Hydraulic Pump T7AS/T7ASW Series Vane Pumps

Pressure up to 300 bar
Fixed Displacement from 6 to 40 ml/rev.

Catalogue HY29-0008/UK
December 2005



DENISON Hydraulics

GENERAL

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MINIMUM & MAXIMUM SPEED, PRESSURE RATINGS

Size	Series	Theoretical Displacement Vi	Minimum Speed	Maximum Speed		Maximum pressure					
				HF-0, HF-1 HF-2	HF-3, HF-4	HF-0, HF-2		HF-1, HF-4		HF-3	
						Int.	Cont.	Int.	Cont.	Int.	Cont.
		ml/rev.	RPM	RPM	RPM	bar	bar	bar	bar	bar	bar
T7AS*	B06	5,8	600	3600	1800	300	275	240	210	175	140
	B10	9,8									
	B11	11,0									
	B13	12,8									
	B17	17,2									
	B20	19,8									
	B22	22,5									
	B25	24,9		3000		275	240				
T7ASW*	B26	26,0	600	3600	1800	300	275	240	210	175	140
	B28	28,0									
	B30	30,0									
	B32	31,8									
	B34	34,0		3000		280	240				
	B36	36,0									
	B40	40,0									

HF-0, HF-2 = Antiwear Petroleum Base
HF-1 = Non Antiwear Petroleum Base
HF-3 = Water in oil Emulsions
HF-4 = Water Glycols

* Please be careful as the cartridge designation is now in ml/rev. (example : B22 = 22,5 ml/rev.)

For further information or if the performance characteristics outlined above do not meet your particular requirements, please consult your local Parker Denison office.

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MINIMUM ALLOWABLE INLET PRESSURE (BAR ABSOLUTE)

Cartridge		Speed RPM									Series
Size	Series	1200	1500	1800	2100	2200	2300	2500	2800	3000	3600	
T7AS	B06	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	B06
	B10											B10
	B11											B11
	B13											B13
	B17										0,88	B17
	B20										0,94	B20
	B22										1,00	B22
	B25									0,85		B25
T7ASW	B26	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	B26
	B28											B28
	B30											B30
	B32											B32
	B34										0,88	B34
	B36										0,94	B36
	B40										1,00	B40

Inlet pressure is measured at inlet flange with petroleum base fluids at viscosity between 10 and 65 cSt. The difference between inlet pressure at the pump flange and atmospheric pressure must not exceed 0,2 bar to prevent aeration.

Multiply absolute pressure by 1,25 for HF-3, HF-4 fluids.
by 1,10 for ester or rapeseed base.

GENERAL CHARACTERISTICS

	Mounting standard	Weight without connector and bracket kg	Moment of inertia $Kgm^2 \times 10^{-4}$	Suction	Pressure
T7AS	SAE J744 ISO/3019-1 SAE A	9,5	2,6	1" - SAE 4 bolts J518 - ISO/DIS 6162-1	3/4" - SAE 4 bolts J518 - ISO/DIS 6162-1
				SAE 16 - SAE threads 1" 5/16 - 12 UNF - 2B	SAE 12 - SAE threads 1" 1/16 - 12 UNF - 2B
				NPTF threads 1" 1/4 NPTF	NPTF threads 3/4" NPTF
				1" BSP	3/4" BSP
T7ASW	SAE J744 ISO/3019-1 SAE A	11,3	3,7	1"1/4 - SAE 4 bolts J518 - ISO/DIS 6162-1	3/4" - SAE 4 bolts J518 - ISO/DIS 6162-1
				SAE 20 - SAE threads 1" 5/8 - 12 UNF - 2B	SAE 12 - SAE threads 1" 1/16 - 12 UNF - 2B
				NPTF threads 1" 1/4 NPTF	SAE 12 - SAE threads 1" 1/16 - 12 UNF - 2B
				1"1/4 BSP	3/4" BSP

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T7AS - Ordering Code

T7AS / T7ASW

Model No. T7AS - B17 - 1 R 00 - A 1 - 00 - ..

