2 of PED 97/23/EC.
- Product classification in CE categories is performed using the PED 97/23/EC table corresponding to a volume-based selection.
- The oil level regulators are entirely made of steel.
- Two connection flanges at 90° on the standard oil level regulator body allow for one, fastening on the compressor boss and for the other, the connection of the oil sight glass originally fixed on the compressor.
- Detail of items supplied with the oil level regulators, pages 51.3.

#### ■ CARLY advantages

- Optimized range of oil level regulators equipped with two 7 holes universal flanges in order to be mounted on most of compressors available on the market.
- Resistance to higher pressure and limited foaming phenomenon inside the regulator due to the spherical design.
- Internal valve/needle/float oil return system, efficient and reliable. Minimizes the bad effect of foaming and ensures a good stability of the oil level.
- The density and viscosity of oils have nearly no effect on the regulator LEVOIL®.
- Due to the large pressure differential (1bar to 4,5bar), the basic model LEVOIL 23 is suitable for mounting on 2 levels cascade packs.
- Installation possible on the right or left side of the compressor, thanks to the centered inlet oil connection.
- Inlet oil connection inclined backwards, in order to avoid the cylinder heads of the compressor.
- Small volume of oil retention in the lower part of the LEVOIL®.
- Wide range of adapters allowing connection of the LEVOIL® on most of the compressors available on the market.
- GOST certified products.



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### ■ Functional features

- The systematic use of LEVOIL® oil level regulators:
  - guarantees oil level regulation in each compressor sump, preventing its deterioration and its exceptional wear.
  - does not require any additional electro-mechanical or electronic device for oil level check.
  - makes possible the installation of compressors at different heights, or at different oil levels.
  - allows independent operation of each compressor mounted in parallel.
  - allows parallel mounting on a same installation of compressors of different dimensional features or refrigerating capacities.
- facilitates the visualisation of oil levels thanks to two possibilities for mounting (right/left) on the compressor for the standard models with seven-hole flanges.

### ■ Recommendations

- \* The oil level regulators must be bolted on the compressor bosses instead of the original oil level sight glass.
- \* The regulator must be fit in using the small elements of the installation kit delivered together (see page 51.3). The four-lobed gasket has to be used when connecting a sight glass or an adapter on the regulator (flange with grooves): see page 51.10.
- \* If the compressor sump does not provide a connection matching the flange of the standard oil level regulator, use a HCYN 1A adapter (see pages 51.6 to 51.9)
- \* Mounting of oil level regulator must only be performed with the oil feed connection located in the higher part.
- \* The oil receiver enables the feeding of oil level regulators, and it must be mounted two meters minimum above the oil level regulators; if it cannot be, it is necessary to mount a HCYCT – non adjustable – or HCYCTR – adjustable – differential valve on the oil receiver and to connect it to the suction line, in order to maintain overpressure in the receiver, ensuring:
  - continuous and regular oil feed of regulators
  - limitation of the pressure in the oil return line in the oil return line of the feeding of the oil level regulators, whose excess would hinder proper operation of regulators and be a source of incidents for the installation.
- \* Imperatively provide for an oil filter (HCYF or HCYBF or HYDROIL if polyol-ester oils, see chapters 45 and 46) upstream of the oil level regulators in order to stop contaminants from disturbing their good operation.
- \* In order to perform perfect air-tightness with the connections to screw without gasket, it is recommended to use a thread sealing product.
- \* For the adjustable oil level regulators models:
  - turn the nut clockwise, to lower the oil level
  - turn the nut counter clockwise, to raise the oil level.
- \* In some cases, the vibrations generated by the compressors can disturb the oil level regulators operation; it is then necessary to eliminate causes of vibration.
- \* For correct operation, it is necessary to ensure, after mounting, that the oil level regulators are perfectly horizontal.
- \* Check that the oil quality is not degrading with time and make regularly some oil acidity tests (TESTOIL-MAS and TESTOIL-POE: refer to chapter 91).
- \* Ensure that the pressure differential between the oil feeding and the compressor crankcase remains within the range recommended page 51.3.
- \* To select the optimal oil level, refer to the recommendations given by the compressor manufacturers; most of the time, this reference level is situated between the quarter and the half-sight glass.
- \* During the selection process, take into account the oil return line pressure drops (filters, low sections, complex shapes), that can vary in time (filter blocking).
- \* In the case of multi-compressor systems, it is recommended to use oil level regulators with a pressure equalization connection (LEVOIL 33 RE models), in order to get all the compressor sumps at the same pressure.
- \* Replace the different gaskets each time the regulators or the sight glasses are taken out (see page 51.10).
- \* Replace the oil filter after each intervention on the oil system (change of oil, component replacement, etc)
- \* General assembly precautions: refer to chapter 115.









