




Hunter's synthetic turf rotors are designed specifically to satisfy the unique needs of cooling and cleaning synthetic turf sports fields. Robust, reliable and engineered for longevity in high-flow and high-pressure conditions, the new ST-1600 complements the ST-90 and STG-900 ST Rotors by adding long-range capabilities. These enhanced radius rotors are perfect for football fields, where smaller radius rotors might fall a little short. They are even better for extra-wide field applications like soccer. ST-1600 rotors are available in two configurations:

ST-1600B

This model is a 5-inch (13 cm) pop-up with adjustable-arc and full-circle capabilities in one rotor. All internal components of this rotor are accessible from the top without disturbing the synthetic surface. It is ideally suited for installation within Hunter's ST243636B enclosure, or in the natural turf that is sometimes adjacent to the synthetic field to be irrigated.

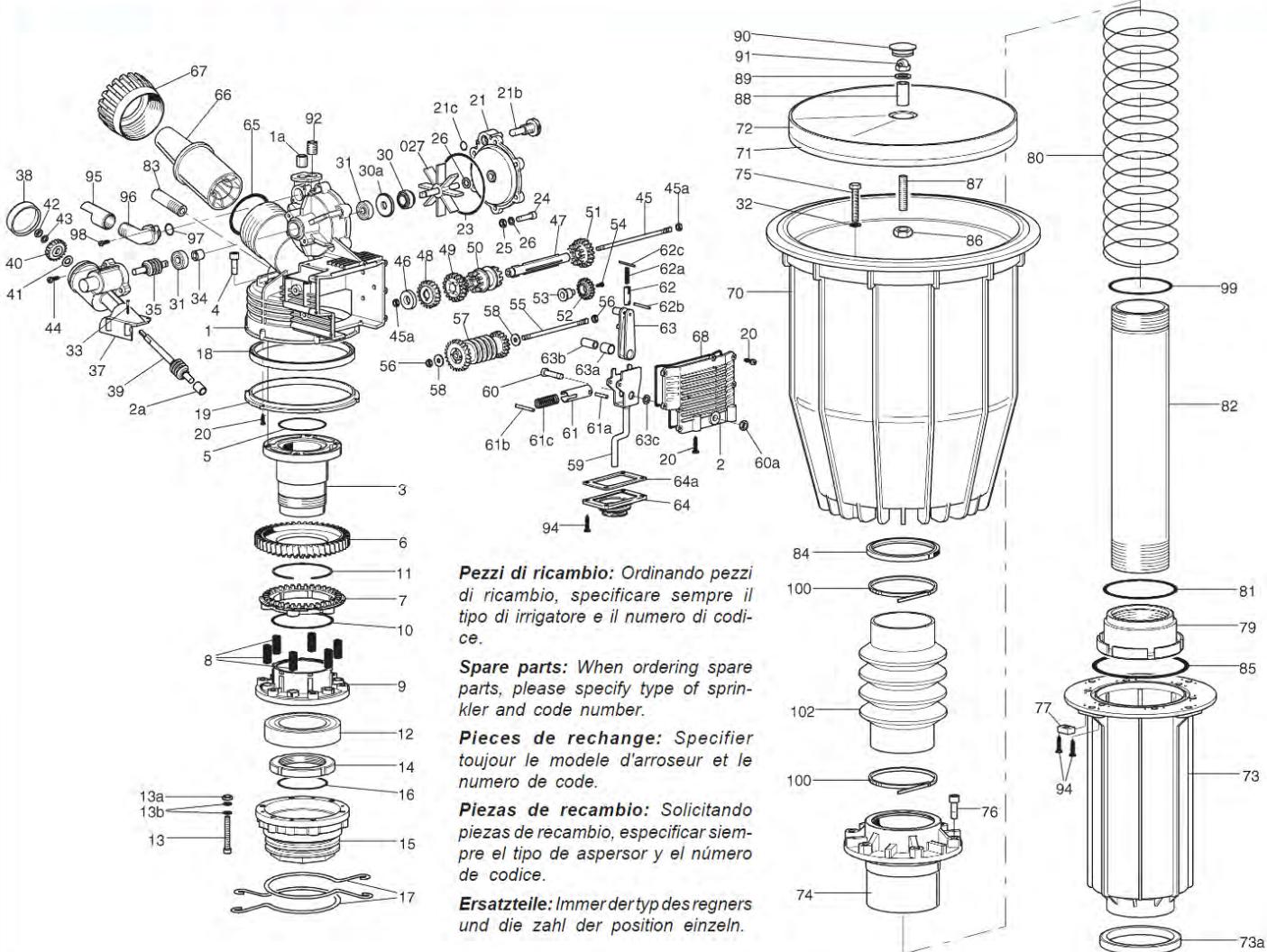
ST-1600BR

This model is a compact and unobtrusive riser-mounted rotor with adjustable-arc and full-circle capabilities. This model is perfect for those installations where it is preferable to keep all irrigation piping and equipment away from the synthetic surface. The riser-mounted configuration also allows existing synthetic sports fields to be retrofitted for irrigation without disturbing the playing surface. Riser-mounted configurations are typically installed at elevations that promote safety and protection from the rotor's high-flow water stream.