T7AS series - SAE A 2 bolts
Mounting flange J744

Displacement *
Volumetric displacement (ml/rev.)
B06 = 5,8
B10 = 9,8
B11 = 11,0
B13 = 12,8
B17 = 17,2
B20 = 19,8
B22 = 22,5
B25 = 24,9

Type of shaft T7AS
1 = keyed (non SAE) Ø 19,05
3 = splined 16/32 (SAE B) 13 teeth
4 = splined 16/32 (SAE A) 9 teeth

Direction of rotation (view on shaft end)
R = Clockwise
L = Counter-clockwise

Modifications

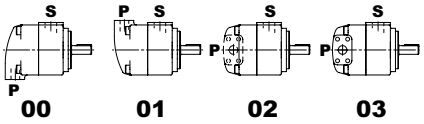
Mounting w/connection variables
00 = 4 bolts SAE flanges (J518) UNC thread
S = 1" SAE
P = 3/4" SAE
02 = SAE thread
S = 1"5/16 (SAE 16)
P = 1"1/16 (SAE 12)
03 = NPTF thread
S = 1"1/4 NPTF
P = 3/4" NPTF
04 = BSP threads
S = 1" BSP
P = 3/4" BSP

Seal class
1 = S1 BUNA N - 0,7 bar max.
(for mineral oil)
5 = S5 VITON - 0,7 bar max.
(for mineral oil and fire resistant fluids)

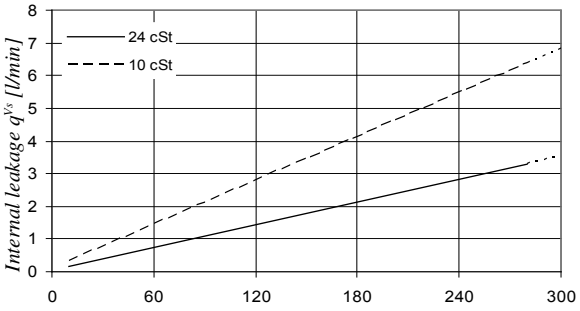
Design letter

Porting combination
00 = standard

P = Pressure
S = Suction



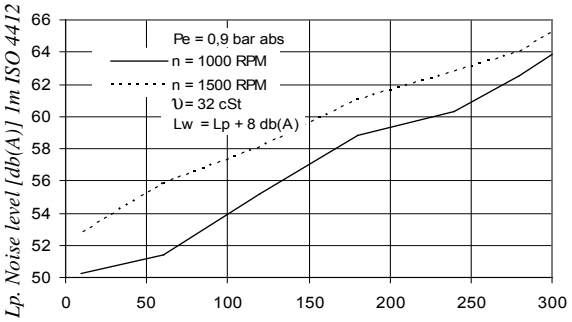
INTERNAL LEAKAGE (TYPICAL)



Pressure p [bar]

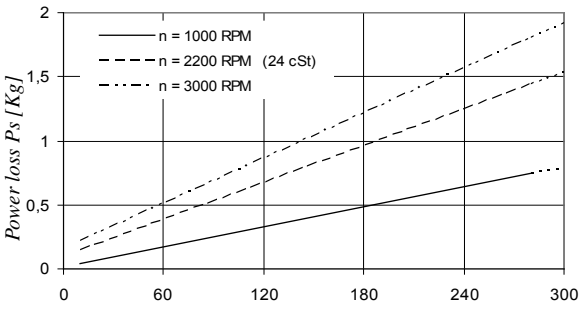
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is higher than 50% of theoretical flow.

NOISE LEVEL (TYPICAL) - T7AS B20



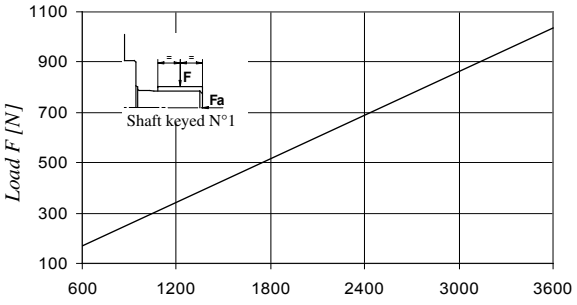
Pressure p [bar]

POWER LOSS HYDROMECHANICAL (TYPICAL)



Pressure p [bar]

