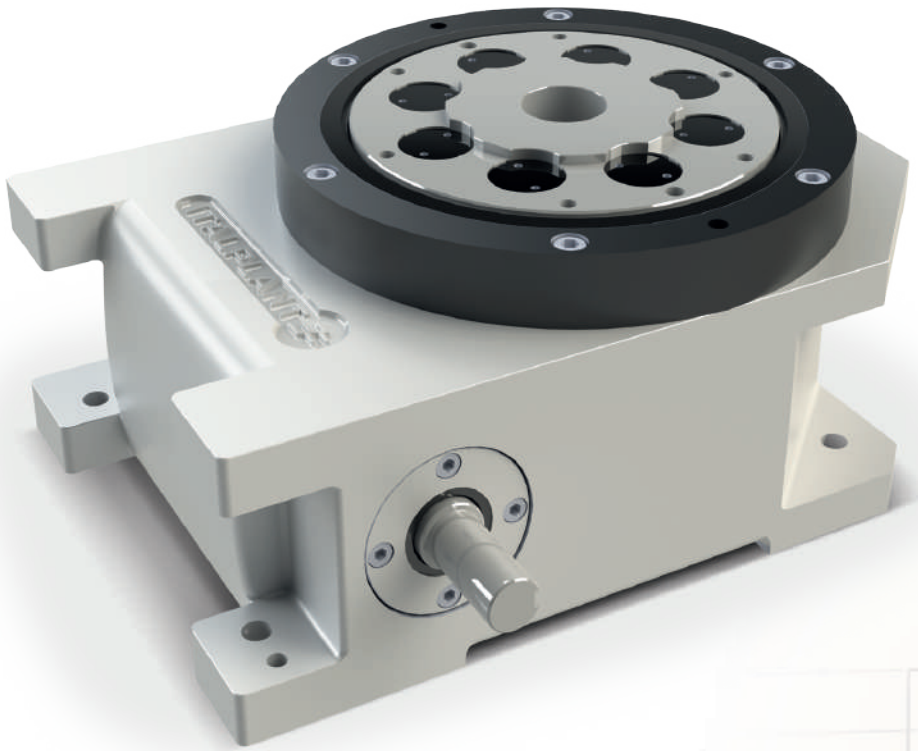
ITALPLANT

PRECISION TRANSFER SYSTEMS



GLOBOIDAL INDEXERS

SX - Slimdex | SP- Stationary Plate | MK2 - High Speed Indexer | TIG - Toroidal Indexer

Catalogue **2023**

SUMMARY

INTRODUCTION

Introduction

Italplant is the ideal solution to your rotary indexing application. Our drives are all with feature positive cam operated movements. This means acceleration and velocity are completely controlled throughout the entire cycle giving extremely accurate, reliable, shock free motion.
Even at high speed (up to 2000 indexers per minute) or with high inertia loads, Italplant indexers remain smooth and accurate. Here you can find the advantages of our indexers:

- **Simplicity** - There are only two basic elements, the cam and the turret
- **Reliability** - The mechanisms are of extremely robust proportions, having a long life with virtually no maintenance.
- **Self-locking** - All the mechanisms are self-locking in the dwell position and require no auxiliary locking device. The turret will withstand full load torque in either direction while stationary.
- **Reversibility** - The mechanism will work equally well in both directions of rotation.
- **Smooth movement** - The manufacturing process cams ensures a smooth, shock-free transfer from follower to follower, with positive control throughout the movement.
- **High Speed** - A cam system gives the designer a free choice of displacement / time function. The advantage of this has been taken to employ acceleration characteristics which minimize the shock forces produced at high speeds of high inertia loads. Machines can be indexed with Italplant Indexing Mechanisms considerably faster than others with other systems.
- **Efficiency** - The use of low-friction Italplant follower bearings results in very high efficiencies, so that the power losses in the cam and turret are negligible.
- **Compactness** - Size for size, the load carrying capacity is higher than that of any other type of indexing mechanism.
- **Safety** - With the Safety Output Torque Limiter **PATENTED system**, it's possible to protect the roller followers of the indexer in case of external jamming on the dial plate/arms/conveyors moved. The protection is possible thanks to friction positioned internally to the rotary table mechanism, that in case of jamming - after the reach of a max. allowable torque - that it's possible to set manually - disengages the internal mechanism, giving an electrical emergency signal and protect the rotary table.
  Thanks to this feature the **Warranty of the rotary tables becomes 5 Years**.
- **Flexibility** - Fitting a continuous motion cam, it's possible to change the output angle of movement with a servomotor assembly.
- **Accuracy** - The Italplant special manufacturing technique ensures that position accuracy is maintained by the elimination of backlash during the dwell. This is possible thanks to the globoidal cam shape of our indexers. Italplant rotary tables for that reason are surely the most accurate in the field of cam mechanism.

The product you need

In reference to your application, you can choose between four types of **Italplant globoidal indexers**:

ITALPLANT Slimdex SX

ITALPLANT Stationary Plate SP

ITALPLANT Mark 2 MK2

ITALPLANT Toroidal Indexer TIG

The Slimdex **SX** series is suitable for low profile dial applications with large output flange and through hole or center post for services like passing of cable or support of fixed centered dial.
The Stationary Plate **SP** is an high capacity series with location diameter and mounting face for stationary tooling plate.
The Mark 2 **MK2** is a series very rigid in construction, suitable for fast applications thanks for the low inertia of the internal turret and the possibility to fit a twin dwell cam. Its special design minimises the effect of roller reversal and resuls in a long life.
The Toroidal Indexer **TIG** is a series suitable for an application that requires a large though hole or accurate positioning at a big diameter of the positioning of the stations. The **TIG** can be provided as the other series with the PATENTED Safety Output Torque Limiter, becoming the only toroidal rotary table with a synchronous clutch that protects the mechanism in case of output jamming on the dial.

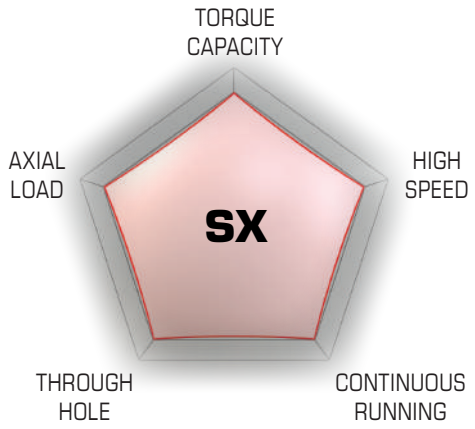
GLOBOIDAL INDEXERS PRODUCT RANGE

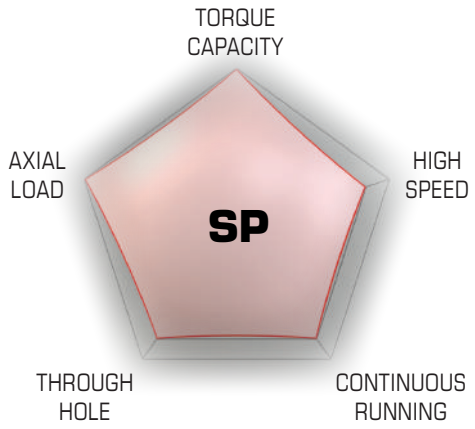
SX (pag. 15)	**SP** (pag. 27)	**MK2** (pag. 35)	**TIG** (pag. 51)
SX 25 HD	SP 805 HD	MK2 210 HD	TIG 800 HD
SX 40 HD	SP 1205 HD	MK2 325 HD	TIG 800 HHD
SX 60 HD	SP 1205 HHD	MK2 425 HD	TIG 1200 HD
SX 60 HHD	SP 1705 HD	MK2 500 HD	TIG 1200 HHD
SX 95 HD	SP 1705 HHD	MK2 650 HD	TIG 1600 HD
SX 95 HHD		MK2 800 HD	TIG 1600 HHD
SX 140 HD		MK2 1100 HD	

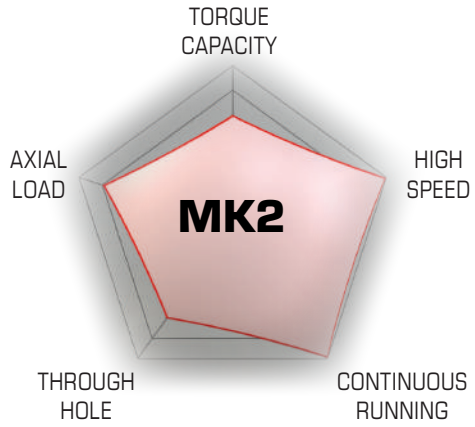
STEP 1: CHOOSE YOUR INDEXER BY FEATURES

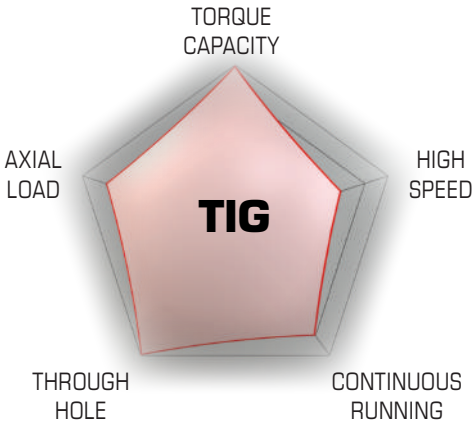
The indexer you need

Italplant globoidal indexers are suitable for all the applications you need, say in case of mounting a dial plate, shaft or to move a linear conveyor. These diagrams indicating the main features of every serie, to help you to select your preferred choice.









STEP 2: CHOOSE THE FIXING FACE

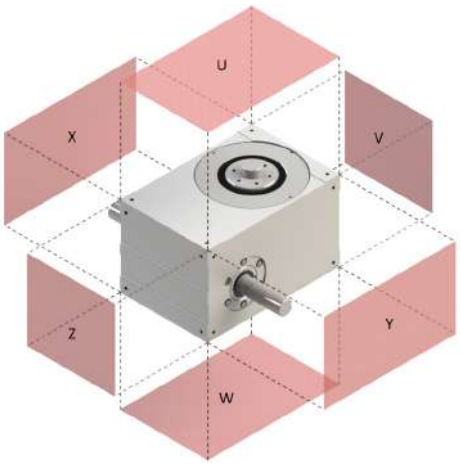
How to fix the indexer

The choosing of the face used for the connection on the indexer to your base frame needs to be defined in order to use its attachments holes for a rigid positioning and for optimal reading of the oil sight glass.

In reference to the indexer type, is possible to use or not all the faces of the next image.

Available mounting faces:

- **SX 25 - MK2 (ALL MODELS): W - U - X - Y - Z - V**
- **SX 140 - SP 805 - SP 1705: W - U - Z - V**
- **SX 40 - SX 60 - SX 95: W - U - X - Y - Z**
- **SP 1205: W - U - Z**
- **TIG (ALL MODELS): W - U**



STEP 3: CHOOSE THE MOUNTING POSITION

INDEXER mounting position

The first parameter to define it's the indexer position. After that, the input shaft where is fitted the motoreducer (if requested) and its orientation.

A B C D E F

DRIVE mounting position

INPUT SHAFT 1		INPUT SHAFT 2	
5CY	4EY	4CX	5EX
5BY	4AY	4BX	5AX
5EY	4CY	4EX	5CX
5AY	4BY	4AX	5BX

STEP 4: CHOOSE THE MOTORIZATION

ROTARY TABLE INDEXED MOTION

ITALPLANT Rotary Table + Worm reducer + 3Phase/Servo motor	**ITALPLANT High Efficiency Reducer + Servo motor (with an own motion law) NORMAL ACCURACY**	**ITALPLANT High Efficiency Reducer + Servo motor (with an own motion law)**	**Servo motor (with an own motion law)**

ROTARY TABLE CONTINUOUS MOTION

ITALPLANT High Efficiency Reducer + Worm reducer + 3Phase/Servo motor	**ITALPLANT High Efficiency Reducer + 3Phase/Servo motor**	**Epicicloidal reducer + 3Phase/Servo motor**	**Servo motor (with an own motion law)**

ITALPLANT Globoidal Rotary Table

ITALPLANT High Efficiency Reducer

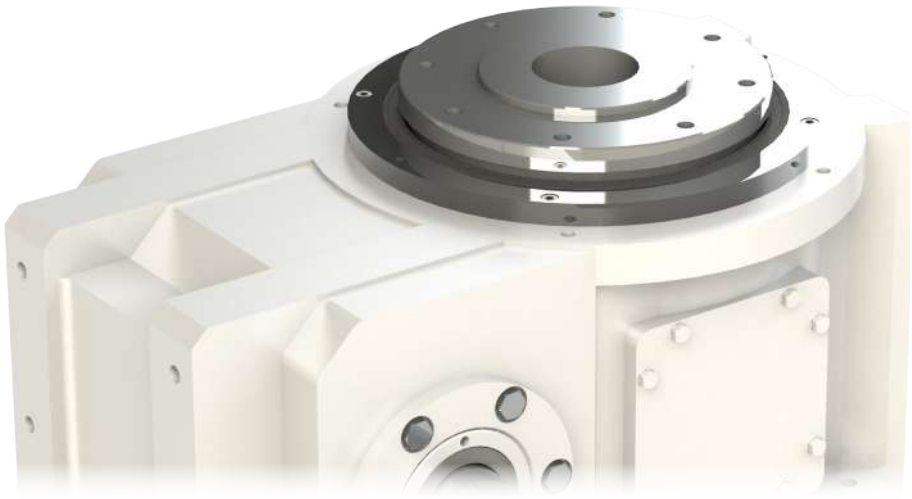
Epicicloidal reducer

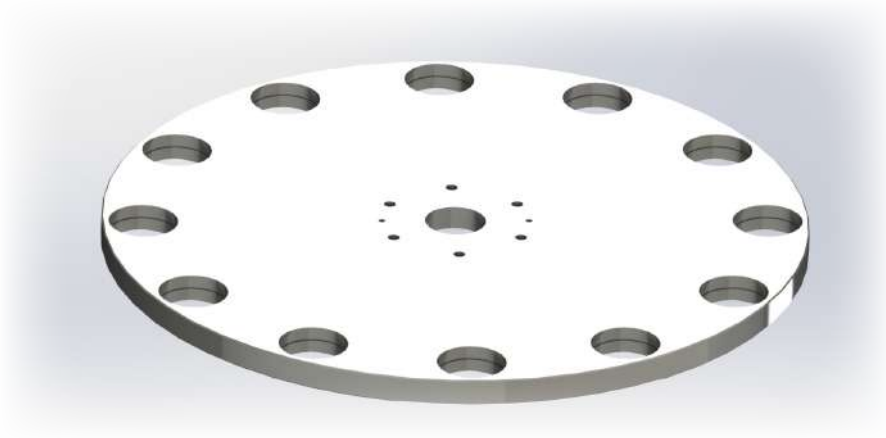
OPTIONAL FEATURES

CENTER THROUGH HOLE - STATIONARY CENTER POST

The ITALPLANT globoidal indexers can be provided with two features:

- The Center Through Hole, in the middle of the output turret. Useful to pass electrical cables or pneumatic pipes, ready to be distributed on the upper dial plate. It's possible to ask for this hole in tolerance, in case the customer needs to connect a central rotating shaft.
- The Stationary Center Post, a shaft that gives a fixed point of attachements for upper customer's components. It's possible to ask for a passing through hole, in tolerance on request





DIAL PLATE

To support the piece's fixtures, for most of the indexer applications is used a dial plate.

Made in aluminum or steel, it becomes the most important component after the rotary table. In fact, thanks to a finely machined dial plate all the stations will be positioned with the accuracy of hundredths of a millimeter.

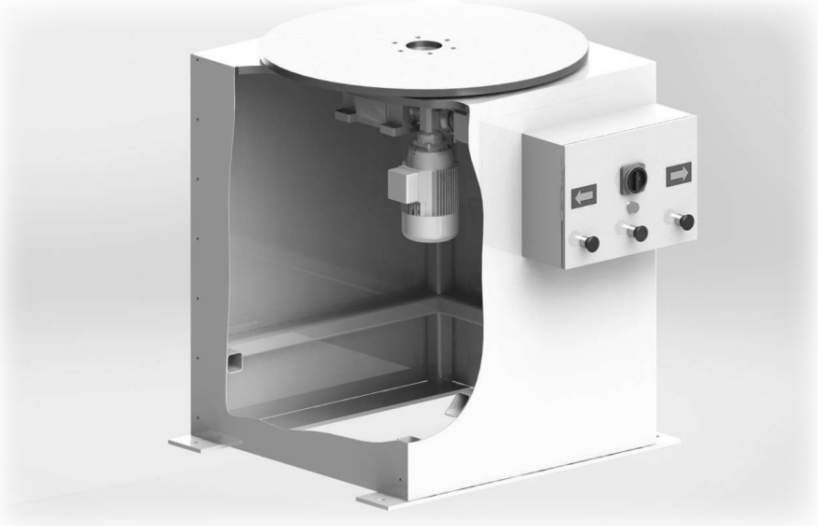
ITALPLANT can provide custom size dial plates, with screws holes, centering hole pins holes and special openings to reduce the weight.

BASE CELL FOR INDEXERS

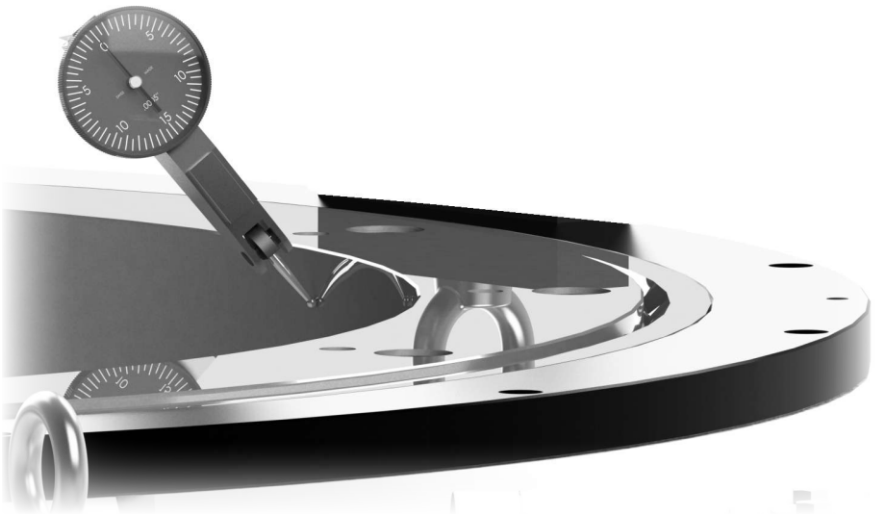
In case of need of a machine base with an indexer built in, ready to be used, ITALPLANT is able to propose a full base cell.

This is composed of a solid welded structure that gives rigidity to the application and user control panel, for the control in real time of the indexer motion, plus a customized dial plate assembled on the indexer suitable for the customer's application.

The base cell can be provided with different voltages in reference to the different country where will be used and with CE marked.



OPTIONAL FEATURES



EXTRA ACCURACY

The range of globoidal indexer allows the customers to choose between a wide range of angular positioning accuracy.

If the value indicated is not enough, thanks to his know how and fine selection fo the components, ITALPLANT can grant extra accuracy to certain kind of rotary tables.

Feel free to ask our Tech Dept. an extra accuracy customization, by indicating the type of indexer chosen and the minimum value of accuracy required on every station, in arcsec measured from the center of the indexer.

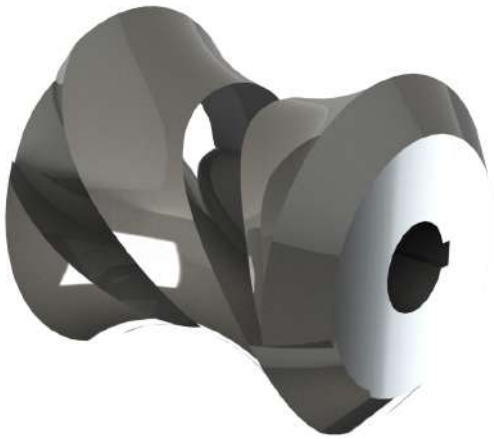
By request, a test report will be provided before the delivery, to prove the real value of the indexer's accuracy.

HIGH SPEED INDEXERS

The most suitable indexer version for the high speed is the Globoidal MK2, thanks to its reduced internal inertia and double conical bearings.

However, also the other globoidal versions can runs faster, thanks to a special ITALPLANT kind of cam, born for that.

Please feel free to indicate the desired index time to our Tech Dept. that will verify the feasibility and will size the correct cam.



FOOD & PHARMACEUTICALS

The environment of each application can means to ask for special materials allowed in food productions and many other fields, like clean room machinery.

For these specific requirements, ITALPLANT proposes a wide range of solutions, like the use of food oil/grease or different materials, as aluminum, steel or plastic. This last material had been developed not only for food and pharmaceutical applications, but also for explosive environments. In these case ITALPLANT can provide a FULL PLASTIC INDEXER, to fit the customer's requirement (PATENTED).

OPTIONAL FEATURES

ROTARY PLACERS

The ITALPLANT indexers can be provided with a customizable turn and lift system (EL). It allows to rotating the dial plate with pieces on and in the same time to combine a lifting of it, phased with the application's cycle.

The lift is operated by an accurate cam, that allows a smooth accurate movement, with controlled acceleration and deceleration, to guarantee the perfect positioning at the required height.

This system is very useful to be mounted also under production lines, to drive the customer's pallets with products on.

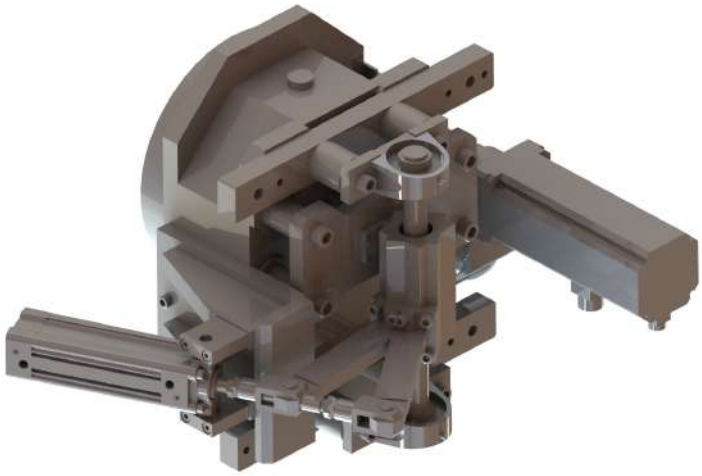
TIMING DEVICE (PATENTED)

This patented system has been developed by ITALPLANT for all the applications where it's necessary to change the support of fixtures on each dial plate station, for batch change.

Usually, this operation requires much time and technicians to work on it. With this automating phasing system, without any disassembly, can be done in less than one minute.

It's only necessary (for example for three types of pieces), to assemble the fixtures in this way: A-B-C-A-B-C-A-B. During the rephasing, automatically the indexer will change the work position from A to B or C.

An important note is that this is a mechanical system, that eliminates any mistakes, which otherwise can be caused by electronically controlled systems.



ROTATING AND TILTING DEVICE POSITIONER

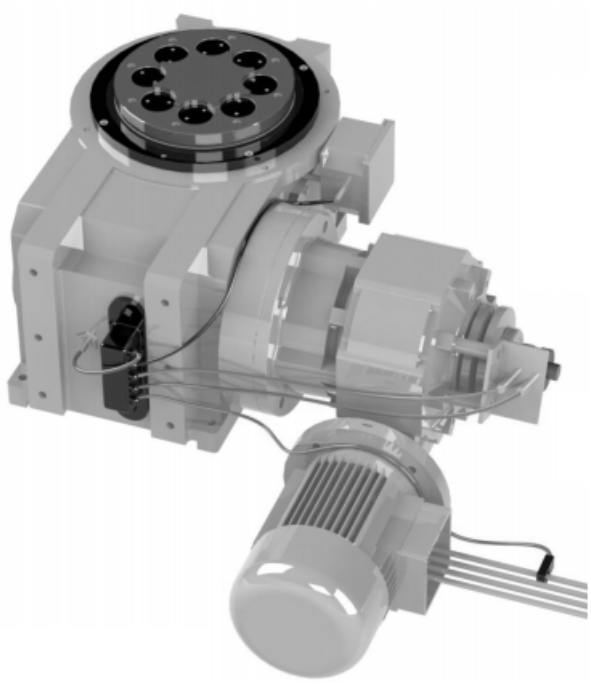
This system with light and simple design, high load capacity, the flexibility of operating angular ranges, the most accurate repeatability in commerce, born from the match of two of ITALPLANT globoidal indexer, a positioner suited for every need.
Completely programmable with servo motors the globoidal cam indexer guarantees high accuracy and reliability that all the customers are looking for.

