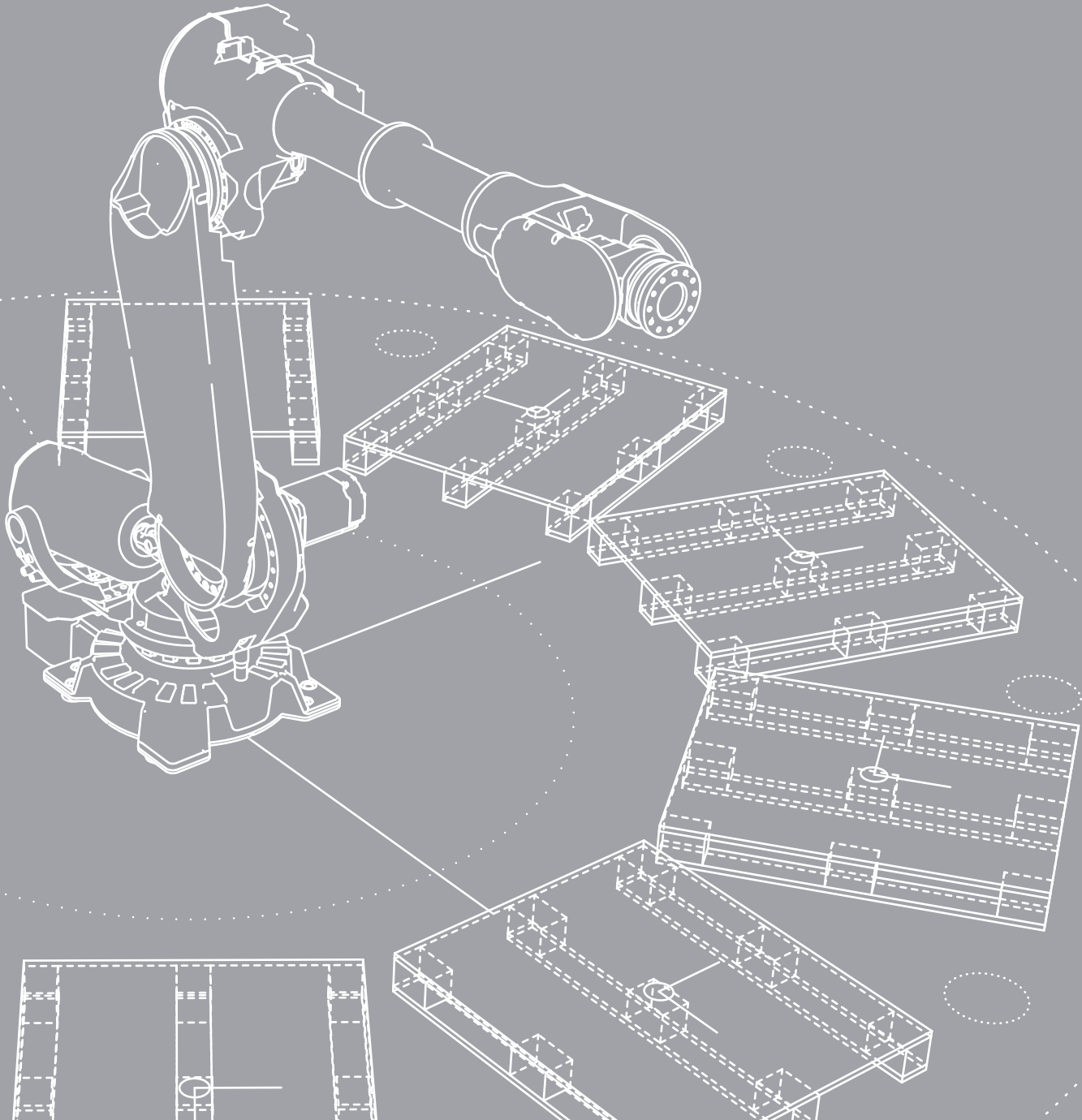
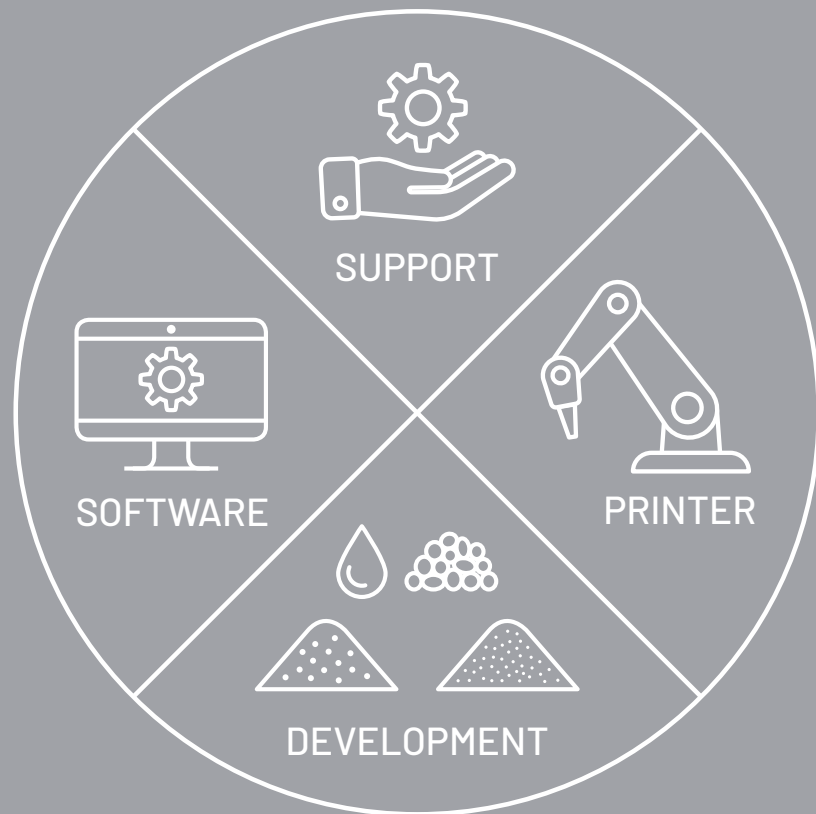