Features & Benefits

- **Long-Range Performance Up To 160 Feet (48 metres)** Five nozzles developed specifically for synthetic turf sports fields
- **Short-Range Performance At 135 Feet (41 metres)** Perfect for football fields needing that little extra distance
- **Proven Heavy-Duty Gear-Drive** Multiple sealed ball bearings throughout
- **Full-Circle and Adjustable-Arc in One Model** 40° - 360° adjustable anytime; un-installed, installed or while in operation
- **Ratcheting Riser Assembly** Easy arc-setting check and vandal resistant
- **Large and Flat Rubber Cover Assembly** Promotes safety and protects internal components
- **Stainless Steel Pop-Up Riser Assembly** Extra heavy-duty to meet the most demanding needs
- **Telescoping Rubber Boot On Riser Assembly** Protects pop-up assembly from infill contamination
- **Adjustable Speed of Rotation** Simple adjusting knob modifies speed to your requirements

ST-1600B Pop-Up Rotor



Dati, pesi e misure non sono impegnativi per la Ditta costruttrice che si riserva di apportare modifiche a sua discrezione.

Data, weights and dimensions are not binding for the manufacturer, who reserves the right to bring changes as he sees fit.

Les données, poids et dimensions ne sont pas engageantes pour la Maison constructrice, qui se réserve le droit d'apporter toutes modifications à sa discrétion.

Datos, pesos y medidas no son empeñativos para la Empresa constructora que se reserva el derecho de aportar modificaciones.

CODICE	N. P.Z.	N. DIS.	DENOMINAZIONE	MATER.
3010668	1	1	Cartier	delin
3010669	1	1a	Inserito per cartier	ottone
3010670	1	2	Coperchio scatola	delin
3010671	1	3	Corpo interno	ottone
3010672	4	4	Viti di fissaggio corpo interno	acc. inox
3010688	1	5	OR tra corpo interno e cartier	NBR
3010673	1	6	Ruota dentata	delin
3010674	1	7	Anello disinnesto	delin
3010662	6	8	Molla per disinnesto	acc. inox
3010675	1	9	Corpo esterno alto	delin
30612	1	10	OR tra corpo interno e corpo esterno	NBR
3010677	1	11	Anellino tondo d'arresto	acc. inox
3010678	1	12	Cuscinetto	acc. inox
3010441	6	13	Vite di fiss. corp. esterno	acc. inox
30270	6	13a	Dado per vite	acc. inox
3010679	12	13b	Rondellapiana	acc. inox
3010680	1	14	Ghiera per cuscinetto	ottone
3010681	1	15	Corpo esterno/basso	delin
3010682	1	16	OR interno al corpo esterno	NBR
30991	2	17	Anelli di ferro inversione	acc. armonico
3010683	1	18	Guarnizione raschiatore	NBR
3010684	1	19	Anello di tenuta	delin
3010484	14	20	Vite autofilettante	acc. inox
3010685	1	21	Coperchio motore	delin
3010687	1	21b	Vita regolatrice di portata	ottone
3010571	1	21c	OR al coperchio motore/vite	NBR
3010689	1	23	OR al coperchio motore	NBR
30973	6	24	Vite di fissaggio	acc. inox
30839	6	25	Dado per vite	acc. inox
30982	1	26	Rondellapiana	acc. inox
3010693	1	30	Tenuta frontale anello	NBR
3010748	1	30a	Tenuta	gomma
3010694	2	31	Cuscinetto	acc. inox
3010736	2	33	Vite autofilettante	acc. inox
3010696	1	34	Giunto testina	delin
3010697	1	35	Perno porta vite senza fine	acc. inox
3010699	1	37	Testina veloce	delin
3010700	1	38	Coperchio alla testina	delin
3010701	1	39	Perno porta vite	acc. inox
3010702	1	40	Coroncina alla testina (veloce)	delin
30587	1	41	Rondella reggispiralina/coroncina	acc. inox

