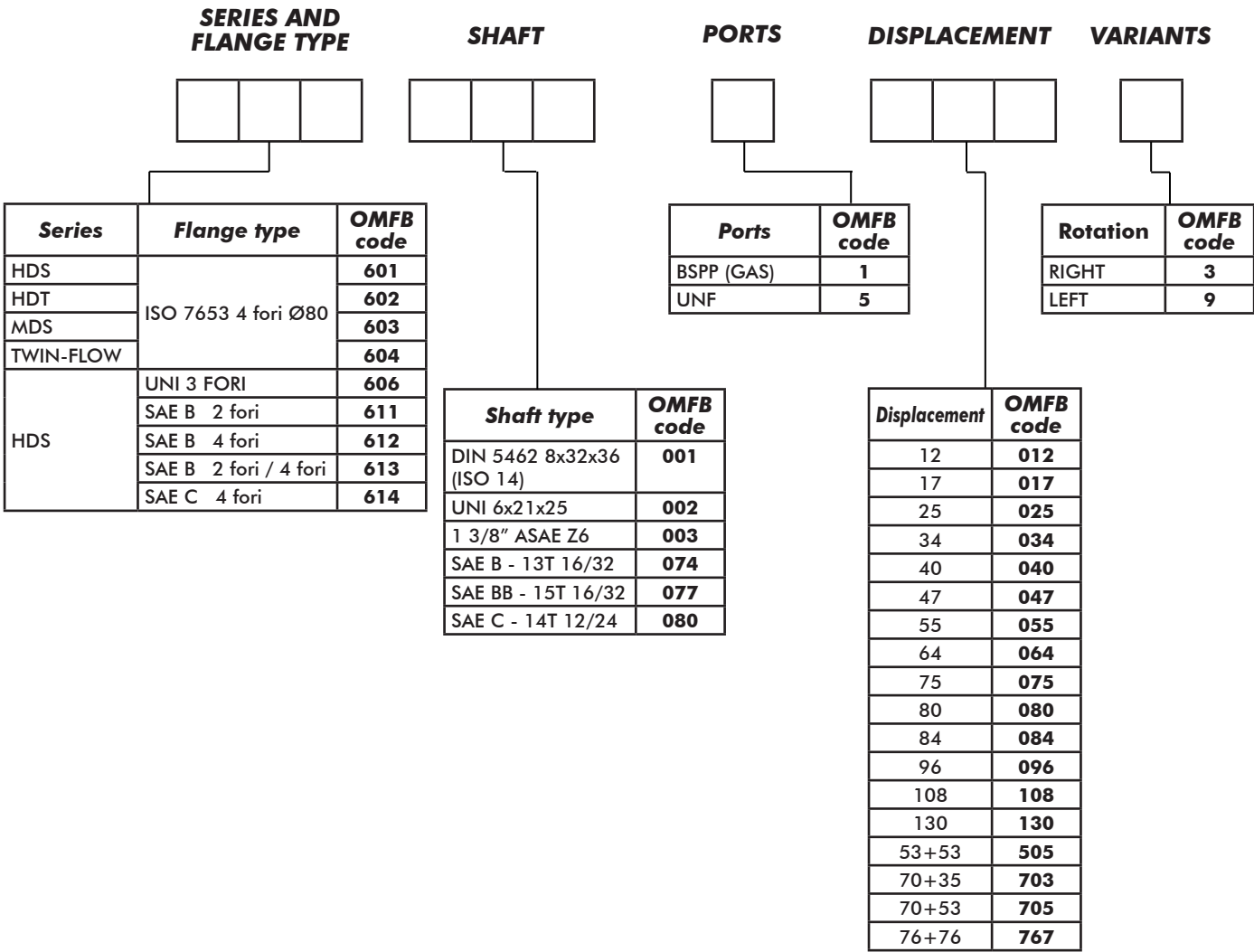


PISTON PUMPS  
RANGE

"HDS" "MDS"  
"HDT"

VERSIONS CODING



99740060010

**POMPE A PISTONI  
AD ASSE INCLINATO  
BENT AXIS PISTON PUMPS**

**CODICE FAMIGLIA**  
FAMILY CODE

**601001**

**"HDS"**

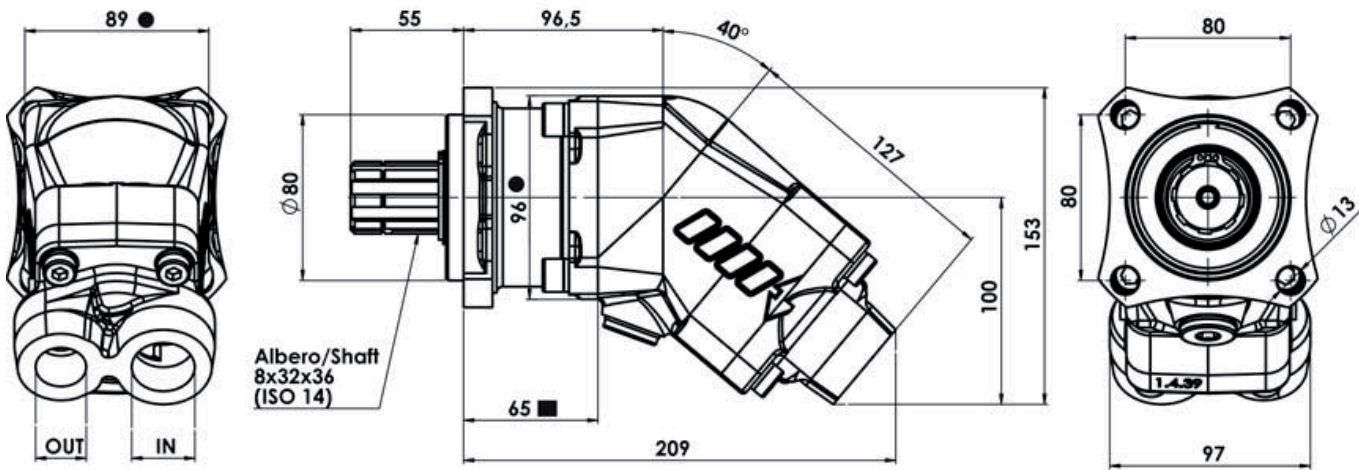
Flangia/Flange  
Albero/Shaft  
Cilin./Displ.

**ISO**  
**ISO14 8x32x36**  
**12-17-25-34**



|                                                                                                                                                                                                                                                                           |                                                                                                                                  |          |                                                               |       |      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------|---------------------------------------------------------------|-------|------|
| Fluido idraulico<br>Fluid                                                                                                                                                                                                                                                 | Minerale o sintetico compatibile con guarnizioni:<br>Mineral or synthetic compatible with the following seals:<br>FKM, FPM, HNBR |          |                                                               |       |      |
| Viscosità cinematica consigliata<br>Kinematic viscosity suggested                                                                                                                                                                                                         | T media ambiente (°C)<br>Average ambient temp. (°C)                                                                              | < -40    | -40÷10                                                        | 10÷35 | > 35 |
|                                                                                                                                                                                                                                                                           | VG (cSt = mm²/s)                                                                                                                 | 16       | 22                                                            | 32    | 46   |
| Viscosità cinematica ottimale di esercizio<br>Optimale kinematic viscosity                                                                                                                                                                                                |                                                                                                                                  |          | VG= 10 cSt ÷ 100 cSt                                          |       |      |
| Viscosità cinematica max consentita all'avviamento<br>Max kinematic viscosity suggested at the start-up                                                                                                                                                                   |                                                                                                                                  |          | VG= 750 cSt                                                   |       |      |
| Indice di viscosità consigliato<br>Viscosity index suggested                                                                                                                                                                                                              |                                                                                                                                  | VI > 100 | Temperatura di esercizio<br>Working temperature -40°C ÷ 140°C |       |      |
| Grado di filtrazione<br>Oil filtering                                                                                                                                                                                                                                     |                                                                                                                                  |          | > 200 bar: 10 µm<br>< 200 bar: 25 µm                          |       |      |
| Pres. di aspirazione<br>Inlet pressure                                                                                                                                                                                                                                    |                                                                                                                                  |          | 0,85 ÷ 2 bar<br>assoluti/absolut                              |       |      |
| Senso di rotazione<br>Pump rotation                                                                                                                                                                                                                                       |                                                                                                                                  |          | Unidirezionale (Dx o Sx)<br>Unidirectional (Right or Left)    |       |      |
| Verificare che la pompa sia posizionata almeno 100 mm sotto il livello minimo del serbatoio olio. Prima di avviare la pompa effettuare spurgo aria.<br>Verify that pump is, at least, 100 mm under the minimum level of the tank. Before starting the pump bleed the air. |                                                                                                                                  |          |                                                               |       |      |

**Dimensions in mm**



● Larghezza minima corpo a quota indicata  
Minimum bodywidth at indicated measurement