PERMISSIBLE RADIAL LOAD



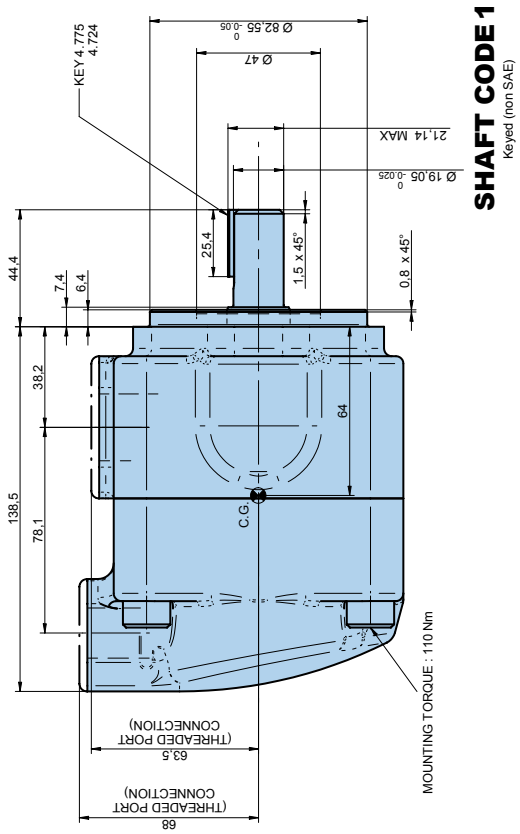
Speed n [RPM]

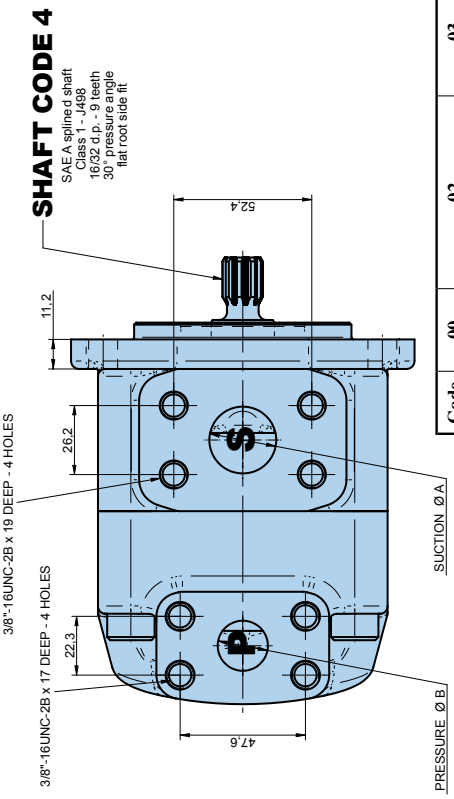
** Cartridge designation is now in ml/rev. (example : B22 = 22,5 ml/rev.)*

Maximum permissible axial load Fa = 600 N

Parker Hannifin
Denison Vane Pump Division
Vierzon - France

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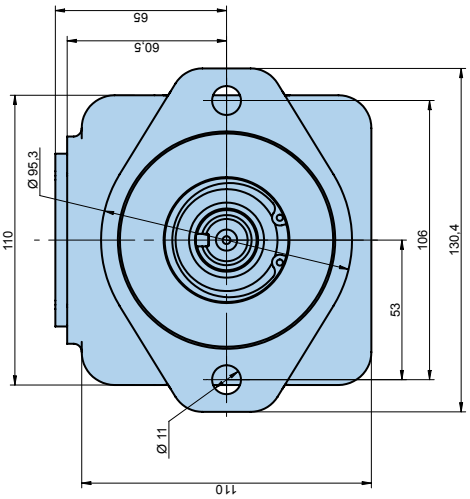


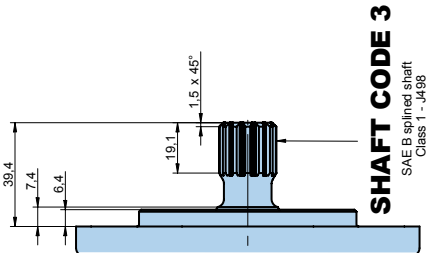


Code	00	02	03	04
A	Ø 25,40	SAE # 16 1" 5/16 - 12 UNF - 2B	1" 1/14 NPTF	1" BSP
B	Ø 19,05	SAE # 12 1" 1/16 - 12 UNF - 2B	3/4" NPTF	3/4" BSP

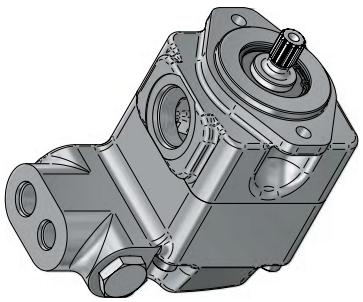
If inlet velocity > 1,9 m/s, please contact Parker Denison.

