

***Setting the hose compression
for Pumps HD25 to HD100
not pre-set in factory***



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Your distributor :

1. PREAMBLE

In order to maintain the flow, to compensate for the tolerances of the assembly parts and to avoid premature wear of the hoses, it is necessary to adapt the crushing of the hose according to the rotation speed, the service pressure desired and the temperature.

2. SETTING THE HOSE COMPRESSION

Thus, pumps assembled in the factory or outside the factory, have to be set in the following manner :

1. Reference shimming

This step is a mandatory step. The shims should not be removed unless the body or wheel is being replaced.

Reference shimming is performed to compensate for the tolerances of the assembly parts. Whatever the desired pump discharge pressure, the reference shimming is first carried out. It is done using fixed shims.

The distance 'a' is the gap between the top of the shoe and the hole of the pump's body must be within the reference shimming interval : see § SETTING TABLES - REFERENCE SHIMMING.

2. Final shimming at 5 bar

The number of removable shims to add is indicated § SETTING TABLES - FINAL SHIMMING AT 5 BAR taking into consideration pressure, speed and temperature. In the absence of precision on the desired pressure, the pumps delivered assembled (with motor and reducer) are set according to the reference shimming (5 bar).

3. HOW TO USE THE SETTING TABLES

Too little hose compression leads to internal leaks which lead to rapid deterioration of the inside of the hose.

Too much hose compression puts significant internal strain on the pump as well as leading to abnormal overheating of the hose which greatly reduces its operational life.

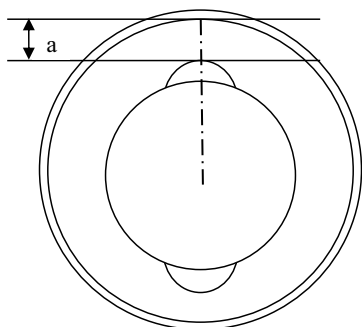
NOTE

There must be the same number of shims under each shoe.

1. Choice of pump size in the reference shimming table : the distance must be within the interval thanks to the fixed shims : see § SETTING TABLES - REFERENCE SHIMMING.
2. Depending on the pressure, the desired speed and the temperature of the pumped product, add the number of removable shims : see § SETTING TABLES - FINAL SHIMMING AT 5 BAR.

4. SETTING TABLES

The distance 'a' is the gap between the top of the shoe and the internal diameter of the pump body.



Removable shims are shaped like this :



Fixed shims are shaped like this:



4.1 Reference shimming (fixed shims)

Pump	Reference shimming - mm (inch)
HD25	26,1 (1,028") < a <= 26,6 (1,047")
HD32	28,1 (1,106") < a <= 28,6 (1,126")
HD40	23,4 (0,921") < a <= 23,9 (0,941")
HDX40	25,0 (0,984") < a <= 25,5 (1,004")
HD50	27,7 (1,091") < a <= 28,2 (1,110")
HD65	24,8 (0,976") < a <= 25,3 (0,996")
HDX65	31,4 (1,236") < a <= 31,9 (1,256")
HDX80	31,4 (1,236") < a <= 31,9 (1,256")
HD80	39,0 (1,535") < a <= 39,5 (1,555")
HD100	40,7 (1,602") < a <= 41,2 (1,622")