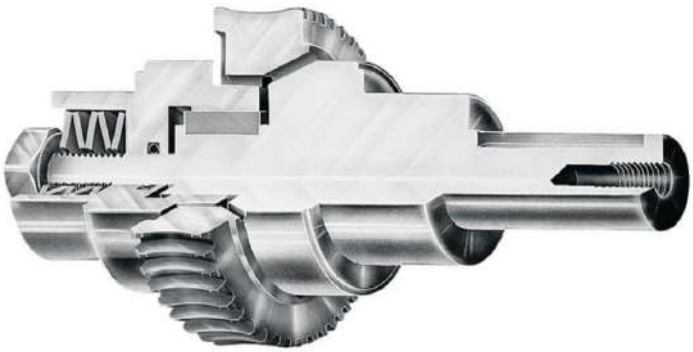
OPTIONAL FEATURES

REMOTE DATA IRC (PATENTED)

The Indexer Remote Control is a new system for remote monitoring of key performance measures at the heart of the machine.
To observe remotely with a smartphone or tablet the key machine's parameters, including:

- Speed (which effects the machine life)
- Temperature (of indexer and environment)
- Vibration (with reference to the rigidity, which is the most important data for the machine life)
- Phase (to see if the dwell meet the cam law)
- Main parameters compared with the previous ones calculated for the specific application (changeable)
- Overall rigidity looking at the HERZ vibration value calculated by our technical office and based on the indexer rigidity and the output mass rigidity.





SITL

This system protects the rotary table in case of safety panic stops operated on the motor.

It's composed by friction that in case of overtorque generated by the motor, is able to cut the cinematic motion in this direction. It allows also a smooth machine stop.

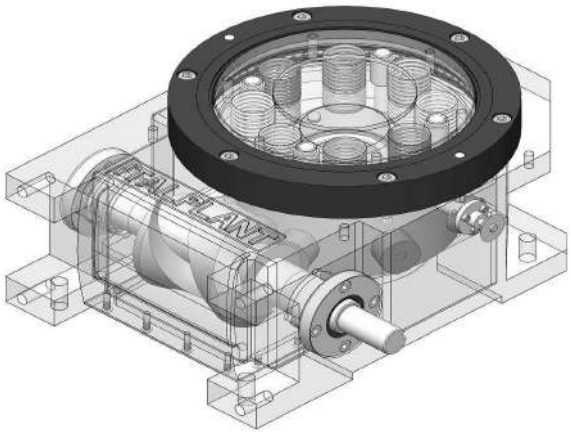
With this system, the weakest components of the indexer, the roller followers, are protected and the life of the indexer is increased.

SOTL+ATT (PATENTED)

This patented system, included in all the ITALPLANT rotary table, allows the system motorization+conveyors to protect himself in case of external jamming, on the links.

The protection it's possible thanks to adjustable synchronous coupling positioned internally to the rotary table mechanism, that in case of jamming - after the reach of a max. allowable torque - that it's possible to set manually - disengages the internal mechanism, giving an electrical emergency signal and protect the rotary table.

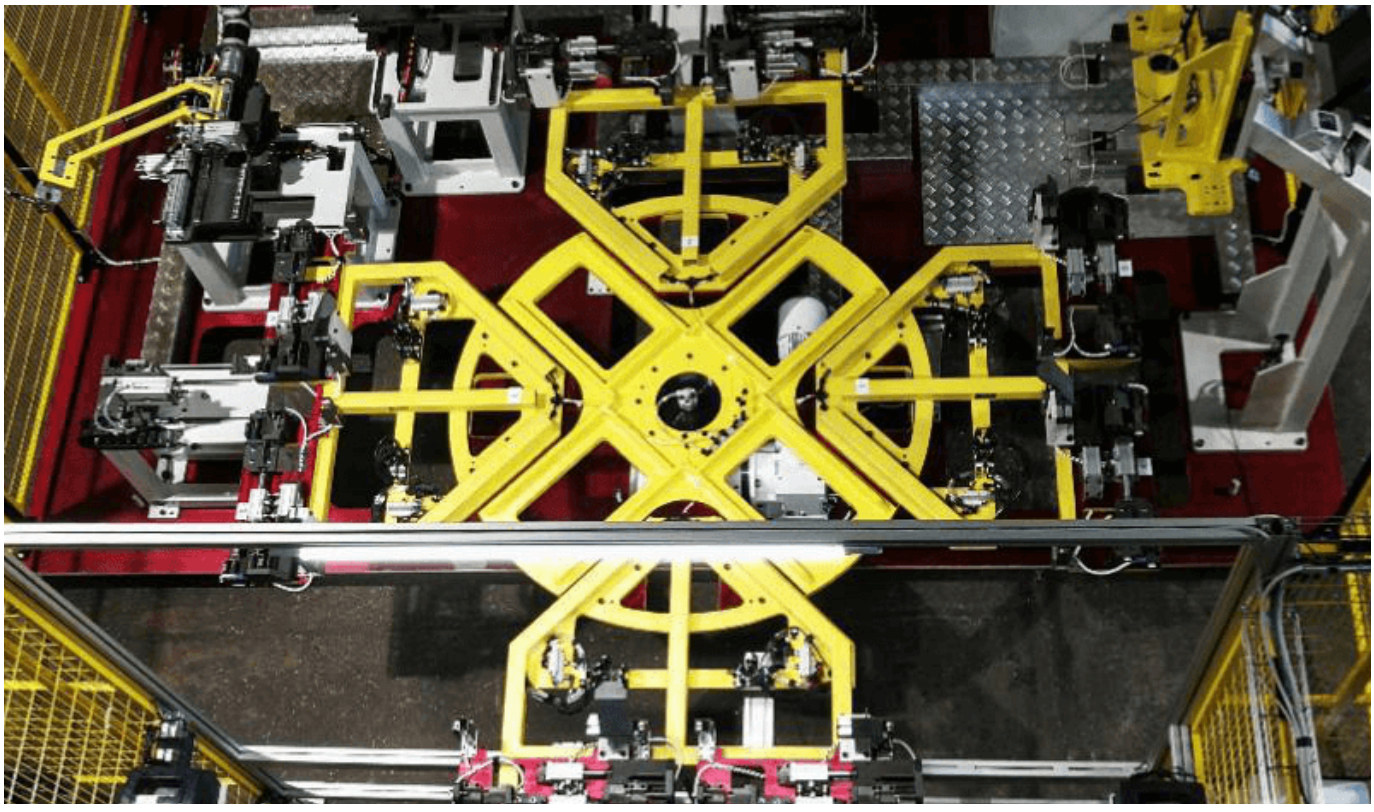
Thanks to this feature the Warranty of the rotary tables becomes 5 Years.



SOTL+ATT version available

EXAMPLES OF APPLICATIONS

SX 95 HD – Car pedal assembly



SP 805 HD - Car seats base structure welding

EXAMPLES OF APPLICATIONS

MK2 500 HD - Bottle caps mounting

TIG 1200 HD - Automation bearing induction hardening process

GLOBOIDAL SLIMDEX INDEXER

The Globoidal Slimdex series SX is ideally suited for slim rotary table applications.

These low profile units feature Globoidal cam controlled movement for speed, accuracy and reliability at prices competitive with other air and hydraulic devices.

All Slimdex models are available with a high performance drive package including indexer, worm reducer (with or without the integral slipping clutch, AC or DC motors and enclosed proximity switch. Available with Safety Output Torque Limiter SOTL/ATT.

Options:

- Center through hole, for the passage of electrically/hydraulic equipment cables
- Stationary center-post, available with center thru hole
- Choice of motor/worm reducer positions
- Available as indexer alone, without reduced or motor
- Available with Safety Output Torque Limiter SOTL/ATT

Features:

- Low profile compact package
- Solid state speed controller with start on demand, auto-stop and dynamic breaking
- Enclosed cycle control switch for cycle-on-demand applications
- High accurate roller followers for smooth motion and accurate indexing
- Fully ground cam profile
- Removable handweel for easy set-up

Available model sizes
SX25 - SX40 - SX60 - SX95 - SX140

SX 25

Load capacity:

- **Axial load:** 150 daN
- **Tilting moment:** 11 daNm

Indexing precision:

- **3-10 Index** ± 42" (arcsec)
- **12-16 Index** ± 63" (arcsec)
  Values improvable on request

Dimensional info:

- **Centre distance:** 62 mm
- **Size:** 140 x 165 x 115 (H) mm
- **Weight:** 10 kg

Additional features

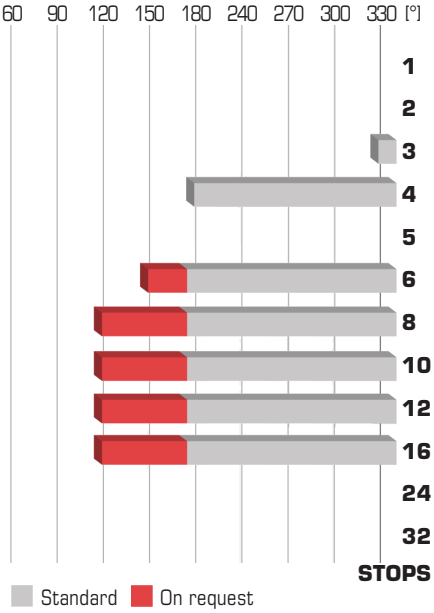
- Compact size and high capacity
- HD Heavy Duty
- Though Hole version
- Provided with three-phase motoreducer

Indexer overview

Optionals on request

- Oscillator version
- Continuous cam with servomotor
- Dial plate (see page 8)
- Enconder / additional control cycle cams
- Base cell (see page 8)
- Food oil or grease

Input shaft cam angles

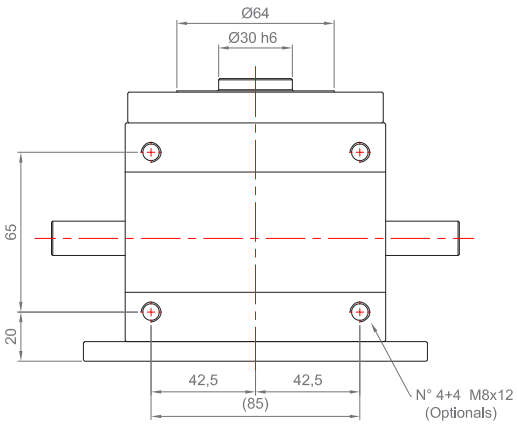


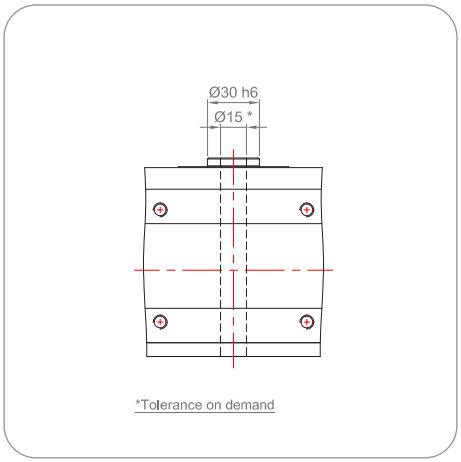
Maximum equivalent radius of gyration

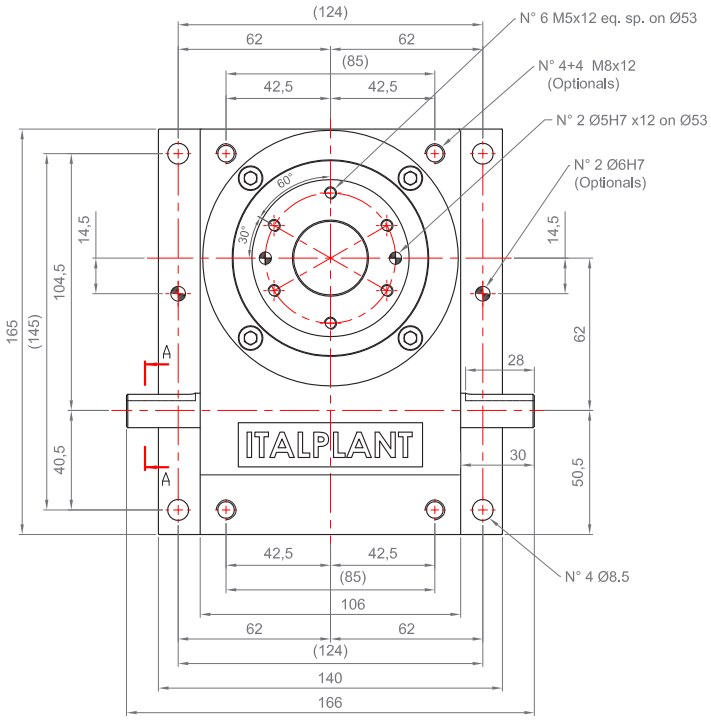
STOPS	0.16	0.24	0.32	0.48	0.64	0.80	0.96	1.29	1.61	2.09	2.57	Index time [s]
1	-	-	-	-	-	-	-	-	-	-	-	
2	-	-	-	-	-	-	-	-	-	-	-	
3	109	112	115	119	120	124	130	176	219	242	251	
4	111	113	116	121	123	126	152	204	235	250	259	
5	-	-	-	-	-	-	-	-	-	-	-	
6	112	114	118	122	124	156	188	235	240	253	264	
8	115	116	127	130	144	180	216	242	251	255	268	
10	116	118	128	131	150	195	235	253	260	261	269	
12	117	119	130	132	176	220	249	259	263	267	270	
16	107	108	119	122	136	172	208	234	243	247	260	
24	-	-	-	-	-	-	-	-	-	-	-	
32	-	-	-	-	-	-	-	-	-	-	-	

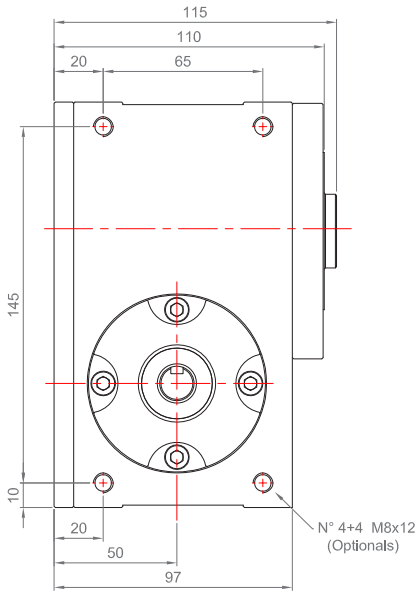
Equivalent radius of gyration referred to HD version - All the values are referred to 300° of input shaft index motion at standard index time with 50 Hz motoreducer - Others stops number and index times are available, on request

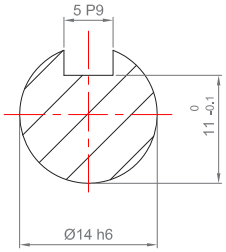
Available stops	Centre distance	Denomination
3 - 4 - 6 - 8 - 10 - 12 - 16 **OTHER STOPS AVAILABLE ON REQUEST**	**HD VERSION - 62 mm**	**SX 25 HD**











SEZ. A-A
Input shaft

Input shafts variants	Output shaft variants
RIGHT (1) - LEFT (2) - DOUBLE (3)	THROUGH HOLE - LCI EXTERNAL TORQUE LIMITER AVAILABLE

SX 40

Load capacity:

- **Axial load:** 1750 daN
- **Tilting moment:** 95 daNm

Indexing precision:

- **2-12 Index** ± 33" (arcsec)
- **16-32 Index** ± 45" (arcsec)
  Values improvable on request

Dimensional info:

- **Centre distance:** 75 mm
- **Size:** 160 x 230 x 114 (H) mm
- **Weight:** 25 kg

Additional features

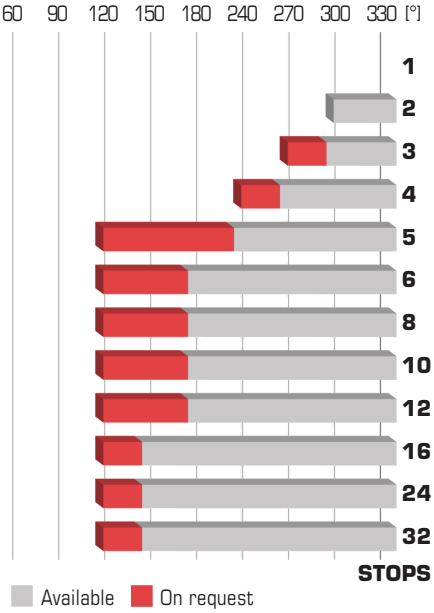
- Compact size and high capacity
- HD Heavy Duty
- Though Hole and Center Post versions
- Provided with three-phase motoreducer

Indexer overview

Optionals on request

- Oscillator version
- Continuous cam with servomotor
- Dial plate (see page 8)
- Enconder / additional control cycle cams
- Base cell (see page 8)
- Food oil or grease

Input shaft cam angles

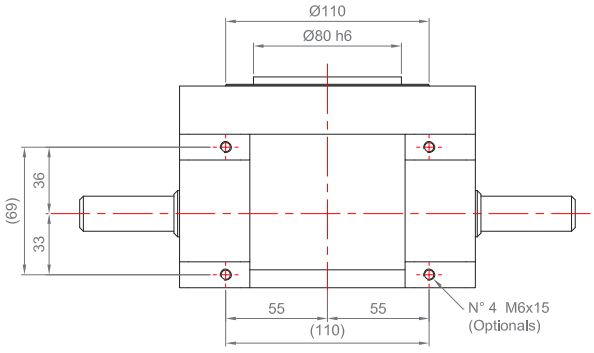


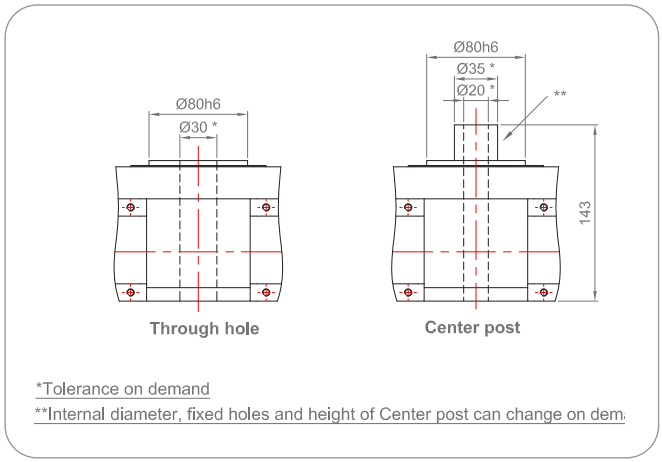
Maximum equivalent radius of gyration

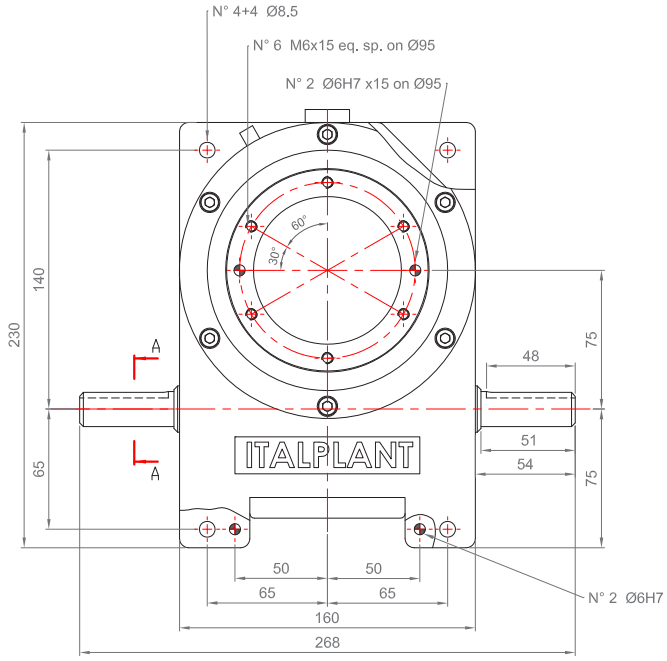
STOPS	0.16	0.24	0.32	0.48	0.64	0.80	0.96	1.29	1.61	2.09	2.57	Index time [s]
1	-	-	-	-	-	-	-	-	-	-	-	
2	138	142	145	146	147	154	169	175	220	251	264	
3	139	143	146	148	149	155	190	195	255	265	270	
4	140	144	147	149	150	190	230	245	263	270	275	
5	143	148	150	165	170	215	255	260	270	280	288	
6	145	150	154	168	185	235	258	266	272	284	294	
8	146	152	160	180	215	270	292	294	298	300	310	
10	148	155	168	190	220	282	298	300	305	309	315	
12	145	146	155	161	165	205	225	230	247	270	278	
16	152	165	184	200	230	300	304	311	317	319	322	
24	135	136	145	151	155	195	215	220	237	260	268	
32	148	149	158	164	168	208	228	233	250	273	281	

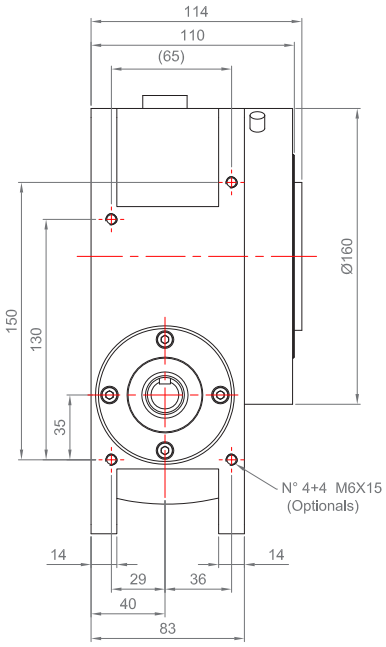
Maximum equivalent radius of gyration in mm - Equivalent radius of gyration referred to HD version - All the values are referred to 300° of input shaft index motion at standard index time with 50 Hz motoreducer - Others stops number and index times are available, on request

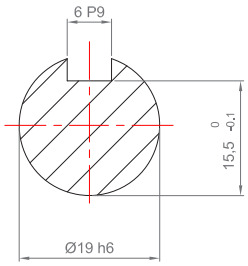
Available stops	Centre distance	Denomination
2 - 3 - 4 - 5 - 6 - 8 - 10 - 12 - 16 - 24 - 32 OTHER STOPS AVAILABLE ON REQUEST	**HD VERSION - 75 mm**	**SX 40 HD**











SEZ. A-A
INPUT SHAFT

SOTL+ATT version available

Input shafts variants	Output shaft variants	SOTL + ATT version
RIGHT (1) - LEFT (2) - DOUBLE (3)	THROUGH HOLE - CENTER POST	AVAILABLE FOR: STANDARD - THROUGH HOLE - CENTER POST

SX 60

Load capacity:

- **Axial load:** 1900 daN
- **Tilting moment:** 165 daNm

Indexing precision:

- **2-12 Index** ± 22" (arcsec)
- **16-32 Index** ± 34" (arcsec)
  Values improvable on request

Dimensional info:

- **Centre distance:** 105/110 mm (HHD)
- **Size:** 222 x 318 x 157 (H) mm
- **Weight:** 40 kg

Additional features

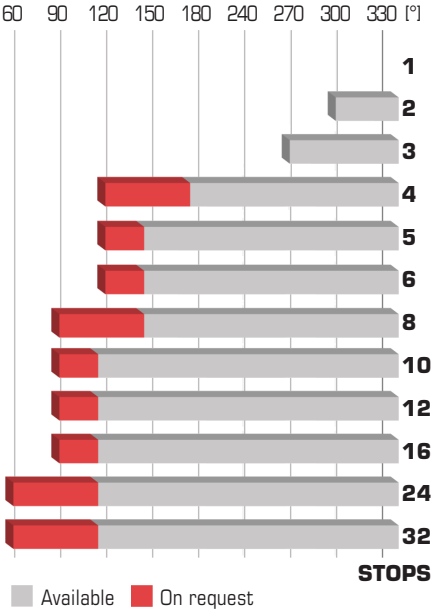
- Compact size and high capacity
- HD Heavy Duty or HHD Heavy Heavy Duty
- Though Hole and Center Post versions
- Provided with three-phase motoreducer

Indexer overview

Optionals on request

- Oscillator version
- Continuous cam with servomotor
- Dial plate (see page 8)
- Enconder / additional control cycle cams
- Base cell (see page 8)
- Food oil or grease

