

# HYDROMECHANIC COUPLINGS TURBOSTART JOLLY

from 0.37 to 2200 Kw



**NON SLIP - CONSTANT OUTPUT SPEED**

# TECHNICAL CATALOGUE

## HYDROMECHANIC COUPLINGS

### JOLLY



**New Turbostart s.r.l.** was born in 1958, its corporate purpose is the production and sale of mechanical and hydraulic drives; the company has always been renowned for their new products reliability and professional service offered to clientele. It is a compact structure, efficient and always ready to solve the most varied problems of customers, succeeding in realizing even personalized products, guaranteeing, at the same time, rapidity and prompt deliveries. Over the years, it has always followed quality objectives, **officially recognized on several occasions all over the world.**

New Turbostart is in **continual development, both in Italy and abroad** (all continents) where it is selling hydrodynamic and hydromechanic couplings without slip at continuous running and 100% efficiency, couplings in cast iron for mines applications for powers ranging from 0,37 to 2.200 Kw, both for in line and pulley assembly, and also disk brake, drum brake, and all metal flexible couplings.

The administration and commercial offices are placed in Milan – Segrate, while production factory is located in Borgo Ticino – Novara, which is owned by New Turbostart and it covers 7.000 sq.m.

The factory is equipped with numerically controlled operating machines; processing of all particulars are carried out inside, as well as assembly and testing, whereas castings are made by skilled foundries in primary aluminium alloy

New Turbostart is certified, according to **UNI EN ISO 9001 – 2008** regulation, and it can supplies couplings in according ATEX Certification.



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The worldwide patented Jolly hydromechanic coupling is a fitting of outstanding importance, which is widely used in modern transmissions.

The Jolly coupling makes it possible to start high inertia loads gradually using three phase squirrel cage asynchronous motors, which demand constant continuous running however the load changes.

## PRINCIPLE OF OPERATION

At start up the Jolly hydromechanic coupling acts as a hydrodynamic coupling till a minimum operating speed of 800+900 rpm is reached. Unloaded motor shaft (5) accelerates easily and the inner impeller(pump) connected to it pivots both the outer impeller and the cover, which are linked to the driven machine, by oil circulation. The lock-up weights, thrust by triangular wedges, gradually accelerate and the rollers start sliding on the impeller friction lock up ring. Subsequently, centrifugal force acts on the internal mechanical clutch, making it engage and providing a positive 1:1 lock up at full motor speed.

## LOCK-UP WEIGHT POSITION FROM REST TO OPERATION

Whenever the resisting torque reaches twice the dragging torque, the mechanical part disengages and the hydraulic part comes into action, protecting both the motor and the driven machine.

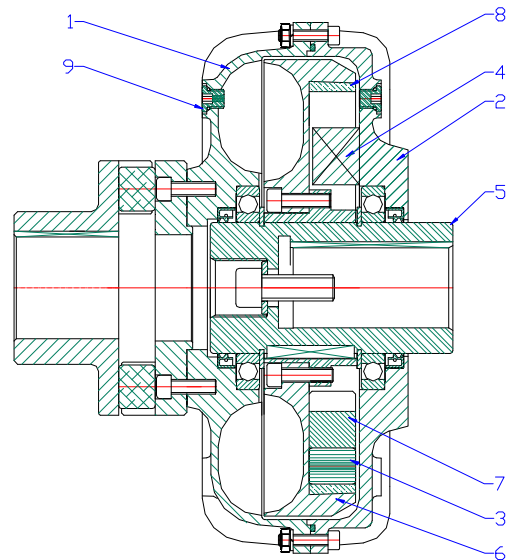
When the overload or jam is removed, the operating speed is regained and the clutch re-engages for 1:1 lock up.

Varying the quantity of oil makes it easy to match the motor to drive requirements and provides optimum acceleration times. Optional reservoir permits to limit the starting torque and consequently to extend the start-up time and optional temperature limiting fusible plugs are a protection against prolonged slip at rated speed, which is caused by anomalous overloads.

The Jolly coupling can operate in both directions of rotation.

The input shaft must be keyed on the motor shaft.

The Jolly coupling is normally used with horizontal axis. For different positions, please consult Turbostart distributor.



**Mechanical Lock-up Fluid Couplig**

1. Turbine Housing Section
2. Cover
3. Lock-up Weight Roller
4. Triangular Wedge
5. Input
6. Inner impeller
7. Lock-up Weights
8. Friction Lock-up Ring
9. Filler Plug

- Soft starts (fig. C)
- Dampens shock loads.
- Energy savings by reducing initial starting current using a smaller motor according to the demand power at the rated speed (fig. D)
- Varying the quantity of fluid makes it easy to match motor to drive requirements and provides optimum acceleration times.
- Optional reservoir permits extended startup time.
- No slip at full speed and no heat generation.
- Optional temperature-limiting fusible plug provides protection in case of prolonged overloads.
- Output speed kept at a constant level and in any case the same as the motor.
- No wear and fatigue on mechanical lockup device.
- No maintenance required but periodic oil change.

The Jolly Coupling is unique in combining the advantages of both fluid and mechanical device to provide full protection, yet save substantially on capital, maintenance and costs.

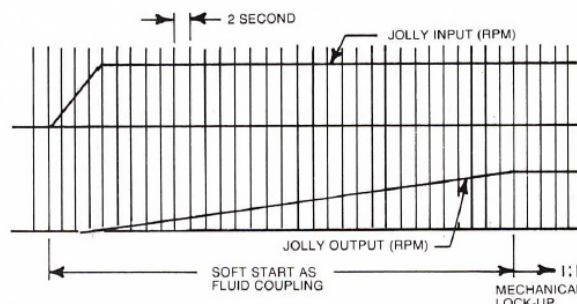


Fig. C

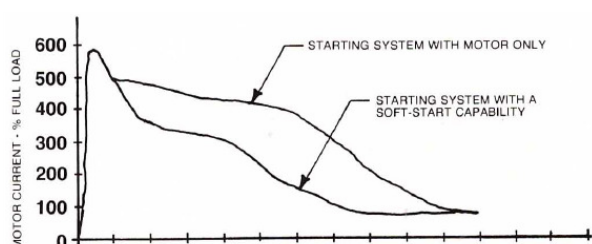


Fig.D

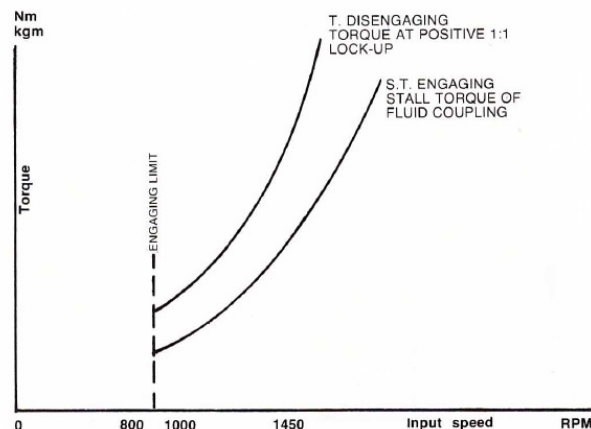
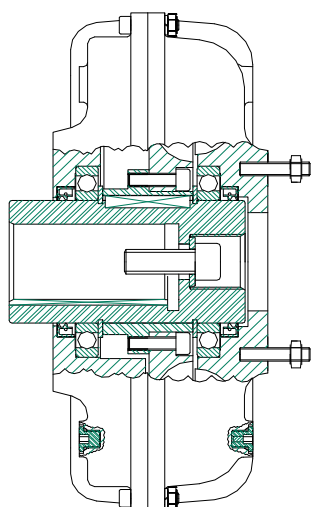