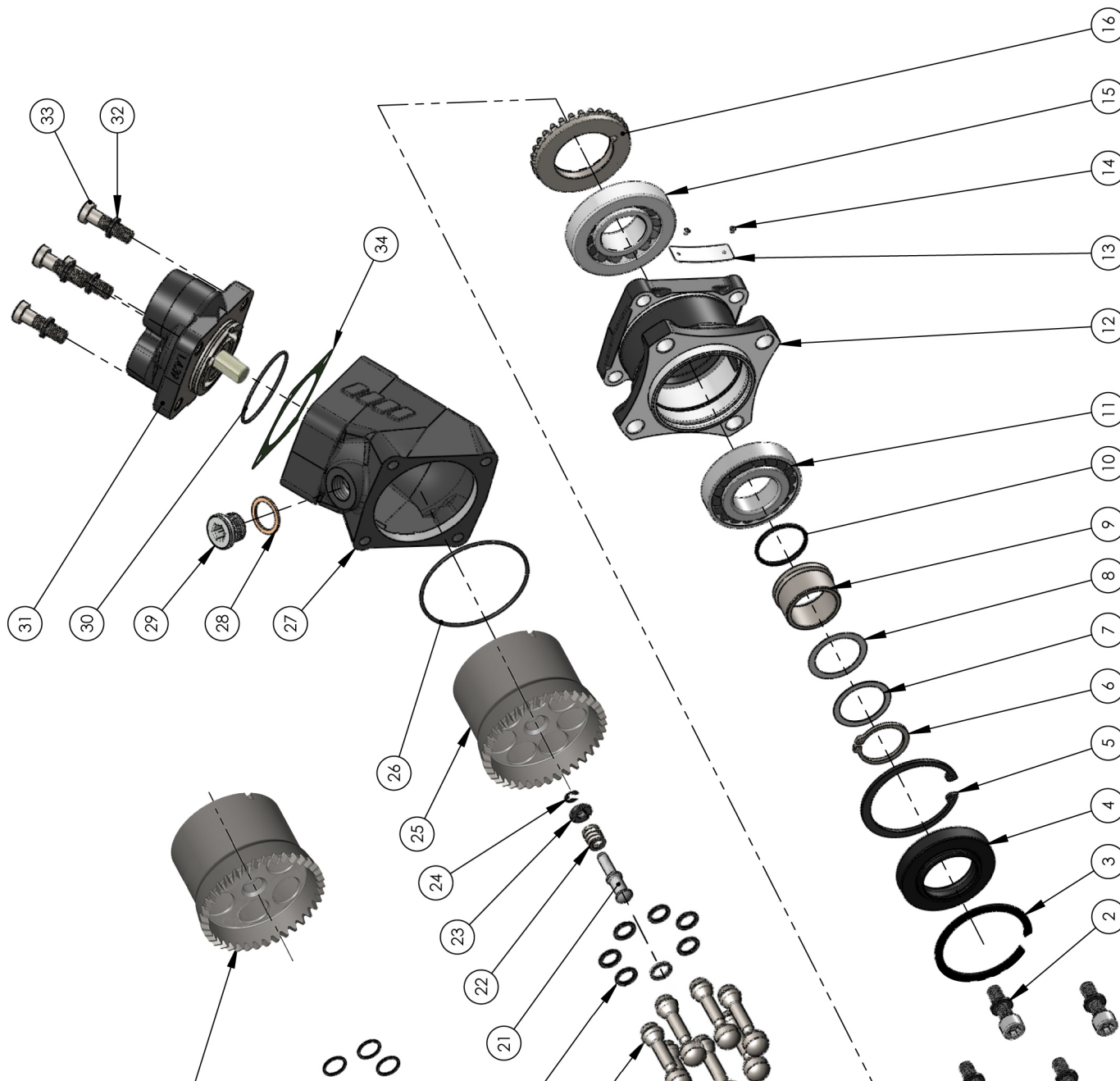
| Tipo pompa<br>Pump type | Rotazione<br>Rotation |                  | IN      | OUT     | IN  | OUT |
|-------------------------|-----------------------|------------------|---------|---------|-----|-----|
|                         | Destra<br>Right       | Sinistra<br>Left |         |         |     |     |
|                         |                       |                  | ISO 228 | ISO 228 | SAE | SAE |
| <b>HDS-12</b>           | 60100110123           | 60100110129      | G 1     | G 3/4   |     |     |
| <b>HDS-17</b>           | 60100110173           | 60100110179      | G 1     | G 3/4   |     |     |
| <b>HDS-25</b>           | 60100110253           | 60100110259      | G 1     | G 3/4   |     |     |
| <b>HDS-34</b>           | 60100110343           | 60100110349      | G 1     | G 3/4   |     |     |

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**COMPANY WITH  
QUALITY SYSTEM  
CERTIFIED BY DNV GL  
= IATF 16949 =**



99740060010

30/03/2016

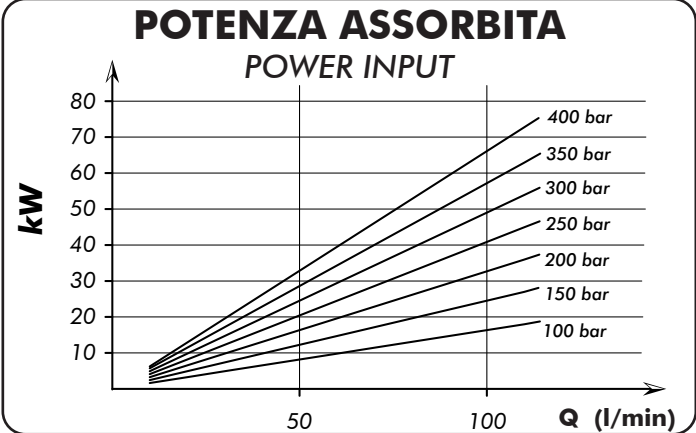
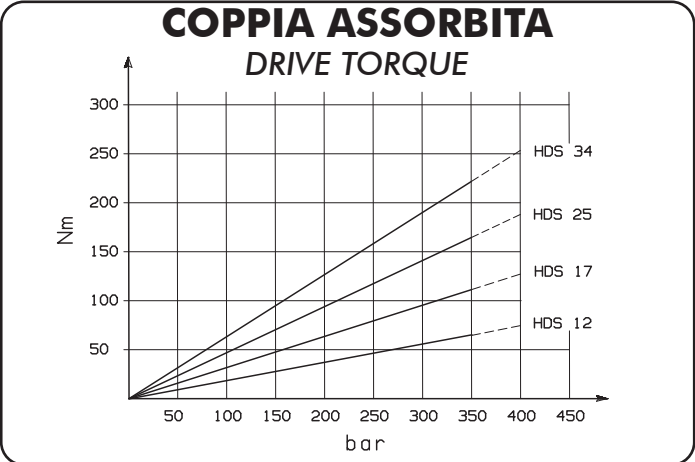
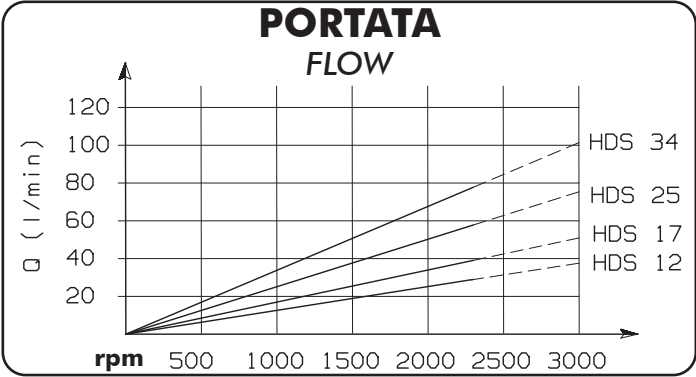
| <b>HDS 25</b><br>GAS | <b>HDS 34</b><br>GAS | <b>Codice</b><br>P. Number | <b>Descrizione</b><br>Description | <b>Q.tà</b><br>Q.ty |
|----------------------|----------------------|----------------------------|-----------------------------------|---------------------|
| •                    | •                    | 50200400565                | Vite TCE M. 10x35                 | 4                   |
| •                    | •                    | 50100800054                | Rosetta elastica                  | 4                   |
| •                    | •                    | 50100002729                | Anello elastico                   | 1                   |
| •                    | •                    | 50600024272                | Paraolio                          | 1                   |
| •                    | •                    | 50100100677                | Anello elastico                   | 1                   |
| •                    | •                    | 50100001355                | Anello seeger rinforzato          | 1                   |
| •                    | •                    | 52900701127                | Rondella                          | 2                   |
| •                    | •                    | 52900700226                | Rondella                          | 2                   |
| •                    | •                    | 51100200200                | Bussola                           | 1                   |
| •                    | •                    | 50600013137                | Guarnizione OR                    | 1                   |
| •                    | •                    | 51000200211                | Cuscinetto a rulli conici         | 1                   |
| •                    | •                    | 51700201154                | Corpo anteriore                   | 1                   |
| •                    | •                    | 513                        | Targhetta completa                | 1                   |
| •                    | •                    | 51300000011                | Chiodino fiss. targhetta          | 2                   |
| •                    | •                    | 51000200373                | Cuscinetto a rulli conici         | 1                   |
| •                    | •                    | 52501100264                | Corona dentata                    | 1                   |
| •                    | •                    | 52200500357                | Albero                            | 1                   |
| •                    | •                    | 52200500268                | Spina UNI 6364                    | 1                   |
| •                    | •                    | 53200500061                | Pistone sferico                   | 7                   |
| •                    | •                    | 53200500052                | 53200500061                       | 5                   |
| •                    | •                    | 53200500052                | 53200500061                       | 21                  |
| •                    | •                    | 50102300064                | 50102300064                       | 15                  |
| •                    | •                    | 50102300073                | 50102300073                       | 1                   |
| •                    | •                    | 50102300064                | 50102300064                       | 1                   |
| •                    | •                    | 50102300073                | 50102300073                       | 1                   |
| •                    | •                    | 54200100313                | 54200100313                       | 1                   |
| •                    | •                    | 54200100162                | 54200100162                       | 1                   |
| •                    | •                    | 51200501651                | 51200501651                       | 1                   |
| •                    | •                    | 51200500812                | 51200500812                       | 1                   |
| •                    | •                    | 54200100322                | 54200100322                       | 1                   |
| •                    | •                    | 54200100171                | 54200100171                       | 1                   |
| •                    | •                    | 50101500046                | 50101500046                       | 1                   |
| •                    | •                    | 50101500028                | 50101500028                       | 1                   |
| •                    | •                    | 50002916034                | 50002916034                       | 1                   |
| •                    | •                    | 50002916025                | 50002916025                       | 1                   |
| •                    | •                    | 50002916017                | 50002916017                       | 1                   |
| •                    | •                    | 50002916012                | 50002916012                       | 1                   |
| •                    | •                    | 50600018020                | 50600018020                       | 1                   |
| •                    | •                    | 51700200717                | 51700200717                       | 1                   |
| •                    | •                    | 11600910129                | 11600910129                       | 1                   |
| •                    | •                    | 11500600135                | 11500600135                       | 1                   |
| •                    | •                    | 50600012224                | 50600012224                       | 1                   |
| •                    | •                    | 50002980340                | 50002980340                       | 1                   |
| •                    | •                    | 50002980251                | 50002980251                       | 1                   |
| •                    | •                    | 50002980171                | 50002980171                       | 1                   |
| •                    | •                    | 50002980126                | 50002980126                       | 1                   |
| •                    | •                    | 50102000101                | 50102000101                       | 4                   |
| •                    | •                    | 50200400556                | 50200400556                       | 4                   |
| A                    | A                    | 50700000256                | 50700000256                       | 1                   |
| A                    | A                    | 50700000523                | 50700000523                       | 1                   |

