



## PISTON PUMPS SERIES DARK „DARK” ISO, UNI



### 4 HOLES-ISO HYDRAULIC PISTON PUMPS

Tipo pompa Pump type	Codice Code	Cilindrata Displacement  cm <sup>3</sup> /rev	Pressione Pressure		Velocità max Max speed  rpm	Peso Weight  kg
			Massima Max  bar	Picco Peak  bar		
DARK-21	108-005-02120	20,25	350	350	1800	14,1
DARK-28	108-005-02826	27				
DARK-35	108-005-03521	33,75				
DARK-42	108-005-04226	40,5				
DARK-48	108-005-04824	47,25				
DARK-52	108-005-05225	51,97	300	350	1500	13,9
DARK-55	108-005-05529	54				
DARK-60	108-005-05921	59,3				

**Kit guarnizioni**  
Seal Kit

**108-903-00027**



### 3 HOLES-UNI HYDRAULIC PISTON PUMPS

Tipo pompa Pump type	Codice Code	Cilindrata Displacement  cm <sup>3</sup> /rev	Pressione Pressure		Velocità max Max speed  rpm	Peso Weight  kg
			Massima Max  bar	Picco Peak  bar		
DARK-21	108-005-02111	20,25	350	350	1800	13,5
DARK-28	108-005-02817	27				
DARK-35	108-005-03512	33,75				
DARK-42	108-005-04217	40,5				
DARK-48	108-005-04815	47,25				
DARK-52	108-005-05216	51,97	300	350	1500	13,3
DARK-55	108-005-05510	54				
DARK-60	108-005-05912	59,3				

**Kit guarnizioni**  
Seal Kit

**108-903-00018**



## PISTON PUMPS SERIES DARK „DARK” SAE-B



### AXIAL HYDRAULIC PISTON PUMPS

Tipo pompa <i>Pump type</i>	Codice <i>Code</i>	Cilindrata <i>Displacement</i>	Pressione <i>Pressure</i>		Velocità max <i>Max speed</i>	Peso <i>Weight</i>
			Massima <i>Max</i>	Picco <i>Peak</i>		
		<i>cm<sup>3</sup>/rev</i>	<i>bar</i>	<i>bar</i>	<i>rpm</i>	<i>kg</i>
<b>DARK SAE-B 21</b>	108-007-00219	20,25	350	340	1800	
<b>DARK SAE-B 28</b>	108-007-00282	27				
<b>DARK SAE-B 35</b>	108-007-00353	33,75				
<b>DARK SAE-B 42</b>	108-007-00424	40,5				
<b>DARK SAE-B 48</b>	108-007-00488	47,25	340	1500		
<b>DARK SAE-B 52</b>	108-007-00522	51,97	310			
<b>DARK SAE-B 55</b>	108-007-00559	54	300			
<b>DARK SAE-B 60</b>	108-007-00602	59,3	270			

**Kit guarnizioni**  
*Seal Kit*

**108-903-00054**



## PISTON PUMPS SERIE 2 PAK „2PAK”



### 4 HOLES-ISO HYDRAULIC PISTON PUMPS

Tipo pompa <i>Pump type</i>	Codice <i>Code</i>	Cilindrata <i>Displacement</i>	Pressione <i>Pressure</i>		Velocità max <i>Max speed</i>	Peso <i>Weight</i>
			Massima <i>Max</i>	Picco <i>Peak</i>		
		cm <sup>3</sup> /rev	bar	bar	rpm	kg
<b>2PAK-70</b>	108-005-07027	73	300	350	1500	20,9
<b>2PAK-80</b>	108-005-08026	82,2				20,3
<b>2PAK-90</b>	108-005-09025	91,4				20,3
<b>2PAK-100</b>	108-005-10022	100,4				20

**Kit guarnizioni**  
*Seal Kit*

**108-903-00036**



### TWIN DELIVERY 4 HOLES-ISO HYDRAULIC PISTON PUMPS

Tipo pompa <i>Pump type</i>	Codice <i>Code</i>	Cilindrata <i>Displacement</i>	Pressione <i>Pressure</i>		Velocità max <i>Max speed</i>	Peso <i>Weight</i>
			Massima <i>Max</i>	Picco <i>Peak</i>		
		cm <sup>3</sup> /rev	bar	bar	rpm	kg
<b>2PAK-35 + 35</b>	108-008-35351	35+35	300	350	1500	21,4
<b>2PAK-50 + 30</b>	108-008-50307	50+30				21,2
<b>2PAK-50 + 50</b>	108-008-50503	50+50				

**Kit guarnizioni**  
*Seal Kit*

**108-903-00036**



## PISTON PUMPS SERIES HDS „HDS” UNI 25-34



### BENT AXIS PISTON PUMPS

Tipo pompa Pump type	Rotazione Rotation		IN	OUT	IN	OUT	Temp. di funzionamento Working temperature	
	Destra Right	Sinistra Left					min	max
<b>HDS-25</b>	<b>108-014-02530</b>	<b>108-014-02549</b>	ISO 228 G 1	ISO 228 G 3/4	SAE	SAE	-15°C	200°C
<b>HDS-34</b>	<b>108-014-03431</b>	<b>108-014-03440</b>	G 1	G 3/4			-15°C	200°C

