

Manuals+

[Q & A](#) | [Deep Search](#) | [Upload](#)

[manuals.plus](#) /

› [Lowara](#) /

› [User Manual for Lowara Multistage Horizontal Centrifuge](#)

Lowara 2HM4 / A HP 0.6

User Manual for Lowara Multistage Horizontal Centrifuge

Model: 2HM4 / A HP 0.6 (P&B Reference: 004042)

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation, installation, and maintenance of your Lowara Multistage Horizontal Centrifuge, Model 2HM4 / A HP 0.6. Please read this manual thoroughly before attempting to install, operate, or service the unit. Retain this manual for future reference.

The Lowara 2HM4 / A HP 0.6 is a robust multistage horizontal centrifugal pump designed for various applications requiring reliable fluid transfer. Its compact design and efficient operation make it suitable for domestic, agricultural, and industrial uses.

2. SAFETY INSTRUCTIONS

Always observe the following safety precautions to prevent injury and damage to the equipment:

- **Electrical Safety:** Ensure the power supply matches the unit's requirements. All electrical connections must be performed by a qualified electrician and comply with local regulations. Disconnect power before any maintenance or service.
- **Fluid Compatibility:** Do not use the pump with flammable, explosive, or corrosive liquids unless specifically designed for such applications.
- **Pressure:** Be aware of system pressure. Always relieve pressure before disconnecting pipes or performing maintenance.
- **Moving Parts:** Keep hands, hair, and loose clothing away from moving parts during operation.
- **Temperature:** The pump surface may become hot during operation. Avoid direct contact.
- **Ventilation:** Ensure adequate ventilation around the motor to prevent overheating.
- **Children and Unauthorized Personnel:** Keep children and unauthorized personnel away from the operating unit.

3. SETUP AND INSTALLATION

Proper installation is crucial for the performance and longevity of your centrifuge. Refer to the image below for visual reference of the product.



Figure 3.1: Lowara Multistage Horizontal Centrifuge, Model 2HM4 / A HP 0.6. This image shows the complete pump unit, featuring a blue motor housing on the right and a shiny, chrome-like pump body on the left. The pump body has an inlet connection at the front and an outlet connection on top. The unit is mounted on a sturdy blue base.

3.1 Unpacking and Inspection

Carefully remove the unit from its packaging. Inspect for any visible damage that may have occurred during transit. Report any damage to your supplier immediately.

3.2 Placement

Install the pump on a firm, level, and stable surface capable of supporting its weight when full of fluid. Ensure the location is dry, well-ventilated, and protected from extreme temperatures, direct sunlight, and frost. Allow sufficient space around the unit for ventilation and future maintenance.

3.3 Plumbing Connections

Connect the suction and discharge pipes to the pump's inlet and outlet ports. Use appropriate fittings and sealants to ensure leak-free connections. Avoid putting strain on the pump's ports by supporting the piping independently. Ensure the suction line is as short and straight as possible and free from air pockets.

3.4 Electrical Connection

Before connecting to the power supply, verify that the voltage and frequency match the specifications on the pump's nameplate. Connect the unit to a properly grounded electrical circuit with appropriate overcurrent protection. All wiring must comply with local electrical codes.

3.5 Priming the Pump

Before initial startup, the pump must be primed. Remove the priming plug (if present) or fill the pump casing through the discharge port until the pump body is completely filled with the liquid to be pumped. Replace the plug securely. This step is critical to prevent dry running and damage to the pump.

4. OPERATING INSTRUCTIONS

4.1 Initial Start-up

After ensuring the pump is properly primed and all connections are secure, switch on the power supply. The pump should start smoothly. Monitor for unusual noises, vibrations, or leaks during the first few minutes of operation.

4.2 Normal Operation

Allow the pump to run within its specified operating range. Avoid continuous dry running, as this can cause severe

damage to the mechanical seal and other components. Periodically check system pressure and flow rates to ensure optimal performance.

4.3 Shutting Down

To stop the pump, simply switch off the power supply. For extended periods of non-use, especially in freezing conditions, drain the pump and piping to prevent damage from ice expansion.

5. MAINTENANCE

Regular maintenance ensures the longevity and efficiency of your Lowara centrifuge.

- **Routine Checks:** Regularly inspect the pump for leaks, unusual noises, excessive vibration, or overheating. Address any issues promptly.
- **Cleaning:** Keep the exterior of the pump clean, especially the motor's cooling fins, to ensure proper heat dissipation.
- **Winterization:** If the pump is installed in an area subject to freezing temperatures, drain all water from the pump and associated piping to prevent frost damage.
- **Professional Service:** For internal repairs or replacement of wear parts (e.g., mechanical seals, bearings), it is recommended to contact a qualified service technician or the manufacturer's authorized service center.

6. TROUBLESHOOTING

This section outlines common issues and their potential solutions. Always disconnect power before attempting any troubleshooting or repair.

Problem	Possible Cause	Solution
Pump does not start	No power; tripped circuit breaker; faulty motor.	Check power supply; reset breaker; consult electrician.
Pump runs but no water/low flow	Pump not primed; air in suction line; clogged impeller/pipes; suction lift too high.	Re-prime pump; check for air leaks; clear obstructions; reduce suction lift.
Excessive noise or vibration	Cavitation; worn bearings; misaligned coupling; loose mounting.	Check suction conditions; inspect bearings; ensure proper alignment and mounting.
Water leaks from pump	Damaged mechanical seal; loose pipe connections.	Inspect/replace mechanical seal; tighten connections.

