



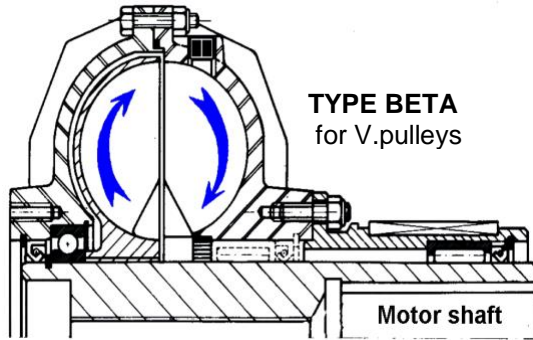
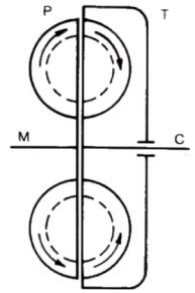
Function

The hydraulic clutch COFLUID is a transmission mechanism working with oil, designed and realised to allow gradual startings without shock, without overcoating the motor, with a consequent decrease in current input, especially in the starting phase.

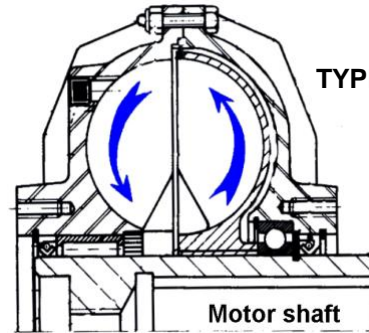
The drawing shows the working of the hydraulic clutch. It is made up of two impellers with opposite frontal hydrofoils, which form the pump-turbine circuit. Inside the clutch, in the pump-turbine circuit, there is some suitable oil, used as a transmission medium.

During its starting the driving impeller P speeds the oil towards the driven impellers T with a continuous rotary motion, this making it rotate too.

Owing to the centrifugal force, the oil contained inside forms a transmission ring, which gives controlled slip at operating speeds.



TYPE BETA for V-pulleys



TYPE ALPHA for in line

Temperature and seals of the clutch

The maximum temperature must be less than 120°C. From sizes 10 to 40, the clutches are made with NBR seals (max. temperature 120°C).

From the size 50 to 95, the clutches are made with VITON seals (max. temperature 180°C)

Adjustement of the oil level

Clutches are supplied with a oil level 45°. Do not go less than 30°.

The reduction of oil quantity allows :

- a longer and gradual start
- an higher slip during the working
- a small absorption of power during the starting phase
- a better parts protection in case of overload

The increase of oil quantity allows

- a quicker starting
- a smaller slip during the working
- an higher absorption of power during the acceleration phase
- harder work of the transmission components

Filling ↓	Size of clutch															
	10	20	25	30	40	50	55	60	65	70	75	80	85	90	95	
30°	litres	0,64	1,23	2,1	2,6	0,9	5,2	8,0	9,3	14,5	13,1	21	34	55	96	150
	kg	0,56	1,08	1,85	2,3	3	4,6	7	8,2	12,7	11,5	18,3	30	48	84	131
45°	litres	0,57	1,14	1,94	2,4	3,2	4,8	7,5	8,7	13,7	12,5	20	32	51	87	137
	kg	0,5	1	1,7	2,1	2,8	4,2	6,6	7,6	12	11	17,4	28	45	76	120
60°	litres	0,51	0,97	1,7	2,1	2,8	4,2	6,5	7,4	11,4	11,4	17	30	46	80	120
	kg	0,45	0,85	1,5	1,85	2,5	3,7	5,7	6,5	10	10	15	26	40	70	105
75°	litres	0,45	0,85	1,54	1,7	2,1	3,4	5,7	6,1	10	9,2	16	25	42	63	108
	kg	0,4	0,75	1,35	1,5	1,9	3	5	5,4	8,7	8,1	14	22	37	55	95
90°	litres	0,36	0,68	1,25	1,48	2,0	2,9	4,5	5,1	7,7	8	12	21	32	55	83
	kg	0,32	0,6	1,1	1,3	1,8	2,6	4	4,5	6,8	7	10,6	18,5	28	48	72.5

Example of the filling at 30°

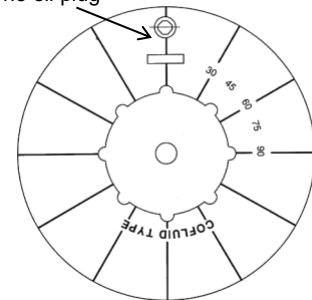
- 1/ Remove the oil plug which is accessible on the clutch (high position)
- 2/ Rotate the clutch until the 30° notch is positional on the vertical. (high position)
- 3/ Carry out the clutch filling until the oils pours out from the hole
- 4/ Reassemble the plug on the clutch

Oil change

The first oil change must be done after 400 hours running out and later every 4000 hours.

Install the clutch in vertical position. Remove the plug completely. Rotate the clutch so the hole is at the lower position and let the oil pour out.