### CARATTERISTICHE TECNICHE DI FUNZIONAMENTO TECHNICAL FEATURES

Tipo pompa Pump type	Cilindrata Displacement  cm <sup>3</sup> /rev	Pressione Pressure			Velocità max. continua Max. continuous speed rpm	Velocità max. intermittente Max. intermittent speed rpm	Velocità min. Min. speed rpm	Peso Weight kg
		P1 bar	P2 bar	P3 bar				
<b>HDS-25</b>	25,12	350	370	400	2300	3000	300	7,6
<b>HDS-34</b>	33,80							

### SCELTA DEL TUBO DI ASPIRAZIONE HOW TO CHOOSE THE SUCTION PIPE SIZE

Q	∅ interno min. tubo Min pipe diam.		Velocità flusso Flow speed (m/s)
	mm	inch	
30	32	1" 1/4	0,62
40	32		0,83
50	38	1" 1/2	0,74
60	38		0,88
70	40	1" 9/16	0,93
80	45	1" 3/4	0,84
90	45		0,94
100	50	2"	0,85
110	50		0,93
120	60	2" 3/8	0,71
130	60		0,77
140	60		0,83
150	60		0,88
160	63	2" 1/2	0,86
170	63		0,91
180	63		0,96

Per garantire corrette condizioni di aspirazione la velocità del flusso non deve superare 1 m/sec.  
To ensure the proper suction pipe size the flow speed should not exceed 1mt/sec.



### Kit guarnizioni Seal Kit

GAS

108-903-26349



## PISTON PUMPS SERIES HDS „HDS” ISO 25-34



### BENT AXIS PISTON PUMPS

Tipo pompa Pump type	Rotazione Rotation		IN ISO 228	OUT ISO 228	IN SAE	OUT SAE	Temp. di funzionamento Working temperature	
	Destra Right	Sinistra Left					min	max
HDS-25	108-015-02539	108-015-02548	G 1	G 3/4			-15°C	200°C
	108-915-02530	108-915-02549					-40°C	140°C
HDS-34	108-015-03430	108-015-03449	G 1	G 3/4			-15°C	200°C
	108-915-03431	108-915-03440					-40°C	140°C

### CARATTERISTICHE TECNICHE DI FUNZIONAMENTO TECHNICAL FEATURES

Tipo pompa Pump type	Cilindrata Displacement  cm <sup>3</sup> /rev	Pressione Pressure P1   P2   P3 bar   bar   bar			Velocità max. continua Max. continuous speed rpm	Velocità max. intermittente Max. intermittent speed rpm	Velocità min. Min. speed rpm	Peso Weight kg
		HDS-25	25,12	350	370	400	2300	3000
HDS-34	33,80							

### SCELTA DEL TUBO DI ASPIRAZIONE HOW TO CHOOSE THE SUCTION PIPE SIZE

Q	Ø interno min. tubo Min pipe diam.		Velocità flusso Flow speed (m/s)
	mm	inch	
30	32	1" 1/4	0,62
40	32		0,83
50	38	1" 1/2	0,74
60	38		0,88
70	40	1" 9/16	0,93
80	45	1" 3/4	0,84
90	45		0,94
100	50	2"	0,85
110	50		0,93
120	60	2" 3/8	0,71
130	60		0,77
140	60		0,83
150	60		0,88
160	63	2" 1/2	0,86
170	63		0,91
180	63		0,96



Per garantire corrette condizioni di aspirazione la velocità del flusso non deve superare 1 m/sec.  
To ensure the proper suction pipe size the flow speed should not exceed 1mt/sec.

### Kit guarnizioni Seal Kit

GAS	108-903-25340
GAS -40°	108-903-25359



## PISTON PUMPS SERIES HDS „HDS” 47-55-64, „MDS” 80



### BENT AXIS PISTON PUMPS

Tipo pompa Pump type	Rotazione Rotation		IN ISO 228	OUT ISO 228	IN SAE 20	OUT SAE 12	Temp. di funzionamento Working temperature	
	Destra Right	Sinistra Left					min	max
<b>HDS-47</b>	<b>108-015-04733</b>	<b>108-015-04742</b>	G 1 1/4	G 3/4			-15°C	200°C
	108-915-04734	108-915-04743					-40°C	140°C
	108-907-00470	108-907-00489						
<b>HDS-55</b>	<b>108-015-05536</b>	<b>108-015-05545</b>	G 1 1/4	G 3/4			-15°C	200°C
	108-915-05537	108-915-05546					-40°C	140°C
	108-907-00550	108-907-00569						
<b>HDS-64</b>	<b>108-015-06035</b>	<b>108-015-06044</b>	G 1 1/4	G 3/4			-15°C	200°C
	108-915-06036	108-915-06045					-40°C	140°C
	108-907-00649	108-907-00658						
<b>MDS-80</b>	<b>108-016-00807</b>	<b>108-016-00816</b>	G 1 1/4	G 3/4			-15°C	200°C
	108-916-00808	108-916-00817					-40°C	140°C
	108-907-00809	108-907-00818						