4.2 Final shimming (removable shims)

HD25			
bar (psi)	tr/min (rpm)	Abaque shimming	mm (inch)
$\Delta P \leq 5$ (72,5)	$5 < \Omega \leq 40$	+ 1 removable shim	$25,6$ (1,008") < a \leq $26,1$ (1,028")
	$40 < \Omega \leq 160$	Reference shimming (fixed shims)	$26,1$ (1,028") < a \leq $26,6$ (1,047")
5 (72,5) < $\Delta P \leq 7,5$ (108,75)	$5 < \Omega \leq 40$	+ 2 removable shims	$25,1$ (0,988") < a \leq $25,6$ (1,008")
	$40 < \Omega \leq 120$	+ 1 removable shim	$25,6$ (1,008") < a \leq $26,1$ (1,028")
	$120 < \Omega \leq 135$	Reference shimming (fixed shims)	$26,1$ (1,028") < a \leq $26,6$ (1,047")
$7,5$ (108,75) < $\Delta P \leq 10$ (145)	$5 < \Omega \leq 40$	+ 3 removable shims	$24,6$ (0,969") < a \leq $25,1$ (0,988")
	$40 < \Omega \leq 115$	+ 2 removable shims	$25,1$ (0,988") < a \leq $25,6$ (1,008")
10 (145) < $\Delta P \leq 15$ (217,5)	$5 < \Omega \leq 40$	+ 4 removable shims	$24,1$ (0,949") < a \leq $24,6$ (0,969")
	$40 < \Omega \leq 90$	+ 3 removable shims	$24,6$ (0,969") < a \leq $25,1$ (0,988")
T° > 60° C (140°F) : remove one removable shim			

4. SETTING TABLES (continued)

HD32			
<i>bar (psi)</i>	<i>tr/min (rpm)</i>	<i>Abaque shimming</i>	<i>mm (inch)</i>
$\Delta P \leq 5$ (72,5)	$5 < \Omega \leq 45$	+ 1 removable shim	$27,6 (1,087'') < a \leq 28,1 (1,106'')$
	$45 < \Omega \leq 140$	Reference shimming (fixed shims)	$28,1 (1,106'') < a \leq 28,6 (1,126'')$
$5 (72,5) < \Delta P \leq 7,5 (108,75)$	$5 < \Omega \leq 45$	+ 2 removable shims	$27,1 (1,067'') < a \leq 27,6 (1,087'')$
	$45 < \Omega \leq 105$	+ 1 removable shim	$27,6 (1,087'') < a \leq 28,1 (1,106'')$
	$105 < \Omega \leq 115$	Reference shimming (fixed shims)	$28,1 (1,106'') < a \leq 28,6 (1,126'')$
$7,5 (108,75) < \Delta P \leq 10 (145)$	$5 < \Omega \leq 45$	+ 3 removable shims	$26,6 (1,047'') < a \leq 27,1 (1,067'')$
	$40 < \Omega \leq 100$	+ 2 removable shims	$27,1 (1,067'') < a \leq 27,6 (1,087'')$
$10 (145) < \Delta P \leq 15 (217,5)$	$5 < \Omega \leq 45$	+ 4 removable shims	$26,1 (1,028'') < a \leq 26,6 (1,047'')$
	$45 < \Omega \leq 75$	+ 3 removable shims	$26,6 (1,047'') < a \leq 27,1 (1,067'')$
T° > 60° C (140°F) : remove one removable shim			

HD40			
<i>bar (psi)</i>	<i>tr/min (rpm)</i>	<i>Abaque shimming</i>	<i>mm (inch)</i>
$\Delta P \leq 5$ (72,5)	$5 < \Omega \leq 45$	+ 1 removable shim	$22,9 (0,902'') < a \leq 23,4 (0,921'')$
	$45 < \Omega \leq 140$	Reference shimming (fixed shims)	$23,4 (0,921'') < a \leq 23,9 (0,941'')$
$5 (72,5) < \Delta P \leq 7,5 (108,75)$	$5 < \Omega \leq 45$	+ 2 removable shims	$22,4 (0,882'') < a \leq 22,9 (0,902'')$
	$45 < \Omega \leq 115$	+ 1 removable shim	$22,9 (0,902'') < a \leq 23,4 (0,921'')$
$7,5 (108,75) < \Delta P \leq 10 (145)$	$5 < \Omega \leq 45$	+ 3 removable shims	$21,9 (0,862'') < a \leq 22,4 (0,882'')$
	$45 < \Omega \leq 100$	+ 2 removable shims	$22,4 (0,882'') < a \leq 22,9 (0,902'')$
$10 (145) < \Delta P \leq 15 (217,5)$	$5 < \Omega \leq 45$	+ 4 removable shims	$21,4 (0,843'') < a \leq 21,9 (0,862'')$
	$45 < \Omega \leq 75$	+ 3 removable shims	$21,9 (0,862'') < a \leq 22,4 (0,882'')$
T° > 60° C (140°F) : remove one removable shim			