3D concrete printing.

Powerful, innovative, easy.





Our core skills – your necessities are our wishes.

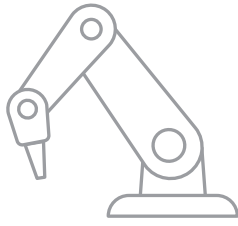
3D printing with concrete is an additive manufacturing process similar to Fused Disposition Modelling (FDM), which stacks multiple layers of material, in this case concrete, to produce the object. In addition to quicker and more cost-effective production, complex shapes can also be fabricated without traditional tooling requirements, thus maintaining a more sustainable production.

With our **progressive approach and constant research and development** of our concrete mixtures, we have optimized the amount of cement mixture used while still achieving maximum durability and quality.

Our unique manufacturing methods enable **a wide variety of surface patterns**. The product assortment ranges from the familiar layered structure look to braided concrete paths.

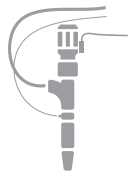
Through the sale of the 3D printing system and our state-of-the-art software it is for the first time ever possible to integrate additive manufacturing with **certified and standardized concrete formulations** in the construction industry.

Concepts and studies have been established to **integrate our system into the precast concrete and concrete block industry**. This guarantees the most efficient and effective procedure.



Hardware – a modular integrated approach.

Our 3D printing facility is a modular system that can be modified or scaled at any time. This modular concept covers an almost unlimited range of customer requirements and specifications.



The system comprises of 3 components:

- **pumping system**
 - concrete pump
 - concrete additives pump
- **extruder system**
 - extruder
 - hose package
- **industrial robot system**
 - 6-axis industrial robot with multiple range of motion
 - mounting platform



R & D – a continuous progress.

TÖLKE-HSH offers a large variety of **high-quality EN standardized concrete mixtures** for different types of applications.

Our innovative 3D printing extruder design supports **nozzle sizes from 3 – 14 cm** and is able to work with concrete with a grain size between 5.6 – 11 mm.

We are continuously testing the **strength (C30/37)** and **durability (XF4)** of all our concrete mixtures.

The ongoing development of our concrete mixtures ensures that you have access to **optimal balanced raw mineral resources**.





Software – the digital control center.