### CARATTERISTICHE TECNICHE DI FUNZIONAMENTO TECHNICAL FEATURES

Tipo pompa Pump type	Cilindrata Displacement cm <sup>3</sup> /rev	Pressione Pressure P1 bar P2 bar P3 bar			Velocità max. continua Max. continuous speed rpm	Velocità max. intermittente Max. intermittent speed rpm	Velocità min. Min. speed rpm	Peso Weight kg
		<b>HDS-47</b>	47,13	350	370	400	1900	
<b>HDS-55</b>	56,7							
<b>HDS-64</b>	63,56							
<b>MDS-80</b>	77,25	300	300	300	1900	2500	300	

### SCELTA DEL TUBO DI ASPIRAZIONE HOW TO CHOOSE THE SUCTION PIPE SIZE

Q	Ø interno min. tubo Min pipe diam.		Velocità flusso Flow speed (m/s)
	mm	inch	
30	32	1" 1/4	0,62
40			0,83
50	38	1" 1/2	0,74
60			0,88
70	40	1" 9/16	0,93
80	45	1" 3/4	0,84
90			0,94
100	50	2"	0,85
110			0,93
120	60	2" 3/8	0,71
130			0,77
140			0,83
150			0,88
160			0,86
170	63	2" 1/2	0,91
180			0,96

Per garantire corrette condizioni di aspirazione la velocità del flusso non deve superare 1 m/sec.  
To ensure the proper suction pipe size the flow speed should not exceed 1mt/sec.



### Kit guarnizioni Seal Kit

GAS	108-903-47648
SAE	
GAS -40°	108-903-47657



## PISTON PUMPS SERIES HDS „HDS” 84-108, „MDS” 130



### BENT AXIS PISTON PUMPS

Tipo pompa Pump type	Rotazione Rotation		IN ISO 22B	OUT ISO 22B	IN SAE 24	OUT SAE 16	Temp. di funzionamento Working temperature	
	Destra Right	Sinistra Left					min	max
<b>HDS-84</b>	<b>108-015-08033</b>	<b>108-015-08042</b>	G 1 1/4	G 1			<b>-15°C</b>	<b>200°C</b>
	108-915-08034	108-915-08043					-40°C	140°C
	108-907-00845	108-907-00854			1 7/8-12	1 5/16-12	-15°C	200°C
<b>HDS-108</b>	<b>108-015-10833</b>	<b>108-015-10842</b>	G 1 1/2	G 1			<b>-15°C</b>	<b>200°C</b>
	108-915-10834	108-915-10843					-40°C	140°C
	108-907-01086	108-907-01095			1 7/8-12	1 5/16-12	-15°C	200°C
<b>MDS-130</b>	<b>108-016-01306</b>	<b>108-016-01315</b>	G 1 1/2	G 1			<b>-15°C</b>	<b>200°C</b>
	108-916-01307	108-916-01316					-40°C	140°C
	108-907-11306	108-907-11315			1 7/8-12	1 5/16-12	-15°C	200°C

### CARATTERISTICHE TECNICHE DI FUNZIONAMENTO TECHNICAL FEATURES

Tipo pompa Pump type	Cilindrata Displacement cm <sup>3</sup> /rev	Pressione Pressure			Velocità max. continua Max. continuous speed rpm	Velocità max. intermittente Max. intermittent speed rpm	Velocità min. Min. speed rpm	Peso Weight kg
		P1 bar	P2 bar	P3 bar				
<b>HDS-84</b>	84,33	350	370	400	1500	2000	300	17,8
<b>HDS-108</b>	107							
<b>MDS-130</b>	131,62	250	260	270	1500	2000	300	

### SCELTA DEL TUBO DI ASPIRAZIONE HOW TO CHOOSE THE SUCTION PIPE SIZE

Q	∅ interno min. tubo Min pipe diam.		Velocità flusso Flow speed (m/s)
	mm	inch	
30	32	1" 1/4	0,62
40	32		0,83
50	38	1" 1/2	0,74
60	38		0,88
70	40	1" 9/16	0,93
80	45	1" 3/4	0,84
90	45		0,94
100	50	2"	0,85
110	50		0,93
120	60	2" 3/8	0,71
130	60		0,77
140	60		0,83
150	60		0,88
160	63	2" 1/2	0,86
170	63		0,91
180	63		0,96

Per garantire corrette condizioni di aspirazione la velocità del flusso non deve superare 1 m/sec.  
To ensure the proper suction pipe size the flow speed should not exceed 1m/sec.