CODICE	N. PZ.	N. DIS.	DENOMINAZIONE	MATER.
303839	1	42	Dado di fissaggio corona	acc. inox
3010164	1	43	Rondellapiana	acc. inox
3010520	2	44	Vite autofilettante	acc. inox
3010703	1	45	Premo porta albero	acc. inox
3010364	2	45a	Dado di fissaggio	acc. inox
3010704	1	46	Distanziatore d. 19	delrin
3010705	1	47	Albero calettato	delrin
20265	1	48	Coronina col riduttore	bronzo
3010706	1	49	Ingranaggio con chiavetta	delrin
3010411	1	50	Innesto inversione	delrin
3010707	1	51	Ingranaggio inversione	delrin
3010412	1	52	Ingranaggio invertitore	delrin
3010413	1	53	Premo porta ingranaggio	acc. inox
3010485	1	54	Vite autofilettante	acc. inox
3010708	1	55	Pemo	acc. inox
30726	2	56	Dadi	acc. inox
3010709	1	57	Vite senza fine	delrin
3010710	2	58	Rondellapiana	acc. inox
3010711	1	59	Leva scatto	acc. inox
30934	1	60	Vite di fissaggio leva a scatto	acc. inox
30726	1	60a	Dadi per viti	acc. inox
3010712	1	61	Custodia molla scatto	ottone
3010713	1	61a	Spina per leva battente scatto	acc. inox
30996	1	61b	Spina per leva scatto	acc. inox
3010743	1	61c	Molla scatto	acc. inox
3010430	1	62	Pistoncino forcella scatto	delrin
3010614	1	62a	Molla al pistoncino	acc. inox
30363	1	62b	Spina di fissaggio pistoncino	ottone
3010715	1	62c	Spina premillimata pistoncino	acc. inox
3010716	1	63	Forcella scatto	delrin
3010717	1	63a	Boccolla d. 10	acc. inox
3010718	1	63b	Boccolla d. 8	ottone
3010737	1	63c	Rondellapiana	acc. inox
3010719	1	64	Soffietto tenuta	NBR
3010720	1	64a	Platto portasoffietto	acc. inox
3010518	1	65	ORGUARANCIALE boccaglio	NBR
3010721	5	66	Boccaglio	delrin
3010722	1	67	Ghiera per boccaglio	delrin
20264	1	68	Guarnizione coperchio	NBR
3010498	1	70	Seccio	PP. F.V.
3010499	1	71	Coperchio al seccio	alafene

CODICE	N. PZ.	N. DIS.	DENOMINAZIONE	MATER.
301095	1	72	Coperchio per erba	Tarnoform
3010724	1	73	Contenitore porta stelo	delrin
3010745	1	73a	Anello	ottone
3010725	1	74	Fangia	delrin
30545	4	75	Viti di fissaggio	acc. inox
30965	6	76	Viti di fissaggio	acc. inox
3010205	10	77	Dadi quadrati	ottone
3010726	1	79	Portatallo	ottone
3010604	1	80	Molla di richiamo	acc. inox
3010729	1	81	OR alto stelo	NBR
20263	1	82	Corpo interno	acc. inox
3010727	1	83	Boccaglio secondario	ottone
3010728	1	84	Guarnizione raschiatore	NBR
3010513	1	85	OR fra fangia e contenitore	NBR
301044	1	86	Dado per tirante	acc. inox
3010749	1	87	Tirante	acc. inox
3010516	1	88	Distanziatore	ottone
30476	2	89	Rondella piana	acc. inox
3010517	1	90	Tappo	delrin
301028	1	91	Dado speciale	acc. inox
3010667	1	92	Grano	acc. inox
3010511	24	94	Vite autofilettante	acc. inox
3010732	1	95	Ugello	ottone
3010733	1	96	Raccordo a 90°	delrin
3010734	1	97	OR al raccordo a 90°	gomma
3010731	4	98	Vite autofilettante	acc. inox
30612	1	99	OR sul tubo INOX	gomma
3010750	2	100	Fascetta	nylon
3010746	1	102	Protez. soffietto tubo inox	gomma
10509		01	Cartier completo	
10512		02	Coperchio completo	
10510		021	Coperchio completo	
10513		027	Turbina completa	composto
10515		035	Perno completo	
10514		037	Testina completa	
10516		039	Perno completo	
10511		059	Leva completa	
10507		063	Forcella completa	
10498		071	Coperchio con erba	
10508		073	Contenitore completo	

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**ATTENZIONE !!**

- 1) Non eseguire regolazioni con l'irrigatore in funzione.
- 2) Non sostare nella zona d'azione dell'irrigatore e del getto d'acqua ad alta pressione.
- 3) Non dirigere il getto d'acqua contro persone, animali, linee elettriche, strade o altri oggetti.

**CAUTION !!**

- 1) Do not perform any adjustments or controls during operation.
- 2) Stand clear of the action area of the sprinkler and the water-jet.
- 3) Ensure stream-water is not directed on persons, animals, powerlines, roads or other objects.

**ATTENTION !!**

- 1) Ne regler pas l'arroseur en fonctionnement.
- 2) Ne rester pas dans la zone d'action de l'arroseur et du jet d'eau.
- 3) Pas diriger le jet d'eau contre personnes, animaux, cables électriques, routes ou autres objets.

**ACHTUNG !!**

- 1) Den regner nur bei stillstand regulieren.
- 2) In dem betriebsgebiet des regners nicht bleiben.
- 3) Den wasserstrohl nicht gegen leute und tiere, gegen elektrischeleitungen, und strassen oder gegen anderen gegenstanden richten.

**ATENCIÓN !!**

- 1) No efectuar regulaciones con el aspersor en marcha.
- 2) No situarse en la zona de accion del aspersor.
- 3) No dirigir el chorro de agua contra personas, líneas electricas, carreteras y otros objetos.

INCONVENIENTI E RIMEDI

- L'irrigatore non gira.
- a) controllare il bocaglio secondario per possibile otturazione (pos. 95-96).
- b) controllare se la turbina gira, smontando il coperchio (pos. 2) (fig. D).

TROUBLE SHOOTING

- Sprinklers do not rotate.
- a) check for plugged secondary nozzle (pos. 95-96).
- b) check for block of propeller, disassembling cover (pos. 2) (fig. D).