## Mechanical oil level regulators and adapters

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#### ■ Technical features

CARLY references	Type of connection	Pressure range (bar)	Oil inlet connection To screw SAE (inch)	Pressure equalization connection To screw SAE (inch)	Adjusted level	Installation kit (delivered with the product)
LEVOIL 22 	7 holes Ø 6,5mm	1 - 4,5	1/4"	/	Set ½ glass	4 screw HM6-30 4 nuts M6 4 washers Diam. 6 2 O-ring 1 quadring 1 fitting wedge for 4 holes sight glass
LEVOIL 23 	7 holes Ø 6,5mm	1 - 4,5	3/8"	/	Set ½ glass	4 screw HM6-30 4 nuts M6 4 washers Diam. 6 2 O-ring 1 quadring 1 fitting wedge for 4 holes sight glass
LEVOIL 23 BO 	1" 1/8 - 18 UNEF	1 - 4,5	3/8"	/	Set ½ glass	1 sight glass 1" 1/4 - 12 UNF 2 PTFE gaskets 1 1" 1/8 - 18 UNEF adapter
LEVOIL 23 SC 	3/4" NPTF	1 - 4,5	3/8"	/	Set ½ glass	1 sight glass 1" 1/4 - 12 UNF 2 PTFE gaskets 1 3/4" NPT adapter
LEVOIL 23 SU 	1" 1/4 - 12 UNF	1 - 4,5	3/8"	/	Set ½ glass	2 PTFE gaskets
LEVOIL 33 RE 	7 holes Ø 6,5mm	1 - 6,5	3/8"	1/4"	Adjustable between ¼ and ¾ - glass	4 screw HM6-30 4 nuts M6 4 washers Diam. 6 2 O-ring 1 quadring 1 fitting wedge for 4 holes sight glass

See tables page 51-8 and 51-9 for regulators and compressors association.



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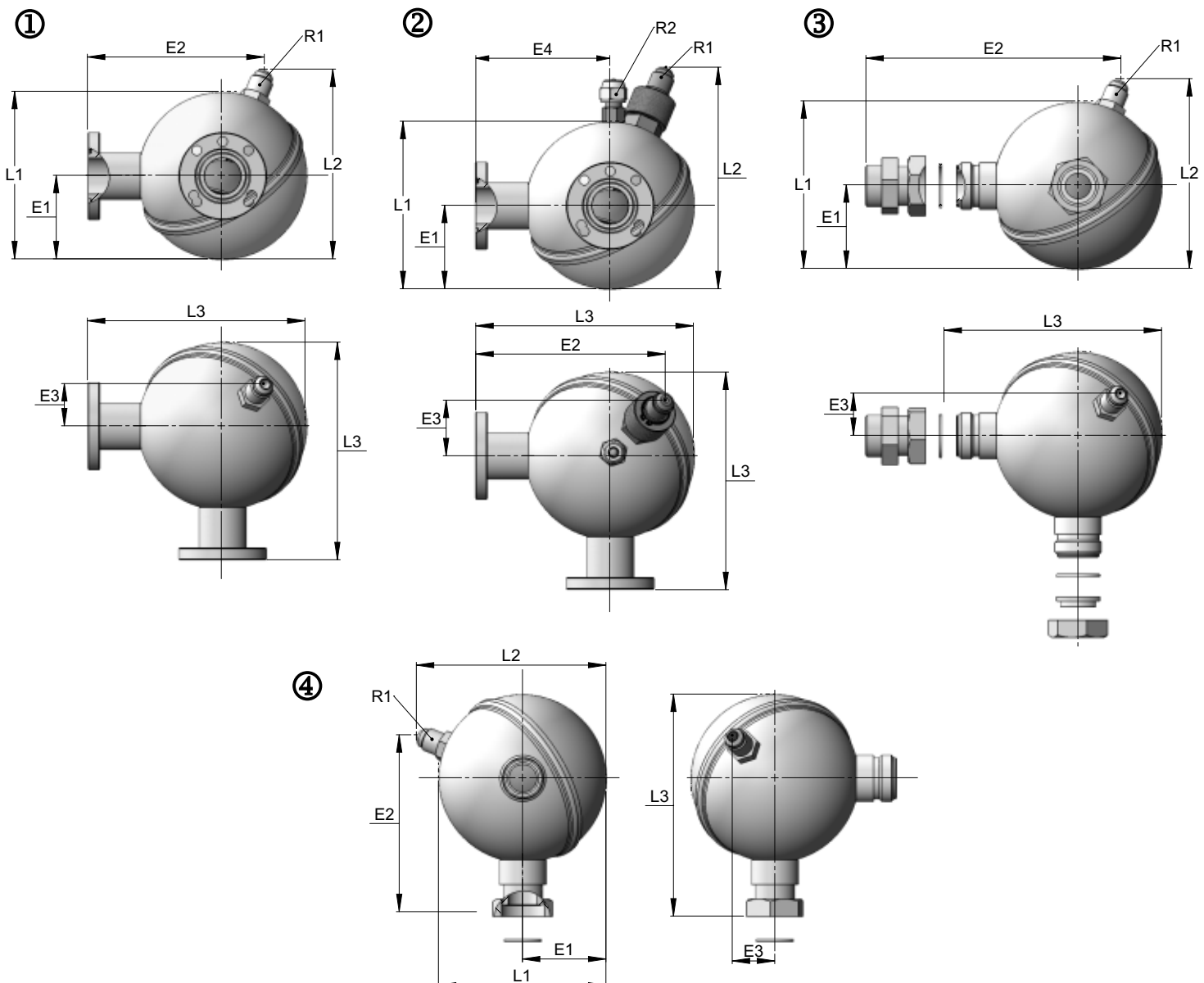
# Mechanical oil level regulators and adapters