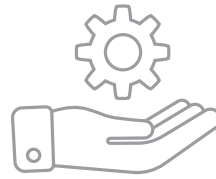
The **“Operator”** is a PLC unit that communicates the technical parameters to the moving mechanical parts.

The **“Pathmaker”** software developed by TÖLKE HSH Betontechnologie takes digital 3D models and builds machine code for the printer.

The software component **“Clone”** is used to analyse and simulate the printing process, which takes the data directly from the **“Pathmaker”**.



Consumer service – your capable counterpart.



We will support you in any way we can, so that your production runs as smooth as possible.

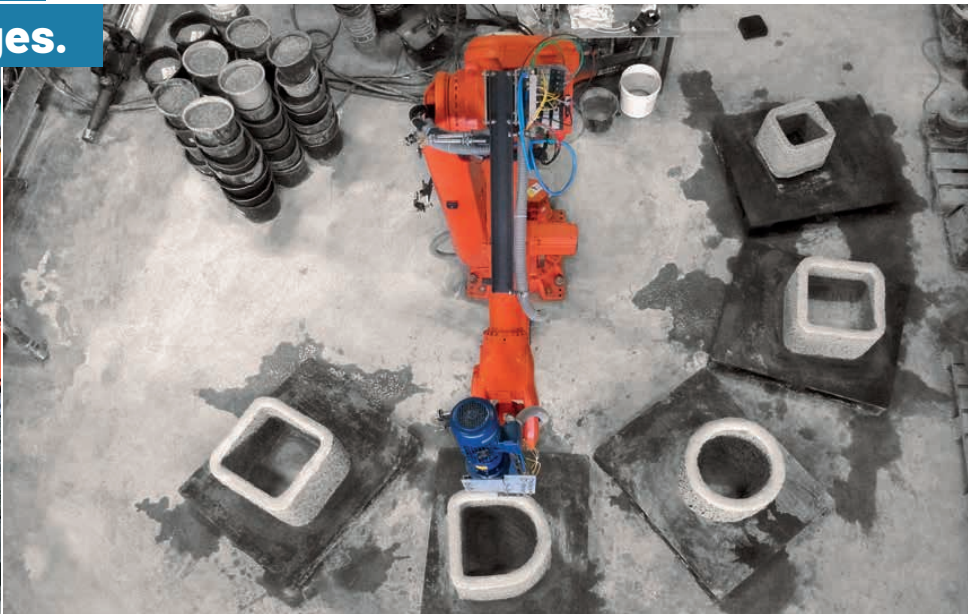
We offer full support in process and project development as well as continuing material development including specific material changes.



In order to avoid any downtime, we offer a **full-service package** covering machines and spare parts.

Furthermore, we offer you specially designed **AM concrete workshops and seminars** based on our customers' requirements to increase their knowledge in this fast-developing field.

Our scope of services for your next challenges.



Our offer includes all technical equipment necessary for implementation:

- six axes industrial robot
- pumping equipment for 3D printing
- control units
- extruder
- concrete mixtures
- software for slicing and simulating the 3D printing process

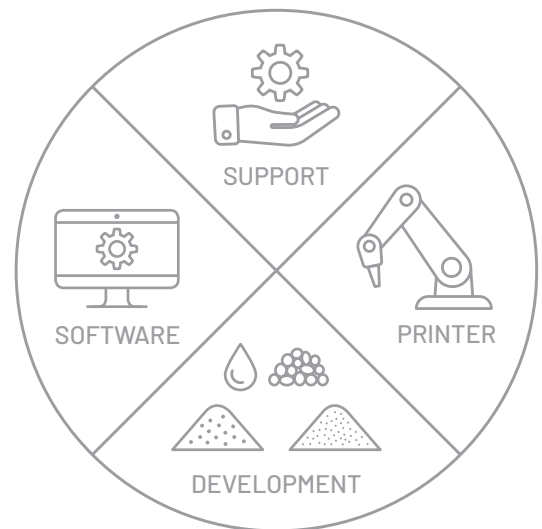
In addition to the technical equipment we also assist in:

- assembly in Nuremberg
- initial operation and approval with customer on-site
- on-site training

Our comprehensive package provides you with a **straightforward and modular entry** into the world of AM with concrete.

We define all **specific requirements and solutions** together with our customers to achieve a common goal.

Your success is our success.