HDX40			
<i>bar (psi)</i>	<i>tr/min (rpm)</i>	<i>Abaque shimming</i>	<i>mm (inch)</i>
$\Delta P \leq 5$ (72,5)	$5 < \Omega \leq 55$	+ 1 removable shim	$24,5 (0,965'') < a \leq 25 (0,984'')$
	$55 < \Omega \leq 120$	Reference shimming (fixed shims)	$25 (0,984'') < a \leq 25,5 (1,004'')$
$5 (72,5) < \Delta P \leq 7,5 (108,75)$	$5 < \Omega \leq 55$	+ 2 removable shims	$24 (0,945'') < a \leq 24,5 (0,965'')$
	$55 < \Omega \leq 100$	+ 1 removable shim	$24,5 (0,965'') < a \leq 25 (0,984'')$
$7,5 (108,75) < \Delta P \leq 10 (145)$	$5 < \Omega \leq 55$	+ 3 removable shims	$23,5 (0,925'') < a \leq 24 (0,945'')$
	$55 < \Omega \leq 85$	+ 2 removable shims	$24 (0,945'') < a \leq 24,5 (0,965'')$
$10 (145) < \Delta P \leq 15 (217,5)$	$5 < \Omega \leq 55$	+ 4 removable shims	$23 (0,906'') < a \leq 23,5 (0,925'')$
	$55 < \Omega \leq 65$	+ 3 removable shims	$23,5 (0,925'') < a \leq 24 (0,945'')$
T° > 60° C (140°F) : remove one removable shim			

4. SETTING TABLES (continued)

HD50			
<i>bar (psi)</i>	<i>tr/min (rpm)</i>	<i>Abaque shimming</i>	<i>mm (inch)</i>
$\Delta P \leq 5$ (72,5)	$5 < \Omega \leq 30$	+ 1 removable shim	$27,2$ (1,071") $< a \leq 27,7$ (1,091")
	$30 < \Omega \leq 90$	Reference shimming (fixed shims)	$27,7$ (1,091") $< a \leq 28,2$ (1,110")
5 (72,5) $< \Delta P \leq 7,5$ (108,75)	$5 < \Omega \leq 30$	+ 2 removable shims	$26,7$ (1,051") $< a \leq 27,2$ (1,071")
	$30 < \Omega \leq 65$	+ 1 removable shim	$27,2$ (1,071") $< a \leq 27,7$ (1,091")
	$65 < \Omega \leq 75$	Reference shimming (fixed shims)	$27,7$ (1,091") $< a \leq 28,2$ (1,11")
$7,5$ (108,75) $< \Delta P \leq 10$ (145)	$5 < \Omega \leq 30$	+ 3 removable shims	$26,2$ (1,031") $< a \leq 26,7$ (1,051")
	$30 < \Omega \leq 65$	+ 2 removable shims	$26,7$ (1,051") $< a \leq 27,2$ (1,071")
10 (145) $< \Delta P \leq 15$ (217,5)	$5 < \Omega \leq 30$	+ 4 removable shims	$25,7$ (1,012") $< a \leq 26,2$ (1,031")
	$30 < \Omega \leq 50$	+ 3 removable shims	$26,2$ (1,031") $< a \leq 26,7$ (1,051")
T° > 60° C (140°F) : remove one removable shim			