7. SPECIFICATIONS

Key technical specifications for the Lowara Multistage Horizontal Centrifuge, Model 2HM4 / A HP 0.6:

Brand: Lowara

Model Number (P&B Reference): 004042

Manufacturer: P & B

Type: Multistage Horizontal Centrifuge

Quantity of Items: 1

Batteries Included: No

Batteries Required: No

ASIN: B00NFESM90

Note: Spare parts availability information is not available.

8. WARRANTY AND SUPPORT

For information regarding warranty coverage, technical support, or authorized service centers, please contact your original point of purchase or refer to the official Lowara website. Keep your purchase receipt as proof of purchase.

© 2024 Lowara. All rights reserved. Information subject to change without notice.

Related Documents - 2HM4 / A HP 0.6

 <p>Product Portfolio XYLEM WATER SOLUTIONS UK - LOWARA PROFESSIONAL PUMPS PROCESSES AND SYSTEMS</p> <p>LOWARA a xylem brand</p>	<p>Lowara Product Portfolio - Xylem Water Solutions UK</p> <p>A comprehensive product portfolio from Xylem Water Solutions UK, featuring Lowara pumps and systems for various applications including residential, industrial, and municipal water management. The document details product specifications, applications, and company information.</p>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
 <p>2015 Spare Parts Price List Spare parts and accessories for Lowara pumps</p> <table border="1"><tr><td>2000001</td><td>2000002</td><td>2000003</td><td>2000004</td><td>2000005</td><td>2000006</td><td>2000007</td><td>2000008</td><td>2000009</td><td>2000010</td><td>2000011</td><td>2000012</td><td>2000013</td><td>2000014</td><td>2000015</td><td>2000016</td><td>2000017</td><td>2000018</td><td>2000019</td><td>2000020</td><td>2000021</td><td>2000022</td><td>2000023</td><td>2000024</td><td>2000025</td><td>2000026</td><td>2000027</td><td>2000028</td><td>2000029</td><td>2000030</td><td>2000031</td><td>2000032</td><td>2000033</td><td>2000034</td><td>2000035</td><td>2000036</td><td>2000037</td><td>2000038</td><td>2000039</td><td>2000040</td><td>2000041</td><td>2000042</td><td>2000043</td><td>2000044</td><td>2000045</td><td>2000046</td><td>2000047</td><td>2000048</td><td>2000049</td><td>2000050</td><td>2000051</td><td>2000052</td><td>2000053</td><td>2000054</td><td>2000055</td><td>2000056</td><td>2000057</td><td>2000058</td><td>2000059</td><td>2000060</td><td>2000061</td><td>2000062</td><td>2000063</td><td>2000064</td><td>2000065</td><td>2000066</td><td>2000067</td><td>2000068</td><td>2000069</td><td>2000070</td><td>2000071</td><td>2000072</td><td>2000073</td><td>2000074</td><td>2000075</td><td>2000076</td><td>2000077</td><td>2000078</td><td>2000079</td><td>2000080</td><td>2000081</td><td>2000082</td><td>2000083</td><td>2000084</td><td>2000085</td><td>2000086</td><td>2000087</td><td>2000088</td><td>2000089</td><td>2000090</td><td>2000091</td><td>2000092</td><td>2000093</td><td>2000094</td><td>2000095</td><td>2000096</td><td>2000097</td><td>2000098</td><td>2000099</td><td>2000100</td><td>2000101</td><td>2000102</td><td>2000103</td><td>2000104</td><td>2000105</td><td>2000106</td><td>2000107</td><td>2000108</td><td>2000109</td><td>2000110</td><td>2000111</td><td>2000112</td><td>2000113</td><td>2000114</td><td>2000115</td><td>2000116</td><td>2000117</td><td>2000118</td><td>2000119</td><td>2000120</td><td>2000121</td><td>2000122</td><td>2000123</td><td>2000124</td><td>2000125</td><td>2000126</td><td>2000127</td><td>2000128</td><td>2000129</td><td>2000130</td><td>2000131</td><td>2000132</td><td>2000133</td><td>2000134</td><td>2000135</td><td>2000136</td><td>2000137</td><td>2000138</td><td>2000139</td><td>2000140</td><td>2000141</td><td>2000142</td><td>2000143</td><td>2000144</td><td>2000145</td><td>2000146</td><td>2000147</td><td>2000148</td><td>2000149</td><td>2000150</td><td>2000151</td><td>2000152</td><td>2000153</td><td>2000154</td><td>2000155</td><td>2000156</td><td>2000157</td><td>2000158</td><td>2000159</td><td>2000160</td><td>2000161</td><td>2000162</td><td>2000163</td><td>2000164</td><td>2000165</td><td>2000166</td><td>2000167</td><td>2000168</td><td>2000169</td><td>2000170</td><td>2000171</td><td>2000172</td><td>2000173</td><td>2000174</td><td>2000175</td><td>2000176</td><td>2000177</