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### ■ Technical features

CARLY references	Drawing Nb	Dimensions (mm)							Connections to flare SAE (inch)	
		L1	L2	L3	E1	E2	E3	E4	R1	R2
LEVOIL 22	1	115	130	148	58	119	29	/	1/4	/
LEVOIL 23	1	115	130	148	58	119	29	/	3/8	/
LEVOIL 23 BO	3	115	130	204	58	174	29	/	3/8	/
LEVOIL 23 SC	3	115	130	204	58	174	29	/	3/8	/
LEVOIL 23 SU	4	115	130	152	58	121	29	/	3/8	/
LEVOIL 33 RE	2	115	157	151	60	131	39	92	3/8	1/4





# Mechanical oil level regulators and adapters

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### ■ Technical features

CARLY references	Volume	Pressure range	Maximal working pressure	Working pressure <sup>(1)</sup>	Maximal working temperature	Minimal working temperature	Working temperature <sup>(1)</sup>	CE Category <sup>(2)</sup>
	V (L)	ΔP (bar)	PS (bar)	PS BT (bar)	TS maxi (°C)	TS mini (°C)	TS BT (°C)	
<b>LEVOIL 22</b>	0,8	1 - 4,5	42	/	100	-20	/	Art3§3
<b>LEVOIL 23</b>	0,8	1 - 4,5	42	/	100	-20	/	Art3§3
<b>LEVOIL 23 BO</b>	0,8	1 - 4,5	42	/	100	-20	/	Art3§3
<b>LEVOIL 23 SC</b>	0,8	1 - 4,5	42	/	100	-20	/	Art3§3
<b>LEVOIL 23 SU</b>	0,8	1 - 4,5	42	/	100	-20	/	Art3§3
<b>LEVOIL 33 RE</b>	0,8	1 - 6,5	42	/	100	-20	/	Art3§3

(1) The working pressure is limited to the PS BT value when working temperature is lower than or equal to TS BT value.

(2) Classification by volume, according to PED 97/23/EC (refer to chapter 0 page 7).

### ■ Example of selection

The selection of the oil level regulator **LEVOIL®** implies for the user to take into account all the conditions under which the product will be used (temperature - pressure - refrigerant - oil - external environment etc).

- Refrigerating unit composed of three compressors operating with R404A under the following conditions:
  - ◊ Compressors n°1 et 2  $T_O = -10^{\circ}\text{C}$   $P_o = 4,4 \text{ bar}$
  - ◊ Compressor n°3  $T_O = -25^{\circ}\text{C}$   $P_o = 2,5 \text{ bar}$
  - ◊ Use of a HCYCT 3 differential valve between the oil receiver and the suction collector that maintains a pressure differential of 1.4 bar.
  - ◊ Oil level regulation at half glass (according manufacturer's recommendation).
  - ◊ Inlet oil pipe diameter 3/8".
- Which **LEVOIL®** mechanical oil level regulator to choose?