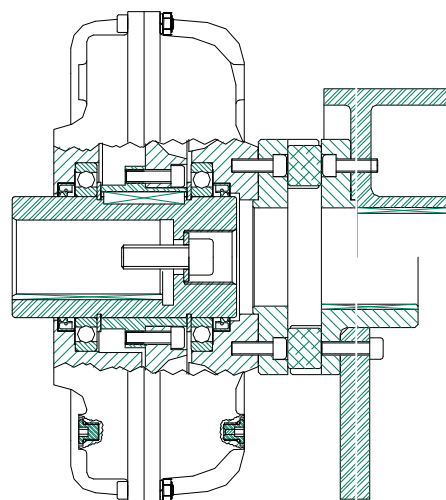
Fig.E

## USUAL APPLICATIONS

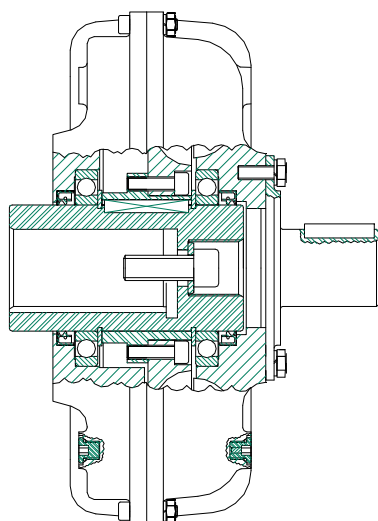
- |                        |                         |                            |
|------------------------|-------------------------|----------------------------|
| - Air separators       | - Carding machines      | - Paper machineries        |
| - Amusement Park rides | - Centrifugal pumps     | - Polverizers              |
| - Belts conveyors      | - Compressors           | - Rotating filters         |
| - Blowers              | - Fans                  | - Textile machines         |
| - Bottling machines    | - Machine tools         | - Wire machines            |
| - Bucket conveyors     | - Metalworking machines | - Wheel balancing machines |



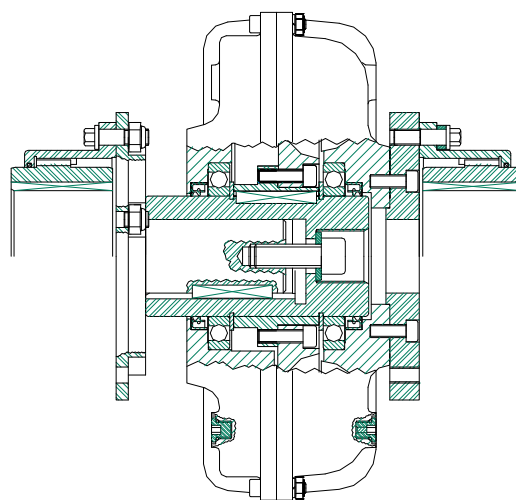
**L/S: with stud bolts**



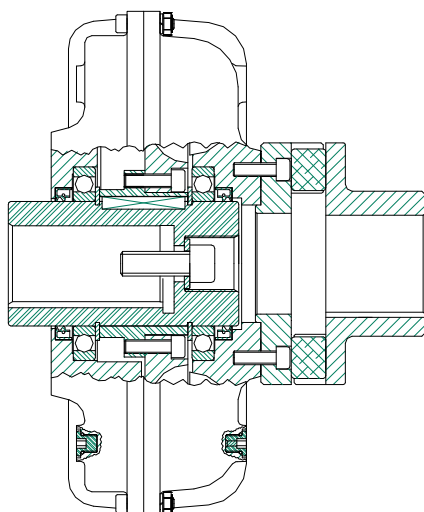
**LE-DF/FF: with flexible coupling and brake disk or brake drum**