td><td>2000178</td><td>2000179</td><td>2000180</td><td>2000181</td><td>2000182</td><td>2000183</td><td>2000184</td><td>2000185</td><td>2000186</td><td>2000187</td><td>2000188</td><td>2000189</td><td>2000190</td><td>2000191</td><td>2000192</td><td>2000193</td><td>2000194</td><td>2000195</td><td>2000196</td><td>2000197</td><td>2000198</td><td>2000199</td><td>2000200</td><td>2000201</td><td>2000202</td><td>2000203</td><td>2000204</td><td>2000205</td><td>2000206</td><td>2000207</td><td>2000208</td><td>2000209</td><td>2000210</td><td>2000211</td><td>2000212</td><td>2000213</td><td>2000214</td><td>2000215</td><td>2000216</td><td>2000217</td><td>2000218</td><td>2000219</td><td>2000220</td><td>2000221</td><td>2000222</td><td>2000223</td><td>2000224</td><td>2000225</td><td>2000226</td><td>2000227</td><td>2000228</td><td>2000229</td><td>2000230</td><td>2000231</td><td>2000232</td><td>2000233</td><td>2000234</td><td>2000235</td><td>2000236</td><td>2000237</td><td>2000238</td><td>2000239</td><td>2000240</td><td>2000241</td><td>2000242</td><td>2000243</td><td>2000244</td><td>2000245</td><td>2000246</td><td>2000247</td><td>2000248</td><td>2000249</td><td>2000250</td><td>2000251</td><td>2000252</td><td>2000253</td><td>2000254</td><td>2000255</td><td>2000256</td><td>2000257</td><td>2000258</td><td>2000259</td><td>2000260</td><td>2000261</td><td>2000262</td><td>2000263</td><td>2000264</td><td>2000265</td><td>2000266</td><td>2000267</td><td>2000268</td><td>2000269</td><td>2000270</td><td>2000271</td><td>2000272</td><td>2000273</td><td>2000274</td><td>2000275</td><td>2000276</td><td>2000277</td><td>2000278</td><td>2000279</td><td>2000280</td><td>2000281</td><td>2000282</td><td>2000283</td><td>2000284</td><td>2000285</td><td>2000286</td><td>2000287</td><td>2000288</td><td>2000289</td><td>2000290</td><td>2000291</td><td>2000292</td><td>2000293</td><td>2000294</td><td>2000295</td><td>2000296</td><td>2000297</td><td>2000298</td><td>2000299</td><td>2000300</td><td>2000301</td><td>2000302</td><td>2000303</td><td>2000304</td><td>2000305</td><td>2000306</td><td>2000307</td><td>2000308</td><td>2000309</td><td>2000310</td><td>2000311</td><td>2000312</td><td>2000313</td><td>2000314</td><td>2000315</td><td>2000316</td><td>2000317</td><td>2000318</td><td>2000319</td><td>2000320</td><td>2000321</td><td>2000322</td><td>2000323</td><td>2000324</td><td>2000325</td><td>2000326</td><td>2000327</td><td>2000328</td><td>2000329</td><td>2000330</td><td>2000331</td><td>2000332</td><td>2000333</td><td>2000334</td><td>2000335</td><td>2000336</td><td>2000337</td><td>2000338</td><td>2000339</td><td>2000340</td><td>2000341</td><td>2000342</td><td>2000343</td><td>2000344</td><td>2000345</td><td>2000346</td><td>2000347</td><td>2000348</td><td>2000349</td><td>2000350</td><td>2000351</td><td>2000352</td><td>2000353</td><td>2000354</td><td>2000355</td><td>2000356</td><td>2000357</td><td>2000358</td><td>2000359</td><td>2000360</td><td>2000361</td><td>2000362</td><td>2000363</td><td>2000364</td><td>2000365</td><td>2000366</td><td>2000367</td><td>2000368</td><td>2000369</td><td>2000370</td><td>2000371</td><td>2000372</td><td>2000373</td><td>2000374</td><td>2000375</td><td>2000376</td><td>2000377</td><td>2000378</td><td>2000379</td><td>2000380</td><td>2000381</td><td>2000382</td><td>2000383</td><td>2000384</td><td>2000385</td><td>2000386</td><td>2000387</td><td>2000388</td><td>2000389</td><td>2000390</td><td>2000391</td><td>2000392</td><td>2000393</td><td>2000394</td><td>2000395</td><td>2000396</td><td>2000397</td><td>2000398</td><td>2000399</td><td>2000400</td><td>2000401</td><td>2000402</td><td>2000403</td><td>2000404</td><td>2000405</td><td>2000406</td><td>2000407</td><td>2000408</td><td>2000409</td><td>2000410</td><td>2000411</td><td>2000412</td><td>2000413</td><td>2000414</td><td>2000415</td><td>2000416</td><td>2000417</td><td>2000418</td><td>2000419</td><td>2000420</td><td>2000421</td><td>2000422</td><td>2000423</td><td>2000424</td><td>2000425</td><td>2000426</td><td>2000427</td><td>2000428</td><td>2000429</td><td>2000430</td><td>2000431</td><td>2000432</td><td>2000433</td><td>2000434</td><td>2000435</td><td>2000436</td><td>2000437</td><td>2000438</td><td>2000439</td><td>2000440</td><td>2000