Input shaft cam angles

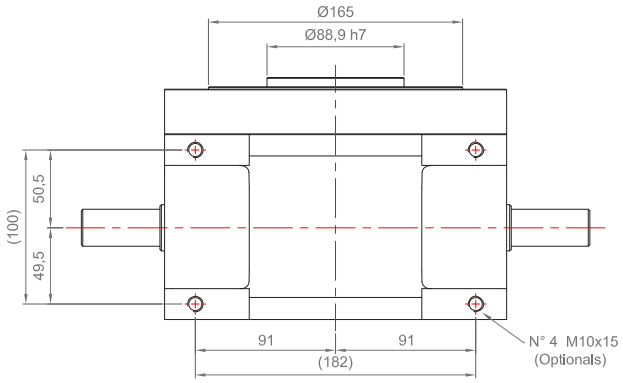


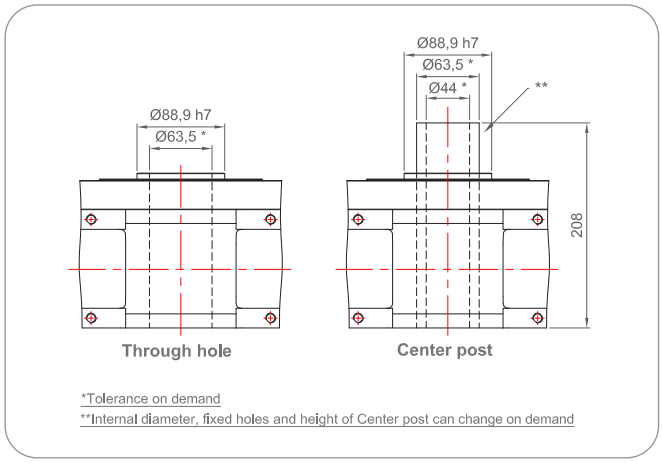
Maximum equivalent radius of gyration

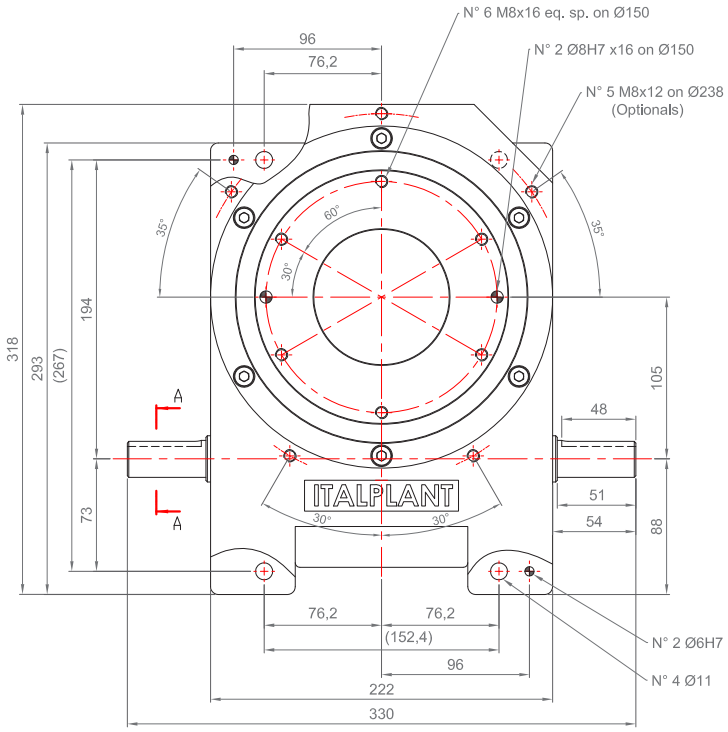
STOPS	0.16	0.24	0.32	0.48	0.64	0.80	0.96	1.29	1.61	2.09	2.57	Index time [s]
1	-	-	-	-	-	-	-	-	-	-	-	
2	215	217	225	231	241	248	253	255	315	410	505	
3	218	223	230	239	248	269	285	385	480	520	521	
4	224	225	238	245	263	275	330	445	510	528	536	
5	227 (290)	233 (292)	242 (298)	246 (305)	250 (310)	310 (390)	370 (465)	500 (560)	539 (597)	541 (645)	544 (650)	
6	230 (298)	237 (300)	249 (310)	261 (321)	275 (335)	340 (420)	410 (500)	525 (578)	545 (601)	551 (652)	560 (675)	
8	232 (300)	245 (311)	258 (324)	263 (350)	315 (395)	395 (495)	475 (590)	530 (598)	550 (609)	557 (670)	565 (679)	
10	235 (304)	247 (317)	260 (339)	265 (376)	355 (410)	440 (510)	530 (610)	537 (620)	555 (635)	564 (674)	571 (680)	
12	239 (307)	250 (319)	262 (340)	270 (380)	364 (415)	445 (515)	535 (617)	540 (637)	561 (651)	570 (679)	574 (684)	
16	241 (314)	252 (320)	265 (356)	274 (395)	372 (420)	454 (520)	539 (623)	544 (640)	567 (669)	573 (687)	579 (690)	
24	242	255	271	280	380	462	542	551	570	578	582	
32	230	241	262	269	279	450	490	510	515	519	524	

Maximum equivalent radius of gyration in mm - Equivalent radius of gyration referred to HD (HHD) versions - All the values are referred to 300° of input shaft index motion at standard index time with 50 Hz motoreducer - Others stops number and index times are available, on request

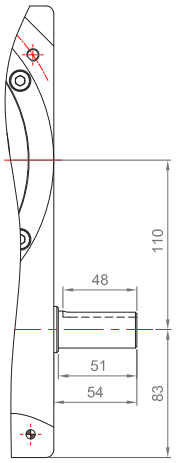
Available stops	Centre distance	Denomination
2 - 3 - 4 - 5 - 6 - 8 - 10 - 12 - 16 - 24 - 32 OTHER STOPS AVAILABLE ON REQUEST	**HD VERSION - 105 mm HHD VERSION - 110 mm**	**SX 60 HD SX 60 HHD**



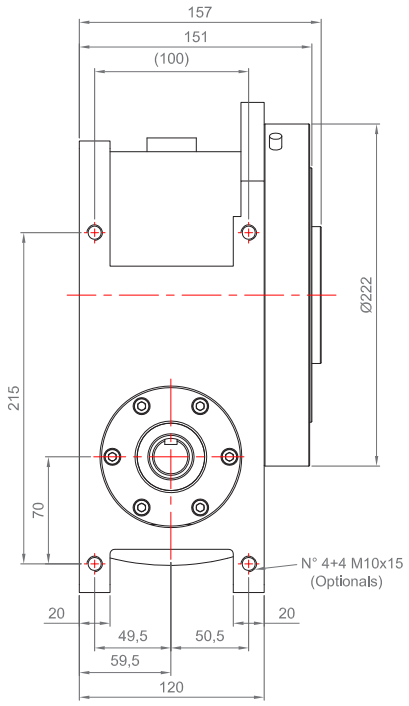


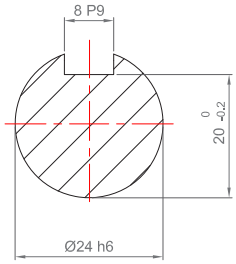


SX 60 HD Version



SX 60 HHD Version





SEZ. A-A
Input shaft

SOTL+ATT version available

Input shafts variants	Output shaft variants	SOTL + ATT version
RIGHT (1) - LEFT (2) - DOUBLE (3)	THROUGH HOLE - CENTER POST	AVAILABLE FOR: STANDARD - THROUGH HOLE - CENTER POST

SX 95

Load capacity:

- **Axial load:** 2350 daN
- **Tilting moment:** 285 daNm

Indexing precision:

- **2-16 Index** ± 17" (arcsec)
- **24-32 Index** ± 29" (arcsec)
  Values improvable on request

Dimensional info:

- **Centre distance:** 153 mm (HD/HHD)
- **Size:** 310 x 450 x 200 (H) mm
- **Weight:** 60 kg

Additional features

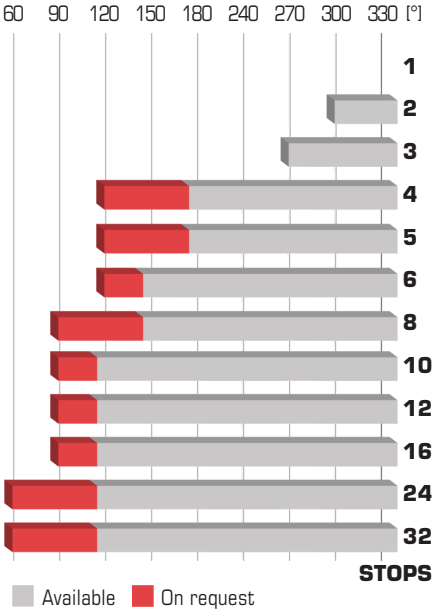
- Compact size and high capacity
- HD Heavy Duty or HHD Heavy Heavy Duty
- Though Hole and Center Post versions
- Provided with three-phase motoreducer

Indexer overview

Optionals on request

- Oscillator version
- Continuous cam with servomotor
- Dial plate (see page 8)
- Enconder / additional control cycle cams
- Base cell (see page 8)
- Food oil or grease

Input shaft cam angles

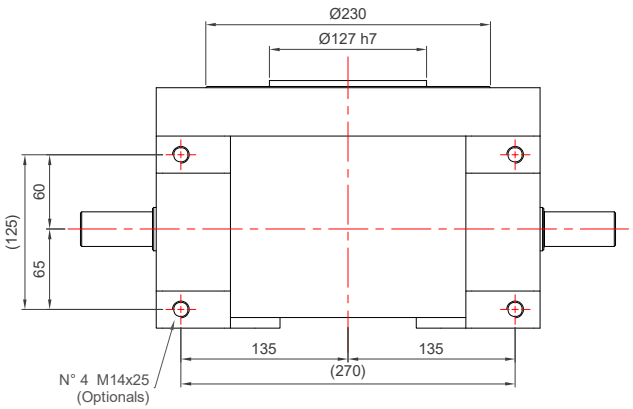


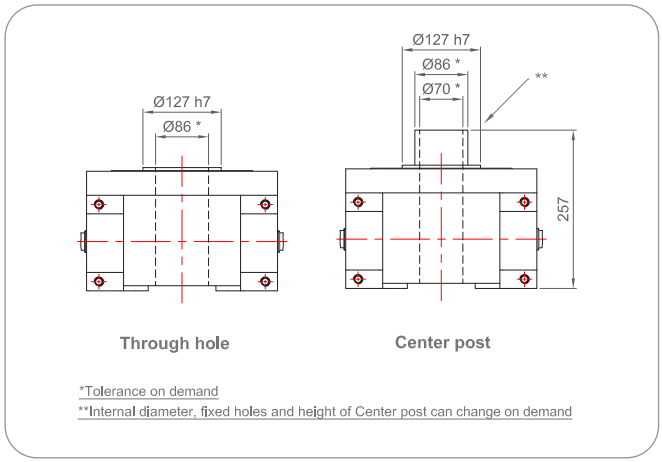
Maximum equivalent radius of gyration

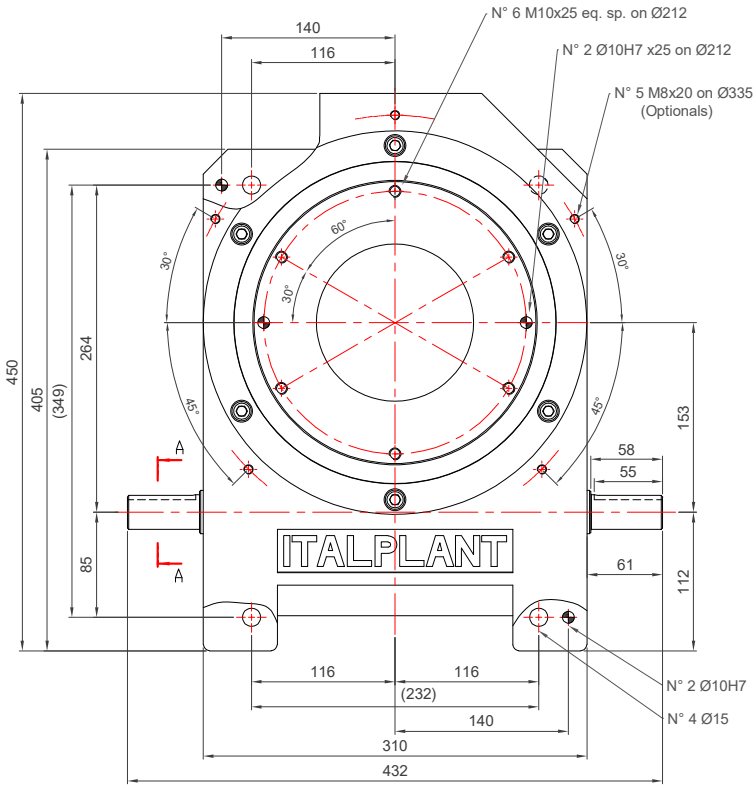
STOPS	0.16	0.24	0.32	0.48	0.64	0.80	0.96	1.29	1.61	2.09	2.57	Index time [s]
1	-	-	-	-	-	-	-	-	-	-	-	
2	315	362	368	371	374	375	378	380	440	575	650	
3	345	368	372	379	384	393	405	545	680	740	758	
4	350 (365)	370 (372)	375 (384)	382 (387)	395 (490)	410 (502)	470 (544)	635 (704)	695 (789)	748 (837)	765 (840)	
5	352 (371)	365 (375)	380 (390)	389 (454)	408 (501)	440 (510)	530 (612)	710 (713)	718 (795)	764 (810)	771 (851)	
6	368 (376)	372 (381)	386 (425)	392 (480)	412 (515)	470 (532)	560 (638	755 (760)	758 (804)	768 (819)	778 (864)	
8	370 (380)	375 (392)	389 (440)	399 (490)	450 (520)	565 (650)	675 (750)	760 (771)	764 (810)	771 (826)	784 (871)	
10	376 (384)	380 (395)	394 (444)	415 (497)	455 (518)	570 (655)	685 (778)	763 (785)	766 (819)	775 (832)	788 (879)	
12	380 (389)	392 (398)	410 (440)	430 (500)	460 (525)	580 (658)	692 (779)	768 (790)	771 (824)	784 (839)	791 (884)	
16	382 (395)	395 (400)	415 (470)	435 (510)	465 (530)	588 (660)	698 (780)	780 (810)	777 (839)	788 (852)	794 (890)	
24	387 (400)	397 (415)	420 (475)	438 (515)	470 (540)	595 (674)	705 (805)	782 (825)	783 (852)	790 (890)	798 (897)	
32	311	318	342	352	386	479	568	632	633	636	644	

Maximum equivalent radius of gyration in mm - Equivalent radius of gyration referred to HD (HHD) versions - All the values are referred to 300° of input shaft index motion at standard index time with 50 Hz motoreducer - Others stops number and index times are available, on request

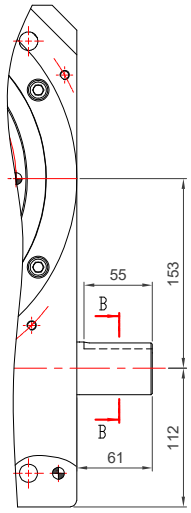
Available stops	Centre distance	Denomination
2 - 3 - 4 - 5 - 6 - 8 - 10 - 12 - 16 - 24 - 32 OTHER STOPS AVAILABLE ON REQUEST	**HD/HHD VERSION - 153 mm**	**SX 95 HD SX 95 HHD**



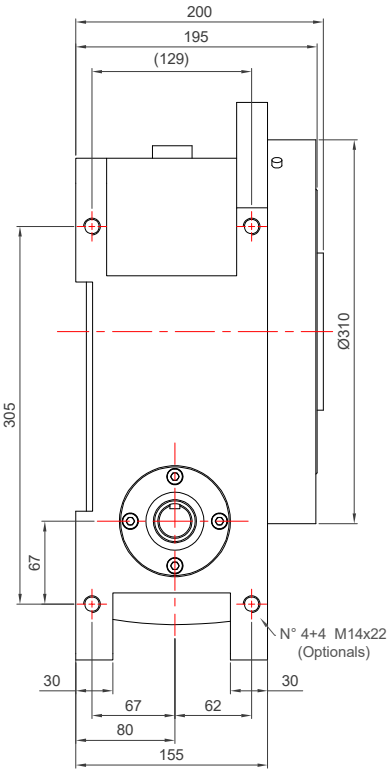


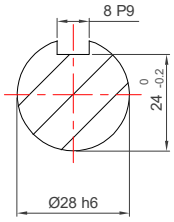


SX 95 HD Version

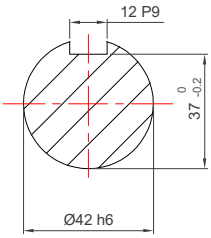


SX 95 HHD Version





SEZ. A-A
Input shaft



SEZ. B-B
Input shaft

SOTL+ATT version available

Input shafts variants	Output shaft variants	SOTL + ATT version
RIGHT (1) - LEFT (2) - DOUBLE (3)	THROUGH HOLE - CENTER POST	AVAILABLE FOR: STANDARD - THROUGH HOLE - CENTER POST

SX 140

Load capacity:

- **Axial load:** 3000 daN
- **Tilting moment:** 480 daNm

Indexing precision:

- **2-16 Index** ± 14" (arcsec)
- **24-32 Index** ± 21" (arcsec)
  Values improvable on request

Dimensional info:

- **Centre distance:** 254 mm
- **Size:** 437 x 648 x 268.5 (H) mm
- **Weight:** 150 kg

Additional features

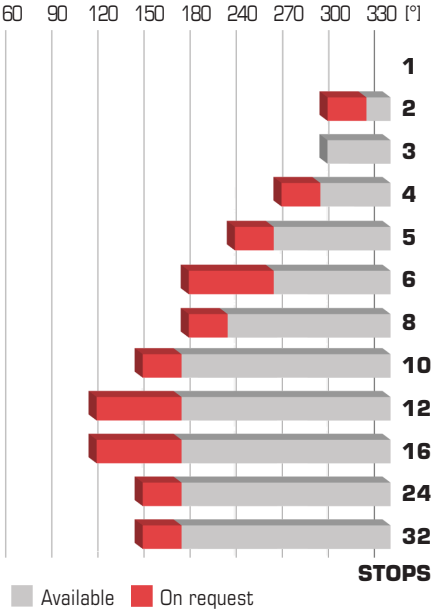
- Compact size and high capacity
- HD Heavy Duty
- Though Hole and Center Post versions
- Provided with three-phase motoreducer

Indexer overview

Optionals on request

- Oscillator version
- Continuous cam with servomotor
- Dial plate (see page 8)
- Enconder / additional control cycle cams
- Base cell (see page 8)
- Food oil or grease

Input shaft cam angles

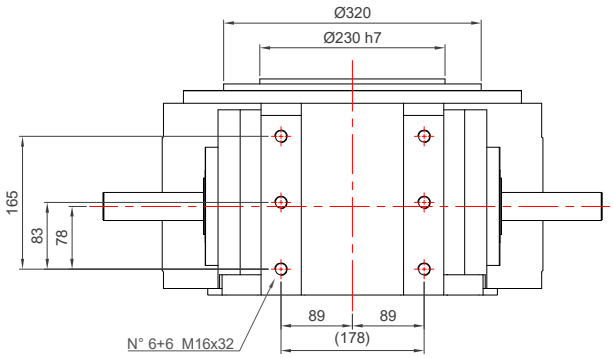


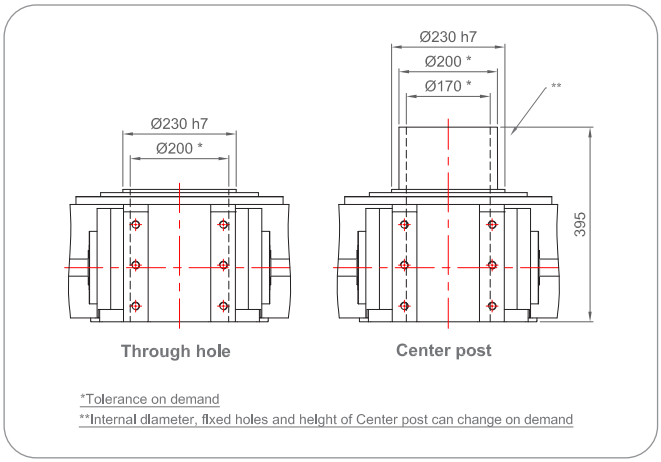
Maximum equivalent radius of gyration

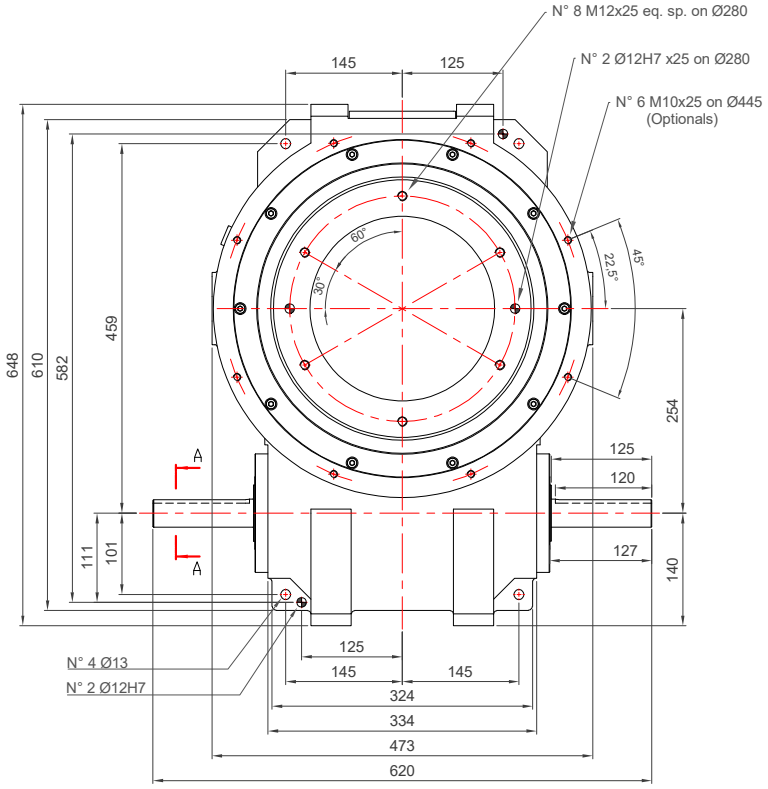
STOPS	0.16	0.24	0.32	0.48	0.64	0.80	0.96	1.29	1.61	2.09	2.57	Index time [s]
1	-	-	-	-	-	-	-	-	-	-	-	
2	-	532	541	554	562	574	593	602	632	824	985	
3	510	538	547	565	571	585	603	740	829	980	1026	
4	516	540	558	580	620	716	862	980	1060	1104	1152	
5	524	549	565	692	703	752	876	990	1095	1110	1164	
6	535	550	593	701	742	795	890	1060	1106	1121	1175	
8	554	569	608	756	818	875	915	1075	1125	1132	1179	
10	568	582	623	796	915	940	962	1080	1129	1140	1186	
12	572	590	634	810	925	965	979	1089	1142	1158	1194	
16	593	596	642	850	941	990	1050	1091	1152	1169	1215	
24	610	624	675	874	962	1005	1090	1099	1160	1175	1240	
32	464	489	497	514	519	532	548	673	754	891	933	

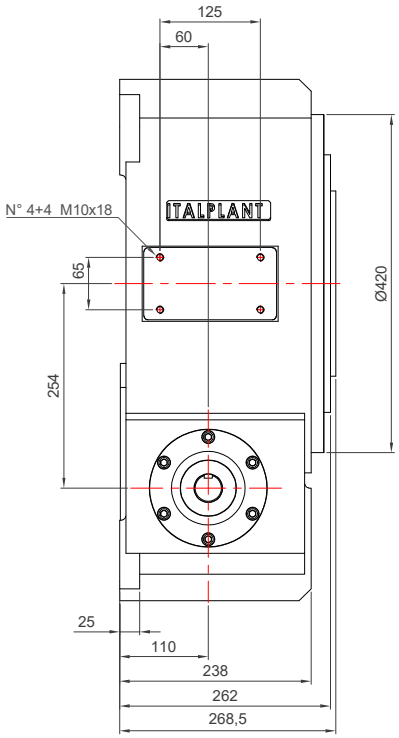
Maximum equivalent radius of gyration in mm - Equivalent radius of gyration referred to HD version - All the values are referred to 300° of input shaft index motion at standard index time with 50 Hz motoreducer - Others stops number and index times are available, on request

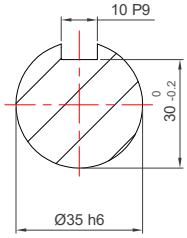
Available stops	Centre distance	Denomination
2 - 3 - 4 - 5 - 6 - 8 - 10 - 12 - 16 - 24 - 32 OTHER STOPS AVAILABLE ON REQUEST	**HD VERSION - 254 mm**	**SX 140 HD**











SEZ. A-A
Input shaft

SOTL+ATT version available

Input shafts variants	Output shaft variants	SOTL + ATT version
RIGHT (1) - LEFT (2) - DOUBLE (3)	THROUGH HOLE - CENTER POST	AVAILABLE FOR: STANDARD - THROUGH HOLE - CENTER POST

GLOBOIDAL STATIONARY PLATE INDEXER

The Stationary Plate series for globoidal index units comprises a range of special shape high strength cast iron housing designed to provide features wich can allow them to be used as the base of a rotary or linear machine. The housing has a large location diameter onto wich a stationary plate can be attached, This may be used for the tooling assembly such as drilling heads, load/unload devices etc. A large bore in the output shaft is provided as standard, through which services such as air and/or liquids can be passed.