The oil plug



opposite face at the pulley



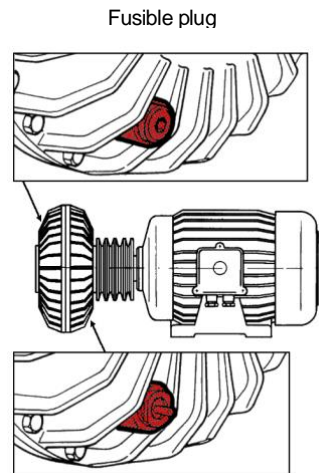


**Security system**

Fusible plug : - 3 possibilities : white : 120°C - red (standard): 145°C - green : 180°C  
 - installed on opposite motor side  
 - a basin to collect the hot oil and a automatic brake

Fusible plug and expansion plug :

- 3 possibilities of expansion plug : white : 120°C - red (standard): 145°C - green : 180°C
- double security : • first with the expansion plug (motor side)
  - second with the fusible plug in case of the expansion plug doesn't work.
- The expansion plug temperatur must be less than the fusible plug temperature.
- Required:
  - contact breaker with the expansion plug
  - a basin to collect the hot oil
  - automatic brake



**Selection of the clutch size following electric motor**

Motor Type	Motor shaft Length		8 poles 750 rpm			6 poles 1000 rpm			4 poles 1500 rpm			2 poles 3000 rpm		
	Ø	1500tr/m 3000tr/m	HP	kW	Size	HP	kW	Size	HP	kW	Size*	HP	kW	Size*
71	14	30	-	-	-	0.33	0.25	10	0.5	0.37	10	0.75	0.55	10
80	19	40	0.33	0.25	10	0.5	0.37	10	0.75	0.55	10	1	0.75	10
80	19	40	-	-	-	0.75	0.55	10	1	0.75	10	1.5	1.1	10
90	24	50	0.75	0.55	20	1	0.75	10	1.5	1.1	10	2	1.5	10
90	24	50	-	-	-	1.5	1.1	20	2	1.5	10	3	2.2	10
100	28	60	1	0.75	20	2	1.5	20	3	2.2	20	4	3	10
100	28	60	1.5	1.1	25	-	-	-	4	3	20	-	-	-
112	28	60	2	1.5	25	3	2.2	25	5.5	4	20	5.5	4	20
132	38	80	3	2.2	30	4	3	30	7.5	5.5	25	7.5	5.5	20
132	38	80	4	3	30	5.5	4	30	10	7.5	30	10	7.5	20
132	38	80	-	-	-	7.5	5.5	30	-	-	-	15	11	20
160	42	110	5.5	4	40	10	7.5	40	15	11	30	15	11	25
160	42	110	7.5	5.5	50	15	11	50	20	15	30 (40)	20	15	25
160	42	110	10	7.5	55	-	-	-	-	-	-	25	18.5	25 (30)
180	48	110	15	11	55	20	15	55	25	18.5	40	30	22	30
180	48	110	-	-	-	-	-	-	30	22	40	-	-	-
200	55	110	20	15	60	25	18.5	55	40	30	50	40	30	40
200	55	110	-	-	-	30	22	55	-	-	-	50	37	40
225	55	110	-	-	-	-	-	-	-	-	-	60	45	40
225	60	140	25	18.5	65	40	30	60	50	37	50 (55)	-	-	-
225	60	140	30	22	65	-	-	-	60	45	55	-	-	-
250	60	-	-	-	-	-	-	-	-	-	-	75	55	40 (50)
250	65	140	40	30	65	50	37	65	75	55	55	-	-	-
280	65	-	-	-	-	-	-	-	-	-	-	100	75	50
280	65	-	-	-	-	-	-	-	-	-	-	125	90	50
280	75	140	50	37	70	60	45	65	100	75	60	-	-	-
280	75	140	60	45	75	75	55	75	125	90	60	-	-	-
315	65	-	-	-	-	-	-	-	-	-	-	150	110	55
315	65	-	-	-	-	-	-	-	-	-	-	180	132	55
315	70	-	-	-	-	-	-	-	-	-	-	220	160	60
315	70	-	-	-	-	-	-	-	-	-	-	270	200	65
315	80	170	75	55	75	100	75	75	150	110	65	-	-	-
315	80	170	100	75	80	125	90	75	175	132	65 (70)	-	-	-
315	90	170	125	90	80	150	110	80	220	160	70	-	-	-
315	90	170	150	110	85	-	-	-	270	200	75	-	-	-
355	90	170	180	132	85	-	-	-	-	-	-	-	-	-
355	90	170	-	-	-	180	132	85	-	-	-	-	-	-
355	90	170	-	-	-	220	160	85	-	-	-	-	-	-
400	100	170	-	-	-	270	200	85	-	-	-	-	-	-
400	100	170	-	-	-	-	-	-	340	255	80	-	-	-
400	100	170	-	-	-	-	-	-	430	322	80	-	-	-
NON STANDARD MOTOR			-	-	-	-	-	-	500	365	85	-	-	-
			-	-	-	-	-	-	600	450	85	-	-	-
			-	-	-	-	-	-	700	525	85	-	-	-
			270	200	90	-	-	-	-	-	-	-	-	-
			500	365	95	-	-	-	-	-	-	-	-	-
			-	-	-	500	365	90	-	-	-	-	-	-
			-	-	-	1000	730	95	-	-	-	-	-	-

★ Note : For power absorbed by the apparatus more than 80% of the motor power, use the clutch size in brackets.  
 The hydraulic clutches are usually used in single cage motor, strong and less expensive with modifications. They can also be installed on the machine with a minimal speed of 750 rpm/mn