**L/MU: with stub shaft**

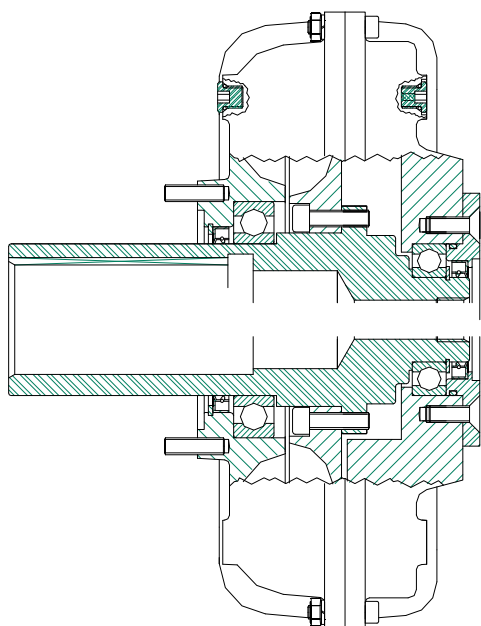


**CF: with input/output flanges for gear coupling**

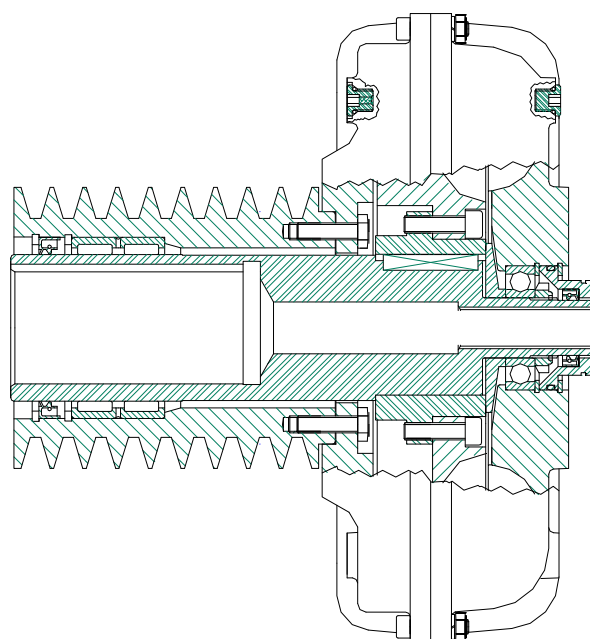


**L/E: with flexible coupling**

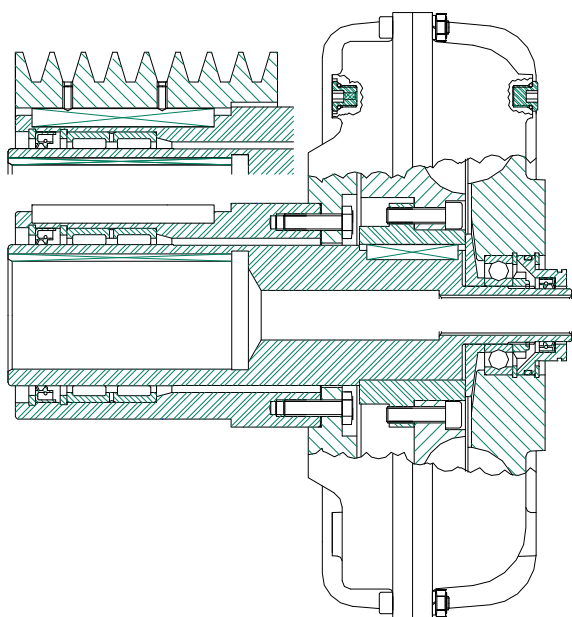
For pulley version



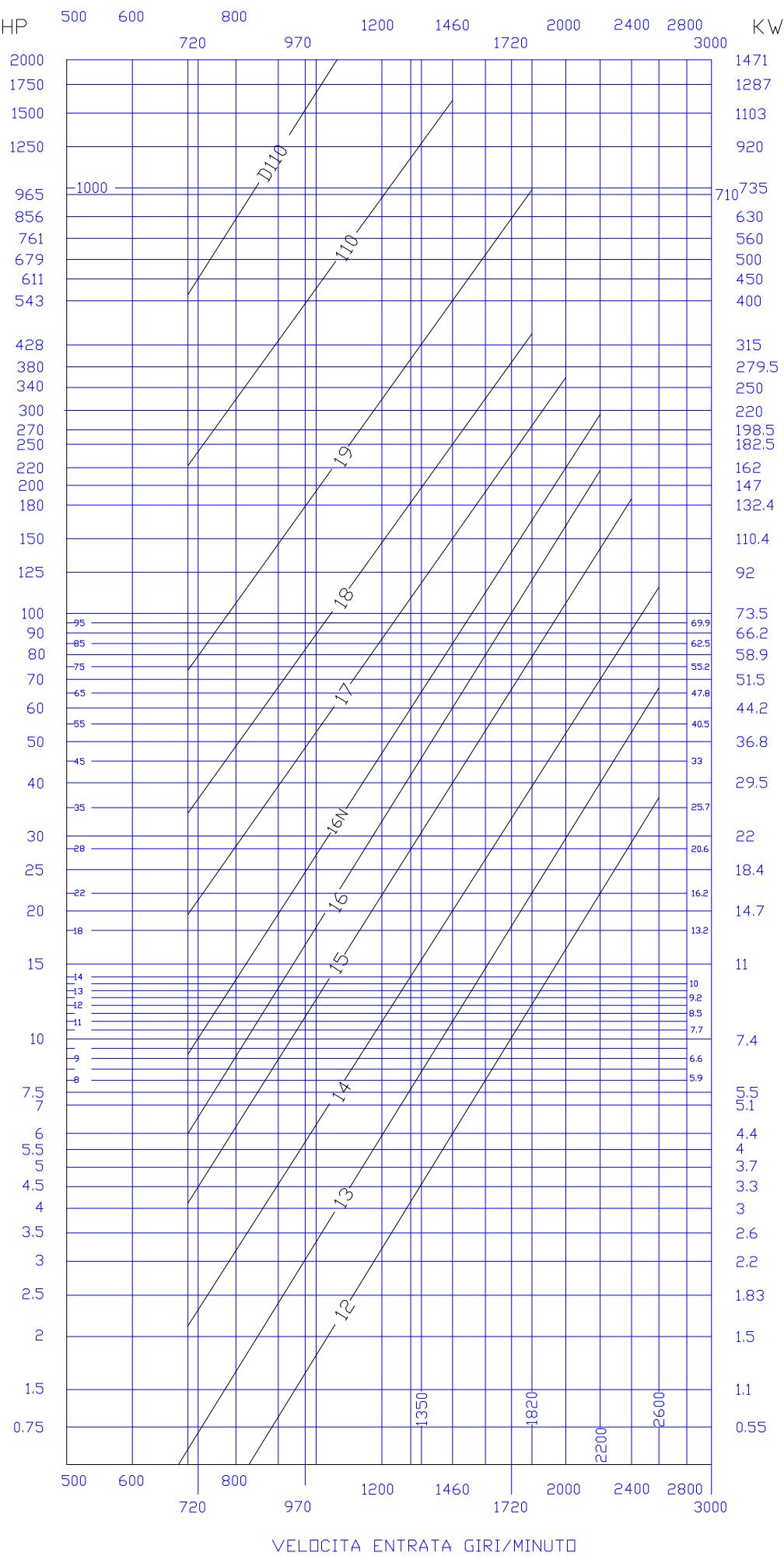
VERSION PF: FOR FLANGED PULLEY



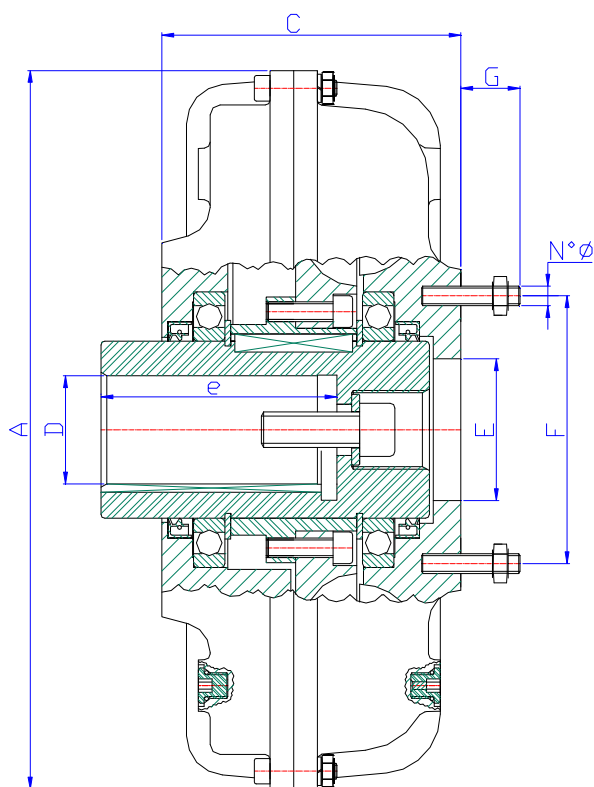
PI VERSION: WITH INCORPORATED PULLEY HAVING HIGH GROOVES NUMBER



PC VERSION: FOR KEYED PULLEY







IN LINE VERSION TYPE L/S: WITH BOLTS

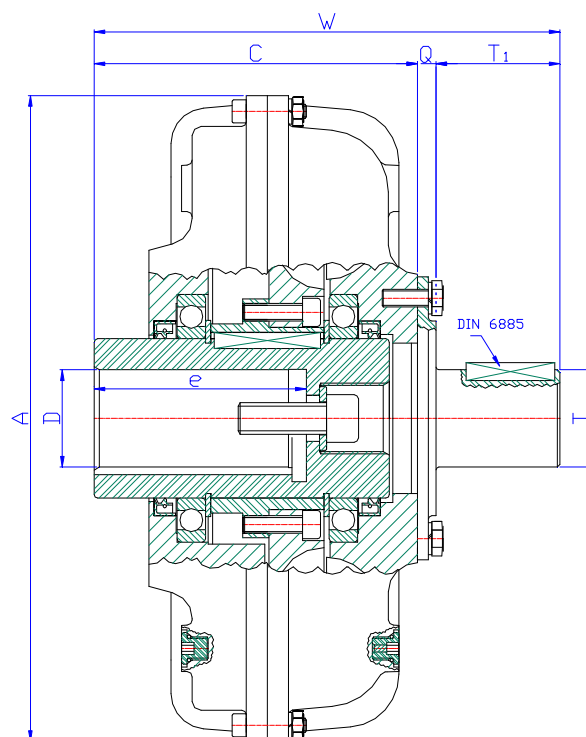
| COUPLING TYPE | DIMENSIONS |           |                          |                   |         |           |         |            |
|---------------|------------|-----------|--------------------------|-------------------|---------|-----------|---------|------------|
|               | A          | C<br>±0,5 | D<br>G7<br>*             | e<br>min          | E<br>H7 | F<br>±0,2 | G<br>±1 | Stud bolts |
| 12            | 234        | 127       | 24 - 28<br>38            | 60<br>80          | 47      | 73        | 16      | 6 M6       |
| 13            | 260        | 146       | 28<br>38<br>42           | 60<br>80<br>110   | 47      | 73        | 16      | 6 M6       |
| 14            | 294        | 148       | 38<br>42 - 48            | 80<br>110         | 62      | 89        | 25      | 6 M8       |
| 15            | 325        | 154       | 42<br>48 - 55            | 110               | 62      | 89        | 25      | 6 M8       |
| 16            | 365        | 183       | 48 - 55<br>60 - 65       | 110<br>140        | 72      | 112       | 30      | 8 M10      |
| 16N           | 390        | 181       | 48 - 55<br>60 - 65       | 110<br>140        | 85      | 136       | 30      | 8 M10      |
| 17            | 430        | 216       | 55<br>60 - 65 - 75<br>80 | 110<br>140<br>170 | 85      | 136       | 30      | 8 M10      |
| 18            | 527        | 239       | 65 - 75<br>80<br>100     | 140<br>170<br>210 | 120     | 168       | 35      | 8 M10      |
| 19            | 626        | 259       | 80<br>100-110            | 170<br>210        | 140     | 196       | 45      | 10 M12     |
| 110           | 800        | 325       | 100 - 110 - 120<br>130   | 210<br>240        | 180     | 250       | 50      | 10 M14     |