441</td><td>2000442</td><td>2000443</td><td>2000444</td><td>2000445</td><td>2000446</td><td>2000447</td><td>2000448</td><td>2000449</td><td>2000450</td><td>2000451</td><td>2000452</td><td>2000453</td><td>2000454</td><td>2000455</td><td>2000456</td><td>2000457</td><td>2000458</td><td>2000459</td><td>2000460</td><td>2000461</td><td>2000462</td><td>2000463</td><td>2000464</td><td>2000465</td><td>2000466</td><td>2000467</td><td>2000468</td><td>2000469</td><td>2000470</td><td>2000471</td><td>2000472</td><td>2000473</td><td>2000474</td><td>2000475</td><td>2000476</td><td>2000477</td><td>2000478</td><td>2000479</td><td>2000480</td><td>2000481</td><td>2000482</td><td>2000483</td><td>2000484</td><td>2000485</td><td>2000486</td><td>2000487</td><td>2000488</td><td>2000489</td><td>2000490</td><td>2000491</td><td>2000492</td><td>2000493</td><td>2000494</td><td>2000495</td><td>2000496</td><td>2000497</td><td>2000498</td><td>2000499</td><td>2000500</td><td>2000501</td><td>2000502</td><td>2000503</td><td>2000504</td><td>2000505</td><td>2000506</td><td>2000507</td><td>2000508</td><td>2000509</td><td>2000510</td><td>2000511</td><td>2000512</td><td>2000513</td><td>2000514</td><td>2000515</td><td>2000516</td><td>2000517</td><td>2000518</td><td>2000519</td><td>2000520</td><td>2000521</td><td>2000522</td><td>2000523</td><td>2000524</td><td>2000525</td><td>2000526</td><td>2000527</td><td>2000528</td><td>2000529</td><td>2000530</td><td>2000531</td><td>2000532</td><td>2000533</td><td>2000534</td><td>2000535</td><td>2000536</td><td>2000537</td><td>2000538</td><td>2000539</td><td>2000540</td><td>2000541</td><td>2000542</td><td>2000543</td><td>2000544</td><td>2000545</td><td>2000546</td><td>2000547</td><td>2000548</td><td>2000549</td><td>2000550</td><td>2000551</td><td>2000552</td><td>2000553</td><td>2000554</td><td>2000555</td><td>2000556</td><td>2000557</td><td>2000558</td><td>2000559</td><td>2000560</td><td>2000561</td><td>2000562</td><td>2000563</td><td>2000564</td><td>2000565</td><td>2000566</td><td>2000567</td><td>2000568</td><td>2000569</td><td>2000570</td><td>2000571</td><td>2000572</td><td>2000573</td><td>2000574</td><td>2000575</td><td>2000576</td><td>2000577</td><td>2000578</td><td>2000579</td><td>2000580</td><td>2000581</td><td>2000582</td><td>2000583</td><td>2000584</td><td>2000585</td><td>2000586</td><td>2000587</td><td>2000588</td><td>2000589</td><td>2000590</td><td>2000591</td><td>2000592</td><td>2000593</td><td>2000594</td><td>2000595</td><td>2000596</td><td>2000597</td><td>2000598</td><td>2000599</td><td>2000600</td><td>2000601</td><td>2000602</td><td>2000603</td><td>2000604</td><td>2000605</td><td>2000606</td><td>2000607</td><td>2000608</td><td>2000609</td><td>2000610</td><td>2000611</td><td>2000612</td><td>2000613</td><td>2000614</td><td>2000615</td><td>2000616</td><td>2000617</td><td>2000618</td><td>2000619</td><td>2000620</td><td>2000621</td><td>2000622</td><td>2000623</td><td>2000624</td><td>2000625</td><td>2000626</td><td>2000627</td><td>2000628</td><td>2000629</td><td>2000630</td><td>2000631</td><td>2000632</td><td>2000633</td><td>2000634</td><td>2000635</td><td>2000636</td><td>2000637</td><td>2000638</td><td>2000639</td><td>2000640</td><td>2000641</td><td>2000642</td><td>2000643</td><td>2000644</td><td>2000645</td><td>2000646</td><td>2000647</td><td>2000648</td><td>2000649</td><td>2000650</td><td>2000651</td><td>2000652</td><td>2000653</td><td>2000654</td><td>2000655</td><td>2000656</td><td>2000657</td><td>2000658</td><td>2000659</td><td>2000660</td><td>2000661</td><td>2000662</td><td>2000663</td><td>2000664</td><td>2000665</td><td>2000666</td><td>2000667</td><td>2000668</td><td>2000669</td><td>2000670</td><td>2000671</td><td>2000672</td><td>2000673</td><td>2000674</td><td>2000675</td><td>2000676</td><td>2000677</td><td>2000678</td><td>2000679</td><td>2000680</td><td>2000681</td><td>2000682</td><td>2000683</td><td>2000684</td><td>2000685</td><td>2000686</td><td>2000687</td><td>2000688</td><td>2000689</td><td>2000690</td><td>2000691</td><td>2000692</td><td>2000693</td><td>2000694</td><td>2000695</td><td>2000696</td><td>2000697</td><td>2000698</td><td>2000699</td><td>2000700</td><td>2000701</td><td>2000702</td><td>2000703</td><td>2000704</td><td