PANNES ET REMEDES

- L'arroseur ne tourne pas.
- a) contrôler que la buse secondaire n'est pas fermé (pos. 95-96) tous ou part.
- b) contrôler que la turbine n'est pas bloqué, désassembler le couvercle (pos. 2) (fig. D).

BETRIEBSSTOERUNGEN

- Der Beregner wechselt die Rightung nicht.
- a) Die Sekundaere Duese ist verstopft (pos. 95-96).
- b) Prufen Sie ob die Turbine verstopft ist. Nehmen Sie den Propfen (Pos. 2) ab (Fig. D).

INCONVENIENTES Y SOLUCIONES

- L'aspersor no marcha.
- a) controlar que a tobera secundaria no es obstruida (pos. 95-96).
- b) controlar que la turbina marcha. Sacar el tapon (pos. 2) (fig. D).

**IMPORTANTE !!**

L'acqua può contenere corpi estranei come granelli di sabbia, piccoli sassi o altre impurità, che sono in grado di danneggiare gli irrigatori.
Per evitare tali problemi, è necessario installare un filtro in entrata.

**IMPORTANT !!**

The water may contain foreign objects such grains of sand, small stones and other impurities, which can damage the sprinklers.
To avoid these problems, it is necessary to install a filter.

**ATTENTION !!**

L'eau peut contenir des objets étrangers, tels grains de sable, petite caillou et autres impuretés, qui peut endommager les arroseurs.
Pour éviter ces problèmes est nécessaire installer un filtre.

**ACHTUNG !!**

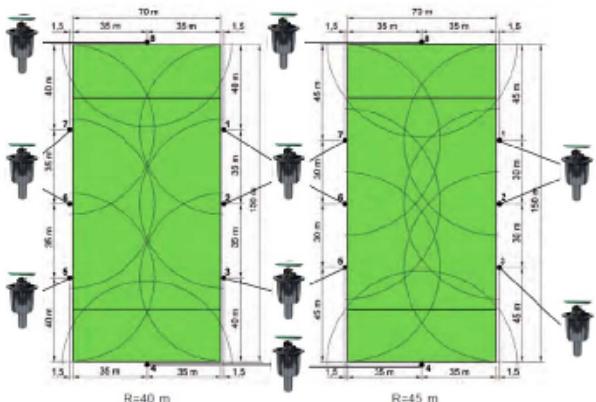
Das Wasser kann Fremdkörper wie Sandkörner, kleine Steine oder andere Verunreinigungen enthalten, die die Regner beschädigen können.
Um diese Probleme zu vermeiden, ist notwendig ein Filter zu installieren.

**ATENCIÓN !!**

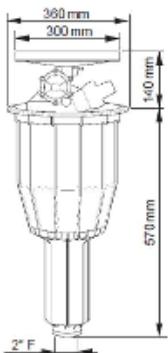
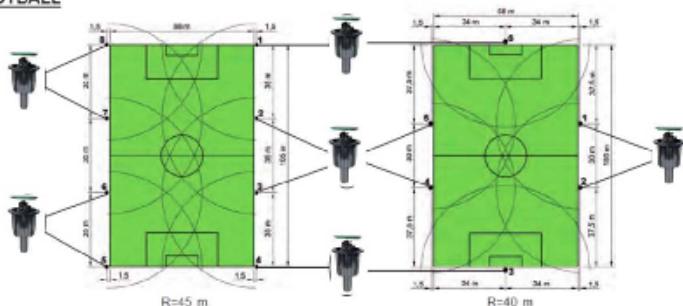
El agua puede contener objetos extraños, tales arena, piedras pequeñas y otras impurezas, que pueden perjudicar los aspersores.
Para evitar estos problemas, es necesario la instalación de un filtro.

U		P		G		Q			O	
Diametro ugello <i>Nozzle diameter</i> Diamètre de la buse <i>Diametro de la tobera</i> Durchmesser der Hauptdüse	mm inch	Pressione <i>Pressure</i> Pression <i>Presión</i> Wasserdruck im Beregner	kg/cm ² lbs/inch	m feet	l/min	m ³ /h	G.P.M.	m ²	Intensità oraria <i>Rainfall per hour</i> Pluviométrie horaire <i>Intensidad horaria</i> Wassermenge pro Stunde	
16 6	•63	3.0	44	29,5	96	314	18,8	83,0	2732	6,8
		4.0	56	32,5	106	364	21,8	96,2	3316	6,6
		5.0	70	35,0	114	406	24,3	107,4	3846	6,3
		6.0	85	37,0	120	446	26,7	117,9	4298	6,2
		7,0	100	39,0	127	482	28,9	127,5	4775	6,0
18 6	•71	3.0	44	31,0	101	350	21,0	92,5	3017	6,9
		4.0	56	34,0	111	405	24,3	107,1	3629	6,7
		5.0	70	37,0	121	452	27,1	119,5	4298	6,3
		6.0	85	39,0	127	496	29,7	131,2	4775	6,2
		7,0	100	40,5	132	535	32,1	141,5	5150	6,2
20 6	•78	4,0	56	35,0	114	545	32,7	144,1	3846	8,5
		5,0	70	39,0	127	609	36,5	161,1	5024	7,2
		6,0	85	43,0	140	668	40,0	176,7	5805	6,9
		7,0	100	44,0	143	721	43,2	190,7	6079	7,1
		8,0	115	45,0	147	773	46,3	204,4	6358	7,3
22 6	•86	4,0	56	36,0	117	649	38,9	171,6	4069	9,5
		5,0	70	39,5	129	726	43,5	192,0	4899	8,9
		6,0	85	44,0	143	795	47,7	210,3	6079	7,8
		7,0	100	47,0	153	859	51,5	227,2	6936	7,4
		8,0	115	48,0	156	920	55,2	243,3	7234	7,1
24 6	•95	4,0	56	37,0	121	765	45,9	202,3	4298	10,6
		5,0	70	40,5	132	855	51,3	226,1	5150	10,0
		6,0	85	45,0	147	937	56,2	247,8	6358	8,8
		7,0	100	47,5	154	1012	60,7	267,7	7084	8,6
		8,0	115	48,5	158	1084	65,0	286,7	7386	8,8