CARATTERISTICHE TECNICHE DI FUNZIONAMENTO / TECHNICAL FEATURES

| Tipo pompa<br>Pump type | Cilindrata<br>Displacement<br><br>cm <sup>3</sup> /rev | Pressione<br>Pressure |           | Velocità / Speed |           |           | Velocità min.<br>Min. speed<br>rpm | Peso<br>Weight<br><br>kg |
|-------------------------|--------------------------------------------------------|-----------------------|-----------|------------------|-----------|-----------|------------------------------------|--------------------------|
|                         |                                                        | P1<br>bar             | P3<br>bar | V0<br>rpm        | V1<br>rpm | V2<br>rpm |                                    |                          |
| HDS-12                  | 12.62                                                  | 350                   | 400       | 3000             | 2300      | 3000      | 300                                | 8.8                      |
| HDS-17                  | 16.98                                                  |                       |           |                  |           |           |                                    | 8.6                      |
| HDS-25                  | 25.12                                                  |                       |           |                  |           |           |                                    | 8,8                      |
| HDS-34                  | 33.80                                                  |                       |           |                  |           |           |                                    | 8,6                      |

P1=Pressione massima continua Max. continuous pressure (100%)  
P3=Pressione massima di punta Max. peak pressure (6 sec.max)

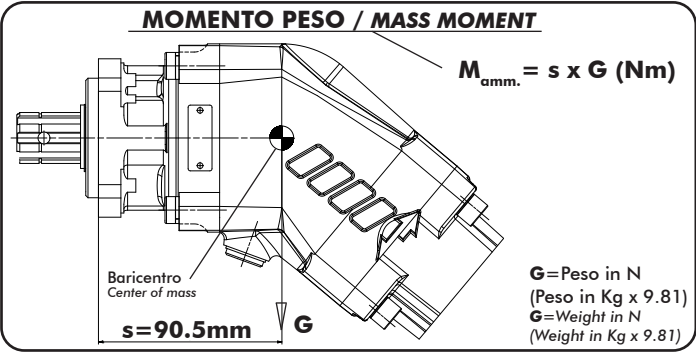
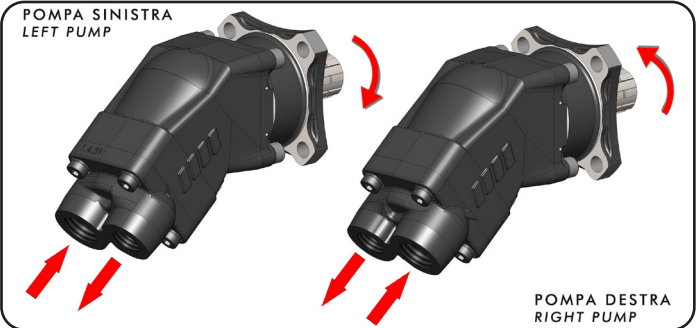
V0=Massima continua vuoto Max. continuous speed without load  
V1=Massima continua Max. continuous speed  
V2=Massima intermittente Max. intermittent speed



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

| Q Portata<br>Flow<br>l/min | Ø interno min. tubo<br>Min pipe diam.<br>mm      inch |         | Velocità flusso<br>Flow speed<br>(m/s) |
|----------------------------|-------------------------------------------------------|---------|----------------------------------------|
| 20                         | 25                                                    | 1"      | 0,68                                   |
| 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.



POMPE A PISTONI  
AD ASSE INCLINATO  
BENT AXIS PISTON PUMPS

CODICE FAMIGLIA  
FAMILY CODE

601001  
603001

"HDS"  
"MDS"

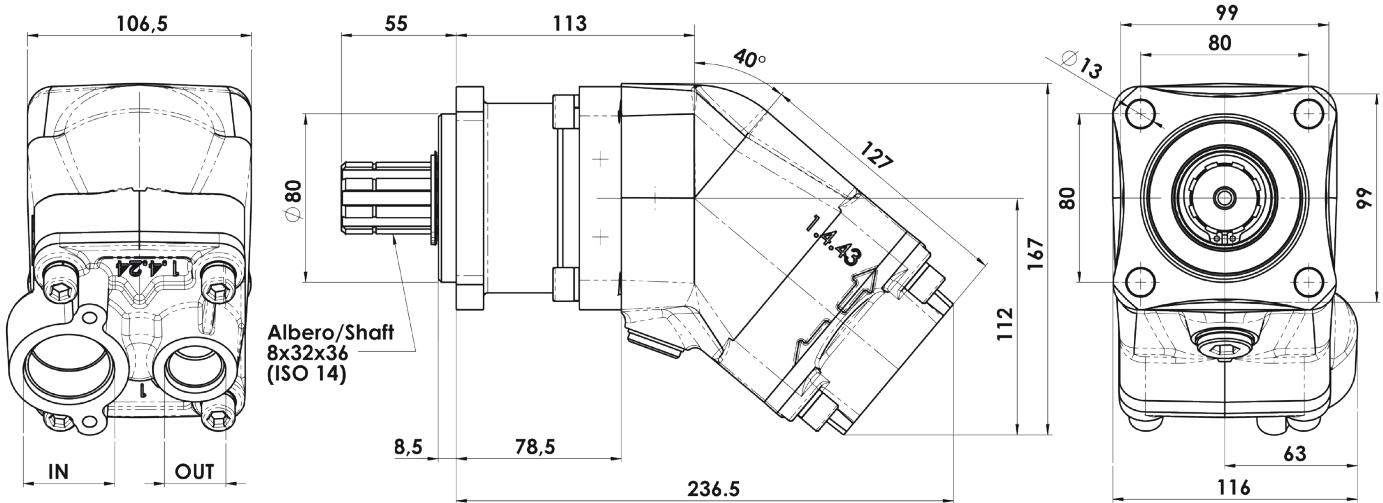
Flangia/Flange  
Albero/Shaft  
Cilin./Displ.

ISO  
ISO14 8x32x36  
40-47-55-64-80



|                                                                                                                                                                                                                                                                           |                                                                                                                                  |          |                                                            |         |      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------|------------------------------------------------------------|---------|------|
| Fluido idraulico<br>Fluid                                                                                                                                                                                                                                                 | Minerale o sintetico compatibile con guarnizioni:<br>Mineral or synthetic compatible with the following seals:<br>FKM, FPM, HNBR |          |                                                            |         |      |
| Viscosità cinematica<br>consigliata<br>Kinematic viscosity<br>suggested                                                                                                                                                                                                   | T media ambiente (°C)<br>Average ambient temp. (°C)                                                                              | < -40    | -40 ÷ 10                                                   | 10 ÷ 35 | > 35 |
|                                                                                                                                                                                                                                                                           | VG (cSt = mm²/s)                                                                                                                 | 16       | 22                                                         | 32      | 46   |
| Viscosità cinematica ottimale di esercizio<br>Optimale kinematic viscosity                                                                                                                                                                                                |                                                                                                                                  |          | VG= 10 cSt ÷ 100 cSt                                       |         |      |
| Viscosità cinematica max consentita all'avviamento<br>Max kinematic viscosity suggested at the start-up                                                                                                                                                                   |                                                                                                                                  |          | VG= 750 cSt                                                |         |      |
| Indice di viscosità consigliato<br>Viscosity index suggested                                                                                                                                                                                                              |                                                                                                                                  | VI > 100 | Temperatura di esercizio<br>Working temperature            |         |      |
|                                                                                                                                                                                                                                                                           |                                                                                                                                  |          | -40°C ÷ 140°C                                              |         |      |
| Grado di filtrazione<br>Oil filtering                                                                                                                                                                                                                                     |                                                                                                                                  |          | > 200 bar: 10 µm<br>< 200 bar: 25 µm                       |         |      |
| Pres. di aspirazione<br>Inlet pressure                                                                                                                                                                                                                                    |                                                                                                                                  |          | 0,85 ÷ 2 bar<br>assoluti/absolut                           |         |      |
| Senso di rotazione<br>Pump rotation                                                                                                                                                                                                                                       |                                                                                                                                  |          | Unidirezionale (Dx o Sx)<br>Unidirectional (Right or Left) |         |      |
| Verificare che la pompa sia posizionata almeno 100 mm sotto il livello minimo del serbatoio olio. Prima di avviare la pompa effettuare spurgo aria.<br>Verify that pump is, at least, 100 mm under the minimum level of the tank. Before starting the pump bleed the air. |                                                                                                                                  |          |                                                            |         |      |

Dimensions in mm



| Tipo pompa<br>Pump type | Rotazione<br>Rotation |                  | IN                       | OUT                       |
|-------------------------|-----------------------|------------------|--------------------------|---------------------------|
|                         | Destra<br>Right       | Sinistra<br>Left |                          |                           |
| HDS-40                  | 60100110403           | 60100110409      | ISO 228<br><br>G 1 1/4"  | ISO 228<br><br>G 3/4"     |
| HDS-47                  | 60100110473           | 60100110479      |                          |                           |
| HDS-55                  | 60100110553           | 60100110559      |                          |                           |
| HDS-64                  | 60100110643           | 60100110649      |                          |                           |
| MDS-80                  | 60300110803           | 60300110809      |                          |                           |
|                         |                       |                  | ISO 725                  | ISO 725                   |
| HDS-40                  | 60100150403           | 60100150409      | 1 5/8-12 UN-2B<br>SAE 20 | 1 1/16-12 UN-2B<br>SAE 12 |
| HDS-47                  | 60100150473           | 60100150479      |                          |                           |
| HDS-55                  | 60100150553           | 60100150559      |                          |                           |
| HDS-64                  | 60100150643           | 60100150649      |                          |                           |
| MDS-80                  | 60300150803           | 60300150809      |                          |                           |