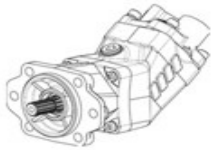


### Kit guarnizioni Seal Kit

GAS	108-903-84009
SAE	
GAS -40°	108-903-84018



## PISTON PUMPS SERIES HDS „HDS” SAE-B 47/55/64



### BENT AXIS PISTON PUMPS

Tipo pompa Pump type	Rotazione Rotation		IN SAE 20	OUT SAE 12	IN GAS	OUT GAS	Temp. di funzionamento Working temperature	
	Destra Right	Sinistra Left					min	max
<b>HDS SAE-B 47</b>	<b>108-017-00477</b>	<b>108-017-00486</b>	1 5/8-12	1 1/16-12			<b>-15°C</b>	<b>200°C</b>
	108-917-00478	108-917-00487			G 1 1/4	G 3/4		
<b>HDS SAE-B 55</b>	<b>108-017-00557</b>	<b>108-017-00566</b>	1 5/8-12	1 1/16-12				
	108-917-00558	108-917-00567			G 1 1/4	G 3/4		
<b>HDS SAE-B 64</b>	<b>108-017-00646</b>	<b>108-017-00655</b>	1 5/8-12	1 1/16-12				
	108-917-00647	108-917-00656			G 1 1/4	G 3/4		

### CARATTERISTICHE TECNICHE DI FUNZIONAMENTO TECHNICAL FEATURES

Tipo pompa Pump type	Cilindrata Displacement cm <sup>3</sup> /rev	Pressione Pressure P1   P2   P3 bar   bar   bar			Velocità max. continua Max. continuous speed rpm	Velocità max. intermittente Max. intermittent speed rpm	Velocità min. Min. speed rpm	Peso Weight kg
		<b>HDS-47</b>	47,13	340			1900	2500
<b>HDS-55</b>	56,7	280						
<b>HDS-64</b>	63,56	250						

### SCELTA DEL TUBO DI ASPIRAZIONE HOW TO CHOOSE THE SUCTION PIPE SIZE

Q	Ø interno min. tubo Min pipe diam. mm   inch		Velocità flusso Flow speed (m/s)
	30	32	
40	32	0,83	
50	38	1" 1/2	0,74
60	38		0,88
70	40	1" 9/16	0,93
80	45		0,84
90	45	1" 3/4	0,94
100	50		0,85
110	50	2"	0,93
120	60		0,71
130	60	2" 3/8	0,77
140	60		0,83
150	60		0,88
160	63	2" 1/2	0,86
170	63		0,91
180	63		0,96



Per garantire corrette condizioni di aspirazione la velocità del flusso non deve superare 1 m/sec.  
To ensure the proper suction pipe size the flow speed should not exceed 1mt/sec.

### Kit guarnizioni

Seal Kit

108-903-00214



## PISTON PUMPS SERIES HDS „HDS” SAE-BB 47/55/64, „MDS” SAE-BB 80



### BENT AXIS PISTON PUMPS

Tipo pompa Pump type	Rotazione Rotation		IN SAE 20	OUT SAE 12	IN GAS	OUT GAS	Temp. di funzionamento Working temperature	
	Destra Right	Sinistra Left					min	max
HDS SAE-BB 47	108-018-00476	108-018-00485	1 5/8-12	1 1/16-12			-15°C	200°C
	108-918-00477	108-918-00486			G 1 1/4	G 3/4		
HDS SAE-BB 55	108-018-00556	108-018-00565	1 5/8-12	1 1/16-12				
	108-918-00557	108-918-00566			G 1 1/4	G 3/4		
HDS SAE-BB 64	108-018-00645	108-018-00654	1 5/8-12	1 1/16-12				
	108-918-00646	108-918-00655			G 1 1/4	G 3/4		
MDS SAE-BB 80	108-018-10803	108-018-10812	1 5/8-12	1 1/16-12				
	108-918-10804	108-918-10813			G 1 1/4	G 3/4		

### CARATTERISTICHE TECNICHE DI FUNZIONAMENTO TECHNICAL FEATURES

Tipo pompa Pump type	Cilindrata Displacement cm <sup>3</sup> /rev	Pressione Pressure P1   P2   P3 bar   bar   bar			Velocità max. continua Max. continuous speed rpm	Velocità max. intermittente Max. intermittent speed rpm	Velocità min. Min. speed rpm	Peso Weight kg
		P1	P2	P3				
HDS-47	47,13	400			1900	2500	300	14
HDS-55	56,7							
HDS-64	63,56	378						
MDS-80	77,25	311						

### SCELTA DEL TUBO DI ASPIRAZIONE HOW TO CHOOSE THE SUCTION PIPE SIZE

Q	Ø interno min. tubo Min pipe diam.		Velocità flusso Flow speed (m/s)
	mm	inch	
30	32	1" 1/4	0,62
40	32		0,83
50	38	1" 1/2	0,74
60	38		0,88
70	40	1" 9/16	0,93
80	45	1" 3/4	0,84
90	45		0,94
100	50	2"	0,85
110	50		0,93
120	60	2" 3/8	0,71
130	60		0,77
140	60		0,83
150	60		0,88
160	63	2" 1/2	0,86
170	63		0,91
180	63		0,96

Per garantire corrette condizioni di aspirazione la velocità del flusso non deve superare 1 m/sec.  
To ensure the proper suction pipe size the flow speed should not exceed 1mt/sec.