MoveL[[-72.9318, 364.132, 0], [0.000937115, 0.0453254, 0.9989863, -0.00426149], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-120.85, 358.842, 0], [0.000940199, 0.0446212, 0.998994, -0.00426083], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-168.769, 353.551, 0], [0.000943263, 0.0438839, 0.999027, -0.00426013], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-216.687, 348.261, 0], [0.000946559, 0.0431109, 0.999061, -0.0042594], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-264.605, 342.971, 0], [0.000950017, 0.0422998, 0.999095, -0.00425863], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-312.524, 337.681, 0], [0.000953665, 0.0414474, 0.999131, -0.00425782], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-360.442, 332.391, 0], [0.000957471, 0.0405507, 0.999168, -0.00425696], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-408.36, 327.1, 0], [0.000961495, 0.0396061, 0.999206, -0.00425605], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-456.948, 278.073, 0], [0.0009032, 0.0532674, 0.998571, -0.00426881], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-397.535, 229.046, 0], [0.00084459, 0.0669526, 0.997747, -0.00428079], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-392.122, 180.02, 0], [0.000785764, 0.0808386, 0.996734, -0.00429197], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-386.71, 130.993, 0], [0.000726822, 0.0943022, 0.995534, -0.00430235], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-381.297, 81.9656, 0], [0.000667863, 0.10792, 0.9945, -0.00431189], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-375.885, 32.9387, 0], [0.000608986, 0.121471, 0.992585, -0.0043206], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-370.472, -18.0882, 0], [0.000550291, 0.134931, 0.990845, -0.00432847], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-365.059, -65.1152, 0], [0.000491874, 0.148279, 0.988936, -0.0043355], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-359.647, -114.142, 0], [0.000433827, 0.161497, 0.986864, -0.00434169], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-354.234, -163.169, 0], [0.00037624, 0.174563, 0.984636, -0.00434706], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-348.821, -212.196, 0], [0.000319197, 0.187462, 0.982262, -0.00435162], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-343.409, -261.223, 0], [0.000262778, 0.200175, 0.979795, -0.00435539], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-337.996, -310.25, 0], [0.000207056, 0.212688, 0.97711, -0.00435839], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-332.584, -359.277, 0], [0.000152099, 0.224989, 0.974352, -0.00436066], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-327.171, -408.304, 0], [9.79683e-05, 0.237064, 0.971484, -0.00436221], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-322.136, -457.89, 0], [0.000115737, 0.233105, 0.972442, -0.00436177], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-279.1, -397.477, 0], [0.000132667, 0.229328, 0.973339, -0.00436129], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-180.085, -392.063, 0], [0.000148816, 0.225722, 0.974182, -0.00436077], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-131.029, -386.649, 0], [0.000164233, 0.222276, 0.974974, -0.00436022], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-81.9939, -381.236, 0], [0.000178966, 0.218981, 0.975719, -0.00435964], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-32.9585, -375.822, 0], [0.000193058, 0.215825, 0.976422, -0.00435904], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[16.077, -370.409, 0], [0.000206549, 0.212802, 0.977086, -0.00435842], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[65.1123, -364.995, 0], [0.000219475, 0.209903, 0.977712, -0.00435779], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[114.148, -359.582, 0], [0.000231871, 0.207121, 0.978306, -0.00435714], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[163.183, -354.168, 0], [0.000243766, 0.204449, 0.978867, -0.00435649], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[212.219, -348.755, 0], [0.000255191, 0.201881, 0.9794, -0.00435584], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[261.254, -343.341, 0], [0.000266171, 0.199412, 0.979906, -0.00435518], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[310.289, -337.927, 0], [0.000276732, 0.197035, 0.980387, -0.00435452], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[359.325, -332.514, 0], [0.000286897, 0.194745, 0.980844, -0.00435387], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[408.36, -327.1, 0], [0.000296687, 0.192539, 0.98128, -0.00435321], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[456.948, -278.073, 0], [0.000336859, 0.183473, 0.983015, -0.00435029], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[397.535, -229.046, 0], [0.000377332, 0.174316, 0.98468, -0.00434696], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[392.122, -180.019, 0], [0.000418077, 0.165075, 0.986271, -0.00434323], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[388.71, -130.993, 0], [0.000459084, 