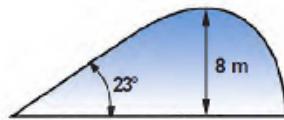
RUGBY

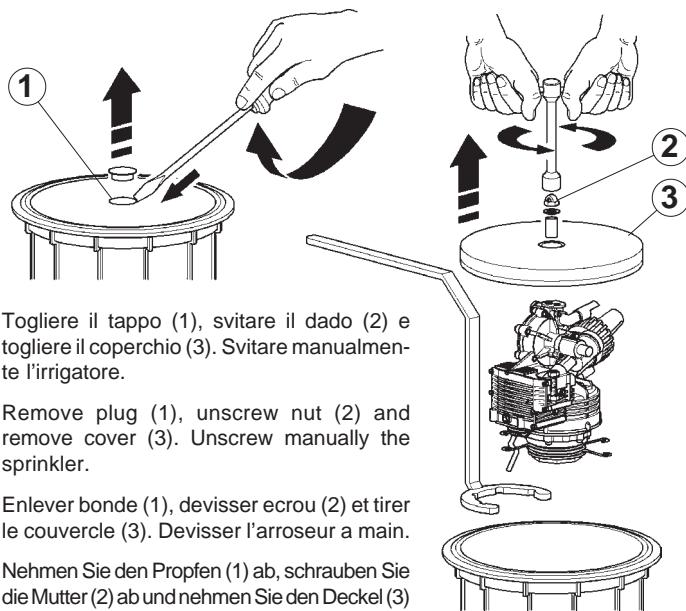
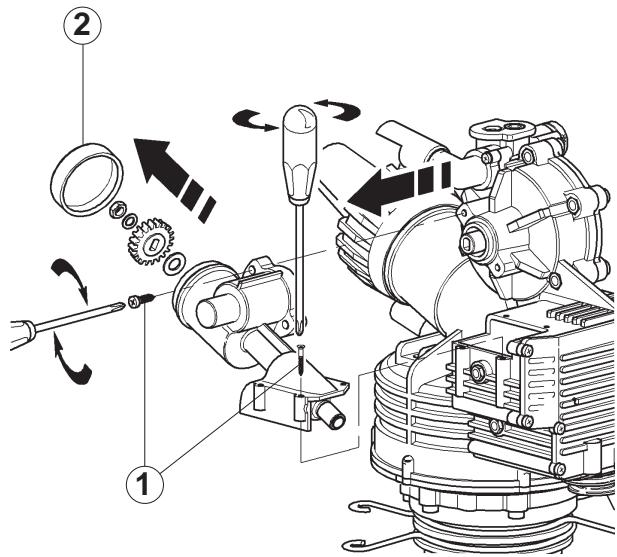
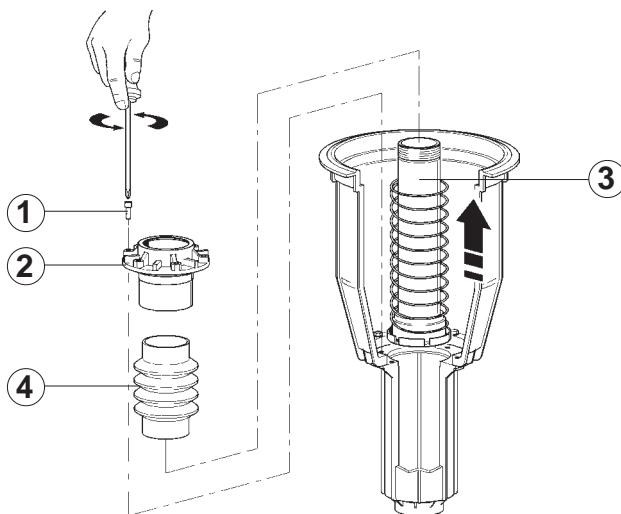
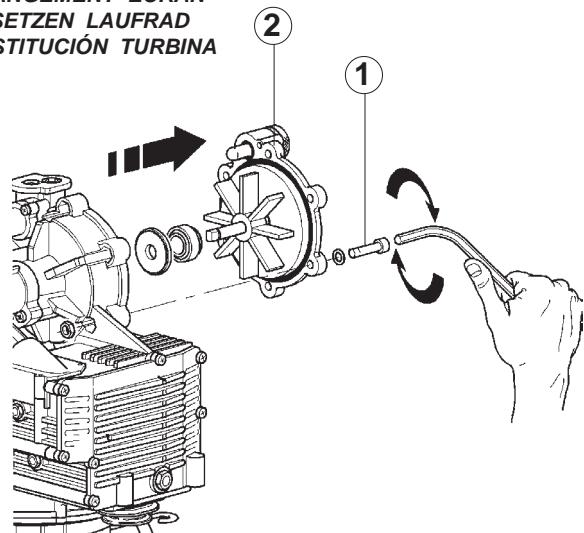