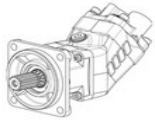
### Kit guarnizioni

Seal Kit

108-903-00214



## PISTON PUMPS SERIES HDS „HDS” SAE C 47/55/64, „MDS” SAE C 80



### BENT AXIS PISTON PUMPS

Tipo pompa Pump type	Rotazione Rotation		IN SAE 20	OUT SAE 12	IN GAS	OUT GAS	Temp. di funzionamento Working temperature	
	Destra Right	Sinistra Left					min	max
HDS SAE-C 47	108-020-00472	108-020-00481	1 5/8-12	1 1/16-12			-15°C	200°C
	108-920-00473	108-920-00482			G 1 1/4	G 3/4		
HDS SAE-C 55	108-020-00552	108-020-00561	1 5/8-12	1 1/16-12				
	108-920-00553	108-920-00562			G 1 1/4	G 3/4		
HDS SAE-C 64	108-020-00641	108-020-00650	1 5/8-12	1 1/16-12				
	108-920-00642	108-920-00651			G 1 1/4	G 3/4		
MDS SAE-C 80	108-020-10809	108-020-10818	1 5/8-12	1 1/16-12				
	108-920-10800	108-920-10819			G 1 1/4	G 3/4		

### CARATTERISTICHE TECNICHE DI FUNZIONAMENTO TECHNICAL FEATURES

Tipo pompa Pump type	Cilindrata Displacement  cm <sup>3</sup> /rev	Pressione Pressure			Velocità max. continua Max. continuous speed rpm	Velocità max. intermittente Max. intermittent speed rpm	Velocità min. Min. speed rpm	Peso Weight kg
		P1 bar	P2 bar	P3 bar				
HDS-47	47,13	400			1900	2500	300	14
HDS-55	56,7							
HDS-64	63,56							
MDS-80	77,25							

### SCELTA DEL TUBO DI ASPIRAZIONE HOW TO CHOOSE THE SUCTION PIPE SIZE

Q	Ø interno min. tubo Min pipe diam.		Velocità flusso Flow speed (m/s)
	mm	inch	
30	32	1" 1/4	0,62
40	32		0,83
50	38	1" 1/2	0,74
60	38		0,88
70	40	1" 9/16	0,93
80	45	1" 3/4	0,84
90	45		0,94
100	50	2"	0,85
110	50		0,93
120	60	2" 3/8	0,71
130	60		0,77
140	60		0,83
150	60		0,88
160	63	2" 1/2	0,86
170	63		0,91
180	63		0,96



Per garantire corrette condizioni di aspirazione la velocità del flusso non deve superare 1 m/sec.  
To ensure the proper suction pipe size the flow speed should not exceed 1mt/sec.

### Kit guarnizioni Seal Kit

108-903-00223



## PISTON PUMPS SERIES MDS „MDS” 80



### BENT AXIS PISTON PUMPS

Tipo pompa Pump type	Rotazione Rotation		IN ISO 228	OUT ISO 228	IN SAE 20	OUT SAE 12	Temp. di funzionamento Working temperature	
	Destra Right	Sinistra Left					min	max
<b>HDS-47</b>	<b>108-015-04733</b>	<b>108-015-04742</b>	G 1 1/4	G 3/4			-15°C	200°C
	108-915-04734	108-915-04743					-40°C	140°C
	108-907-00470	108-907-00489						
<b>HDS-55</b>	<b>108-015-05536</b>	<b>108-015-05545</b>	G 1 1/4	G 3/4			-15°C	200°C
	108-915-05537	108-915-05546					-40°C	140°C
	108-907-00550	108-907-00569						
<b>HDS-64</b>	<b>108-015-06035</b>	<b>108-015-06044</b>	G 1 1/4	G 3/4			-15°C	200°C
	108-915-06036	108-915-06045					-40°C	140°C
	108-907-00649	108-907-00658						
<b>MDS-80</b>	<b>108-016-00807</b>	<b>108-016-00816</b>	G 1 1/4	G 3/4			-15°C	200°C
	108-916-00808	108-916-00817					-40°C	140°C
	108-907-00809	108-907-00818						

### CARATTERISTICHE TECNICHE DI FUNZIONAMENTO TECHNICAL FEATURES

Tipo pompa Pump type	Cilindrata Displacement cm <sup>3</sup> /rev	Pressione Pressure P1 P2 P3 bar bar bar			Velocità max. continua Max. continuous speed rpm	Velocità max. intermittente Max. intermittent speed rpm	Velocità min. Min. speed rpm	Peso Weight kg
		<b>HDS-47</b>	47,13	350	370	400	1900	2500
<b>HDS-55</b>	56,7							
<b>HDS-64</b>	63,56							
<b>MDS-80</b>	77,25	300	300	300	1900	2500	300	

#### SCELTA DEL TUBO DI ASPIRAZIONE HOW TO CHOOSE THE SUCTION PIPE SIZE

Q	Ø interno min. tubo Min pipe diam. mm inch		Velocità flusso Flow speed (m/s)
	30	32	
40	0,83		
50	38	1" 1/2	0,74
60			0,88
70			0,93
80	45	1" 3/4	0,84
90			0,94
100	50	2"	0,85
110			0,93
120	60	2" 3/8	0,71
130			0,77
140			0,83
150			0,88
160			0,86
170			0,91
180	63	2" 1/2	0,96

Per garantire corrette condizioni di aspirazione la velocità del flusso non deve superare 1 m/sec.  
To ensure the proper suction pipe size the flow speed should not exceed 1m/sec.