HYDRAULIC COMPONENTS

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O.M.F.B. S.p.A. Hydraulic Components

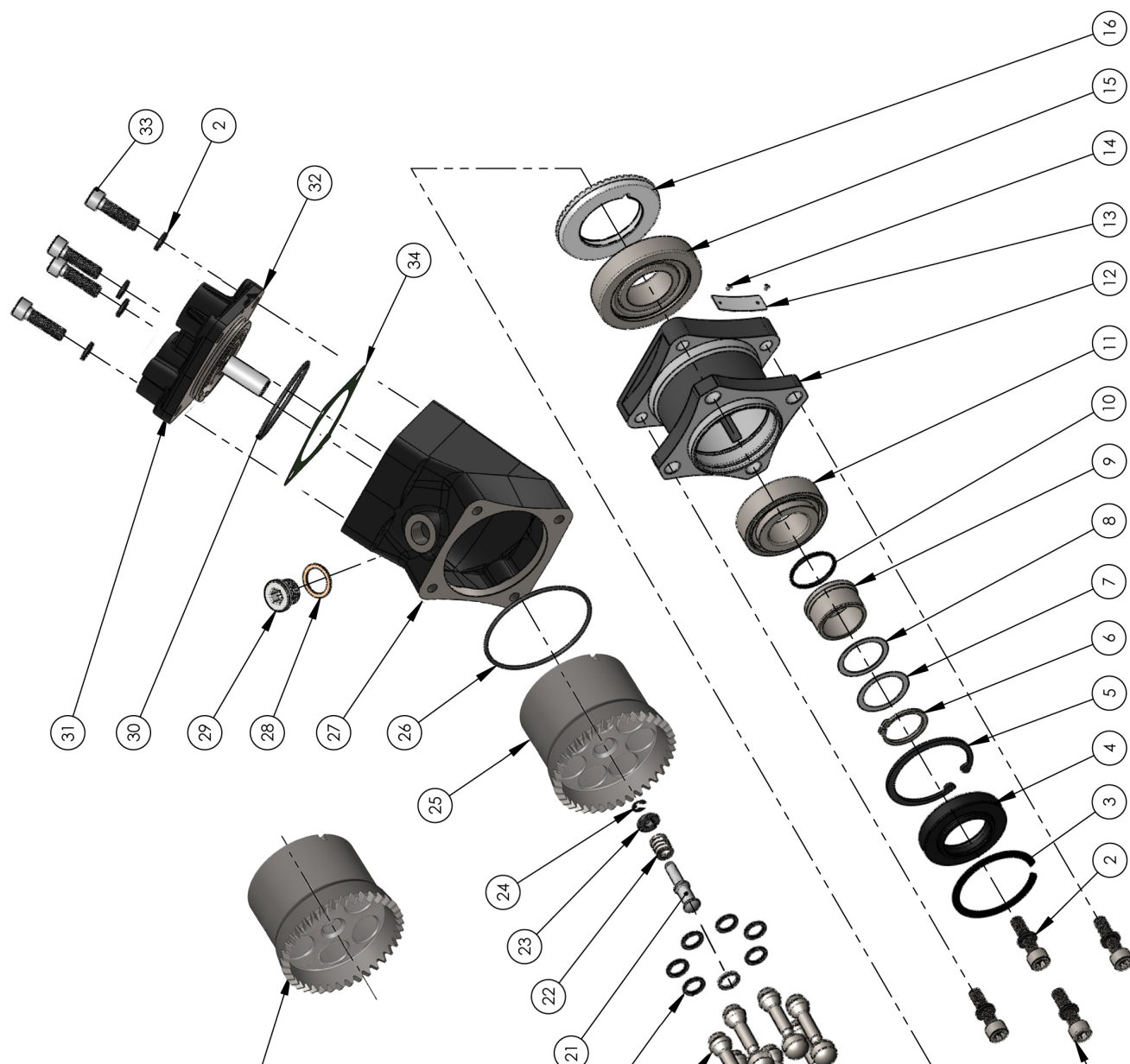
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QUALITY SYSTEM  
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= IATF 16949 =



99740060010

07/03/2017

601001  
603001SCHEMA RICAMBI POMPE A PISTONI **HDS 40-47-55-64 E MDS 80**  
**HDS PISTON PUMP 40-47-55-64 AND MDS 80 SERIES SPARE PARTS****"HDS"**  
**"MDS"**

| <b>IS 55</b> | <b>HDS 64</b> | <b>MDS 80</b> | <b>Codice</b> | <b>Descrizione</b>                   | <b>Q.tà</b> |
|--------------|---------------|---------------|---------------|--------------------------------------|-------------|
| SAE          | GAS           | SAE           | P. Number     | Description                          | Q.ty        |
| •            | •             | •             | 50200400574   | Vite TCE M 10x40 UNI 5931            | 4           |
| •            | •             | •             | 50100800054   | Rosetta elastica x M10 DIN 7980      | 4           |
| •            | •             | •             | 50100002729   | Anello elastico E-SB 72x2            | 1           |
| •            | •             | •             | 50600024272   | Paralio HNB                          | 1           |
| •            | •             | •             | 50100100677   | Anello elastico Ø72 I                | 1           |
| •            | •             | •             | 50100001355   | Anello seeger rinforzato AS UNI 7436 | 1           |
| •            | •             | •             | 52900701127   | Rondella 4x35x0.2                    | 1           |
| •            | •             | •             | 52900700226   | Rondella 4x35x0.1                    | 1           |
| •            | •             | •             | 51100200200   | Bussola                              | 1           |
| •            | •             | •             | 50600013137   | Guarnizione OR 3137 HNBR             | 1           |
| •            | •             | •             | 51000200220   | Cuscinetto a rulli conici            | 1           |
| •            | •             | •             | 51700201163   | Corpo anteriore                      | 1           |
| •            | •             | •             | 513           | Targhetta completa                   | 1           |
| •            | •             | •             | 51300000011   | Chiodino fissaggio targhetta         | 2           |
| •            | •             | •             | 51000200275   | Cuscinetto a rulli conici            | 1           |
| •            | •             | •             | 52501100255   | Corona dentata                       | 1           |
| •            | •             | •             | 52200500231   | Albero                               | 1           |
| •            | •             | •             | 52200500204   | Spina UNI 6364-A Ø6x14               | 1           |
| •            | •             | •             | 50100306142   |                                      | 1           |
| •            | •             | •             | 53200500285   |                                      | 7           |
| •            | •             | •             | 53200500025   | Pistone sferico                      | 5           |
| •            | •             | •             | 53200500016   |                                      | 21          |
| •            | •             | •             | 53200500043   |                                      | 15          |
| •            | •             | •             | 50102300064   |                                      | 1           |
| •            | •             | •             | 50102300046   |                                      | 1           |
| •            | •             | •             | 50102300126   |                                      | 1           |
| •            | •             | •             | 50102300019   |                                      | 1           |
| •            | •             | •             | 50102300082   |                                      | 1           |
| •            | •             | •             | 54200100162   |                                      | 1           |
| •            | •             | •             | 51200500812   |                                      | 1           |
| •            | •             | •             | 54200100171   |                                      | 1           |
| •            | •             | •             | 50101500028   |                                      | 1           |
| •            | •             | •             | 50002916040   |                                      | 1           |
| •            | •             | •             | 50002916047   |                                      | 1           |
| •            | •             | •             | 50002916055   |                                      | 1           |
| •            | •             | •             | 50002916064   |                                      | 1           |
| •            | •             | •             | 50002916080   |                                      | 1           |
| •            | •             | •             | 50600013350   |                                      | 1           |
| •            | •             | •             | 51700201421   |                                      | 1           |
| •            | •             | •             | 11600910129   |                                      | 1           |
| •            | •             | •             | 11500600135   |                                      | 1           |
| •            | •             | •             | 50600013275   |                                      | 1           |
| •            | •             | •             | 50002990400   |                                      | 1           |
| •            | •             | •             | 50002990419   |                                      | 1           |
| •            | •             | •             | 50002990473   |                                      | 1           |
| •            | •             | •             | 50002990482   |                                      | 1           |
| •            | •             | •             | 50002990553   |                                      | 1           |
| •            | •             | •             | 50002990562   |                                      | 1           |
| •            | •             | •             | 50002990642   |                                      | 1           |
| •            | •             | •             | 50002990651   |                                      | 1           |
| •            | •             | •             | 50002990802   |                                      | 1           |
| •            | •             | •             | 50002990811   |                                      | 1           |
| •            | •             | •             | 50100800054   |                                      | 4           |
| •            | •             | •             | 50200400565   |                                      | 4           |
| A            | A             | A             | 50700000229   |                                      | 1           |
| A            | A             | A             | 50700000532   |                                      | 1           |