In addition, a stationary centre post can be fitted, onto which a second plate can be mounted. A full range of stops, index angles and cam laws is available. Available with Safety Output Torque Limiter SOTL/ATT.

For cycle-on-demand applications, index angles up to 330 degrees are available.

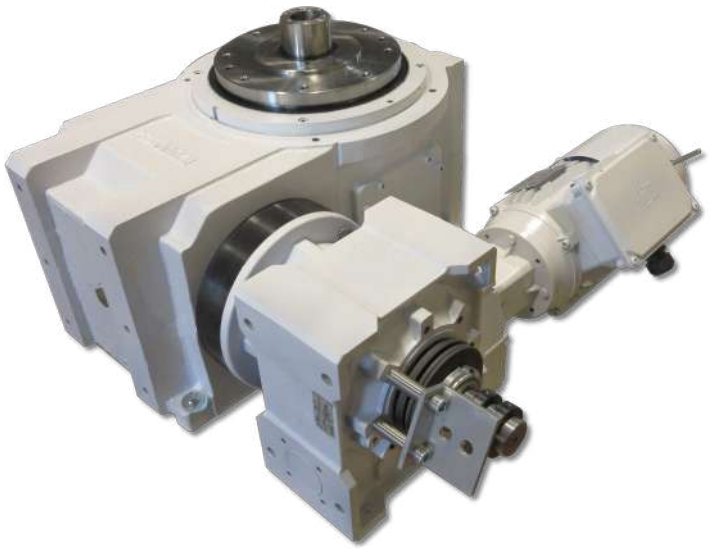
The SP range of units can also be mounted with the output shaft vertical/horizontal for use in linear applications.

Options:

- Center through hole, for the passage of electrically/hydraulic equipment cables
- Stationary center-post, available with center through hole
- Choice of motor/worm reducer positions
- Available as indexer only without reducer or motor
- Available with Safety Output Torque Limiter SOTL/ATT

Features:

- Rigid cast iron housing
- Large diameter pre-loaded taper roller bearings
- Location diameter and mounting face for stationary tooling plate
- High accurate roller followers for smooth motion and accurate indexing
- Fully ground cam profile



Available model sizes
SP 805 - SP 1205 - SP 1705

SP 805

Load capacity:

- **Axial load:** 4500 daN
- **Tilting moment:** 1600 daNm

Indexing precision:

- **1-16 Index** ± 18" (arcsec)
- **24-32 Index** ± 24" (arcsec)
  Values improvable on request

Dimensional info:

- **Centre distance:** 190.5 mm
- **Size:** 330 x 507 x 296.8 (H) mm
- **Weight:** 200 kg

Additional features

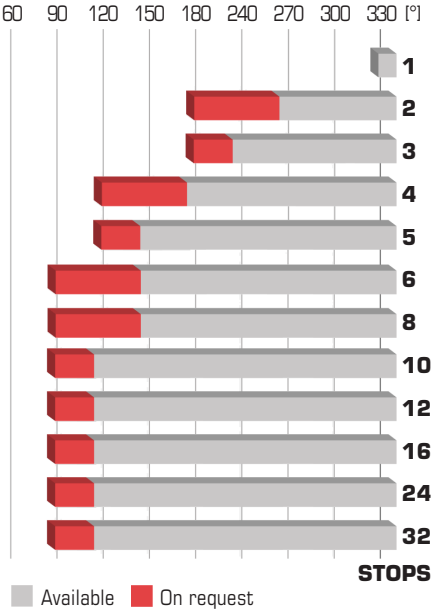
- Powerful bearing for bigger capacity
- HD Heavy Duty
- Though Hole and Center Post versions
- Provided with three-phase motoreducer

Indexer overview

Optionals on request

- Oscillator version
- Continuous cam with servomotor
- Dial plate (see page 8)
- Enconder / additional control cycle cams
- Base cell (see page 8)
- Food oil or grease

Input shaft cam angles

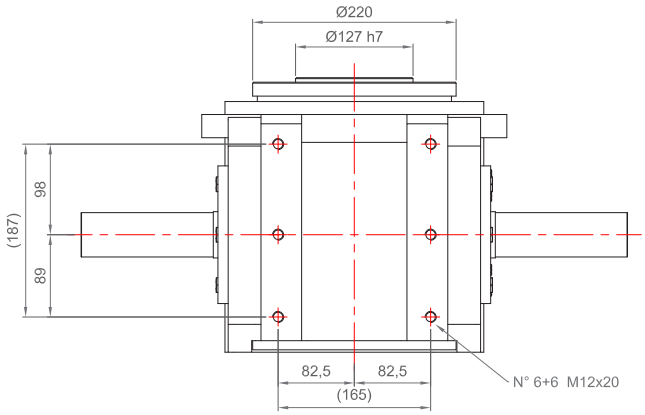


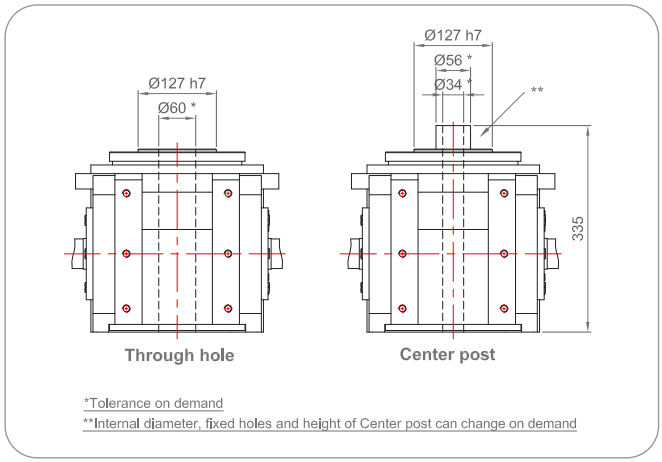
Maximum equivalent radius of gyration

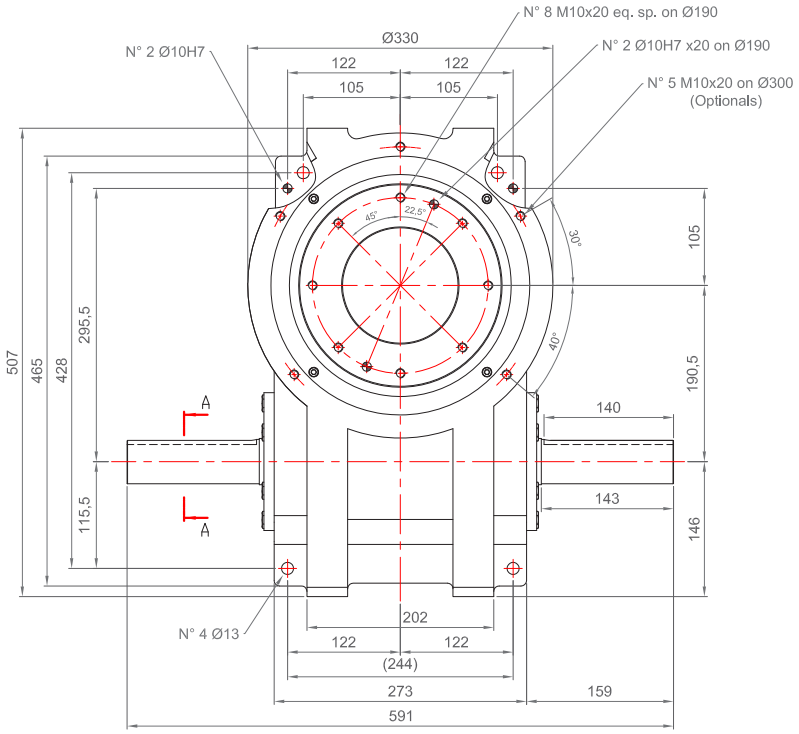
STOPS	0.16	0.24	0.32	0.48	0.64	0.80	0.96	1.29	1.61	2.09	2.57	Index time [s]
1	140	145	155	159	165	170	172	250	310	420	470	
2	442	474	506	565	605	660	672	705	785	850	890	
3	456	496	536	568	610	675	695	756	832	884	925	
4	470	516	540	570	617	690	710	795	850	899	942	
5	482	535	560	585	645	704	790	825	864	915	957	
6	490	540	565	644	690	780	840	896	915	935	965	
8	508	545	601	674	735	822	869	922	945	962	978	
10	524	551	618	703	759	844	876	944	953	971	990	
12	532	565	620	750	845	872	915	951	963	980	995	
16	540	571	632	798	878	897	925	974	979	994	1005	
24	556	590	650	810	890	930	985	992	1000	1015	1050	
32	389	398	428	440	482	525	530	670	700	801	805	

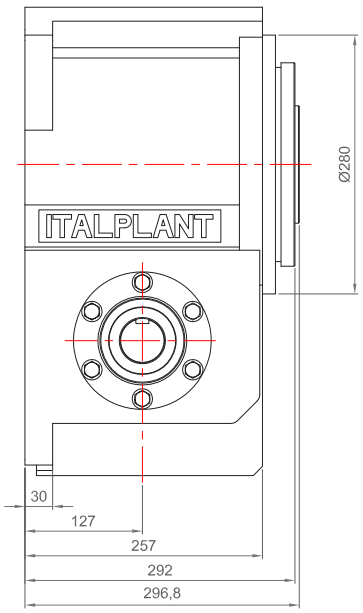
Maximum equivalent radius of gyration in mm - Equivalent radius of gyration referred to HD version - All the values are referred to 300° of input shaft index motion at standard index time with 50 Hz motoreducer - Others stops number and index times are available, on request

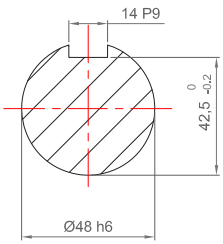
Available stops	Centre distance	Denomination
1 - 2 - 3 - 4 - 5 - 6 - 8 - 10 - 12 - 16 - 24 - 32 OTHER STOPS AVAILABLE ON REQUEST	**HD VERSION - 190.5 mm**	**SP 805 HD**





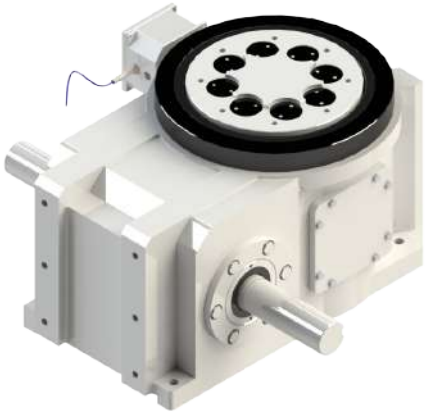






SEZ. A-A
Input shaft

SOTL+ATT version available



Input shafts variants	Output shaft variants	SOTL + ATT version
RIGHT (1) - LEFT (2) - DOUBLE (3)	THROUGH HOLE - CENTER POST	AVAILABLE FOR: STANDARD - THROUGH HOLE - CENTER POST

SP 1205

Load capacity:

- **Axial load:** 7800 daN
- **Tilting moment:** 2690 daNm

Indexing precision:

- **2-12 Index** ± 15" (arcsec)
- **16-32 Index** ± 19" (arcsec)
  Values improvable on request

Dimensional info:

- **Centre distance:** 266.7/268 mm (HHD)
- **Size:** 457 x 680 x 363.5 (H) mm
- **Weight:** 330 kg

Additional features

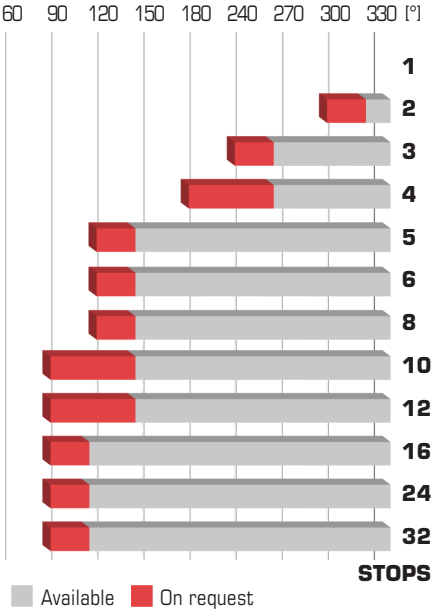
- Powerful bearing for bigger capacity
- HD Heavy Duty or HHD Heavy Heavy Duty
- Though Hole and Center Post versions
- Provided with three-phase motoreducer

Indexer overview

Optionals on request

- Oscillator version
- Continuous cam with servomotor
- Dial plate (see page 8)
- Enconder / additional control cycle cams
- Base cell (see page 8)
- Food oil or grease

Input shaft cam angles

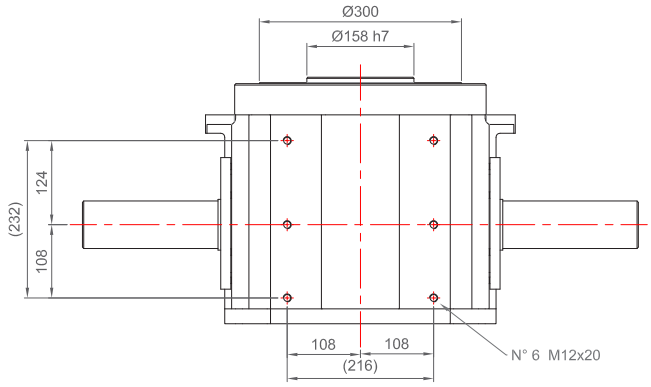


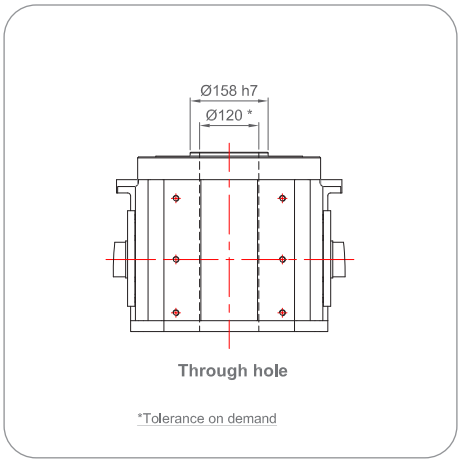
Maximum equivalent radius of gyration

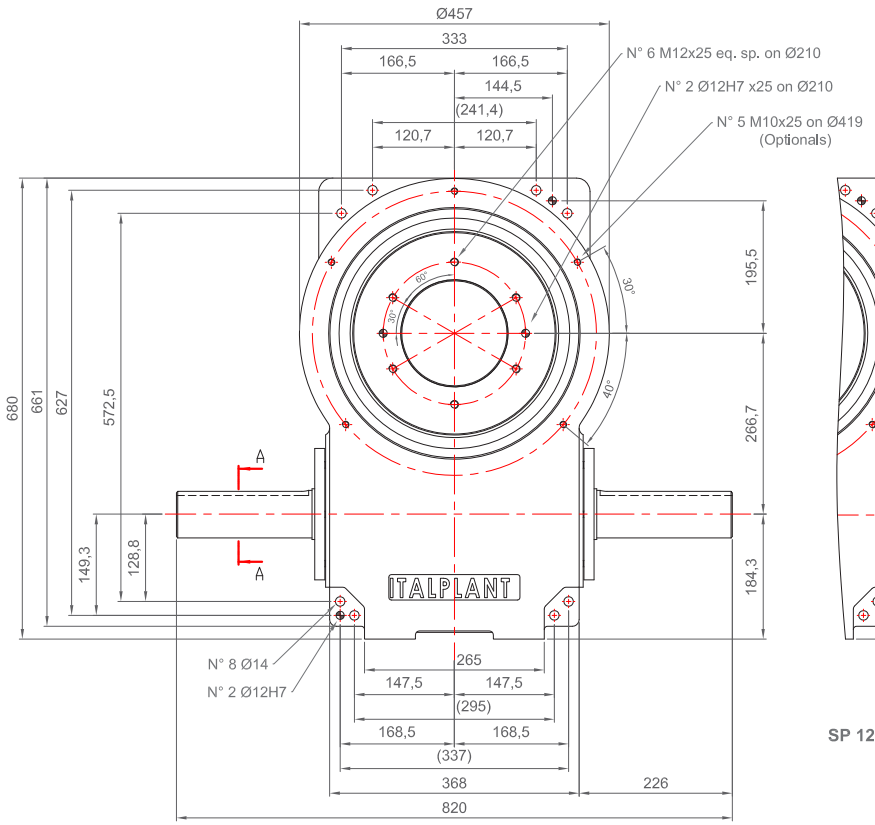
STOPS	0.16	0.24	0.32	0.48	0.64	0.80	0.96	1.29	1.61	2.09	2.57	Index time [s]
1	-	-	-	-	-	-	-	-	-	-	-	
2	488 (578)	540 (630)	551 (641)	571 (650)	608 (665)	675 (700)	690 (780)	711 (794)	805 (895)	974 (1064)	1170 (1260)	
3	512 (602)	545 (635)	560 (644)	585 (659)	635 (674)	698 (710)	715 (800)	760 (850)	840 (930)	1050 (1140)	1195 (1285)	
4	528 (618)	565 (655)	569 (659)	590 (680)	640 (730)	770 (860)	868 (958)	1025 (1115)	1115 (1205)	1185 (1275)	1223 (1313)	
5	552 (642)	574 (664)	586 (676)	750 (840)	794 (884)	815 (905)	893 (983)	1084 (1174)	1145 (1235)	1215 (1305)	1247 (1337)	
6	566 (656)	594 (684)	605 (695)	790 (880)	835 (925)	889 (979)	940 (1030)	1152 (1242)	1196 (1286)	1225 (1315)	1259 (1349)	
8	592 (682)	620 (710)	624 (714)	805 (895)	879 (969)	930 (1020)	956 (1046)	1190 (1280)	1250 (1340)	1268 (1358)	1275 (1365)	
10	612 (702)	635 (725)	640 (730)	890 (980)	925 (1015)	934 (1024)	964 (1054)	1210 (1300)	1267 (1357)	1279 (1369)	1290 (1380)	
12	632 (722)	662 (752)	675 (765)	895 (985)	950 (1040)	972 (1062)	981 (1071)	1254 (1344)	1270 (1360)	1285 (1375)	1310 (1400)	
16	648 (738)	668 (758)	679 (769)	902 (992)	975 (1065)	989 (1079)	994 (1084)	1269 (1359)	1295 (1385)	1310 (1400)	1334 (1424)	
24	654 (744)	670 (760)	690 (780)	940 (1030)	980 (1070)	995 (1085)	1050 (1140)	1280 (1370)	1305 (1395)	1327 (1417)	1349 (1439)	
32	560	575	625	790	885	985	1015	1085	1105	1195	1270	

Maximum equivalent radius of gyration in mm - Equivalent radius of gyration referred to HD (HHD) version - All the values are referred to 300° of input shaft index motion at standard index time with 50 Hz motoreducer - Others stops number and index times are available, on request

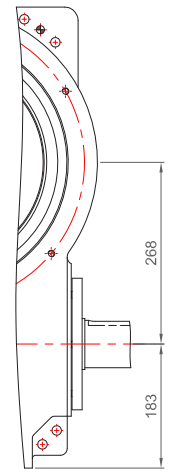
Available stops	Centre distance	Denomination
2 - 3 - 4 - 5 - 6 - 8 - 10 - 12 - 16 - 24 - 32 OTHER STOPS AVAILABLE ON REQUEST	**HD VERSION - 266.7 mm HHD VERSION - 268 mm**	**SP 1205 HD SP 1205 HHD**



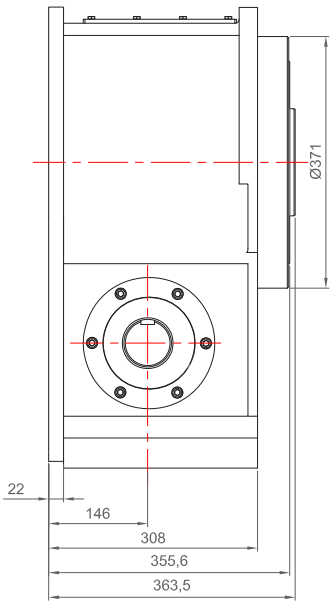


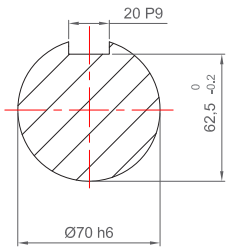


SP 1205 HD Version



SP 1205 HHD Version





SEZ. A-A
Input shaft

SOTL+ATT version available

Input shafts variants	Output shaft variants	SOTL + ATT version
RIGHT (1) - LEFT (2) - DOUBLE (3)	THROUGH HOLE	AVAILABLE FOR: STANDARD - THROUGH HOLE

SP 1705

Load capacity:

- **Axial load:** 14900 daN
- **Tilting moment:** 4500 daNm

Indexing precision:

- **2-12 Index** ± 10" (arcsec)
- **16-32 Index** ± 15" (arcsec)
  Values improvable on request

Dimensional info:

- **Centre distance:** 315/330 mm (HHD)
- **Size:** 585 x 830 x 460 (H) mm
- **Weight:** 450 kg

Additional features

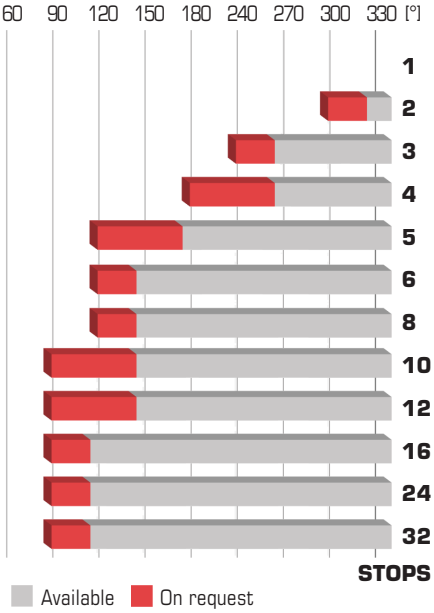
- Powerful bearing for bigger capacity
- HD Heavy Duty or HHD Heavy Heavy Duty
- Though Hole and Center Post versions
- Provided with three-phase motoreducer

Indexer overview

Optionals on request

- Oscillator version
- Continuous cam with servomotor
- Dial plate (see page 8)
- Enconder / additional control cycle cams
- Base cell (see page 8)
- Food oil or grease