- Calculation of the oil receiver pressure ( $P_{RH}$ )

$$P_{RH} = P_o \text{ maxi} + \Delta P \text{ valve}$$

**Result:**  $P_{RH} = 4.4 + 1.4 = 5.8 \text{ bar}$

#### \* **LEVOIL®** SELECTION FOR COMPRESSORS NO.1 AND NO.2

The pressure differential between the **HCYR** oil receiver and the common line compressors being of **1.40 bar** (given by the **HCYCT 3** differential valve), a **LEVOIL®** oil level regulator accepting a pressure differential of 1.4 bar has to be mounted on each of these compressors.

**Result:** **LEVOIL 23**

#### \* **LEVOIL®** SELECTION FOR COMPRESSOR NO.3

The pressure differential between the **HCYR** oil receiver and compressor No.3 being of  $5.8 - 2.5 = 3.3 \text{ bar}$ , a **LEVOIL®** oil level regulator accepting a pressure differential of 3.3 bar has to be mounted on the compressor.

**Result:** **LEVOIL 23 / LEVOIL 33 RE**



# Mechanical oil level regulators and adapters

## → HCYN 1A

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### ■ Technical features

• HCYN 1A adapters allow connection of CARLY oil level regulators to compressors when it is not possible to connect the universal 7 holes flange directly on the compressors sight glass flange.

CARLY references	Features of compressor connection (sight glass)	Accessories delivered with the adapter	End view from compressor side	Side view compressor on the right
<b>HCYN 1A2</b>	Threads 1" 1/8 - 12 UNF	1 O-ring 3 screws HM6 - 30 cl 8 - 8 3 nuts HM6 3 washers DEC 6 1 glass 3 trous diameter 60		
<b>HCYN 1A3</b>	3 screws 1/4" diameter 47.6	1 O-ring 3 screws HM6 - 30 cl 8 - 8 3 nuts HM6 3 washers DEC 6		
<b>HCYN 1A5</b>	4 screws 1/4" diameter 50	1 O-ring 3 screws HM6 - 30 cl 8 - 8 3 nuts HM6 3 washers DEC 6 1 glass 3 holes diameter 60		
<b>HCYN 1A7</b>	Threads 1" 1/2 - 18 UNEF	1 O-ring 3 screws HM6 - 30 cl 8 - 8 3 nuts HM6 3 washers DEC 6 1 glass 3 holes diameter 60		
<b>HCYN 1A9</b>	4 screws 1/4" at 90° diameter 50	1 O-ring 3 screws HM6 - 30 cl 8 - 8 3 nuts HM6 3 washers DEC 6 1 glass 3 holes diameter 60		
<b>HCYN 1A10</b>	Threads 1" 1/8 - 18 UNEF	1 O-ring 3 screws HM6 - 30 cl 8 - 8 3 nuts HM6 3 washers DEC 6 1 glass 3 holes diameter 60		
<b>HCYN 1A11</b>	Threads 3/4" NPT	1 O-ring 3 screws HM6 - 30 cl 8 - 8 3 nuts HM6 3 washers DEC 6 1 glass 3 holes diameter 60		
<b>HCYN 1A14</b>	1" 3/4 - 12 UN ROTALOCK	1 O-ring 3 screws HM6 - 30 cl 8 - 8 3 nuts HM6 3 washers DEC 6 1 gasket PTFE 1 glass 3 holes diameter 60		
<b>HCYN 1A15</b>	1" 1/4 - 12 UNF ROTALOCK	1 O-ring 3 screws HM6 - 30 cl 8 - 8 3 nuts HM6 3 washers DEC 6 1 gasket PTFE 1 glass 3 holes diameter 60		

See tables page 51-8 and 51-9 for regulators and compressors association.



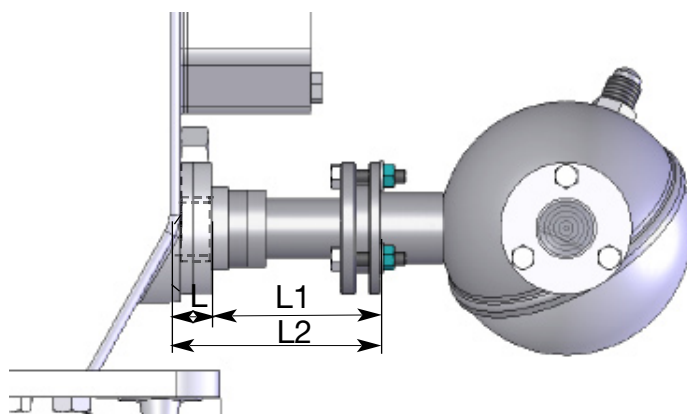
# Mechanical oil level regulators and adapters