Keyways as per UNI 6604-69 DIN 6885/1

Bolting screws diameters as per DIN 332

Bolting screws and washers supplied on request.

The weights and dimensions may be subject to change.



IN LINE VERSION TYPE L/MU WITH STUB SHAFT

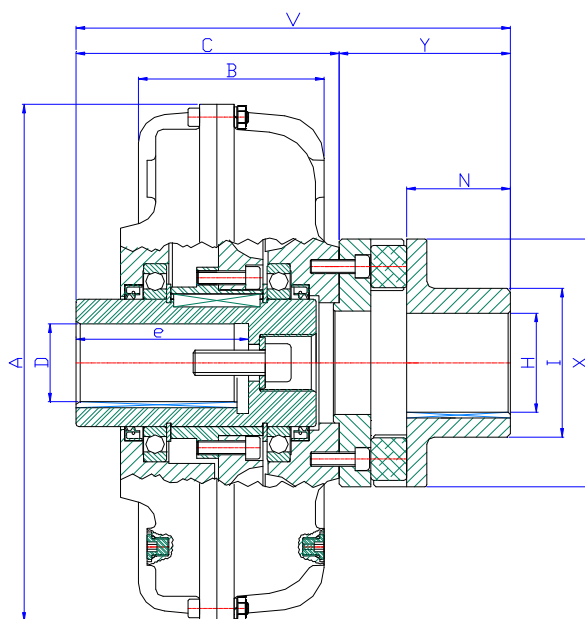
| COUPLING TYPE | DIMENSIONS |           |                          |                   |    |         |     |     |
|---------------|------------|-----------|--------------------------|-------------------|----|---------|-----|-----|
|               | A          | C<br>±0,5 | D<br>G7<br>*             | e<br>min          | Q  | T<br>h6 | T1  | W   |
| 12            | 234        | 127       | 24 - 28<br>38            | 60<br>80          | 8  | 24      | 31  | 165 |
| 13            | 260        | 146       | 28<br>38<br>42           | 60<br>80<br>110   | 8  | 30      | 39  | 192 |
| 14            | 294        | 148       | 38<br>42 - 48            | 80<br>110         | 8  | 38      | 46  | 202 |
| 15            | 325        | 154       | 42<br>48 - 55            | 110               | 10 | 48      | 66  | 230 |
| 16            | 365        | 183       | 48 - 55<br>60 - 65       | 110<br>140        | 10 | 52      | 66  | 259 |
| 16N           | 390        | 181       | 48 - 55<br>60 - 65       | 110<br>140        | 10 | 55      | 70  | 261 |
| 17            | 430        | 216       | 55<br>60 - 65 - 75<br>80 | 110<br>140<br>170 | 10 | 55      | 70  | 296 |
| 18            | 527        | 239       | 65 - 75<br>80<br>100     | 140<br>170<br>210 | 12 | 70      | 85  | 336 |
| 19            | 626        | 259       | 80<br>100-110            | 170<br>210        | 25 | 80      | 100 | 484 |
| 110           | 800        | 325       | 100 - 110 - 120<br>130   | 210<br>240        | 28 | 110     | 160 | 513 |

Keyways as per UNI 6604-69 DIN 6885/1

Bolting screws diameters as per DIN 332

Bolting screws and washers supplied on request.

The weights and dimensions may be subject to change.



IN LINE VERSION TYPE L/E: WITH FLEXIBLE COUPLING

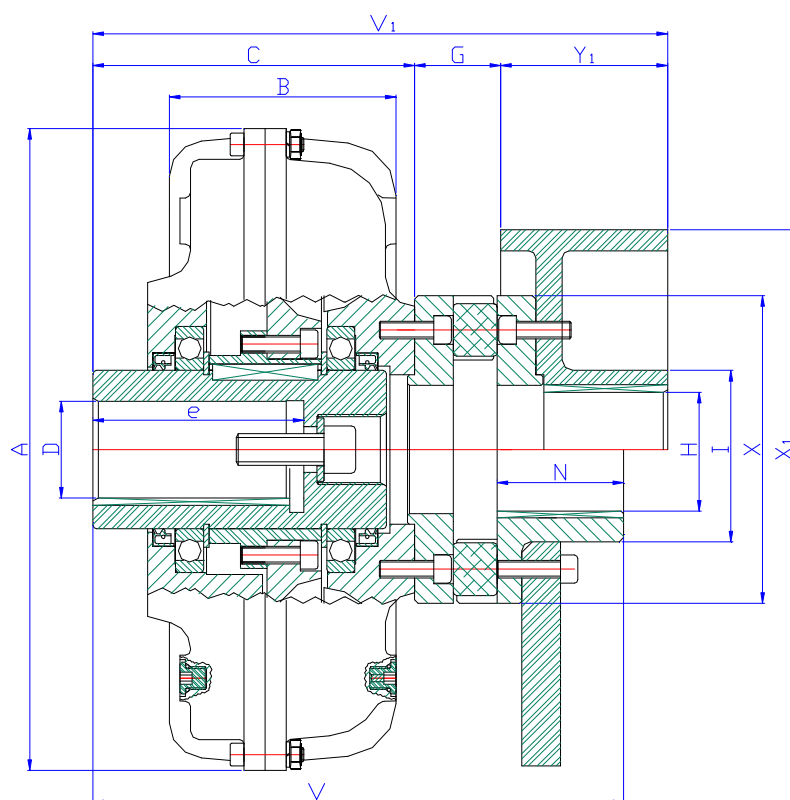
| COUPLING TYPE | FLEXIBLE COUPLING | DIMENSIONS |     |           |                          |                   |                |     |     |     |     |     |
|---------------|-------------------|------------|-----|-----------|--------------------------|-------------------|----------------|-----|-----|-----|-----|-----|
|               |                   | A          | B   | C<br>±0,5 | D<br>G7<br>*             | e<br>min          | H<br>G7<br>max | I   | N   | X   | Y   | V   |
| 12            | E 20              | 234        | 98  | 127       | 24 - 28<br>38            | 60<br>80          | 38             | 55  | 42  | 96  | 76  | 202 |
| 13            | E 20              | 260        | 105 | 146       | 28<br>38<br>42           | 60<br>80<br>110   | 38             | 55  | 42  | 96  | 76  | 221 |
| 14            | E 30              | 294        | 107 | 148       | 38<br>42 - 48            | 80<br>110         | 48             | 76  | 55  | 122 | 95  | 243 |
| 15            | E 30              | 325        | 125 | 154       | 42<br>48 - 55            | 110               | 48             | 76  | 55  | 122 | 95  | 249 |
| 16            | E 40              | 365        | 130 | 183       | 48 - 55<br>60 - 65       | 110<br>140        | 60             | 86  | 72  | 150 | 119 | 302 |
| 16N           | E 50              | 390        | 145 | 181       | 48 - 55<br>60 - 65       | 110<br>140        | 70             | 105 | 72  | 175 | 119 | 300 |
| 17            | E 50              | 430        | 160 | 216       | 55<br>60 - 65 - 75<br>80 | 110<br>140<br>170 | 70             | 105 | 72  | 175 | 119 | 335 |
| 18            | E 60              | 527        | 195 | 239       | 65 - 75<br>80<br>100     | 140<br>170<br>210 | 80             | 124 | 88  | 220 | 142 | 381 |
| 19            | E 70              | 626        | 225 | 259       | 80<br>100-110            | 170<br>210        | 100            | 150 | 111 | 250 | 181 | 440 |
| 110           | E 80              | 800        | 320 | 325       | 100 - 110 - 120<br>130   | 210<br>240        | 110            | 200 | 141 | 320 | 226 | 551 |