#### Kit guarnizioni Seal Kit

GAS	108-903-47648
SAE	
GAS -40°	108-903-47657



## PISTON PUMPS SERIES MDS „MDS” 130



### BENT AXIS PISTON PUMPS

Tipo pompa Pump type	Rotazione Rotation		IN ISO 228	OUT ISO 228	IN SAE 24	OUT SAE 16	Temp. di funzionamento Working temperature	
	Destra Right	Sinistra Left					min	max
<b>HDS-84</b>	<b>108-015-08033</b>	<b>108-015-08042</b>	G 1 1/4	G 1			<b>-15°C</b>	<b>200°C</b>
	108-915-08034	108-915-08043					-40°C	140°C
	108-907-00845	108-907-00854			1 7/8-12	1 5/16-12	-15°C	200°C
<b>HDS-108</b>	<b>108-015-10833</b>	<b>108-015-10842</b>	G 1 1/2	G 1			<b>-15°C</b>	<b>200°C</b>
	108-915-10834	108-915-10843					-40°C	140°C
	108-907-01086	108-907-01095			1 7/8-12	1 5/16-12	-15°C	200°C
<b>MDS-130</b>	<b>108-016-01306</b>	<b>108-016-01315</b>	G 1 1/2	G 1			<b>-15°C</b>	<b>200°C</b>
	108-916-01307	108-916-01316					-40°C	140°C
	108-907-11306	108-907-11315			1 7/8-12	1 5/16-12	-15°C	200°C

### CARATTERISTICHE TECNICHE DI FUNZIONAMENTO

#### TECHNICAL FEATURES

Tipo pompa Pump type	Cilindrata Displacement  cm <sup>3</sup> /rev	Pressione Pressure			Velocità max. continua Max. continuous speed rpm	Velocità max. intermittente Max. intermittent speed rpm	Velocità min. Min. speed rpm	Peso Weight  kg
		P1 bar	P2 bar	P3 bar				
<b>HDS-84</b>	84,33	350	370	400	1500	2000	300	
<b>HDS-108</b>	107							
<b>MDS-130</b>	131,62	250	260	270	1500	2000	300	

### SCELTA DEL TUBO DI ASPIRAZIONE

#### HOW TO CHOOSE THE SUCTION PIPE SIZE

Q	Ø interno min. tubo Min pipe diam.		Velocità flusso Flow speed (m/s)
	mm	inch	
30	32	1" 1/4	0,62
40	32		0,83
50	38	1" 1/2	0,74
60	38		0,88
70	40	1" 9/16	0,93
80	45	1" 3/4	0,84
90	45		0,94
100	50	2"	0,85
110	50		0,93
120	60	2" 3/8	0,71
130	60		0,77
140	60		0,83
150	60		0,88
160	63	2" 1/2	0,86
170	63		0,91
180	63		0,96

Per garantire corrette condizioni di aspirazione la velocità del flusso non deve superare 1 m/sec.  
To ensure the proper suction pipe size the flow speed should not exceed 1mt/sec.



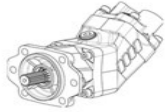
### Kit guarnizioni

#### Seal Kit

GAS	108-903-84009
SAE	
GAS -40°	108-903-84018



## PISTON PUMPS SERIES MDS „MDS” SAE-BB 80



### BENT AXIS PISTON PUMPS

Tipo pompa Pump type	Rotazione Rotation		IN SAE 20	OUT SAE 12	IN GAS	OUT GAS	Temp. di funzionamento Working temperature	
	Destra Right	Sinistra Left					min	max
<b>HDS SAE-BB 47</b>	<b>108-018-00476</b>	<b>108-018-00485</b>	1 5/8-12	1 1/16-12			<b>-15°C</b>	<b>200°C</b>
	108-918-00477	108-918-00486			G 1 1/4	G 3/4		
<b>HDS SAE-BB 55</b>	<b>108-018-00556</b>	<b>108-018-00565</b>	1 5/8-12	1 1/16-12				
	108-918-00557	108-918-00566			G 1 1/4	G 3/4		
<b>HDS SAE-BB 64</b>	<b>108-018-00645</b>	<b>108-018-00654</b>	1 5/8-12	1 1/16-12				
	108-918-00646	108-918-00655			G 1 1/4	G 3/4		
<b>MDS SAE-BB 80</b>	<b>108-018-10803</b>	<b>108-018-10812</b>	1 5/8-12	1 1/16-12				
	108-918-10804	108-918-10813			G 1 1/4	G 3/4		

### CARATTERISTICHE TECNICHE DI FUNZIONAMENTO TECHNICAL FEATURES

Tipo pompa Pump type	Cilindrata Displacement cm <sup>3</sup> /rev	Pressione Pressure P1   P2   P3 bar   bar   bar			Velocità max. continua Max. continuous speed rpm	Velocità max. intermittente Max. intermittent speed rpm	Velocità min. Min. speed rpm	Peso Weight kg
		<b>HDS-47</b>	47,13	400			1900	2500
<b>HDS-55</b>	56,7							
<b>HDS-64</b>	63,56	378						
<b>MDS-80</b>	77,25	311						