FOOTBALL



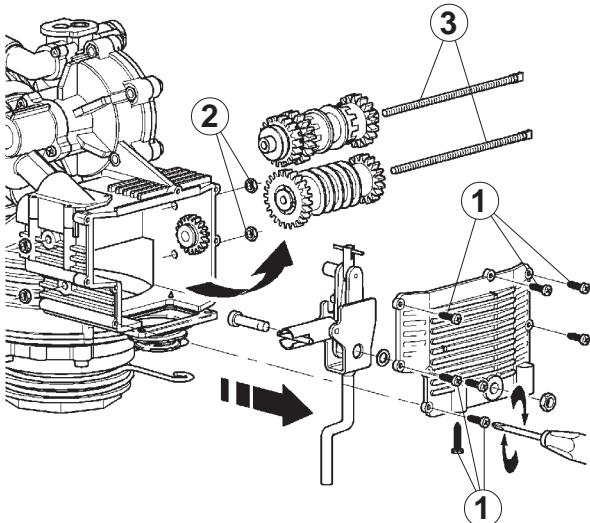
APOGEO
APOGEE
APOGÉE
MAX WASSERSTRÄHLHOHE
ALTURA MAXIMA



I**GB****F****D****E****SOSTITUZIONE PARTI DI RICAMBIO****REPLACEMENT OF SPARE PARTS****CHANGEMENT PIECES DETACHEES****ERSATZENDER ERSATZTEILE****SOSTITUICIÓN REPUESTOS****SOSTITUZIONE COPERCHIO E IRRIGATORE
REPLACING COVER AND SPRINKLERS
CHANGEMENT COUVERCLE ET ARROSEUR
ERSETZEN DES DECKELS UND DES REGNERS
SOSTITUCIÓN COBERTERA****A****SOSTITUZIONE TESTINA
REPLACING GEARBOX
CHANGEMENT TETE
ERSETZEN KOPF
SOSTITUCIÓN CABEZA****B****SOSTITUZIONE PISTONE INOX (3)
REPLACEMENT INOX PISTON (3)
CHANGEMENT DU PISTON EN ACIER (3)
ERSETZEN DES KLEINES SCHLAUCHES (3)
SOSTITUCIÓN PISTÓN EN ACERO (3)****C****SOSTITUZIONE TURBINA
REPLACING PROPELLER
CHANGEMENT ECRAN
ERSETZEN LAUFRAD
SOSTITUCIÓN TURBINA****D**

I
SOSTITUZIONE PARTI DI RICAMBIO
GB
REPLACEMENT OF SPARE PARTS
F
CHANGEMENT PIÈCES DETACHEES
D
ERSATZENDER ERSATZTEILE
E
SOSTITUICIÓN REPUESTOS

SOSTITUZIONE INGRANAGGI E LEVA INVERSIONE
REPLACING GEARS AND LEVER
CHANGEMENT ENGRANAGES ET LEVIER
ERSETZUNG DER GETRIEBEN
SOSTITUCIÓN ENGRANAJES



Svitare le viti (1).

Svitare i dadi (2) ed i perni (3).

Unscrew screws (1). Unscrew nuts (2) and shaft (3).

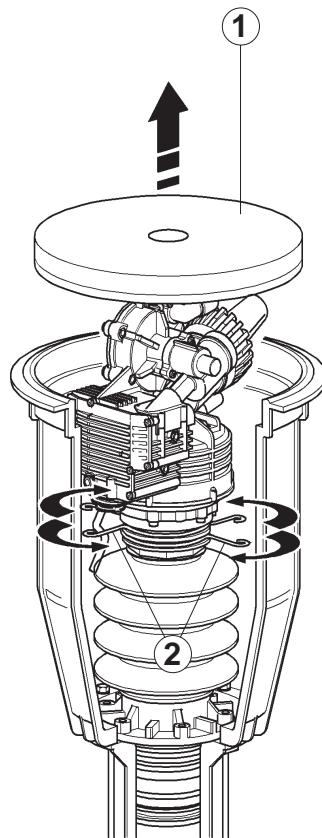
Devisser les vis (1). Devisser les écrous (2) et les pivots (3).

Schrauben Sie die Schrauben (1). Die zwei Muttern (2) und die Zapfen (3) lockern.