## → HCYN 1A

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### ■ Technical features

CARLY references	Dimensions (mm)		
	L1	L2	L
HCYN 1A2	58,5	84,5	26,0
HCYN 1A3	102,0	102,0	/
HCYN 1A5	57,5	82,5	25,0
HCYN 1A7	55,5	82,5	27,0
HCYN 1A9	59,5	63,0	3,5
HCYN 1A10	46,5	57,5	11,0
HCYN 1A11	46,5	72,5	26,0
HCYN 1A14	46,5	72,5	26,0
HCYN 1A15	46,5	72,5	26,0



CARLY references	Nominal Diameter	Maximal working pressure	Working pressure (1)	Maximal working temperature	Minimal working temperature	Working temperature (1)	CE Category (2)
	DN (mm)	PS (bar)	PS BT (bar)	TS maxi (°C)	TS mini (°C)	TS BT (°C)	
HCYN 1A2	21,7	42	/	100	-20	/	Art3§3
HCYN 1A3	21,7	42	/	100	-20	/	Art3§3
HCYN 1A5	21,7	42	/	100	-20	/	Art3§3
HCYN 1A7	21,7	42	/	100	-20	/	Art3§3
HCYN 1A9	21,7	42	/	100	-20	/	Art3§3
HCYN 1A10	21,7	42	/	100	-20	/	Art3§3
HCYN 1A11	21,7	42	/	100	-20	/	Art3§3
HCYN 1A14	21,7	42	/	100	-20	/	Art3§3
HCYN 1A15	21,7	42	/	100	-20	/	Art3§3

(1) The working pressure is limited to the PS BT value when working temperature is lower than or equal to TS BT value.

(2) Classification by diameter, according to PED 97/23/EC (refer to chapter 0 page 7).





# Mechanical oil level regulators and adapters

## ➔ LEVOIL® + HCYN 1A

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### ■ Compressor / oil level regulator association