Shaft torque limits [ml/rev. x bar]	
Shaft	Vi x p max.
1	8720
3	8720
4	6550





Option : with valve



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Model No. T7ASW - B32 - 1 R 00 - A 1 - 00 - ..

T7ASW series - SAE A 2 bolts
Mounting flange J744

Displacement *
Volumetric displacement (ml/rev.)
B26 = 26,0
B28 = 28,0
B30 = 30,0
B32 = 31,8
B34 = 34,0
B36 = 36,0
B40 = 40,0

Type of shaft T7ASW
1 = keyed (non SAE) Ø 19,05
3 = splined 16/32 (SAE B) 13 teeth
4 = splined 16/32 (non SAE) 11 teeth

Direction of rotation (view on shaft end)
R = Clockwise
L = Counter-clockwise

Modifications

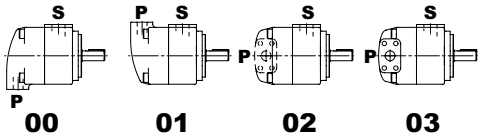
Mounting w/connection variables
00 = 4 bolts SAE flanges (J518) UNC threads
S = 1"1/4 SAE
P = 3/4" SAE
02 = SAE thread
S = 1"5/8 (SAE 20)
P = 1"1/16 (SAE 12)
03 = NPTF & SAE threads
S = 1"1/4 NPTF
P = 1"1/16 (SAE 12)
04 = BSP threads
S = 1"1/4 BSP
P = 3/4" BSP

Seal class
1 = S1 BUNA N - 0,7 bar max.
(for mineral oil)

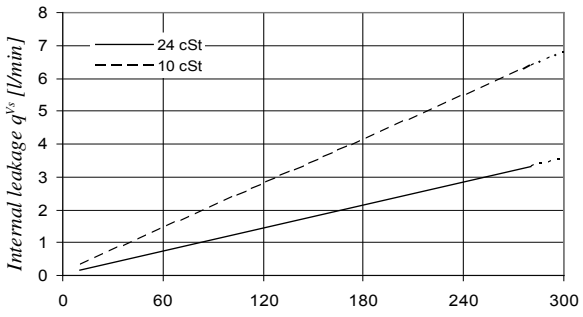
Design letter

Porting combination
00 = standard

P = Pressure
S = Suction

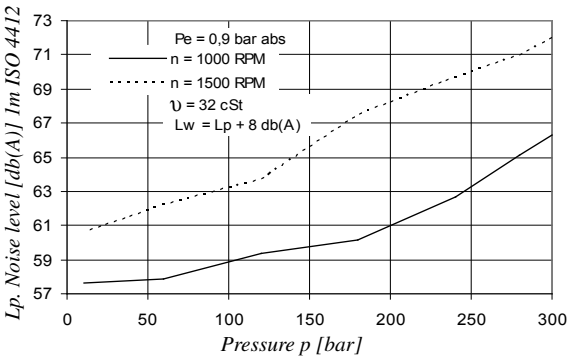


INTERNAL LEAKAGE (TYPICAL)

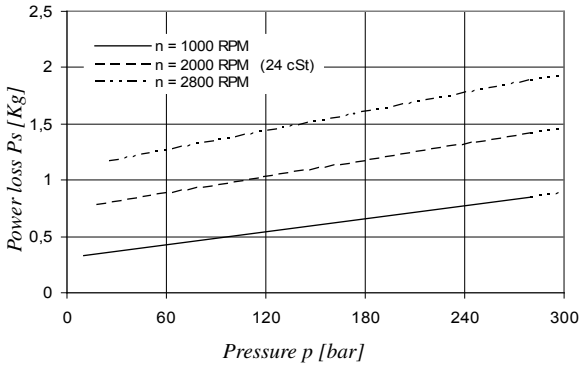


Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is higher than 50% of theoretical flow.