Keyways as per UNI 6604-69 DIN 6885/1

Bolting screws diameters as per DIN 332

Bolting screws and washers supplied on request.

The weights and dimensions may be subject to change.



**IN LINE VERSION TYPE LE/FF WITH BRAKE DRUM  
AND VERSION LE/DF WITH BRAKE DISK**

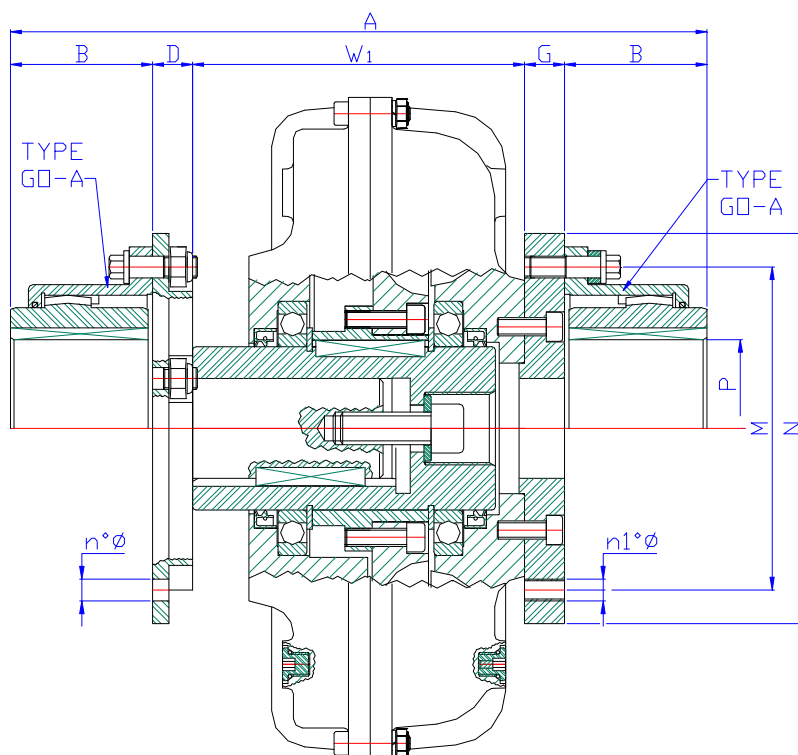
| COUPLING<br>TYPE | DIMENSIONS |     |           |                          |                   |          |                |     |     |     |            |     |            |     |
|------------------|------------|-----|-----------|--------------------------|-------------------|----------|----------------|-----|-----|-----|------------|-----|------------|-----|
|                  | A          | B   | C<br>±0,5 | D<br>G7<br>*             | e<br>min          | G<br>± 1 | H<br>G7<br>max | I   | N   | X   | X1         | Y   | Y1         | V1  |
| 12               | 234        | 98  | 127       | 24 - 28<br>38            | 60<br>80          | 16       | 38             | 55  | 42  | 96  | 160        | 76  | 60         | 202 |
| 13               | 260        | 105 | 146       | 28<br>38<br>42           | 60<br>80<br>110   | 16       | 38             | 55  | 42  | 96  | 160        | 76  | 60         | 221 |
| 14               | 294        | 107 | 148       | 38<br>42 - 48            | 80<br>110         | 25       | 48             | 76  | 55  | 122 | 160        | 95  | 60         | 243 |
| 15               | 325        | 125 | 154       | 42<br>48 - 55            | 110               | 25       | 48             | 76  | 55  | 122 | 160<br>200 | 95  | 60<br>75   | 249 |
| 16               | 365        | 130 | 183       | 48 - 55<br>60 - 65       | 110<br>140        | 30       | 60             | 86  | 72  | 150 | 160<br>200 | 119 | 60<br>75   | 302 |
| 16N              | 390        | 145 | 181       | 48 - 55<br>60 - 65       | 110<br>140        | 30       | 70             | 105 | 72  | 175 | 250<br>315 | 119 | 95<br>118  | 300 |
| 17               | 430        | 160 | 216       | 55<br>60 - 65 - 75<br>80 | 110<br>140<br>170 | 30       | 70             | 105 | 72  | 175 | 250<br>315 | 119 | 95<br>118  | 335 |
| 18               | 527        | 195 | 239       | 65 - 75<br>80<br>100     | 140<br>170<br>210 | 35       | 80             | 124 | 88  | 220 | 315<br>400 | 142 | 118<br>150 | 381 |
| 19               | 626        | 225 | 259       | 80<br>100-110            | 170<br>210        | 45       | 100            | 150 | 111 | 250 | 400<br>500 | 181 | 150<br>190 | 440 |
| 110              | 800        | 320 | 325       | 100 - 110 - 120<br>130   | 210<br>240        | 50       | 110            | 200 | 141 | 320 | 500        | 226 | 190        | 551 |

Keyways as per UNI 6604-69 DIN 6885/1

Bolting screws diameters as per DIN 332

Bolting screws and washers supplied on request.

The weights and dimensions may be subject to change.