Compressor		Type of connection	Oil level regulator	Oil level regulator + adapter	Electronic oil level regulator	BOOSTER application LP oil level regulator	Adjustable oil level regulator	Oil level regulator with equalisation
Brand	Range		(1,0 bar < Δp < 4,5 bar)		(3,5 bar < Δp < 21 bar)	(1,0 bar < Δp < 4,5 bar)	(1,0 bar < Δp < 6,5 bar)	(1,0 bar < Δp < 6,5 bar)
BITZER	2CC --> 2KC 2CHC --> 2JHC	1" 1/8 - 18 UNEF	LEVOIL 23 BO	LEVOIL 22/23 + HCYN 1A10	/	LEVOIL 23 BO	LEVOIL 33 RE + HCYN 1A10	LEVOIL 33 RE + HCYN 1A10
	4CC --> 4FC, 4CHC --> 4FHC, 4NFR --> 4UFR, NFC --> UFC							
	ESH							
	2N, 2T, 4N, 4T, 4P, 4U, 4Z	4 holes in Ø 50mm	LEVOIL 22/23	LEVOIL 22/23 (+ HCYN 1A5 for CP before 05/1997)	/	LEVOIL 22/23 (+ HCYN 1A5 for CP before 05/1997)	LEVOIL 33 RE (+ HCYN 1A5 for CP before 05/1997)	LEVOIL 33 RE (+ HCYN 1A5 for CP before 05/1997)
	4FE, 4G, 4H, 4J, 4JE, 6F, 6G, 6H, 6J, W							
	S4, S6, S66							
	8D, 8E			LEVOIL 22/23 + HCYN 1A5	/	LEVOIL 22/23 + HCYN 1A5	LEVOIL 33 RE + HCYN 1A5	LEVOIL 33 RE + HCYN 1A5
	4NC(S) --> 4VC(S), 4NHC --> 4VHC, 4NES --> 4VES, 4NDC --> 4VDC	3 holes in Ø 47,6mm	LEVOIL 22/23	/	/	LEVOIL 22/23	LEVOIL 33 RE	LEVOIL 33 RE
	6D, 6E							
	8FC, 8GC							
GSD 8	1" 3/4 - 12 UNF	/	LEVOIL 22/23 + HCYN 1A14	/	LEVOIL 22/23 + HCYN 1A14	LEVOIL 33 RE + HCYN 1A14	LEVOIL 33 RE + HCYN 1A14	
BOCK	HA, HG (4, 5, 6)	3 holes in Ø 47,6mm	LEVOIL 22/23	/	/	LEVOIL 22/23	LEVOIL 33 RE	LEVOIL 33 RE
	HG (7, 8) HGZ							
	EX	1" 1/8 - 18 UNEF	LEVOIL 23 BO	LEVOIL 22/23 + HCYN 1A10	/	LEVOIL 23 BO	LEVOIL 33 RE + HCYN 1A10	LEVOIL 33 RE + HCYN 1A10
	HA, HG (12, 22, 34)							
	AM (2 --> 5) F (2 --> 16)							
CARRIER	EA, ER, 6E, OBE, OBCC	3 holes in Ø 47,6mm	LEVOIL 22/23	/	/	LEVOIL 22/23	LEVOIL 33 RE	LEVOIL 33 RE
	DA, DR, 5F, 5H, 6D, 6E	1" 1/2 - 18 UNEF	/	LEVOIL 22/23 + HCYN 1A7	/	LEVOIL 22/23 + HCYN 1A7	LEVOIL 33 RE + HCYN 1A7	LEVOIL 33 RE + HCYN 1A7
COPELAND	DK, DL, DN, ZR, ZZ	1" 1/8 - 12 UNF	/	LEVOIL 22/23 + HCYN 1A2	/	LEVOIL 22/23 + HCYN 1A2	LEVOIL 33 RE + HCYN 1A2	LEVOIL 33 RE + HCYN 1A2
	D2, D3, D4, D6, 4CC, 6CC	3 holes in Ø 47,6mm	LEVOIL 22/23	/	/	LEVOIL 22/23	LEVOIL 33 RE	LEVOIL 33 RE
	D8, 8CC		/	LEVOIL 22/23 + HCYN 1A3	/	LEVOIL 22/23 + HCYN 1A3	LEVOIL 33 RE + HCYN 1A3	LEVOIL 33 RE + HCYN 1A3
	ZB, ZF, ZS, ZO	3/4" - 14 NPTF	LEVOIL 23 SC	LEVOIL 22/23 + HCYN 1A11	/	LEVOIL 23 SC	LEVOIL 33 RE + HCYN 1A11	LEVOIL 33 RE + HCYN 1A11
	ZR (11 --> 19, 90), ZP (180/235/295/385)	1" 3/4 - 12 UNF ROTALOCK	/	LEVOIL 22/ 23 + HCYN 1A14	/	LEVOIL 22/23 + HCYN 1A14	LEVOIL 33 RE + HCYN 1A14	LEVOIL 33 RE + HCYN 1A14
	ZR (94/108/125/144/160/190) ZP (90/103/120/137/154/182) ZB (50 --> 114)	1" 1/4 - 12 UNF ROTALOCK	LEVOIL 23 SU	LEVOIL 22/23 + HCYN 1A15	/	LEVOIL 22/23 + HCYN 1A15	RE + HCYN 1A15	RE + HCYN 1A15





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## ➔ LEVOIL® + HCYN 1A

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### ■ Compressor / oil level regulator association