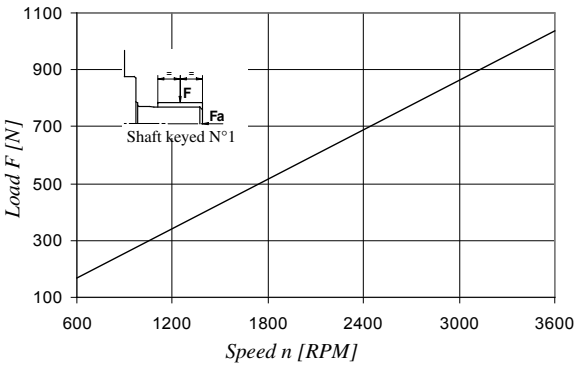
NOISE LEVEL (TYPICAL) - T7ASW B28



POWER LOSS HYDROMECHANICAL (TYPICAL)



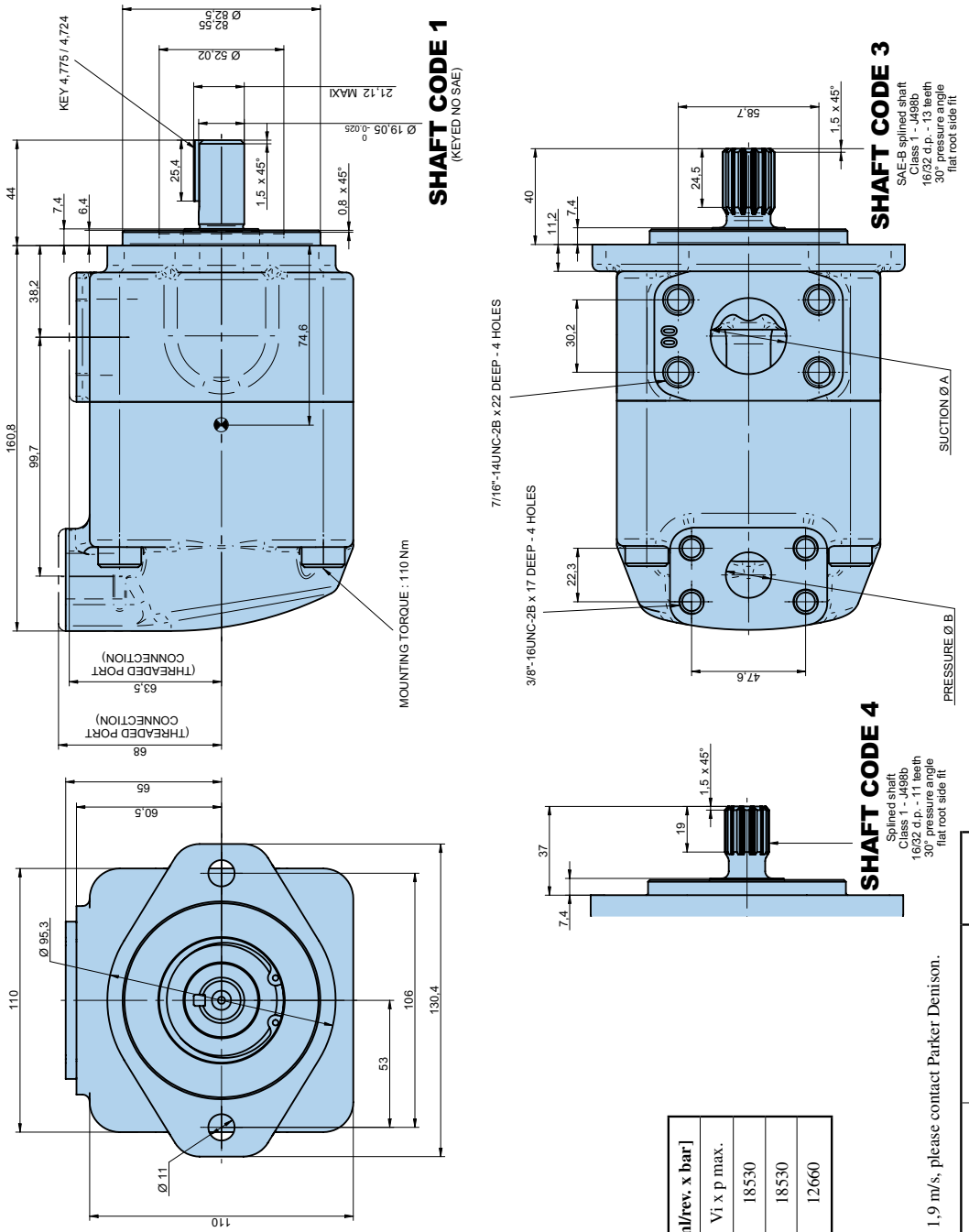
PERMISSIBLE RADIAL LOAD



** Cartridge designation is now in ml/rev. (example : B22 = 22,5 ml/rev.)* *Maximum permissible axial load Fa = 800 N*

Parker Hannifin
Denison Vane Pump Division
Vierzon - France

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Shaft torque limits [ml/rev. x bar]	
Shaft	Vi x p max.
1	18530
3	18530
4	12660

If inlet velocity > 1,9 m/s, please contact Parker Denison.

Code	00	02	03	04
A	Ø 31,80	SAE # 16 1" 5/16 - 12 UNF - 2B	1" 1/14 NPTF	1"1/4 BSP
B	Ø 19,05	SAE # 12 1" 1/16 - 12 UNF - 2B	SAE # 12 1" 1/16 - 12 UNF - 2B	3/4 " BSP

Parker Hannifin
Denison Vane Pump Division
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Denison Vane Pump Division
Vierzon - France

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Hydraulics Group Sales Offices

Europe

Austria
Wiener Neustadt
Tel: +43 (0)2622 23501
Fax: +43 (0)2622 66212

Belgium
Nivelles
Tel: +32 (0)67 280 900
Fax: +32 (0)67 280 999

Czech Republic
Klecany
Tel: +420 284 083 111
Fax: +420 284 083 112

Denmark
Ballerup
Tel: +45 4356 0400
Fax: +45 4373 8431

Finland
Vantaa
Tel: +358 (0)9 4767 31
Fax: +358 (0)9 4767 3200

France
Contamine-sur-Arve
Tel: +33 (0)450 25 80 25
Fax: +33 (0)450 03 67 37

Germany
Kaarst
Tel: +49 (0)2131 4016 0