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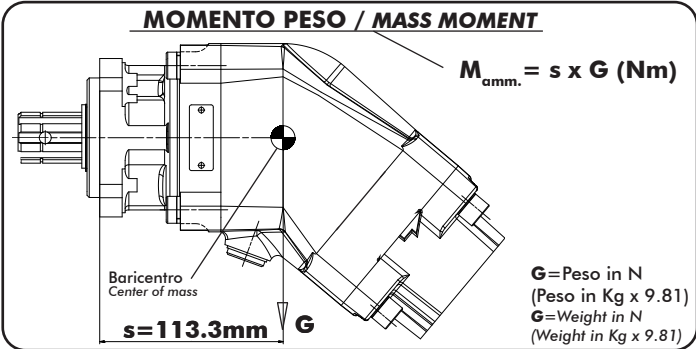
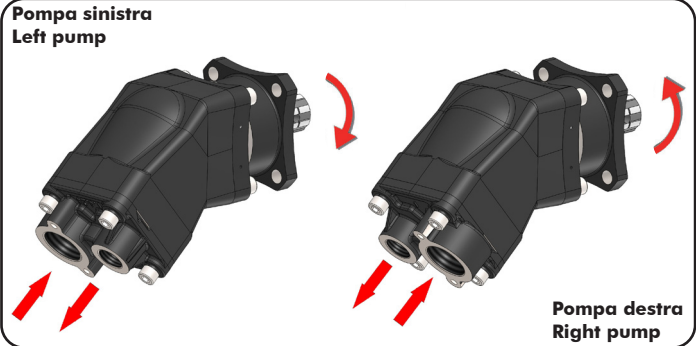
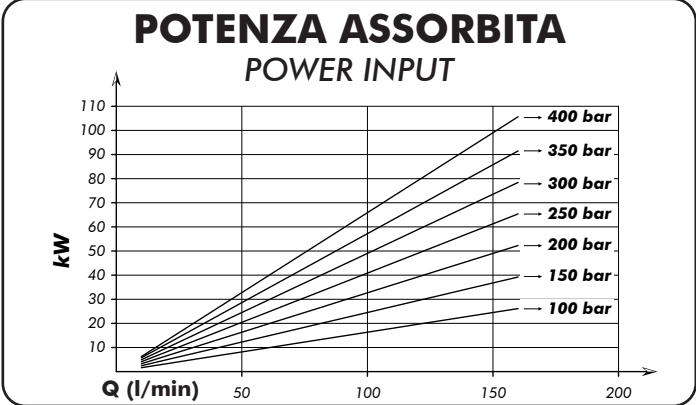
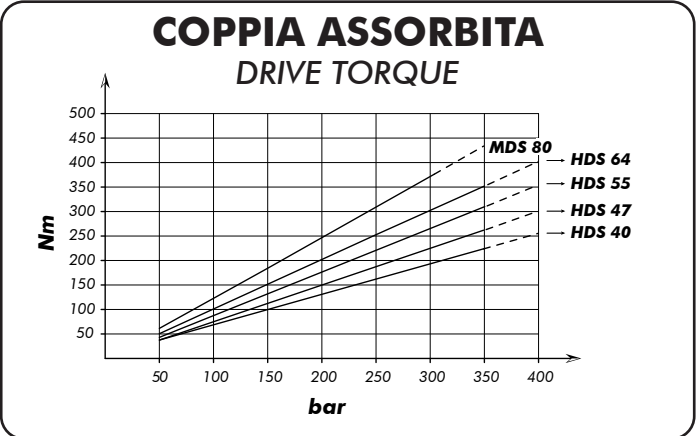
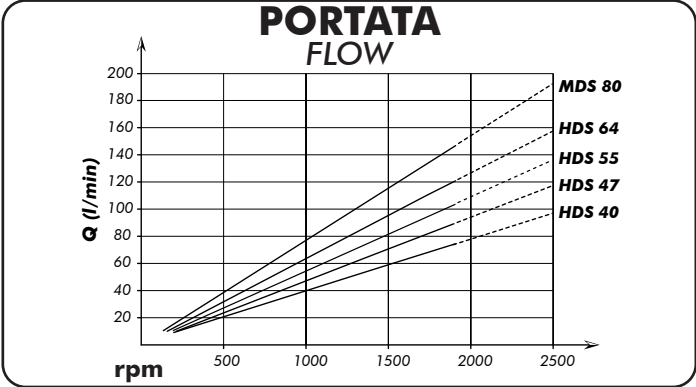
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CARATTERISTICHE TECNICHE DI FUNZIONAMENTO / TECHNICAL FEATURES

| Tipo pompa<br>Pump type | Cilindrata<br>Displacement<br>cm <sup>3</sup> /rev | Pressione<br>Pressure |           | Velocità / Speed |           |           | Velocità min.<br>Min. speed<br>rpm | Peso<br>Weight<br>kg |
|-------------------------|----------------------------------------------------|-----------------------|-----------|------------------|-----------|-----------|------------------------------------|----------------------|
|                         |                                                    | P1<br>bar             | P3<br>bar | V0<br>rpm        | V1<br>rpm | V2<br>rpm |                                    |                      |
| HDS-40                  | 41.25                                              | 350                   | 400       | 2700             | 1900      | 2500      | 300                                | 12,3                 |
| HDS-47                  | 47.13                                              |                       |           |                  |           |           |                                    |                      |
| HDS-55                  | 56.70                                              |                       |           |                  |           |           |                                    |                      |
| HDS-64                  | 63.56                                              | 250                   | 300       | 2300             | 1800      | 2100      | 300                                | 12,1                 |
| MDS-80                  | 77.25                                              |                       |           |                  |           |           |                                    | 12                   |

P1=Pressione max.continua      Max. continuous pressure (100%)  
P3=Pressione max. di punta      Max. peak pressure (6 sec.max)

V0=Max. continua vuoto      Max. continuous speed without load  
V1=Max. continua      Max. continuous speed  
V2=Max. intermittente      Max. intermittent speed



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

| Q Portata<br>Flow<br>l/min | Ø interno min. tubo<br>Min pipe diam.<br>mm      inch |         | Velocità flusso<br>Flow speed<br>(m/s) |
|----------------------------|-------------------------------------------------------|---------|----------------------------------------|
| 20                         | 25                                                    | 1"      | 0,68                                   |
| 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**  
10890347648

COMPANY WITH  
QUALITY SYSTEM  
CERTIFIED BY DNV GL  
= IATF 16949 =

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O.M.F.B. S.p.A. Hydraulic Components  
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**POMPE A PISTONI  
AD ASSE INCLINATO  
BENT AXIS PISTON PUMPS**

**CODICE FAMIGLIA**  
FAMILY CODE

**601001**  
**603001**

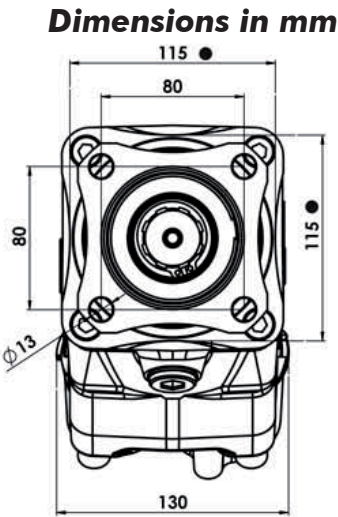
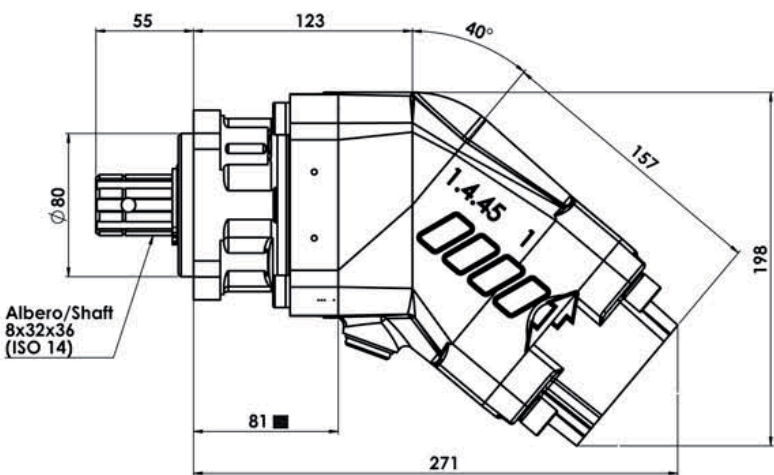
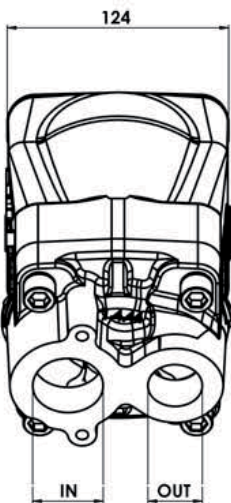
**"HDS"**  
**"MDS"**

Flangia/Flange  
Albero/Shaft  
Cilin./Displ.

**ISO**  
**ISO14 8x32x36**  
**84-108-120-130**



|                                                                                                                                                                                                                                                                           |                                                                                                                                  |          |                                                            |       |      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------|------------------------------------------------------------|-------|------|
| Fluido idraulico<br>Fluid                                                                                                                                                                                                                                                 | Minerale o sintetico compatibile con guarnizioni:<br>Mineral or synthetic compatible with the following seals:<br>FKM, FPM, HNBR |          |                                                            |       |      |
| Viscosità cinematica<br>consigliata<br>Kinematic viscosity<br>suggested                                                                                                                                                                                                   | T media ambiente (°C)<br>Average ambient temp. (°C)                                                                              | < -40    | -40÷10                                                     | 10÷35 | > 35 |
|                                                                                                                                                                                                                                                                           | VG (cSt = mm²/s)                                                                                                                 | 16       | 22                                                         | 32    | 46   |
| Viscosità cinematica ottimale di esercizio<br>Optimale kinematic viscosity                                                                                                                                                                                                |                                                                                                                                  |          | VG= 10 cSt ÷ 100 cSt                                       |       |      |
| Viscosità cinematica max consentita all'avviamento<br>Max kinematic viscosity suggested at the start-up                                                                                                                                                                   |                                                                                                                                  |          | VG= 750 cSt                                                |       |      |
| Indice di viscosità consigliato<br>Viscosity index suggested                                                                                                                                                                                                              |                                                                                                                                  | VI > 100 | Temperatura di esercizio<br>Working temperature            |       |      |
|                                                                                                                                                                                                                                                                           |                                                                                                                                  |          | -40°C ÷ 140°C                                              |       |      |
| Grado di filtrazione<br>Oil filtering                                                                                                                                                                                                                                     |                                                                                                                                  |          | > 200 bar: 10 µm<br>< 200 bar: 25 µm                       |       |      |
| Pres. di aspirazione<br>Inlet pressure                                                                                                                                                                                                                                    |                                                                                                                                  |          | 0,85 ÷ 2 bar<br>assoluti/absolut                           |       |      |
| Senso di rotazione<br>Pump rotation                                                                                                                                                                                                                                       |                                                                                                                                  |          | Unidirezionale (Dx o Sx)<br>Unidirectional (Right or Left) |       |      |
| Verificare che la pompa sia posizionata almeno 100 mm sotto il livello minimo del serbatoio olio. Prima di avviare la pompa effettuare spurgo aria.<br>Verify that pump is, at least, 100 mm under the minimum level of the tank. Before starting the pump bleed the air. |                                                                                                                                  |          |                                                            |       |      |