Input shaft cam angles

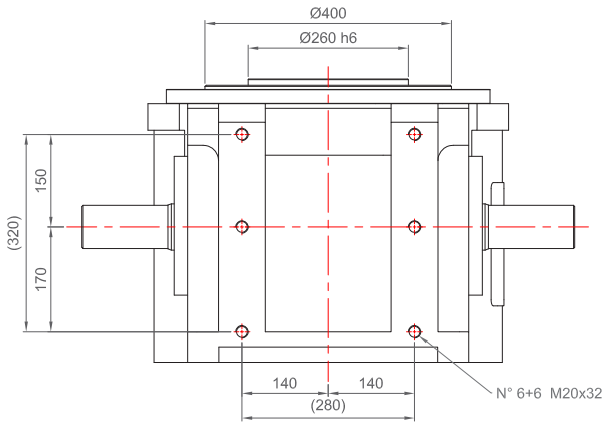


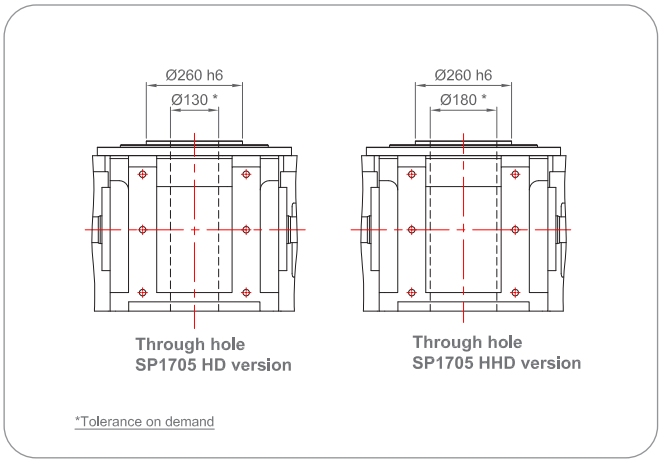
Maximum equivalent radius of gyration

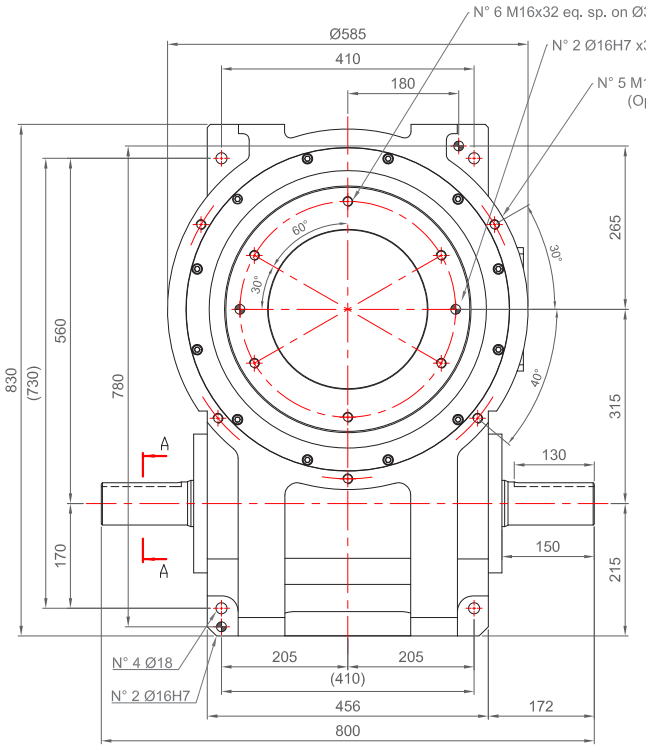
STOPS	0.16	0.24	0.32	0.48	0.64	0.80	0.96	1.29	1.61	2.09	2.57	Index time [s]
1	-	-	-	-	-	-	-	-	-	-	-	
2	747 (948)	807 (1008)	823 (1024)	840 (1041)	860 (1061)	897 (1098)	984 (1185)	999 (1200)	1102 (1303)	1273 (1474)	1470 (1671)	
3	771 (972)	812 (1013)	826 (1027)	849 (1050)	869 (1070)	907 (1108)	1004 (1205v	1055 (1256)	1137 (1338)	1349 (1550)	1495 (1696)	
4	787 (988)	832 (1033)	841 (1042)	870 (1071)	925 (1126)	1057 (1258)	1162 (1363)	1320 (1521)	1412 (1613)	1484 (1685)	1523 (1724)	
5	811 (1012)	841 (1042)	858 (1059)	1030 (1231)	1079 (1280)	1102 (1303)	1187 (1388)	1379 (1580)	1442 (1643)	1514 (1715)	1547 (1748)	
6	825 (1026)	861 (1062)	877 (1078)	1070 (1271)	1120 (1321)	1176 (1377)	1234 (1435)	1447 (1648)	1493 (1694)	1524 (1725)	1559 (1760)	
8	851 (1052)	887 (1088)	896 (1097)	1085 (1286)	1164 (1365)	1217 (1418)	1250 (1451)	1485 (1686)	1547 (1748)	1567 (1768)	1575 (1776)	
10	871 (1072)	902 (1103)	912 (1113)	1170 (1371)	1210 (1411)	1221 (1422)	1258 (1459)	1505 (1706)	1564 (1765)	1578 (1779)	1590 (1791)	
12	891 (1092)	929 (1130)	947 (1148)	1175 (1376)	1235 (1436)	1259 (1460)	1275 (1476)	1549 (1750)	1567 (1768)	1584 (1785)	1610 (1811)	
16	907 (1108)	935 (1136)	951 (1152)	1182 (1383)	1260 (1461)	1276 (1477)	1288 (1489)	1564 (1765)	1592 (1793)	1609 (1810)	1634 (1835)	
24	913 (1114)	937 (1138)	962 (1163)	1220 (1421)	1265 (1466)	1282 (1483)	1344 (1545)	1575 (1776)	1602 (1803)	1626 (1827)	1649 (1850)	
32	872 (1063)	900 (1091)	916 (1107)	1147 (1338)	1225 (1416)	1241 (1432)	1253 (1444)	1529 (1720)	1557 (1748)	1574 (1765)	1599 (1790)	

Maximum equivalent radius of gyration in mm - Equivalent radius of gyration referred to HD (HHD) version - All the values are referred to 300° of input shaft index motion at standard index time with 50 Hz motoreducer - Others stops number and index times are available, on request

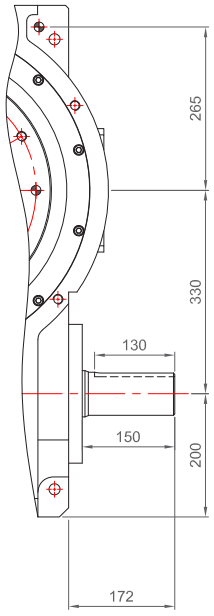
Available stops	Centre distance	Denomination
2 - 3 - 4 - 5 - 6 - 8 - 10 - 12 - 16 - 24 - 32 OTHER STOPS AVAILABLE ON REQUEST	**HD VERSION - 315 mm HHD VERSION - 330 mm**	**SP 1705 HD SP 1705 HHD**



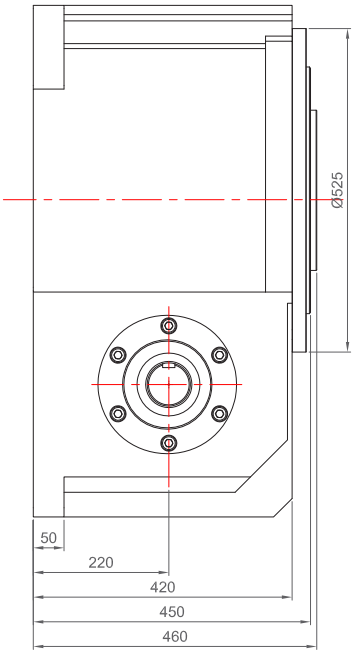


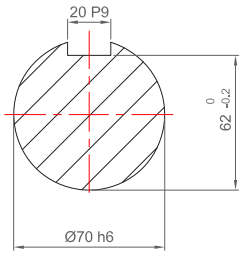


SP 1705 HD Version



SP 1705 HHD Version





SEZ. A-A
Input shaft

SOTL+ATT version available

Input shafts variants	Output shaft variants	SOTL + ATT version
RIGHT (1) - LEFT (2) - DOUBLE (3)	THROUGH HOLE - CENTER POST	AVAILABLE FOR: STANDARD - THROUGH HOLE - CENTER POST

GLOBOIDAL HIGH SPEED INDEXER

Indexing units with orthogonal axes MK2, high accuracy, no backlash. Twin dwell cams and various other cam laws. Available from 1 to 32 stops (more on request) with high value of dynamic capacities and various values of center distance.

Most of these mechanisms can be supplied with the high speed special cams.

Available with Safety Output Torque Limiter SOTL/ATT.

Options:

- Center through hole, for the passage of electrically/hydraulic equipment cables
- Choice of motor/worm reducer positions
- Available as indexer only without reduced or motor
- Available with Safety Output Torque Limiter SOTL/ATT

Features:

- Hardened & ground steel cam
- High precision heavy duty cam followers
- Rigid cast iron housing
- Largest range of stops & index periods
- Pre-loaded taper roller bearings
- Optimum motion law
- Special Italplant cam for extra high speeds

Available model sizes
MK2 210 - MK2 325 - MK2 425 - MK2 500 - MK2 650 - MK2 800 - MK2 1100

MK2 210

Load capacity:

- **Axial load:** 90 daN
- **Tilting moment:** 8 daNm

Indexing precision:

- **3-10 Index** ± 53" (arcsec)
- **12-16 Index** ± 79" (arcsec)
  Values improvable on request

Dimensional info:

- **Centre distance:** 62 mm
- **Size:** 100 x 162 x 132 (H) mm
- **Weight:** 10 kg

Additional features

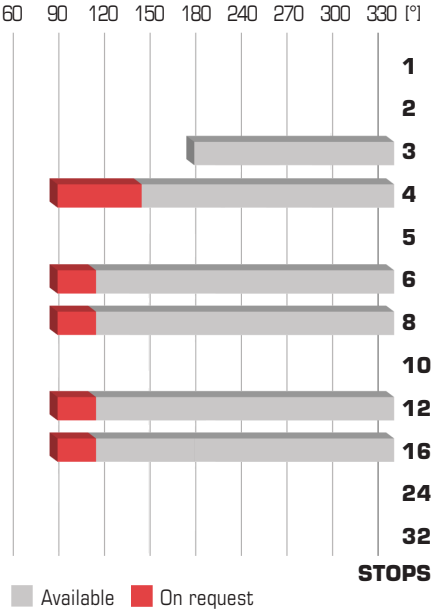
- High speed bearing for faster index time
- HD Heavy Duty
- Standard version with keyed output shaft
- Provided with three-phase motoreducer

Indexer overview

Optionals on request

- Oscillator version
- Continuous cam with servomotor
- Dial plate (see page 8)
- Enconder / additional control cycle cams
- Base cell (see page 8)
- Food oil or grease

Input shaft cam angles

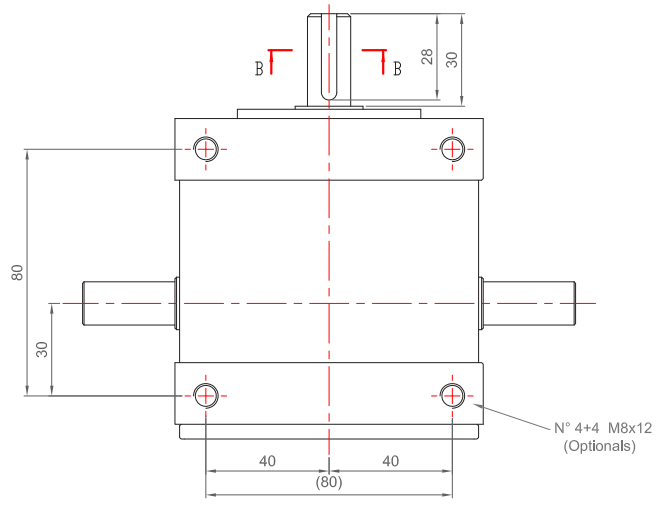


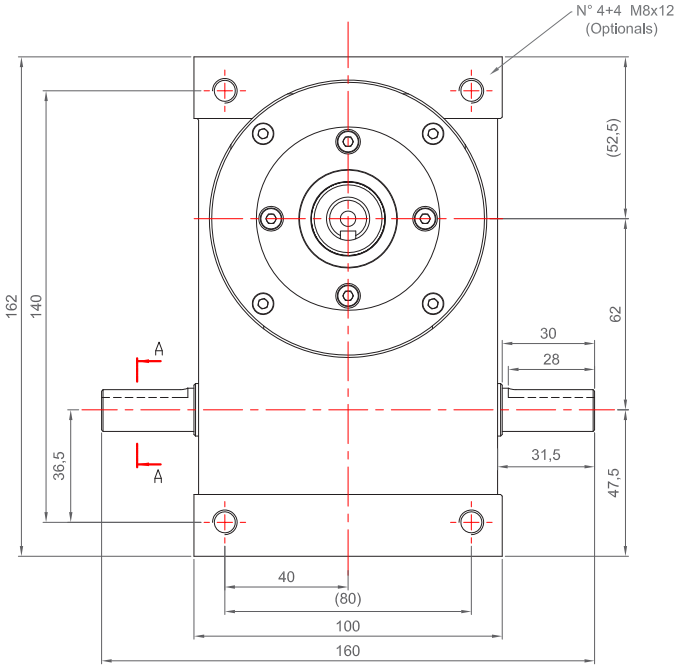
Maximum equivalent radius of gyration

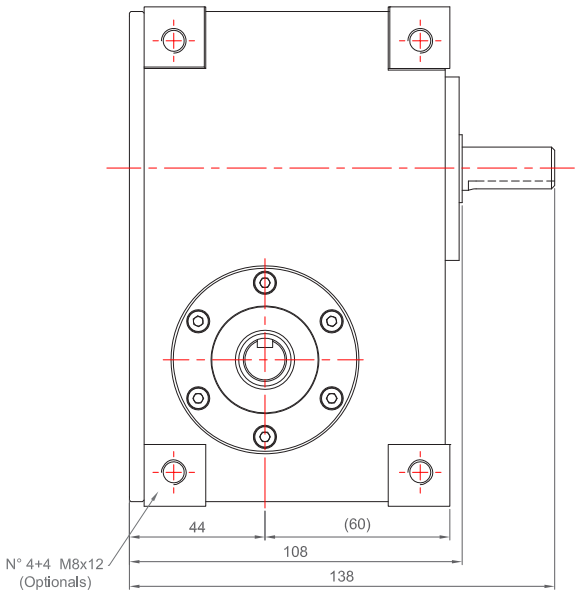
STOPS	0.16	0.24	0.32	0.48	0.64	0.80	0.96	1.29	1.61	2.09	2.57	Index time [s]
1	-	-	-	-	-	-	-	-	-	-	-	
2	-	-	-	-	-	-	-	-	-	-	-	
3	84	87	90	94	95	99	105	131	174	197	206	
4	86	88	91	96	98	101	127	159	190	205	214	
5	-	-	-	-	-	-	-	-	-	-	-	
6	87	89	93	97	99	131	163	190	195	208	219	
8	90	91	102	105	119	155	191	197	206	210	223	
10	-	-	-	-	-	-	-	-	-	-	-	
12	92	94	105	107	151	195	224	214	218	222	225	
16	82	83	94	97	111	147	183	189	198	202	215	
24	-	-	-	-	-	-	-	-	-	-	-	
32	-	-	-	-	-	-	-	-	-	-	-	

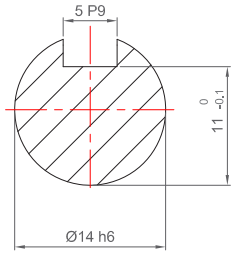
Maximum equivalent radius of gyration in mm - Equivalent radius of gyration referred to HD version - All the values are referred to 300° of input shaft index motion at standard index time with 50 Hz motoreducer - Others stops number and index times are available, on request

Available stops	Centre distance	Denomination
3 - 4 - 6 - 8 - 12 - 16 **OTHER STOPS AVAILABLE ON REQUEST**	**HD VERSION - 62 mm**	**MK2 210 HD**

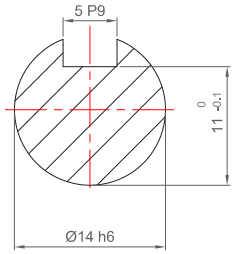








SEZ. A-A
Input shaft



SEZ. B-B
Output shaft

Input shafts variants	Output shaft variants
RIGHT (1) - LEFT (2) - DOUBLE (3)	SHAFT WITH OR WITHOUT KEY - LCI EXTERNAL TORQUE LIMITER AVAILABLE

MK2 325

Load capacity:

- **Axial load:** 1120 daN
- **Tilting moment:** 160 daNm

Indexing precision:

- **1-10 Index** ± 33" (arcsec)
- **12-16 Index** ± 48" (arcsec)
  Values improvable on request

Dimensional info:

- **Centre distance:** 80 mm
- **Size:** 155 x 222 x 232 (H) mm
- **Weight:** 30 kg

Additional features

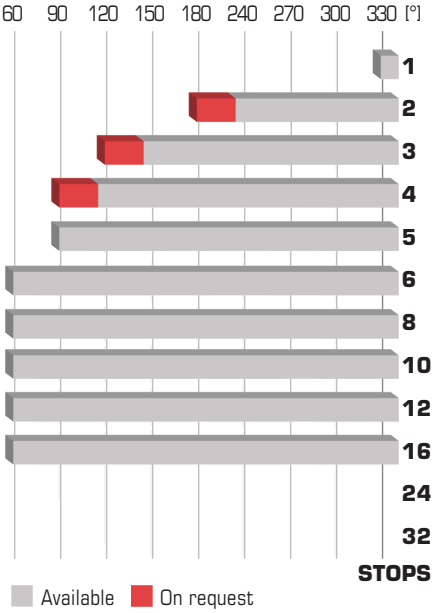
- High speed bearing for faster index time
- HD Heavy Duty
- Standard version with keyed output shaft
- Provided with three-phase motoreducer

Indexer overview

Optionals on request

- Oscillator version
- Continuous cam with servomotor
- Dial plate (see page 8)
- Enconder / additional control cycle cams
- Base cell (see page 8)
- Food oil or grease

Input shaft cam angles

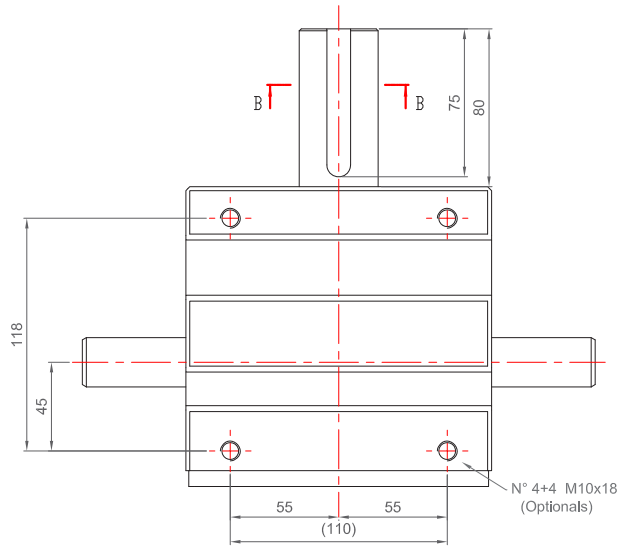


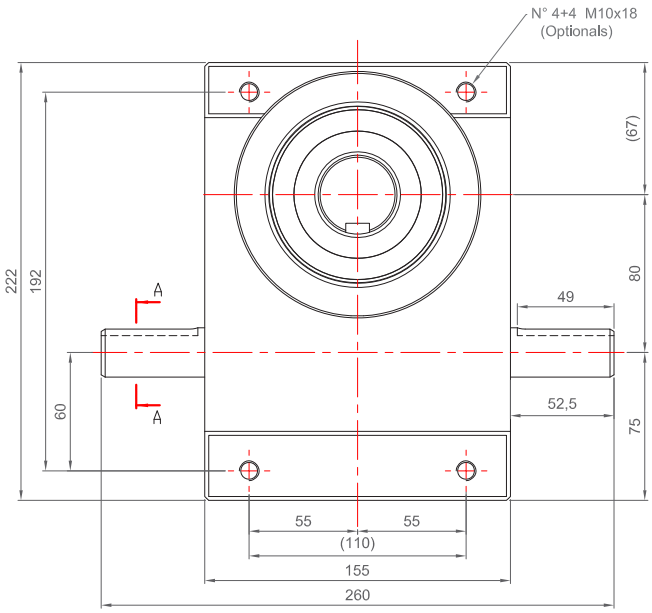
Maximum equivalent radius of gyration

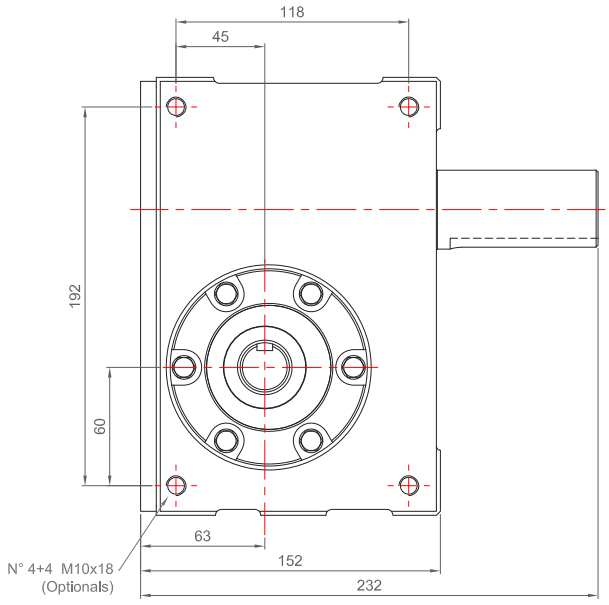
STOPS	0.16	0.24	0.32	0.48	0.64	0.80	0.96	1.29	1.61	2.09	2.57	Index time [s]
1	95	98	100	100	101	106	116	120	151	173	182	
2	152	156	160	161	162	169	186	193	242	276	290	
3	153	157	161	163	164	171	209	215	281	292	297	
4	154	158	162	164	165	209	253	270	289	297	303	
5	157	163	165	182	187	237	281	286	297	308	317	
6	204	212	217	237	261	331	364	375	384	400	415	
8	161	167	176	198	237	297	321	323	328	330	341	
10	163	171	185	209	242	310	328	330	336	340	347	
12	160	166	175	180	187	231	253	259	277	303	310	
16	167	182	202	220	253	330	334	342	349	351	354	
24	-	-	-	-	-	-	-	-	-	-	-	
32	-	-	-	-	-	-	-	-	-	-	-	

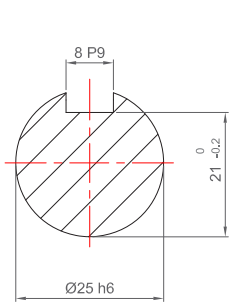
Maximum equivalent radius of gyration in mm - Equivalent radius of gyration referred to HD version - All the values are referred to 300° of input shaft index motion at standard index time with 50 Hz motoreducer - Others stops number and index times are available, on request

Available stops	Centre distance	Denomination
1 - 2 - 3 - 4 - 5 - 6 - 8 - 10 - 12 - 16 **OTHER STOPS AVAILABLE ON REQUEST**	**HD VERSION - 80 mm**	**MK2 325 HD**

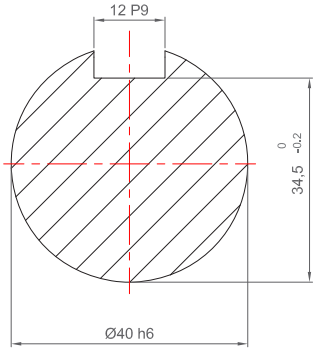








SEZ. A-A
Input shaft



SEZ. B-B
Input shaft

Input shafts variants	Output shaft variants
RIGHT (1) - LEFT (2) - DOUBLE (3)	SHAFT WITH OR WITHOUT KEY - LCI EXTERNAL TORQUE LIMITER AVAILABLE

MK2 425

Load capacity:

- **Axial load:** 1900 daN
- **Tilting moment:** 460 daNm

Indexing precision:

- **1-12 Index** ± 27" (arcsec)
- **16-32 Index** ± 40" (arcsec)
  Values improvable on request

Dimensional info:

- **Centre distance:** 108 mm
- **Size:** 180 x 280 x 222 (H) mm
- **Weight:** 50 kg

Additional features

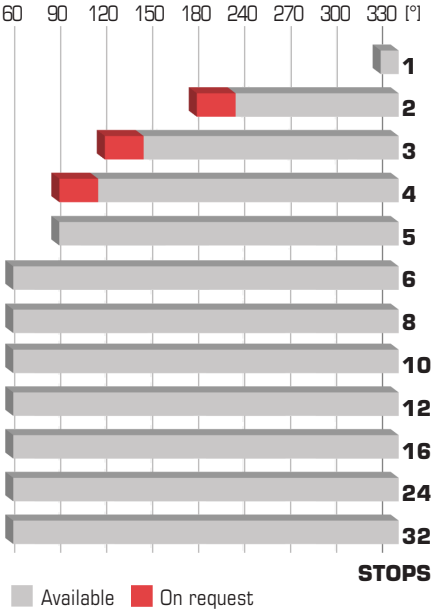
- High speed bearing for faster index time
- HD Heavy Duty
- Standard version with centering output shaft
- Provided with three-phase motoreducer