>2000705</td><td>2000706</td><td>2000707</td><td>2000708</td><td>2000709</td><td>2000710</td><td>2000711</td><td>2000712</td><td>2000713</td><td>2000714</td><td>2000715</td><td>2000716</td><td>2000717</td><td>2000718</td><td>2000719</td><td>2000720</td><td>2000721</td><td>2000722</td><td>2000723</td><td>2000724</td><td>2000725</td><td>2000726</td><td>2000727</td><td>2000728</td><td>2000729</td><td>2000730</td><td>2000731</td><td>2000732</td><td>2000733</td><td>2000734</td><td>2000735</td><td>2000736</td><td>2000737</td><td>2000738</td><td>2000739</td><td>2000740</td><td>2000741</td><td>2000742</td><td>2000743</td><td>2000744</td><td>2000745</td><td>2000746</td><td>2000747</td><td>2000748</td><td>2000749</td><td>2000750</td><td>2000751</td><td>2000752</td><td>2000753</td><td>2000754</td><td>2000755</td><td>2000756</td><td>2000757</td><td>2000758</td><td>2000759</td><td>2000760</td><td>2000761</td><td>2000762</td><td>2000763</td><td>2000764</td><td>2000765</td><td>2000766</td><td>2000767</td><td>2000768</td><td>2000769</td><td>2000770</td><td>2000771</td><td>2000772</td><td>2000773</td><td>2000774</td><td>2000775</td><td>2000776</td><td>2000777</td><td>2000778</td><td>2000779</td><td>2000780</td><td>2000781</td><td>2000782</td><td>2000783</td><td>2000784</td><td>2000785</td><td>2000786</td><td>2000787</td><td>2000788</td><td>2000789</td><td>2000790</td><td>2000791</td><td>2000792</td><td>2000793</td><td>2000794</td><td>2000795</td><td>2000796</td><td>2000797</td><td>2000798</td><td>2000799</td><td>2000800</td><td>2000801</td><td>2000802</td><td>2000803</td><td>2000804</td><td>2000805</td><td>2000806</td><td>2000807</td><td>2000808</td><td>2000809</td><td>2000810</td><td>2000811</td><td>2000812</td><td>2000813</td><td>2000814</td><td>2000815</td><td>2000816</td><td>2000817</td><td>2000818</td><td>2000819</td><td>2000820</td><td>2000821</td><td>2000822</td><td>2000823</td><td>2000824</td><td>2000825</td><td>2000826</td><td>2000827</td><td>2000828</td><td>2000829</td><td>2000830</td><td>2000831</td><td>2000832</td><td>2000833</td><td>2000834</td><td>2000835</td><td>2000836</td><td>2000837</td><td>2000838</td><td>2000839</td><td>2000840</td><td>2000841</td><td>2000842</td><td>2000843</td><td>2000844</td><td>2000845</td><td>2000846</td><td>2000847</td><td>2000848</td><td>2000849</td><td>2000850</td><td>2000851</td><td>2000852</td><td>2000853</</td></tr></table>	2000001	2000002	2000003	2000004	2000005	2000006	2000007	2000008	2000009	2000010	2000011	2000012	2000013	2000014	2000015	2000016	2000017	2000018	2000019	2000020	2000021	2000022	2000023	2000024	2000025	2000026	2000027	2000028	2000029	2000030	2000031	2000032	2000033	2000034	2000035	2000036	2000037	2000038	2000039	2000040	2000041	2000042	2000043	2000044	2000045	2000046	2000047	2000048	2000049	2000050	2000051	2000052	2000053	2000054	2000055	2000056	2000057	2000058	2000059	2000060	2000061	2000062	2000063	2000064	2000065	2000066	2000067	2000068	2000069	2000070	2000071	2000072	2000073	2000074	2000075	2000076	2000077	2000078	2000079	2000080	2000081	2000082	2000083	2000084	2000085	2000086	2000087	2000088	2000089	2000090	2000091	2000092	2000093	2000094	2000095	2000096	2000097	2000098	2000099	2000100	2000101	2000102	2000103	2000104	2000105	2000106	2000107	2000108	2000109	2000110	2000111	2000112	2000113	2000114	2000115	2000116	2000117	2000118	2000119	2000120	2000121	2000122	2000123	2000124	2000125	2000126	2000127	2000128	2000129	2000130	2000131	2000132	2000133	2000134	2000135	2000136	2000137	2000138	2000139	2000140	2000141	2000142	2000143	2000144	2000145	2000146	2000147	2000148	2000149	2000150	2000151	2000152	2000153	2000154	2000155	2000156	2000157	2000158	2000159	2000160	2000161	2000162	2000163	2000164	2000165	2000166	2000167	2000168	2000169	2000170	2000171	2000172	2000173	2000174	2000175	2000176	2000177	2000178	2000179	2000180	2000181	2000182	2000183	2000184	2000185	2000186	2000187	2000188	2000189	2000190	2000191	2000192	2000193	2000194	2000195	2000196	2000197	2000198	2000199	2000200	2000201	2000202	2000203	2000204	2000205	2000206	2000207	2000208	2000209	2000210	2000211	2000212	2000213	2000214	2000215	2000216	2000217	2000218	2000219	2000220	2000221	2000222	2000223	2000224	2000225	2000226	2000227	2000228	