● Larghezza minima corpo a quota indicata  
Minimum bodywidth at indicated measurement

| Tipo pompa<br>Pump type | Rotazione / Rotation |                 | IN<br>ISO 228<br>G 1 1/4" | OUT<br>ISO 228<br>G 1"    |
|-------------------------|----------------------|-----------------|---------------------------|---------------------------|
|                         | Destra / Right       | Sinistra / Left |                           |                           |
| HDS-84                  | 60100110843          | 60100110849     | G 1 1/2"                  | G 1"                      |
| HDS-108                 | 60100111083          | 60100111089     |                           |                           |
| HDS-130                 | 60100111303          | 60100111309     |                           |                           |
| MDS-120                 | 60300111203          | 60300111209     |                           |                           |
| MDS-130                 | 60300111303          | 60300111309     |                           |                           |
|                         |                      |                 | ISO 725                   | ISO 725                   |
| HDS-84                  | 60100150843          | 60100150849     | 1 7/8-12 UN-2B<br>SAE 24  | 1 5/16-12 UN-2B<br>SAE 16 |
| HDS-108                 | 60100151083          | 60100151089     |                           |                           |
| HDS-130                 | 60100151303          | 60100151309     |                           |                           |
| MDS-120                 | 60300151203          | 60300151209     |                           |                           |
| MDS-130                 | 60300151303          | 60300151309     |                           |                           |

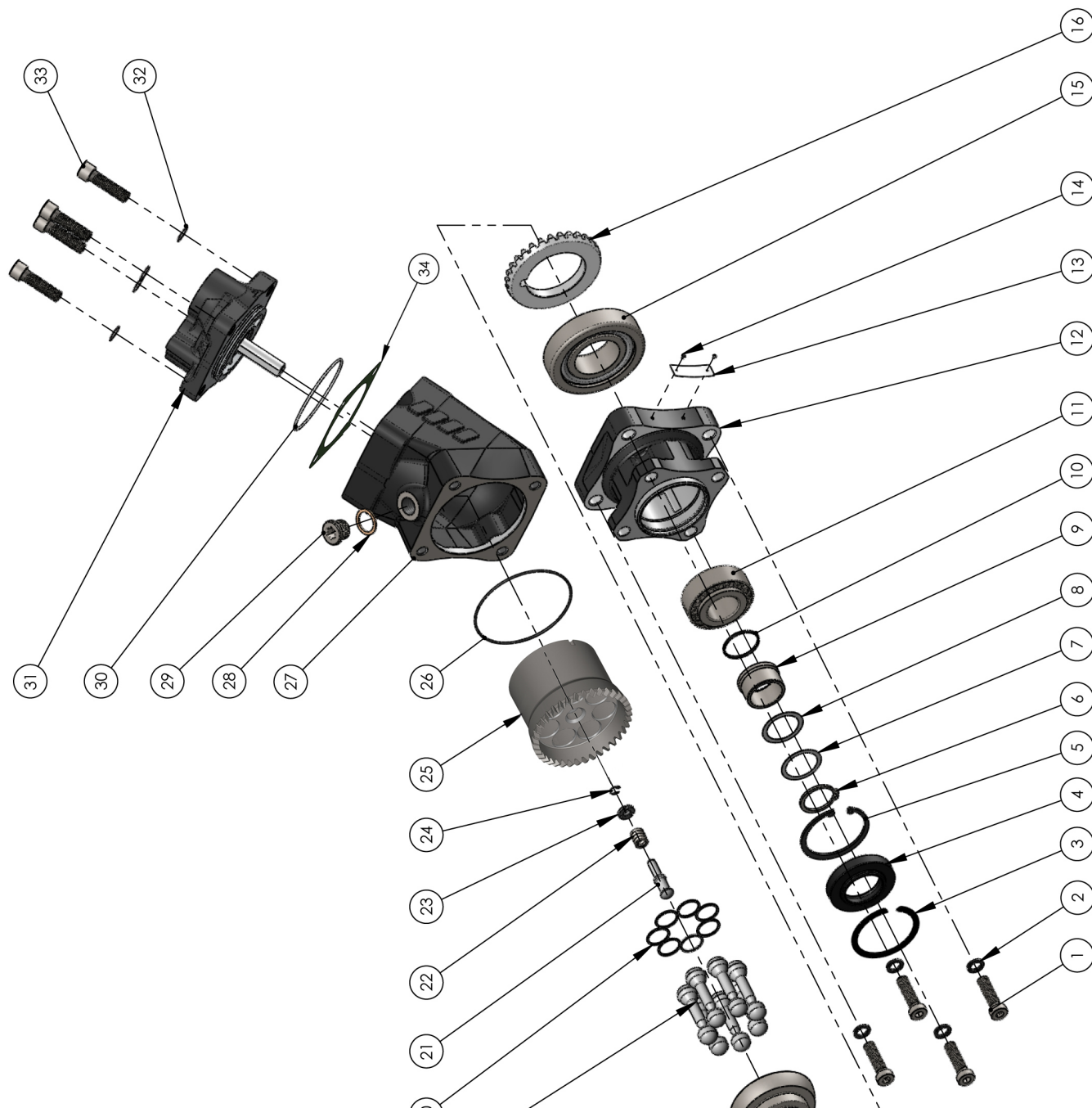
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HYDRAULIC COMPONENTS

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QUALITY SYSTEM  
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99740060010

11/05/2021

| <b>ID5 130</b><br>GAS SAE | <b>MDS 120</b><br>GAS SAE | <b>MDS 130</b><br>GAS SAE | <b>Codice/Code</b> | <b>Descrizione / Description</b>   | <b>Q.tà/Q.ty</b>         |
|---------------------------|---------------------------|---------------------------|--------------------|------------------------------------|--------------------------|
| •                         | •                         | •                         | 50200500573        | Vite TCE M12x45                    | Socket head capcrew 4    |
| •                         | •                         | •                         | 50102000129        | Rosetta elastica                   | Washer 4                 |
| •                         | •                         | •                         | 50100002729        | Anello elastico                    | Circlip 1                |
| •                         | •                         | •                         | 50600024272        | Paraolio                           | Oil seal 1               |
| •                         | •                         | •                         | 50100100677        | Anello elastico                    | Circlip 1                |
| •                         | •                         | •                         | 50100001355        | Anello seeger rinforzato           | Retaining ring 1         |
| •                         | •                         | •                         | 52900701127        | Rondella                           | Spacers 2                |
| •                         | •                         | •                         | 52900700226        | Rondella                           | Spacers 2                |
| •                         | •                         | •                         | 51100200200        | Bussola                            | Bushing 1                |
| •                         | •                         | •                         | 50600013137        | Guarnizione OR                     | O-ring 1                 |
| •                         | •                         | •                         | 51000200364        | Cuscinetto a rulli conici          | Tapered roller bearing 1 |
| •                         | •                         | •                         | 51700201172        | Corpo anteriore                    | Front housing 1          |
| •                         | •                         | •                         | 513                | Targhetta completa                 | Plate 1                  |
| •                         | •                         | •                         | 51300000011        | Chiodino fissaggio targhetta       | Plate nail 2             |
| •                         | •                         | •                         | 51000200355        | Cuscinetto a rulli conici          | Tapered roller bearing 1 |
| •                         | •                         | •                         | 51000200357        | Corona dentata                     | Crown 1                  |
| •                         | •                         | •                         | 52501100273        | Albero                             | Shaft 1                  |
| •                         | •                         | •                         | 52200500562        | Spina UNI 6364                     | Pin UNI 6364 1           |
| •                         | •                         | •                         | 52200500955        | Pistone sferico                    | Piston 7                 |
| •                         | •                         | •                         | 50100300142        | Fasce elastiche                    | Spring rings 21          |
| •                         | •                         | •                         | 53200500034        | Perno sferico con guida albero     | Shaft guide pin 1        |
| •                         | •                         | •                         | 53200500070        | Molla di carico corpo cilindri     | Spring 1                 |
| •                         | •                         | •                         | 53200500105        | Anello guida molla                 | Spring guide ring 1      |
| •                         | •                         | •                         | 50102300037        | Anello seeger                      | Retaining ring 1         |
| •                         | •                         | •                         | 50102300055        | Gruppo corpo cilindri sede pistoni | Piston barrel assembly 1 |
| •                         | •                         | •                         | 50102300117        | Guarnizione OR                     | O-Ring 1                 |
| •                         | •                         | •                         | 54200100162        | Corpo intermedio                   | Int. housing 1           |
| •                         | •                         | •                         | 51200500812        | Tappo cieco                        | Blank plug 1             |
| •                         | •                         | •                         | 54200100171        | Rondella rame                      | Copper washer 1          |
| •                         | •                         | •                         | 50101500028        | Guarnizione OR                     | O-ring 1                 |
| •                         | •                         | •                         | 50002916084        | Gruppo corpo posteriore            | Rear cover assembly 1    |
| •                         | •                         | •                         | 50002916108        | Rosetta elastica                   | Washer 4                 |
| •                         | •                         | •                         | 50002916130        | Vite TCE M12x45                    | Socket head capcrew 4    |
| •                         | •                         | •                         | 50600012412        | Guarnizione piastra                | Gasket 1                 |
| •                         | •                         | •                         | 51700201412        |                                    |                          |
| •                         | •                         | •                         | 11500600135        |                                    |                          |
| •                         | •                         | •                         | 11600910129        |                                    |                          |
| •                         | •                         | •                         | 50600018520        |                                    |                          |
| •                         | •                         | •                         | 50002990848        |                                    |                          |
| •                         | •                         | •                         | 50002990857        |                                    |                          |
| •                         | •                         | •                         | 50002991089        |                                    |                          |
| •                         | •                         | •                         | 50002991098        |                                    |                          |
| •                         | •                         | •                         | 50002991301        |                                    |                          |
| •                         | •                         | •                         | 50002991310        |                                    |                          |
| •                         | •                         | •                         | 50102000129        |                                    |                          |
| •                         | •                         | •                         | 50200500573        |                                    |                          |
| A                         | A                         | A                         | 50700000247        |                                    |                          |
| A                         | A                         | A                         | 50700000541        |                                    |                          |