Indexer overview

Optionals on request

- Oscillator version
- Continuous cam with servomotor
- Dial plate (see page 8)
- Enconder / additional control cycle cams
- Base cell (see page 8)
- Food oil or grease

Input shaft cam angles

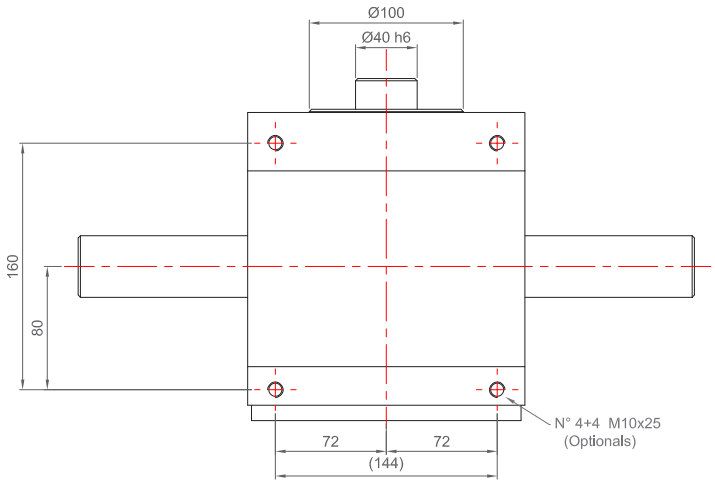


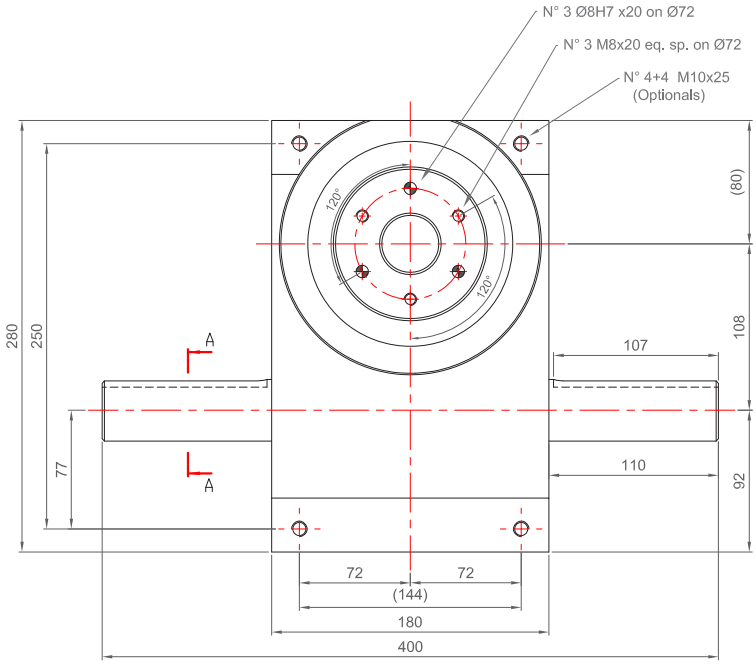
Maximum equivalent radius of gyration

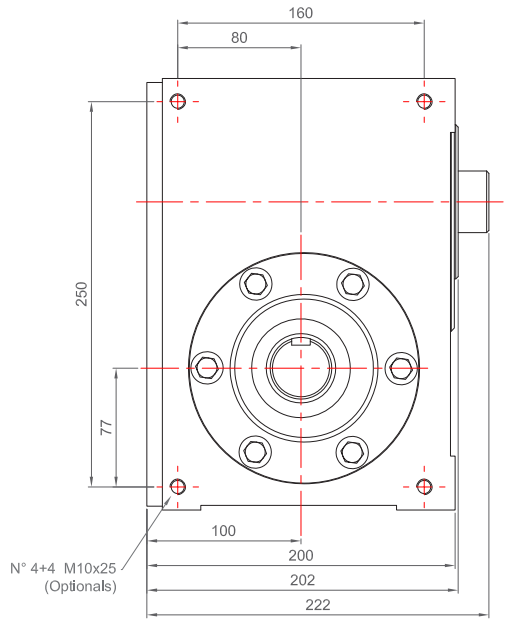
STOPS	0.16	0.24	0.32	0.48	0.64	0.80	0.96	1.29	1.61	2.09	2.57	Index time [s]
1	112	113	117	120	126	129	132	133	164	214	263	
2	179	181	188	193	201	207	211	213	263	342	421	
3	182	186	192	199	207	224	238	321	400	433	434	
4	187	188	198	204	219	229	275	371	425	440	447	
5	189	194	202	205	208	258	308	417	449	451	453	
6	210	218	225	241	272	340	380	438	454	459	467	
8	193	204	215	219	263	329	396	442	458	464	471	
10	196	206	217	221	296	367	442	448	463	470	476	
12	199	208	218	225	303	371	446	450	468	475	478	
16	201	210	221	228	310	378	449	453	473	478	483	
24	170	180	191	197	268	325	382	388	401	407	410	
32	158	165	179	183	254	310	359	361	368	375	377	

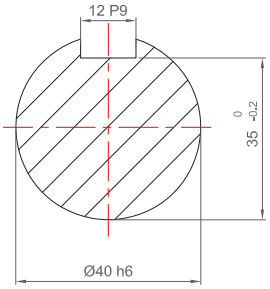
Maximum equivalent radius of gyration in mm - Equivalent radius of gyration referred to HD version - All the values are referred to 300° of input shaft index motion at standard index time with 50 Hz motoreducer - Others stops number and index times are available, on request

Available stops	Centre distance	Denomination
1 - 2 - 3 - 4 - 5 - 6 - 8 - 10 - 12 - 16 - 24 - 32 OTHER STOPS AVAILABLE ON REQUEST	**HD VERSION - 108 mm**	**MK2 425 HD**



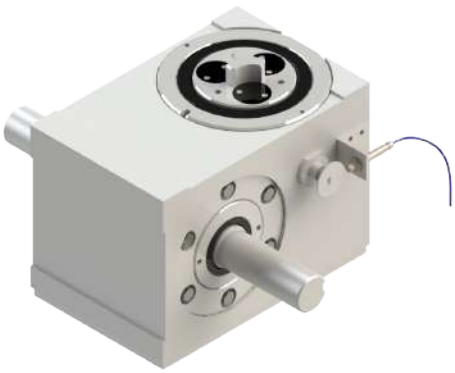






SEZ. A-A
Input shaft

SOTL+ATT version available



Input shafts variants	Output shaft variants	SOTL + ATT version
RIGHT (1) - LEFT (2) - DOUBLE (3)	KEYED SHAFT ON REQUEST	AVAILABLE FOR STANDARD OUTPUT SHAFT WITHOUT KEY

MK2 500

Load capacity:

- **Axial load:** 2800 daN
- **Tilting moment:** 980 daNm

Indexing precision:

- **1-12 Index** ± 24" (arcsec)
- **16-32 Index** ± 35" (arcsec)
  Values improvable on request

Dimensional info:

- **Centre distance:** 140 mm
- **Size:** 216 x 355 x 264 (H) mm
- **Weight:** 80 kg

Additional features

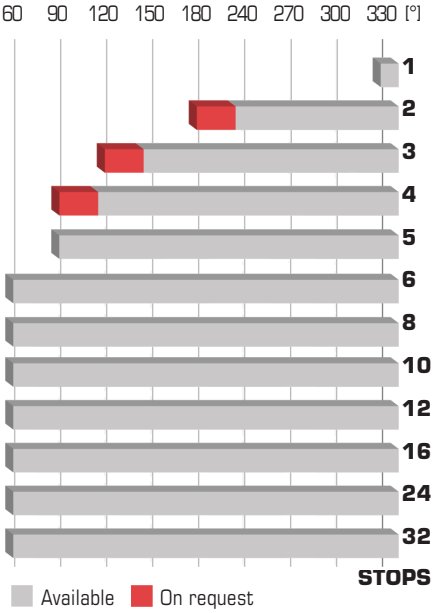
- High speed bearing for faster index time
- HD Heavy Duty
- Standard version with centering output shaft
- Provided with three-phase motoreducer

Indexer overview

Optionals on request

- Oscillator version
- Continuous cam with servomotor
- Dial plate (see page 8)
- Enconder / additional control cycle cams
- Base cell (see page 8)
- Food oil or grease

Input shaft cam angles

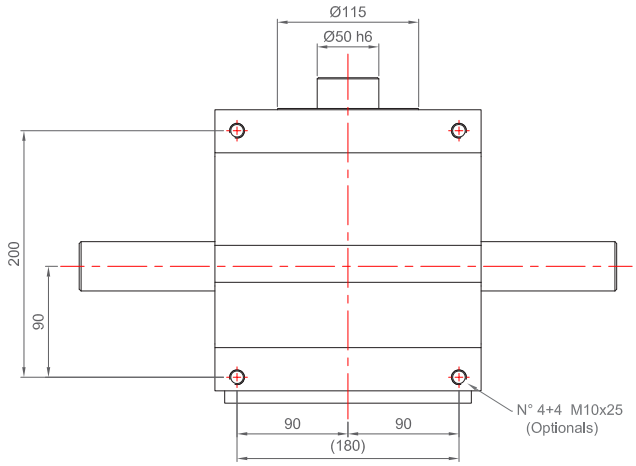


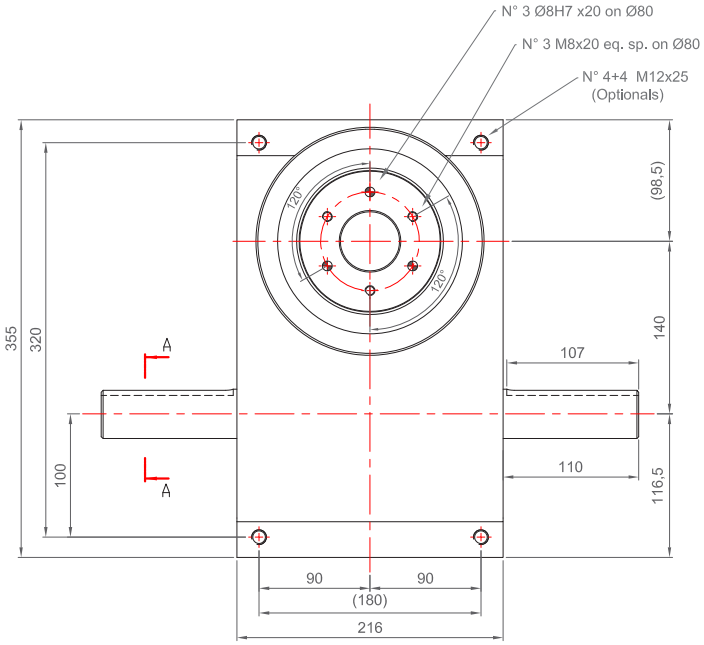
Maximum equivalent radius of gyration

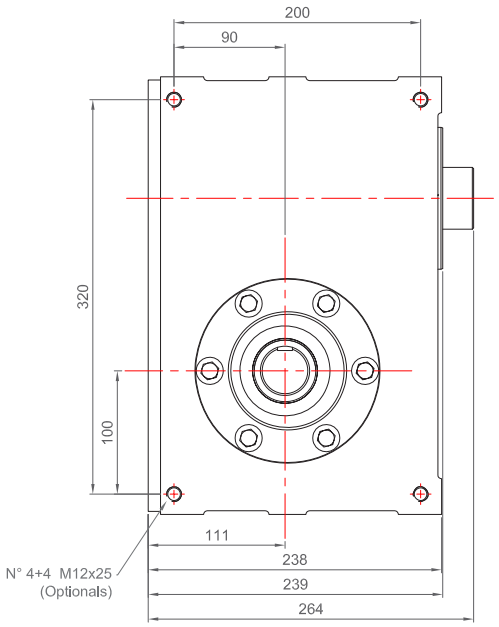
STOPS	0.16	0.24	0.32	0.48	0.64	0.80	0.96	1.29	1.61	2.09	2.57	Index time [s]
1	127	128	132	136	142	146	149	150	185	241	297	
2	228	262	267	269	271	272	274	275	319	417	471	
3	250	267	270	275	278	285	293	395	493	536	549	
4	254	268	272	277	286	297	341	460	504	542	554	
5	255	264	275	282	296	319	384	514	520	554	559	
6	267	270	280	284	299	341	406	547	549	557	564	
8	268	272	282	289	326	409	489	551	554	559	568	
10	272	275	286	301	330	413	496	553	555	562	571	
12	275	284	297	312	333	420	501	557	559	568	573	
16	277	286	301	315	337	426	506	565	563	571	575	
24	280	288	304	317	341	431	511	567	567	572	578	
32	226	231	248	255	279	347	412	458	459	461	467	

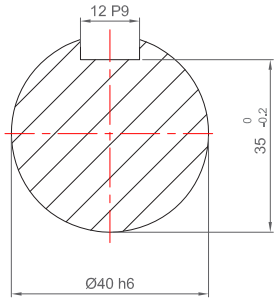
Maximum equivalent radius of gyration in mm - Equivalent radius of gyration referred to HD version - All the values are referred to 300° of input shaft index motion at standard index time with 50 Hz motoreducer - Others stops number and index times are available, on request

Available stops	Centre distance	Denomination
1 - 2 - 3 - 4 - 5 - 6 - 8 - 10 - 12 - 16 - 24 - 32 OTHER STOPS AVAILABLE ON REQUEST	**HD VERSION - 140 mm**	**MK2 500 HD**



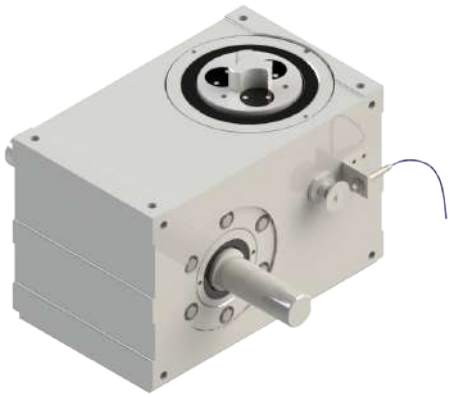






SEZ. A-A
Input shaft

SOTL+ATT version available



Input shafts variants	Output shaft variants	SOTL + ATT version
RIGHT (1) - LEFT (2) - DOUBLE (3)	KEYED SHAFT ON REQUEST	AVAILABLE FOR STANDARD OUTPUT SHAFT WITHOUT KEY

MK2 650

Load capacity:

- **Axial load:** 4100 N
- **Tilting moment:** 1520 Nm

Indexing precision:

- **1-12 Index** ± 19" (arcsec)
- **16-32 Index** ± 27" (arcsec)
  Values improvable on request

Dimensional info:

- **Centre distance:** 152 mm
- **Size:** 254 x 394 x 295 (H) mm
- **Weight:** 110 kg

Additional features

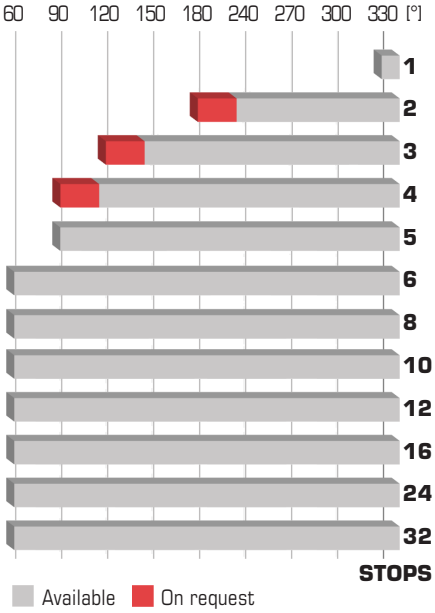
- High speed bearing for faster index time
- HD Heavy Duty
- Standard version with centering output shaft
- Provided with three-phase motoreducer

Indexer overview

Optionals on request

- Oscillator version
- Continuous cam with servomotor
- Dial plate (see page 8)
- Enconder / additional control cycle cams
- Base cell (see page 8)
- Food oil or grease

Input shaft cam angles

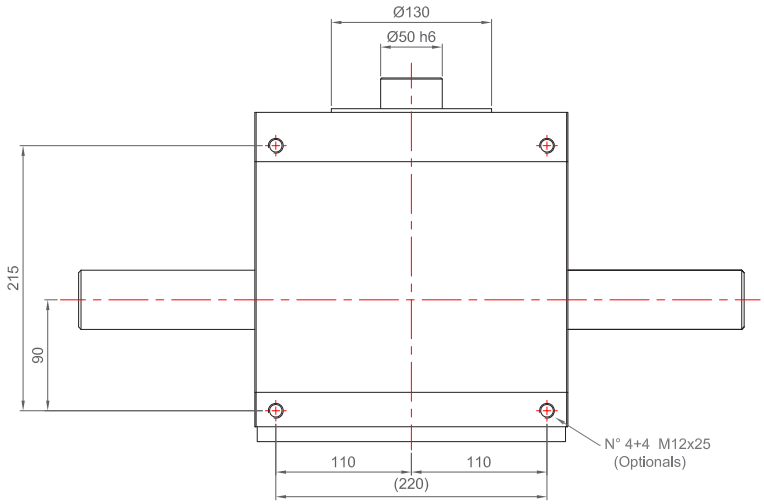


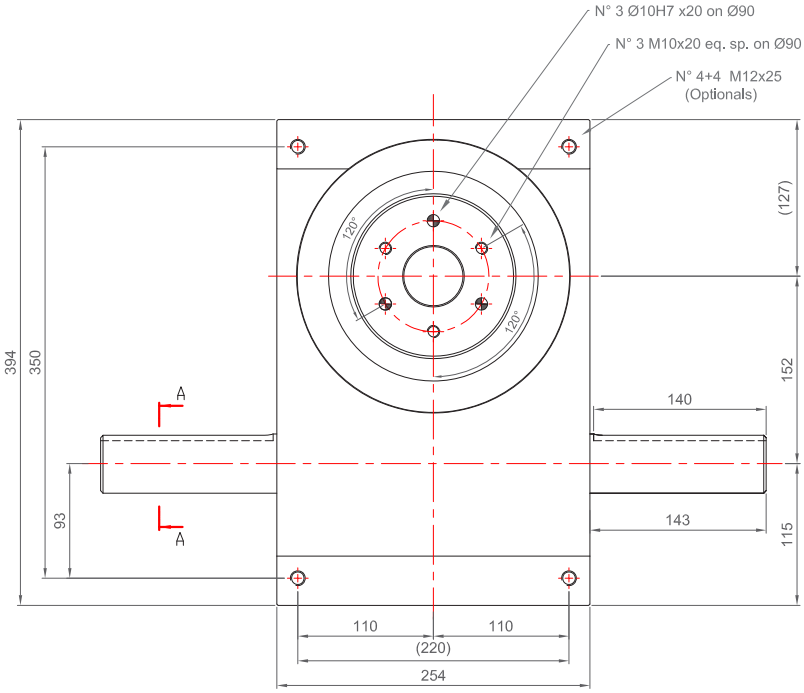
Maximum equivalent radius of gyration

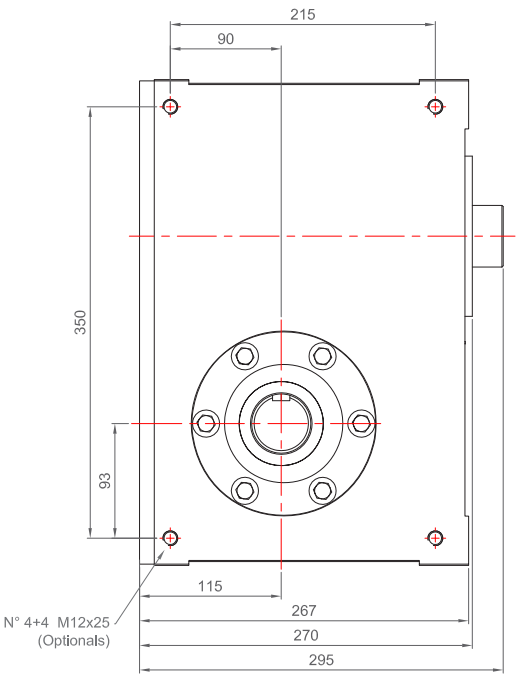
STOPS	0.16	0.24	0.32	0.48	0.64	0.80	0.96	1.29	1.61	2.09	2.57	Index time [s]
1	143	144	150	154	160	165	168	170	209	273	336	
2	384	412	440	491	526	574	584	613	683	739	774	
3	397	431	466	494	530	587	604	657	723	769	804	
4	409	449	470	496	537	600	617	691	739	782	819	
5	419	465	487	509	561	612	687	717	751	796	832	
6	426	470	491	560	600	709	730	779	796	813	839	
8	442	474	523	586	639	715	756	802	822	837	850	
10	456	479	537	611	660	734	762	821	829	844	861	
12	463	491	539	652	735	758	796	827	837	852	865	
16	470	497	550	694	763	780	804	847	851	864	874	
24	483	513	565	704	774	809	857	863	870	883	913	
32	338	346	372	383	419	521	617	687	688	691	700	

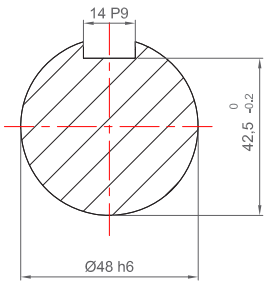
Maximum equivalent radius of gyration in mm - Equivalent radius of gyration referred to HD version - All the values are referred to 300° of input shaft index motion at standard index time with 50 Hz motoreducer - Others stops number and index times are available, on request

Available stops	Centre distance	Denomination
1 - 2 - 3 - 4 - 5 - 6 - 8 - 10 - 12 - 16 - 24 - 32 OTHER STOPS AVAILABLE ON REQUEST	**HD VERSION - 152 mm**	**MK2 650 HD**



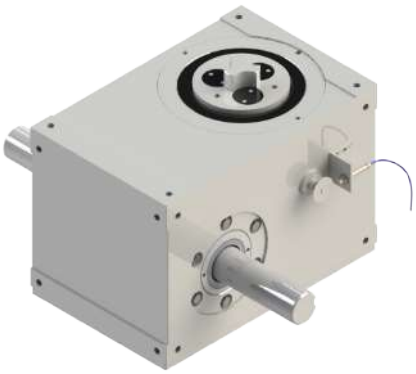






SEZ. A-A
Input shaft

SOTL+ATT version available



Input shafts variants	Output shaft variants	SOTL + ATT version
RIGHT (1) - LEFT (2) - DOUBLE (3)	KEYED SHAFT ON REQUEST	AVAILABLE FOR STANDARD OUTPUT SHAFT WITHOUT KEY

MK2 800

Load capacity:

- **Axial load:** 4900 daN
- **Tilting moment:** 1700 daNm

Indexing precision:

- **1-12 Index** ± 18" (arcsec)
- **16-32 Index** ± 24" (arcsec)
  Values improvable on request

Dimensional info:

- **Centre distance:** 178 mm
- **Size:** 305 x 457 x 306.5 (H) mm
- **Weight:** 160 kg

Additional features

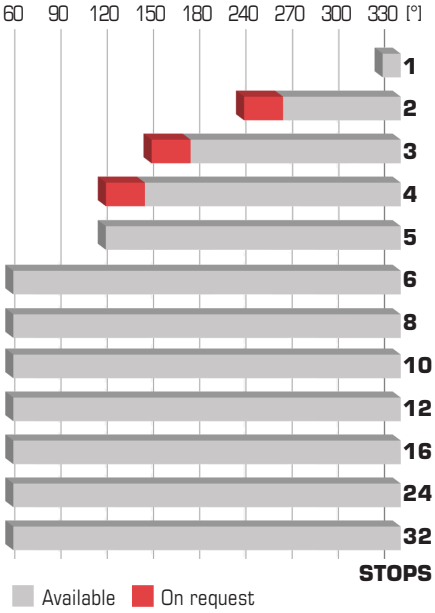
- High speed bearing for faster index time
- HD Heavy Duty
- Standard version with centering output shaft
- Provided with three-phase motoreducer

Indexer overview

Optionals on request

- Oscillator version
- Continuous cam with servomotor
- Dial plate (see page 8)
- Enconder / additional control cycle cams
- Base cell (see page 8)
- Food oil or grease