HD65			
<i>bar (psi)</i>	<i>tr/min (rpm)</i>	<i>Abaque shimming</i>	<i>mm (inch)</i>
$\Delta P \leq 5$ (72,5)	$5 < \Omega \leq 30$	+ 1 removable shim	$24,3$ (0,957") $< a \leq 24,8$ (0,976")
	$30 < \Omega \leq 90$	Reference shimming (fixed shims)	$24,8$ (0,976") $< a \leq 25,3$ (0,996")
5 (72,5) $< \Delta P \leq 7,5$ (108,75)	$5 < \Omega \leq 30$	+ 2 removable shims	$23,8$ (0,937") $< a \leq 24,3$ (0,957")
	$30 < \Omega \leq 65$	+ 1 removable shim	$24,3$ (0,957") $< a \leq 24,8$ (0,976")
	$65 < \Omega \leq 75$	Reference shimming (fixed shims)	$24,8$ (0,976") $< a \leq 25,3$ (0,996")
$7,5$ (108,75) $< \Delta P \leq 10$ (145)	$5 < \Omega \leq 30$	+ 3 removable shims	$23,3$ (0,917") $< a \leq 23,8$ (0,937")
	$30 < \Omega \leq 65$	+ 2 removable shims	$23,8$ (0,937") $< a \leq 24,3$ (0,957")
10 (145) $< \Delta P \leq 15$ (217,5)	$5 < \Omega \leq 30$	+ 4 removable shims	$22,8$ (0,898") $< a \leq 23,3$ (0,917")
	$30 < \Omega \leq 50$	+ 3 removable shims	$23,3$ (0,917") $< a \leq 23,8$ (0,937")
T° > 60° C (140°F) : remove one removable shim			

HDX65			
<i>bar (psi)</i>	<i>tr/min (rpm)</i>	<i>Abaque shimming</i>	<i>mm (inch)</i>
$\Delta P \leq 5$ (72,5)	$5 < \Omega \leq 25$	+ 1 removable shim	$30,9$ (1,217") $< a \leq 31,4$ (1,236")
	$25 < \Omega \leq 65$	Reference shimming (fixed shims)	$31,4$ (1,236") $< a \leq 31,9$ (1,256")
5 (72,5) $< \Delta P \leq 7,5$ (108,75)	$5 < \Omega \leq 25$	+ 2 removable shims	$30,4$ (1,197") $< a \leq 30,9$ (1,217")
	$25 < \Omega \leq 45$	+ 1 removable shim	$30,9$ (1,217") $< a \leq 31,4$ (1,236")
	$45 < \Omega \leq 50$	Reference shimming (fixed shims)	$31,4$ (1,236") $< a \leq 31,9$ (1,256")
$7,5$ (108,75) $< \Delta P \leq 10$ (145)	$5 < \Omega \leq 25$	+ 3 removable shims	$29,9$ (1,177") $< a \leq 30,4$ (1,197")
	$25 < \Omega \leq 45$	+ 2 removable shims	$30,4$ (1,197") $< a \leq 30,9$ (1,217")
10 (145) $< \Delta P \leq 15$ (217,5)	$5 < \Omega \leq 25$	+ 4 removable shims	$29,4$ (1,157") $< a \leq 29,9$ (1,177")
	$25 < \Omega \leq 35$	+ 3 removable shims	$29,9$ (1,177") $< a \leq 30,4$ (1,197")
T° > 60° C (140°F) : remove one removable shim			

4. SETTING TABLES (continued)

HDX80			
<i>bar (psi)</i>	<i>tr/min (rpm)</i>	<i>Abaque shimming</i>	<i>mm (inch)</i>
$\Delta P \leq 5$ (72,5)	$5 < \Omega \leq 25$	+ 1 removable shim	$30,9$ (1,217") $< a \leq 31,4$ (1,236")
	$25 < \Omega \leq 65$	Reference shimming (fixed shims)	$31,4$ (1,236") $< a \leq 31,9$ (1,256")
5 (72,5) $< \Delta P \leq 7,5$ (108,75)	$5 < \Omega \leq 25$	+ 2 removable shims	$30,4$ (1,197") $< a \leq 30,9$ (1,217")
	$25 < \Omega \leq 45$	+ 1 removable shim	$30,9$ (1,217") $< a \leq 31,4$ (1,236")
	$45 < \Omega \leq 50$	Reference shimming (fixed shims)	$31,4$ (1,236") $< a \leq 31,9$ (1,256")
$7,5$ (108,75) $< \Delta P \leq 10$ (145)	$5 < \Omega \leq 25$	+ 3 removable shims	$29,9$ (1,177") $< a \leq 30,4$ (1,197")
	$25 < \Omega \leq 45$	+ 2 removable shims	$30,4$ (1,197") $< a \leq 30,9$ (1,217")
10 (145) $< \Delta P \leq 15$ (217,5)	$5 < \Omega \leq 25$	+ 4 removable shims	$29,4$ (1,157") $< a \leq 29,9$ (1,177")
	$25 < \Omega \leq 35$	+ 3 removable shims	$29,9$ (1,177") $< a \leq 30,4$ (1,197")
T° > 60° C (140°F) : remove one removable shim			