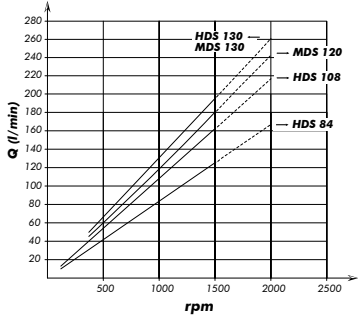
CARATTERISTICHE TECNICHE DI FUNZIONAMENTO / TECHNICAL FEATURES

| Tipo pompa<br>Pump type | Cilindrata<br>Displacement<br><br>cm³/rev | Pressione<br>Pressure<br><br>P1<br>bar      P3<br>bar |     | Velocità / Speed |           |           | Velocità min.<br>Min. speed<br>rpm | Peso<br>Weight<br><br>kg |
|-------------------------|-------------------------------------------|-------------------------------------------------------|-----|------------------|-----------|-----------|------------------------------------|--------------------------|
|                         |                                           |                                                       |     | V0<br>rpm        | V1<br>rpm | V2<br>rpm |                                    |                          |
| HDS-84                  | 84.33                                     | 350                                                   | 400 | 2300             | 1500      | 2000      | 300                                | 19.2                     |
| HDS-108                 | 107                                       |                                                       |     |                  | 1500      |           |                                    | 18.6                     |
| HDS-130                 | 131.62                                    |                                                       |     |                  | 1750      |           |                                    | 18.3                     |
| MDS-120                 | 122.1                                     | 260                                                   | 280 |                  | 1500      |           |                                    | 18.4                     |
| MDS-130                 | 131.62                                    | 250                                                   | 270 |                  | 1500      |           |                                    | 18.7                     |

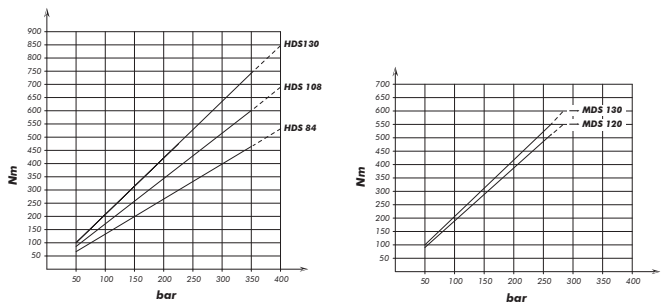
P1=Pressione massima continua Max. continuous pressure (100%)  
P3=Pressione massima di punta Max. peak pressure (6 sec.max)

V0=Massima continua vuoto Max. continuous speed without load  
V1=Massima continua Max. continuous speed  
V2=Massima intermittente Max. intermittent speed

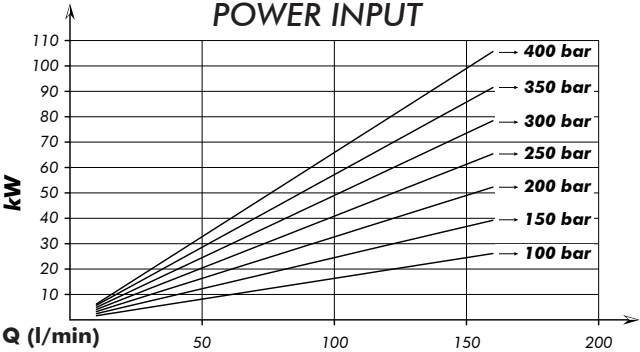
PORTATA / FLOW



COPPIA ASSORBITA / DRIVE TORQUE



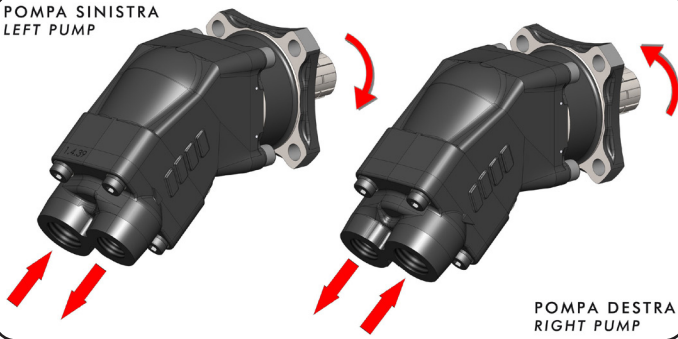
POTENZA ASSORBITA  
POWER INPUT



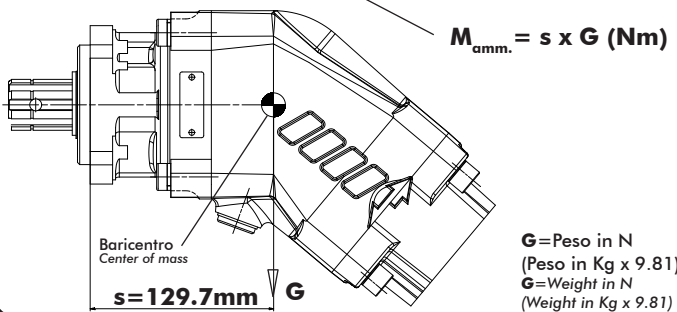
SCELTA DEL TUBO DI ASPIRAZIONE  
HOW TO CHOOSE THE SUCTION PIPE SIZE

| Q Portata<br>Flow<br>l/min | interno min. tubo<br>Min pipe diam.<br>mm      inch |         | Velocità flusso<br>Flow speed<br>(m/s) |
|----------------------------|-----------------------------------------------------|---------|----------------------------------------|
| 20                         | 25                                                  | 1"      | 0,68                                   |
| 30                         | 32                                                  | 1" 1/4  | 0,62                                   |
| 40                         | 32                                                  |         | 0,83                                   |
| 50                         | 38                                                  | 1" 1/2  | 0,74                                   |
| 60                         | 38                                                  | 1" 9/16 | 0,88                                   |
| 70                         | 40                                                  |         | 0,93                                   |
| 80                         | 45                                                  | 1" 3/4  | 0,84                                   |
| 90                         | 45                                                  | 2"      | 0,94                                   |
| 100                        | 50                                                  |         | 0,85                                   |
| 110                        | 50                                                  | 2" 3/8  | 0,93                                   |
| 120                        | 60                                                  |         | 0,71                                   |
| 130                        | 60                                                  |         | 0,77                                   |
| 140                        | 60                                                  | 2" 1/2  | 0,83                                   |
| 150                        | 60                                                  |         | 0,88                                   |
| 160                        | 63                                                  | 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.