Compressor		Type of connection	Oil level regulator	Oil level regulator + adapter	Electronic oil level regulator	BOOSTER application LP oil level regulator	Adjustable oil level regulator	Oil level regulator with equalisation
Brand	Range		(1,0 bar < Δp < 4,5 bar)		(3,5 bar < Δp < 21 bar)	(1,0 bar < Δp < 4,5 bar)	(1,0 bar < Δp < 6,5 bar)	(1,0 bar < Δp < 6,5 bar)
DANFOSS	MLZ / MFZ / LFZ	1" 1/8 - 18 UNEF	LEVOIL 23 BO	LEVOIL 22/23 + HCYN 1A10	/	LEVOIL 23 BO	LEVOIL 33 RE + HCYN 1A10	LEVOIL 33 RE + HCYN 1A10
	SH (090 --> 161)	1" 3/4 - 12 UNF ROTALOCK	/	LEVOIL 22/23 + HCYN 1A14	/	LEVOIL 22/23 + HCYN 1A14	LEVOIL 33 RE + HCYN 1A14	LEVOIL 33 RE + HCYN 1A14
DORIN	H1, K (40CC --> 280CC) Hi (100-->240) SCC (180B-->280B)	1" 1/8 - 18 UNEF	LEVOIL 23 BO	LEVOIL 22/23 + HCYN 1A10	/	LEVOIL 23 BO	LEVOIL 33 RE + HCYN 1A10	LEVOIL 33 RE + HCYN 1A10
	H2, H32, H4K, K4, K5, K6, KP, 2S, Y6, SC SCC (500 -->2500B) Hi (400 --> 1500)	3 holes in Ø 47,6mm	LEVOIL 22/23		/	LEVOIL 22/23	LEVOIL 33 RE	LEVOIL 33 RE
	K7, K8, Y7	3 holes in Ø 47,6mm	/	LEVOIL 22/23 + HCYN 1A3	/	LEVOIL 22/23 + HCYN 1A3	LEVOIL 33 RE + HCYN 1A3	LEVOIL 33 RE + HCYN 1A3
DUNHAM-BUSH	B6	3 holes in Ø 47,6mm	LEVOIL 22/23		/	LEVOIL 22/23	LEVOIL 33 RE	LEVOIL 33 RE
FRASCOLD	A, B, D, F, S, V, Z A-SK --> S-SK	3 holes in Ø 47,6mm	LEVOIL 22/23		/	LEVOIL 22/23	LEVOIL 33 RE	LEVOIL 33 RE
	W	3 holes in Ø 47,6mm	/	LEVOIL 22/23 + HCYN 1A3	/	LEVOIL 22/23 + HCYN 1A3	LEVOIL 33 RE + HCYN 1A3	LEVOIL 33 RE + HCYN 1A3
MANEUROP	All compressors with sight glass	1" 1/8 - 18 UNEF	LEVOIL 23 BO	LEVOIL 22/23 + HCYN 1A10	/	LEVOIL 23 BO	LEVOIL 33 RE + HCYN 1A10	LEVOIL 33 RE + HCYN 1A10
PRESTCOLD	PK, PL	1" 1/8 - 12 UNF	/	LEVOIL 22/23 + HCYN 1A2	/	LEVOIL 22/23 + HCYN 1A2	LEVOIL 33 RE + HCYN 1A2	LEVOIL 33 RE + HCYN 1A2
	P	3 holes in Ø 47,6mm	LEVOIL 22/23		/	LEVOIL 22/23	LEVOIL 33 RE	LEVOIL 33 RE
	P8, P08	3 holes in Ø 47,6mm	/	LEVOIL 22/23 + HCYN 1A3	/	LEVOIL 22/23 + HCYN 1A3	LEVOIL 33 RE + HCYN 1A3	LEVOIL 33 RE + HCYN 1A3
REFCOMP	SP	3 holes in Ø 47,6mm	LEVOIL 22/23		/	LEVOIL 22/23	LEVOIL 33 RE	LEVOIL 33 RE
	SP (8 cyl)	3 holes in Ø 47,6mm	/	LEVOIL 22/23 + HCYN 1A3	/	LEVOIL 22/23 + HCYN 1A3	LEVOIL 33 RE + HCYN 1A3	LEVOIL 33 RE + HCYN 1A3
TECUMSEH EUROPE	All compressors with sight glass	1" 1/8 - 18 UNEF	LEVOIL 23 BO	LEVOIL 22/23 + HCYN 1A10	/	LEVOIL 23 BO	LEVOIL 33 RE + HCYN 1A10	LEVOIL 33 RE + HCYN 1A10
	SCROLL VSA	3/4" - 14 NPTF	LEVOIL 23 SC	LEVOIL 22/23 + HCYN 1A11	/	LEVOIL 23 SC	LEVOIL 33 RE + HCYN 1A11	LEVOIL 33 RE + HCYN 1A11
TRANE	M, R	3 holes in Ø 47,6mm	LEVOIL 22/23		/	LEVOIL 22/23	LEVOIL 33 RE	LEVOIL 33 RE
	K	3/4" - 14 NPTF	LEVOIL 23 SC	LEVOIL 22/23 + HCYN 1A11	/	LEVOIL 23 SC	LEVOIL 33 RE + HCYN 1A11	LEVOIL 33 RE + HCYN 1A11
YORK	GC, GS, JS	3 holes in Ø 47,6mm	LEVOIL 22/23		/	LEVOIL 22/23	LEVOIL 33 RE	LEVOIL 33 RE