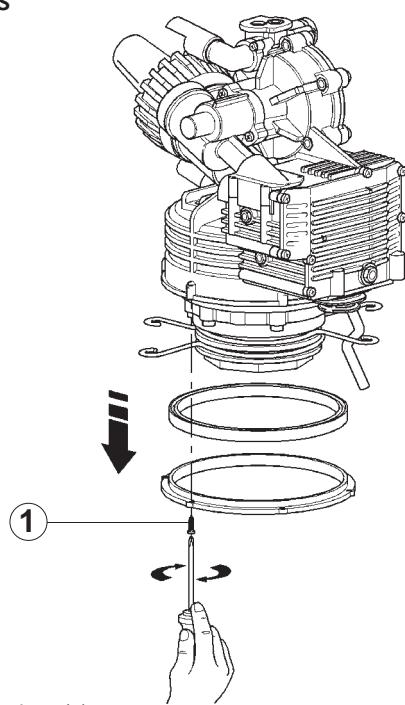
Enroscar los tornillos (1). Enroscar las tuercas (2) y los pernos (3).

E

POSIZIONAMENTO SETTORI DI CERCHIO
PART CIRCLE OPERATION
ARROSAGE A SECTEURS
UM DIE KREIS-SEKTOREN ZU STELLEN
RIEGO A SECTOR DE CIRCOLO

F

SOSTITUZIONE GUARNIZIONI
REPLACING SEAL
CHANGEMENT JOINT
ERSETZUNG KUGELN
SOSTITUCIÓN JUNTAS

G

Svitare le viti (1).

Unscrew screws (1).

Devisser les vis (1).

Schrauben Sie die Schrauben (1).

Enroscar los tornillos (1).

Sollevare il coperchio (1). Regolare manualmente il settore desiderato ruotando gli anelli (2).

Lift-up cover (1). Settle manually the rings (2) for part circle irrigation.

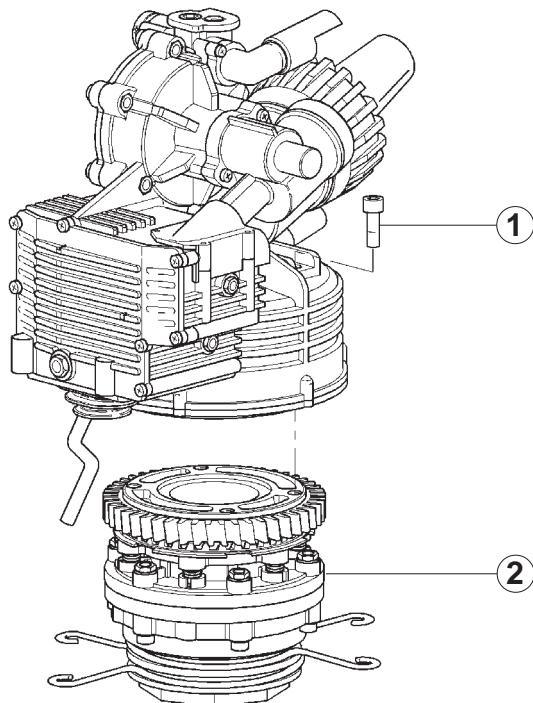
Soulever le couvercle (1). Positionner à main les bagues (2) en choisissant l'angle diarrageage.

Den Deckel (1) heben. Mit Hand die Ringe (2) rollen um den Gewünscht Sektor zu regeln.

Elevar la tapa (1). Regular manualmente el sector deseado girando los anillos (2).

I**GB****F****D****E**SOSTITUZIONE PARTI DI
RICAMBIOREPLACEMENT OF SPARE
PARTSCHANGEMENT PIÈCES
DETACHEESERSATZEN DER
ERSATZTEILESOSTITUCIÓN
REPUESTOS

SOSTITUZIONE ANELLO CORONA (5)
REPLACING THREADED RING (5)
CHANGEMENT DU BAGUE DENTE (5)
ERSETZUNG DES KRANZES (5)
SOSTITUCIÓN ANILLO CORONA (5)

H

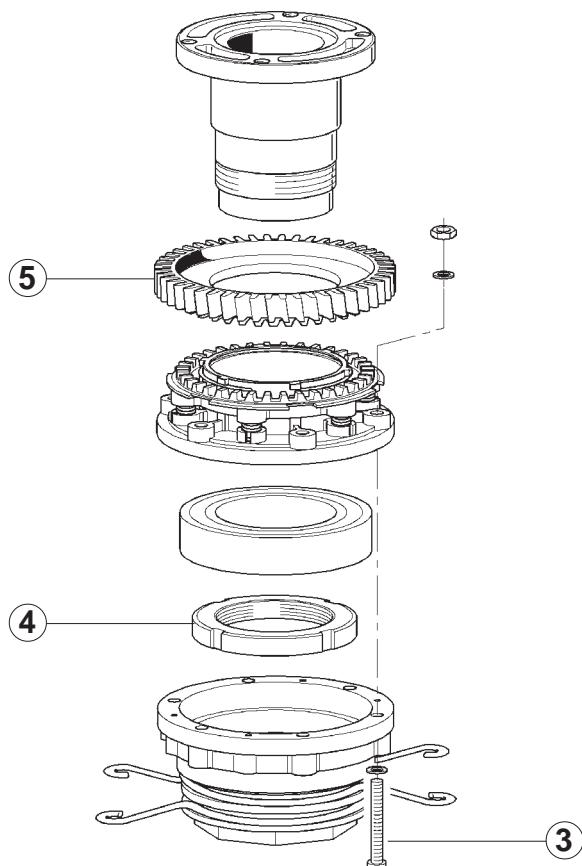
Svitare le viti (1) e sfilare il corpo (2).