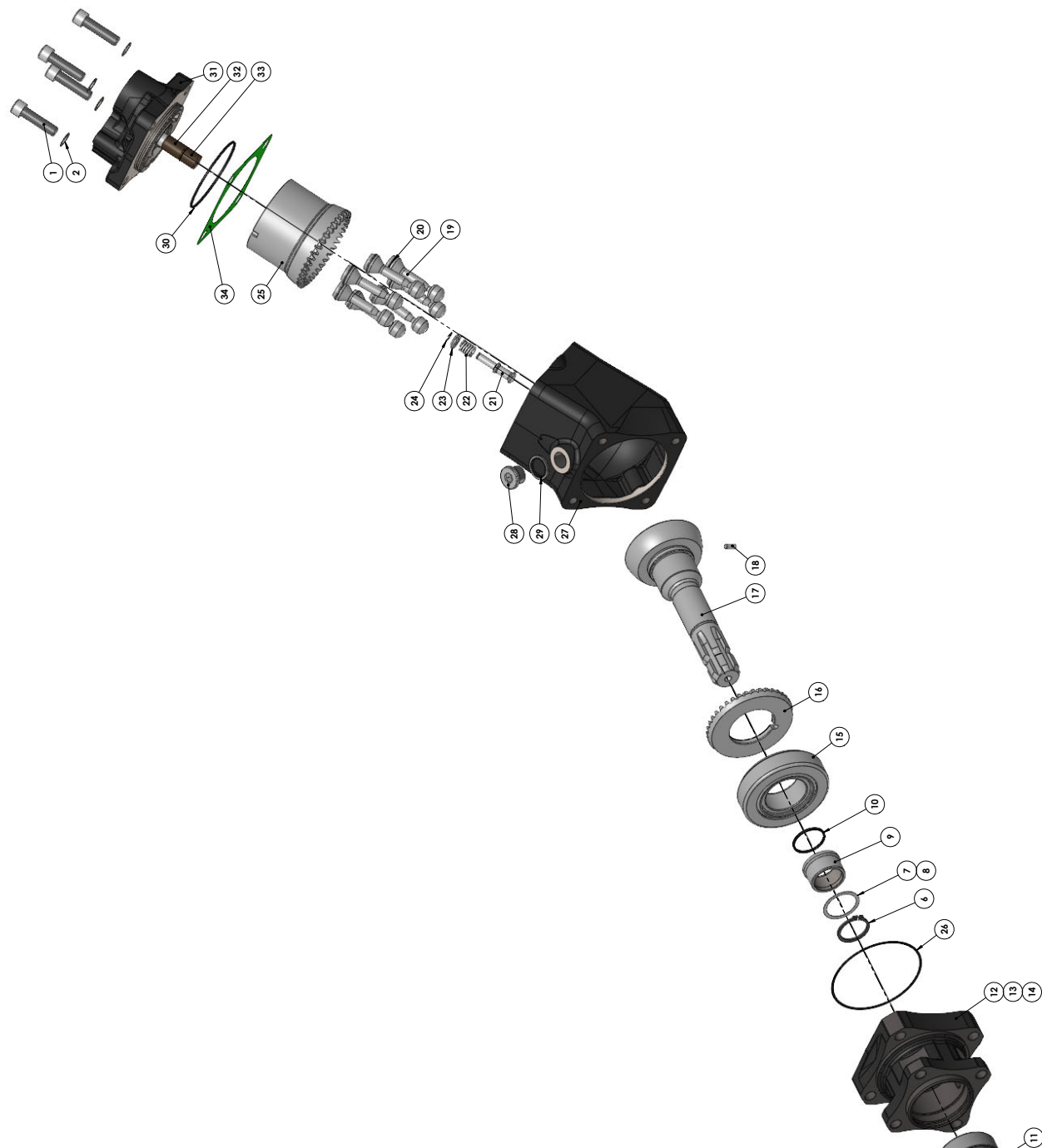


MOMENTO PESO / MASS MOMENT



Kit guarnizioni / Seal Kit  
10890384009





99740060010

13/01/2022

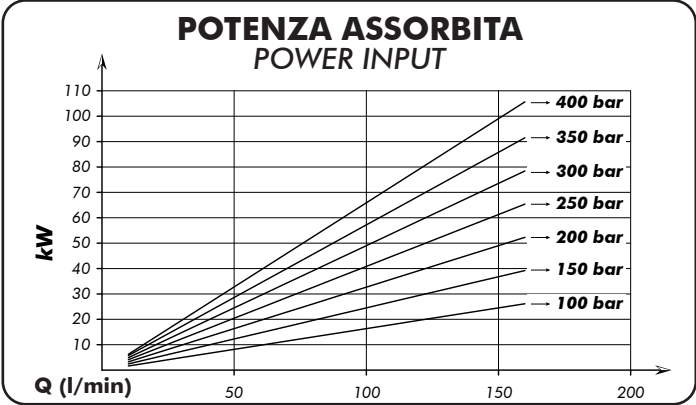
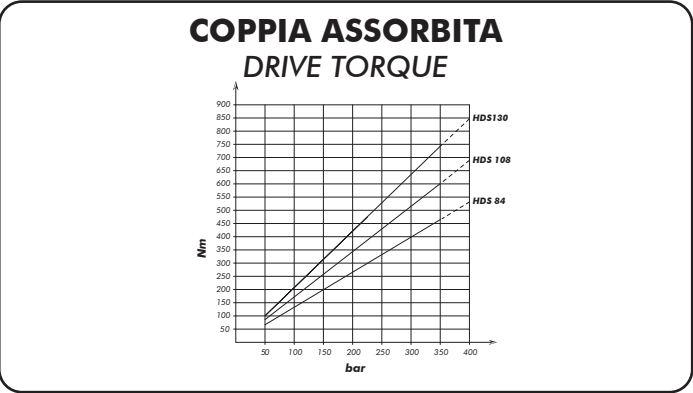
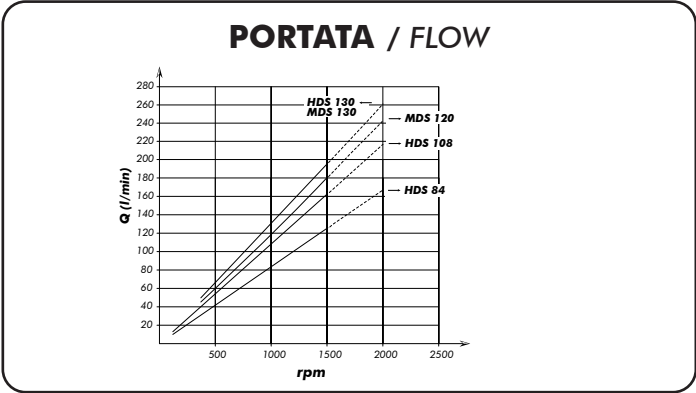
| <b>130</b> | <b>Codice/Code</b> | <b>Descrizione / Description</b> | <b>Q.</b> |
|------------|--------------------|----------------------------------|-----------|
| •          | 50200500573        | Vite TCE M12x45                  | 8         |
| •          | 50102000129        | Rosetta elastica                 | 8         |
| •          | 50100002729        | Anello elastico                  | 1         |
| •          | 50600024272        | Paraolio                         | 1         |
| •          | 50100100677        | Anello elastico                  | 1         |
| •          | 50100001355        | Anello seeger rinforzato         | 1         |
| •          | 52900701127        | Rondella                         | 1         |
| •          | 52900700226        | Rondella                         | 1         |
| •          | 51100200200        | Bussola                          | 1         |
| •          | 50600013137        | Guarnizione OR                   | 1         |
| •          | 51000200364        | Cuscinetto a rulli conici        | 1         |
| •          | 51700201172        | Corpo anteriore                  | 1         |
| •          | 513                | Targhetta completa               | 1         |
| •          | 51300000011        | Chiodino fissaggio targhetta     | 2         |
| •          | 51000200357        | Cuscinetto a rulli conici        | 1         |
| •          | 52501100273        | Corona dentata                   | 1         |
| •          | 52200500455        | Albero                           | 1         |
| •          | 50100306142        | Spina UNI 6364                   | 1         |
| •          | 53200500105        | Pistone sferico                  | 7         |
| •          | 50102300117        | Fasce elastiche                  | 21        |
| •          | 54200100162        | Perno sferico con guida albero   | 1         |
| •          | 51200500812        | Molla di carico corpo cilindri   | 1         |
| •          | 54200100171        | Anello guida molla               | 1         |
| •          | 50101500028        | Anello seeger                    | 1         |
| •          | 51700300716        | Corpo cilindri sede pistoni      | 1         |
| •          | 50600012412        | Guarnizione OR                   | 1         |
| •          | 51700201412        | Corpo intermedio                 | 1         |
| •          | 11500600135        | Tappo cieco                      | 1         |
| •          | 11600910129        | Rondella rame                    | 1         |
| •          | 50600018520        | Guarnizione OR                   | 1         |
| •          | 51700202242        | Corpo posteriore (sinistro)      | 1         |
| •          | 53300400328        | Boccola DU 16x18x25              | 1         |
| •          | 53300400337        | Boccola DU 16x18x20              | 1         |
| A          | 507000000247       | Guarnizione piastra 0,3mm        | 1         |
| A          | 507000000541       | Guarnizione piastra 0,5mm        | 1         |

rtive

| CARATTERISTICHE TECNICHE DI FUNZIONAMENTO / TECHNICAL FEATURES |                                           |                       |           |                  |           |           |                                       |                          |
|----------------------------------------------------------------|-------------------------------------------|-----------------------|-----------|------------------|-----------|-----------|---------------------------------------|--------------------------|
| Tipo<br>pompa<br>Pump type                                     | Cilindrata<br>Displacement<br><br>cm³/rev | Pressione<br>Pressure |           | Velocità / Speed |           |           | Velocità<br>min.<br>Min. speed<br>rpm | Peso<br>Weight<br><br>kg |
|                                                                |                                           | P1<br>bar             | P3<br>bar | V0<br>rpm        | V1<br>rpm | V2<br>rpm |                                       |                          |
| HDS-130                                                        | 131.62                                    | 350                   | 400       | 2300             | 1750      | 2000      | 300                                   | 18,7                     |

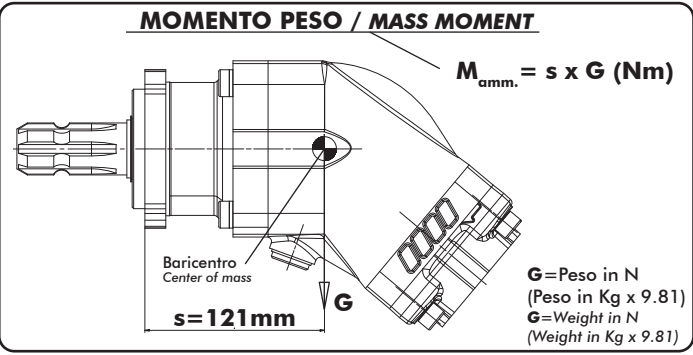
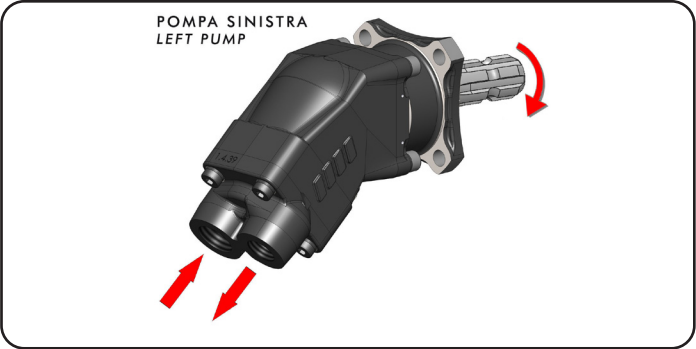
P1=Pressione massima continua Max. continuous pressure (100%)  
P3=Pressione massima di punta Max. peak pressure (6 sec.max)

V0=Massima continua vuoto Max. continuous speed without load  
V1=Massima continua Max. continuous speed  
V2=Massima intermittente Max. intermittent speed



| SCELTA DEL TUBO DI ASPIRAZIONE<br>HOW TO CHOOSE THE SUCTION PIPE SIZE |                                                     |         |                                        |
|-----------------------------------------------------------------------|-----------------------------------------------------|---------|----------------------------------------|
| Q Portata<br>Flow<br>l/min                                            | interno min. tubo<br>Min pipe diam.<br>mm      inch |         | Velocità flusso<br>Flow speed<br>(m/s) |
| 20                                                                    | 25                                                  | 1"      | 0,68                                   |
| 30                                                                    | 32                                                  | 1" 1/4  | 0,62                                   |
| 40                                                                    | 32                                                  |         | 0,83                                   |
| 50                                                                    | 38                                                  |         | 0,74                                   |
| 60                                                                    | 38                                                  | 1" 1/2  | 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  
10890384009