Fax: +49 (0)2131 4016 9199

Hungary
Budapest
Tel: +36 (06)1 220 4155
Fax: +36 (06)1 422 1525

Ireland
Dublin
Tel: +353 (0)1 293 9999
Fax: +353 (0)1 293 9900

Italy
Corsico (MI)
Tel: +39 02 45 19 21
Fax: +39 02 4 47 93 40

The Netherlands
Oldenzaal
Tel: +31 (0)541 585000
Fax: +31 (0)541 585459

Norway
Ski
Tel: +47 64 91 10 00
Fax: +47 64 91 10 90

Poland
Warsaw
Tel: +48 (0)22 573 24 00
Fax: +48 (0)22 573 24 03

Portugal
Leca da Palmeira
Tel: +351 22 9997 360
Fax: +351 22 9961 527

Slovakia
Ref. Czech Republic

Spain
Madrid
Tel: +34 91 675 73 00
Fax: +34 91 675 77 11

Sweden
Spånga
Tel: +46 (0)8 597 950 00
Fax: +46 (0)8 597 951 10

Turkey
Merter/Istanbul
Tel: +90 212 482 91 06 or 07
Fax: +90 212 482 91 10

United Kingdom
Warwick
Tel: +44 (0)1926 317 878
Fax: +44 (0)1926 317 855

International

Australia
Castle Hill
Tel: +61 (0)2-9634 7777
Fax: +61 (0)2-9899 6184

Canada
Milton, Ontario
Tel: +1 905-693-3000
Fax: +1 905-876-0788

China
Beijing
Tel: +86 10 6561 0520
Fax: +86 10 6561 0526

Asia Pacific Group
Hong Kong, Kowloon
Tel: +852 2428 8008
Fax: +852 2425 6896

India
Mumbai
Tel: +91 22 7907081
Fax: +91 22 7907080

Japan
Tokyo
Tel: +(81) 3 6408 3900
Fax: +(81) 3 5449 7201

Latin America Group
Brazil
Tel: +55 12 3954-5100
Fax: +55 12 3954-5266

South Africa
Kempton Park
Tel: +27 (0)11-961 0700
Fax: +27 (0)11-392 7213

USA
Cleveland (industrial)
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