**IN LINE VERSION TYPE CF WITH INPUT/OUTPUT FLANGES  
FOR GEAR COUPLING**

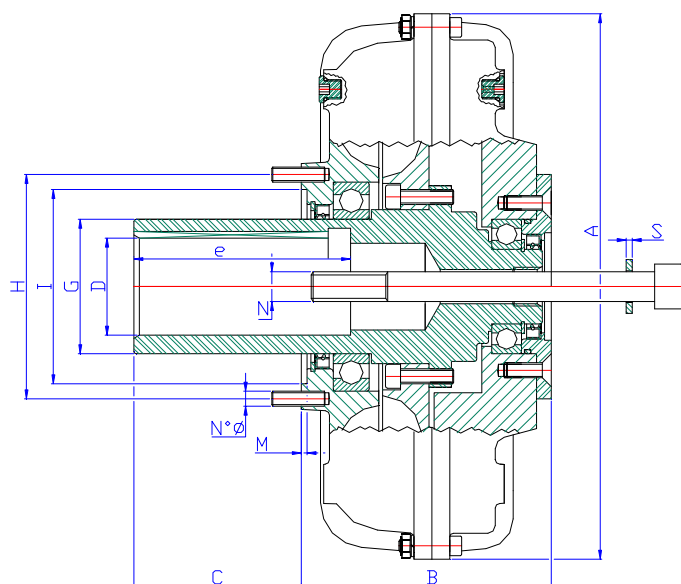
| COUPLING<br>TYPE | DIMENSIONS |     |      |      |      |           |     |       |        |            |
|------------------|------------|-----|------|------|------|-----------|-----|-------|--------|------------|
|                  | A          | W1  | B    | D    | G    | M<br>±0,1 | N   | n° Ø  | n1° Ø  | P<br>MAX Ø |
| 12               | 369        | 126 | 51,5 | 19   | 19   | 122       | 152 | 8 10  | 8 M10  | 60         |
| 13               | 388        | 145 | 51,5 | 19   | 19   | 122       | 152 | 8 10  | 8 M10  | 60         |
| 14               | 419        | 152 | 63,5 | 19   | 19   | 148       | 180 | 10 10 | 10 M10 | 75         |
| 15               | 478        | 156 | 78,5 | 22   | 22   | 178       | 215 | 10 12 | 10 M12 | 75         |
| 16               | 523        | 183 | 78,5 | 22   | 22   | 178       | 215 | 10 12 | 10 M12 | 110        |
| 16N              | 533        | 181 | 78,5 | 22   | 22   | 178       | 215 | 10 12 | 10 M12 | 110        |
| 17               | 596        | 216 | 92,5 | 22   | 22   | 203       | 240 | 12 12 | 12 M12 | 110        |
| 18               | 753        | 265 | 108  | 28,5 | 28,5 | 236       | 280 | 12 16 | 12 M16 | 127        |
| 19               | 855        | 285 | 123  | 28,5 | 28,5 | 270       | 320 | 14 16 | 14 M16 | 150        |
| 110              | 948        | 352 | 123  | 28,5 | 28,5 | 270       | 320 | 14 16 | 14 M16 | 150        |

Keyways as per UNI 6604-69 DIN 6885/1

Bolting screws diameters as per DIN 332

Bolting screws and washers supplied on request.

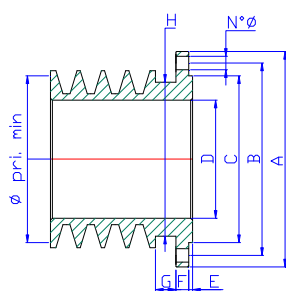
The weights and dimensions may be subject to change.



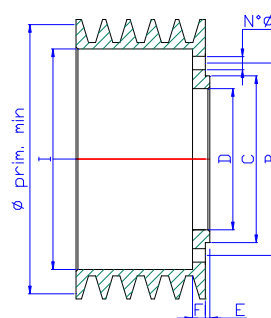
VERSION PF FOR FLANGED PULLEY AND PT FOR HOLLOWED PULLEY

| COUPLING<br>TYPE | DIMENSIONS |     |            |                |            |    |     |     |     |              |       |
|------------------|------------|-----|------------|----------------|------------|----|-----|-----|-----|--------------|-------|
|                  | A          | B   | C          | D              | e<br>min   | G  | H   | I   | M   | N            | N° Ø  |
| 14 PF            | 294        | 143 | 110        | 38<br>42 48    | 80<br>110  | 65 | 114 | 90  | 5,5 | M 12<br>M 16 | 8 M8  |
| 15 PF            | 325        | 163 | 110        | 42 48<br>55    | 110        | 75 | 114 | 90  | 5,5 | M 16<br>M 20 | 8 M8  |
| 16 PF            | 365        | 171 | 110<br>126 | 48 55<br>60 65 | 110<br>140 | 90 | 150 | 130 | 4   | M 20         | 8 M10 |
| 16N PF           | 390        | 195 | 126        | 48 55<br>60 65 | 110<br>140 | 90 | 150 | 130 | 4   | M 20         | 8 M10 |

Flanged pulley



Hollowed pulley



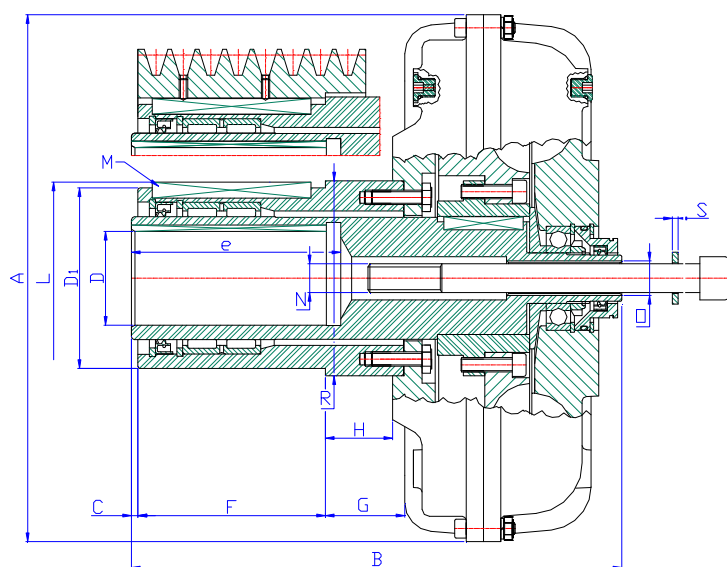
| COUPLING<br>TYPE | DIMENSIONS |        |      |       |        |    |    |     |       |        | PULLEY              |                      |
|------------------|------------|--------|------|-------|--------|----|----|-----|-------|--------|---------------------|----------------------|
|                  | A ±1       | B ±0,2 | C g6 | D min | E ±0,1 | F  | G  | H   | I min | N° Ø   | FLANGED<br>P.D. min | HOLLOWED<br>P.D. min |
| 14 PF            | 130        | 114    | 80   | 72    | 3      | 10 | 15 | 90  | 130   | 8 8,5  | SPB 110<br>SPC 120  | SPB 170<br>SPC 180   |
| 15 PF            | 130        | 114    | 90   | 78    | 3      | 10 | 15 | 90  | 128   | 8 8,5  | SPB 110<br>SPB 125  | SPB 170<br>SPC 180   |
| 16 PF            | 168        | 150    | 130  | 94    | 3      | 10 | 16 | 120 | 166,5 | 8 10,5 | SPB 130<br>SPC 140  | SPB 210<br>SPC 220   |
| 16N PF           | 168        | 150    | 130  | 94    | 3      | 10 | 16 | 120 | 166,5 | 8 10,5 | SPB 130<br>SPB 140  | SPB 210<br>SPC 220   |

Keyways as per UNI 6604-69 DIN 6885/1

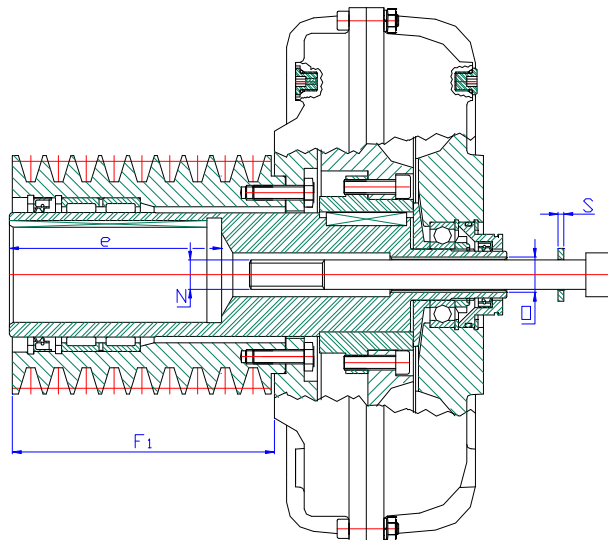
Bolting screws diameters as per DIN 332

Bolting screws and washers supplied on request.

The weights and dimensions may be subject to change.