Input shaft cam angles

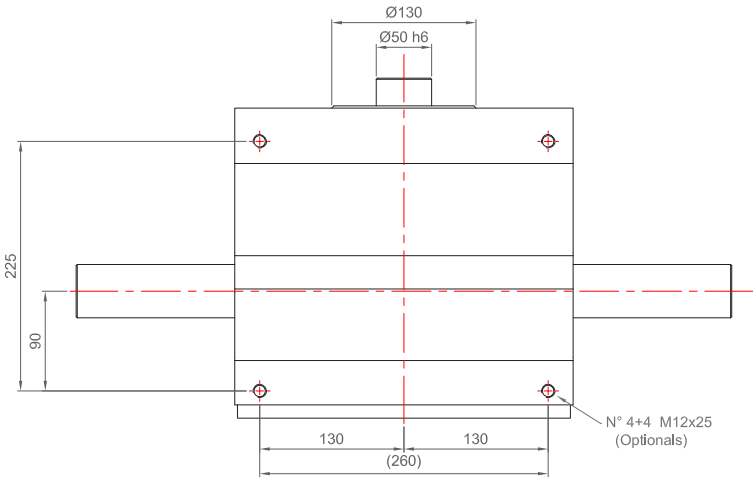


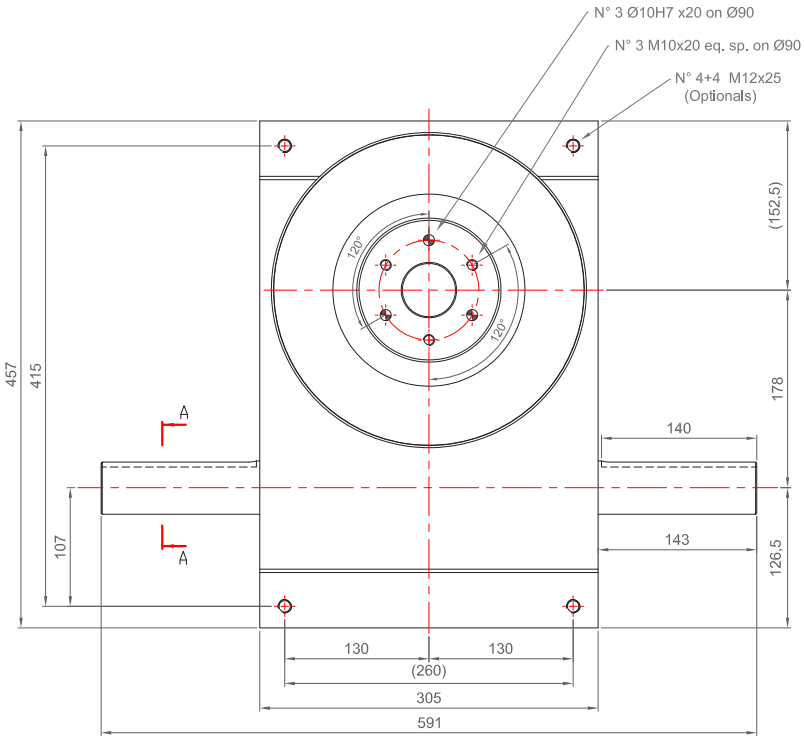
Maximum equivalent radius of gyration

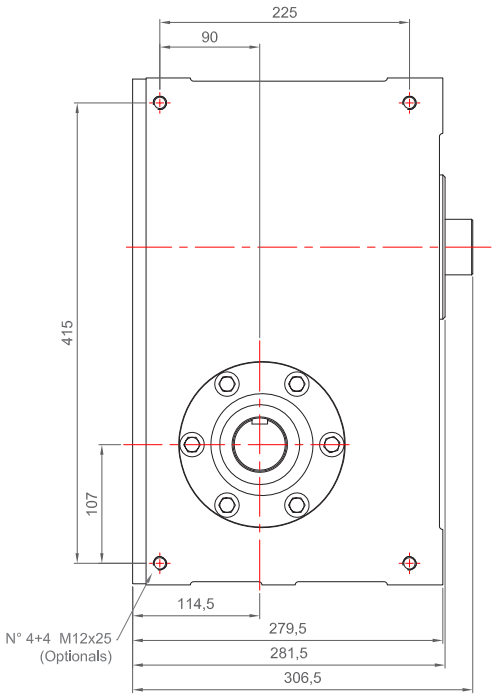
STOPS	0.16	0.24	0.32	0.48	0.64	0.80	0.96	1.29	1.61	2.09	2.57	Index time [s]
1	207	209	217	223	232	239	244	246	304	395	487	
2	527	565	603	673	721	786	801	840	935	1013	1060	
3	543	591	639	677	727	804	828	901	991	1053	1102	
4	560	615	643	679	735	822	846	947	1013	1071	1122	
5	574	637	667	697	768	839	941	983	1029	1090	1140	
6	682	751	786	896	960	1134	1169	1247	1273	1301	1343	
8	605	649	716	803	876	979	1035	1098	1126	1146	1165	
10	624	656	736	837	904	1005	1044	1125	1135	1157	1179	
12	634	673	739	893	1007	1039	1090	1133	1147	1167	1185	
16	643	680	753	951	1046	1069	1102	1160	1166	1184	1197	
24	662	703	774	965	1060	1108	1173	1182	1191	1209	1251	
32	463	474	510	524	574	714	846	941	942	947	959	

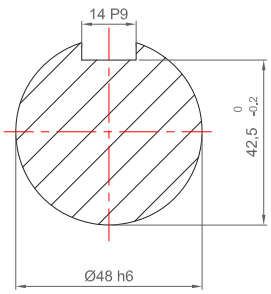
Maximum equivalent radius of gyration in mm - Equivalent radius of gyration referred to HD version - All the values are referred to 300° of input shaft index motion at standard index time with 50 Hz motoreducer - Others stops number and index times are available, on request

Available stops	Centre distance	Denomination
1 - 2 - 3 - 4 - 5 - 6 - 8 - 10 - 12 - 16 - 24 - 32 OTHER STOPS AVAILABLE ON REQUEST	**HD VERSION - 178 mm**	**MK2 800 HD**









SEZ. A-A
Input shaft

SOTL+ATT version available

Input shafts variants	Output shaft variants	SOTL + ATT version
RIGHT (1) - LEFT (2) - DOUBLE (3)	KEYED SHAFT ON REQUEST	AVAILABLE FOR STANDARD OUTPUT SHAFT WITHOUT KEY

MK2 1100

Load capacity:

- **Axial load:** 6500 daN
- **Tilting moment:** 2800 daNm

Indexing precision:

- **1-12 Index** ± 12" (arcsec)
- **16-32 Index** ± 17" (arcsec)
  Values improvable on request

Dimensional info:

- **Centre distance:** 254 mm
- **Size:** 400 x 646 x 370 (H) mm
- **Weight:** 350 kg

Additional features

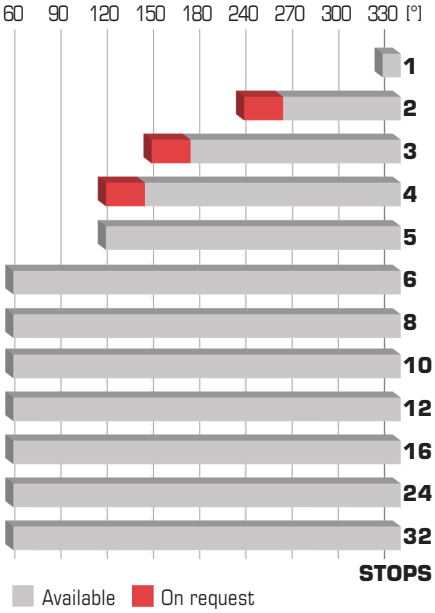
- High speed bearing for faster index time
- HD Heavy Duty
- Standard version with centering output shaft
- Provided with three-phase motoreducer

Indexer overview

Optionals on request

- Oscillator version
- Continuous cam with servomotor
- Dial plate (see page 8)
- Enconder / additional control cycle cams
- Base cell (see page 8)
- Food oil or grease

Input shaft cam angles

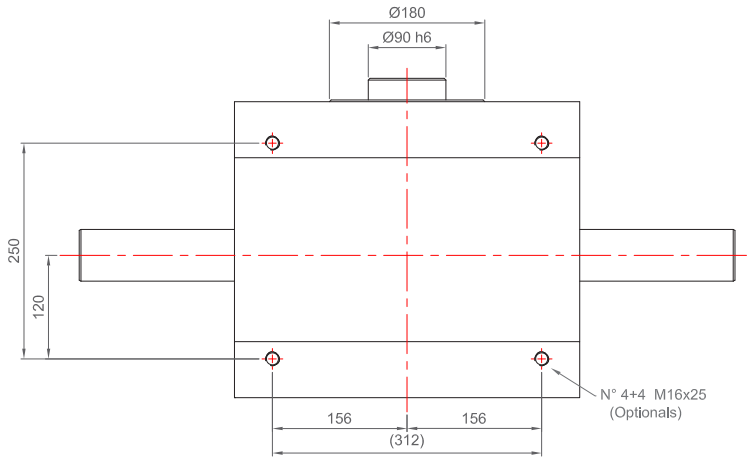


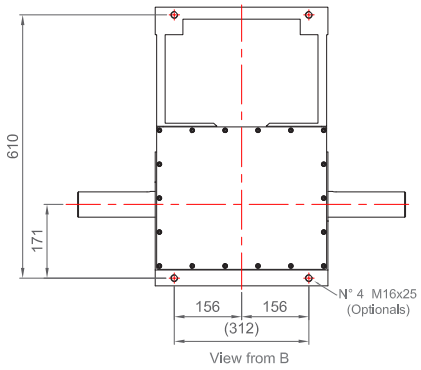
Maximum equivalent radius of gyration

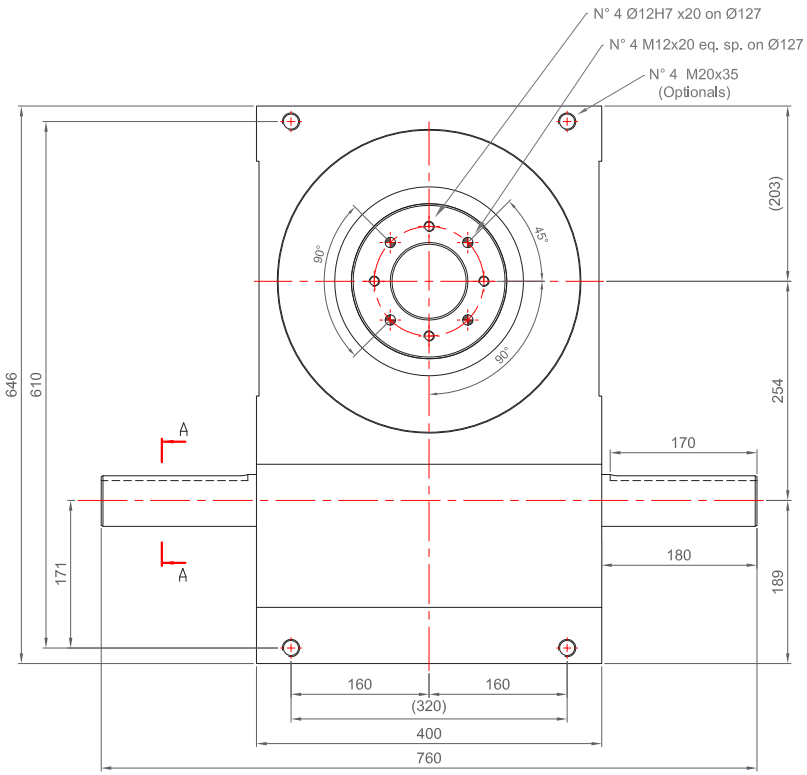
STOPS	0.16	0.24	0.32	0.48	0.64	0.80	0.96	1.29	1.61	2.09	2.57	Index time [s]
1	272	274	284	292	304	313	320	322	398	518	638	
2	542	578	610	680	739	820	850	890	975	1042	1252	
3	548	601	670	715	805	840	865	940	1010	1124	1279	
4	565	625	679	760	810	824	929	1097	1193	1268	1309	
5	591	642	685	825	850	872	956	1160	1225	1300	1334	
6	690	760	795	901	977	1190	1210	1348	1399	1433	1473	
8	633	663	730	861	941	995	1040	1273	1338	1357	1364	
10	655	679	754	952	990	1010	1055	1295	1356	1369	1380	
12	676	708	770	958	1017	1040	1100	1342	1359	1375	1402	
16	693	715	775	965	1050	1070	1115	1358	1386	1402	1427	
24	700	717	786	1006	1064	1110	1242	1370	1396	1420	1443	
32	599	615	669	845	947	1054	1086	1161	1182	1279	1359	

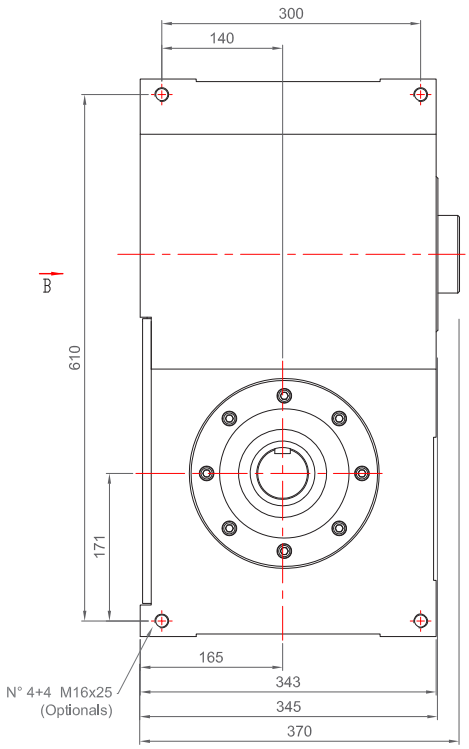
Maximum equivalent radius of gyration in mm - Equivalent radius of gyration referred to HD version - All the values are referred to 300° of input shaft index motion at standard index time with 50 Hz motoreducer - Others stops number and index times are available, on request

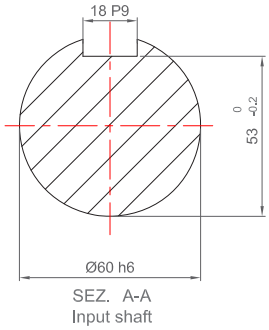
Available stops	Centre distance	Denomination
1 - 2 - 3 - 4 - 5 - 6 - 8 - 10 - 12 - 16 - 24 - 32 OTHER STOPS AVAILABLE ON REQUEST	**HD VERSION - 254 mm**	**MK2 1100 HD**



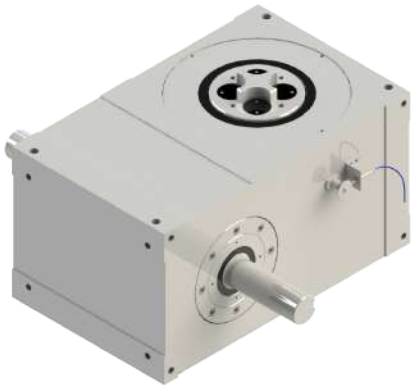








SOTL+ATT version available



Input shafts variants	Output shaft variants	SOTL + ATT version
RIGHT (1) - LEFT (2) - DOUBLE (3)	KEYED SHAFT ON REQUEST	AVAILABLE FOR STANDARD OUTPUT SHAFT WITHOUT KEY

GLOBOIDAL TOROIDAL INDEXER

The Italplant toroidal indexers TIG are large and slim globoidal cam mechanisms with similar functioning to the other rotary table of our production. The difference with these is that turn a ring instead of the dial plate.

The toroidal shape is particularly useful in case you need a lot of space in the central area. This space allows, in addition to the passage of cables, the placing of assembly stations, pick and place, robots and any other types of equipment that would otherwise be located outside, taking away valuable space.

The result is a compact indexer, with performance and load capacity superior to its competitors, due to the roller follower by Italplant design, which enhances the mechanical properties.

Options:

- Choice of motor/worm reducer positions
- Available as indexer only without reduced or motor
- The only Toroidal Indexer with the Safety Output Torque Limiter (SOTL - Patented)

Features:

- High speed for continuous motion running
- Enormous inner hole
- Compact design
- Optimum accuracy
- Mechanism with globoidal cam
- Low number of stops available

Available model sizes
TIG 800 - TIG 1200 - TIG 1600

TIG 800

Load capacity:

- **Axial load:** 3200 daN
- **Tilting moment:** 1400 daNm

Indexing precision:

- **4-32 Index** ± 15" (arcsec)
  Values improvable on request

Dimensional info:

- **Centre distance:** 342.5 mm (HD/HHD)
- **Size:** 690 x 780 x 170 (H) mm
- **Weight:** 200 kg

Additional features

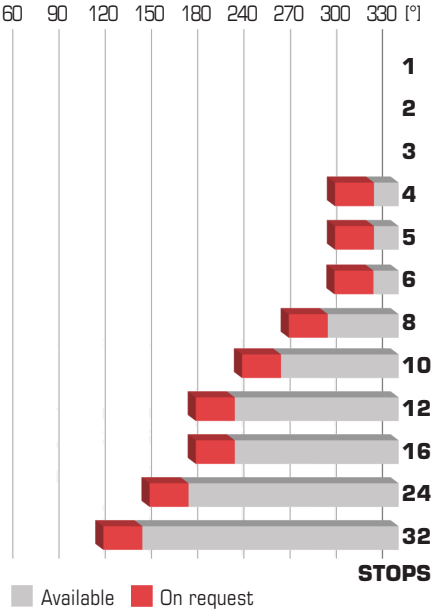
- Large full through center hole
- HD Heavy Duty or HHD Heavy Heavy Duty
- Slim toroidal indexer with low height
- Provided with three-phase motoreducer
- Ring indexer available with torque limiter

Indexer overview

Optionals on request

- Oscillator version
- Continuous cam with servomotor
- Dial plate (see page 8)
- Enconder / additional control cycle cams
- Customized base frame support
- Food oil or grease

Input shaft cam angles

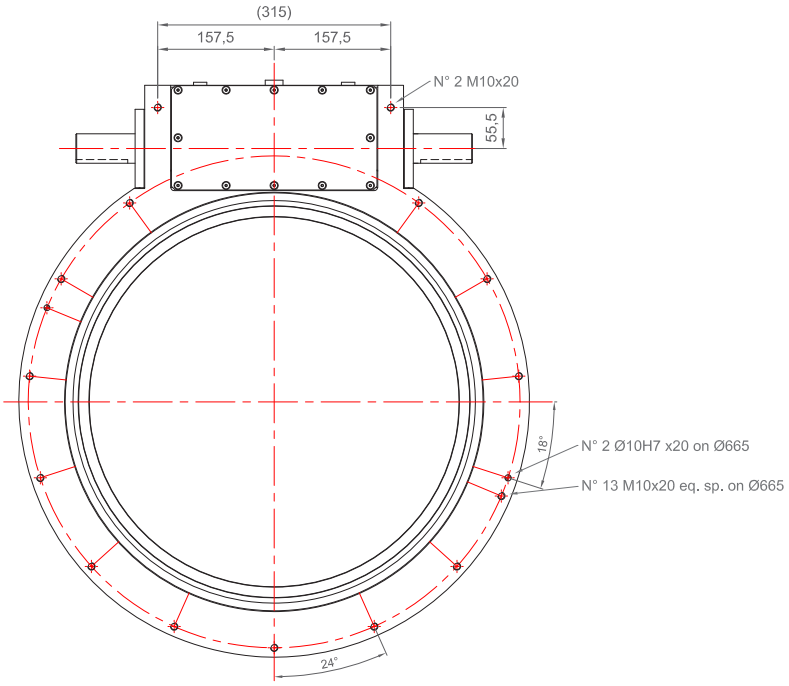


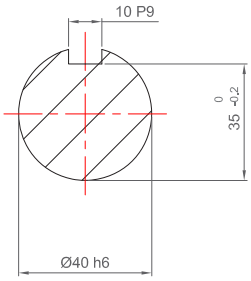
Maximum equivalent radius of gyration

STOPS	0.16	0.24	0.32	0.48	0.64	0.80	0.96	1.29	1.61	2.09	2.57	Index time [s]
1	-	-	-	-	-	-	-	-	-	-	-	
2	-	-	-	-	-	-	-	-	-	-	-	
3	-	-	-	-	-	-	-	-	-	-	-	
4	-	-	-	-	332	360	375	387	398	415	418	
5	-	-	-	341	350	358	369	410	424	551	590	
6	-	-	-	345	364	394	425	486	525	695	712	
8	-	-	344 (402)	375 (439)	392 (459)	405 (474)	489 (572)	599 (701)	615 (720)	720 (842)	910 (1065)	
10	-	349 (408)	377 (441)	399 (467)	449 (525)	496 (580)	525 (614)	640 (749)	683 (799)	815 (954)	1052 (1231)	
12	- -	352 (412)	402 (470)	436 (510)	510 (597)	564 (660)	680 (796)	705 (825)	798 (934)	990 (1158)	1152 (1348)	
16	354 (414)	369 (432)	425 (497)	499 (584)	550 (644)	628 (735)	735 (860)	810 (948)	895 (1047)	1015 (1188)	1214 (1420)	
24	372 (435)	410 (480)	490 (573)	541 (633)	601 (703)	677 (792)	781 (914)	887 (1038)	994 (1163)	1190 (1392)	1392 (1629)	
32	390 (456)	457 (535)	544 (636)	601 (703)	688 (805)	746 (873)	810 (948)	920 (1076)	1090 (1275)	1240 (1451)	1428 (1671)	

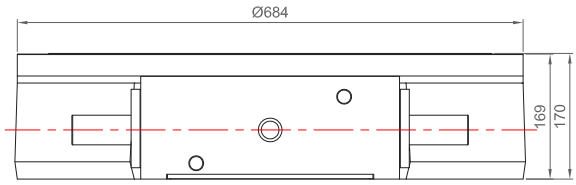
Maximum equivalent radius of gyration in mm - Equivalent radius of gyration referred to HD (HHD) versions - All the values are referred to 300° of input shaft index motion at standard index time with 50 Hz motoreducer - Others stops number and index times are available, on request

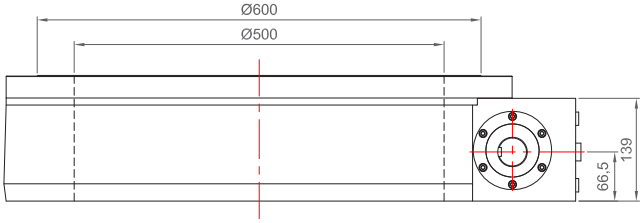
Available stops	Centre distance	Denomination
4 - 5 - 6 - 8 - 10 - 12 - 16 - 24 - 32 **OTHER STOPS AVAILABLE ON REQUEST**	**HD/HHD VERSION - 342.5 mm**	**TIG 800 HD** **TIG 800 HHD**

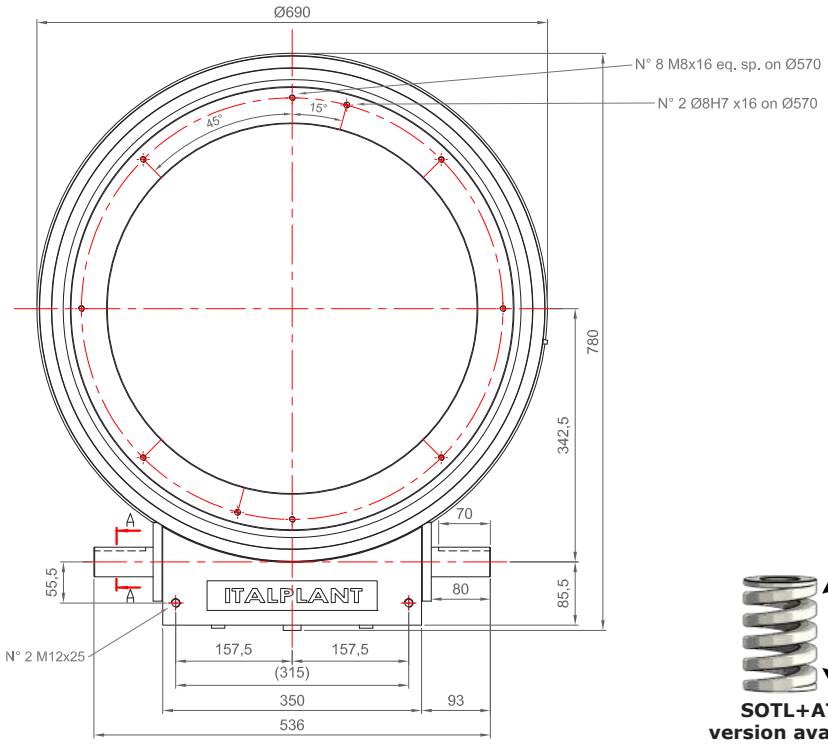




SEZ. A-A
Input shaft







SOTL+ATT version available

Input shafts variants	SOTL + ATT version
RIGHT (1) - LEFT (2) - DOUBLE (3)	AVAILABLE - RELEASE CAM POSITIONABLE AT DIFFERENT LATERAL SIDE