### SCELTA DEL TUBO DI ASPIRAZIONE HOW TO CHOOSE THE SUCTION PIPE SIZE

Q	Ø interno min. tubo Min pipe diam. mm   inch		Velocità flusso Flow speed (m/s)
	30	32	
40	32	0,83	
50	38	1" 1/2	0,74
60	38		0,88
70	40	1" 9/16	0,93
80	45	1" 3/4	0,84
90	45		0,94
100	50	2"	0,85
110	50		0,93
120	60	2" 3/8	0,71
130	60		0,77
140	60		0,83
150	60		0,88
160	63	2" 1/2	0,86
170	63		0,91
180	63		0,96



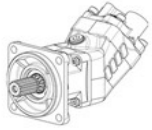
Per garantire corrette condizioni di aspirazione la velocità del flusso non deve superare 1 m/sec.  
To ensure the proper suction pipe size the flow speed should not exceed 1mt/sec.

### Kit guarnizioni Seal Kit

108-903-00214



## PISTON PUMPS SERIES MDS „MDS” SAE-C 80



### BENT AXIS PISTON PUMPS

Tipo pompa Pump type	Rotazione Rotation		IN SAE 20	OUT SAE 12	IN GAS	OUT GAS	Temp. di funzionamento Working temperature	
	Destra Right	Sinistra Left					min	max
<b>HDS SAE-C 47</b>	<b>108-020-00472</b>	<b>108-020-00481</b>	1 5/8-12	1 1/16-12			<b>-15°C</b>	<b>200°C</b>
	108-920-00473	108-920-00482			G 1 1/4	G 3/4		
<b>HDS SAE-C 55</b>	<b>108-020-00552</b>	<b>108-020-00561</b>	1 5/8-12	1 1/16-12				
	108-920-00553	108-920-00562			G 1 1/4	G 3/4		
<b>HDS SAE-C 64</b>	<b>108-020-00641</b>	<b>108-020-00650</b>	1 5/8-12	1 1/16-12				
	108-920-00642	108-920-00651			G 1 1/4	G 3/4		
<b>MDS SAE-C 80</b>	<b>108-020-10809</b>	<b>108-020-10818</b>	1 5/8-12	1 1/16-12				
	108-920-10800	108-920-10819			G 1 1/4	G 3/4		

### CARATTERISTICHE TECNICHE DI FUNZIONAMENTO TECHNICAL FEATURES

Tipo pompa Pump type	Cilindrata Displacement  cm <sup>3</sup> /rev	Pressione Pressure			Velocità max. continua Max. continuous speed  rpm	Velocità max. intermittente Max. intermittent speed  rpm	Velocità min. Min. speed  rpm	Peso Weight  kg
		P1 bar	P2 bar	P3 bar				
<b>HDS-47</b>	47,13	400			1900	2500	300	14
<b>HDS-55</b>	56,7							
<b>HDS-64</b>	63,56							
<b>MDS-80</b>	77,25							

### SCELTA DEL TUBO DI ASPIRAZIONE HOW TO CHOOSE THE SUCTION PIPE SIZE

Q	Ø interno min. tubo Min pipe diam.		Velocità flusso Flow speed  (m/s)
	mm	inch	
30	32	1" 1/4	0,62
40	32		0,83
50	38	1" 1/2	0,74
60	38		0,88
70	40	1" 9/16	0,93
80	45	1" 3/4	0,84
90	45		0,94
100	50	2"	0,85
110	50		0,93
120	60	2" 3/8	0,71
130	60		0,77
140	60		0,83
150	60		0,88
160	63	2" 1/2	0,86
170	63		0,91
180	63		0,96

Per garantire corrette condizioni di aspirazione la velocità del flusso non deve superare 1 m/sec.  
To ensure the proper suction pipe size the flow speed should not exceed 1mt/sec.

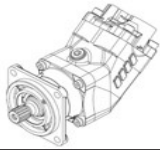


**Kit guarnizioni**  
Seal Kit

108-903-00223



## PISTON PUMPS SERIES MDS „MDS” SAE-C 130



### BENT AXIS PISTON PUMPS

Tipo pompa Pump type	Rotazione Rotation		IN SAE 20	OUT SAE 12	IN GAS	OUT GAS	Temp. di funzionamento Working temperature	
	Destra Right	Sinistra Left					min	max
HDS SAE-C 84	108-020-00847	108-020-00856	1 5/8-12	1 1/16-12			-15°C	200°C
	108-920-00848	108-920-00857			G 1 1/4	G 3/4		
HDS SAE-C 108	108-020-01088	108-020-01097	1 5/8-12	1 1/16-12				
	108-920-01089	108-920-01098			G 1 1/4	G 3/4		
MDS SAE-C 130	108-020-11308	108-020-11317	1 5/8-12	1 1/16-12				
	108-920-11309	108-920-11318			G 1 1/4	G 3/4		