2000229	2000230	2000231	2000232	2000233	2000234	2000235	2000236	2000237	2000238	2000239	2000240	2000241	2000242	2000243	2000244	2000245	2000246	2000247	2000248	2000249	2000250	2000251	2000252	2000253	2000254	2000255	2000256	2000257	2000258	2000259	2000260	2000261	2000262	2000263	2000264	2000265	2000266	2000267	2000268	2000269	2000270	2000271	2000272	2000273	2000274	2000275	2000276	2000277	2000278	2000279	2000280	2000281	2000282	2000283	2000284	2000285	2000286	2000287	2000288	2000289	2000290	2000291	2000292	2000293	2000294	2000295	2000296	2000297	2000298	2000299	2000300	2000301	2000302	2000303	2000304	2000305	2000306	2000307	2000308	2000309	2000310	2000311	2000312	2000313	2000314	2000315	2000316	2000317	2000318	2000319	2000320	2000321	2000322	2000323	2000324	2000325	2000326	2000327	2000328	2000329	2000330	2000331	2000332	2000333	2000334	2000335	2000336	2000337	2000338	2000339	2000340	2000341	2000342	2000343	2000344	2000345	2000346	2000347	2000348	2000349	2000350	2000351	2000352	2000353	2000354	2000355	2000356	2000357	2000358	2000359	2000360	2000361	2000362	2000363	2000364	2000365	2000366	2000367	2000368	2000369	2000370	2000371	2000372	2000373	2000374	2000375	2000376	2000377	2000378	2000379	2000380	2000381	2000382	2000383	2000384	2000385	2000386	2000387	2000388	2000389	2000390	2000391	2000392	2000393	2000394	2000395	2000396	2000397	2000398	2000399	2000400	2000401	2000402	2000403	2000404	2000405	2000406	2000407	2000408	2000409	2000410	2000411	2000412	2000413	2000414	2000415	2000416	2000417	2000418	2000419	2000420	2000421	2000422	2000423	2000424	2000425	2000426	2000427	2000428	2000429	2000430	2000431	2000432	2000433	2000434	2000435	2000436	2000437	2000438	2000439	2000440	2000441	2000442	2000443	2000444	2000445	2000446	2000447	2000448	2000449	2000450	2000451	2000452	2000453	2000454	2000455	2000456	2000457	2000458	2000459	2000460	2000461	2000462	2000463	2000464	2000465	2000466	2000467	2000468	2000469	2000470	2000471	2000472	2000473	2000474	2000475	2000476	2000477	2000478	2000479	2000480	2000481	2000482	2000483	2000484	2000485	2000486	2000487	2000488	2000489	2000490	2000491	2000492	2000493	2000494	2000495	2000496	2000497	2000498	2000499	2000500	2000501	2000502	2000503	2000504	2000505	2000506	2000507	2000508	2000509	2000510	2000511	2000512	2000513	2000514	2000515	2000516	2000517	2000518	2000519	2000520	2000521	2000522	2000523	2000524	2000525	2000526	2000527	2000528	2000529	2000530	2000531	2000532	2000533	2000534	2000535	2000536	2000537	2000538	2000539	2000540	2000541	2000542	2000543	2000544	2000545	2000546	2000547	2000548	2000549	2000550	2000551	2000552	2000553	2000554	2000555	2000556	2000557	2000558	2000559	2000560	2000561	2000562	2000563	2000564	2000565	2000566	2000567	2000568	2000569	2000570	2000571	2000572	2000573	2000574	2000575	2000576	2000577	2000578	2000579	2000580	2000581	2000582	2000583	2000584	2000585	2000586	2000587	2000588	2000589	2000590	2000591	2000592	2000593	2000594	2000595	2000596	2000597	2000598	2000599	2000600	2000601	2000602	2000603	2000604	2000605	2000606	2000607	2000608	2000609	2000610	2000611	2000612	2000613	2000614	2000615	2000616	2000617	2000618	2000619	2000620	2000621	2000622	2000623	2000624	2000625	2000626	2000627	2000628	2000629	2000630	2000631	2000632	2000633	2000634	2000635	2000636	2000637	2000638	2000639	2000640	2000641	2000642	2000643	2000644	2000645	2000646	2000647	2000648	2000649	2000650	2000651	2000652	2000653	2000654	2000655	2000656	2000657	2000658	2000659	2000660	2000661	2000662	2000663	2000664	2000665	2000666	2000667	2000668	2000669	2000670	2000671	2000672	2000673	2000674	2000675	2000676	2000677	2000678	2000679	2000680	2000681	2000682	2000683	2000684	2000685	2000686	2000687	2000688	2000689	2000690	2000691	2000692	2000693	2000694	2000695	2000696	2000697	2000698	2000699	2000700	2000701	2000702	2000703	2000704	2000705	2000706	2000707	2000708	2000709	2000710	2000711	2000712	2000713	2000714	2000715	2000716	2000717	2000718	2000719	2000720	2000721	2000722	2000723	2000724	2000725	2000726	2000727	2000728	2000729	2000730	2000731	2000732	2000733	2000734	2000735	2000736	2000737	2000738	2000739	2000740	2000741	2000742	2000743	2000744	2000745	2000746	2000747	2000748	2000749	2000750	2000751	2000752	2000753	2000754	2000755	