0.155758, 0.987786, -0.00433909], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[381.297, -81.9656, 0], [0.000450263, 0.146365, 0.989221, -0.00433454], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[375.885, -32.9387, 0], [0.000541642, 0.13691, 0.990574, -0.00432956], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[370.472, 16.0882, 0], [0.000583167, 0.127397, 0.991842, -0.00432416], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[365.059, 65.1152, 0], [0.000624804, 0.117835, 0.993024, -0.00431834], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[359.647, 114.142, 0], [0.000666519, 0.10823, 0.994116, -0.0043121], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[354.234, 163.169, 0], [0.000708277, 0.0985909, 0.995118, -0.00430544], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[348.821, 212.196, 0], [0.000750042, 0.0889254, 0.996209, -0.00429836], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[343.409, 261.223, 0], [0.000791779, 0.0792415, 0.996846, -0.00429262], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[337.996, 310.25, 0], [0.000833452, 0.0695476, 0.997589, -0.00428297], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[332.583, 359.277, 0], [0.000875027, 0.0598519, 0.998198, -0.00427467], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[327.171, 408.304, 0], [0.000916487, 0.0501826, 0.998732, -0.00426598], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[276.46, 457.89, 0], [0.000918716, 0.049636, 0.998758, -0.00426549], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[225.749, 397.107, 0], [0.000921059, 0.0490874, 0.998785, -0.00426499], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[175.038, 391.508, 0], [0.000923501, 0.0485154, 0.998813, -0.00426446], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[124.327, 385.909, 0], [0.000926005, 0.0479184, 0.998842, -0.00426391], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[73.6159, 380.311, 0], [0.000928712, 0.0472947, 0.998871, -0.00426333], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[22.9048, 374.712, 0], [0.000931495, 0.0466426, 0.998902, -0.00426272], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[36.9698, 247.314, 0], [0.000808813, 0.0752822, 0.997153, -0.00428769], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[106.221, 226.372, 0], [0.000782212, 0.0814635, 0.996667, -0.00429262], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[166.578, 186.478, 0], [0.000740555, 0.0911232, 0.99583, -0.00430001], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[212.979, 130.971, 0], [0.000687559, 0.103376, 0.994633, -0.0043088], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[241.546, 64.5011, 0], [0.000627072, 0.117313, 0.993085, -0.00431801], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[252.315, -7.21092, 0], [0.000563113, 0.131994, 0.991241, -0.00432682], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[260.282, -79.3757, 0], [0.000499125, 0.146625, 0.989183, -0.00433467], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[268.249, -151.541, 0], [0.000435568, 0.161101, 0.986928, -0.00434151], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[250.035, -217.295, 0], [0.000376129, 0.174589, 0.984632, -0.00434707], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[179.709, -231.614, 0], [0.000335731, 0.178849, 0.983867, -0.00434865], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[107.544, -239.582, 0], [0.000343149, 0.182051, 0.983279, -0.0043498], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[35.3795, -247.549, 0], [0.000328083, 0.185455, 0.982643, -0.00435096], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-36.7853, -255.516, 0], [0.000312024, 0.18908, 0.981952, -0.00435214], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-108.95, -263.483, 0], [0.000294873, 0.192948, 0.981199, -0.00435333], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-181.158, -270.49, 0], [0.000277536, 0.196854, 0.980423, -0.00435447], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-226.975, -222.314, 0], [0.000323596, 0.186469, 0.982451, -0.00435129], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-234.942, -150.149, 0], [0.000402511, 0.168608, 0.985674, -0.00430442], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-242.91, -77.9842, 0], [0.00048239, 0.150442, 0.988609, -0.00433656], [-1, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-249.94, -5.74328, 0], [0.00056309, 0.132, 0.99124, -0.00432682], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-241.37, 66.0676, 0], [0.000643113, 0.113622, 0.993514, -0.00431565], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-212.139, 132.351, 0], [0.000714426, 0.0971693, 0.995258, -0.00430442], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh; MoveL[[-165.376, 187.555, 0], [0.00076962, 0.084386, 0.996424, -0.0042949], [0, -2, 1, 1], [0, 9E9, 9E9, 9E9, 9E9, 9E9]], [400, 500, 5000, 1000], zone_hsh, tool_hsh \WObj := wobj_hsh;

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Contact us

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