VERSION PC FOR KEYED PULLEY



VERSION PI FOR INCORPORATED PULLEY

| COUPLING<br>TYPE | DIMENSIONS |            |          |                          |                              |                          |                          |            |           |                          |         |                      |             |     |            |     |
|------------------|------------|------------|----------|--------------------------|------------------------------|--------------------------|--------------------------|------------|-----------|--------------------------|---------|----------------------|-------------|-----|------------|-----|
|                  | A          | B<br>± 1,5 | C<br>± 1 | D1<br>h6                 | D<br>(G7)                    | e<br>min                 | F                        | G ±<br>1,5 | H         | L                        | M       | N<br>Ø max<br>screws | O<br>Puller | F1  | R          | S   |
| 12               | 234        | 215        | 2,5      | 85                       | 24 28<br>38                  | 60<br>80                 | 80                       | 22         | 14        | 88,5                     | 12 X 8  | M12                  | M14         | 95  | 88         | 2,5 |
| 13               | 260        | 240        | 7        | 85                       | 28<br>38                     | 60<br>80                 | 80                       | 31         | 22        | 88,5                     | 12 x 8  | M12                  | M14         | 110 | 88         | 2,5 |
| 14               | 294        | 244        | 2,5      | 95                       | 38<br>42 48                  | 80<br>110                | 80                       | 29         | 20        | 98,5                     | 12 X 8  | M16                  | M20         | 110 | 104        | 2,5 |
| 15               | 325        | 286        | 5        | 110                      | 42 48<br>55                  | 110                      | 110                      | 30         | 18        | 115                      | 16 x 10 | M16                  | M20         | 135 | 115        | 2,5 |
| 16               | 365        | 340        | 4        | 125                      | 48 55<br>60 65               | 110<br>140               | 130                      | 51         | 46        | 130                      | 18 x 11 | M20                  | M24         | 180 | 135        | 4   |
| 16N              | 390        | 340        | 3        | 125                      | 48 55<br>60 65               | 110<br>140               | 130                      | 42         | 34        | 130                      | 18 x 11 | M20                  | M24         | 180 | 135        | 4   |
| 17               | 430        | 451        | 3,5      | 150                      | 55<br>60 65 75<br>80         | 110<br>140<br>170        | 150                      | 109        | 100       | 156                      | 20 x 12 | M20                  | M24         | 255 | 160        | 4   |
| 18               | 527        | 488        | 4        | 150<br>150<br>160<br>170 | 75<br>80<br>90 95**<br>100** | 140<br>170<br>170<br>230 | 150<br>150<br>230<br>230 | 121<br>40  | 101<br>20 | 156<br>156<br>166<br>176 | 20 x 12 | M24                  | M30         | 255 | 160<br>175 | 4   |
| 19               | 626        | 560        | 5        | 190                      | 80 90<br>100 110             | 170<br>210               | 280                      | 43         | 25        | 195,5                    | 25 x 14 | M24                  | M30         | 310 | 215        | 6   |

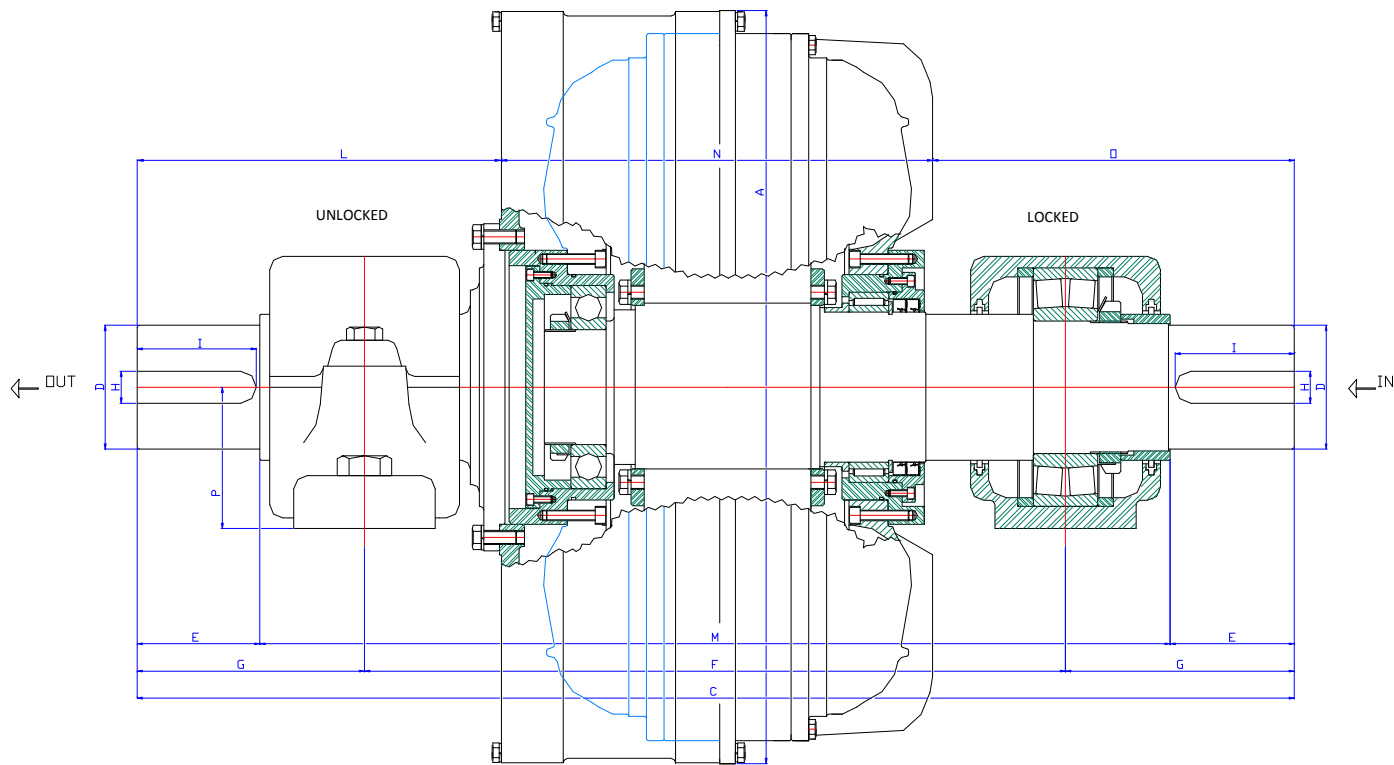
Keyways as per UNI 6604-69 DIN 6885/1

Bolting screws diameters as per DIN 332

Bolting screws and washers supplied on request.

The weights and dimensions may be subject to change.

DOUBLE CIRCUIT VERSION EQUIPPED WITH SUPPORTS AND INNER AND OUTPUT SHAFTS



| COUPLING | DIMENSIONS |      |      |     |       |       |    |     |       |      |     |     |     | KG  |
|----------|------------|------|------|-----|-------|-------|----|-----|-------|------|-----|-----|-----|-----|
|          | A ±2       | C ±3 | D m6 | E   | F     | G     | H  | I   | L     | M    | N   | O   | P   |     |
| D 110    | 852        | 1310 | 140  | 140 | 793,5 | 258,5 | 36 | 135 | 413,5 | 1030 | 488 | 409 | 160 | 880 |

Keyways as per UNI 6604-69 DIN 6885/1  
 Bolting screws diameters as per DIN 332  
 Bolting screws and washers supplied on request.  
 The weights and dimensions may be subject to change.



## INSTALLATION

Check that the connection to the motor shaft is moderately loose; too much slack can cause dangerous vibrations.