2000756	2000757	2000758	2000759	2000760	2000761	2000762	2000763	2000764	2000765	2000766	2000767	2000768	2000769	2000770	2000771	2000772	2000773	2000774	2000775	2000776	2000777	2000778	2000779	2000780	2000781	2000782	2000783	2000784	2000785	2000786	2000787	2000788	2000789	2000790	2000791	2000792	2000793	2000794	2000795	2000796	2000797	2000798	2000799	2000800	2000801	2000802	2000803	2000804	2000805	2000806	2000807	2000808	2000809	2000810	2000811	2000812	2000813	2000814	2000815	2000816	2000817	2000818	2000819	2000820	2000821	2000822	2000823	2000824	2000825	2000826	2000827	2000828	2000829	2000830	2000831	2000832	2000833	2000834	2000835	2000836	2000837	2000838	2000839	2000840	2000841	2000842	2000843	2000844	2000845	2000846	2000847	2000848	2000849	2000850	2000851	2000852	2000853</
2000001	2000002	2000003	2000004	2000005	2000006	2000007	2000008	2000009	2000010	2000011	2000012	2000013	2000014	2000015	2000016	2000017	2000018	2000019	2000020	2000021	2000022	2000023	2000024	2000025	2000026	2000027	2000028	2000029	2000030	2000031	2000032	2000033	2000034	2000035	2000036	2000037	2000038	2000039	2000040	2000041	2000042	2000043	2000044	2000045	2000046	2000047	2000048	2000049	2000050	2000051	2000052	2000053	2000054	2000055	2000056	2000057	2000058	2000059	2000060	2000061	2000062	2000063	2000064	2000065	2000066	2000067	2000068	2000069	2000070	2000071	2000072	2000073	2000074	2000075	2000076	2000077	2000078	2000079	2000080	2000081	2000082	2000083	2000084	2000085	2000086	2000087	2000088	2000089	2000090	2000091	2000092	2000093	2000094	2000095	2000096	2000097	2000098	2000099	2000100	2000101	2000102	2000103	2000104	2000105	2000106	2000107	2000108	2000109	2000110	2000111	2000112	2000113	2000114	2000115	2000116	2000117	2000118	2000119	2000120	2000121	2000122	2000123	2000124	2000125	2000126	2000127	2000128	2000129	2000130	2000131	2000132	2000133	2000134	2000135	2000136	2000137	2000138	2000139	2000140	2000141	2000142	2000143	2000144	2000145	2000146	2000147	2000148	2000149	2000150	2000151	2000152	2000153	2000154	2000155	2000156	2000157	2000158	2000159	2000160	2000161	2000162	2000163	2000164	2000165	2000166	2000167	2000168	2000169	2000170	2000171	2000172	2000173	2000174	2000175	2000176	2000177	2000178	2000179	2000180	2000181	2000182	2000183	2000184	2000185	2000186	2000187	2000188	2000189	2000190	2000191	2000192	2000193	2000194	2000195	2000196	2000197	2000198	2000199	2000200	2000201	2000202	2000203	2000204	2000205	2000206	2000207	2000208	2000209	2000210	2000211	2000212	2000213	2000214	2000215	2000216	2000217	2000218	2000219	2000220	2000221	2000222	2000223	2000224	2000225	2000226	2000227	2000228	2000229	2000230	2000231	2000232	2000233	2000234	2000235	2000236	2000237	2000238	2000239	2000240	2000241	2000242	2000243	2000244	2000245	2000246	2000247	2000248	2000249	2000250	2000251	2000252	2000253	2000254	2000255	2000256	2000257	2000258	2000259	2000260	2000261	2000262	2000263	2000264	2000265	2000266	2000267	2000268	2000269	2000270	2000271	2000272	2000273	2000274	2000275	2000276	2000277	2000278	2000279	2000280	2000281	2000282	2000283	2000284	2000285	2000286	2000287	2000288	2000289	2000290	2000291	2000292	2000293	2000294	2000295	2000296	2000297	2000298	2000299	2000300	2000301	2000302	2000303	2000304	2000305	2000306	2000307	2000308	2000309	2000310	2000311	2000312	2000313	2000314	2000315	2000316	2000317	2000318	2000319	2000320	2000321	2000322	2000323	2000324	2000325	2000326	2000327	2000328	2000329	2000330	2000331	2000332	2000333	2000334	2000335	2000336	2000337	2000338	2000339	2000340	2000341	2000342	2000343	2000344	2000345	2000346	2000347	2000348	2000349	2000350	2000351	2000352	2000353	2000354	2000355	2000356	2000357	2000358	2000359	2000360	2000361	2000362	2000363	2000364	2000365	2000366	2000367	2000368	2000369	2000370	2000371	2000372	2000373	2000374	2000375	2000376	2000377	2000378	2000379	2000380	2000381	2000382	2000383	2000384	2000385	2000386	2000387	2000388	2000389	2000390	2000391	2000392	2000393	2000394	2000395	2000396	2000397	2000398	2000399	2000400	2000401	2000402	2000403	2000404	2000405	2000406	2000407	2000408	2000409	2000410	2000411	2000412	2000413	2000414	2000415	2000416	2000417	2000418	2000419	2000420	2000421	2000422	2000423	2000424	2000425	2000426	2000427	2000428	2000429	