HD80			
<i>bar (psi)</i>	<i>tr/min (rpm)</i>	<i>Abaque shimming</i>	<i>mm (inch)</i>
$\Delta P \leq 5$ (72,5)	$5 < \Omega \leq 15$	+ 1 removable shim	$38,5$ (1,516") $< a \leq 39,0$ (1,535")
	$15 < \Omega \leq 60$	Reference shimming (fixed shims)	$39,0$ (1,535") $< a \leq 39,5$ (1,555")
5 (72,5) $< \Delta P \leq 7,5$ (108,75)	$5 < \Omega \leq 15$	+ 2 removable shims	$38,0$ (1,496") $< a \leq 38,5$ (1,516")
	$15 < \Omega \leq 30$	+ 1 removable shim	$38,5$ (1,516") $< a \leq 39,0$ (1,535")
	$30 < \Omega \leq 50$	Reference shimming (fixed shims)	$39,0$ (1,535") $< a \leq 39,5$ (1,555")
$7,5$ (108,75) $< \Delta P \leq 10$ (145)	$5 < \Omega \leq 15$	+ 3 removable shims	$37,5$ (1,476") $< a \leq 38,0$ (1,496")
	$15 < \Omega \leq 30$	+ 2 removable shims	$38,0$ (1,496") $< a \leq 38,5$ (1,516")
	$30 < \Omega \leq 40$	+ 1 removable shim	$38,5$ (1,516") $< a \leq 39,0$ (1,535")
10 (145) $< \Delta P \leq 15$ (217,5)	$5 < \Omega \leq 15$	+ 4 removable shims	$37,0$ (1,457") $< a \leq 37,5$ (1,476")
	$15 < \Omega \leq 30$	+ 3 removable shims	$37,5$ (1,476") $< a \leq 38,0$ (1,496")
T° > 60° C (140°F) : remove one removable shim			

HD100			
<i>bar (psi)</i>	<i>tr/min (rpm)</i>	<i>Abaque shimming</i>	<i>mm (inch)</i>
$\Delta P \leq 5$ (72,5)	$5 < \Omega \leq 15$	+ 1 removable shim	$40,2$ (1,583") $< a \leq 40,7$ (1,602")
	$15 < \Omega \leq 45$	Reference shimming (fixed shims)	$40,7$ (1,602") $< a \leq 41,2$ (1,622")
5 (72,5) $< \Delta P \leq 7,5$ (108,75)	$5 < \Omega \leq 15$	+ 2 removable shims	$39,7$ (1,563") $< a \leq 40,2$ (1,583")
	$15 < \Omega \leq 25$	+ 1 removable shim	$40,2$ (1,583") $< a \leq 40,7$ (1,602")
	$25 < \Omega \leq 35$	Reference shimming (fixed shims)	$40,7$ (1,602") $< a \leq 41,2$ (1,622")
$7,5$ (108,75) $< \Delta P \leq 10$ (145)	$5 < \Omega \leq 15$	+ 3 removable shims	$39,2$ (1,543") $< a \leq 39,7$ (1,563")
	$15 < \Omega \leq 25$	+ 2 removable shims	$39,7$ (1,563") $< a \leq 40,2$ (1,583")
	$25 < \Omega \leq 30$	+ 1 removable shim	$40,2$ (1,583") $< a \leq 40,7$ (1,602")
10 (145) $< \Delta P \leq 15$ (217,5)	$5 < \Omega \leq 15$	+ 4 removable shims	$38,7$ (1,524") $< a \leq 39,2$ (1,543")
	$15 < \Omega \leq 25$	+ 3 removable shims	$39,2$ (1,543") $< a \leq 39,7$ (1,563")
T° > 60° C (140°F) : remove one removable shim			