Unscrew screws (1) and remove body (2).

Devisser les vis (1) et enlever corp (2).

Schrauben Sie die Schrauben (1) und den Gehäusekörper (2) losschrauben.

Enroscar los tornillos (1) y aflojar cuerpo (2).



Svitare le viti (3) e la ghiera (4).

Unscrew screws (3) and threaded ring (4).

Devisser les vis (3) et la bague fileté (4).

Schrauben Sie die Schrauben (3) und drucklager (4).

Enroscar los tornillos (3) y tuerca (4).

ST-1600 Synthetic Turf Rotor

Dimensions:

- POP-UP HEIGHT:** 5" (13 cm)
- FEMALE INLET:** 2" Pipe*, 2" BSP
- POP-UP DIAMETER:** 12" (30 cm)
- EXPOSED DIAMETER:** 14" (36 cm)
- OVERALL HEIGHT:** 22.5" (57 cm)
- NOZZLE TRAJECTORY:** 23°

* Use 2" pipe adapter PN 241499

Operating Specification:

- DISCHARGE RATE:** 96.2 to 286.4 GPM
21.8 to 65.0 m³/hr.
364 to 1084 l/min.
- RADIUS RANGE:** 107' to 160'
32.5 m to 48.7 m
- PRESSURE RANGE:** 60 to 120 PSI
4.0 to 8.0 Bar
400 to 800 kPa

ST-1600 Nozzle Performance Data

Nozzle	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr	▲
16	60	107	96.2	1.63	1.88
	75	115	107.3	1.57	1.81
	90	121	117.8	1.54	1.78
	105	128	127.3	1.50	1.73
	120	135	137.4	1.46	1.69
18	60	112	107.0	1.66	1.91
	75	121	119.4	1.56	1.80
	90	128	131.0	1.54	1.78
	105	133	141.3	1.54	1.78
	120	141	153.2	1.48	1.71
20	60	115	144.0	2.10	2.43
	75	128	160.9	1.89	2.18
	90	141	176.5	1.71	1.97
	105	144	190.5	1.76	2.03
	120	148	204.2	1.80	2.08
22	60	118	171.5	2.37	2.73
	75	130	191.8	2.20	2.54
	90	144	210.0	1.94	2.24
	105	154	226.9	1.84	2.12
	120	157	243.1	1.89	2.18
24	60	121	202.1	2.64	3.05
	75	133	225.9	2.46	2.84
	90	148	247.6	2.19	2.52
	105	156	267.4	2.12	2.45
	120	160	286.4	2.16	2.49

ST-1600 Nozzle Performance Data – Metric

Nozzle	Pressure Bar	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr	▲
16	4.0	400	32.5	21.8	364	41.4 47.8
	5.0	500	35.0	24.4	406	39.8 45.9
	6.0	600	37.0	26.8	446	39.1 45.1
	7.0	700	39.0	28.9	482	38.0 43.9
	8.0	800	41.0	31.2	520	37.1 42.9
18	4.0	400	34.0	24.3	405	42.0 48.6
	5.0	500	37.0	27.1	452	39.6 45.8
	6.0	600	39.0	29.8	496	39.1 45.2
	7.0	700	40.5	32.1	535	39.1 45.2
	8.0	800	43.0	34.8	580	37.6 43.5
20	4.0	400	35.0	32.7	545	53.4 61.7
	5.0	500	39.0	36.5	609	48.1 55.5
	6.0	600	43.0	40.1	668	43.4 50.1
	7.0	700	44.0	43.3	721	44.7 51.6
	8.0	800	45.0	46.4	773	45.8 52.9
22	4.0	400	36.0	38.9	649	60.1 69.4
	5.0	500	39.5	43.6	726	55.8 64.5
	6.0	600	44.0	47.7	795	49.3 56.9
	7.0	700	47.0	51.5	859	46.7 53.9
	8.0	800	48.0	55.2	920	47.9 55.3
24	4.0	400	37.0	45.9	765	67.1 77.4
	5.0	500	40.5	51.3	855	62.6 72.2
	6.0	600	45.0	56.2	937	55.5 64.1
	7.0	700	47.5	60.7	1012	53.8 62.2
	8.0	800	48.7	65.0	1084	54.9 63.3

Note: All precipitation rates calculated for 180 degree operation.
For the precipitation rate for a 360 degree sprinkler, divide by 2.

MODELS	STANDARD FEATURES
ST-1600B = 5" (13 cm) pop-up	Pop-up synthetic turf rotor, adjustable-arc and full circle, BSP inlet threads, 5 nozzles
ST-1600BR = Riser mounted	Riser-mounted synthetic turf rotor, adjustable-arc and full circle, BSP inlet threads, 5 nozzles