2000430	2000431	2000432	2000433	2000434	2000435	2000436	2000437	2000438	2000439	2000440	2000441	2000442	2000443	2000444	2000445	2000446	2000447	2000448	2000449	2000450	2000451	2000452	2000453	2000454	2000455	2000456	2000457	2000458	2000459	2000460	2000461	2000462	2000463	2000464	2000465	2000466	2000467	2000468	2000469	2000470	2000471	2000472	2000473	2000474	2000475	2000476	2000477	2000478	2000479	2000480	2000481	2000482	2000483	2000484	2000485	2000486	2000487	2000488	2000489	2000490	2000491	2000492	2000493	2000494	2000495	2000496	2000497	2000498	2000499	2000500	2000501	2000502	2000503	2000504	2000505	2000506	2000507	2000508	2000509	2000510	2000511	2000512	2000513	2000514	2000515	2000516	2000517	2000518	2000519	2000520	2000521	2000522	2000523	2000524	2000525	2000526	2000527	2000528	2000529	2000530	2000531	2000532	2000533	2000534	2000535	2000536	2000537	2000538	2000539	2000540	2000541	2000542	2000543	2000544	2000545	2000546	2000547	2000548	2000549	2000550	2000551	2000552	2000553	2000554	2000555	2000556	2000557	2000558	2000559	2000560	2000561	2000562	2000563	2000564	2000565	2000566	2000567	2000568	2000569	2000570	2000571	2000572	2000573	2000574	2000575	2000576	2000577	2000578	2000579	2000580	2000581	2000582	2000583	2000584	2000585	2000586	2000587	2000588	2000589	2000590	2000591	2000592	2000593	2000594	2000595	2000596	2000597	2000598	2000599	2000600	2000601	2000602	2000603	2000604	2000605	2000606	2000607	2000608	2000609	2000610	2000611	2000612	2000613	2000614	2000615	2000616	2000617	2000618	2000619	2000620	2000621	2000622	2000623	2000624	2000625	2000626	2000627	2000628	2000629	2000630	2000631	2000632	2000633	2000634	2000635	2000636	2000637	2000638	2000639	2000640	2000641	2000642	2000643	2000644	2000645	2000646	2000647	2000648	2000649	2000650	2000651	2000652	2000653	2000654	2000655	2000656	2000657	2000658	2000659	2000660	2000661	2000662	2000663	2000664	2000665	2000666	2000667	2000668	2000669	2000670	2000671	2000672	2000673	2000674	2000675	2000676	2000677	2000678	2000679	2000680	2000681	2000682	2000683	2000684	2000685	2000686	2000687	2000688	2000689	2000690	2000691	2000692	2000693	2000694	2000695	2000696	2000697	2000698	2000699	2000700	2000701	2000702	2000703	2000704	2000705	2000706	2000707	2000708	2000709	2000710	2000711	2000712	2000713	2000714	2000715	2000716	2000717	2000718	2000719	2000720	2000721	2000722	2000723	2000724	2000725	2000726	2000727	2000728	2000729	2000730	2000731	2000732	2000733	2000734	2000735	2000736	2000737	2000738	2000739	2000740	2000741	2000742	2000743	2000744	2000745	2000746	2000747	2000748	2000749	2000750	2000751	2000752	2000753	2000754	2000755	2000756	2000757	2000758	2000759	2000760	2000761	2000762	2000763	2000764	2000765	2000766	2000767	2000768	2000769	2000770	2000771	2000772	2000773	2000774	2000775	2000776	2000777	2000778	2000779	2000780	2000781	2000782	2000783	2000784	2000785	2000786	2000787	2000788	2000789	2000790	2000791	2000792	2000793	2000794	2000795	2000796	2000797	2000798	2000799	2000800	2000801	2000802	2000803	2000804	2000805	2000806	2000807	2000808	2000809	2000810	2000811	2000812	2000813	2000814	2000815	2000816	2000817	2000818	2000819	2000820	2000821	2000822	2000823	2000824	2000825	2000826	2000827	2000828	2000829	2000830	2000831	2000832	2000833	2000834	2000835	2000836	2000837	2000838	2000839	2000840	2000841	2000842	2000843	2000844	2000845	2000846	2000847	2000848	2000849	2000850	2000851	2000852	2000853</	

 A thumbnail image of the Lowara Spare Parts Price List 2022 V03 document, showing a table of parts with columns for part number, description, and price.	<p><u>Lowara Spare Parts Price List 2022 V03</u></p> <p>Official price list for Lowara spare parts for the year 2022, version 03. This document details various components, their codes, descriptions, and prices.</p>
 A thumbnail image of the HORIZON 12 Flex Operator's Manual, showing the cover of the manual with the title and some text.	<p><u>HORIZON 12 Flex Operator's Manual - Drucker Diagnostics Centrifuge Guide</u></p> <p>Comprehensive operator's manual for the Drucker Diagnostics HORIZON 12 Flex laboratory centrifuge. Includes detailed instructions on setup, operation, settings, maintenance, troubleshooting, and specifications for safe and effective use.</p>