### CARATTERISTICHE TECNICHE DI FUNZIONAMENTO

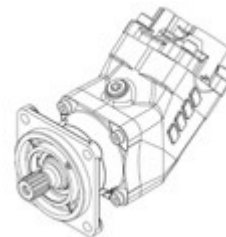
#### TECHNICAL FEATURES

Tipo pompa Pump type	Cilindrata Displacement cm <sup>3</sup> /rev	Pressione Pressure P1   P2   P3 bar   bar   bar			Velocità max. continua Max. continuous speed rpm	Velocità max. intermittente Max. intermittent speed rpm	Velocità min. Min. speed rpm	Peso Weight kg
		400						
HDS-84	84,33	400			1500	2000	300	17,8
HDS-108	107	400						
MDS-130	131,62	370						

### SCELTA DEL TUBO DI ASPIRAZIONE

#### HOW TO CHOOSE THE SUCTION PIPE SIZE

Q	∅ interno min. tubo Min pipe diam.		Velocità flusso Flow speed (m/s)
	mm	inch	
30	32	1" 1/4	0,62
40	32		0,83
50	38	1" 1/2	0,74
60	38		0,88
70	40	1" 9/16	0,93
80	45	1" 3/4	0,84
90	45		0,94
100	50	2"	0,85
110	50		0,93
120	60	2" 3/8	0,71
130	60		0,77
140	60		0,83
150	60		0,88
160	63	2" 1/2	0,86
170	63		0,91
180	63		0,96



Per garantire corrette condizioni di aspirazione la velocità del flusso non deve superare 1 m/sec.  
To ensure the proper suction pipe size the flow speed should not exceed 1mt/sec.

### Kit guarnizioni

Seal Kit

108-903-00232



## PISTON PUMPS VDPP SERIES VDPP 60



### VERIABLE DISPLACEMENT AXIAL PISTON PUMP

Pump type	Rotation		Nominal pressure <i>bar</i>	Maximum pressure <i>bar</i>	Displacement <i>cm<sup>3</sup>/rev</i>	Weight <i>kg</i>
	Right	Left				
<b>VDPP 60 ISO</b>	108-050-00609	108-050-00618	350	400	60	22
<b>VDPP 60 SAE</b>	108-051-00608	108-051-00617				

SUCTION FITTINGS				
	STRAIGHT			WITH THREAD
	45°	90°	THREAD	THREAD
Ø 50	108-950-35045	108-950-35090	108-950-35000	
Ø 64	108-950-36445	108-950-36490	108-950-36400	
<b>G 1" 1/2</b>				108-950-41129
<b>G 1" 1/4</b>				108-950-41147

	RIGHT	LEFT
SEALS	108-950-50600	
DISTRIBUTOR PLATE	108-950-10608	108-950-20606
REGULATOR LSN	108-950-00100	
PRESSURE REGULATOR	108-950-00208	



## PISTON PUMPS VDPP SERIES VDPP 90



### VERIABLE DISPLACEMENT AXIAL PISTON PUMP

Pump type	Rotation		Nominal pressure <i>bar</i>	Maximum pressure <i>bar</i>	Displacement <i>cm<sup>3</sup>/giro</i>	Weight <i>kg</i>
	Right	Left				
VDPP 90 ISO	108-050-00903	108-050-00912	350	400	90	25,8
VDPP 90 SAE	108-051-00902	108-051-00911				

SUCTION FITTINGS				
	STRAIGHT			WITH THREAD
	45°	90°	THREAD	THREAD
Ø 50	108-950-35045	108-950-35090	108-950-35000	
Ø 64	108-950-36445	108-950-36490	108-950-36400	
G 1" 1/2				108-950-41129
G 1" 1/4				108-950-41147

	RIGHT	LEFT
SEALS	108-950-50897	
SEALS SAE	108-950-50904	
DISTRIBUTOR PLATE	108-950-10902	108-950-20900
REGULATOR LSN	108-950-00100	
PRESSURE REGULATOR	108-950-00208	



**PISTON PUMPS VDPP SERIES  
VDPP 110**



**VERIABLE DISPLACEMENT AXIAL PISTON PUMP**

Pump type	Rotation		Nominal pressure <i>bar</i>	Maximum pressure <i>bar</i>	Displacement <i>cm<sup>3</sup>/giro</i>	Weight <i>kg</i>
	Right	Left				
<b>VDPP 110 ISO</b>	108-050-01108	108-050-01117	350	400	110	28
<b>VDPP 110 SAE</b>	108-051-01107	108-051-01116				

<b>SUCTION FITTINGS</b>				
	STRAIGHT			WITH THREAD
	45°	90°	THREAD	THREAD
Ø 50	108-950-35045	108-950-35090	108-950-35000	
Ø 64	108-950-36445	108-950-36490	108-950-36400	
<b>G 1" 1/2</b>				108-950-41129
<b>G 1" 1/4</b>				108-950-41147

	<b>RIGHT</b>	<b>LEFT</b>
SEALS	108-950-51092	
SEALS SAE	108-950-51109	
DISTRIBUTOR PLATE	108-950-11107	108-950-21105
REGULATOR LSN	108-950-00100	
PRESSURE REGULATOR	108-950-00208	