### Mounting with Pulley

- after having checked the correct balancing of the grooved pulley, mount it on the coupling
- lock assembly on motor shaft by bolting screw A (Fig. 1)
- check the alignment of pulleys, and make sure the belts tension is not too stretched to prevent fast wornout of bearings.

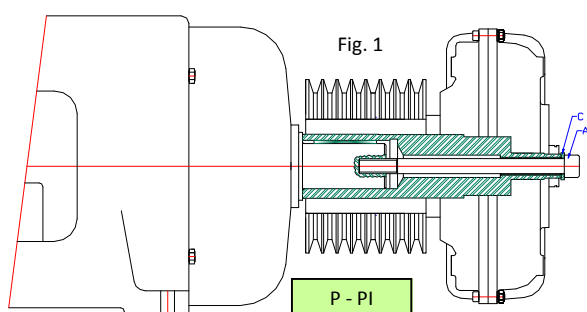


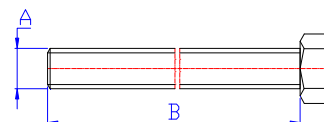
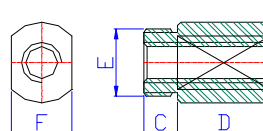
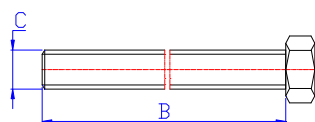
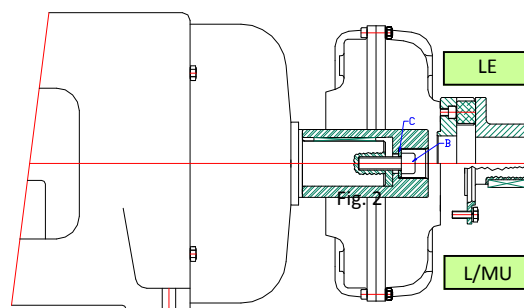
Fig. 1

### Mounting in line versionn

Lock the Jolly coupling on motor shaft by bolting screw (B) and washer (C) (Fig. 2).

For type L/MU it is necessary to remove the output shaft.

For type L/E it is necessary to remove the half flexible coupling.



| PULLER FOR COUPLINGS TYPE P - PI |         |         |         |         |
|----------------------------------|---------|---------|---------|---------|
| COUPLING                         | 12 - 13 | 14 - 15 | 16 - 17 | 18 - 19 |
| C                                | M 14    | M 20    | M 24    | M30     |
| B                                | 300     | 350     | 600     | 650     |

| PULLER FOR COUPLINGS TYPE L and PF |      |        |    |    |          |    |
|------------------------------------|------|--------|----|----|----------|----|
| COUPLING                           | A    | B ± 10 | D  | C  | E        | F  |
| 13 - 17                            | M 24 | 280    | 55 | 15 | M40p2 S. | 42 |
| 18 - 110                           | M 24 | 450    | 55 | 15 | M40p2 S. | 42 |

## WEIGHTS

| Coupling Type | WEIGHTS OF COUPLINGS WITHOUT OIL Kgs. |      |      |     |     |
|---------------|---------------------------------------|------|------|-----|-----|
|               | L/S                                   | L/E  | L/MU | CF  | P   |
| 12            | 11                                    | 12,8 | 11,1 | 16  | 14  |
| 13            | 13                                    | 14,8 | 13,2 | 18  | 16  |
| 14            | 22                                    | 26   | 22,5 | 29  | 23  |
| 15            | 26                                    | 30   | 27   | 38  | 33  |
| 16            | 39                                    | 45   | 40,7 | 51  | 48  |
| 16 N          | 41                                    | 50   | 44   | 55  | 61  |
| 17            | 51                                    | 60   | 53,8 | 68  | 87  |
| 18            | 100                                   | 116  | 107  | 132 | 147 |
| 19            | 155                                   | 181  | 167  | 190 | 205 |
| 110           | 340                                   | 410  | 365  | 375 |     |

Weights are approximated in accordance with diameter of shaft.

## OIL FILLING

The hydromechanic Jolly couplings are normally supplied complete with oil filling and ready to be put into operation.

To refill the oil during the maintenance this procedure shall be followed:

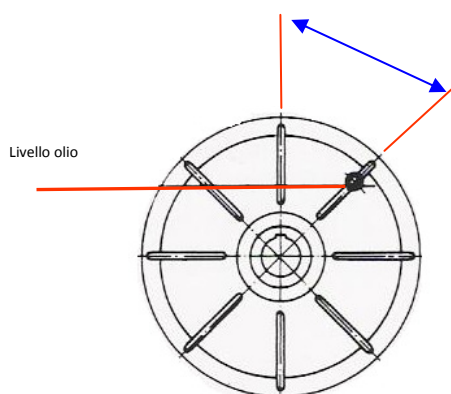
**Coupling with horizontal axis.**

Place the arrow marked on the casting at the 12 o'clock position (rotating towards top); the filler plug will be at an inclination in relation to vertical according to the angle indicated in the table below. Fill oil through one of the filler plugs until the oil begins running out of filler plug and paying attention that no air bubble is present. The couplings are never to be totally filled, to avoid damages to the seals, caused by inner pressure.

For the oil quantity required please refer to the table below.

A more gradual startup of the driven machine is achieved by reducing the oil quantity inside the coupling.

The coupling dragging torque and the power absorbed, at startup, by the electric motor progressively slow down. However, possible calibration shall be carefully made to prevent overheating of the coupling.



Use oil SAE 10 W such as:

AGIP OSO 32  
BP Energol HLP 32  
ESSO Nuto H 32  
FINA Hydran 32  
MOBIL DTE 32  
SHELL Tellus 32  
TOTAL Azolla 32  
CHEVRON Hydraulic 32

After calibration, the 12 o'clock position should be marked to have just the same refill during the maintenance operation.

Fusible plugs calibrated at 145°C or 175°C can be provided upon request for couplings with special sealing.

## MAINTENANCE AND CHECKING

After few hours of operation check the tightness of bolts and screws.

From time to time check that no oil leakages are present.

Check the oil level once a month.

The oil should be changed every 4000 hours of operation or every 12 months.

## GUARANTEE

The couplings are guaranteed for 18 months of operation and in any case no more than 24 months from the date of invoice.

The guarantee is void if the installation and maintenance instructions are not complied with, if no balanced accessories are used, and if the connecting dimensions are out of tolerance.

| Coupling Type | Angle $\alpha$ | Oil quantity |        |
|---------------|----------------|--------------|--------|
|               |                | Litres       | Kgs    |
| 12 L          | 30°            | 0,800        | 0,670  |
| 12 P          | 30°            | 0,900        | 0,780  |
| 13 L          | 30°            | 1,200        | 1,040  |
| 13 P          | 30°            | 1,360        | 1,180  |
| 14 L          | 30°            | 1,750        | 1,520  |
| 14 P          | 30°            | 1,900        | 1,650  |
| 15 L          | 30°            | 2,300        | 2,000  |
| 15 P          | 30°            | 2,500        | 2,180  |
| 16 L          | 0°             | 3,180        | 2,770  |
| 16 P          | 0°             | 3,500        | 3,050  |
| 16 NL         | 0°             | 3,600        | 3,130  |
| 16 NP         | 0°             | 4,000        | 3,480  |
| 17 L          | 0°             | 5,460        | 4,750  |
| 17 P          | 0°             | 5,750        | 5,000  |
| 18 L          | 45°            | 9,430        | 8,200  |
| 18 P          | 45°            | 9,600        | 8,350  |
| 19 L          | 45°            | 15,520       | 13,500 |
| 19 P          | 45°            | 15,850       | 13,780 |
| 110 L         | 50°            | 32,500       | 30,000 |