TIG 1200

Load capacity:

- **Axial load:** 7200 daN
- **Tilting moment:** 3100 daNm

Indexing precision:

- **3-32 Index** ± 9" (arcsec)
  Values improvable on request

Dimensional info:

- **Centre distance:** 600 mm (HD/HHD)
- **Size:** 1204 x 1373 x 262 (H) mm
- **Weight:** 1100 kg

Additional features

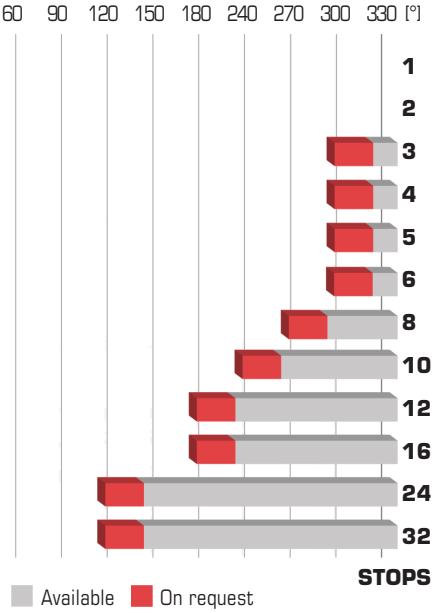
- Large full through center hole
- HD Heavy Duty or HHD Heavy Heavy Duty
- Slim toroidal indexer with low height
- Provided with three-phase motoreducer
- Ring indexer available with torque limiter

Indexer overview

Optionals on request

- Oscillator version
- Continuous cam with servomotor
- Dial plate (see page 8)
- Enconder / additional control cycle cams
- Customized base frame support
- Food oil or grease

Input shaft cam angles

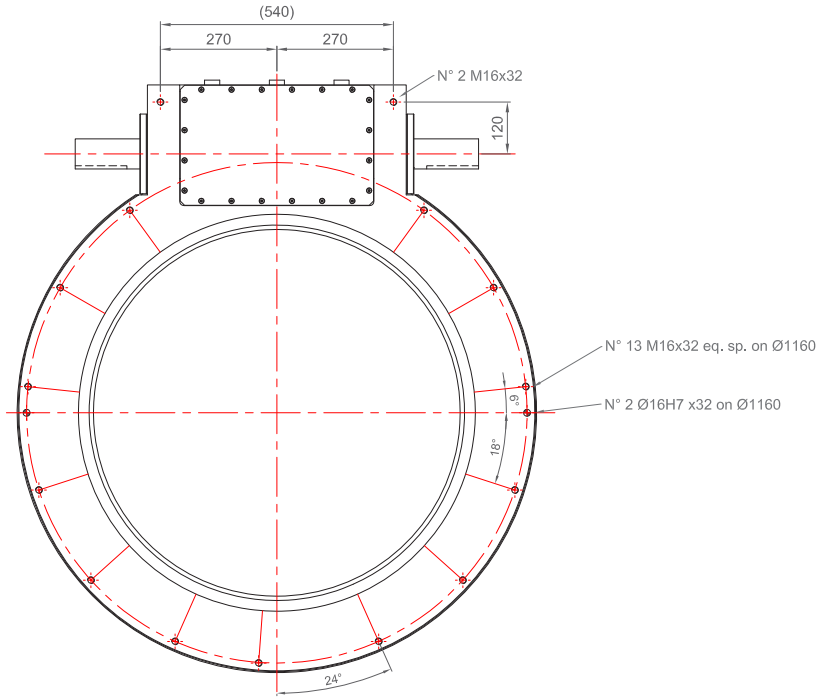


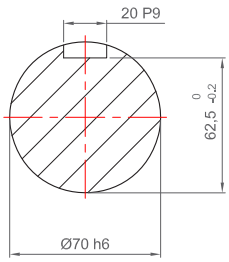
Maximum equivalent radius of gyration

STOPS	0.16	0.24	0.32	0.48	0.64	0.80	0.96	1.29	1.61	2.09	2.57	Index time [s]
1	-	-	-	-	-	-	-	-	-	-	-	
2	-	-	-	-	-	-	-	-	-	-	-	
3	-	-	-	-	-	-	628	638	661	707	732	
4	-	-	-	-	-	691	720	743	764	797	803	
5	-	-	-	-	-	687	708	787	814	1058	1133	
6	-	-	-	662	699	756	816	933	1008	1334	1367	
8	-	-	-	720 (850)	753 (888)	778 (918)	939 (1108)	1150 (1357)	1181 (1393)	1382 (1631)	1747 (2062)	
10	- -	670 -	724 (854)	766 (904)	862 (1017)	952 (1124)	1008 (1189)	1229 (1450)	1311 (1547)	1565 (1846)	2020 (2383)	
12	- -	676 (797)	772 (911)	837 (988)	979 (1155)	1083 (1278)	1306 (1541)	1354 (1597)	1532 (1808)	1901 (2243)	2212 (2610)	
16	- -	708 (836)	816 (963)	958 (1131)	1056 (1246)	1206 (1423)	1411 (1665)	1555 (1835)	1718 (2028)	1949 (2300)	2331 (2750)	
24	714 (843)	787 (929)	941 (1110)	1039 (1226)	1154 (1362)	1300 (1534)	1500 (1769)	1703 (2010)	1908 (2252)	2285 (2696)	2673 (3154)	
32	749 (884)	877 (1035)	1044 (1232)	1154 (1362)	1321 (1559)	1432 (1690)	1555 (1835)	1766 (2084)	2093 (2470)	2381 (2809)	2742 (3235)	

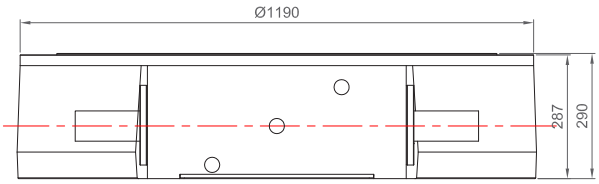
Maximum equivalent radius of gyration in mm - Equivalent radius of gyration referred to HD (HHD) versions - All the values are referred to 300° of input shaft index motion at standard index time with 50 Hz motoreducer - Others stops number and index times are available, on request

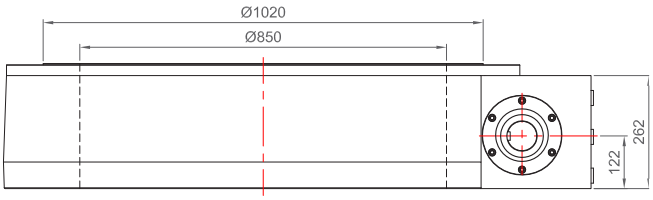
Available stops	Centre distance	Denomination
3 - 4 - 5 - 6 - 8 - 10 - 12 - 16 - 24 - 32 OTHER STOPS AVAILABLE ON REQUEST	**HD/HHD VERSION - 600 mm**	**TIG 1200 HD TIG 1200 HHD**

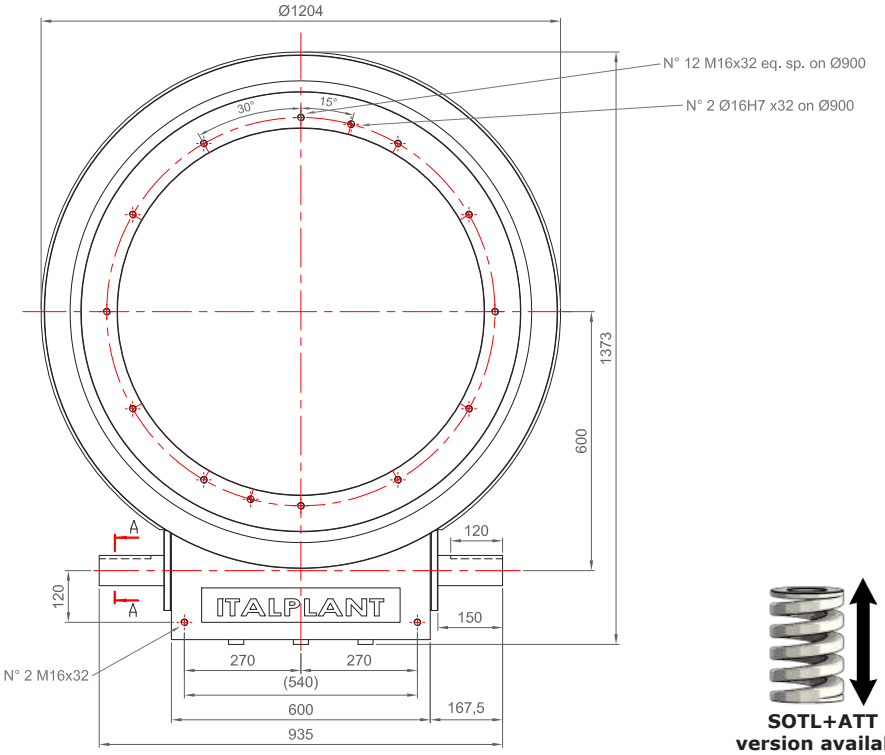




SEZ. A-A
Input shaft







SOTL+ATT version available

Input shafts variants	SOTL + ATT version
RIGHT (1) - LEFT (2) - DOUBLE (3)	AVAILABLE - RELEASE CAM POSITIONABLE AT DIFFERENT LATERAL SIDE

TIG 1600

Load capacity:

- **Axial load:** 9500 N
- **Tilting moment:** 6500 Nm

Indexing precision:

- **3-32 Index** ± 6" (arcsec)
  Values improvable on request

Dimensional info:

- **Centre distance:** 875 mm (HD/HHD)
- **Size:** 1700 x 1940 x 370 (H) mm
- **Weight:** 2800 kg

Additional features

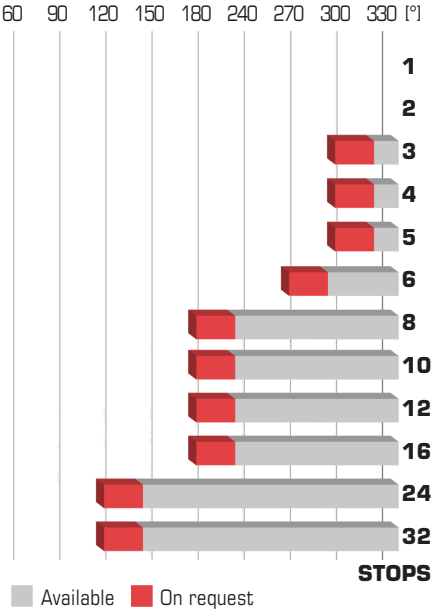
- Large full through center hole
- HD Heavy Duty or HHD Heavy Heavy Duty
- Slim toroidal indexer with low height
- Provided with three-phase motoreducer
- Ring indexer available with torque limiter

Indexer overview

Optionals on request

- Oscillator version
- Continuous cam with servomotor
- Dial plate (see page 8)
- Enconder / additional control cycle cams
- Customized base frame support
- Food oil or grease

Input shaft cam angles

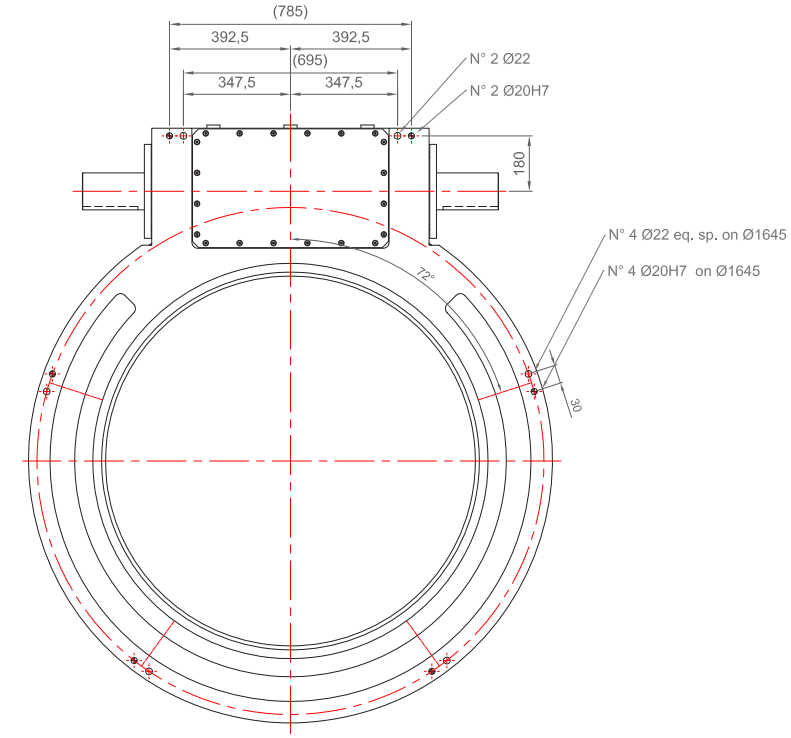


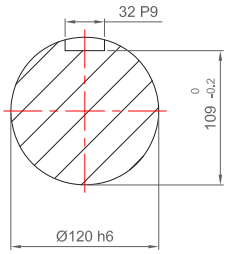
Maximum equivalent radius of gyration

STOPS	0.16	0.24	0.32	0.48	0.64	0.80	0.96	1.29	1.61	2.09	2.57	Index time [s]
1	-	-	-	-	-	-	-	-	-	-	-	
2	-	-	-	-	-	-	-	-	-	-	-	
3	-	-	-	-	-	-	810	824	853	912	944	
4	-	-	-	-	-	892	929	959	986	1028	1035	
5	-	-	-	-	-	887	914	1015	1050	1365	1461	
6	-	-	-	854	902	976	1053	1204	1300	1721	1763	
8	-	-	-	929 (1068)	971 (1117)	1003 (1154)	1211 (1393)	1484 (1706)	1523 (1752)	1783 (2051)	2254 (2592)	
10	-	864	934 (1074)	988 (1136)	1112 (1279)	1228 (1413)	1300 (1495)	1585 (1823)	1692 (1945)	2019 (2321)	2606 (2996)	
12	-	872 (1003)	996 (1145)	1080 (1242)	1263 (1453)	1397 (1606)	1684 (1937)	1746 (2008)	1976 (2273)	2452 (2820)	2853 (3281)	
16	-	914 (1051)	1053 (1211)	1236 (1421)	1362 (1567)	1555 (1789)	1820 (2094)	2006 (2307)	2217 (2549)	2514 (2891)	3007 (3458)	
24	921	1015 (1168)	1214 (1396)	1340 (1541)	1489 (1712)	1677 (1928)	1934 (2225)	2197 (2526)	2462 (2831)	2947 (3390)	3448 (3965)	
32	966 (1111)	1132 (1302)	1347 (1549)	1489 (1712)	1704 (1960)	1848 (2125)	2006 (2307)	2279 (2620)	2700 (3105)	3071 (3532)	3537 (4067)	

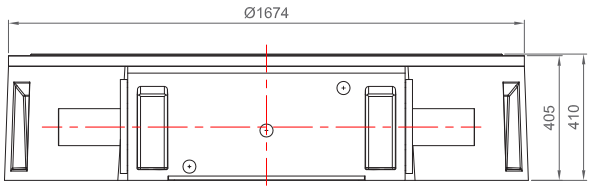
Maximum equivalent radius of gyration in mm - Equivalent radius of gyration referred to HD (HHD) versions - All the values are referred to 300° of input shaft index motion at standard index time with 50 Hz motoreducer - Others stops number and index times are available, on request

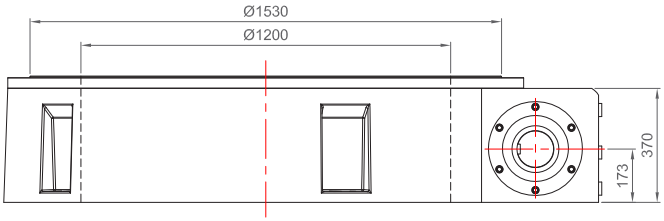
Available stops	Centre distance	Denomination
3 - 4 - 5 - 6 - 8 - 10 - 12 - 16 - 24 - 32 OTHER STOPS AVAILABLE ON REQUEST	**HD/HHD VERSION - 875 mm**	**TIG 1600 HD TIG 1600 HHD**

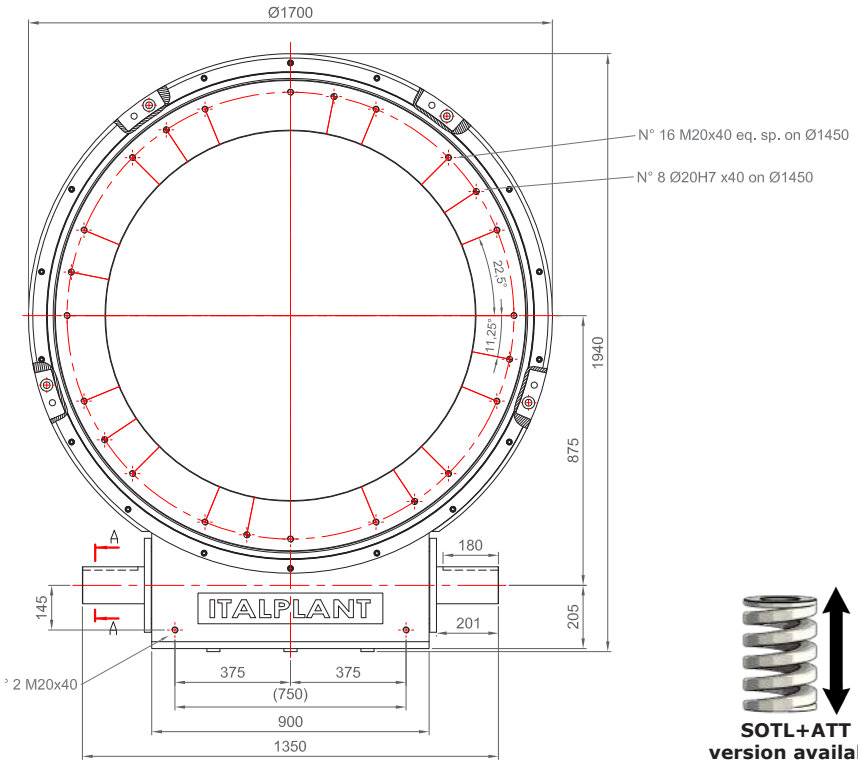




SEZ. A-A
Input shaft



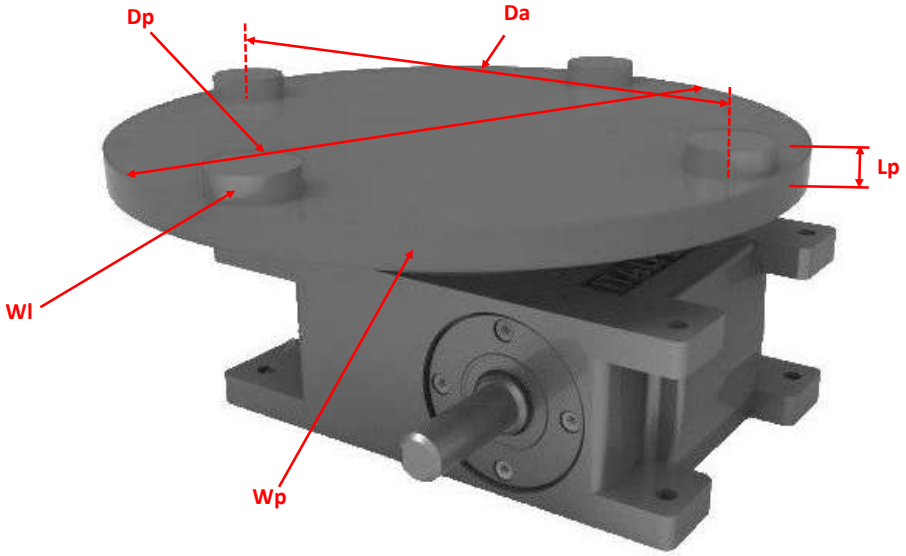




SOTL+ATT version available

Input shafts variants	SOTL + ATT version
RIGHT (1) - LEFT (2) - DOUBLE (3)	AVAILABLE - RELEASE CAM POSITIONABLE AT DIFFERENT LATERAL SIDE

DATA SHEET



Total Inertia [kg*m^2]	**It =**
Weight plate [kg]	**Wp =**
Diameter plate [mm]	**Dp =**
or	
Diameter plate [mm]	**Dp =**
Thickness plate [mm]	**Lp =**
Material plate	**Mat =**
N° of station	**N° =**
Weight station [kg]	**Wl =**
Diameter of application [mm]	**Da =**
Additional forces ⊾ [N]	**F1 =**
Additional forces // [N]	**F2 =**

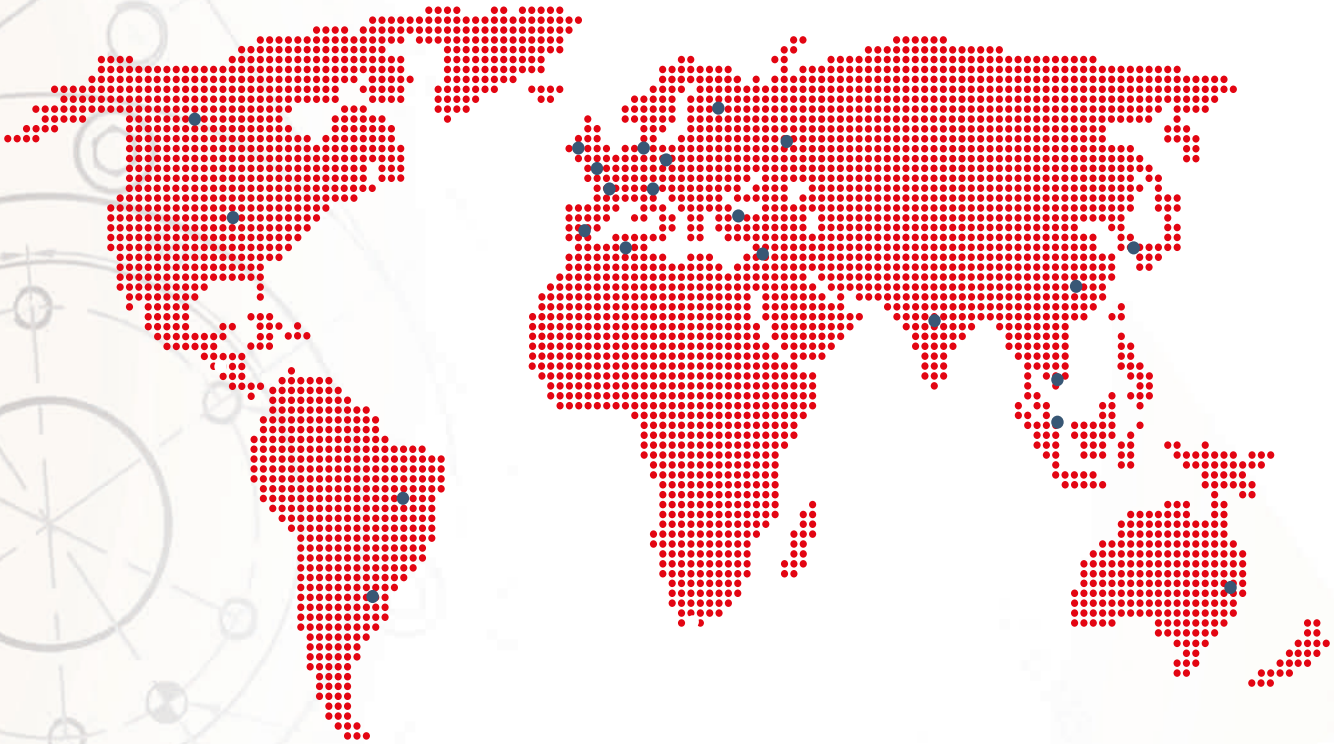
Indexer	Oscillator
or	
High Efficiency Reducer	
Continuous motion	Indexed motion (servo)
Cycle on Demand	
or	
Continuous running	
t. index [s]	**ti =**
t. dwell [s]	**td =**
t. cycle [s]	**tc =**
Frequency of cycle	**Cyc/min =**
(Cam angle) [°]	**α =**

Notes for the loads

Notes for the cycle

Name	Company	Rif.	
Address			
Email (in capital letters)			

ITALPLANT IN THE WORLD



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