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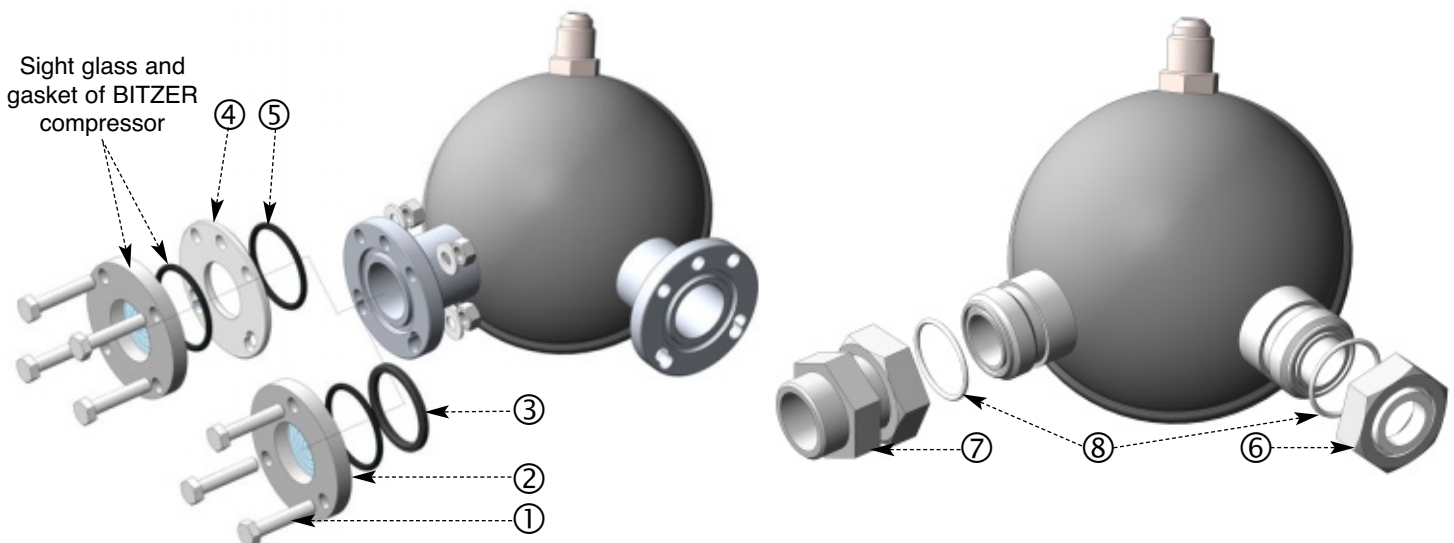
# Mechanical oil level regulators and adapters

## → LEVOIL® + HCYN 1A

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### ■ Spare parts

CARLY references	Part Nb	Description	Types	Quantity
HCYN 1V1K	1+2+3+5	Bolts (1) + Glass (2) + gaskets (3, 5)	LEVOIL 22 / 23 / 33 RE	1
CY 29900130	1+3+4+5	Bolts (1) + intermediate disk (4) + gaskets (3, 5)	LEVOIL 22 / 23 / 33 RE	1
CY 15552000	3	Quad ring	LEVOIL 22 / 23 / 33 RE	1
CY 15552190	5	O-ring	LEVOIL 22 / 23 / 33 RE	1
CY 12850080	6	Sight glass 1" 1/4 ROTALOCK	LEVOIL 23 SC / 23 BO / 23 SU	1
CY 17637550	7	1" 1/8 -18 UNEF adapter	LEVOIL 23 BO	1
CY 17637490	7	3/4" NPT adapter	LEVOIL 23 SC	1
CY 15580120	8	PTFE gasket	LEVOIL 23 SC / 23 BO / 23 SU	1



### ■ Weights and packaging

CARLY references	Unit weight (kg)		Packaging unit	
	With packaging	Without packaging	standard	OEM
LEVOIL 22	1,27	1,10	1	/
LEVOIL 23	1,27	1,10	1	/
LEVOIL 23 BO	1,90	1,70	1	/
LEVOIL 23 SC	1,90	1,70	1	/
LEVOIL 23 SU	1,90	1,70	1	/
LEVOIL 33 RE	1,37	1,20	1	/

CARLY references	Unit weight (kg)		Packaging unit	
	With packaging	Without packaging	standard	OEM
HCYN 1A2	0,45	0,45	1	/
HCYN 1A3	0,45	0,45	1	/
HCYN 1A5	0,60	0,60	1	/
HCYN 1A7	0,58	0,58	1	/
HCYN 1A9	0,45	0,45	1	/
HCYN 1A10	0,40	0,40	1	/
HCYN 1A11	0,45	0,45	1	/
HCYN 1A14	0,45	0,45	1	/
HCYN 1A15	0,45	0,45	1	/